ONEACADIANA

804 E St. Mary Blvd. Lafayette, Louisiana 70503 // o 337.408.3664 // f 337.408.3664 // OneAcadiana.org

October 8, 2021

Members of the Louisiana Climate Initiatives Task Force,

On behalf of One Acadiana, I am expressing our support for including Carbon Capture and Storage (CCS) in the Louisiana Climate Action Plan. Louisiana has long been a leader in energy production. As the Sportsman's Paradise, we also understand the importance of protecting our natural environment and know that oil and gas production and environmental stewardship are not mutually exclusive.

One Acadiana brings together more than 600 members and investor businesses across nine parishes in South Louisiana to pursue a long-term vision of making Acadiana one of the most sought-after places in the South for businesses and talent. In this capacity, we advocate for Louisiana's continued economic vitality and support the efficient and responsible development of our natural resources.

For more than a century, Louisiana's oil and natural gas industry has created hundreds of thousands of jobs and boosted our nation's energy independence and national security, and it remains an integral component of our state's economy. Industry leaders have committed to reducing and managing carbon emissions, and the Climate Initiatives Task Force should not overlook the opportunity to leverage our existing infrastructure and natural resources to help the industry meet climate goals while allowing businesses to grow, supporting our economy, and improving our environment.

The CCS process is designed to remove carbon dioxide emissions from industry operations and either reuse or store it so it will not enter the atmosphere. Louisiana is fortunate to have ideal geology for sequestration and industrial corridors that contain pure carbon sources located relatively close to existing carbon dioxide pipeline infrastructure. We also boast a highly trained workforce that can build out the ancillary infrastructure needed to deploy CCS systems and have a statutory and regulatory framework in place to support this new industry. Louisiana is well-positioned to generate new jobs, protect current jobs, and reduce emissions through commercial-scale CCS deployment.

Again, One Acadiana supports including Carbon Capture and Storage (CCS) in the Louisiana Climate Action Plan so that our state can continue providing safe, affordable, and reliable energy to America.

Sincerely,

Troy Wayman, CEcD
President & CEO
One Acadiana

Simon R. Moore
Vice President, Investor Relations, Corporate Relations and Sustainability

Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501
Tel: 610-481-7461

October 8, 2021

State of Louisiana
Office of the Governor
Climate Initiatives Task Force

Re: Air Products Comments on Revised Draft Partial Final Report and Draft Strategy and Action Portfolio

To Members of the Governor's Climate Initiatives Task Force:

Air Products appreciates Governor John Bel Edwards' creation of the Climate Initiatives Task Force and its efforts to investigate and make recommendations for the reduction of greenhouse gas emissions. It is a worthwhile endeavor to meet the challenges of climate change while maintaining a manufacturing base that provides jobs, economic security and opportunity for Louisiana citizens. In reviewing the CITF's Draft Strategy and Action Portfolio, Air Products offers the following remarks regarding proposed actions relevant to the company.

Overall, the CITF's action plan is comprehensive; Air Products would like to remain involved in the committee's work to ensure regulatory changes are enacted responsibly.

Air Products' specific strategy recommendations follow:

1 - Shift toward a clean, renewable and resilient power grid
Air Products recommends also including electricity generated from clean hydrogen (i.e., hydrogen generated from clean sources such as natural gas with carbon capture).

12. Accelerate adoption of and accessibility to clean transportation fuels

12.4 – Begin infrastructure and technology planning to support transition of medium- and heavy-duty transportation, shipping and aviation to clean and zero-emission
Air Products recommends this action focus on clean hydrogen for use in medium and heavy-duty land transport and clean ammonia and clean hydrogen for use in shipping.

12.5 – Implement targeted pilot project and incentive programs to accelerate transition of medium- and heavy-duty vehicles to clean and zero-emission vehicles

Air Products recommends the targeted incentive programs include the use of clean hydrogen as future clean fuels.

22 – Ensure Louisiana is prepared to maximize potential federal funding opportunities

Air Products supports this initiative and looks forward to working with the state to develop clean energy investments in Louisiana with a particular emphasis on clean hydrogen, clean ammonia and carbon sequestration.

Low-carbon intensity hydrogen is an ideal clean fuel alternative; it allows industrial, transportation, power generation and other users to reduce their carbon footprints. Air Products is fully invested in projects that leverage our technology and sustainability capabilities, as sustainability is our strategic focus and creates our growth opportunities. We believe that technological solutions and management interventions must be developed and implemented to address the acceleration in greenhouse gas emissions worldwide.

Numerous studies have shown that Louisiana's geology is some of the best in the world for permanent geologic sequestration and the state's highly trained, skilled workforce is capable of constructing and operating permanent geologic sequestration projects and the necessary associated infrastructure. Clean hydrogen fuels and carbon sequestration in Louisiana will play a critical role in mitigating carbon emissions while consecutively preserving the state's economic competitiveness.

Air Products supports the initiatives and strategies being discussed by the Climate Initiatives Task Force and looks forward to working with the State of Louisiana and involved stakeholders in achieving the stated goals to improve the health and welfare of people in the state and advance Louisiana's economic and energy profile.

Sincerely,

Simon R. Moore
Vice President, Investor Relations,
Corporate Relations and Sustainability

Audubon | DELTA

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New Orleans, LA 70119

504.708.5862
la.audubon.org

October 8, 2021

Louisiana Climate Initiatives Task Force
Office of the Governor
PO Box 94004
Baton Rouge, LA 70804

Via email: climate@la.gov

Re: Comments on the Climate Initiatives Task Force (CITF) Draft Partial Final Report and Draft Action Portfolio

Governor Edwards, Members of the Climate Initiatives Task Force:

Audubon Delta is the regional office of the National Audubon Society, encompassing the states of Arkansas, Louisiana, and Mississippi. The regional office combines the former state office of Audubon Louisiana with two other state offices. The National Audubon Society protects birds and the places they need, today and tomorrow, throughout the Americas using science, advocacy, education, and on-the-ground conservation. Audubon has had a presence on the Gulf Coast for nearly a century and is invested thoroughly in the region. Audubon staff are working to advance habitat restoration, conservation, and stewardship with the goal of having healthy and resilient coastal and marine ecosystems that support populations of birds, fish, wildlife, and people throughout the Gulf's five coastal states.

On behalf of our members in Louisiana, we would like to provide comments to the Governor's Office, members of the CITF, and participants in the associated advisory groups and sector committees on the Draft Partial Final Report and Draft Action Portfolio. First and foremost, this initiative and all participants are to be commended on moving this critically important action forward. Louisiana is a state on the edge – facing the impacts of climate change head on, with more severe storms, temperature variability, and impacts to people and wildlife across the spectrum. The Draft Partial Final Report and Draft Action Portfolio recognize the necessity of action at all levels across the state, and the importance of moving forward an actionable suite of measures as soon as possible.

The Draft Action Portfolio provides a look at the many actions and recommendations that can achieve the Governor's emissions reductions goals, gleaned from technical evaluation and public comment. It's hard to imagine that at any time in the State's history such a robust array of solutions were available, or that the will of our officials has been set to take on such a challenge. The Coastal Master Plan has demonstrated that an ambitious plan rooted in science and good public policy can do wonders for our state, and advance our home in a way that provides economic opportunity and prosperity while protecting the people and wildlife that make our region unique. It is our sincere hope that these draft documents will provide the foundation for such an effort centered on equitable climate mitigation and adaptation.

Though these reports set the table for an ambitious set of objectives, the most rigorous task is ahead: making decisions on which of these action items are of the highest priority, and which will move Governor Edwards' goals forward in a realistic and timely fashion. With this important prioritization in mind, we offer the following more specific comments on the path forward:

- *Capacity and Funding:* The success of the Final Report and the Action Portfolio will be determined by the capacity of the State of Louisiana to accomplish such a robust set of recommendations. Two elements must be prioritized to address this – staffing and funding. The Draft Action Portfolio takes a realistic view of this challenge in Strategy 28, outlining the creation of the Governor's Office of Climate Resilience and the establishment of regular meetings of the CITF. It is truly remarkable that these draft documents and the process and engagement around them have been accomplished by the already busy staff of the Governor's office. These actions would provide the framework and personnel necessary to keep these actions at the front of mind for the State at the executive and legislative branch for tracking and implementation. We have seen the success of such a strategic establishment, with the activities and successes of the Coastal Protection and Restoration Authority. As the suite of action items is moved forward to the legislature or state agencies for implementation, the prioritization of appropriate funding sources must be considered, at the federal and state level. Resources must be made available to the Office of Climate Resilience to accomplish the Governor's goals, and action items that are achievable and based in the best available science to reduce emissions must be prioritized for available funding and implementation.

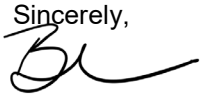
- *Concerns of Equity:* The participants in the CITF effort have continually asserted the importance of considering the burden that underserved, rural, and vulnerable communities have borne in the development of Louisiana to this point. The Draft Partial Final Report and Action Portfolio take care to identify action items not only to achieve emissions reduction goals, but to do so in a way that seeks to avoid disproportionate impacts moving forward, as we chart a more sustainable and resilient future for all of Louisiana. Equitable access to resources and involvement in the decision-making process are incorporated throughout strategies and actions, and we encourage the continued consideration and inclusion of these concepts as these action items make their way through the planning process and into the implementation stage.

- *The Economic Opportunities of Resilience:* The Draft Partial Final Report and Action Portfolio envision a transition for Louisiana: to a more resilient landscape, not only in resilience from storms or extreme weather, but a diversification of our economic portfolio with opportunities for our residents inherent in the changes necessary to reduce emissions. A more climate-friendly future comes with a transition to new and emerging technologies, and in that transition comes opportunities for employment, workforce training, and for our state to the center of a new and booming economy in the climate mitigation and adaptation field. Our state has been a leader in energy innovation for a century – we can continue on that path and serve as a hub for the development and deployment of renewable energy technologies and coastal restoration practices. The state should examine and make apparent the economic opportunities and the potential from the implementation of action items in the Draft Action Portfolio. Strategy 20 outlines the first steps in ensuring that Louisiana workers and businesses are prioritized in the transition to a low-carbon economy. Other strategies which provide for greater access to resilient or renewable resources, such as Strategies 1 and 2, allow for realization of the economic opportunities by a greater number of Louisianans, and spread the benefits of this transition to our residents. We applaud these actions, and are eager to engage with the Governor's Office, the legislature, and other state agencies on these critical action items.

- *Alignment with the Coastal Master Plan:* Audubon is a long-standing participant in the Coastal Master Plan process, as advocates and partners in Restore the Mississippi River Delta. We encourage the continued alignment between the Coastal Master Plan and the progress of the Climate Initiatives Task Force, as many of these programs, goals, and the implementation of projects may achieve mutual goals. The Draft Action Portfolio identifies the importance of this symmetry in Strategy 17, and we support these actions as critical both for carbon emissions reduction, and for a more sustainable Louisiana coast.

In closing, we once again applaud the state officials, staff, and all participants in the CITF process so far. This work is ambitious, complex, and critically important. Louisiana has the opportunity to be a worldwide leader in climate mitigation and adaptation, and to provide for the long-term economic prosperity and sustainability of our state. The Draft Partial Final Report and Draft Action Portfolio represent the first meaningful steps to that future, and we encourage the expedient identification of priority action items, and the necessary coordination with state agencies and state legislature to accomplish the identified strategies. We look forward to continued engagement with the CITF, advisory groups, and sector committees as future iterations of the reports are released.

Sincerely,



Brent Newman
Senior Policy Director
Audubon Delta

P.O. Box 712 Thibodaux, LA 70302
www.BayouIndustrialGroup.com

October 7, 2021

Harry Vorhoff
Climate Initiatives Task Force
Governor's Office of Coastal Activities
Via Email: climate@la.gov

Re: Comments on Draft Louisiana Climate Action Report

Dear Mr. Vorhoff:

Bayou Industrial Group (BIG) represents 150 businesses, advocacy groups and governmental organizations in the Lafourche, Terrebonne, St. Mary, and Assumption Parishes of southeastern Louisiana, a region that proudly considers itself "America's working coast." Here, we produce the energy that fuels America and our coastal communities play a vital role in servicing Gulf of Mexico oil and gas production.

BIG and our members appreciate the tremendous energy and economic benefits that offshore oil and gas production contribute to our region and our nation. We also recognize Governor Edwards for the creation of the Climate Task Force to reduce greenhouse gas emissions originating in Louisiana. BIG believes that it is possible to have both a robust oil and gas industry that creates jobs and economic opportunity alongside a healthy and sustainable environment to live and work for generations.

For these reasons, BIG supports and encourages the inclusion of Carbon Capture & Storage (CCS) in the Louisiana Climate Action Report to enhance economic growth in Louisiana and strengthen funding capacity for critical coastal restoration projects.

Wide-scale deployment of CCS will require the collective support of industry, communities and government. If appropriate policies and regulations are put in place, CCS could generate new jobs, protect current jobs, and reduce emissions at a lower cost to society than many other widely available technologies. Deployment of carbon capture provides a viable pathway for the decarbonization and continued operation of key industrial, manufacturing and energy facilities, thereby avoiding plant closures and the offshoring of jobs and livelihoods. It's critical that we support the advancement of CCS and other emission-reduction technologies that could put the world on the right path toward a lower-emissions energy future.

Bayou Industrial Group thanks you and the members of the Task Force for your work and we encourage you to continue to recognize the ongoing contributions of our oil and gas industry to environmental stewardship and economic vitality, as well as the benefits of CCS, in the Louisiana Climate Action Report.

Thank you,

Henri Boulet

Henri Boulet
President

Comments on the Draft Portfolio

Bradford, Angelle <bradford.751@buckeyemail.osu.edu>

Fri 10/8/2021 5:53 PM

To: Climate <climate@la.gov>;

Hello,

Overall, there are some recurring themes for the document that are of concern for me:

- the summary for each strategy, and its subsequent actions, is mostly a set of definitions, a menu or wish list - it does not feel actionable
- the "how" in both the short and term are lacking for getting these actions done
- there is heavy emphasis on the report overall on carbon capture, which is not real science, not safe and not realistic to incorporate in long-term planning
- there is not a clear distinction on which items are under the purview of which agency or what role the legislature will have to play

Thank you.

Sincerely,

Angelle Bradford
Intern Manager and Sierra Student Liaison
Delta Chapter Ex Com, Sierra Club
Bradford.751@osu.edu **Cell: 225-454-8319**

October 4, 2021

Attn: Louisiana Climate Initiative Task Force

The Committee of 100 for Economic Development, Inc. serves as Louisiana's Business Roundtable. While not all of our members are directly engaged in the oil/gas industry, it is an important cornerstone of our economic base in Louisiana.

The natural gas and oil industry is committed to addressing climate challenges while also supplying the affordable, reliable energy our country counts on every day. Investing in technology and innovation, such as carbon capture, supports our goals of meeting the world's growing need for energy while also advancing a lower-carbon future.

Louisiana's geology is uniquely capable for carbon dioxide storage in geologic formations such as depleted oil and natural gas reservoirs, un-mineable coal seams and deep saline reservoirs -- structures that have stored crude oil, natural gas, brine, and carbon dioxide over millions of years. Our industrial corridors contain pure carbon sources located relatively close to existing CO2 pipeline infrastructure. Louisiana has significant Strategic Petroleum Reserve facilities and the headquarters for the SPR is in Kenner, Louisiana.

CCS is an important emissions reduction technology that can be applied across the energy system and with the ability to remove CO2 from an industrial facility's emissions and use it to produce many products, including the prospect of creating net-zero fuels to low-carbon intensive building materials. Our petro-chemical industry will utilize the technology to capture and safely store industrial CO_2 emissions helping to address the impact of climate change.

We have a highly trained, skilled workforce that is well suited for building additional pipelines and operating wells. Add to these a preexisting statutory and regulatory framework, forward-thinking regulators equipped with the experience to kickstart this new industry, and it becomes clear that Louisiana is uniquely positioned to be a key player in CCS.

We support the advancement of CCS and other emission-reduction technologies that could put the world on the right path toward a lower-emissions energy future. The natural gas and oil industry has made expansion a top priority because it enables significant carbon dioxide emissions reductions without threatening access to affordable, reliable energy.

It's important for the Task Force to consider the technological and environmental advancements that the industry has made over the past few decades. It is critical that our country moves forward to lead the world in energy production and environmental progress –while we ensure safe, affordable, and reliable energy for all Americans. Louisiana's robust energy industry must and will be part of that equation.

Michael Olivier
Chief Executive
Committee of 100 for Economic Development, Inc.

Louisiana Chemical Association
Gregory M. Bowser, President & CEO

October 7, 2021

Governor's Office of Coastal Activities
Attention: CITF Chairman Harry Vorhoff

Carbon Capture & Louisiana

Louisiana's oil and natural gas industry is leading the way to reduce and manage carbon emissions, as companies around the globe work to minimize their carbon footprint in a battle against climate change.

The natural gas and oil industry is committed to addressing climate challenges while also supplying the affordable, reliable energy our country counts on every day. Investing in technology and innovation, such as carbon capture, supports our goals of meeting the world's growing need for energy while also advancing a lower-carbon future.

What is CCUS?

Carbon capture and storage (CCS), also referred to as carbon capture and sequestration, is a process that is designed to remove carbon dioxide emissions from industry operations and either reuses or stores it so it will not enter the atmosphere.

Carbon dioxide storage in geologic formations includes depleted oil and natural gas reservoirs, un-mineable coal seams and deep saline reservoirs -- structures that have stored crude oil, natural gas, brine and carbon dioxide over millions of years.

CCS is an important emissions reduction technology that can be applied across the energy system.

CCS has both the ability to remove CO2 from an industrial facility's emissions and use it to produce many products, including the prospect of creating net-zero fuels to low-carbon intensive building materials. Net-zero refers to a scenario whereby the same amount of CO2 emissions are being captured, or removed, from the atmosphere as are being emitted.

Capturing and then safely storing the world's industrial CO_2 emissions is an ambitious endeavor, but it's critical in helping to address the impact of climate change.

Louisiana

Louisiana is very fortunate to have ideal geology for sequestration and industrial corridors that contain pure carbon sources located relatively close to existing CO2 pipeline infrastructure. And, most importantly, we have a highly trained, highly skilled workforce that is well suited for building additional pipelines and operating wells. Add to these a preexisting statutory and regulatory framework, forward-thinking regulators equipped with the experience to kickstart this new industry, and it becomes clear that Louisiana is uniquely positioned to be a key player in CCS.

Louisiana Chemical Association

Supporting Carbon Capture Technology

The oil and natural gas industry is critical to Louisiana, providing jobs and economic benefits throughout the state for over a century. CCS technology can help the industry meet climate goals while allowing business to grow, continue supporting our economy, and improving our environment.

It is possible to have both a robust oil and natural gas industry that creates jobs and economic opportunity alongside a healthy and sustainable environment to live and work for generations. In Louisiana, we can balance economic opportunities and environmental benefits.

Wide-scale deployment of CCS will require the collective support of industry, communities and government. If appropriate policies and regulations are put in place, CCS could generate new jobs, protect current jobs, and reduce emissions at a lower cost to society than many other widely available technologies.

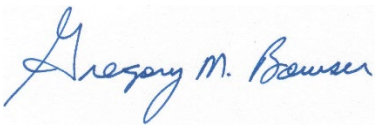
Deployment of carbon capture provides a viable pathway for the decarbonization and continued operation of key industrial, manufacturing and energy facilities, thereby avoiding plant closures and the offshoring of jobs and livelihoods.

It's critical that we support the advancement of CCS and other emission-reduction technologies that could put the world on the right path toward a lower-emissions energy future.

Supporting commercial-scale CCS deployment holds great promise for reducing emissions across the economy. The natural gas and oil industry has made expansion a top priority, because it enables significant carbon dioxide emissions reductions without threatening access to affordable, reliable energy.

It's important for the Task Force to consider the technological and environmental advancements that the industry has made over the past few decades. It is critical that the nation press forward continue to lead the world in energy production and environmental progress –while we ensure safe, affordable, and reliable energy for all Americans. Louisiana's robust energy industry must and will be part of that equation.

Thanks,



Gregory M. Bowser
President & CEO

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Comments of Clean Air Task Force on Louisiana's Climate Action Plan Draft, Partial, Final Report and the DRAFT Portfolio of Climate Strategies and Actions

Clean Air Task Force (CATF) commends the work of the Climate Initiative Task Force in developing the Louisiana Climate Action Plan Draft, Partial, Final Report (Report) and the DRAFT Portfolio of Climate Strategies and Actions (Portfolio). CATF offers the following comments.

As well and clearly noted in the Report, climate change is not only a critical global issue, it is a significant and direct threat to lives, communities, the environment and the economy of Louisiana. Success in avoiding the worst economic, health and environmental impacts will require careful and expansive planning.

The attention to inequities, environmental justice and tools to mitigate these existing and potential impacts throughout the Portfolio is singularly commendable and reasoned.

DRAFT Portfolio of Climate Strategies and Actions:

> **Strategy 1, Action 1.1** notes a "Renewable and Clean Portfolio Standard would require that by 2035, 50% of electricity generation is to be generated from renewable resources and 30% from clean resources, and by 2050, 100% of electricity would need to be generated from renewable or clean resources, with at least 80% from renewable resources." The decline curve in carbon emissions is well reasoned. However, to limit technology and system risk, remaining neutral as to which clean generation sources are built and at what scale, is necessary for least-cost system transition to net-zero emissions. For example, North Carolina's Energy Solutions for North Carolina[1] act well addresses this balance between carbon reduction obligations – the cost of implementation and the flexibility to plan for the power system transition through mid-century.
>
> Both **Strategy 7, Action 7.1** (Support regional long-range transmission infrastructure planning) and **Action 7.3** (Adopt an energy storage target) should be subsumed into any Renewable and Clean Portfolio Standard rulemaking, as least-cost decarbonization pathways cannot be achieved without each of these fundimental issues, which are only superficially distinct from one another, being included in the power sector planning solution set.
>
> **Strategy 3, Action 3.5** recommends the establishment of a regional cap-and-trade program which can complement a net-zero Renewable and Clean Portfolio Standard. The resultant market driven incentives across the envisioned sectors not only greatly expands aggregate state-wide carbon emission reduction potential but also accelerates the adoption of carbon reducing technologies and practices. The proceeds from the sale of emissions allowances could also be a powerful tool for

[1] Energy Solutions for North Carolina, HB 951, *https://www.ncleg.gov/Sessions/2021/Bills/House/PDF/H951v5.pdf*

equity if the State were to require their investment in pollution abatement in environmental justice communities.

Strategy 5, Action 5.4 notes the requirement for industrial process decarbonization. Louisiana has the highest industrial emissions of any US state after Texas, dominated by petrochemicals industries with significant contributions from the steel sector, pulp & paper, and other activities. While some reductions from those sectors is possible by reducing fuel consumption and switching to clean electricity for heating and other loads, the so-called "process emissions" from some activities (e.g., iron ore reduction in the steel industry, feedstock conversions in the chemicals industry, as well as some calcining and waste processing) are related to fundamental production processes and are not readily abated by electrification. For industrial process emissions, as well as some combustion emissions, carbon capture is likely to be the best direct and near-term CO2 reduction strategy – which requires scrubbing the emissions of other air pollutants, yielding cleaner air in fenceline communities. For other industrial emissions, switching to hydrogen fuel – which may require carbon capture for its production – could well be the most availing. The International Energy Agency notes that reaching global climate goals is "virtually impossible" without carbon capture, accounting for about 14% of the CO_2 cuts in 2050 needed to avoid a two degree Celsius temperature rise.[2][3]

Strategy 5, Action 5.6 notes the fundamental obligation for "the safe and equitable deployment of carbon capture, utilization, and storage (CCUS)." Storage in saline aquifers is expected to become the dominant form of CO_2 storage. Saline aquifers are very deep, porous formations filled in part with salty water (brine), which are separated from overlying drinking water aquifers by thousands of feet of rock. The EPA Underground Injection Control program requires rigorous geologic characterization of potential storage sites and detailed CO_2 monitoring, verification, and reporting (MRV) plans for these Class VI permits.[4] Properly sited projects can safely and securely store CO_2 in deep geologic formations with very minimal risk of leakage. Additionally, the technology and methods for injecting, storing, and monitoring CO_2 in the subsurface are mature and have been practiced since 1972. A properly sited project requires the presence of an overlying caprock that is impermeable which "traps" the injected CO_2 by preventing it from migrating upward, similar to how hydrocarbons and other fluids have been trapped in the subsurface for millions of years. Over time, injected CO_2 can be further trapped by dissolving into the brine

[2] International Energy Agency, Energy Technology Perspectives 2015, pages 207, (2015), available at: *https://www.iea.org/etp/etp2015/*

[3] Reuters, Global climate goals 'virtually impossible' without carbon capture: IEA, (2020), available at: *https://www.reuters.com/article/us-iea-carboncapture-idUSKCN26F0IB*

[4] Environmental Protection Agency, Geologic Sequestration of Carbon Dioxide – Underground Injection Control (UIC) Program Class VI Implementation Manual for UIC Program Directors, (2018), available at: *https://www.epa.gov/sites/default/files/2018-01/documents/implementation_manual_508_010318.pdf*

that exists in the pore space of the rock and through mineralization (where the CO_2 interacts with the rock) forms a solid mineral. The combination of the cap rock, solution trapping, and mineralization are effective mechanisms to permanently trap CO_2.[5]

We thank the Task Force for the opportunity to comment and stand ready to serve as a resource or provide any further detail on these comments or the reasoning behind them.

Submitted this 10th day of October 2021.

/s/ Andrew Place
U.S. State Energy and Climate Policy Director
Clean Air Task Force
aplace@catf.us
412-522-3654
114 State Street
Boston, MA 02109

[5] Geologic Storage is Permanent: An FAQ with Bruce Hill, (2021), https://www.catf.us/2021/03/geologic-storage-is-permanent-faq/

CONSUMER ENERGY ALLIANCE
THE VOICE OF THE ENERGY CONSUMER

October 8, 2021

Climate Initiative Task Force

To Whom It May Concern,

On behalf of Consumer Energy Alliance (CEA) and our membership across Louisiana, we write today to share our comments on the Climate Action Report and recommendations to continue to reduce Louisiana's greenhouse gas emissions furthering environmental goals, while still meeting the state's energy needs.

Founded in 2006, CEA is a nonpartisan, nonprofit organization advocating for balanced energy and environmental policies and responsible access to resources. CEA represents virtually every sector of the U.S. economy – from the iron and steel industry to truckers, airlines, agriculture, labor organizations, restaurants, chemical manufacturers, small businesses, and families all across the nation – that are concerned about U.S. energy policies, energy security and affordability, environmental stewardship, and long-term price and supply reliability. CEA has more than 550,000 individual members and almost 350 academic, non-profit, corporate, and union affiliates throughout the United States. Our members support a rational, all-of-the-above energy policy that utilizes all of our domestic natural resources – both traditional and renewable – while ensuring aggressive environmental protections and solutions are put in place.

As the Climate Initiative Task Force continues to look at options to reduce greenhouse gas emissions, carbon capture utilization and storage (CCUS) should be considered as an important player in the energy evolution. CCUS is a proven process and technology that helps reduce carbon dioxide (CO_2) emissions while allowing us to maintain our ability to meet our constantly growing energy needs. CCUS is a method in which CO_2 is captured from industrial sources, transported to geological storage sites or used as an injectant in enhanced oil recovery from existing wells or to make other products. In either case, the CO_2, which would otherwise be released into the atmosphere, is geologically sequestered deep below the Earth's surface.

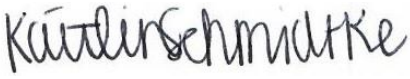
Louisiana has unique geology that allows for sequestration. The state also has substantial existing pipeline infrastructure that can be utilized for transportation of CO_2 to be sequestered or utilized. Louisiana has an existing and skilled workforce that can work to add to the existing pipeline infrastructure to accommodate additional CO_2 infrastructure.

As the Task Force continues to identify opportunities to reduce greenhouse gas emissions and advancing its climate goals, CCUS is a viable and exciting option to consider that will have significant potential benefits for consumers. CCUS allows for continued energy production to meet the critical needs of the state while also balancing with environmental progress.

Thank you for your consideration.

Sincerely,

CONSUMER ENERGY ALLIANCE
THE VOICE OF THE ENERGY CONSUMER



Kaitlin Schmidtke
Executive Director- Gulf of Mexico
Consumer Energy Alliance

MORGAN CITY HARBOR AND TERMINAL DISTRICT
7327 Highway 182 . P. O. Box 1460 . Morgan City, LA 70381
TELEPHONE (985) 384-0850 . FAX (985) 385-1931
Email: office@portofmc.com . www.portofmc.com

October 8, 2021

LA Climate Initiatives Task Force
climate@la.gov

Re: Revised Draft Partial Final Report and
Draft Strategy & Action Portfolio for
LA Climate Action Plan

The Port of Morgan City, located at the intersection of the Atchafalaya River and the Gulf Intracoastal Waterway, is known as the birthplace of the offshore oil exploration industry where the first well was drilled out of sight of land south of Morgan City in 1947. Businesses at the Port of Morgan City provided oilfield service and support for many years, and many continue to do so today. However, due to a highly-skilled workforce, they have also been successful in diversifying their activities. Some have even had the opportunity to provide components for the offshore wind industry.

The Port of Morgan City is also home to the LA Shrimp and Petroleum Festival which is a celebration of community where two seemingly different industries, shrimp and petroleum, worked together to provide a flourishing economy dependent upon our waterways. Just as the balance of shrimp and petroleum industries supported our local economy, the Port of Morgan City is poised to support a balance of renewable energy and oil and gas activities.

It is possible to have both a robust oil and natural gas industry that creates jobs and economic opportunity alongside a healthy and sustainable environment to live and work for generations. Louisiana's oil and natural gas industry is already leading the way to reduce and manage carbon emissions. The natural gas and oil industry is committed to addressing climate challenges while also supplying the affordable, reliable energy our country counts on every day. In Louisiana, we can successfully balance economic opportunities and environmental benefits.

One strategy supported by the Port of Morgan City is the inclusion of Industrial Decarbonization Technologies specifically Carbon Capture Storage (CCS) as a part of the Louisiana Climate Action Plan as a viable and important technology for reducing Louisiana's industrial emissions

as Louisiana has the ideal geology for sequestration. Investing in technology and innovation, such as carbon capture, supports our goals of meeting the world's growing need for energy while also advancing a lower-carbon future.

Deployment of carbon capture provides a viable pathway for the decarbonization and continued operation of key industrial, manufacturing and energy facilities, thereby avoiding plant closures and the offshoring of jobs and livelihoods. If appropriate policies and regulations are put in place, CCS could generate new jobs, protect current jobs, and reduce emissions at a lower cost to society than many other widely available technologies.

It's important for the Task Force to consider the technological advancements that the industry has made to provide clean energy over the past few decades. It is critical that the nation press forward continue to lead the world in energy production and environmental progress –while we ensure safe, affordable, and reliable energy for all Americans.

Louisiana's robust energy industry must be part of that balanced equation!

Very truly yours,

Raymond M. "Mac" Wade
Executive Director

Draft, Partial, Final Report

PosiGen Redline Version on Relevant Sections.

Glossary of Terms and Acronyms

Mitigation: Generally, the reduction of something harmful or the reduction of the severity, seriousness, or painfulness of its harmful effects. In the climate context, mitigation refers to efforts to avoid and reduce the emission of GHGs

ECONOMIC OPPORTUNITIES

In recent decades, Louisiana has found economic benefits from aggressively taking action against the coastal crisis.[67] Just as investment in the state's coastal program has created expertise and experience for Louisiana businesses to export around the world, state investment and leadership in the work of GHG emissions mitigation and in a low-carbon economy could also provide significant economic opportunities to the people of this state--creating and mobilizing new technologies in clean energy, batteries, hydrogen electrolysis, carbon capture, and direct air capture will create millions of new jobs globally.[68]

One area of considerable job growth and economic opportunity is in renewable energy. A dramatic drop in costs for solar energy and onshore wind have helped lead investments in renewable power across the country. Interest in solar development is growing inside the state[69] and Louisiana is working with the Bureau of Ocean Energy Management (BOEM) to complete the necessary steps to hold a lease sale in the Gulf of Mexico for offshore wind power production. According to the National Renewable Energy Laboratory, Louisiana ranks fourth in the nation for offshore wind technical potential[70] and a single offshore wind project could create 4,470 construction jobs and 150 full time operations jobs.[71] In addition to offshore wind deployment, Louisiana is well positioned to be a manufacturing and servicing hub for offshore wind being proposed and implemented across the U.S. In fact, Louisiana companies were integral to the design, fabrication, and construction of the nation's first commercial offshore wind farm in Block Island, Rhode Island.[72]

Reducing net GHG emissions is also an impetus for greater investment in the state's coastal master plan. By constructing projects to restore coastal ecosystems, we can adapt to the impacts of climate change and sequester CO_2. Through a Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States (RESTORE) Act planning grant, CPRA and the TWI will examine in more detail the carbon capture potential of coastal ecosystem restoration known as "blue carbon." Information will be developed about current coastal carbon storage conditions, how coastal restoration could influence those conditions, and the modeling tools and markets available to assess and support coastal carbon capture.

Finally, the work of the CITF is presenting the state with an opportunity to address the challenges of a changing economy head on. Production of oil and gas has declined in Louisiana over the past several years as have the number of jobs provide by that traditionally strong industry in the state

economy. Global markets and policy decisions being made far outside of Louisiana may have continued impacts on segments of the state economy that are carbon intensive. Navigating the need and capacity for existing industries to adapt and innovate to meet the needs of a low carbon economy will be critically important for the state. This too is an opportunity to revisit and address long-standing questions about who benefits from economic growth in Louisiana and who must carry the burden of transitions. It is also an opportunity to recommit to the importance of human and environmental health for any thriving economy. As the CITF does its work, it must be vigilant in its pursuit of a more inclusive, thriving, adaptable economy that provides benefits for all Louisianans.

HEALTH BENEFITS

The public health impacts associated with GHG emissions are tremendously costly for Louisiana. In addition to the direct impacts of diseases, climate change and its impacts are detrimental to mental health. The stress, anxiety, and trauma of continued and worsening cycles of hurricanes, flooding, extreme heat, sea level rise, and coastal degradation are heavy burdens to bear. But addressing emissions through policies and programs to reduce the risks brought on by climate change can have short and long-term benefits for human health.[73]

Keeping GHG emissions in line with lower emissions scenarios by the end of the century can save thousands of lives and hundreds of billions of dollars in costs associated with health care. These positive benefits accumulate from reductions in heat intensity, infectious disease, and water.[74] Many of the processes that produce GHG emissions also release hundreds of other air pollutants that can cause serious illness and premature death. Because of this relationship, cutting GHG emissions to reduce the impacts of climate change can also mitigate other harmful impacts on human health.[75] The adverse impacts caused by these pollutants are particularly severe for elderly, children, and those with chronic illnesses and among Black and Indigenous communities. Addressing GHG emissions can also provide an opportunity to mitigate against longer pollen seasons, increased pollen production by plants, and altered degrees of allergic reaction.[76]

ADVANCING CLIMATE EQUITY

In Louisiana and around the world, climate change and GHG emissions disproportionately impact low-income, Black, Indigenous, and coastal communities. These communities are the least responsible for emissions, but bear the highest costs in health, environmental degradation, and even migration. Actions and strategies to reduce GHG emissions must be informed, designed, and implemented to prioritize and offer tangible benefits to these communities and also allow them to design, participate, and lead the envisioning and work of repairing our environment and building an equitable and sustainable clean energy future.

Without intentional policy design, Louisiana's actions to build a new, low-carbon economy will reinforce and replicate the stratification and divisions that are so fundamental to the old economy. From disasters like Hurricanes Katrina and Laura that laid bare the intertwined environmental hazards compounded by systems of historic and current racism and segregation, generational poverty, and discriminatory inequitable disaster recovery strategies, to the everyday struggles of residents in the River Parishes, to farmers and agricultural workers along our state's great rivers, and other fence-line communities, to the loss of land and community that has impacted Indigenous and long-standing communities in the coastal zone – there is no shortage of examples of the connections between climate impacts, environmental injustice, disaster, class, and race.

In spite of the challenges, low-income, Black, and Indigenous communities are crucial to Louisiana's climate future. These communities hold tremendous knowledge of the state's lands, waters, wildlife, and environment and are leaders in the implementation of GHG reductions. The CITF is developing actions and strategies with climate equity at the forefront. Commitments to equity are reflected in the composition of the CITF and the supporting committees and in the conversations taking place in their meetings. In addition, an equity advisory group was formed to specifically consider the potential outcomes of policy proposals for advancing or negating progress toward a more equitable society. A definition of climate equity was created, and criteria were developed to help measure each proposed policy's potential impact on the three equity fundamental objectives.

By intentionally moving considerations of climate equity to the forefront, the CITF aims to ensure that the costs of mitigation or adaptation actions do not to fall unequally on the already disadvantaged and that this opportunity to use climate mitigation and adaptation to address long standing historical inequities is fully realized. This work begins with the CITF but will continue for years to come.

DRAFT Portfolio of Climate Strategies and Actions

PosiGen Redline Version on Relevant Sections.

Clean Energy Transition

STRATEGY 1. Shift towards a clean, renewable, and resilient power grid

ACTION 1.1 Adopt a Renewable and Clean Portfolio Standard and create a statewide market for Renewable Energy Certificates

Renewable and Clean Portfolio Standard is a law or regulation that would require electricity used in Louisiana to be generated from an increasing percentage of renewable (naturally replenishing with no GHG emissions; e.g., solar, wind, and geothermal) or clean (generation emits little to no GHGs; e.g., nuclear, biowaste and natural gas with carbon capture) sources. Power generation facilities reliant on carbon capture technology must capture at least 95% of facility emissions to qualify as clean energy. A Renewable and Clean Portfolio Standard would require that by 2030, 50% of electricity generation is renewable and clean, by 2035, 75% of electricity generation is to be generated from renewable and clean resources, and by 2040, 100% of electricity would need to be generated from renewable and clean resources, with at least 80% from renewable resources. To support a Renewable and Clean Portfolio Standard, Renewable Energy Certificates play an important role in accounting, tracking, and assigning ownership to renewable electricity generation and use. Renewable Energy Certificates are market-based instruments that represent the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. This action proposes engagement of the Louisiana Public Service Commission (LPSC), Louisiana Legislature, utilities, and stakeholders to develop a Renewable and Clean Portfolio Standard and a statewide market for Renewable Energy Certificates by 2023. If the LPSC fails to open a rulemaking of the Portfolio Standard by January 2022, then the responsibility will fall to the LDEQ to write standards and set up a Cap-and-Trade system. *(Associated Submitted Action Proposals: 56, 172, 145, 152)*

Action 1.1.1 Create a consumer-based Renewable Energy Credit system

Customers that invest in solar power for their homes or businesses are currently treated like energy producers by the state's Net-metering rule. If the NEM rule is not reversed to fairly compensate these customers, then the state will adopt a consumer-based REC system to allow small solar producers to aggregate their renewable energy production. A REC is defined as 1MWh of renewable energy, since consumer-based systems produce renewable energy on a kWh basis, then the system should allow for smaller credit amounts.

ACTION 1.2 Improve electric generation resource planning and procurement to streamline the retirement and replacement of energy resources

Utilities plan for future electric generation needs through integrated resource plans, or IRP's. IRP's identify future needs and different types of resources a utility can use to reliably serve Louisianans. Over the next decade, Louisiana's electric utilities will be undergoing a rapid transition from predominantly fossil fuel generation to renewable resources coupled with battery storage and new natural gas generation facilities necessary to ensure grid reliability. Where appropriate, the electric utility industry will move away from constructing large base load power stations towards smaller, more distributed generation facilities

strategically located to enhance grid reliability and achieve emissions reductions. This action proposes working with the LPSC to evolve the IRP and regulatory process to accommodate the dynamic nature of the transition and to expedite renewable energy procurement in a way that will improve competition, reduce ratepayer costs, and improve Louisiana's air quality. Specific recommendations include: establishing a price per ton of carbon that must be included in utility IRP planning to streamline and even the playing field between utilities, requiring Cooperative utilities to create a climate mitigation plan since they are exempt from the IRP process, amending existing Market Based Mechanism to require all-source competitive solicitation and loading order rules, considering a limited exemption from the 1983 certification order for new generation projects up to 50 MWs that are replacing existing capacity with zero emissions generation, considering exempting electric utilities from the LPSC Market Based Mechanism Order requirements for additions of replacement capacity of 100 MW or less with zero emission generation, and accounting for climate projections and impacts in resource planning. *(Associated Submitted Action Proposals: 114, 116, 117)*

ACTION 1.3 Accelerate the decommissioning of coal and older natural gas-fired power generation

As utilities in Louisiana look to transition their generation portfolio toward more zero-carbon generation resources, they are analyzing the benefits to customers that could be realized from deactivating legacy generation resources sooner than had historically been planned. Deactivation of coal and older natural gas fired generation will eliminate the GHG emissions provided by those facilities and lead to an overall reduction in GHG emissions when those generation sources are replaced by renewable or more efficient generation resources. Transitioning away from older inefficient fossil fuel generation will also reduce other criteria pollutants and hazardous air pollutants. The deactivation and retirement of older

generation resources, particularly on an accelerated basis, typically has impacts on customer rates; this impact can vary depending on the specific circumstances involving the generation resource as well as the level of investment that was required to maintain operation of the resource to provide reliable service to customers. This action would encourage utilities to continue to work with the utilities' stakeholders, customers, and local communities to analyze the costs and benefits of these early deactivations while working with the LPSC to provide the appropriate framework to address the necessary rate effects of such deactivations. *(Associated Submitted Action Proposals: 112)*

ACTION 1.4 Reduce energy usage by adopting an Energy Efficiency Resource Standard (EERS)

Improving energy efficiency for all users lowers GHG emissions and brings down the overall need for electricity generation, including the most expensive and carbon intensive peak generation, which has the added benefit of defering the need to build new power plants thereby offsetting electric rate increases. Reducing energy usage per home and building also lowers electricity bills that has a proven benefit to boosting local economies. Further, decreasing consumption has a direct impact on health by lowering air pollutants associated with electricity production. This action proposes the engagement of the LPSC, Louisiana Legislature, utilities, and stakeholders to implement an Energy Efficiency Resource Standard directing all electric and gas utilities subject to their jurisdiction to reduce energy sales based on 2019 levels 20% for electric utilities and 6% for gas utilities by 2030. The EERS will be included in the IRP proceedings. Efficiency programs to support meeting this standard would be available to all customer types and include programs specifically targeted to low-income and renter residents. *(Associated Submitted Action Proposals: 16, 119, 162)*

ACTION 1.5 Publish "climate rankings" for electric utilities to increase public awareness, transparency, and accountability

Customers of electric utilities should have easy, understandable access to information about where and how their electricity is produced and how that power mix changes over time. This action proposes engaging with

the LPSC and regulated utilities to develop a climate scorecard and real-time dashboard that synthesizes data on the diversity of a utility's generation portfolio, including load, energy mix, and renewables forecasting, as well as carbon dioxide (CO_2), methane, and other emissions. Further, the rankings will include a consumer-based renewable energy score to compare the ease of solar adoption among the different utilities'Scorecard information would compare utility data and trends to other utilities around the state and the nation. The scorecard should be updated annually. *(Associated Submitted Action Proposals: 108, 115)*

STRATEGY 2. Increase renewable electricity generation and access for all users

ACTION 2.1 Authorize tax incentives for residential, commercial, and community-based renewable energy installation and storage

Financial incentives for renewable energy installation and storage at household and commercial scales, particularly solar (electricity and water heating), are important for ensuring equitable access to renewable energy across Louisiana. Similar tax incentives created by the Louisiana Department of Revenue have been employed in the past and this action would reinstate an updated program to provide a tax rebate (e.g., 30% or number of kW installed) based on the cost of installation with a cap per household/project and an annual budget limit for the state. The rebate will be available to low-income households for solar and battery installation. The Legislature will create a process by which companies will be eligible for the credit if they have been in operation for a minimum of 2 years. This action would also explore tax incentives or credits to promote and support community-owned solar installations. Community solar refers to local solar facilities shared by multiple community subscribers who receive credit on their electricity bills for their share of the power produced. The primary purpose of community solar is to allow members of a community the opportunity to share the benefits of solar power even if they cannot or prefer not to install solar panels on their property. If this action is implemented, it will be important to ensure that this program is accessible for low/moderate income homeowners through mechanisms such as "carve-outs", availability for community solar, and other non-ownership models, pairing with other incentives, targeted messaging, and outreach. *(Associated Submitted Action Proposals: 113, 147, 126)*

ACTION 2.2 Enable on-bill financing for customers to pay for investments in clean energy, infrastructure, and efficiency upgrades through their utility bill

On-bill financing models allow utilities to incur the upfront costs for customers who upgrade to renewable/clean energy production (e.g., solar) and add additional facilities, electrification measures, demand response devices, and energy efficiency upgrades. Under this model, customers pay for these investments over time through monthly charges on their utility bill. This action proposes working with the LPSC and utilities to enable, design, and implement an on-bill financing program for Louisiana customers that is accessible, cost-effective, and inclusive of consumer protections. *(Associated Submitted Action Proposals: 79, 175)*

ACTION 2.3 Establish utility green tariffs

Green tariffs are optional programs offered by utilities that allow customers to purchase renewable power from specific projects through a special utility tariff rate (fee structure). Opting to pay a green tariff for renewable energy helps customers meet sustainability targets and helps promote the development of additional renewable energy generation projects sooner. This action would include working with the LPSC to establish tariff offerings for renewable power for residential, commercial, and industrial customers through a Utility Green Tariff program. The dollars collected by the utility under the tariff will be spent on the rate class that raised the financing. For example, money raised by residential customers that opted in for the green

tariff, will be spent on low-income residential or community solar and battery storage programs. *(Associated Submitted Action Proposals: 111, 118, 175)*

ACTION 2.4 Enable and promote the use of renewable Power Purchase Agreements (PPAs)

Power Purchase Agreements (PPAs) are long-term contracts between energy customers and renewable energy developers that allow purchase of renewable energy at certain volumes and prices. Renewable energy developers design, permit, finance, install, operate, maintain, and own a renewable energy project. Basic co-benefits of PPAs are two-fold: 1) customers that enter PPAs can avoid the up-front capital costs of installing a renewable energy system while still increasing access to renewable power; and 2) developers get revenue certainty that helps to finance the renewable energy project. Physical PPAs require renewable energy developers and customers to be located within the same electricity market and provide for the physical transfer of electricity from the generator to the customer. Virtual PPAs are purely financial arrangements where customers do not receive electricity directly from the renewable project but do receive Renewable Energy Credits, and this does not require the renewable energy project and the customer to be in the same electricity market. This action proposes working with the LPSC to allow for physical PPAs and virtual PPAs. *(Associated Submitted Action Proposals: 11, 47, 144)*

ACTION 2.5 Redesign and expand property-assessed clean energy (PACE) financing

This action provides a voluntary avenue for home and business owners to finance energy efficiency and renewable energy projects for their property through property-assessed clean energy (PACE). The types of projects typically included under PACE include energy efficiency improvements (e.g., insulation, weather sealing, high-efficiency water heaters) as well as solar and other on-site renewable energy and battery storage systems. This program covers the up-front cost of qualified energy improvements with financing from a local government and then spreads the repayments over a longer period such that the costs of these energy improvements would be distributed over the lifetime of the project. This action proposes working with the Louisiana Legislature and local governments to redesign, enable, and expand PACE in Louisiana. This includes education and outreach to developers, realtors, mortgage lenders, title companies, appraisers, and homeowners as well as streamlining and consistency of practices among actors. *(Associated Submitted Action Proposals: 146)*

ACTION 2.6 Reinstate full retail credit net metering for solar energy system owners and virtual net metering for community solar participants

Many on-site (e.g., rooftop) solar energy system owners produce more electricity than they consume. Net metering is a billing mechanism that provides these customers with credit for the energy they add to the grid, and customers are then only billed for their "net" energy use. Virtual net metering applies similarly to the electricity bills of subscribers of community solar projects. When a solar system is built at a school, grocery store, or other consolidated site in a community, residents can choose to share that solar system through partial ownership or "subscription." Net metering helps financially justify the cost of solar system installation thereby increasing demand for solar energy and creating jobs for those in the solar industry. The increased use of distributed solar energy also helps smooth the demand curve for electricity allowing utilities to better manage their peak electricity loads. This action includes working with the LPSC to reinstate full retail credit net metering for solar energy system owners and establish full retail credit virtual net metering for community solar, with special attention paid to underserved and overburdened communities. In order to move this action forward, there needs to be a clear distinction between a "personal use solar system" and a "net solar energy exporter." For residential customers this limit is a 20 KW system, and for commercial it is a 10 MW system. The Legislature or other independent body will commission a new cost benefit analysis to guide the next round of NEM rule-making at the LPSC. *(Associated Submitted Action Proposals: 57, 126, 164)*

ACTION 2.7 Establish an Emission Reduction Generation and Supply (ERGS) program

Reduction of uncontrolled combustion flaring from the industrial sector and conversion of energy otherwise wasted into electricity or heat via Combined Heat and Power (CHP) could provide a source of energy for other uses. Allowing excess co-generated power from industry to be purchased by public utilities while building capacity for CHP at multiple scales can help maximize efficiency of energy production. This action would request the LPSC establish an Emission Reduction Generation and Supply (ERGS) program that would authorize industry or other third parties to generate, share and/or transfer power from emission-reducing sources (e.g., CHP, battery storage, on-site renewable energy generation, waste- heat generation) through privately-owned transmission infrastructure without classifying the energy resource owner as a regulated electric public utility. This action would incentivize industrial customers to build larger-scale reduced-emissions energy resources by allowing them to share the electricity produced. *(Associated Submitted Action Proposals: 43, 52, 89, 124, 160)*

Industrial Decarbonization

STRATEGY 3. Monitor, inventory, certify, and support industrial decarbonization

ACTION 3.1 Require self-reporting carbon intensity audits for industrial facilities to develop a state carbon intensity database

To accurately monitor the impact of actions in this Climate Action Plan on GHG emissions from the industrial sector, Louisiana first needs to establish a baseline of current emissions on a facility-by-facility basis. This action proposes mandatory, self-reported energy and carbon-intensity audits from all industrial facilities and would provide a mechanism (e.g., a carbon intensity database) in which state-wide data can be stored and made publicly available. A carbon intensity database would build upon existing publicly available datasets generated by the U.S. Environmental Protection Agency (EPA) Greenhouse Gas Reporting Program, Title V Clean Air Act Permit Information, and others. Under this action, the Louisiana Department of Environmental Quality (DEQ) would compile and calibrate existing data, ensure all facilities submit reports, update the database annually, and partner with the Louisiana State University Industrial Assessment Center (LSU-IAC), University of Louisiana's Energy Institute of Louisiana, and Louisiana Department of Natural Resources (DNR) to complete assessments for energy reduction. The Governor's Office, state agencies, federal partners, industry, utilities, and environmental stakeholders would be able to use this database to ensure continual progress is made towards emission reduction. *(Associated Submitted Action Proposals: 51, 108, 140)*

ACTION 3.2 Develop an Industry Certification Program for GHG emission reduction activities

Louisiana's emission profile is comprised of various industries each with unique operations and needs, therefore approaches to GHG emission reduction must be flexible to accommodate varying industries. This action would establish a voluntary Industry Certification Program for industries to propose and implement site-specific GHG emission reduction plans to meet emission reduction goals. Site-specific plans would then be approved by the certifying agency with annual certification required to monitor real reduction in GHG emissions and maintain benefits of program participation. This action proposes that DEQ would be the certifying agency and would develop criteria and actions for program participation and certification in partnership with the public. DEQ would monitor and certify GHG emissions reductions rather than specific actions. A participation fee to participate in the Industry Certification Program would cover costs to increase staff capacity, allowing the program to become self-funding and income-generating. Similar programs have been successfully implemented in California and Texas alongside the EPA Natural Gas STAR Program. *(Associated Submitted Action Proposals: 62)*

ACTION 3.3 Develop a statewide comprehensive framework to reduce industrial GHG emissions

This action proposes DEQ and DNR jointly develop a statewide framework to achieve and enforce industrial emissions reductions, prevent waste from new and existing sources, and attract clean energy industry to the state. The framework should incorporate actions expressed in Louisiana's Climate Action Plan and strategic engagement with other state agencies, federal partners, industry, and environmental advocates to ensure a comprehensive approach is developed, implemented, and provides a tool for accountability. *(Associated Submitted Action Proposals: N/A)*

ACTION 3.4 Increase capacity for Industrial Assessment Centers (IACs)

The U.S. Department of Energy (DOE) financially supports IACs across the nation, with a local program at LSU. The LSU- IAC is a team of university-based faculty and students that provide no-cost assessments to small and medium sized U.S. manufacturers to identify potential cost savings from energy efficiency improvements, waste minimization and pollution prevention, and productivity improvement. This action proposes the state work with the U.S. DOE to increase funding for the LSU-IAC so that it can provide extensive no-cost assessments and ad-hoc advice to industry, the DNR State Energy Office, and the Governor's Office in implementing actions of Louisiana's Climate Action Plan and the DEQ-DNR statewide regulatory framework. IACs would partner with the DNR State Energy Office to convene stakeholder groups of small and mid-sized industry to develop strategies for meeting actions of the "Industrial Decarbonization" section of this Climate Action Plan. *(Associated Submitted Action Proposals: N/A)*

ACTION 3.5 Initiate a regional cap-and-trade program for GHG emissions and direct proceeds toward the advancement of strategies in the Louisiana Climate Action Plan

Cap-and-trade programs establish a declining limit on major sources of GHG emissions (a mandated "cap") and creates a powerful economic incentive for investment in cleaner, more efficient technologies. Under these programs, emissions allowances are purchased and sold by emitting entities (creating a market to "trade" allowances). This action proposes the Louisiana Legislature authorize DEQ to work with peer agencies in Texas, Oklahoma, Arkansas, Mississippi, Alabama, and Florida to establish a regional cap-and-trade program for GHG emissions from electric and gas utilities, industry, and other large GHG emitters. Proceeds from the sales of emissions allowances would be used to support incentive programs for the equitable expansion of renewable energy deployment, electric vehicle adoption, weatherization and energy efficiency programs, workforce transition, climate change adaptation, and other goals established by the Louisiana Climate Action Plan. *(Associated Submitted Action Proposals: 8, 48, 53, 173)*

STRATEGY 4. Improve efficiencies in and modernization of industrial processes and facilities

ACTION 4.1 Set Industry Efficiency Standards

Efficiency is the foundation of industrial decarbonization, which not only can reduce GHG emissions immediately but can also lower energy cost, mitigate risk, increase competitiveness, and make electrification more feasible. Near-term modifications to procedures and behaviors can be achieved while incurring little expense and prioritizing investments in modernized technologies. To meet Louisiana's energy efficiency target, this action proposes that the state both incentivizes and requires increased efficiencies through Industry Efficiency Standards (e.g., BTU per unit output) or pollution standards (e.g., CO_2 per unit output) established by DNR and DEQ. Standards would be minimum allowable criteria for existing and new facilities based on specified metrics, such as equipment, fuels, or per-unit-of-production basis. *(Associated Submitted Action Proposals: N/A, EI citation)*

ACTION 4.2 Develop and implement a Strategic Energy Management Program

Strategic Energy Management (SEM) approaches efficiency through direct engagement with manufacturers to identify sources of significant energy use, implement efficiency measures, and track progress toward implementing energy efficiency standards. This action proposes the establishment of an SEM Program in Louisiana's DNR Energy Office that would ensure continual energy improvement is integrated into the culture of facility management. The SEM Program Manager, partnering closely with IACs and universities, may fund pilot projects that deploy efficient technology and assist manufacturers in meeting Industry Efficiency Standards. Through an SEM Program, DNR and DEQ would also develop a strategic engagement plan to partner with major and minor energy users as an opportunity to discuss and work through concerns, limitations, and feasibility of various methods to improve efficiencies. Working alongside manufacturers and IACs and universities, an SEM program may conduct studies on carbon intensity, life cycle accounting, competitiveness, resilience, and the impacts of energy-intensive industry for various processes to guide decisions, track progress, and set further standards. *(Associated Submitted Action Proposals: n/a (citation 1, citation 2)*

STRATEGY 5. Accelerate industrial electrification, switching to low- or no- carbon fuels and low- or no-carbon feedstocks

ACTION 5.1 Invest in infrastructure to support industrial-scale electrification

Electrification has the potential to cut industrial emissions in half as numerous industrial technologies and processes that rely on compressed air, steam, and heat can be electrified today. Electrification hinges on the ability of utilities and other power providers to generate adequate amounts of affordable, clean energy to provide to industries (Steinberg, ACEEE). This action proposes the DNR Energy Office partner with utilities, the LPSC, and industry to incentivize transmission buildout, grid updates, and planning for electrification to increase access to clean energy around clusters of industrial facilities in Louisiana. This buildout would allow industry and customers to contract renewable power competitively, identify and purchase renewable energy, and allow new industry to contract with utilities for renewable energy. *(Associated Submitted Action Proposals: 29, 71, 73, 139)*

ACTION 5.2 Demonstrate electrification of industrial processes and equipment through pilot projects

Replacing combustion-fueled technologies with electrification within an industrial facility directly reduces carbon emissions. If the source of the electricity (e.g., from the power grid) is from renewable energy sources or from less carbon- intensive process than was originally used at the facility, the result is reduced GHG emissions. Technology currently exists to electrify many types of systems and processes within industrial facilities, but the economic and practical feasibility of this technology has not been widely demonstrated. This action would include the development of pilot projects to electrify systems within Louisiana industrial facilities (e.g., building systems and motors) to explore economic feasibility and demonstrate the potential for more widespread implementation. *(Associated Submitted Action Proposals: N/A)*

ACTION 5.3 Enact incentives that enable and encourage accelerated electrification

Electrification has extensive potential to reduce GHG emissions of the industrial sector. For example, electrification in manufacturing can increase efficiency by reducing thermal and material waste and can improve overall product quality. However, given the low cost of alternative fuel sources (e.g., natural gas), electrification is unlikely to be driven by economics alone. This action proposes the DNR Energy Office partner with industry and utilities to determine roadblocks for electrification and work with other state partners to develop effective incentives to encourage a clean energy transition for industrial users. The

incentives would be based on criteria that prioritize communities most closely impacted by industry and where explicit pollution reduction co-benefits have been identified. Applicants seeking to take advantage of these incentives would be required to reapply through DNR each year to ensure compliance with established criteria. *(Associated Submitted Action Proposals: 29, 63)*

ACTION 5.4 Promote low-carbon alternatives for high-temperature industrial processes

Industrial feedstocks (unprocessed materials used to supply a manufacturing process) have traditionally been petroleum, natural gas, and their derivatives. Natural gas is also widely combusted in Louisiana to achieve high temperatures for chemical manufacturing and petroleum refining. Low-carbon substitutes can replace energy-dense fuels that manufacturers currently rely on to achieve the high temperatures needed in many industrial processes, especially for refining and chemicals manufacturing. Electric furnaces for temperatures above 350°C are in development but not yet technologically mature for industrial use. Therefore, fuel switching from natural gas and other fossil fuels to low-carbon or renewable fuels (e.g., renewable natural gas, hydrogen, and biofuels) is the most necessary and next less carbon- intensive option. This action proposes tasking the DNR Energy Office and the IACs to explore which less-intensive carbon fuels could be used as alternatives in different processes and then incentivizing industry to switch fuel sources to lower- carbon options. As a result, IAC assessments and the proposed DEQ Certification Program would recommend and incentivize low-carbon fuels for industrial heat processes that cannot currently be electrified. *(Associated Submitted Action Proposals: 12, 107, 125, citation)*

ACTION 5.5 Invest in research, technology, and infrastructure to produce renewables-powered bulk chemicals

Louisiana is one of the largest producers of bulk chemicals, like ammonia, in the country, and chemical manufacturing accounts for over half of Louisiana's industrial GHG emissions. The bulk chemicals are often intermediate products used to create end products like plastic containers or fertilizer. To reduce emissions from this industry, this action proposes that the state support investments in next generation low or no carbon bulk chemicals, created from renewables-powered electrochemistry (e.g ammonia produced from green hydrogen) captured CO2, or biogas. This action also proposes studies of whether additional infrastructure as well as studies of potential climate and air quality impacts from further development of green and non-green bulk chemicals. *(Associated Submitted Action Proposals: 6, 51)*

ACTION 5.6 Support the safe and equitable deployment of carbon capture, utilization, and storage (CCUS) for high-intensity and hard-to-abate emissions

Carbon capture, utilization, and storage (CCUS) is a suite of technologies that can play a significant role in GHG emission reduction. Carbon capture can use a variety of techniques to remove emissions from industrial and power production operations post-combustion. With expansive geologic storage potential, highly concentrated industrial corridors, and a trained workforce, Louisiana has potential for deployment of this technology and infrastructure. For processes unable to be made efficient, electrified, or fuel switched, CCUS may be pursued. This action proposes the state continue to work with federal and state partners and industry to determine potential sites for storage, to identify a regulatory and legal framework that supports CCUS, and to determine impacts of capture and transport infrastructure buildout. Further actions in section "Safe and Resilient Energy and Infrastructure for Tomorrow's Needs" outline specific areas for impact analysis prior to permitting and deployment of infrastructure. *(Associated Submitted Action Proposals: 7, 45, 49, 74, 155)*

ACTION 5.7 Invest in research for utilizations of captured carbon and life cycle analyses to understand their overall impact

The capture and use of carbon dioxide to create valuable products has potential to lower the net costs of reducing emissions and remove CO_2 from the atmosphere. This process of utilization refers to the use of CO_2

directly or as a feedstock in industrial or chemical processes, to produce valuable carbon-containing products, where CO_2 can generate economic value. Utilization technologies are still nascent in form and barriers to implementation remain, so more funding is needed to research and pilot various techniques. This action proposes that DNR would partner with universities to more comprehensively understand and study the various utilization techniques and their applicability and feasibility to reduce emissions in Louisiana industries. *(Associated Submitted Action Proposals: n/a)*

STRATEGY 6. Promote reduced-carbon materials

ACTION 6.1 Develop a "Buy Clean Louisiana" policy for procurement of materials with lower carbon footprints for use in public construction projects

Adoption of a "Buy Clean Louisiana" policy incentivizes the use of building materials (e.g., concrete and steel) that are manufactured through lower carbon intensity processes to reduce the GHG emission footprint of construction. This action, spurred by Louisiana's

would require state agencies to consider embodied carbon emissions, all carbon dioxide emitted in producing materials, of industrial products when contracting for state infrastructure and non- infrastructure projects. This action would lower GHG emissions and spur further innovation in materials science. *(Associated Submitted Action Proposals: 135)*

ACTION 6.2 Explore how circular economy principles can be applied to lifecycles of products created and used in Louisiana

A circular economy is a systemic approach to economic development based around an understanding of product lifecycles. Circular economies are designed to benefit businesses, society, and the environment while promoting zero waste – where every material after use becomes the feedstock for another use. Reducing GHG emissions by implementing material waste reduction programs, providing incentives for recycling, and investing in new technologies that consider the "lifecycle" of material products (e.g., plastics) are important actions to consider when reducing overall wasted energy. This action, coordinated by DEQ, other waste management entities, non-governmental organizations (NGOs) and private industry, includes reviewing opportunities to increase efficiency in recycling practices, exploring possible incentives for industrial use of recycled materials, and identifying other opportunities for the productive reuse of waste materials in Louisiana. After exploring options, this action would direct state agencies involved in the promotion of exports of goods and materials manufactured in Louisiana to develop specific proposals to help Louisiana manufacturers better engage in global markets already moving towards circular economy principles. *(Associated Submitted Action Proposals: 72, 82, 85)*

Safe and Resilient Energy and Infrastructure for Tomorrow's Needs

STRATEGY 7. Increase the reliability and long-term resilience of tomorrow's energy infrastructure

ACTION 7.1 Support regional long-range transmission infrastructure planning

Long-range transmission planning ensures that the electricity grid can accommodate the changes occurring in the energy sector as Louisiana transitions to lower GHG-emitting sources (e.g., electrification, the growth of distributed generation, the retirement of aging or inefficient generation, offshore wind, development of

reliable and affordable energy storage). Recognizing the important role of long-range transmission planning for achieving GHG emissions reduction goals and maintaining reliable service during extreme weather events, the Office of the Governor will join with the LPSC as an active participant and stakeholder in Louisiana's two regional transmission organizations, the Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP), to accomplish this action. This action would also ensure connectivity between the MISO and SPP infrastructure through operational agreements that manage joint coordination of transmission upgrades. *(Associated Submitted Action Proposals: 122, 123, 165)*

ACTION 7.2 Strategically plan for and foster the development of resilient microgrids

Microgrids are localized "islands" of electricity generation that can be isolated from the larger macrogrid. This action, involving the Governor's Office of Homeland Security and Emergency Preparedness, Louisiana National Guard, the LPSC, and other stakeholders, would involve collaboration to plan implementation of microgrids for strategically important entities and underserved communities to build resilience against increasing natural disasters. This action may initially implement pilot projects for strategic assets in the near-term with the intention of broader deployment of microgrids to improve the resilience of other municipalities or user groups over the long-term. *(Associated Submitted Action Proposals: 176)*

ACTION 7.3 Adopt an energy storage target

Energy storage is a necessary component of Louisiana's energy transition to ensure grid reliability and resilience. Storage enables larger quantities of and greater reliance on clean energy sources through addressing intermittency and fluctuations of solar and wind power generation. Many states, including Virginia and Pennsylvania, have enacted energy storage targets and a streamlined regulatory environment that incentivize energy storage. This action proposes the LPSC develop an energy storage target that mirrors the recommendation of the Energy Storage Association for a benchmark of 1000 megawatts within five years. This action would then require the Louisiana Legislature assemble an Energy Storage Task Force that proposes recommendations for how Louisiana will meet the target. *(Associated Submitted Action Proposals: 174)*

ACTION 7.4 Strategically plan for the development of offshore wind power

Given the availability of wind power as a potential energy resource, Louisiana's advantage as a strong offshore energy producing state, and the economic development opportunity that wind power presents, it would be advantageous for Louisiana to continue collaboration across sectors and enhancing plans for the accelerated implementation of offshore wind power generation. This action proposes strategic collaboration across Louisiana state agencies and the federal government, transmission planning agencies, energy regulators, and the private sector, to take additional steps to advance development of offshore wind power generation. Possible activities under this action would include tool development, exploring incentives, conducting research and identifying knowledge gaps, conducting stakeholder outreach, and preparing the transmission and workforce infrastructures needed to capitalize on the deployment of offshore wind in the Gulf of Mexico. *(Associated Submitted Action Proposals: 61, 101)*

STRATEGY 8. Advance an equitable, efficient, and sustainable siting and permitting process for new energy and infrastructure projects

ACTION 8.1 Increase the resources and staffing capacity of the Department of Natural Resources (DNR) to plan for, oversee, and monitor the deployment of new clean energy technologies and infrastructure

DNR's jurisdiction over utility-scale solar and wind energy on state lands and water bottoms makes the agency central in deployment of clean energy in Louisiana. This action would enable DNR or the Louisiana Legislative Auditor to guide the development of a process to assess, monitor, and make regulatory determinations on development of Carbon Capture and Storage (CCS), CCUS, and clean/renewable energy infrastructure technologies (e.g., solar farming, transmission lines, offshore wind). Specifically related to CCS and CCUS, a new and unique set of research, technology, and monitoring needs are required within DNR. Prior to the permitting of any projects, this action would require an internal audit of the deploying agency to ensure that it is adequately funded and prepared to assess, monitor, and make regulatory determinations (e.g., related to geologic storage in the development and maintenance of CCS well sites). This action also supports increased capacity of DNR to monitor potential air quality impacts, leaks at CCS well sites, complications of underground storage, and others. *(Associated Submitted Action Proposals: n/a)*

ACTION 8.2 Solicit a study to more comprehensively understand potential impacts of CCUS technology and infrastructure on communities, ecosystems, and cultural resources to inform siting and permitting deployment

With mixed feedback and perception around the deployment of CCUS, this action proposes the state review existing research and solicit one or multiple studies to understand potential risks more comprehensively for Louisiana in buildout of this emission reduction technology. The study would expressly address but not be limited to the following concerns: air quality impacts on nearby communities, increased energy intensity for different industry processes, pipeline safety implications, wetland impact of pipeline buildout, potential incidents of geologic storage. *(Associated Submitted Action Proposals: N/A)*

ACTION 8.3 Collaboratively develop regulatory frameworks and statewide siting plans for new energy technologies (e.g., solar farming, transmission lines, offshore wind, CCUS) with considerations for both climate and environmental justice

For emerging energy generation and emissions reduction technologies in Louisiana (e.g., solar farming, offshore wind, CCUS), there is opportunity to ground the permitting and siting frameworks around the Principles and Fundamental Objectives identified in Louisiana's Climate Action Plan. In anticipation of the significant investment in and deployment of large-scale low- or no-carbon technologies, this action would establish an interagency working group that, with the benefit of robust public input particularly from those who face disproportionate climate and environmental impacts, will engage in a prospective, pre-permit siting analysis. One of the primary goals of this action is to ensure that future permitting and siting decisions for the above-mentioned emerging technologies would be carried out in a coordinated manner that is consistent with the Principles and Fundamental Objectives of Louisiana's Climate Action Plan and centered on an engagement process that is inclusive of environmental impacts, environmental justice considerations, and the needs of marginalized communities. To the extent possible, this effort would seek to identify areas where the necessary conditions (solar, atmospheric, geologic, and economic) for a given technology are highest and the potential for conflicts or adverse impacts (health, environmental, economic) are lowest. *(Associated Submitted Action Proposals: 46, 92, 96)*

ACTION 8.4 Update existing permitting and facility siting practices and regulations to align with Louisiana's emission reduction goals

Currently, the construction of new and expanded industrial facilities are handled by multiple state agencies with multiple permit guidelines depending on the nature of the technology and the location of the proposed facility. Ostensibly all such decisions should be made in accordance with Article IX, §1 of the Louisiana Constitution which serves as the basis for what is known as the "Public Trust Doctrine." However varying agency priorities, regulatory nuances, and administrative or judicial decisions have led to a complex and at-times disjointed process. Additionally, siting decisions are made on a permit-by-permit basis without having

the benefit of a comprehensive statewide plan or framework. The ability of current permitting regulations to fully integrate the most recent understanding of climate impacts and environmental justice concerns is questionable. Via executive order (EO), the Governor would mandate that all facility siting decisions be made in accordance with the emission reduction goals of EO JBE 20-18. This action would include convening an interagency panel (including DOTD, DEQ, DNR Office of Conservation [OOC], DNR Office of Coastal Management (OCM), Louisiana Department of Agriculture and Forestry [LDAF], the Coastal Protection and Restoration Authority [CPRA], Department of Wildlife and Fisheries [DWF]) with the benefit of robust public input, particularly from those who face disproportionate climate and environmental impacts, with the objective to review existing regulations and permitting practices to ensure that permitting and siting decisions are climate neutral and are not exceeding the cumulative risk burden on vulnerable communities, tribal lands, or the environment. *(Associated Submitted Action Proposals: N/A)*

ACTION 8.5 Ensure energy transition does not overburden vulnerabilities communities

Based on Action 8.4, this action would enable the same interagency panel (DOTD, DEQ, DNR-OOC, DNR-OCM, LDAF, CPRA, DWF) to establish an additional set of requirements for facility expansions, new developments, and GHG-reducing activities to ensure these activities do not exceed a cumulative risk burden for negative health impacts on nearby communities. Facilities subject to this environmental and public health impact review will include major sources of air pollution, resources recovery facilities, sewage treatment plants, landfills, recycling facilities, and CCUS. *(Associated Submitted Action Proposals: 46)*

Actively Manage Methane Emissions

STRATEGY 9. Increase resources for decommissioning legacy oil and gas infrastructure

ACTION 9.1 Hold former well operators accountable for orphaned wells

Orphaned wells are abandoned oil and gas wells for which no viable responsible party can be located, or such party has failed to maintain the wellsite in accordance with Louisiana rules and regulations. Leaks from orphaned wells create a large source of methane emissions where operators are not legally held responsible after wells are plugged and abandoned. This action includes a combination of legislation and regulation by the DNR to ensure that former operators are held responsible for abandoned wells; this action would include but may not be limited to the following activities: changing the definition of "responsible party" within DNR rules to include all former operators; collecting and publishing a database of orphaned wells and responsible parties; and allowing landowners to sue responsible parties for abandoned wells. *(Associated Submitted Action Proposals: 167)*

ACTION 9.2 Strengthen financial security requirements for plugging wells

The Oilfield Site Restoration (OSR) Program created within DNR focuses on properly plugging abandoned orphan wells and restoring sites to approximate pre-wellsite conditions suitable for redevelopment. Financial security requirements are state bonds that guarantee compliance of statutes and regulations for the issuance of permits for oil and gas exploration, drilling, and plugging. Lack of funding for the OSR Program, alongside loopholes in current state law and regulation that allow operators to avoid financial security requirements, leads to a failure to plug wells. This action proposes necessary comprehensive legislative reform to raise the amount of financial security, require additional bonding for coastal wells, remove the ability of operators to use blanket securities, and require site-specific trust accounts for wells in an ownership transfer. *(Associated Submitted Action Proposals: 168)*

ACTION 9.3 Tighten the "future utility" designation and requirements for inactive wells

Under current regulation, industrial pipeline operators can classify inactive wells with a "future utility" status that indicates that the well has potential for use in the future. However, DNR's ability to grant indefinite extensions creates a higher risk for "future utility" wells to become orphaned wells and subsequently creating potential negative impacts on the environment and communities. For example, over 1500 wells have been classified as "future utility" status for over 25 years, over 400 over 50 years. Over 7000 wells are currently listed as "future utility" and have had that status over 5 years. This action, enacted by the Louisiana Legislation, would develop regulatory measures that tighten the definition and requirements of a "future utility" well designation in its application and would also limit the duration a well can remain at "future utility" status. Current "future utility" wells would be reviewed and added to the list of orphaned wells as appropriate. *(Associated Submitted Action Proposals: 169)*

ACTION 9.4 Increase funding to the Oilfield Site Restoration (OSR) Fund to plug orphaned wells

The OSR Fund is the state's largest source of funding to plug orphaned wells. As noted by the Louisiana Legislative Auditor in 2014 and again in 2020, additional funding to the OSR is necessary to address and reduce the current population of orphaned wells, and exemptions and reduced fees result in approximately $4.4 million in lost revenues to the OSR Fund. This action by the Louisiana Legislation would increase existing (and identify additional) funds for OSR, including a removal of the OSR Fund cap on OSR fees, increase of the OSR fee, removal of exemptions and reductions in fees, and increase of the orphan well surcharge by 150%. *(Associated Submitted Action Proposals: 166)*

ACTION 9.5 Provide workforce training to plug legacy wells

Current Louisiana law limits operator responsibility to initial plug and abandonment; however, even capped and plugged oil and gas wells weaken over time. Plugs are expected to last 100 years and provide limited methane mitigation, meaning that today: 1) millions of legacy wells are likely failing; and 2) all wells eventually become the responsibility of the government. For these reasons, this action proposes establishment of an Abandoned Well Pilot Program from federal and state funding that provides training and jobs for unemployed residents in Louisiana to plug orphaned wells. Initial activity of this action would include a pilot study conducted in parishes most impacted by legacy infrastructure. *(Associated Submitted Action Proposals: 131)*

STRATEGY 10. Monitor and regulate methane emissions

ACTION 10.1 Enact methane waste rules

Methane is a potent GHG and has the potential to leak or be intentionally released into the atmosphere at the wellhead where it is produced, during its transportation and distribution, and when it is being cleaned, refined, or used in the manufacturing process. Reducing these methane emissions improves the GHG footprint of activities that currently use natural gas and is an important component of improving the overall effectiveness of deploying CCUS. Waste management facilities and sites are also sources of methane emissions. This action proposes that DNR-OOC and DEQ collaboratively develop rules to require methane emitters to establish a baseline methane waste capture rate, determined by their quarterly reports, and enact methane waste rules in line with those of other states. States such as New Mexico and Colorado have recently enacted methane waste rules to eliminate this wasteful practice with support from industry and environmental groups. New Mexico requires operators to capture no less than 98% of produced gas by December 31, 2026, starting on April 1, 2022. Although not setting a strict capture limit, Colorado requires use of modern, zero-emitting (clean) components at all new and most existing facilities to limit methane emissions. *(Associated Submitted Action Proposals: 43, 89, CO, NM)*

ACTION 10.2 Establish a Methane Monitoring Program

To more comprehensively monitor emissions, this action proposes DNR-OOC and DEQ collaboratively develop programs that effectively and efficiently monitor both intentional and fugitive methane emissions. Emerging technologies, such as remote sensing and satellite imagery, alongside in-situ sensing are increasing the feasibility of continuous monitoring of methane emissions. This action would also ensure that data and maps that show regular fluxes in emissions are provided freely to the public. *(Associated Submitted Action Proposals: 76, 151)*

ACTION 10.3 Enable an effective Leak Detection and Repair (LDAR) Program

The most effective way to reduce leaks is to require frequent, and where possible continuous, monitoring. Many states have established Leak Detection and Repair (LDAR) programs, modeled after the U.S. EPA LDAR Program, to require owners and operators to find leaky and malfunctioning equipment at production facilities, compressor stations, natural gas storage facilities, and process plants, and then fix that equipment within a set time period of detection. Alongside reduced leakage, air quality and pipeline safety improvements make LDAR programs very cost-effective. Many states have established Leak Detection and Repair (LDAR) programs, modeled after the U.S. EPA LDAR Program, to require owners and operators to find leaky and malfunctioning equipment at production facilities, compressor stations, natural gas storage facilities, and process plants, and then fix that equipment within a set time period of detection. This action proposes a quarterly requirement of LDAR to ensure consistent monitoring. *(Associated Submitted Action Proposals: 91)*

Transportation, Development, and the Built Environment

STRATEGY 11. Reduce vehicle miles traveled (VMT) and increase transportation efficiencies

ACTION 11.1 Reduce idling of public fleets

Up to one gallon of fuel is burned per hour of idling, with each gallon equivalent to 20 pounds of carbon dioxide. Idle reduction technologies and practices can reduce the time that vehicle engines idle. This action proposes instituting idle reduction policies for Louisiana's 81,000 publicly owned vehicles. Implementation of this action would be supported by the use of fleet telematics software, already installed in many state-owned vehicles, to manage fuel usage and set an automatic shutoff for vehicles after prolonged idling. Coordination with the DOA alongside training for fleet managers and operators would support telematics usage and successful implementation across public fleets. *(Associated Submitted Action Proposals: 33, 100, 161)*

ACTION 11.2 Expand broadband internet access

The COVID-19 pandemic has accelerated the transition to online services, but this transition has not been widespread and accessible for all Louisianans due to limited broadband access in urban and rural areas. Expanding broadband, particularly for rural communities, can reduce overall transportation demand and therefore GHG emissions while facilitating e-commerce, telecommuting, and virtual health. This action proposes government serve as the subsurface conduit within public road rights-of-way: DOTD along state highways and local governments in their respective jurisdictions. *(Associated Submitted Action Proposals: 25)*

ACTION 11.3 Enact a state policy that allows for hybrid workplaces and telecommuting

DOTD implements a variety of Travel Demand Management (TDM) strategies designed to maximize choice while reducing travel, single occupant trips, and congestion. TDM options are funded by DOTD and

Metropolitan Planning Organizations and include biking, walking, ridesharing, public transit, and telecommuting. To further reduce regular travel demand in Louisiana, this action proposes DOA adopt a state policy that allows for and encourages hybrid workplaces and telecommuting for public workers. *(Associated Submitted Action Proposals: 81)*

ACTION 11.4 Explore short-term opportunities and incentives to increase efficiency of freight transport

This action includes research into and incentives to increase the efficiency of freight transport for inter-city and/or interstate shipment of goods. This shift led by DOTD and DOA, in partnership with Ports and private freight companies (ground, rail, and water) could include efficiency incentives, traffic optimization, shore power at ports to reduce ship idling, and feasibility research into policy or pricing tools to encourage shifting freight to lower-carbon-intensity modes of transport. This action would continue and build upon existing DOTD congestion reduction programs. *(Associated Submitted Action Proposals: 1, 33, 106)*

ACTION 11.5 Implement a state VMT reduction strategy

More efficient fuels and clean vehicles are valuable emission reduction actions but must also be accompanied by transportation mode shifting, where alternatives to automobile travel are chosen, in order to make a meaningful reduction in transportation-related emissions. To position Louisiana to encourage mode shift, this action proposes that DOTD develop a VMT reduction strategy that promotes, incentivizes, and enforces development of Complete Streets infrastructure that enables and supports safe mobility for all users inclusive of pedestrians, bicyclists, or public transportation users. Complete Streets policies should be supported, planned, and incentivized at the state, regional, and local level. The VMT strategy proposed by this action would highlight and build on partnerships with nonprofits and advocacy groups that are focused on these practices. *(Associated Submitted Action Proposals: 69, 70)*

STRATEGY 12. Accelerate adoption and accessibility of clean vehicles and fuels

ACTION 12.1 Expand availability of alternative fuels and electric vehicle charging

Increased availability of alternative fuel sources is critical to reducing GHG emissions and facilitating a smooth transition to clean transportation. This action proposes increased: motorist access to alternative fuels, efficient and sustainable fuels (including aviation), the number charging stations for electric vehicles, and investments in innovation. Dependent on both local and state-wide scales, this action is part of a broader near-term transition to clean energy for public utilities coordinated alongside state agencies (e.g., Department of Revenue, DNR, LDAF, DOTD, and LPSC), utility companies, legislative efforts, and universities. *(Associated Submitted Action Proposals: 12, 13, 22, 27, 94, 125)*

ACTION 12.2 Reduce socio-economic and geographic barriers to increase accessibility to low- and zero- emission vehicles and supporting infrastructure

As low- and zero-emission vehicles become increasingly available, purposeful steps need to be taken to ensure intentional and equitable statewide buildout of vehicle electrification infrastructure, with special attention given to underserved and overburdened communities. Anticipated federal infrastructure funding will facilitate rapid deployment of siting infrastructure, but the state must strategically plan for the buildout of charging stations to ensure equitable access. Alongside infrastructure, this action proposes that incentives for alternative fuels and low- and zero-emission vehicles be reinstated, either in the form of a state targeted incentive program or tax credit, to accelerate adoption and reduce barriers to access. This action would also include broad community outreach and education central to increased accessibility and would facilitate

transitioning behavior to take advantage of incentives and buildout of electric vehicles. *(Associated Submitted Action Proposals: 83, 137, 175)*

ACTION 12.3 Shift public fleets to clean and zero-emission vehicles

With over 80,000 public vehicles operating in Louisiana, significant GHG emissions reduction can be realized through action taken to transition state and local government fleets to low- and zero-emission vehicles and fuels. This action would set a statewide policy and goal for the transition of public fleet vehicles to clean and zero-emission vehicles and fuels; coordinate among DOTD, DOA, state agencies, and local government to update procurement policies and practices, and work with fleet managers and mechanics to provide training for vehicle maintenance. *(Associated Submitted Action Proposals: 28, 36, 41, 143, 157)*

ACTION 12.4 Begin infrastructure and technology planning to support transition of medium- and heavy- duty transportation, shipping, and aviation to clean and zero-emission

Medium- and heavy-duty vehicles weigh more than 10,000 pounds and have an outsized impact on GHG emissions.

Technical solutions for shifting these larger vehicles to clean and zero-emission fuels are less certain and less widely available than for light-duty vehicles, especially as vehicle turnover is less frequent. Comprehensive decarbonization of heavier duty transportation will also require supporting infrastructure buildout, such as retrofits to depots and fueling stations. This action proposes DOTD begin long-range strategic planning for technology adoption, fleet turnover, and infrastructure needs to support deep decarbonization of medium- and heavy-duty transportation, shipping and aviation. Specific to shipping, many international ships dock at Louisiana-based ports, so planning efforts proposed by this action would also develop emission standards for these vessels that reduce GHGs and potentially alleviate air quality hazards for communities near them. *(Associated Submitted Action Proposals: 12, 84)*

ACTION 12.5 Implement targeted pilot project and incentive programs to accelerate transition of medium- and heavy- duty vehicles to clean and zero-emission vehicles

Targeted pilot and incentive programs can encourage and accelerate a transition to cleaner heavy-duty vehicles. This action proposes DOTD, in partnership with DNR and DEQ, identify and implement targeted pilot projects and incentive programs that can make significant impact and/or test new technologies today. Such programs may include a targeted incentive program to accelerate the widespread deployment of electric yard trucks or terminal tractors, an expansion of the successful Port of New Orleans Clean Truck Replacement Incentive Program with other Louisiana Ports, and pilot program to replace diesel school buses with electric buses that can also be deployed as mobile power sources for critical facilities post-disaster. *(Associated Submitted Action Proposals: 41, 84, 137)*

STRATEGY 13. Increase urban, rural, and regional public transit service

ACTION 13.1 Increase financial support to local transit operators to increase statewide ridership

More reliable and frequent public transit is necessary to increase ridership and reduce single-vehicle trips. Increased funding for local transit service will also benefit marginalized, transit-dependent populations in urban areas and provide competitive access to economic opportunity. This action proposes that DOTD increase funding for transit operations in eligible parishes and provide greater funding of the State Transportation Plan. The state would work with federal partners to ensure more federal funding moves down to subsidize annual transit operations and allows local jurisdictions to secure funding more easily for transit locally. *(Associated Submitted Action Proposals: 95, 138)*

ACTION 13.2 Enable access to resources outside urban centers

Nearly 750,000 of Louisiana's 4.6 million residents live in rural areas. Therefore, a necessary measure to reduce light- duty vehicles on the road requires access to resources beyond urban centers and greater investment in rural transit service. This action proposes that DOTD, metropolitan planning organizations (MPOs), and local governments take a variety of measures to enable resource access: obtain smaller transit vehicles for more specialized trips, develop an on- demand ridership system, and planned trips to city centers coordinated and supported by the community. Federal funding from the infrastructure package would be prioritized for this transit buildout and for MPOs to develop on-demand public transit. *(Associated Submitted Action Proposals: 81, 95, 128)*

ACTION 13.3 Invest in regional transit to connect communities to jobs and services across Louisiana

Alongside local transit, regional connectivity can encourage greater use of public transportation. Dedicated bus lanes and high-occupancy vehicle (HOV) lanes on interstates, state highways, and major arterial roadways allow for more efficient travel on highways and urban streets. A high-speed rail between New Orleans and Baton Rouge would minimize light-duty and bus travel between Louisiana's largest cities for daily commuters. This action proposes investment from DOTD, local MPOs, local governments, and municipalities to intentionally plan and build infrastructure that supports regional transit. *(Associated Submitted Action Proposals: N/A)*

STRATEGY 14. Coordinate land use planning to reduce sprawl and support healthy and resilient communities

ACTION 14.1 Develop a statewide framework to guide resilient local land-use practices

Mitigation of the root emissions of climate change is interconnected with adaptation to the impacts of climate change, particularly as it pertains to land use and land use management. However, with many risks, vulnerabilities, and relevant ongoing initiatives throughout Louisiana, a statewide framework is needed to unify and guide holistic land use management. This action proposes the development of a land use framework that would guide a statewide authority to coordinate decision making as it related to land use, and the authority would partner with DOTD in implementation of the state's VMT reduction strategy (Action 11.5). The statewide authority would also develop an education program that demonstrates the benefit of land use practices on achieving climate goals and reducing climate risk, and would assist locals in their development of comprehensive land use plans. The framework would consider needs of different communities across the state, particularly those underserved and overburdened. *(Associated Submitted Action Proposals: 18, 40, 69, 128)*

ACTION 14.2 Encourage compact development through local trainings, incentives, tools, and model standards and ordinances

A primary land-use practice to maximize resilience and emission reduction is compact development where land is used efficiently, creatively, and intentionally. Compact development promotes risk reduction and open space conservation while encouraging reuse and retrofit of existing structures, reduced VMTs, mode shift, and energy efficiency. To work towards compact development, this action proposes the state start by convening public, private, and local nonprofit bodies that plan and design compact development, permitting, regulation, and incentives. After receiving feedback from local groups, the state would pilot promising approaches and design incentive and regulatory systems to support compact development, Complete Streets, and equitable transit access. *(Associated Submitted Action Proposals: 65, 69, 70)*

ACTION 14.3 Develop a model solar ordinance for adoption by local governments

Communities are increasingly seeing interest by the solar industry to make investments in communities for solar energy generation. However, many - if not most - local governments lack the capacity and technical expertise to develop ordinances on their own. Furthermore, lack of knowledge or misinformation about solar energy facilities may leave communities unprepared and unprotected from the impact of this type of industry and land use. The model solar ordinance developed by this action would be a tool available to local governments and contain the comprehensive policy language needed to protect properties, environments, and people, as well as guide and support solar energy investments locally. This tool would provide context, information, and capacity to local governments, increase predictability of impact, and support current and future solar energy investments that can significantly help the state transition to renewable energy. Solar industry representatives will be invited to participate in the ordinance development process. *(Associated Submitted Action Proposals: 20)*

ACTION 14.4 Align statewide transportation planning and decision making with land use planning

Transportation infrastructure often dictates how and where land is used and developed in Louisiana. To ensure compact development and other actions set forth in this section are a priority in the state, this action proposes that transportation planning align with smarter land use practices. Land use and transportation modeling tools can test land use scenarios and transportation pricing programs and should be incorporated into how decisions are made in transportation. This alignment would not only reduce VMT, allow for widespread implementation of Complete Streets, facilitate equitable access to public transit, and reduce the need for single-occupancy vehicles, but would also allow for greater implementation of green infrastructure and resilience measures to mitigate against Louisiana's flood risk. Alignment of transportation planning with smart land use would be led by the DOA and DOTD with close partnership by MPOs and local jurisdictions. *(Associated Submitted Action Proposals: 65)*

ACTION 14.5 Reduce the negative impacts of state-funded transportation projects

Major transportation projects, such as the construction of new or expanded roadways, can have multiple cascading impacts on greenhouse gas emissions as well as community resilience—from the materials used in construction to the spurring of new areas of development to inducing more vehicle miles traveled. This action would require that proposals for medium- to large-scale state-funded transportation projects include an analysis by DOTD of their climate impacts, including induced greenhouse gas emissions as well impacts on community resilience to future weather events. Tools developed by DOTD for this analysis would be made freely available to Parish and municipal governments to inform their decisions about locally-funded transportation projects. This action would also require that DOTD monitor and evaluate all road building and expansion projects to determine if they increase congestion. Transportation spending can also help jump start the "Buy Clean Louisiana" program (Action 6.1), prioritizing lower carbon intensity materials and advancing best practices and standards in road construction.

STRATEGY 15. Improve the efficiency and resilience of homes and non- residential buildings

ACTION 15.1 Improve energy efficiency in residential and commercial buildings by developing new retrofit programs and expanding existing weatherization programs

This action proposes that Louisiana will retrofit 5% of buildings each year through a combination of expanding existing programs and developing new retrofit programs focused on energy efficiency, including DNR's Home Energy Loan Program (HELP) and reviving the expired Home Energy Rebate Option (HERO) program. Programs would focus on improving insulation, air sealing, appliance efficiency, HVAC efficiency, and other low-hanging fruit that would provide a reduction in consumer electricity bills as well as a reduction in associated GHGs. Programs impacting public or commercial buildings can also improve indoor air quality

and circulation to benefit human health. Implementation of these programs would create a network of trade allies who can perform retrofit work and create a workforce development pipeline. Lastly, program development through this action would coordinate and fund outreach and education to encourage homeowners and small businesses to understand their energy usage and identify possible areas for improved efficiency. *(Associated Submitted Action Proposals: 16, 87, 102)*

ACTION 15.2 Set minimum thermal and lighting efficiency standards for residential, commercial, and public buildings

Minimum efficiency standards can reduce energy demand and the associated GHGs. Under La. R.S. 30:1203, with some exceptions, this action proposes that DNR enact regulations for minimum thermal efficiency standards for new residential and light commercial buildings, minimum thermal and lighting efficiency standards for new and renovated commercial buildings, minimum lighting efficiency standards for existing public buildings, and procedures for the issuance of certificates certifying compliance with energy efficiency standards for buildings. Thermal efficiency relates to non-electric heating and cooling systems and well as hot water systems. *(Associated Submitted Action Proposals: 133)*

ACTION 15.3 Lead by example in Louisiana through energy benchmarking in state public buildings

The Louisiana Legislature passed Act 1184 in 2001, requiring benchmarking and disclosure of energy performance of buildings constructed with state funds. However, it has never been implemented. This action proposes that the state fund the implementation of Act 1184 and develop a system for benchmarking the energy performance of public buildings in Louisiana, using a life-cycle analysis methodology to calculate the carbon impacts from construction, materials, and operations over time. This system can be used to guide scoping, design, and procurement, but also in evaluating the carbon impacts of retrofits compared to a new build alternative. The energy savings from improved building performance can be recycled into additional audits, repairs, and improvements. Once developed, the energy benchmarking system could also be used by state subdivisions, parishes, and municipalities. Parishes may seek to accelerate this by developing their own initiatives, such as the St. Tammany Healthy Resilient Buildings Initiative, that can realize energy cost savings and improved air quality. *(Associated Submitted Action Proposals: 50, 87, 104, 134, 161)*

ACTION 15.4 Update statewide building and energy efficiency codes

The Louisiana State Uniform Construction Code Council (LSUCCC) is tasked with reviewing and approving updates to the state's building code. The Louisiana Legislature has, in the past, directed the LSUCCC to review and adopt new codes, such as the plumbing code. Currently, Louisiana's energy codes are from 2007 – more than 12 years out of date. This action directs LSUCCC to similarly review and adopt new codes pertaining to energy efficiency. In implementing this action, the Louisiana Legislature would also change the LSUCCC authorization and require them to adopt the latest codes automatically as new versions are published, except if overridden by a high threshold of the LSUCCC such as a 3/4 vote. These updates would also include promoting a performance-based building code that sets targets for energy consumption per building, particularly low-income housing where tenants are required to pay the utility bill and are forced out if they become delinquent in payment. If newer building codes were adopted, building projects could take advantage of the latest low-carbon materials such as mass timber. *(Associated Submitted Action Proposals: 75, 133, 50)*

ACTION 15.5 Promote the electrification of building appliances

Appliances and systems like water heaters, HVACs, driers, and stoves account for the bulk of building energy use. Electrifying these appliances and systems not only reduce GHG emissions when they are powered by renewable or clean electricity, but they also save the user money due to increased energy efficiency. This action would direct rebates for the purchase of efficient electric appliances and systems to customers. To

improve equitable access, rebates would be on a graduated scale based on income. This action would also work with retailers, contractors, and distributors to increase stocking of these appliances, so they are available options for unplanned upgrades (i.e. appliance breaks). It also includes making more widely available point-of-purchase materials to increase awareness.

Natural and Working Lands and Wetlands

Strategy 16. Preserve and expand natural lands and urban green spaces to maximize climate mitigation and adaptation goals

ACTION 16.1 Conserve Louisiana's interior natural lands, prioritizing forested lands, floodplains, wetlands and riparian areas

This action would set a baseline and target for percentage of interior natural lands conserved or protected statewide; strategically identify priority areas for conservation that maximize ecological and social co-benefits, with a focus on forested lands as well as floodplains, wetlands, and riparian areas that provide critical watershed function and flood hazard mitigation; and expand the use of conservation servitudes and other conservation tools in partnership with landowners and local government. This action would also work to align and incorporate climate mitigation goals with the Louisiana Watershed Initiative. *(Associated Submitted Action Proposals: 40, 68)*

ACTION 16.2 Support the expansion of urban tree canopy and green spaces

Activities that reforest public areas in urban environments (including rights-of-way and adjudicated properties) and increase urban green spaces (e.g., parks, gardens, farms) can sequester carbon while also reducing heat island effect, reducing localized flooding, and increasing access to open space. This action proposes the state government act as convenor among Parish and municipal governments to promote a coherent, statewide approach to promote tree planting and maintenance in urban areas along streets to help lower cooling loads and improve climate resilience. This action would prioritize tree-planting in historically underserved communities. In addition, this action would also include surveys of existing tree canopies in Louisiana urban areas, with progress tracked and reported annually, and would require that state-funded transportation projects dedicate at least 3% of project costs to the planting of trees and the provision of landscape-based stormwater runoff management. Finally, this action would promote inclusion of equity-focused conservation actions for urban green spaces in both regional and local plans (e.g., State Watershed Plan, Hazard Mitigation Plan, Comprehensive Plans). *(Associated Submitted Action Proposals: 2, 4, 44, 64, 68, 78)*

STRATEGY 17. Restore and conserve Louisiana's coastal wetlands to maximize climate mitigation and adaptation goals

ACTION 17.1 Leverage the carbon sequestration potential of Louisiana's coastal wetlands to accelerate implementation of Coastal Master Plan projects

Implementation of Louisiana's Coastal Master Plan includes coastal restoration actions to reduce land loss with a focus on risk reduction to support coastal communities. Implemented currently and over the long-term by CPRA, LDAF, and the U.S. Army Corps of Engineers, restoration of wetlands will inherently lead to continuous carbon offsets by way of the increased plant biomass and carbon sequestration in the soil as well as mitigation of hazards related to relative sea-level rise and storm surge impacting vulnerable coastal communities. Incorporating climate mitigation goals and measures (e.g., carbon sequestration potential of natural wetlands) into future iterations of the Coastal Master Plan as well as into project design and

prioritization could further make the case for investment in Louisiana's coastal program and unlock additional resources for project implementation. *(Associated Submitted Action Proposals: 77)*

ACTION 17.2 Quantify and monitor the potential coastal blue carbon in Louisiana habitats and Coastal Master Plan projects

Development of a quantification and monitoring strategy to assess net carbon flux of Louisiana's coastal wetland habitats (fresh, intermediate/brackish, and saline; also known as coastal blue carbon) is a crucial step towards building a robust carbon finance framework. Carbon financing presents an opportunity for the state to partner with industry to expand coastal wetland restoration initiatives. Near-term, this action would include: 1) research and development led by the state, non-profits, and/or academic institutions to create accurate biogeochemical models that will allow quantification of Louisiana's coastal blue carbon over time and across variable environmental conditions; and 2) expanding support and monitoring capacity of existing foundational monitoring programs (e.g., System Wide Assessment and Monitoring Program (SWAMP) that includes the Coastwide Reference Monitoring System [CRMS]) to quantify coastal blue carbon across coastal Louisiana over time. *(Associated Submitted Action Proposals: 59, 60, 77)*

STRATEGY 18. Support the sustainable management and conservation of working agricultural and forestry lands

ACTION 18.1 Establish a Louisiana Conservation Innovation Program

Many states have established Conservation Innovation Programs to promote development of innovative conservation practices unique to the state. In implementing this action, a Louisiana Conservation Innovation Program would be created within the LDAF that will stimulate development and adoption of innovative conservation approaches and technologies that curtail and sequester GHG emissions. Through partnering with the U.S. Department of Agriculture (USDA) Conservation Innovation Grant Program, the LDAF will promote pilot projects, field demonstrations, and on-farm conservation research. *(Associated Submitted Action Proposals: 42, 110)*

ACTION 18.2 Support the transition to regenerative agriculture and forestry practices

Regenerative agriculture can be generally described as a system of farming principles and practices that seeks to rehabilitate and enhance farm ecosystems by placing an emphasis on soil health, water management, fertilizer use, and other best management practices. Transition to regenerative agriculture and forestry practices is essential to minimize the agricultural sector's GHG emissions, maximize agricultural sequestration potential, and promote healthy soils and ecosystems. However, many barriers impede widespread transition. This action proposes that LDAF and local Soil and Water Conservation Districts (SWCDs) convene focus groups of farmers, ranchers, and foresters to identify barriers to adoption of various conservation practices and identify opportunities and solutions to overcome those challenges. SWCDs are local units of state government that provide conservation planning services to landowners. This action would also propose increased funding for the LDAF to be distributed to local SWCDs. Adequate resources would allow SWCDs to build on, coordinate, and expand sustainable agriculture programs and partnerships across stakeholder groups and their districts. *(Associated Submitted Action Proposals: 88)*

ACTION 18.3 Establish a technical assistance grant program for farmers and foresters

As consensus is built around impediments to adoption of regenerative agriculture and forestry conservation practices (see Action 18.2), this action would promote partnerships between LDAF, SWCDs, and the USDA Natural Resource Conservation Service (NRCS) to develop a competitive grant program that offers technical and financial assistance to landowners that would guide and support transition and lower barriers to utilize on-farm conservation practices. *(Associated Submitted Action Proposals: N/A)*

ACTION 18.4 Expand implementation of on-farm conservation programs

On-farm conservation programs have had the largest success in transitioning farmers, ranchers, and forest landowners to implementing conservation practices. The Louisiana Conservation Delivery Program, a partnership of the USDA NRCS and local SWCDs along with individual landowners, focusses on enhancing and conserving soil, water, and related natural resources through implementation of voluntary on-farm conservation plans of sustainable practices. This action uplifts this successful program and would expand federal and state funding for it. *(Associated Submitted Action Proposals: 38, 39)*

ACTION 18.5 Measure carbon sequestration potential of conservation farming best management practices

Best management practices are central to regenerative and conservation farming, though their emission reduction and carbon sequestration potential have not been quantified. This action would task state research institutions to study, monitor, and publish data on the co-benefits and impacts of best management practices to abate GHG emissions, improve soil and water quality, improve natural ecosystems, and sequester carbon. *(Associated Submitted Action Proposals: 34)*

ACTION 18.6 Establish an urban agriculture and conservation program in the LDAF

The LDAF currently offers a variety of approaches to conservation through partnerships, programs, and projects through its Office of Soil and Water Conservation and SWCDs. To build on this work and to create additional conservation involvement and education opportunities for the greatest diversity of producers and landowners, this action promotes an urban agriculture and conservation program within the LDAF. The proposed program would provide educational resources, workforce development and training, marketing assistance, and grant support for farmers, landowners, foresters, and other stakeholders as they work to adopt sustainable and regenerative agriculture practices that build resilience, mitigate GHG emissions, and sequester carbon across all Louisiana landscapes. *(Associated Submitted Action Proposals: 88)*

ACTION 18.7 Establish a statewide compost facility and accompanying local programs

Composting is an effective waste and GHG reduction measure that diverts organic materials from landfills and incinerators and converts those materials into valuable fertilizer to replenish and stabilize the soil. The state already implements an Agriculture Solid Waste Best Management Practice (BMP) Program, though compost is not always the beneficial use at the end of the waste stream. This action proposes the state designate a statewide compost facility, promote compost as a solid waste BMP, and partner with parish- and municipal-level compost programs. Public compost facilities would also increase the viability of community gardens that further promote sustainable and local agriculture, providing resources to underserved and overburdened communities. *(Associated Submitted Action Proposals: 154, 158, 159, 160)*

ACTION 18.8 Promote market driven strategies that encourage smarter forest management and greater use of Louisiana forest products for construction

Markets for wood products create incentives for landowners to plant more trees and keep forests as forests. Educating landowners on the management of forests and encouraging use of forest products through market driven incentives would increase the amount of carbon captured and stored by the forest. This action proposes the state encourage the use of Louisiana forest products—in the form of lumber, plywood, paper, wood pellets, and biomass—in state capital projects and other construction projects. Markets for low-value forest products and residuals, such as residuals generated during milling and production and woody fiber for biofuels and bioenergy, further incentivize forest management and forest products manufacturing, resulting in more carbon sequestration and storage. Implementation of this action would include research and development of new technologies by the state of Louisiana (LDAF, Louisiana Economic Development [LED],

Louisiana Forestry Association [LFA], DNR, and the energy sector) related to increasing the use of cellulose (plant-based) products can innovate Louisiana's manufacturing, construction, and energy sectors while reducing GHG emissions. *(Associated Submitted Action Proposals: 26, 31, 67)*

An Inclusive, Low-Carbon Economy

STRATEGY 19. Strengthen climate education, research, and innovation as a focus of Louisiana's energy transition

ACTION 19.1 Establish a Research Practitioner Partnership (RPP) Program to support climate education

This action, enabled through the Louisiana Department of Education STEM Team and the LA STEM Council, proposes a Research Practitioner Partnership (RPP) Program to would provide dedicated, yearly funding and support for K-12 climate education projects and curricula implemented by educators, researchers, practitioners, industry, and policy makers. This is seen as a critical step towards ensuring that the next generation is prepared, resilient, and innovative when facing future climate threats. *(Associated Submitted Action Proposals: 54)*

ACTION 19.2 Teach, re-train, and employ Louisiana residents in clean energy sectors

Training Louisiana workers is a critical step towards transitioning and growing the state's local clean energy industry. This action, enabled by the Louisiana Board of Regents, the Louisiana Legislature, and the Louisiana Department of Labor, would create a Climate Corps Program for local community colleges and Louisiana universities to provide education, training, and re-training necessary to support the growth of the renewable energy industry. This action would also encourage the growth of rural jobs that take advantage of natural carbon sequestration, such as encouraging employment of foresters and land managers who understand the best practices for natural carbon sequestration. This action would provide training and career track transition programs in the form of four-year degrees, two-year degrees, and industry certificate programs offered in the following areas: information technology, electrical engineering, utility management, and electrical vehicles (manufacturing, operations, maintenance). *(Associated Submitted Action Proposals: 23,99, 137)*

ACTION 19.3 Coordinate climate change mitigation and adaptation research needs across Louisiana's university network

Louisiana's extensive research institution and university network offers widespread expertise well-suited to inform climate action. Many universities are already investing in and undertaking research related to various aspects of climate action, though this research and development is often not coordinated. This action proposes The Water Institute of the Gulf (TWI), as the state's Innovation and Collaboration Hub, first inventory interdisciplinary climate research capabilities across the state to provide a broad understanding of existing in-state expertise in climate action. Following completion of this inventory, TWI would launch a partnership program to serve as the coordinating unit that identifies state research needs, convenes institutions to discuss emerging work, and partners among universities on grant and project proposals that seek to understand existing emissions and emission reduction measures by sector. Partners of this program would meet quarterly to coordinate ongoing work and identify emerging opportunities for research, development, and demonstration/pilot projects for the state. *(Associated Submitted Action Proposals: N/A)*

STRATEGY 20. Prioritize Louisiana workers and businesses in the transition to a low-carbon economy

ACTION 20.1 Promote and invest in Louisiana solar and offshore wind industries, including specialized worker training and long-term economic development planning to recruit, develop, and retain firms and workers

Louisiana has many programs and investments in place to promote the energy industry, and the state could retool these programs to promote and invest in the energy of the future, especially solar and offshore wind. As other states invest in the energy transformation, Louisiana cannot afford to be left behind. This action proposes a combination of legislative and executive actions to adjust tax incentives, permits, worker training programs, and determine other ways to speed and smooth the transformation of the state's energy systems. *(Associated Submitted Action Proposals: 23, 61, 93)*

ACTION 20.2 Coordinate worker training opportunities with the development of renewable power generation at distributed and utility scales, so that workers are qualified to install and maintain systems at both scales

The technical needs of renewable power generation are different at the utility scale than at the distributed (individual building) scale. However, with training, a worker could be qualified to work on either type of installation. This action, based on improving the likelihood of workers maintaining steady work across utility and distributed projects, implemented by the state coordinates training opportunities with planned installations so that workers can benefit from hands-on experience and training for renewable energy work across Louisiana. *(Associated Submitted Action Proposals: N/A)*

ACTION 20.3 Establish and expand state offices in under-resourced communities to provide tailored programs and services for the energy transition that include procurement and development opportunities for small businesses and workers

If the energy transition is to reach communities most impacted by climate change and disinvestment, Louisiana should extend the physical reach of state offices and programs to these communities. Implementation of this action would include extending existing offices and programs, like Small Business Assistance Centers run by the LED, and could expand to new services specifically needed for the energy transition (e.g., Rapid Response teams, Action 20.4). This action incorporates targeted outreach specifically for procurement and development opportunities for small businesses and workers in these communities, ensuring they can benefit from investments in renewable energy. *(Associated Submitted Action Proposals: N/A)*

ACTION 20.4 Create Louisiana Rapid Response teams to support transition services for oil and gas workers facing job displacement and layoffs

Louisiana has lost thousands of jobs in oil and gas over the last decade, and as the energy transition accelerates it is inevitable that additional oil and gas workers will face layoffs. To make sure that these workers are supported, this action proposes the creation of Rapid Response teams that can "deploy" to communities facing job losses and facility closures. These Rapid Response teams could work with the workers and their families as part of a Just Transition, ensuring that the workers receive unemployment benefits, support services, and that relevant training or new job opportunities are identified. Louisiana's oil and gas workers are skilled and valued, and the state should proactively work to place them in new high-quality jobs where their skills can be used, even if not every worker can transition to the renewable energy industry. *(Associated Submitted Action Proposals: 153)*

ACTION 20.5 Establish partnerships with Louisiana unions and businesses to guarantee job placements for workers in clean energy training programs

Enrolling in a training program is often too risky, with foregone wages not worth the opportunity cost of gaining a new certification. Still riskier is the prospect of no job waiting at the end of a training program. This action would create partnerships between the state, unions, and businesses to guarantee job training

placements for workers so that they know the investment in their skills will be worth the risk. A job guarantee would increase the number of workers enrolled and completing training programs in clean energy and other skills needed for the energy transition. *(Associated Submitted Action Proposals: N/A)*

STRATEGY 21. Build a more just and resilient future for all Louisiana residents

ACTION 21.1 Establish the Louisiana Office of Economic Resilience

This action proposes the establishment of the Louisiana Office of Economic Resilience to help provide strategic direction and support to the state, workers, and small businesses as they manage economic transitions. This Office would conduct research and develop programming dealing with transitions resulting from globalization and trade disruptions, rapid technological shifts including increased automation, changes to fossil fuel prices and demand, widespread efforts to decarbonize the energy sector, and other challenges resulting from climate change. In addition, the Office would also implement a Just Transition Program to ensure economic opportunity is created for those hardest hit by the transition. This action would be a joint effort by LED and the Louisiana Workforce Commission which would also help promote and prepare workers for emerging opportunities related to the manufacturing, installation, and servicing of renewable energy systems, batteries and other forms of energy storage, natural and engineered carbon sequestration, and energy efficiency.

Collaboration and Partnerships to Ensure Successful Implementation

STRATEGY 22. Ensure Louisiana is prepared to maximize potential federal funding opportunities

Federal funding opportunities can help prepare Louisiana for the transition to a low-carbon economy. These opportunities could include but are not limited to:

- Converting state and local fleets; buildout of electric vehicle infrastructure (SA# 158, 162, 29, 27, 36)
- School bus electrification (SA# 137)
- Plug, remediate, and reclaim orphaned wells (SA# 166, 167, 168)
- Expand monitoring of methane leaks (SA# 91, 151)
- Measuring, monitoring, and enhancing wetland sequestration (SA# 59, 60)
- Pre-disaster mitigation and community-focused resilience (SA# 152)
- 45Q carbon sequestration (SA# 109, 120, 121)
- Hydrogen Hubs and Direct Air Capture Hubs
- Accelerate offshore wind opportunity in Louisiana (SA# 61, 101)
- Attracting clean energy industries and investments (SA# 29)
- Investments in Energy Efficiency Improvements and Weatherization Programs (SA#119, 162, 16, 177)
- Expanding the Trade Adjustment Assistance program to include workers displaced by climate or energy transitions (SA# 153, 23)
- Advocating for a streamlined federal acknowledgement process for Louisiana tribes
- Investing in rural broadband (SA# 25)
- Sustainable agriculture, forestry, and soil management
- Environmental data scientists

STRATEGY 23. Position Louisiana as a climate leader through engaging in national and regional dialogues and planning

Partnerships are essential to make meaningful progress towards Louisiana's targets. Regional partners are necessary to advance cap-and-trade, electricity transmission planning, offshore wind development, and climate adaptation. This strategy recommends that Louisiana initiate and participate in discussions with surrounding states to establish a regional cap-and-trade program, intentionally plan expansion of electricity transmission infrastructure and offshore wind development, and set goals towards climate resilience with states facing similar threats. National partners are also essential to secure and ensure support for the state's goals and to pilot nationwide initiatives that move towards carbon neutrality. In addition to federal priorities mentioned above, Louisiana supports a national carbon price policy and would work to advance this action with federal partners.

STRATEGY 24. Align climate action approaches across state government

A whole-of-government approach within Louisiana is necessary to advance emission reduction actions. The Governor's Office will encourage cross-agency collaboration and alignment, the setting of climate-related goals within individual agencies, and the strengthening of partnerships with local government, communities, and Indigenous peoples to coordinate and carry out actions that cross and extend beyond agency jurisdictions. As the central implementer of this Climate Action Plan, state agencies must maintain alignment and function as a coordinated unit for climate action to be successful. The Governor's Office will also seek to collaborate with other state entities such as the LPSC and the Louisiana Legislature.

STRATEGY 25. Coordinate action with local governments

Local governments are significant collaborators and implementers of climate action within their jurisdictions. State partners will work alongside local government to encourage local climate action planning to complement Louisiana's Climate Action Plan, reduce emissions locally, enhance economic activities, and advance equity around local concerns as climate mitigation activities are implemented. Alongside engagement with communities on climate change emissions, parishes and municipalities will work to build community awareness, safer regulation, sufficient funding, and collective implementation of equitable disaster planning and recovery across the rural to urban gradient.

STRATEGY 26. Call upon the private sector to align their practices and play a leading role in climate action

Businesses are crucial partners for developing innovative and technical solutions to reduce emissions and critical sources of resources to meet environmental goals. The Governor's Office and state partners must work with and engage in solution building continuously with the private sector and regulated utilities, to implement the actions set forth in this Climate Action Plan. One action that would require such a public-private partnership is the establishment of a Green Bank. Private sector and utilities would collaborate with the state to develop a Green Bank that leverages public and private dollars for the implementation of climate mitigation and adaptation initiative, particularly for low-wealth households with community involvement in how funds are spent.

STRATEGY 27. Improve engagement with disadvantaged communities and Indigenous peoples

Disadvantaged communities and Indigenous peoples must be at the center of collaboration and partnership in the development and implementation of climate action. In development, the Climate Initiatives Task Force will ensure actions set forth in this Climate Action Plan create new opportunities for and benefits to disadvantaged communities and Indigenous peoples, particularly those historically marginalized, those who face disproportionate climate impacts, and those of low-to-moderate income. In implementation, the Climate Initiatives Task Force must enable and encourage communities and Indigenous peoples are enabled and encouraged to engage in knowledge sharing, solution building, and decision making. The Governor's Office

and its state agencies must invest in sustainable two-way communication of needs and progress with Indigenous peoples and marginalized communities.

Accountability and Adaptability to Ensure Lasting Success

STRATEGY 28. Ensure that Climate Action Plan strategies are effectively and transparently implemented

ACTION 28.1 Establish the Governor's Office of Climate Resilience

As seen in the actions established in this Louisiana Climate Action Plan, climate change mitigation and adaptation require extensive coordination across multiple stakeholders inside and outside of government. It also requires focus to oversee the implementation of this plan and assess progress toward meeting the Governor's GHG emission reduction goals. This action would establish a formal Governor's Office of Climate Resilience within the Governor's Office to ensure the successful implementation of the actions contained in this Climate Action.

ACTION 28.2 Legislatively enable the Climate Initiatives Task Force (CITF) with quarterly meetings

This action by the Louisiana Legislature would enable regular Climate Initiatives Task Force (CITF) meetings to ensure progress is made towards the implementation of emission reduction strategies and actions; the impacts of these actions on the people, environment, and economy of Louisiana are understood; transparency is maintained; and the critical issue of climate change in Louisiana remains in focus. Regular meetings of the CITF would ensure the impacts of these actions are tracked and provided to the public, and that opportunities to increase the effectiveness of action implementation in practice are identified and pursued.

STRATEGY 29. Track progress in reducing net GHG emissions reductions and adapt the approaches taken as needed

ACTION 29.1 Establish a Louisiana GHG monitoring program

Regular collection of GHG data across the state is vital to providing checkpoints on GHG reduction to adaptively manage emission reduction approaches across all sectors. This action includes development of a GHG Monitoring Program established by DEQ-DNR to collect GHG data, which could be used in conjunction with regular updates of the GHG inventory. In addition, this action would facilitate benchmarking that could be used to determine whether the strategies and actions included in the Louisiana Climate Action Plan are effective once implemented.

ACTION 29.2 Update the state GHG inventory biennially

In conjunction with regular collection of GHG data (Action 29.1), updates to the GHG inventory are necessary to monitor progress and hold the state accountable for progressing towards reduction goals. This action proposes that the Louisiana Legislature statutorily mandate biennial updates to the GHG inventory with consistent funding to support these efforts. In addition, this action would support work by the state to

continue to increase the accuracy of that assessment as technologies evolve. The U.S. EPA State Inventory Tool (SIT) model has been used as the primary information source for inventory updates, but this methodology has known and acknowledged limitations. This proposed action would include investments in remote sensing, satellite imagery, and other tools to provide more accurate and comprehensive monitoring of GHG emissions in Louisiana, as well as incorporating criteria pollutants monitored by the DEQ Air Quality Monitoring Program into the GHG inventory.

ACTION 29.3 Update the Louisiana Climate Action Plan every five years

The strategies and actions outlined in the Louisiana Climate Action Plan have been selected based on their expected effectiveness in reducing net GHG emissions while also having the best anticipated outcomes for the state and its people. An updated GHG inventory would reveal where those actions were effective, while at the same time new strategies or actions may become available due to advances in technology or increased understanding of the most effective approaches in net GHG emission reduction. This action would allow updates to Louisiana's Climate Action Plan every five years by the Governor's Office to ensure that it continues to be based on the best available science and that the actions taken demonstrate benefits to Louisiana's communities, environment, and economy to the greatest extent possible. Regular updates would ensure ineffective actions could be modified or replaced, the greatest investment is in the most effective approaches, and new technologies could be incorporated when available.

October 6, 2021

The Honorable Chip Kline
Chairman, Coastal Protection and Restoration Authority Board
Office of the Governor-Coastal Activities
PO Box 44027
Baton Rouge, LA 70804

Subject: Opposition to Draft Portfolio of Climate Strategies and Actions

Dear Chairman Kline,

I am writing to express WestRock's opposition to certain details found in the Draft Portfolio of Climate Strategies and Actions. WestRock operates a paper mill in Hodge, LA that serves as a vital part of our supply chain which is integral to delivering essential, sustainable paper and packaging products to our customers. If the proposed cap-and-trade program were to be implemented, the WestRock Hodge mill would be negatively impacted by increased operating costs which jeopardizes its ability to compete in the marketplace.

WestRock is a global manufacturer of sustainable paper and packaging products with approximately 50,000 team members across more than 300 manufacturing facilities, design centers, research labs and sales offices throughout the world. In Louisiana, we employ 465 people across 2 facilities with a payroll exceeding $48 million. We pay $5 million in taxes annually and have over $219 million in local supplier spend. We manufacture essential products used to ship and package food, beverages, health care, pharmaceutical, personal hygiene care, disinfectant products and other basic household supplies.

WestRock appreciates Governor Edwards and the Louisiana Climate Initiatives Task Force efforts to develop strategies to achieve net zero greenhouse gas emissions by 2050, and as one of North America's largest paper recyclers, WestRock has a long-standing commitment to innovation, environmental stewardship, and sustainable business practices. However, we are opposed to a regional cap-and-trade program because it fails to treat biomass as carbon-neutral.

Papermaking is an energy-intensive process, and the mill produces a significant portion of its own power using biomass. Failing to recognize our primary fuel source as carbon neutral would deviate from the practice of other states that participate in similar cap-and-trade programs, as well as widely accepted international carbon accounting protocols which would have harmful consequences. The WestRock Hodge mill competes in an intense global marketplace not only against external competition, but against other WestRock mills that may not face the same regulatory burdens that are being proposed.

Thank you for the opportunity to provide comments. WestRock looks forward to further discussions on this matter and commits to working with the Louisiana Climate Initiatives Task Force.

Respectfully,

Jonathan Harding
Regional Manager, State Government Relations

Public Comments on the Climate Initiative's Task Force Final Report and Portfolio
Louisiana Energy Users Group
October 8, 2021

The Louisiana Energy Users Group (LEUG) is an unincorporated trade association comprised of Louisiana industrial concerns, the membership of which includes refineries, petrochemical manufacturers, pulp and paper companies, LNG facilities and industrial gas suppliers. LEUG's member companies include direct and substantial electric customers of Entergy Louisiana, LLC (ELL). Some LEUG members, in addition to purchasing power from ELL, use efficient forms of cogeneration/combined heat and power production to meet their energy needs. LEUG is an active participant in proceedings before the Louisiana Public Service Commission (LPSC) that impact the cost, reliability, and regulation of its members' electric supply.

LEUG appreciates the opportunity to provide these public comments to the Governor's Office on the Climate Initiatives Task Force's (CITF) Draft Partial Final Climate Action Plan Report (Draft Final Report) and Draft Portfolio of Climate Strategies and Actions (Draft Portfolio).[1]

LEUG supports the Governor's establishment of the CITF to assist with the development of a proposed suite of balanced policy solutions to address climate change. LEUG member companies are actively engaged in and committed to the reduction of GHG emissions at their facilities in Louisiana and throughout the world, and are making significant investments in research and new technologies in that regard. Some examples of the many efforts underway include the following: the production of hydrogen through electrolysis, development and implementation of carbon capture technology, reduction in the use of carbon-based fuels, development of a green ammonia project, purchases of renewable energy as well as Renewable Energy Certificates, creation of tidal marsh and emergent wetlands as carbon offsets, increasing energy efficiencies in production operations, co-development of wind and solar projects, investment in research and production of renewable fuels, planting of forests as carbon sinks, use of renewable biomass energy, electrification of company fleets and production facilities, use of recycled materials, and use of cogeneration/CHP for on-site energy needs.

While the Draft Portfolio includes a broad range of proposals, LEUG's comments here focus primarily on those proposed Actions impacting the electric power supply, including those under Strategy 1 – "a shift towards a clean, renewable, and resilient power grid" and Strategy 2 – "increase renewable electricity generation and access for all users." Many of the Actions proposed under Strategy 1 and 2 (as well as some Actions under the other Strategies) fall directly within the jurisdiction of the LPSC. LEUG envisions that such Actions will be presented to the LPSC, a Louisiana constitutional body, as recommendations for its consideration. The LPSC would then

[1] LEUG, through counsel Katherine King, is a member of the Power Production Sector Committee. In addition to these comments, LEUG has submitted comments on specific Actions in the Draft Portfolio through the Survey Master spreadsheet provided to Sector Committee members.

conduct the appropriate rulemaking or other proceedings that would permit input from all interested parties prior to making a decision on the adoption of the Action item and, if adopted, the rules for implementation. As with most electric issues, the "devil is in the details," and serious and in-depth consideration is required to examine the positive and negative impacts of the adoption of the Action items, as well as the manner in which they are implemented to insure that the intended goal is achieved and negative unintended consequences are mitigated.

Some of the Actions may reduce GHG emissions by some amount, but the feasibility and cost of such Actions, and the impact they will have on the economy of the state and the well-being of its citizens must be carefully examined. Impacts on the reliability of the state's electric supply must be taken into consideration, as well as the ability for Louisiana businesses to remain competitive and for Louisiana residents to obtain affordable power. At the end of the day, Actions must be adopted that achieve the desired goals, but do so at the lowest reasonable cost and in a way that protects Louisiana's economy. Polices must both encourage the new technology that will be required to achieve desired goals and provide flexibility if targets and timetables are technically unrealistic. LEUG appreciates the Governor's commitment to a balanced approach focused on adapting to maintain Louisiana's position "as a world leader in energy, industry, agriculture and transportation."

PosiGen

October 8, 2021

Submitted via electronic mail to climate@la.gov

Re: Comments on the Louisiana Climate Action Plan Revised Draft, Partial, Final Report and the Draft Portfolio of Climate Strategies and Actions Issued on August 23, 2021

Dear Climate Initiatives Task Force:

PosiGen Solar (hereafter "PosiGen") is a ten-year-old Louisiana-based company that provides solar PV, storage, and energy efficiency upgrades to residential and commercial electric ratepayers. PosiGen has more than 12,000 customers throughout the state who are served by each of the state's Investor-owned utilities as well as Coop and municipal utilities.

Louisiana is #1 in the nation in low-income solar adoption due to PosiGen's 100% financing model, [1] which for many years now has cost taxpayers and ratepayers nothing, while also attracting $100s of millions of dollars in private investment in our fast-growing Louisiana company and its more than 425 employees.[2]

PosiGen has a unique voice in the Climate Task Force proceedings as we are the largest solar leasing company in both the state and the nation serving largely low-to-moderate income communities and communities of color. Our mission is to implement local solar power for all, meaning solar must be affordable, easy to access, and high performing. By making solar more accessible through our energy efficiency + solar leasing model, PosiGen is making it possible for Louisiana families to invest in and increase the durability of their homes, save money on their utility bills every month, and contribute to lowering our state's carbon emissions while increasing climate resiliency in the face of recurrent grid failures and increasingly frequent and severe hurricanes, heat waves, extreme rain and extended freeze events.

While this Task Force will assuredly focus most of its recommendations on elevating currently available, scientifically proven, high impact and lowest public cost carbon

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[1] https://emp.lbl.gov/publications/income-trends-among-us-residential

[2] https://www.prnewswire.com/news-releases/posigen-and-forbright-bank-partner-to-expand-clean-energy-options-in-underserved-communities-301395331.html ; https://kresge.org/news-views/posigen-shows-the-market-how-to-deploy-single-family-solar-solutions-with-equity/ ; https://www.canarymedia.com/articles/solar/posigen-spurs-solar-ownership-and-environmental-justice

reduction solutions, PosiGen would respectfully recommend that this Task Force strive to further advance carbon solutions that also offer meaningful, measurable short and long term co-benefits to our front-line climate impact communities and their residents, such as emergency cooling and power services, local jobs and wealth creation, reduction of energy poverty, improved durability of housing stock, reduced insurance rates, and improved health outcomes. As an example, PosiGen is proud to be a ground level provider of 12 charitable donations of emergency solar + storage microgrids in our most heavily devastated coastal communities after our latest hurricane.[3] These microgrids can deliver strong carbon reduction benefits every day for Louisiana, while delivering all of the above benefits and services as part of a comprehensive state program to invest in pre-disaster mitigation efforts for vulnerable communities and populations in the years to come.

Below is a snapshot of our Louisiana customers' energy production between July 2020 through June 2021. Sixty-five percent of our customers are LMI (low to mid income).

		Annual kWh		*Annual Gross Savings*	
	Product	**Total kWh**	**Total / System**	**Total $**	**Total / System**
Total	Solar	59,102,109	4,825	$6,501,232	$531
	EE Total	51,591,127	4,212	$5,675,024	$463
	Total	**110,693,236**	**9,036**	**$12,176,256**	**$994**
LMI	Solar	38,416,371		$4,225,801	
	EE Total	33,534,233		$3,688,766	
	Total	**71,950,604**		**$7,914,566**	
Non - LMI	Solar	20,685,738		$2,275,431	
	EE Total	18,056,895		$1,986,258	
	Total	**38,742,633**		**$4,261,690**	

By providing affordable solar to all Louisiana homeowners, PosiGen is delivering economic benefits to high-need communities and local economies throughout the state. When our customers save money on their utility costs, a net average of more than $500 per year, that money is then put right back into their local businesses and economy, supporting growth and economic resiliency at the local level.

When solar is affordable, more residential and commercial customers are able to invest in the technology, which increases investment in renewable energy

[3] https://www.pv-tech.org/solar-being-deployed-to-help-communities-in-hurricane-hit-louisiana/

development, small businesses and jobs. Local solar cuts home and business operating expenses while having a positive impact in reducing carbon emissions globally. PosiGen's energy efficiency upgrades ensure that our customers' homes are safe, clean places to live in. Solar has a global impact—but PosiGen is also helping our customers' live safer, healthier lives.

PosiGen provides safe, full time job opportunities to the communities we serve, paying above average wages while offering outstanding benefits to all of our employees, including full health insurance coverage. Diversity is one of our strongest values, and it is important to us that we work directly with people from the communities we serve. More than 65% of PosiGen's employees are women or people of color.

PosiGen is submitting comments to protect and expand the interests of its residential and commercial customers, as well as encouraging the Climate Task Force to recognize and act to support going forward the outstanding cumulative carbon benefits of local solar, as well as Louisiana's lauded national leadership already in having a Louisiana company that has taken the state to the top in equitable clean energy access. PosiGen is commenting on several sections of the Draft, Partial, Final Report and the Draft Portfolio of Climate Strategies and Actions and we have included a redlined version of each in Appendix A and Appendix B, respectively.

Recommended Changes and Additions

I. Draft, Partial, Final Report

The report is written very well, and PosiGen supports the facts as they are clearly laid out by the Climate Task Force committee. We would note that Louisiana is in an excellent position to capitalize on new energy opportunities and markets as the United States has rejoined the global effort to take climate change more seriously.

After witnessing the catastrophe following the ice storm in Texas this past winter and going through just the latest hurricane to hit our state in two years, it is beyond clear that we must transition to a cleaner grid system with redundant, climate-proof local clean energy investments to ensure that future grid failures do not result in the extreme suffering and loss of life and economies caused by the widespread grid collapse in the face of Hurricane Ida. The technology exists today to guarantee reliability while also planning and building for the future.

PosiGen has more than 18,000 solar installations nationwide, and we see consumer-sited renewable generation as a critical piece to carbon mitigation efforts at a remarkably low cost to the state and utility companies. Under PosiGen's leasing model, neither the ratepayer nor the utility is required to fund the project. We have

more than 12,000 customers in Louisiana, and we have the capacity to do much more in every community throughout the state. Because we offer full lease financing to all customers for both rooftop solar as well as energy efficiency improvements, and install more than 100 new homes each month, our carbon reduction impacts are exceptional, low to no cost to the state, and with outstanding co-benefits such as improved indoor air quality, stronger and more durable roofs, electrical upgrades and building repairs.

The table below shows real customer data on metric tons of CO2 offset by solar power generation from our Louisiana customers over the course of one year (7/20 – 6/21). Small systems covering thousands of Louisiana roofs adds up to enormous CO2 reductions.

	Metric Tons of CO2	
	Total Tons	Total / System
Total	41,371	3.4
	36,114	2.9
	77,485	**6.3**
LMI	26,891	
	23,474	
	50,365	
Non - LMI	14,480	
	12,640	
	27,120	

II. Draft Portfolio of Climate Strategies and Actions

Recommendation 1
Add a table of contents to the Draft Portfolio of Climate Strategies and Actions

Recommendation 2
Action 1.1: Make the targets more ambitious and allow more leeway with clean energy to achieve the more ambitious targets. PosiGen suggests the following:

- By 2030, 50% of electricity generation is to be generated from renewable and clean energy resources
- By 2035, 75% of electricity generation is to be generated from renewable and clean energy resources

- By 2040, 100% of electricity of electricity generation is to be generated from renewable and clean energy resources, with at least 80% from renewable resources.

Recommendation 3
Action 1.1: Institute a back-up plan if and/or when the LPSC fails to take up the rule-making. We suggest the following language:

> "If the LPSC fails to open a rulemaking of the Portfolio Standard by January 2022, then the responsibility to create the Renewable and Clean Portfolio Standard and a statewide market for Renewable Energy Certificates will fall to the LDEQ to write standards and set up a Cap-and-Trade system."

Recommendation 4
Action 1.1: Add a sub action called Action 1.1.1 Create a consumer-based Renewable Energy Credit system.

Customers that invest in solar power for their homes or businesses are currently treated like energy producers by the state's Net-metering rule. If the NEM rule is not reversed to fairly compensate these customers, then the state will adopt a consumer-based REC system to allow small solar producers to aggregate their renewable energy production. A REC is defined as 1MWh of renewable energy, since consumer-based systems produce renewable energy on a kWh basis, then the system should allow for smaller credit amounts.

Recommendation 5
Action 1.2: We do not support changing the IRP schedule to annual. The IRP process is very expensive and time consuming and takes more than a year to complete, meaning that the next IRP would start before the last one was complete. This would likely lead to a condensed process, which would not achieve the desired result: more renewable energy projects.

Recommendation 6
Action 1.2 We suggest adding a requirement that the LPSC, LDEQ, or other state agency establish a Louisiana price per ton of carbon to be included in utility IRP planning to streamline the process and even the playing field between utilities.

Recommendation 7
Action 1.2 The Cooperative utilities represent thousands of Louisiana ratepayers and yet these utilities are exempt from the IRP rules. We suggest requiring Cooperative utilities to create a climate mitigation plan in lieu of the IRP, Cooperative utilities typically do not own their generation but rather, go into long-term Power Purchase Agreements. Many of their PPAs are up for renewal in 2020's

and it behooves the Task Force to engage with them to improve their generation resources, including consumer-based energy generation.

Recommendation 8
Action 1.4 The Energy Efficiency Standard suggested is too moderate. The state can and must do better. Improving energy efficiency not only lowers GHG emissions bringing down the overall need for electricity, it decreases the most costly and carbon intensive **peak generation**. Lowering or avoiding peak generation has the added benefit of deferring the need to build new power plants thereby offsetting electric rate increases. Energy efficiency is the least cost resource, but utilities have been resistant to it because as ratepayers use less energy, the utility experiences slow to negative growth. We suggest making the EERS more in line with other states[4] and direct all electric and gas utilities to reduce energy sales based on 2019 levels: 20% for electric utilities and 6% for gas utilities by 2030.

Recommendation 9
Action 1.4 The EERS should be included in the IRP proceedings as it will impact load projections.

Recommendation 10
Action 1.5 The "climate rankings" scorecard should include a consumer-based renewable energy score. This will help businesses and consumers compare the ease of solar adoption among the different utilities and allow the state the information needed to pinpoint low-adoption and problem areas.

Recommendation 11
Action 1.5 We suggest updating the scorecard annually.

Recommendation 12
Action 2.1 The problem with the former solar tax incentive and the reason it was discontinued was because of a few bad actors who took advantage of homeowners. We would like to see more professionalism in the marketplace and suggest that the Legislature create a process by which companies will be eligible for the credit. We recommend 2 years as a minimum time of operation to be qualified to install systems for the tax credit.

Recommendation 13

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[4] Energy Efficiency Resource Standards by State. ACEEE. Available at: https://database.aceee.org/state/energy-efficiency-resource-standards

Action 2.1 We largely serve lower income households and a tax credit is not an incentive to people who owe little to no taxes. We recommend offering a tax rebate for solar and battery systems to low-income Louisiana citizens to create equity in the incentive program.

Recommendation 14

Action 2.3 Under the energy efficiency program, the dollars collected by the utility per rate class are spent on programs for that rate class. We recommend that the tariff follow the same rule. For example, money raised by residential customers that opted in for the green tariff will be spent on low-income residential or community solar and battery storage programs.

Recommendation 15

Action 2.3 Green tariffs should be limited to renewable energy projects only. While clean energy (carbon capture, nuclear power, etc) are important for lowering GHG emissions, a voluntary green tariff should be reserved for projects that are more difficult to finance. Also, it may be beneficial to consider making this tariff mandatory – see next recommendation.

Recommendation 16

Action 2.4 A voluntary green tariff will not raise enough capital or retain enough confidence for financing a PPA. A mandatory green tariff could be assessed for ratepayers, and this would allow for greater renewable energy development. A mandatory tariff is justified to achieve the GHG reduction goal; this method is used for all other types of generation projects as well as the energy efficiency program.

Recommendation 17

Action 2.5 We suggest adding battery storage systems as qualified systems for PACE financing.

Recommendation 18

Action 2.6 We strongly support reinstating full retail credit net-metering for future solar owners and eliminating the time limit for grandfathered solar owners. The current LPSC rule treats small solar generators as if they were large power producers, which does not make sense and hinders our state's ability to capitalize on private investment into renewable energy generation. We suggest a clear distinction between a "personal use solar system" and a "net solar energy exporter". For residential customers this limit could be a 20 KW system, and for commercial it could be a 10 MW system. Further, we recommend a new cost benefit analysis to be performed by an independent engineering firm to guide the next round of NEM rule-making at the LPSC.

Recommendation 19

Action 14.3 PosiGen supports a model solar ordinance for local governments but would strongly suggest that the solar industry is part of the process to create the ordinance. It would be unfortunate if such an ordinance discouraged the use of solar, as happens with many Home-Owners Associations.

Recommendation 20

Action 15.4 It is surprising and disappointing that Louisiana's energy code is completely outdated and thoroughly out of touch with modern standards. We strongly support setting targets for energy consumption per building, particularly low-income designated housing where tenants are required to pay the utility bill and are forced out if the bill becomes delinquent. This must be changed.

Recommendation 21

Add action items under the Strategies in the "Collaboration and Partnerships to Ensure Successful Implementation" section.

Conclusion

PosiGen is ready to be a resource to the Climate Task Force on residential and commercial solar power, energy efficiency, and battery storage systems. Consumer-based energy resources will be an important, low cost piece of the puzzle in solving our climate crisis and at the same time, building more resilient, safer, and wealthier communities. Please feel free to contact me if you have questions or need more information on the comments above.

Respectfully,

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Center on Global Energy Policy

CONGRESSIONAL TESTIMONY OF **DR. S. JULIO FRIEDMANN**

Senior Research Scholar, Center on Global Energy Policy, Columbia Univ. School of International & Public Affairs

BEFORE A JOINT HEARING OF THE **COMMITTEE ON ENERGY AND NATURAL RESOURCES**, UNITED STATES SENATE, 2ND SESSION, 115TH CONGRESS

Chairman Murkowski, Ranking Member Manchin and Members of the Committee, thank you for inviting me here today to discuss issues of Carbon Management. My name is Julio Friedmann. I am a Senior Research Scholar at Columbia University's Center on Global Energy. From 2013-2016, I served as Principal Deputy Assistant Secretary for the Office of Fossil Energy at DOE, and before that served at Lawrence Livermore National Lab for 15 years.

It is an honor to appear again before this Committee to discuss carbon management broadly. Since my last congressional testimony 14-months ago, the nation and the world have changed dramatically, and I am compelled to acknowledge this extraordinary moment and its circumstances. The unprecedented COVID-19 pandemic has taken the lives of more than 143,000 Americans. It has damaged the US and global economy. and underscored inequity, racial strife and problematic aspects of our health care and judicial systems. It has also accentuated the central need for science and fact-based policy making, which adds import and salience to this hearing. Climate change is a looming threat – and a challenge that will strain greatly every aspect of our society and economy. The challenges demand courage, ingenuity, humility, and generosity to meet and overcome them.

These demands advise my own research at the Center on Global Energy Policy where I lead the Carbon Management Research Initiative. Our team draws on the broad and interdisciplinary expertise of scholars across Columbia University, including scientists, lawyers and former policymakers at the Earth Institute, the Sabin Law Center, and the Schools of Earth Science, Engineering, Law, Medicine, International and Public Affairs, as well as Columbia's burgeoning School of Climate,

It is abundantly clear that if we are to counter the risks of climate change, protect our economy and maintain our global competitiveness, we must pursue technologies that manages emissions by reducing and removing CO_2. These include conventional carbon capture and storage (CCS), CO_2 use and recycling, and CO_2 removal (both through managed ecosystems and engineered approaches). All are essential components of combining rapid, deep decarbonization with a muscular economy.

These technologies are essential for the energy sector, especially for power generation and heavyl industries. They are beginning to contribute to every other sector of our economy –

manufacturing, forestry, farming and high tech. Our research shows these technologies often present the lowest-cost, most actionable pathway for profound emissions reduction and that in some sectors they are the only pathway.

New studies by groups like the International Energy Agency,[1] Global CCS Institute,[2] Goldman Sachs,[3] McKinsey[4] and the Energy Transition Commission[5] have underscored carbon management's essential component to supporting both economic growth and rapid, deep decarbonization. It should be clear from all of this that carbon management deployment is not some greenwashing or a license to pollute. Quite the opposite – it is an overt, committed pathway to deeply and quickly reduce greenhouse gas (GHG) emissions in a cost-effective way while sustaining economic growth and communities at risk – from Alaska Natives living a subsistence lifestyle along the North Slope and the fishermen and oil workers in Prudhoe Bay to the miners, roughnecks, and biotech workers in West Virginia and Kentucky. Leading US companies and institutions have adopted carbon management strategies as part of their business plans, creating new companies and services to provide carbon management to rapidly growing global markets.

My testimony will focus on large-scale carbon management, including carbon capture and storage (CCS); CO_2 use and recycling; CO_2 removal, including engineered and managed ecosystem approaches; the need to invest in innovation; and the implications for competitiveness & industrial productivity. I'll also comment on how government agencies can help the US maintain leadership, sustain jobs and communities, innovate quickly, and rapidly reduce carbon pollution.

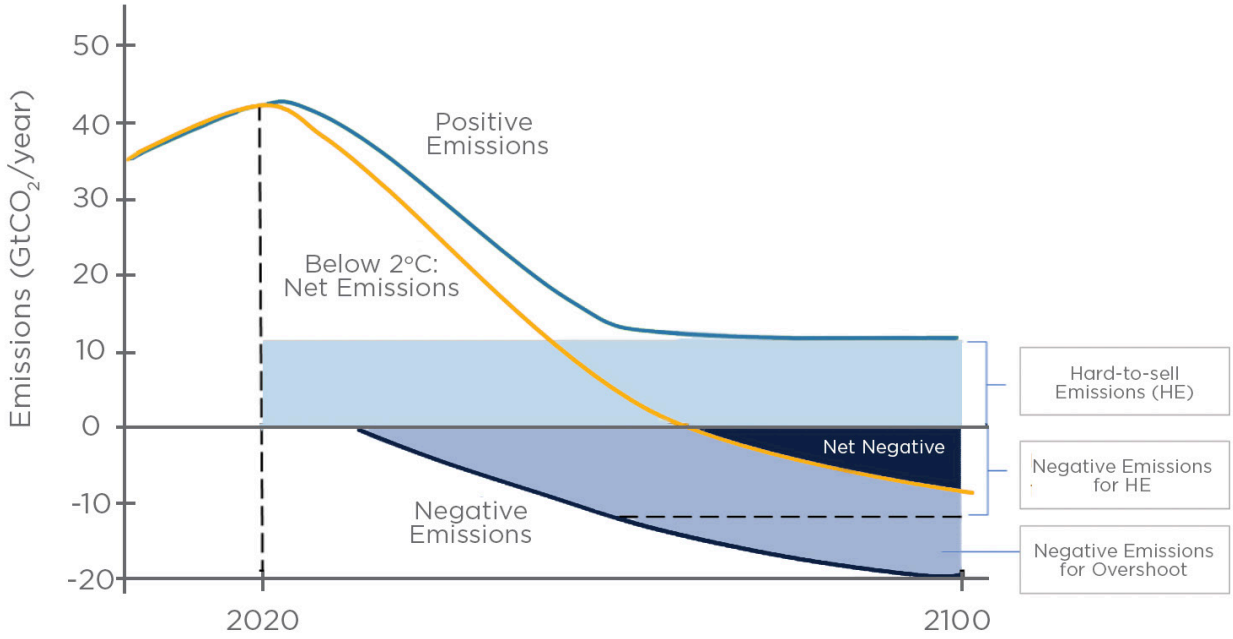
Net-zero Framework: Climate and US Competitiveness

Core to the continued and growing interest in carbon management is the recognition that national and global economies must achieve net-zero greenhouse gas emissions. Importantly, this is required to achieve ANY climate stabilization target. If net-zero emissions are not achieved, atmospheric concentrations of greenhouse gases will increase, as will the risks and damages from climate change, with which you are familiar. That is true for stabilization at 1.5°C, 2°C, 3°C or higher. Net-zero is the core arithmetic to stabilize climate: ***any residual CO_2 emissions must be balanced by an equal amount of CO_2 removal***.

$$\mathbf{CO_2 emissions - CO_2 removals = 0}$$

By definition, achieving net-zero emissions requires that any emissions that are not *reduced* must be *removed*. To achieve net-zero emissions, all emissions trajectories must decrease (figure 1). However, if there are any residual emissions that are not reduced or mitigated, net-zero requires an equal mass of CO_2 removal. In many scenarios and descriptions, residual emissions are considered "hard-to-abate," meaning either the cost is extremely high (e.g., for aviation) or the technology does not exist (e.g., application of fertilizer).

Figure 1: Representative pathway to net-zero and net-negative emissions. The orange line represents emissions trajectory as the sum of the green and blue trajectories



Source: J. Wilcox et al. 2020..

This sensibility has led to specific policy decisions by nations, states and municipalities. Multiple nations now have legislated net-zero economies by 2050, and others have legislated net-zero for key sectors (e.g., electric power generation). That is also true of many states – nine have legislated 100% net-zero power standards, and several have committed to net-zero economies (e.g., CA & NY). These represent substantial markets, and the growth in commitments produces a growing fraction of the national and global market that demands net-zero goods & services.

National and regional policies of these kinds have helped prompt leading companies to make commitments to net-zero emissions as well. These include:

- Tech giants such as Microsoft & Amazon
- Industrial giants like Dow and Unilever
- Oil & Gas companies including Occidental and Shell
- Power companies like Southern and Xcel
- Airlines like Delta
- Retailers like Nike

These commitments include operations, supply chains and products – all net-zero. Some companies, such as Microsoft, have committed to removing their legacy of emissions representing their whole corporate history – more than 200 million tons in total! All have realized that they need all tools available to achieve these goals, including carbon management in all its forms.

Technical and Commercial Status of Carbon Management

Since my testimony before this Committee 14 months ago, a great deal has changed for all carbon management approaches. In fact, a signature aspect of the carbon management landscape is rapid and sometimes revolutionary change. In this, there are similarities to carbon management now and solar & EV enterprises in 2005. Fifteen years ago, both enterprises were considered prohibitively expensive, immature, hard to scale and reliant on market aligning policies. Instead, steady investments in innovation, changing consumer culture and international markets, and multiple market-aligning policies created opportunities, jobs, wealth, and a cleaner energy system and environment. Carbon management can deliver these benefits even more quickly but will require a similar mix of innovation, policy incentives, and a national posture of development and commercialization.

I have streamlined this section for clarity and have added substantial additional materials on all these topics in a technical appendix at the end of this testimony for completeness.

Carbon Capture and Storage (CCS)

CCS represents a set of technologies that capture & separate CO_2 from large point sources, transport them to sites of geological storage, compress & inject them deep in the earth's crust, and monitor them to validate safe and secure storage operations. Today, 21 large-scale CCS facilities operate worldwide, safely and securely keeping more than 40 million tons of CO_2 from the air and oceans every year. In total, the world has managed more than 260 million tons of man-made CO_2 this way.[6] More information can be found in the technical appendix.

CCS can and will play a critical role in managing the emissions from these key sectors:

- Heavy industry, including cement, steel, chemicals, refining, ethanol, pulp & paper, and glass[7]
- Existing power stations, most notably coal- and gas-fired electricity production[8]
- In the near-term production of low-carbon and zero-carbon hydrogen, as is currently done in five facilities worldwide,[9] including the Air Product project in Port Arthur, Texas

Although these applications are very important for the US, they have enormous potential applications in China, India, Southeast Asia, Europe and the Middle East. These provide commercial opportunities to US manufacturers and companies to provide carbon management goods & services, as detailed in a recent NPC report.[10]

CO_2 Use and Recycling

For good reasons, many seek to find ways to use CO_2 to create economic value in a climate-

positive way. Today, the primary use of CO_2 is for enhanced oil recovery. This is an important near-term pathway and provides opportunities to finance projects, scale-up technologies and reduce costs. Many see the value in turning CO_2 into goods for scale - that will be essential at some point for a circular carbon economy.[11] The main types of valuable products made from CO_2 include synthetic fuels; chemical feedstocks like carbon monoxide, syngas & methanol;[12] CO_2-based cement, concrete & aggregates; and durable CO_2-based-products, including carbon fiber/tubes, plastics and composites, etc. While it is unlikely that these approaches and products will lead to profound GHG emissions reductions, they are engines for growth and are already supporting hundreds of US companies making and selling these products.

CO_2 Removal

Driven in part by the science, market forces and arithmetic discussed above, CO_2 removal has gained dramatic and profound increased prominence as an enterprise and as a necessary component of climate action. The National Academies has described the different pathways and what is needed for them to scale and succeed.[13] They include both engineered and managed ecosystem approaches.

- *Engineered pathways:* These approaches use machinery and conversion equipment to separate CO_2 from ambient air. This can involve direct-air capture with storage (DACS), bioenergy with carbon capture and storage (BECCS), and carbon mineralization. The US currently has one operating BECCS facility (the ADM ethanol plant at Decatur, IL) with many more announced projects. There are seven DAC companies, with plans under development for projects in West Texas (Carbon Engineering + Occidental Petroleum), Huntsville, Alabama (Global Thermostat & Coca-Cola), and others.

- *Managed Ecosystems:* Sometimes called "nature-based solutions," managed ecosystems include modifying working forest operation, reforestation, adding forests (afforestation), soil carbon storage and wetland restoration including mangrove plantation ("blue carbon"). In addition to removing CO_2, these approaches often have ancillary benefits (e.g., water quality, biodiversity, soil health). Many companies, including technology companies (e.g., Pachama, Indigo, LandLife), are executing projects in the US and seeking to expand their markets.

A number of large US companies have made commitments to CO_2 removal, both as an environmental goal and as an investment opportunity. These include technology giants Microsoft, which just last week announced a request for proposals as part of its action plan and $1 billion investment strategy;[14] Amazon, which has announced a $2 billion investment strategy;[15] Nike & Unilever, which have joined Microsoft in creating a buyers club for CO_2 removal services;[16] and Dow, which has committed to a net-zero footprint.[17] Several US companies, including Winrock and American Carbon Registry, serve to certify and authenticate these services and will help mature CO_2 removal as an industry.

Key Policy Concerns

To maintain leadership and global competitiveness in these markets and to achieve important climate goals, strong policies are needed to bring carbon management tools, technologies

and practices to market. In my last testimony, I discussed a wide range of potential policies. I will focus today on a subset of those approaches and additional new policies that this Committee and this Congress can consider.

Incentives for Deployment

In the past, the US has stimulated market adoption of clean energy technologies through incentives, such as investment tax credits and production tax credits, augmented by state-level mandates (e.g., renewable portfolio standards). The value of these has ranged from $60-$150/ton for the wind production tax credit to ~$40-$120/ton for the solar investment tax credit.

For carbon management, the only national incentive is the 45Q tax credit, worth $50/ton for saline formation storage and $35/ton for CO_2 reuse (e.g., EOR) and recycling and for direct-air capture. Recent analyses including our own at Columbia[18] and the National Petroleum Council[19] make clear that this is insufficient for widespread market adoption. Our work estimates that for utility-owned gas-fired power plants to deploy CCS, they would require $80/ton incentives and for merchant power plants closer to $110/ton, in line with existing renewable tax credit provisions. Important enhancements to 45Q are under consideration in Congress today, including these provisions to:

- Extend the construction eligibility criteria 2-5 years (or to make the credit permanent)
- Increase the value of direct-air capture to $65/ton or higher
- Increase the value of saline formation storage
- Make the credits fully refundable (e.g., under Section 1603), as was done during the 2009 stimulus response.

Incentives of these kinds are vitally important for CCS projects to receive project financing. The greater the incentives, the more CO_2 capture systems will be deployed and the more tons of CO_2 reduced or removed.

Augmenting Policies

Many other important policy options fall within the jurisdiction of this Committee, affecting opportunities around many forms of carbon management. Three important options merit consideration and legislative treatment:

Land Use (Forests)

The US Forest Service has programs and authorization to prioritize forest health and disburse funds. One action to consider would be to prioritize and augment funding for states to expedite implementation of elements of State Forest Action Plans required under the 2008 Farm Bill and present in every state. In addition to creating jobs for forest workers (many in rural communities), it would improve forest resilience and increase rates of carbon drawdown. These funds would provide critical financial support to states addressing high wildfire risk (including fuel clearing and other labor-intensive forest health treatments).

A related action would be to lift the cap on the Reforestation Trust Fund (RTF). The fund was established in 1980 to regrow and replace US forests impacted by wildfire, pests, disease or timber harvests. Today, RTF is funded by existing tariffs imposed on imported timber and wood products but is capped at $30 million. Lifting the cap to $60 million would not lift tariffs and would allow important existing funds to flow to forest restoration projects.

Pore Space Access

CCS, DACS and BECCS all require access to subsurface pore volumes. For saline formation, access and injection rights commonly belong to the surface owners. This means the rights to enormous CO_2 storage capacity, potentially over a trillion tons, belong to the US Government on Federal lands. The BLM should establish a program to provide access to pore volumes on Federal Lands, ideally at low-cost or zero-cost, and begin to create processes to resolve issues of pore-volume access for projects with multiple landowners and post-injection site care.

Resource Assessment

The US Geological Survey has done an excellent job assessing the potential CO_2 storage resources in conventional geology,[20] notably saline formations and depleted oil & gas fields. The US Department of Energy has similarly done an excellent job in assessment through the Regional Partnerships Programs,[21] and is greatly improving the confidence and resolution of these assessments through the CarbonSAFE program.[22] This work is the global standard of excellence for geological storage resource assessment. This Committee should consider expanding the CarbonSAFE program's funding and continuing the USGS assessment work.

That work should expand into carbon mineralization assessment. Although the USGS has made an initial effort to map and assess US CO_2 mineralization resources that is very helpful,[23] it is too coarse for states or companies to consider policies and investments. A more detailed representation of key ultramafic and mafic rock bodies, including detailed mineralogy and petrology assays, would provide data both scientists and entrepreneurs could use.

Finally, BOEM within the Department of the Interior could undertake similar assessments for the continental shelf region, starting with the near-shore Gulf of Mexico. As discussed above, they could also provide zero-cost or near-zero cost access to saline formation pore volumes in federal waters.

Infrastructure

As I have indicated in prior testimony,[24] CO_2 infrastructure is essential to deployment. A new study by the Great Plains Institute,[25] supported by 17 governors through a multi-state working group, shows just how valuable that infrastructure could be, reducing 280-670 million tons each year (Table 1), supporting hundreds of large-scale projects and creating tens of thousands of jobs. The projected network size would be 30,000 miles (only six times what exists today) and would cost roughly $15 billion. This would launch some of the fastest and cheapest abatement the US could undertake, including from ethanol, hydrogen and fertilizer production.

Table 1: CO_2 storage, land-use and investment across primary scenarios. Source: Great Plains Inst., 2020

Scenario	CO_2 Stored	Miles of Transport Network	Capital Investment	Project Labor Investment	Annual O&M Spending
Near- and Medium-Term	281 million metric tons	29,710 miles	$16.6 billion	$14.3 billion	$252 million
Midcentury	669 million metric tons	29,922 miles	$19.3 billion	$15.3 billion	$254 million
Impact of midcentury planning horizon	x 2.38 mroe CO_2 stored	+0.7%	+16.3%	+7.0%	+0.8%

The EFFECT Act has provisions to authorize the Department of Energy to provide grants for CO_2 pipelines. The Invest CO_2 Act would do the same with the Department of Transportation. This Committee could support these bills and could also expand the authorization of the DOE Loan Program Office to include investments in CO_2 pipeline infrastructure.

Innovation

Innovation is our nation's strong suit, and sustained, substantial support by the Federal Government has always played an important role, ranging from basic science to applied science to funding of pilots and demonstrations. A pending report from the Center on Global Energy Policy explains both the history and the opportunity innovation investment could play in maintaining US competitiveness as well as enabling and achieving deep carbon reductions.

In no area is this clearer than in carbon management. The report calls for dramatic increases in funding for both CCS and CO_2 removal, and adding that funding to multiple agencies. These recommendations follow the lead of the Energy Futures Initiative report from last year,[26] which lays out specific line items and budgets for US agencies. This recommendation is matched by the Rhodium Group recommendations around capturing leadership for direct-air capture.[27] Dramatic increases in carbon management innovation support represent a no-regrets pathway.

The same is true for data gathering & analysis around carbon management. Gathering data & information and undertaking analysis remain core government functions, and themselves enable opportunities that would not otherwise come to light. As one example, a recent report on achieving net-zero emissions for California by Lawrence Livermore National Lab[28] reveals key opportunities for CO_2 removal, both engineered and through managed ecosystems, and was only possible due to the decade of data made available on crops, forests, geological resources of all kinds, municipal solid waste and water. This Committee should empower agencies to gather key data (e.g., on industrial heat use, power market data, land use and facility engineering) to enable new carbon management technologies and projects.

Industrial Opportunities

In two reports on industrial decarbonization and in my recent House Testimony, my co-authors and I make a set of recommendations regarding how to rapidly and cost-effectively reduce emissions from heavy industry. New scholarship which we will publish soon shows unambiguously that CCS is one of the lowest-cost, most actionable pathways for profound emissions reduction, especially in the cement, steel, chemical and refining sectors. One important and under-utilized approach involves government procurement authorities, since governments buy 50% of the concrete, 20% of the steel and 5% of fuel in the US. Legislative opportunities include the Army Corp reauthorization, Highway bill reauthorization and Defense authorization. The Government can purchase low-carbon production from these industries, stimulating market competition and new products. This has often been the path for advanced technologies entering the marketplace. Importantly, these kinds of industrial investments and incentives will protect the US against border carbon adjustments and position US manufacturers for emerging global market opportunities.

Similarly, low-carbon hydrogen will be a major workhorse for a net-zero global economy. Policy measures that support low-carbon hydrogen production and use, including low- and zero-carbon production using hydrocarbons & CCS, will further US interests in many ways. In addition to procurement, infrastructure investments, tax credits for low-carbon hydrogen production and investments in innovation will all support this key industrial pathway.

Closing Thoughts

Carbon management is both the industry of the future and a keystone to a just, verdant world. The technology, physics and chemistry are well understood, and other aspects of the science are gaining clarity every day. A dedicated, committed effort by the US Government would lay the cornerstone for commercial activity, high-paying jobs, helping communities at risk, and tackling the hardest, most stubborn aspects of climate change. US leadership in this space is not inevitable but is very much possible by taking the right measures.

With that, I look forward to your comments and questions.

Notes

1. International Energy Agency (IEA), *World Energy Outlook 2018*, November 2019, https://www.iea.org/topics/world-energy-outlook
2. Global CCS Instiute, 2020, The Value of Carbon Capture and Storage, https://www.globalccsinstitute.com/resources/publications-reports-research/the-value-of-carbon-capture-ccs/
3. Goldman Sachs, 2019, Carbonomics: The Future of Energy in the Age of Climate Change, https://www.goldmansachs.com/insights/pages/gs-research/carbonomics-f/report.pdf
4. McKinsey Quartey, 2020, https://www.mckinsey.com/business-functions/sustainability/

our-insights/driving-co2-emissions-to-zero-and-beyond-with-carbon-capture-use-and-storage#

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ABOUT THE CENTER ON GLOBAL ENERGY POLICY

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GBRIA
GREATER BATON ROUGE INDUSTRY ALLIANCE

"Adding Value to Your Community"

October 8, 2021

To the Louisiana Climate Initiative Task Force:

The Greater Baton Rouge Industry Alliance, Inc. (GBRIA) voices its support for our state's industrial de-carbonization technologies, specifically Carbon Capture Storage (CCS), as part of the Louisiana Climate Action Plan.

Louisiana's own oil and natural gas industry leads in reduction and management of carbon emissions as it works with companies around the globe to minimize its carbon footprint. The industry commits to addressing climate change while also providing affordable and reliable energy our communities need for daily life. Technologies such as carbon capture require investment to continue innovation for more environmental efficiency.

Carbon Capture Storage (CCS) removes carbon dioxide emissions from industrial operations for reuse or storage, thus not allowing emissions to reach the atmosphere. CCS allows for industrial facilities to recycle its own carbon dioxide emissions to continue manufacturing of products such as net-zero fuels and low-carbon intensive building materials.

GBRIA represents more than 70 industrial facilities located along the Mississippi River between Baton Rouge and New Orleans brings value to our communities by driving solutions to workforce development and safety performance improvements. Supporting de-carbonization technologies serves our mission by encouraging a healthy and safe environment, and by maintaining the growth of our industry that provides high-paying jobs and substantial economic benefits throughout the state.

Sincerely,

Connie P. Fabre

Connie P. Fabre
President and CEO

8555 UNITED PLAZA BLVD., SUITE 202 • BATON ROUGE, LA 70809
PHONE 225-769-0596 FAX 225-769-0289 WEB www.gbria.org

Gulf Economic Survival Team

October 8, 2021

Harry Vorhoff
Climate Initiatives Task Force
Governor's Office of Coastal Activities
Via Email: climate@la.gov

Dear Mr. Vorhoff:

The Gulf Economic Survival Team (GEST) is a grassroots association comprised of small, medium and large energy support companies as well as allied business and trade associations with a mission to promote the significance of Gulf Energy to our nation, our state and our local economies. GEST members represent the indirect and induced jobs created by the oil and gas industry. We recognize that the backbone of our state and our nation's economy are small and family-owned businesses, and many of them are right here in Louisiana servicing the oil and gas industry.

Thank you for the opportunity to submit comments regarding the Louisiana Climate Initiative Task Force. The Task Force presents Louisiana a tremendous opportunity to engage a diverse group of stakeholders and to demonstrate that Louisiana can be a global leader in developing policy recommendations that build upon Louisiana's natural strengths. Louisiana has a long history of producing American energy for our nation and we have proven economic growth and environmental sustainability are not mutually exclusive.

Louisiana is blessed to have two areas of strength in the carbon emissions space that sets us apart from other states and countries. These include carbon capture and storage (CCS), and land-based sequestration. Louisiana has some of the best geology in the world for CCS, and we have a skilled workforce that is more than capable of constructing major CCS projects and infrastructure.

Louisiana's oil and natural gas industry is leading the way to reduce and manage carbon emissions, as companies around the globe work to minimize their carbon footprint in a battle against climate change. Carbon capture and storage is one of the few proven technologies that can deliver deep emissions reductions in industrial sectors safely and effectively. If appropriate policies and regulations are put in place, CCS could generate new jobs, protect current jobs, and reduce emissions at a lower cost to society than many other widely available technologies, which will help keep trained Louisianans employed in the state.

Once again, thank you for the opportunity to submit comments and we look forward to participating in future Task Force meetings. If you have any questions, please contact me at lori@gulfeconomicsurvival.org or 985.209.7932.

Sincerely,

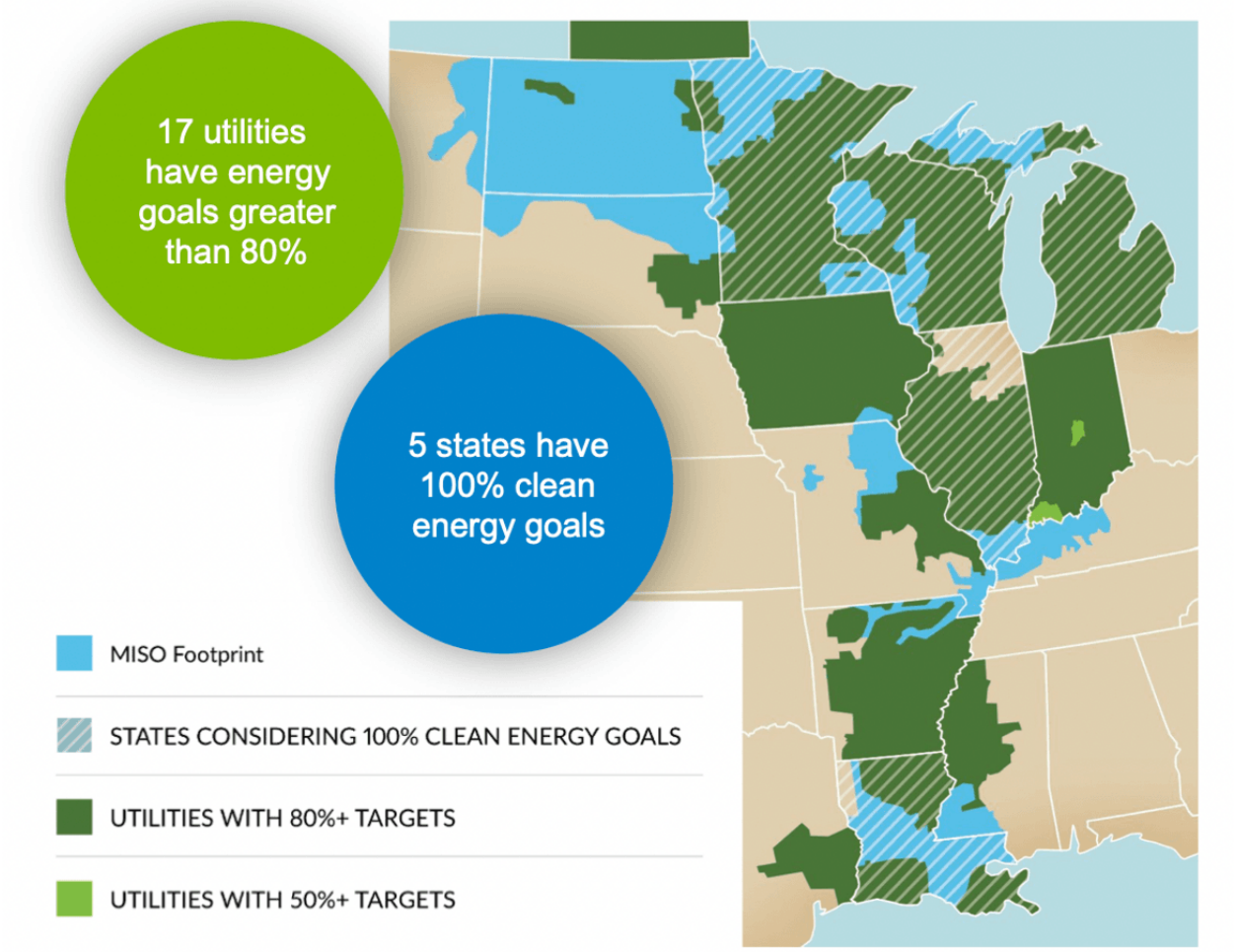
Lori LeBlanc
GEST Executive Director

Gulf States Renewable Energy Industries Association

Louisiana Climate Task Force Draft Report Comments

ACTION 1.1 Adopt a Renewable and Clean Portfolio Standard and create a statewide market for Renewable Energy Certificates

GSREIA applauds and supports the recommendation of the adoption of a Renewable and Clean Portfolio Standard. We would ask that this recommendation be more aggressive in timeline but still retaining attain ability. Our recommendation would require that by 2030, 50% of electricity generation is to be generated from renewable resources and 30% from clean resources, and by 2045, 100% of electricity would need to be generated from renewable or clean resources, with at least 80% from renewable resources.



GSREIA recommends that NREL's recommendations of best practices be adhered to in the development of an RPS. When designing an RPS, incorporate the following best practices:

- RPS targets should be stable, ramp up steadily over time and not be subject to sudden or uncertain shifts
- An RPS program should be of sufficient duration to allow for long-term contracting and financing
- An RPS program should apply to all load-serving entities: investor owned, municipal, and electric cooperatives, including suppliers of last resort
- The eligibility of specific renewable energy technologies and generators should be well defined
- Use of tradable renewable energy credits for RPS compliance should be considered and adhered to with a robust tracking system
- The cost of RPS compliance should be allocated fairly across all utility customers
- An RPS program should be mandatory and impose non compliance penalties on those entities that fail to meet requirements.

GSREIA believes that one of the most essential pieces of an RPS for Louisiana is addressing resiliency. In order to do this, any RPS must include clear battery storage targets. These targets not only harden our grid infrastructure, but allow us to leverage renewable resources to their full potential.

ACTION 1.2 Improve electric generation resource planning and procurement to streamline the retirement and replacement of energy resources

GSREIA agrees with specific recommendations including: changing the IRP frequency to an annual process, amending existing Market Based Mechanism to require all-source competitive solicitation and loading order rules, considering a limited exemption from the 1983 certification order for new generation projects up to 50 MWs that are replacing existing capacity with zero emissions generation, considering exempting electric utilities from the LPSC Market Based Mechanism Order requirements for additions of replacement capacity of 100 MW or less with zero emission generation, and accounting for climate projections and impacts in resource planning.

We further recommend IRP's include a market analysis of expected interconnection fees for planned procurement. This will assist in elimination of renewable generation development being stifled due to outsized and unprotected interconnection costs.

ACTION 1.3 Accelerate the decommissioning of coal and older natural gas-fired power generation

GSREIA agrees with the recommendation of retiring coal and natural gas-fired generation on an accelerated timeline.

ACTION 1.4 Reduce energy usage by adopting an Energy Efficiency Resource Standard

GSREIA agrees with the recommendation of adopting an Energy Efficiency Resource Standard.

ACTION 2.1 Authorize tax incentives for residential, commercial, and community-based renewable energy installation and storage
GSREIA strongly supports tax incentive recommendations and urges the Task Force to make strong and specific suggestions for these policies. In order to develop a more distributed and resilient grid with islanding capabilities to mitigate disasters such as Hurricane Ida, community solar and solar plus storage are essential. Energy resources and generation have been incentivized through the tax code for over a century. This is not a novel or fiscally irresponsible approach to achieving energy transition goals.

Community Solar

Colorado passed in 2010 and has since expanded the Community Solar Gardens Act. The Community Solar Gardens Act included direction on a number of design elements that make shared renewables work for utilities, developers and consumers alike. It also included important language that enabled policymakers to establish targeted policies for low-income customer adoption.

Colorado defines solar gardens as projects between 10 kilowatts (kW) and two megawatts (MW) in size located in or near the same community as the customers being served. These shared solar systems should serve at least 10 subscribing customers. The owner of the system can be either the utility or a third-party operator that contracts with the utility for the solar power production, creating diverse opportunities for market participation. Care was taken to make sure that all of these new megawatts of local solar power add to rather than detract from the state's other successful clean energy policies like net metering.

Community solar garden subscribers receive full retail credit for their portion of the power produced, minus a reasonable charge to cover the utility's costs of delivering the electricity from the garden to the customer. Similar to net metering, this bill credit can be carried forward if it exceeds the customer's electricity use in any given billing period.

Solar+ Storage

Maryland is currently offering a storage-specific tax credit for its residents. The tax credit covers 30% of the cost of your storage system, up to $5,000 for residential batteries and up to $150,000 for commercial batteries. Louisiana can be a leader on storage policy adopting a similar measure.

ACTION 2.2 Enable on-bill financing for customers to pay for investments in clean energy, infrastructure, and efficiency upgrades through their utility bill.

GSREIA supports enabling on-bill financing for customers to pay for clean energy investments.

ACTION 2.3 Establish utility green tariffs

GSREIA supports the establishment of utility green tariffs. LPSC Chairman Greene currently has an open docket exploring a framework for green tariffs across the state. We urge this Task Force to support the goals of that docket.

ACTION 2.4 Enable and promote the use of renewable Power Purchase Agreements (PPAs)

GSREIA strongly supports enabling and promotion of renewable power purchase agreements. Specifically virtual and third party power purchase agreements. These could be established in the existing green tariff docket. Not only does such a policy help meet renewable energy goals but also boosts economic development. Many major corporations when choosing locations for expansion are choosing sites where they can leverage PPA's to meet their own carbon emission goals. Failing to enact these policies will leave Louisiana out of the running for attracting many expanding businesses.

ACTION 2.5 Redesign and expand property-assessed clean energy (PACE) financing

GSREIA also strongly supports the redesign and expansion of PACE financing. We recommend looking at Texas flexible and effective PACE program. They also have a toolkit referred to as "Texas PACE in a BOX" to help promote the utilization of the program that we highly recommend.

ACTION 2.6 Reinstate full retail credit net metering for solar energy system owners and virtual net metering for community solar participants

GSREIA cannot state strong enough the fundamental necessity of restoring a market adequate net metering and virtual net metering credit. In the short-sighted decision in 2019 to move to a "avoided cost" model, this change has hit the most energy-efficient homes the hardest. Since solar will still be viable for those that use the most power mid-day, including retirees and those with inefficient homes where the air conditioning is running 24/7. This move actually incentivizes those adding solar to use more power mid-day, when demand is already intense which provides less relief to the grid.

Under the new system, Utilities are actually receiving more of a subsidy from the new regulations than rooftop solar owners ever did. Under the new rules, any lost revenues for "excess power" generated to the grid through rooftop solar is recovered by the utility.
In purporting to fix a subsidy problem, which we would argue doesn't exist, they've created a subsidy for shareholders.

A typical 10 kW solar PV system under retail net metering would save a family around $1,400 per year in Louisiana at current energy rates. This adds up to $63000 over a 30-year typical system life when escalating utility costs are factored in.

Under the wholesale export arrangement currently affecting most of Louisiana, the same 10 kW solar PV system would save a family around $400 less each year due to undervaluing of the solar energy by the La public service commission. This reduces the homeowners savings by $18000 over the same 30-year period.

So it's basically an $18,000 giveaway for each solar house to the utility company.

ACTION 7.1 Support regional long-range transmission infrastructure planning

GSREIA strongly agrees with and supports more aggressive and expanded long-term transmission infrastructure planning. We urge that the Task Force recommend adding dedicated stakeholders to both the SPP and MISO planning processes that promote the adherence to the principles of this action plan.

ACTION 7.2 Strategically plan for and foster the development of resilient microgrids

GSREIA agrees with the recommendation that we foster the development of resilient microgrids. Utilizing microgrids for existing critical infrastructure such as hospitals, schools, ports and community centers would improve our ability to respond and save lives during natural disasters.

ACTION 7.3 Adopt an energy storage target

GSREIA agrees with the Task Force proposition that the LPSC develop an energy storage target that mirrors the recommendation of the Energy Storage Association for a benchmark of 1000 megawatts within five years. In order to meet this recommendation, we urge the Task Force to support tax incentive action and RPS requirements that make the target their deliverables.

ACTION 7.4 Strategically plan for the development of offshore wind power

GSREIA agrees and supports a strategic plan for the development of offshore wind. Any such strategic plan must be coupled with efforts to support and grow long-term transmission infrastructure.

Louisiana is also in the unique position of possessing the skilled labor, blade manufacturing capacity and ship and port assets that will be essential to the development of offshore wind power in the Gulf of Mexico. GSREIA recommends that this action include an asset inventory along with strategic directives on how to utilize those resources as we develop wind resources.

ACTION 8.3 Collaboratively develop regulatory frameworks and statewide siting plans for new energy technologies (e.g., solar farming, transmission lines, offshore wind, CCUS) with considerations for both climate and environmental justice

GSREIA agrees and supports Action 8.3. We have supported legislation from the previous legislative session related to solar-siting rulemaking. We urge this Task Force to recommend that such siting policies endeavor to embrace best practices and dissuade punitive or overly burdensome regulatory action meant to have a chilling effect on renewable development.

ACTION 12.1 Expand availability of alternative fuels and electric vehicle charging

As Louisiana's trade association representing electric vehicles and charging infrastructure, we strongly support Action 12.1. We urge this Task Force to study and explore existing impediments to charging infrastructure including excessive fees by utilities related to charging stations. Such fees such be in line with those showing strong expansion of these resources.

ACTION 12.2 Reduce socio-economic and geographic barriers to increase accessibility to low- and zero-emission vehicles and supporting infrastructure

GSREIA strongly agrees with the Task Force recommendation in Action 12.2.

ACTION 14.3 Develop a model solar ordinance for adoption by local governments

GSREIA strongly agrees with Task Force recommendation in Action 14.3. GSREIA has put together the best practices seen across the nation and will be submitting those recommendations to DNR during the upcoming solar siting rule-making public policy period. Large scale solar development investors require predictability and stability in a regulatory market to make investments. A model ordinance would ensure this essential regulatory consistency.

GSREIA broadly supports all of the goals of Strategy 20 to prioritize Louisiana workers and businesses in the transition to a low-carbon economy.

Comments: DRFATActionPortfolio08232021

Jordan Stewart <j.stewart.leedap@gmail.com>

Fri 10/8/2021 9:38 AM

To: Climate <climate@la.gov>;

Cc: jstewartleedap@gmail.com <jstewartleedap@gmail.com>;

Climate Action Task Force,

The following comments are submitted for consideration in your deliberations on the document named "DRAFTActionPortfolio08232021."

STRATEGY 15: Please consider adding a sub-action item targeting the reduction of reliance on energy generally and in particular building design and construction.

There are several strategies for reducing the need for energy use to provide the services we are accustomed to in buildings that are not fully captured by the concept of "efficiency." If you are not using power at all, that condition falls beyond "efficiency." Further, reducing overall energy use before addressing efficiency is always a best practice.

An example to consider would be developing a standard for minimum passive thermal comfort performance in multi-family housing. This reduces energy demand in regular operations but also reduces the risks posed by power outages and make these buildings more resilient for occupation when limited power is available (a small solar system or small generator). This approach has the additional benefit of being less costly for residents to operate while being designed to equitable and dignified standards.

Countries, designers, cities, and industries in climates such as ours around globe have been exploring these pathways. The work involves reducing heat island effect outside the building as well as rethinking the approach to building design. Work in Queensland, Australia (Rosemary Kennedy), Venezuela, and Thailand come to mind.

You will find an example exploration of how this worked in practice as an ordinance and among design teams described in the articles below.

Arreaza, Timo Marquez et al. "Experiences in the Development of Sustainable Design Methodology for a Residential Complex La Piedra in Maracaibo, Venezuela."Sun, Wind and Architecture: The Proceedings of the 24thInternational Conference on Passive and Low Energy Architecture. Ed. Stephen K. Wittkopf and Tan Beng Hiang. Singapore: Research Publishing Services, 2007. 521-526.

Arreaza, Timo Marquez et al. "Going Beyond Local Regulations on the Built Environment: Considerations and Implications in the Design Process for the City of Maracaibo, Venezuela." Sun, Wind and Architecture: The Proceedings of the 24th International Conference on Passive and Low Energy Architecture. Ed. Stephen K. Wittkopf and Tan Beng Hiang. Singapore: Research Publishing Services, 2007. 514-520.

Sincerely,
Jordan Stewart, Metairie LA

LA 1 COALITION

Henri Boulet
Executive Director

October 7, 2021

Harry Vorhoff
Climate Initiatives Task Force
Governor's Office of Coastal Activities
Via Email: climate@la.gov

Re: Comments on Draft Louisiana Climate Action Report

Dear Mr. Vorhoff:

LA 1 Coalition represents over 60+ businesses and governmental organizations which operate out of Port Fourchon and Grand Isle who have concentrated on educating both the general public and policy makers on the importance of Louisiana Highway One. As you likely know, Highway 1 supports nearly 18% of our nation's domestic oil supply and 4% of our nation's domestically produced natural gas. .

LA 1 Coalition and our members appreciate the tremendous energy and economic benefits that offshore oil and gas production contribute to our region and our nation. We also recognize Governor Edwards for the creation of the Climate Task Force to reduce greenhouse gas emissions originating in Louisiana. We believe that it is possible to have both a robust oil and gas industry that creates jobs and economic opportunity alongside a healthy and sustainable environment to live and work for generations.

For these reasons, LA 1 Coalition supports and encourages the inclusion of Carbon Capture & Storage (CCS) in the Louisiana Climate Action Report to enhance economic growth in Louisiana and strengthen funding capacity for critical coastal restoration projects.

Wide-scale deployment of CCS will require the collective support of industry, communities and government. If appropriate policies and regulations are put in place, CCS could generate new jobs, protect current jobs, and reduce emissions at a lower cost to society than many other widely available technologies. Deployment of carbon capture provides a viable pathway for the decarbonization and continued operation of key industrial, manufacturing and energy facilities, thereby avoiding plant closures and the offshoring of jobs and livelihoods. It's critical that we support the advancement of CCS and other emission-reduction technologies that could put the world on the right path toward a lower-emissions energy future.

P.O. Box 2048 • Nicholls State University • Thibodaux, LA 70310
(985) 448-4485 • Fax: (985) 448-4486 • Email: henri.boulet@nicholls.edu • la1coalition.org

LA 1 Coalition thanks you and the members of the Task Force for all of your work and we encourage you to continue to recognize the ongoing contributions of our oil and gas industry to environmental stewardship and economic vitality, as well as the benefits of CCS, in the Louisiana Climate Action Report.

Thank you,

Henri Boulet

Henri Boulet
President

October 8, 2021

Attn: Louisiana Climate Initiatives Task Force
Email to climate@la.gov

The Lafourche Chamber of Commerce is a membership driven, nonprofit organization of businesses and professionals who work together to strengthen the business climate and the quality of life of Lafourche Parish, Grand Isle and the Bayou Region.

Lafourche Parish connects the communities of Thibodaux, Raceland, Mathews, Lockport, Larose, Cut Off, Galliano, Golden Meadow, Leeville, and Port Fourchon. But our organization's representation does not stop there. The Chamber also represents the small town of Grand Isle. Our mission is to serve as a professional leader in the growth of Lafourche by promoting businesses and providing resources which support the common interests of the community.

In Lafourche, we have a unique perspective on the importance of the oil and natural gas industry for our region's economy and environment. We appreciate the opportunity to submit comments on behalf of our organization to the Louisiana Climate Initiatives Task Force and we recognize the importance of this initiative for our state's future.

The energy industry has been a critical part of our community for over a century and the industry's success is closely tied to the success of our region, providing jobs and tax revenues for our people. It is possible to have both a robust oil and natural gas industry that creates jobs and economic opportunity alongside a healthy and sustainable environment to live and work. Carbon capture and storage (CCS) is one proven technology that can help the industry meet climate goals while allowing business to grow, continue supporting our economy, and improving our environment.

Deployment of carbon capture provides a viable pathway for the decarbonization and continued operation of key industrial, manufacturing and energy facilities, thereby avoiding plant closures and the offshoring of jobs and livelihoods. It's critical that we support the advancement of CCS and other emission-reduction technologies that could put the world on the right path toward a lower-emissions energy future while keeping jobs for our citizens.

Thank you for allowing our organization the opportunity to provide comments and we encourage the Task Force to support technologies like CCS in our state to help maintain a robust energy industry in Louisiana, while growing our economy and supporting our environment.

Sincerely,

Lin Kiger
President/CEO
Lafourche Chamber of Commerce

Louisiana Chemical Association

Gregory M. Bowser, President & CEO

October 8, 2021

Governor's Office of Coastal Activities
Attention: CITF Chairman Harry Vorhoff

The Louisiana Chemical Association (LCA) is providing these comments to the Governor's Office on the Climate Initiatives Task Force's (CITF) Draft Partial Final Climate Action Plan Report (Draft Final Report) and Draft Portfolio of Climate Strategies and Actions (Draft Portfolio). LCA is a nonprofit Louisiana corporation, composed of 63 members with over 100 chemical manufacturing plant sites in Louisiana. LCA was formed in 1959 to promote a positive business climate for chemical manufacturing that ensures long-term economic growth for its member companies. LCA member companies employ over 270,000 Louisianians in direct and indirect jobs and create products that support the modern lifestyles of all people in Louisiana, across the Nation, and through exports around the world.

The risks of climate change are a global issue that requires action by all members of society. LCA and its member companies are committed to finding real solutions both to reduce greenhouse gas (GHG) emissions in their operations and to protect the jobs that the chemical industry supports throughout the state. LCA appreciates the opportunity to comment/provide feedback on these draft documents.

Draft Final Report

In general, LCA supports and appreciates the hard work and effort that has gone into the Draft Final Report. However, LCA has a couple of general comments on the draft, as well as comments on specific action items.

First, LCA objects to the use of the term "Cancer Alley" in the report. The use of this term is inflammatory and seeks incorrectly to link the chemical industry with cancer rates in the industrial corridor, the part of Louisiana that covers the area of the lower Mississippi River of South Louisiana that includes Ascension, East Baton Rouge, Iberville, St. Charles, St. James, St. John the Baptist and West Baton Rouge parishes. Decades of data compiled by the Louisiana Tumor Registry (LTR) shows there is no "Cancer Alley", and, in fact, rates of cancer in the industrial corridor on the whole are even with or below those in the rest of the state. LCA requests that the term "Cancer Alley" be removed from the report, as it serves no purpose other than to inflame the audience.

Second, in the section titled, "Economic Impacts to Louisiana," there are a handful of illustrative examples of companies taking various actions to reduce emissions. There are several projects that could be added to bolster this section, including CF Industries' green ammonia project which is an example of both decarbonization and the economic benefits to the State if the right incentives are in place. CF Industries has committed to achieving net-zero carbon emissions by 2050 and has begun work on a

20,000 ton/year green ammonia project at its Donaldsonville facility. More information on this project can be found at: https://www.cfindustries.com/newsroom/2020/commitment-to-clean-energy-economy.

Draft Portfolio

Action 1.1 – This action requires the adoption of a Renewable and Clean Portfolio Standard (RCPS) and the creation of a statewide market for renewable energy certificates. With respect to this action, LCA believes there needs to be clarification on how to treat cogeneration facilities that are operated by non-utilities. LCA believes that cogeneration facilities that support industry should be able to opt-out of RCPS requirements. If implemented along with Action 2.7 [establishing an emission reduction generation and supply (ERGS) program], industrial combined heat and power (CHPs) plants would be allowed to avoid classification as regulated electric public utilities and be able to opt out of RPS requirements.

Action 2.4 – Power purchase agreements (PPAs) where the buyer is a corporate entity can help speed up deployment of renewable energy projects by allowing developers to secure a revenue stream for the generated electricity. For utilities, enabling corporate PPAs can be an alternative to government-led auctions. In a regulated electricity market like Louisiana, enabling direct purchase agreements between corporate entities and developers could occur through the establishment of a program, such as a green tariff, or a standardized way to sleeve a purchase agreement through the utility. This would aid in decarbonization of Louisiana's power grid and support the climate-related objectives of corporations seeking to purchase renewable energy. Making the procurement of renewable power easier in Louisiana may also attract future investment in the state from corporations that are evaluating potential options to mitigate the carbon footprint of operating their assets.

Action 3.2: This action requires the development of a voluntary industry certification program for GHG emission reduction activities. However, LCA does not believe that this action, as written, would provide sufficient motivation for a company to participate in such a voluntary program. One potential way to make this action more attractive could be by adding a funding mechanism to incentivize participation. For example, if a participating facility has a reduction project that it would like to undertake, then the facility could apply for funding to cover a portion of the project cost. There is no guarantee that making this change would be attractive to all companies, but it could lead to some companies deciding to participate. Additional incentives or market-based approaches may be necessary to make voluntary certification desirable.

Actions 3.3 and 3.5 – LCA groups these two actions together, as Action 3.3 directs the Louisiana Department of Environmental Quality (LDEQ) and Louisiana Department of Natural Resources (LDNR) to jointly develop a statewide framework to achieve and enforce industrial emissions reductions, while Action 3.5 directs LDEQ to initiate an action [to develop a regional cap-and-trade program] as one method to reduce GHG emissions. LCA supports an economgy-wide, market-based, national or international-level price on carbon emissions with transparent and predictable price signals that will facilitate lower GHG emissions. Such a program should be designed to avoid carbon leakage to prevent the offshoring or outsourcing of GHG emissions which would negate overall GHG emissions reductions. Any climate policy must protect the ability of energy-intensive, trade-exposed (EITE) industries to be competitive in the global economy. In the end, "carbon

leakage" and "trade-exposed" industries are key issues with the potential to affect the jobs of thousands of Louisianians. LCA believes that any carbon pricing program would be more successful on a national or international basis than on a state or regional level because national and global systems could better support innovation and well-functioning labor markets can better ease the transition from carbon-intensive to lower-emissions firms. The program should also be economy-wide and not targeted to a particular sector alone. Additionally, if any impacts of carbon pricing have a disproportionate impact on marginalized communities, then the federal government would have the ability to move more quickly to implement targeted actions to provide protection while at the same time not undermining carbon-reducing efforts. In the absence of a national or international program, LCA does believe that carbon pricing can successfully be implemented on a regional level, so long as the principles provided above and below are fully taken into account.

With respect to the proceeds from the carbon pricing program, LCA believes that some of those revenues can be reinvested in the participating facilities to help fund robust emissions reduction projects. LCA believes some additional principles should be considered when developing/implementing a carbon pricing framework:

- Foster market mechanisms to put a price on carbon to create incentives for innovation and investment in low- and zero-carbon energy solutions to significantly reduce GHG emissions while preserving and creating well-paying jobs.
- Incentivize and recognize early action by the private sector to cut emissions by establishing fair and reasonable industry-wide performance standards based on appropriate baseline years and including provisions to reward prior voluntary efforts to reduce emissions.
- Ensure sufficient transition times for EITE industries to adjust in an economically rational manner.
- Incentivize carbon-sequestering agricultural conservation practices through the promotion of carbon credit protocols and markets.

Action 4.1 – To meet Louisiana's energy efficiency target, this action proposes that the state both incentivize and require increased efficiencies through industry efficiency standards or pollution standards established by LDNR and LDEQ. LCA believes that there needs to be consideration for existing facilities, and they should have sufficient time to transition to different/new technologies if they are subject to the same standards as new facilities.

Action 5.6 – This action proposes the State continue to work with federal and state partners and industry to determine potential sites for storage, to identify a regulatory and legal framework that supports carbon capture and storage (CCS), and to determine impacts of capture and transport infrastructure buildout. CCS is one of the leading GHG reduction methods and its implementation is increasing across the world. LCA agrees with the proposal that the State evaluate mechanisms to support the widespread implementation of CCS and suggests mechanisms such as tax incentives associated with CO2 captured, infrastructure investments to enable transportation of CO2, streamlined permitting processes for transportation and sequestration activities.

Action 8.4 – This action requires several state agencies, including the Louisiana Department of Transportation and Development (DOTD), LDEQ, LDNR Office of Conservation (OOC), LDNR Office of Coastal Management (OCM), Louisiana Department of Agriculture and Forestry (LDAF), to update existing permitting and facility siting practices and regulations to align with Louisiana's emission reduction goals. This is a very broad mandate, and LCA is concerned that if this multi-agency framework is not developed and administered properly, then it could lead to a situation where expansions and new developments are hampered by an overly cumbersome process.

Action 8.5 – This action requires the same agencies discussed in Action 8.4 above to establish an additional set of requirements for facility expansions, new developments, and GHG-reducing activities to ensure these activities do not exceed a "cumulative risk burden" for negative health impacts on nearby communities. Similar with the feedback to Action 8.4, LCA is concerned that if this multi-agency framework is not developed and administered properly, then it could lead to a situation where expansions and new developments are hampered by an overly cumbersome process. Additionally, LCA requests clarification as to how the term "cumulative risk burden" will be defined.

LCA and its member companies appreciate the opportunity to be part of the Governor's Climate Initiatives Task Force and its committees and advisory groups and to submit comments on the Draft Partial Final Climate Action Plan Report and Draft Portfolio of Climate Strategies and Actions. Should you have any questions regarding the written comments of LCA, please do not hesitate to contact me at (225) 376-7672 or tokesha@lca.org.

Thank you for your assistance and cooperation.

Tokesha Collins-Wright

Tokesha Collins-Wright

LCA Vice President of Environmental Affairs

GREATER NEW ORLEANS INC
REGIONAL ECONOMIC DEVELOPMENT

October 8, 2021

VIA EMAIL

Louisiana Climate Initiatives Task Force (LCITF)
climate@la.gov

Dear Members of the Louisiana Climate Initiatives Task Force:

On behalf of Greater New Orleans, Inc., I am writing to offer support for the state of Louisiana's Climate Action Plan. Louisiana is postured to provide an exemplary standard for the country, in which we address issues brought on by climate change through decarbonization, create a sustainable economic model through industry modernization, and comprehensively build equity through intentional inclusion.

As identified in the Louisiana Climate Action Plan, we are in support of industry decarbonization tools, such as the safe and equitable deployment of carbon capture, utilization, and storage (CCUS), offshore wind power, utility green tariffs, renewable Power Purchase Agreements, and low-carbon alternatives. As a supporter and champion of decarbonization, we celebrate your efforts to achieve a net-neutral state, while simultaneously helping industry meet climate goals and allowing businesses to grow, continue supporting our economy, and improve our environment. We believe that there is no better time to address categorical issues of national importance and utilize Louisiana's unique, yet ideal geology for sequestration and offshore wind, industrial corridors that contain pure carbon sources, specialized workforce, and existing pipeline infrastructure to transition our state to net neutrality.

As the economic development organization for Southeast Louisiana, GNO, Inc. is deeply invested in addressing climate challenges, and we support the state's prioritization of appropriate policies and regulations that will generate new jobs, protect current jobs, and reduce emissions at a low cost. We believe decarbonization technologies, such as CCUS and offshore wind, protect existing and future investment in Louisiana, but also advance and further develop an exportable knowledge-based industry and specialized workforce. In fact, because of Louisiana's leading oil and gas industry, our highly skilled and trained workforce is prepared to rapidly, yet efficiently adapt to the industry modernization. Accordingly, we support the Louisiana Climate Action Report, as its strategies capture present and future opportunities to foster a balance between economic opportunity and environmental benefit.

We sincerely appreciate your ongoing efforts to work in the best interest of the State of Louisiana. If we can be of further assistance, please do not hesitate to ask.

Sincerely,

Michael Hecht
President and CEO, GNO, Inc.

October 8, 2021

Re: Louisiana Climate Initiatives Task Force Draft Partial Final Report/Draft Strategy & Action Portfolio

Dear Governor Edwards,

The Louisiana Environmental Action Network (LEAN) and Lower Mississippi Riverkeeper (LMRK) welcome the opportunity to submit comments on the Draft Partial Final Report and Strategy & Action Portfolio of the Louisiana Climate Initiatives Task Force (LCTIF).

General Comments

The creation of the Task Force presents a major opportunity for Louisiana to change direction on the issue of climate change. LEAN was a member of a Louisiana Legislative Study Commission which convened and completed a report in 1999 on the implications of climate change for the state[i]. Unfortunately, that earlier attempt at a state climate policy was not implemented. The intervening years have seen Louisiana generally play a role of opposition to climate policy at the national and state levels[ii], with resulting loss of opportunities for developing climate policies considered "no regrets" within the then current economic situation. Today the impacts of climate change on the state and beyond have become more damaging, and the need for addressing the problem in a substantive way is more acute.

The goals set in the creation of the LCTIF are therefore of paramount importance, beginning with achieving a 26-28% reduction in greenhouse gas (GHG) emissions by the year 2025. This goal, which can be achieved by engaging all sectors within Louisiana's current economic and industrial system, sets the state on course to reach the subsequent targets. It is also critically important both as a directional action by the state and for constructive participation in national climate policy efforts.

Comments on Selected Actions/Strategies

A series of Strategies and related actions involve creation of policies and programs focused on GHG emissions in Louisiana:

Strategy 3. Monitor, inventory, certify, and support industrial decarbonization

Action 3.1 Require self-reporting carbon intensity audits for industrial facilities to develop a state carbon intensity database.

Action 3.2. Develop an Industrial Decertification Program for GHG emission reduction activities.

Action 3.3. Develop a statewide comprehensive framework to reduce industrial GHG emissions

Strategy 29. Track progress in reducing net GHG emissions reductions and adapt approaches taken as needed.

Action 29.1 Establish a Louisiana GHG monitoring program.

Action 29.2. Update the state GHG inventory biennially.

These Actions and Strategies acknowledge the need to address Louisiana's large industrial carbon footprint, and also raise questions about their coordination and consistency with each other, how they would be aligned, and the need for expanded agency capacity to implement them. While presented in the context of "Industrial Decarbonization", they have high value in themselves and would constitute important components of achieving the state GHG reduction targets for 2025 and afterwards. The presentation of these actions could also convey the impression that the state will only be acting unilaterally, when there is an expectation of new federal climate policy that will involve Louisiana along with other states.

Missing from these proposals and other areas of the report is a full consideration of the permit process in Louisiana, which is where state governance most directly intersects the GHG issue. LEAN and LMRK directly engage with this process through tracking and reviewing air and water permits regulated by the Louisiana Department of Environmental Quality (LDEQ). The major emitting facilities included in the new Louisiana GHG Inventory also fall under this permit process.

A brief review of permits for one such facility, the Plaquemines Liquids Terminal (PLT)[iii], can illustrate this intersection. GHG were among the emissions from the proposed PLT facility that were estimated to be above federal levels for Prevention of Significant Deterioration (PSD) – at a projected 566,466 tons per year (vs. the PSD minimum level of 75,000 tons per year) – which also required an analysis of Best Available Control Technology (BACT) by LDEQ. The BACT analysis reviewed several options, including efficient design and operation of facility boilers, and options for Carbon Capture and Storage (CCS) (considered but not adopted). While GHG are considered to be a regulated New Source Review (NSR) pollutant under PSD regulations, LDEQ concluded that the lack of federal PSD standards or National Ambient Air Quality Standards (NAAQS) for GHG meant that analysis for ambient air quality was not required.

The PLT facility also required a Louisiana Coastal Use Permit (CUP) from the Louisiana Department of Natural Resources (LDNR) because of its location (Plaquemines Parish). Pursuant

to Louisiana Governor's Executive Order No. BJ 2008-7, state agencies are directed to administer regulatory practices, programs, contracts, grants, and all other functions vested in them in a manner consistent with Louisiana's Master Plan for a Sustainable Coast and the public interest, "to the maximum extent possible."[iv] These permits and the facility are of heightened interest because of its proximity to the planned site of the Mid-Barataria Sediment Diversion Project (MBSD). The Louisiana Coastal Protection and Restoration Authority (CPRA) endorsed a preliminary finding of coastal consistency for the PLT facility, with the condition that it cause no loss of sediment for the MBSD or impacts from events such as oil spills.[v]

Action 5.6. Support safe and equitable deployment of carbon capture, utilization, and storage (CCUS) for high-intensity and hard-to-abate emissions.

The explanation for CCUS under this action (Strategy 5) refers to "expansive geologic storage potential" in Louisiana. Yet as noted, in the permit process for a new PLT facility which would be a significant source of GHG emissions, LDEQ decided not to adopt CCS/CCUS as an option under BACT. The PLT Draft Air Permit stated that data for all geologic formations in Louisiana with potential use for CCUS included a "high level of uncertainty." One such option – saline formations in the near vicinity of the facility – that was described as having "an enormous potential for CO2 storage capacity." This conclusion rested largely on the lack of precise information about these formations, whose estimated carbon storage capacity ranged from 151 to 2,075 billion metric tons.

The economic and technical feasibility of CCUS options should be fully evaluated, which would include precise estimates and figures for their GHG storage capacity. The LSU Center for Energy Studies received a grant in 2017 from the U.S. Department of Energy to study the feasibility of "Integrated Carbon Capture and Storage in the Louisiana Chemical Corridor."[vi] The range of this study appears to be limited to the industrial corridor between Baton Rouge and New Orleans, while the PLT facility (and a number of other large emitting facilities) lie along the Mississippi River south of the Crescent City, where the saline formations in question are located.

Action 17.1 – *Leverage the carbon sequestration potential of Louisiana's coastal wetlands to acceleration implementation of Coastal Master Plan projects* – calls for incorporating climate mitigation goals and measures into future versions of the Coastal Master Plan, but makes no reference to specific mitigation measures for emitting facilities in the Louisiana Coastal Zone. While emitting facilities and processes anywhere contribute to global carbon levels which have local impacts, those facilities in the Coastal Zone have an immediate connection with the effort to sustain wetlands and systems that provide protection from hurricanes and sea-level rise, in addition to being located in close proximity to one of the CCUS prospects (saline formations.) The potential for such facilities to contribute to coastal restoration projects as part of their mitigation requirements under the permit process should also be explored.

Strategy 27. Improve engagement with disadvantaged communities and Indigenous peoples. The Task Force has taken significant steps to ensure inclusion of these communities and their

concerns in its work. It is imperative that the concerns of these historically ignored and marginalized communities are meaningfully addressed in the final actions of the Task Force.

Disadvantaged and Indigenous Communities are often impacted by multiple factors in addition to climate change, such as air and water pollution, flood risk, and drinking water vulnerability, though these are also usually connected to human-caused climate trends. Ensuring that their concerns have a prominent place in state climate policy continues the historic elevation of Environmental Justice as well as new considerations of climate equity. LEAN and our partner groups have worked to assist and empower many of these communities in Louisiana, whose vulnerabilities are summarized in our *Community Atlas* and *Guidebook.*[vii]

Some small communities such as Ironton, Louisiana have long been vulnerable to multiple impacts from air pollution from industrial facilities, river and hurricane flooding, and lack of access to needed infrastructure. Ironton was among the small coastal communities heavily impacted by Hurricane Ida, along with many others whose level of damage from that storm illustrates another component of the climate challenge facing Louisiana: impacts from hurricanes and other severe weather events can exacerbate economic and social stressors and shift previously healthy communities to a marginal condition and status.[viii]

Several Strategies and Actions focus on Transportation and Land Use, including:

Strategy 13. Increase urban, rural, and regional public transit service.

Action 13.3 Invest in regional transit to connect communities to jobs and services across Louisiana.

Strategy 14. Coordinate land use planning to reduce sprawl and support healthy and resilient communities.

Action 14.1 Develop a statewide framework to guide resilient local land-use practices.

Action 144. Align statewide transportation planning and decision making with land use planning.

These are also high value components for climate policy, as well as generally responsible planning policies on which Louisiana has lagged behind many other states. They relate to climate equity concerns, as well as the flood risk reduction effort being developed under the Louisiana Watershed Initiative (LWSI). Low-lying lands and wetlands set aside as floodplain retention areas will also deliver GHG sequestration benefits.[ix] The *Louisiana Speaks* initiative undertaken following Hurricane Katrina attempted to implement many of the same goals, and a review of its level of success would assist the Task Force in attempting to ensure that its final recommendations are carried out.[x]

Land Use Planning and benefits for flood reduction under the LWSI can also factor in implementation of the Strategies and Actions aimed at utilizing protection of natural habitats:

Strategy 16. Preserve and expand natural lands and urban green spaces to maximize climate mitigation and adaptation goals.

Action 16.1. Conserve Louisiana's interior natural lands, prioritizing forested lands, floodplains, wetlands and riparian areas.

There are numerous private and public ecosystem restoration efforts across Louisiana whose climate benefits should be incorporated (and expanded), along with their other benefits. While Louisiana's coastal wetlands have received considerable attention for their climate related functions, there are other important efforts underway such as restoration of Longleaf Pine forests and the Cajun Native Prairie, and urban forest programs to reduce the urban heat effect.

Concluding Points

Many of the Strategies and Actions in the Draft Partial Final Report and Portfolio are at this point largely aspirational as well as directional. Successfully developing those whose implementation depends on state agencies will require a significant expansion of the capacity of those agencies to expand their mission and activities. It will also require coordination of aims and actions that may be at cross purposes, as called for in *Strategy 24. Align climate action approaches across state government.*

Achieving the critically important 2025 Goal of a 26-28% reduction in Louisiana's GHG emissions will require a unified effort by state government and the private sector towards that specific target, a point not fully reflected in the text supporting the corresponding *Strategy 26. Call upon the private sector to align their practices and play a leading role in climate action.*

We welcome the opportunity to submit these comments, as well as to participate on the Task Force.

Sincerely,

Marylee Orr
Executive Director
Louisiana Environmental Action Network

Michael Orr
Director
Lower Mississippi Riverkeeper

P.O. Box 66323
Baton Rouge, LA 70896

[i] *Danger and Opportunity: Implications of Climate Change for Louisiana: A Report for the Louisiana State Legislature. (1999);* https://web.archive.org/web/20000819003913/http://www.crcl.org/pubs/hcr74/hcr74.htm

[ii] One of the high-profile instances of this approach was Governor Jindal's response to the 2009 Endangerment Finding on Greenhouse Gases by the U.S. EPA (https://www.federalregister.gov/documents/2009/12/15/E9-29537/endangerment-and-cause-or-contribute-findings-for-greenhouse-gases-under-section-202a-of-the-clean). LEAN and a number of Louisiana conservation organizations responded to actions by the Governor and state agencies (LDED, LDEQ, LDNR) in an open letter (https://old.leanweb.org/uncategorized/letter-to-governor-jindal-concerning-the-epas-endangerment-finding/).

[iii] LDEQ, Plaquemines Liquids Terminal, AI No. 217532, PSD-LA-835 (Permit and Public Hearing 2019-21); https://www.deq.louisiana.gov/public-notices?keyword=Plaquemines+Liquids+Terminal&startDate=01%2F01%2F2019&endDate=08%2F01%2F2021.

[iv] Louisiana Governor's Executive Order No. BJ 2008-7 (http://www.dnr.louisiana.gov/assets/docs/conservation/groundwater/ Appendix_B.pdf).

[v] Nola.com, "Oil exporting terminal next to Mid-Barataria Sediment Diversion gets state's initial ok," (https://www.nola.com/news/environment/article_f81343f8-43e9-53de-ba92-449d6fded314.html)

[vi] LSU Center for Energy Studies, "Integrated Carbon Capture and Storage in the Louisiana Chemical Corridor" (https://www.lsu.edu/ces/presentations/2017/DISMUKES_EBA-LA-CCUS_final.pdf)

[vii] Louisiana Environmental Action Network, https://leanweb.org/community-atlas.

[viii] Nola.com, "This Louisiana coastal community fought to get running water; now it might drown," (https://www.nola.com/collection_d1998440-0cdc-11ea-9a74-5fc15d0b512a.html)

[ix] Louisiana Watershed Initiative (https://www.watershed.la.gov/state-projects-and-programs)

[x] *Louisiana Speaks Regional Plan* (https://www.cpex.org/louisiana-speaks)

LMOGA

Louisiana Mid-Continent
Oil & Gas Association

October 8, 2021

Chip Kline
Director
Governor's Office of Coastal Activities
150 Terrace Avenue
Baton Rouge, LA 70802

RE: Comments in Response to the Draft, Partial, Final Report of the Louisiana Climate Action Plan

Chairman Kline,

The Louisiana Mid-Continent Oil and Gas Association (LMOGA) appreciates the opportunity to provide comments on the Louisiana Climate Initiatives Task Force's (CTF) Draft, Partial, Final Report of the Climate Action Plan (Report).

LMOGA is a state trade association representing all aspects of the oil and natural gas industry in the State of Louisiana and the Gulf of Mexico. LMOGA members consider safety and environmental stewardship to be core principles in all aspects of their operations.

When it comes to climate solutions, the oil and natural gas industry is at the forefront of creating and implementing technology designed to tackle our climate challenges head on, making significant investments in a cleaner future and making strides in reducing emissions to the lowest levels in a generation.

Collectively, through the efforts of the CTF and the actions of LMOGA members, Louisiana can become a leader in climate change solutions.

Furthermore, LMOGA appreciates Louisiana's rich and unique cultural heritage, and our members have made significant investments in Louisiana's coastal restoration initiatives. LMOGA recognizes and supports Louisiana's position as a global energy leader while also preserving and protecting our heritage, our culture and our coast.

As such we support Governor Edwards' comment as stated on page 11, "Our state can and will reduce GHG emissions to limit the impacts of climate change that harm the state's natural and cultural heritage while adapting to maintain its position as a world leader in energy, industry, agriculture, and transportation."

LMOGA commends Governor Edwards for establishing the CTF and the CTF for its efforts to develop solutions to the climate challenges we currently face. LMOGA has been an active participant on the CTF since its inception, serving on the task force, the Legal Advisory Group, the Oil and Gas Extraction and Mining Sector Committee and the Manufacturing and Industry Sector Committee.

In many ways, Louisiana is strategically positioned to be a global leader in climate change solutions, but to do that, we must take an all-of-the-above approach in our evaluations of

potential solutions, without bias and taking all viewpoints into account. Our decisions need to be data-driven and rooted in science.

To those ends, LMOGA offers the following comments on the Report:

- Page 21, second paragraph (Health Impacts) – recommend removing "as the quality and safety of water, air"
    - It has been demonstrated through ambient air monitoring, modeling and EPA National Ambient Air Quality Standards (NAAQS) designations that Louisiana's air quality has improved significantly over the past several decades.
    - According to the Consumer Energy Alliance, emissions in Louisiana have been in decline from 1990 through 2019 (the last year included in the study). More specifically, Louisiana's emissions of certain criteria pollutants decreased by the following amounts over the same time period:[i]
        - 71% reduction in sulfur dioxide (SO2)
        - 66% reduction in nitrogen oxides (NOx)
        - 49% reduction in carbon monoxide (CO)
        - 17% reduction in volatile organic compounds (VOCs)

- Page 23, third paragraph (just before Disease heading) – Remove mention of "Cancer Alley"
    - First, the term Cancer Alley has been debunked as not factually accurate by numerous studies, such as the Louisiana Tumor Registry[ii].
    - Second, referencing pollution in a climate document conflates environmental impacts (which are local) with climate (which is global); this distracts from the primary goal of this paper and the goals of the CTF.
    - Third, hyperbolic terms such as "Cancer Alley" can be considered inflammatory and have no place in a balanced conversation that is rooted in science.

- Page 24, fourth paragraph – Remove mention of the Deepwater Horizon oil spill
    - Similar to the comment above, a single offshore incident is not germane to a document contemplating globally-focused climate solutions.
    - Additionally, in reference to the carbon benefits of coastal restoration, hundreds of millions of dollars from the Deepwater Horizon litigation and resulting settlement fund have been used to restore the Louisiana coastline[iii].

- Page 27, second paragraph – Recommend deleting "part of the company's global strategy to invest…low-carbon future"
    - The CTF should not be using an individual company's investment strategy as a basis for determining an economic forecast.

- Page 28, Economic Opportunities – In recent years, Louisiana has experienced a period of significant economic growth through industrial expansion, yet our air quality continues to improve (as mentioned above)
    - In his presentation before the CTF on July 29, 2021, Dr. David Dismukes, Ph.D. (LSU Center for Energy Studies) highlighted the fact that although Louisiana has experienced significant industrial growth since 2005, emissions have not dramatically increased. They certainly have not increased in proportion to the growth of our economy. This is indicative of the fact that facilities have been

working to drive down emissions from processes and increasing operating efficiencies.

- Page 28, Economic Opportunities – Carbon Capture and Sequestration (CCS) is not featured; recommend adding some content that contemplates the potential economic benefits of CCS
    - As mentioned below in more detail, CCS represents a huge opportunity for Louisiana, as recognized by Governor Edwards, Louisiana Department of Natural Resources, Louisiana Economic Development and many others. The Report should highlight the benefits of CCS to Louisiana and the global economy as a whole.

In the ongoing global effort to mitigate the potential impacts of climate change, many organizations and governments have set net-zero GHG emissions goals, and many have been advocating for wholesale elimination of GHG emissions to reach those goals.

In striving to meet net-zero GHG emissions goals, we must recognize the fact that certain industrial processes produce GHG emissions that are difficult to abate. This is a fundamental and necessary reality as many of these processes are essential to supplying the products that make our modern life possible – from life-saving medical supplies to transportation fuels.

As long as demand continues for the essential products the industry provides, we will have to develop technologies and solutions to mitigate these emissions.

CCS will play a critical role in mitigating carbon emissions from certain industrial and manufacturing sectors that are difficult to reduce. CCS technology has been employed in projects around the world for decades; it has been demonstrated to be a safe, effective method for sequestering carbon[iv]. For an industrial state like Louisiana, CCS can be done safely and represents an area of strength and an opportunity for continued economic growth.[v]

As noted by Governor Edwards, Louisiana's geology is some of the best in the world for geologic sequestration.[vi] In addition, because of its long history of producing, transporting, and refining oil and natural gas, Louisiana has a highly trained, skilled workforce capable of constructing and operating geologic sequestration projects as well as the necessary associated infrastructure. Louisiana has existing large-scale infrastructure in place that will further benefit the growth of a CCS industry.

Louisiana has a tremendous opportunity to lead the way globally in the CCS industry by leveraging our workforce, geology, and industrial infrastructure to form one or more major CCS hubs within the state. These hubs would fit into a broader, national (or even global) hub-and-cluster carbon infrastructure model, positioning Louisiana to be a global leader in climate solutions and would have an immensely positive impact on our economy.

To further expand upon the climate opportunities that fit well with Louisiana's unique strengths, I have included LMOGA's Climate Solutions Document as an attachment to these comments.

LMOGA
Louisiana Mid-Continent
Oil & Gas Association

LMOGA appreciates the opportunity to provide comments and input on the CTF's Report, and we look forward to our continued participation in the CTF efforts. If you have any questions or if I can provide any additional clarity, please do not hesitate to contact me.

Sincerely,

Nathan McBride
Regulatory Affairs Manager
Louisiana Mid-Continent
Oil and Gas Association

Enclosures: LMOGA Climate Solutions Document
LMOGA Sector Committee Survey Responses
LMOGA Advisory Group Survey Responses

CC: Harry Vorhoff
Lindsay Cooper

[i] "Louisiana's Emissions Plunged 71%, as Statewide GDP Increased by 177%," Consumer Energy Alliance, 2020. <https://consumerenergyalliance.org/2020/08/louisianas-emissions-plunged-71-percent/#:~:text=Louisiana's%20Emissions%20Plunged%2071%25%2C%20as%20Statewide%20GDP%20Increased%20by%20177%25&text=Baton%20Rouge%2C%20LA%20%E2%80%93%20Consumer%20Energy,across%20the%20state%20since%201990>

[ii] Louisiana Tumor Registry, 2021. <https://sph.lsuhsc.edu/louisiana-tumor-registry/data-usestatistics/statistics/>

[iii] La. Approved for $200M+ in Deepwater Horizon oil spill settlement funds for coastal restoration projects," Rachel Thomas (WAFB), November 23, 2020.<https://www.wafb.com/2020/11/23/la-approved-m-deepwater-horizon-oil-spill-settlement-funds-coastal-restoration-projects/>

[iv] "CCS is a climate change technology," Global CCS Institute, 2021. <https://www.globalccsinstitute.com/about/what-is-ccs/>

[v] Carbon dioxide can be stored safely underground in confining formations via Class VI wells, regulated by the Underground Injection Control regime of EPA. https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-co2 visited on August 10, 2021.

[vi] There has been extensive geologic data gathered on Louisiana due to the State's history with the natural gas and oil industry. With this large data set, there are several opportunities to confine carbon dioxide in formations that will safely keep it restricted to a geologic zone. LSU has studied specific fields along the Mississippi River, which can be found here https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf visited on August 10, 2021.

LMOGA
Louisiana Mid-Continent Oil & Gas Association

LMOGA Climate Solutions

Louisiana Mid-Continent Oil and Gas Association (LMOGA) is a state trade association representing all sectors of the oil and natural gas industry in Louisiana and the Gulf of Mexico. Our members provide safe, affordable, reliable energy products that make modern life possible and meet the demands of a global economy. As Louisiana looks to be a leader in implementing climate change solutions, the purpose of this document is to provide LMOGA's perspective on several key climate solutions that are aligned with Louisiana's natural strengths.

LMOGA appreciates Louisiana's rich and unique cultural heritage, and our members have made significant investments in Louisiana's coastal restoration initiatives[i]. LMOGA recognizes and supports Louisiana's position as a global energy leader while also preserving and protecting our heritage, our culture, and our coast.

LMOGA members consider safety and environmental stewardship to be core principles in all aspects of their operations. To that end, LMOGA members have been investing billions of dollars into the advancement of innovative solutions and incorporating new technologies with the goal of reducing greenhouse gas (GHG) and other air emissions.

The risks of climate change are real, and the solutions to these risks must be real as well. Now is the time to work together to develop creative solutions to the climate challenge, solutions that leverage Louisiana's natural areas of strength and present opportunities for economic growth for Louisianans.

Even before Governor Edwards officially announced the formation of the Climate Initiatives Task Force (CTF), LMOGA collaborated with state and federal policy makers at all levels to ensure Louisiana maintains a thriving oil and natural gas industry while also contributing to the State's climate solutions. Since the official announcement of the CTF in 2020, LMOGA has been an active participant on the CTF, participating in all meetings of the CTF at large, the Legal Advisory Group, the Oil and Gas Extraction and Mining Sector Committee and the Manufacturing and Industry Sector Committee thus far.

LMOGA certainly appreciates the opportunity to be involved in CTF's development of climate solutions for Louisiana, recognizing the opportunity for Louisiana to be a carbon sink.

There are five primary areas that Louisiana, as a long-standing leader in energy production, should leverage to maximize impacts from a GHG emissions reductions standpoint:

1. **Carbon Capture and Sequestration (CCS)**
2. **Natural Gas**
3. **Hydrogen**
4. **Gulf of Mexico Crude Oil**
5. **Lower-Carbon-Intensity Liquid Fuels.**

Carbon Capture and Sequestration (CCS)[ii]

"Louisiana is the 'Saudi Arabia' of carbon dioxide sequestration." – Gov. Edwards

In the ongoing global effort to mitigate the potential impacts of climate change, many organizations and governments have set net-zero GHG emissions goals, and many have been advocating for wholesale elimination of GHG emissions to reach those goals.

In striving to meet these goals, we must recognize the fact that certain industrial processes produce GHG emissions that are extremely difficult to abate. This is a fundamental and necessary reality. Many of these processes are essential to supplying the products that make our modern life possible – from life-saving medical supplies to transportation fuels.

As long as demand continues for the essential products our industry provides, we will have to develop technologies and solutions to mitigate these emissions, which is something the industry is working on right now in CCS.

CCS will play a critical role in mitigating carbon emissions that are difficult to reduce. CCS technology has been employed in projects around the world for decades; it has been demonstrated to be a safe, effective method for sequestering carbon[iii]. And for an industrial state like Louisiana, CCS can be done safely and represents an area of strength and an opportunity for continued economic growth.[iv]

As noted by Governor Edwards, Louisiana's geology is some of the best in the world for geologic sequestration.[v] In addition, because of its long history of producing, transporting, and refining oil and gas, Louisiana has a highly trained, skilled workforce capable of constructing and operating geologic sequestration projects and the necessary associated infrastructure. Additionally, Louisiana has large amounts of infrastructure in place that can be leveraged as we seek to promote and grow a CCS industry by developing large-scale projects.

Louisiana has a tremendous opportunity to lead the way globally in the CCS industry by leveraging our workforce, geology, and industrial infrastructure to form one or more major CCS hubs within the state. These hubs would fit into a broader, national (or even global) hub-and-cluster carbon infrastructure model.

As Louisiana looks to advance widespread implementation of CCS projects, there are statutory and regulatory updates that need to occur. LMOGA has been working collaboratively with the Louisiana Department of Natural Resources (LDNR) in an effort to work through these issues.

Louisiana can be an active partner in advancing CCS development by offering financial incentives such as tax credits and/or property tax exemptions for GHG reducing projects that may not otherwise produce positive returns on investment. Additionally, the State could offer favorable lease terms for projects to be located on state-owned land or offshore.

It is in the State of Louisiana's best interest to recognize that investments in CCS represent investments in job growth and the modernization of Louisiana's economy.

While industrial-scale geologic sequestration will play a critical role in GHG emissions reductions for years to come, land-based sequestration is an area in which Louisiana's coastal environment, agricultural lands and wetlands all represent abundant opportunities to sequester carbon.

When considering large-scale, ongoing coastal restoration efforts, land-based sequestration represents an area for potential synergy. All coastal restoration, reforestation and wetlands restoration requires the introduction and cultivation of various plant species. Inherently, plants sequester CO2 throughout their lifecycle, so future restoration projects will continue to increase the amount of CO2 sequestered.

Louisiana is also in a unique and advantageous position with the globally renowned expertise found at the Water Institute of the Gulf, headquartered in Baton Rouge. The Water Institute is currently evaluating the potential of Louisiana's coastal wetlands as a carbon sink, and they have the capabilities to design coastal restoration projects that also maximize carbon sequestration. The Water Institute has been collaborating with CTF's efforts and will play a key role in Louisiana's carbon reduction solutions.

Similar to CCS, the State can incentivize increased investment in land-based sequestration by offering tax incentives such as property tax abatements for certain activities or credits to incentivize investments and innovation like modifying agricultural practices. A system of verifiable carbon offset or credits would create further market-based incentives for private investment in projects that result in carbon mitigations.

Carbon sequestration – both geologic and land-based – will play an ever-increasing role as the world moves to a lower carbon future. Louisiana has a tremendous opportunity to recognize and capitalize on carbon sequestration to grow its economy and establish itself as a global leader in climate solutions.

Importance of Natural Gas

Several peer-reviewed and widely accepted climate studies recognize natural gas, from renewable and non-renewable sources, as a prominent fuel and a vital component of any reliable and viable lower-carbon transition plan. The International Energy Agency acknowledges in its *Net Zero by 2050* report, that natural gas demand is expected to approximately *double* by 2050[vi].

Wind and solar electricity production are not necessarily practical in all areas of the country. This includes Louisiana; in terms of capability of supplying electricity on a utility scale, Louisiana ranks 30th and 41st for solar photovoltaic and onshore wind potential, respectively.[vii]

Even for regions in which wind and solar are highly effective, these energy sources cannot meet demand with a satisfactory level of reliability (cloudy days or windless days for solar and wind production, respectively) and are further hampered by the present limitations of available storage and transmission technology. To fill these gaps, natural gas serves as a clean and reliable source of electricity. Clearly, natural gas will continue to play an important role in the global energy portfolio for years to come.

Additionally, natural gas is a critical feedstock for the petrochemical industry, which plays a key role in the production of components required for alternative energy projects from solar panels to windmills.

When compared to other fossil fuels, such as coal, natural gas outperforms in terms of lifecycle greenhouse gas emissions, which includes production and consumption.

Louisiana-sourced natural gas, especially from dry gas plays like the Haynesville, has a lower carbon intensity than natural gas sourced from other plays because flaring is much less prevalent within the State of Louisiana[viii].

In addition to working to minimize flaring, operators have been investing large amounts of time and capital into improving leak detection technology and developing best management practices – all with the goal of driving down methane emissions.

For some operators, these investments work toward their goal of attaining a Responsibly Sourced Gas (RSG) certification, which is a third-party certification process to verify operators meet certain standards and best practices throughout their operations.[ix] This voluntary market-based approach, while still developing, is expected to incentivize continued efforts to reduce GHG intensity.

Further down the pipeline, LNG produced in Louisiana is exported all around the world and is helping other countries reduce their carbon footprints by reducing reliance on coal for electricity production.

Hydrogen Economy
LMOGA also supports the emerging clean hydrogen economy and recognizes Louisiana's opportunity to capitalize on this new and promising energy market.

As with CCS, Louisiana is uniquely positioned to be a global leader in producing, transporting and exporting clean hydrogen.

Additional synergy will come from Louisiana's adoption of a robust CCS industry because CCS is a critical component in producing blue hydrogen. Blue hydrogen is produced using conventional means (typically using natural gas), but carbon emissions are captured and stored.

Louisiana's strong manufacturing and industrial sector will continue to provide a stable end-use for clean hydrogen, and additional uses will emerge as hydrogen infrastructure is built out. Other end uses include but certainly are not limited to heating, natural gas supplementation and hydrogen-fueled vehicles.

At this point, the biggest headwinds hindering the growth and development of our hydrogen economy are lack of infrastructure and capital costs associated with the production of clean hydrogen.

Again, like CCS, the State of Louisiana could help industry overcome these challenges through creative incentives and tax exemptions.

Gulf of Mexico Crude Oil

The Gulf of Mexico represents another area of strength that is unique to Louisiana and provides a tremendous opportunity towards achieving the State's climate goals.

Crude oil sourced from the Gulf of Mexico has the lowest carbon intensity per barrel of crude than anywhere else in the world, except for Saudi Arabia.[x] If carbon emissions from the transportation of the crude oil are factored in, crude from the Gulf is the best crude available to the United States from a carbon intensity standpoint.[xi]

Another significant climate benefit from Gulf oil production is the offshore oil revenues reinvested in coastal restoration projects – which have a positive impact on emissions themselves – in the form of Gulf of Mexico Energy Security Act (GOMESA).

GOMESA is a mechanism created to share offshore oil and gas revenue among oil and gas producing Gulf states. It is funded entirely by revenues from Gulf of Mexico lease sales and production. GOMESA funds are invested in projects and activities that restore coastlines, enhance conservation efforts and provide hurricane protection and infrastructure improvements.

In addition to being one of the best crude options in terms of carbon intensity, increased Gulf production will lead to increased funding for coastal restoration – a virtuous cycle of emissions reductions.

Lower Carbon Intensity Liquid Fuels

Louisiana's current, developing, and planned energy infrastructure can opportunistically be a major center for production of clean, liquid fuels, allowing Louisiana to have a key role in the global effort to combat the effects of climate change and meeting the needs of energy markets. Liquid fuels are the most efficient source of transportation energy in terms of energy intensity, reliability, and affordability.

LMOGA recognizes that there are ways to continue building upon improvements in the carbon intensity of liquid fuels. These emissions mitigation strategies will differ from company to company and are driven by operational efficiency and strategies for maximizing the utility of existing facilities and infrastructure.

In the upstream, exploration and production sector, companies have been working to reduce flaring at well sites and to drive down methane leaks. In the midstream, or pipeline, sector companies have similarly been investing in technology and methods to detect and mitigate leaks and fugitive emissions.

In the downstream refining sector, companies are continuously working to improve their environmental performance. Refinery emissions reductions will be incremental in nature and include actions such as improvements towards modernizing furnaces and boilers.

Also in the downstream sector, the capacity of biofuel and renewable fuel production, most of which takes place in conjunction with refining operations, in Louisiana is significant and continues to grow.

Additionally, fuels that leverage Louisiana's strengths of natural gas and hydrogen will only become more prevalent in the future as technology continues to develop.

Petroleum-based liquid fuels will continue to play an important role in our energy portfolio for the foreseeable future, and LMOGA member companies have been and continue to invest heavily in ways to reduce emissions throughout the entire petroleum value chain, from the reservoir to the fuel station pump.[xii]

Other Considerations

LMOGA strongly believes that climate policy is best enacted at the national or international level.[xiii] Further, any climate-related policy changes must be applied broadly across the entire economy and should be market-driven.[xiv]

LMOGA recognizes that equity must be carefully considered in climate related policy decisions when it comes to people, communities, and sources of energy. Our members are committed to providing affordable and reliable energy to improve our quality of life and protecting the environment and our neighbors in the places where we live and work.

Additionally, Louisiana is home to several independent and small refineries. Many of these facilities drive the local economy of their communities by generating tax revenue and employing citizens. Steps must be taken to ensure policy changes do not disproportionately impact facilities such as these, creating economic impacts that could destabilize Louisiana's economy.

Finally, Louisiana should be taking an "all of the above" approach to our energy landscape and leveraging our natural strengths to maximize GHG reductions in a way that maintains our global position in the energy sector while also efficiently growing our economy.[xv]

Conversely, if Louisiana does not enact policy that encourages growth in the industries mentioned above and opts for a more heavy-handed regulatory approach, we run the risk of simply pushing industry out of our state to less-restrictive states (or countries).

If the ultimate goal is a reduction of <u>global</u> emissions, simply forcing industry out of our state through increased compliance burdens is counter-productive and will only lead to lost jobs and missed economic opportunities without any real climate benefits. This means avoiding arbitrary deadlines or technology mandates and instead focusing on proven, readily available solutions to move towards a lower carbon future.

Conclusion

In summary, LMOGA believes energy production and environmental protection are compatible goals, and Louisiana can play a major role in reducing GHG emissions and producing lower-carbon energy for decades to come. This lower-carbon energy, along with CCS and other emission reduction technologies, can establish Louisiana as a global leader in implementing climate change solutions.

Our industry is committed to meeting the world's ever-increasing need for low-cost, reliable and clean energy, all while continuing to support a robust economy for the people of Louisiana. We will continue to deliver energy that improves lives, increases national security, and protects the environment for generations to come. LMOGA's members are committed to developing

solutions to address climate change, and we look forward to collaborating with the State government and federal partners towards achieving climate goals.

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[i] Offshore members of LMOGA directly improve Louisiana's coastline via Gulf of Mexico Energy Security Act (GOMESA) and through direct private investment for everything from donations, tree plantings, and restoration on land owned by members. Further, The Water Institute of the Gulf is researching the rate in which carbon dioxide is sequestered via coastal land building. Lastly, there are additional organizations partnering with LMOGA members on nature-based carbon sequestration solutions, such as "Corporate Partners," Restore the Earth Foundation, 2021. https://restoretheearth.org/partners/.

[ii] Carbon Capture, Utilization, and Storage (CCS) encompasses methods and technologies to remove CO2 from the flue gas and from the atmosphere, followed by recycling the CO2 for utilization and/or safely and permanently storing CO2.

[iii] "CCS is a climate change technology," Global CCS Institute, 2021. <https://www.globalccsinstitute.com/about/what-is-ccs/>

[iv] Carbon dioxide can be stored safely underground in confining formations via Class VI wells, regulated by the Underground Injection Control regime of EPA. https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-co2 visited on August 10, 2021.

[v] There has been extensive geologic data gathered on Louisiana due to the State's history with the natural gas and oil industry. With this large data set, there are several opportunities to confine carbon dioxide in formations that will safely keep it restricted to a geologic zone. LSU has studied specific fields along the Mississippi River, which can be found here https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf visited on August 10, 2021.

[vi] "Net Zero by 2050," IEA, 2021. <https://iea.blob.core.windows.net/assets/405543d2-054d-4cbd-9b89-d174831643a4/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf>

[vii] "Decarbonizing the U.S. Industrial Sector," Niskanen Center, 2021. < https://www.niskanencenter.org/wp-content/uploads/2021/04/Sobhani-Decarbonizing-the-Industrial-Sector.pdf>

[viii] "…a closer look at Haynesville…" Rystad Energy, April 22, 2021. <https://www.rystadenergy.com/newsevents/news/press-releases/a-gas-boom-is-coming-in-the-us-a-closer-look-at-haynesville-and-appalachia-reveals-records-and-a-risk/>

[ix] "What is RSG?" Project Canary, 2021. <https://www.projectcanary.com/responsibly-sourced-gas/>

[x] "Could restricting oil production in the US Gulf of Mexico lead to carbon leakage?," Wood Mackenzie, 2021. < https://www.woodmac.com/news/opinion/could-restricting-oil-production-in-the-us-gulf-of-mexico-lead-to-carbon-leakage/#:~:text=Operators%20report%20facility%20emissions%20to,equivalent%20(CO2e)%20in%202019.&text=We%20forecast%20overall%20US%20Gulf,tonnes%20CO2e%2Fkboe%20in%202021>

[xi] *See Id.*

[xii] The Energy Information Administration projects energy consumption of petroleum and other liquids and natural gas to increase through 2050. https://www.eia.gov/pressroom/presentations/AEO2021_Release_Presentation.pdf visited on August 10, 2021.

[xiii] An example of climate policy at the international level is the Paris Climate Accord. A unified approach, such as Paris Climate Accord, creates equity across borders and efficiently manage emissions.

[xiv] A state-specific solution, without consideration for policies adopted by neighboring or regional states, will have a disproportionately negative, and potentially devastating, impact on the state's economy. Further, an example of a market driven approach is putting a price on carbon emissions, also known as carbon pricing. The rationale to adopting such an approach is price carbon such that it sends a clear signal through market, creating incentives to

reduce emissions, fostering investment in research and development to advance solutions, and providing consumers with transparency to make the best choices.

[xv] Focusing on efficiency is a conduit to the greatest benefit to Louisiana by balancing the marginal cost with the marginal benefit to capital allocation. This can be done by adopting a regulatory scheme that allows for cross-market collaboration to efficiently reduce impacts to the environment. For example, collaboration between sustainable farming and oil and gas industry creates opportunities for marginal benefit to be greater than marginal cost.

LOUISIANA OIL & GAS ASSOCIATION

MIKE MONCLA, *President*

October 8, 2021

Louisiana Climate Initiative Task Force
PO Box 94004
Baton Rouge, LA 70804

Dear Representatives of the Louisiana Climate Initiative Task Force,

For decades, the oil and gas industry has been the backbone of the Louisiana economy. With a $73 billion economic impact on the state and over 250,000 jobs created, the industry must remain vibrant to ensure the prosperity of Louisiana for generations to come.

With the creation of the **Louisiana Climate Initiative Task Force (CITF**) and their goal of reaching net-zero carbon emissions by 2050, it is important to recognize the work that has been done in modernizing the industry in reducing its carbon footprint.

The industry at large has invested billions of dollars into Carbon Capture & Storage (CCS), an innovative technology that removes carbon emissions from oil and gas operations.

The Louisiana Oil & Gas Association encourages the Task Force to put carbon sequestration at the forefront when discussing ways to improve the state's green energy capabilities. Louisiana's existing energy infrastructure, skilled labor force, and geological landscape will allow the state to become a hub for CCS technology, adding jobs and substantial economic investment.

As society moves towards a green future, industry and public officials must work together to find solutions that limit carbon emissions while maintaining an abundant source of energy that will keep Louisiana and the rest of the nation afloat.

LOGA and all of our industry partners call on the Task Force to work with oil and gas stakeholders on carbon sequestration and other issues relating to Louisiana's energy sector as we all strive towards a more sustainable and thriving future.

Sincerely,

Mike Moncla
President

Louisiana Climate Initiative Task Force (CITF) October 8, 2021

Good afternoon.

I am writing to you today to express my support for the work of the Louisiana Climate Initiative Task Force and specifically in favor of industry de-carbonization technologies. I have worked in petrochemical manufacturing facilities for 42 years including over 9 years as site managers and 6 years as the EHS Director of the 2nd largest chlorine manufacturing plant in the US. I currently serve as the Executive Director for Lake Area Industry Alliance, a 501 c 3 organization which represents chemical manufacturing, refineries and LNG facilities in SW Louisiana.

Louisiana is uniquely positioned to be a leader in the nation in Carbon Capture Storage (CCS). We have the ideal geology for sequestration, the industrial corridors that include vast carbon sources, pipeline infrastructure and a highly trained and skilled workforce that is well suited for the installation and operation of CCS facilities.

The oil and natural gas industry is critical to Louisiana, providing jobs and economic benefits throughout the state for over a century and can continue into the future. CCS technology can help the industry meet aggressive climate goals while allowing business to grow, continue supporting our economy, and improving our environment.

I believe it is possible to have both a robust oil and natural gas industry that creates jobs and economic opportunity alongside a healthy and sustainable environment to live and work for generations. In Louisiana, we can and need to balance economic opportunities and environmental benefits.

Thank you for your consideration of my comments and support.

Jim Rock

October 6, 2021

The Honorable Chip Kline
Chairman, Coastal Protection and Restoration Authority Board
Office of the Governor-Coastal Activities
PO Box 44027
Baton Rouge, LA 70804

Subject: Opposition to Draft Portfolio of Climate Strategies and Actions

Dear Chairman Kline,

I am writing to express WestRock's opposition to certain details found in the Draft Portfolio of Climate Strategies and Actions. WestRock operates a paper mill in Hodge, LA that serves as a vital part of our supply chain which is integral to delivering essential, sustainable paper and packaging products to our customers. If the proposed cap-and-trade program were to be implemented, the WestRock Hodge mill would be negatively impacted by increased operating costs which jeopardizes its ability to compete in the marketplace.

WestRock is a global manufacturer of sustainable paper and packaging products with approximately 50,000 team members across more than 300 manufacturing facilities, design centers, research labs and sales offices throughout the world. In Louisiana, we employ 465 people across 2 facilities with a payroll exceeding $48 million. We pay $5 million in taxes annually and have over $219 million in local supplier spend. We manufacture essential products used to ship and package food, beverages, health care, pharmaceutical, personal hygiene care, disinfectant products and other basic household supplies.

WestRock appreciates Governor Edwards and the Louisiana Climate Initiatives Task Force efforts to develop strategies to achieve net zero greenhouse gas emissions by 2050, and as one of North America's largest paper recyclers, WestRock has a long-standing commitment to innovation, environmental stewardship, and sustainable business practices. However, we are opposed to a regional cap-and-trade program because it fails to treat biomass as carbon-neutral.

Papermaking is an energy-intensive process, and the mill produces a significant portion of its own power using biomass. Failing to recognize our primary fuel source as carbon neutral would deviate from the practice of other states that participate in similar cap-and-trade programs, as well as widely accepted international carbon accounting protocols which would have harmful consequences. The WestRock Hodge mill competes in an intense global marketplace not only against external competition, but against other WestRock mills that may not face the same regulatory burdens that are being proposed.

Thank you for the opportunity to provide comments. WestRock looks forward to further discussions on this matter and commits to working with the Louisiana Climate Initiatives Task Force.

Respectfully,

Jonathan Harding
Regional Manager, State Government Relations

advanced energy management alliance

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aem-alliance.org

October 8, 2021

Submitted via electronic mail to climate@la.gov

Re: Comments on Draft Partial Final Report Issued August 23, 2021

Dear Climate Initiatives Task Force:

Advanced Energy Management Alliance ("AEMA") is pleased to provide comments to the Louisiana Climate Initiatives Task Force. AEMA is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource companies and advanced energy management service and technology providers, including demand response ("DR") providers, as well as some of the nation's largest demand response and distributed energy resources ("DERs") and consumers. Given that AEMA has DER customers in addition to providers in our membership, we view policy from the point of view of the consumer our recommendations reflect that perspective. The comments herein represent the views of the organization as a whole rather than those of any individual member.

I. Increasing Resilience to Climate Disaster

Clearly the impact of climate change can be felt in tragic and devastating ways in Louisiana, including during Hurricane Ida. AEMA believes that, had more distributed energy resources been deployed to homes, businesses, and industrial facilities, the impact of extended power outages, which in some cases led to loss of life, could have been materially mitigated. After Hurricane Maria destroyed the power system in Puerto Rico, AEMA submitted comments recommending a series of action that the government could take to increase resilience to such

events.[1] Those recommendations included developing a plan that fully took resilience and resilient technologies such as DERS into account; opening resilience proceedings at the Public Service Commission that would include DER and DR; and instructing the utilities to include DER and DR in their integrated resource plans.

A survey of customers of all sizes and types released in 2020 by AEMA found that consumer expectations of resilience are shifting; that distributed energy supply options are expanding and becoming increasingly economic; and that holistic customer solutions can bring essential support to the resilience of the electric grid.[2] As far back as Hurricane Sandy, microgrids in New York and New Jersey enabled university campus facilities to continue operation in the face of massive power outages.[3] When hurricanes hit Texas, Florida and North Carolina, distributed solar and demand response were able to stabilize the grid and prevent surges when power was restored. During heat waves in California, hundreds of energy storage facilities at office buildings in San Francisco were called to operate collectively as a "virtual power plant," reducing demand on an over-taxed grid. During the solar eclipse in 2017, over 750,000 programmable thermostats were lowered by their consumers to reduce demand by 700 MW as solar systems across the U.S. were displaced in the temporary darkness.[4] Those thermostats alone provided as much grid service as seven gas peaker plants, often the most inefficient and emitting resources. A recent ruling in Hawaii that allows emergency DR to fill in for the closure of a coal plant, states that "achievement of lasting grid stability and reliability necessitates the development of new paradigms such that grid needs are met through the integration of efficiently and effectively deployed DER resources."[5] A 2020 study released by the American Council for an Energy Efficient Economy ("ACEEE") shows an increase in reliability as a result of a combination of energy efficiency and electrification (which included

[1] AEMA Puerto Rico comments can be downloaded here: https://aem-alliance.org/aema-makes-resilience-recommendations-puerto-rico-commission/
[2] https://aem-alliance.org/aema-releases-whitepaper-on-consumer-resilience/

[3] Article on Princeton's microgrid can be found here: https://www.princeton.edu/news/2014/10/23/two- years-after-hurricane-sandy-recognition-princetons-microgrid-still-surges

[4] See description of program here: https://awards.ixda.org/entry/2019/nest-solar-eclipse-rush-hour/

[5] Order 37816 in Docket 2019-0323, pages 24-25.
https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A21F08B30537B01373

heat pumps at a minimum, but in some cases heat pump water heaters, induction stoves, and electric vehicles).[6] ***AEMA urges that DERs be included as part of ensuring climate resilience in any comprehensive state plan.***

II. Greenhouse Gas Reductions

During the Obama Administration, the Environmental Protection Agency ("EPA") solicited feedback during the development of the Clean Power Plan ("CPP"). During that process, AEMA provided analysis of several wholesale markets that, through implementing additional demand response, would lead to significantly decreased emissions.[7] As a result of that white paper, EPA's final rule included demand response as both a greenhouse gas mitigation tool as well as a reliability measure.[8] Those opportunities only increase when a broader set of distribution energy solutions—rooftop solar, energy efficiency, smart inverters, batteries, thermal storage (from hot water heaters, for example), fuel cells, combined heat and power, microgrids, electric vehicles, and geothermal heat pumps—are combined with demand response and advanced energy management. AEMA commented during the Trump Administration on the EPA repeal of the CPP, urging the agency to consider distributed energy resources in any replacement rule.[9] AEMA stands by the need for customer-sited resources to be part of any greenhouse gas mitigation plan, including those developed by state governments. Thus, ***AEMA recommends that DERs be considered as tools in reducing greenhouse gas emissions in Louisiana.***

III. Cost Savings to Residents and Communities in Louisiana

Customers have reaped tremendous economic benefits from flexible demand-side resources. On the PJM grid in the mid-Atlantic, customers collectively saved $11.8 billion in one year alone through demand response.[10] In another example, in its Distributed Energy Resource

[6] https://www.aceee.org/sites/default/files/pdfs/programs_to_electrify_space_heating_brief_final_6-23-20.pdf
[7] https://aem-alliance.org/study-finds-significant-greenhouse-gas-savings-demand-response-group-urges-epa-incorporate-clean-power-plan/
[8] https://aem-alliance.org/advanced-energy-management-alliance-touts-demand-response-as-tool-in-clean-power-plan/
[9] https://aem-alliance.org/aema-file-comments-epa-greenhouse-gas-proceeding/
[10] Link to PJM Market Monitor report can be found here: https://aem-alliance.org/aema-reacts-strongly-market-monitor-report/

Roadmap, the New York Independent System Operator stated it "believes that providing resources with the flexibility to meet wholesale and distribution system needs will deliver the maximum benefit to New York electricity consumers."[11] Baltimore Gas and Electric's SmartEnergy Rewards program, in which Maryland customers lowered their energy usage in response to signals from the utility, is estimated to have avoided $93 million in transmission capital expenditures and $72 million in distribution capital expenditures—savings that are then passed along to the customers.[12] AEMA believes that by allowing consumer resources to fully participate in state and federal policy solutions, we will see deployment of lower emission solutions, such as electric vehicles and heat pumps that address often hard-to-abate sectors and provide clean air outcomes. ***AEMA recommends that DERs be included as providing positive cost saving benefits in any climate action plan in Louisiana.***

IV. Ensuring Equitable Solutions to Climate Change

Ensuring that all customers can participate in and benefit from climate solutions such as DERs leads to an understanding that equity must be top of mind in developing state policies and that equity should be fully included in the solution set, not just tacked on. PosiGen, a solar and energy efficiency company headquartered in Louisiana, and focused on serving low income and communities of color,[13] has collected data on emission reductions directly resulting from their installations. The Table below shows the LMI and non-LMI deployments and the overall savings in energy, carbon, coal, and gasoline.

[11] "DER Energy Market Design: Dual Participation". New York Independent System Operator, Feb 2018, 2019.https://www.nyiso.com/documents/20142/5256593/DER%20Energy%20Market%20Design%20Dual%20Participation%20022819.pdf/cfaf3647-4b77-a706-b86d-24129d460ecf.
[12] Report on this program can be found here: https://www.utilitydive.com/news/behavioral-demand-response-gives-baltimore-gas-and-electric-a-business-reas/546895/
[13] More information about PosiGen can be found on their website: https://www.posigen.com/about/#

Table 1. Emission reductions from PosiGen installations over one year.

PosiGen Customers in Louisiana from July 2020 - June 2021

		Annual kWh		Annual Gross Savings		Metric Tons of CO2		- or - Tons of Coal Burned		- or - Gallons of Gasoline	
	Product	Total kWh	Total / System	Total $	Total / System	Total Tons	Total / System	Total Tons	Total / System	Total Gallons	Total / System
Total	Solar	59,102,109	4,825	$6,501,232	$531	41,371	3.4	23,138	1.9	4,728,169	386.0
	EE Total	51,591,127	4,212	$5,675,024	$463	36,114	2.9	20,198	1.6	4,127,290	336.9
	Total	**110,693,236**	**9,036**	**$12,176,256**	**$994**	**77,485**	**6.3**	**43,336**	**3.5**	**8,855,459**	**722.9**
LMI	Solar	38,416,371		$4,225,801		26,891		15,040		3,073,310	
	EE Total	33,534,233		$3,688,766		23,474		13,129		2,682,739	
	Total	**71,950,604**		**$7,914,566**		**50,365**		**28,169**		**5,756,048**	
Non - LMI	Solar	20,685,738		$2,275,431		14,480		8,098		1,654,859	
	EE Total	18,056,895		$1,986,258		12,640		7,069		1,444,552	
	Total	**38,742,633**		**$4,261,690**		**27,120**		**15,168**		**3,099,411**	

The emissions reductions from DERs in all communities can and should be considered as climate policy is implemented in Louisiana. ***AEMA recommends that access and input by communities of all economic levels be designed into any climate policy and include DERs.***

V. Economic Competitiveness

AEMA believes that climate solutions like DERs will increase the economic competitiveness of the state of Louisiana. AEMA members are located in virtually every state, including Louisiana. One of our founding Board members is Walmart, of which 138 are located in the state of Louisiana. Other AEMA distributed energy resource providers provide products and services that are relevant to the interests of electric customers in Louisiana. These providers serve national accounts that have been eagerly awaiting the ability to grow in Louisiana. Competition in energy has lowered prices for consumers and delivered market-based innovation such as renewable energy and AEMA believes that DERs should be integrated on a competitive basis in all markets and behind all utilities. These resources should be compensated for all of the value these resources provide utilities and grid operators. DERs enable business operations to more efficient, lowering energy costs, and resulting in more productive businesses that are in turn more competitive. Improved productivity and efficiency increase both employer and employee opportunities, increasing the tax base and bringing enormous economic benefit to the state of Louisiana. ***AEMA recommends that Louisiana consider the positive competitiveness and economic attributes of including DERs in climate solutions for the state.***

VI. Modeling

Local Solar for All, in collaboration with Vibrant Clean Energy, Vote Solar, and Coalition for Community Solar Access, recently released a report that analyzed the least cost and quickest solution to achieve President Biden's goal of reducing economy-wide emissions in the U.S. by 50% and achieving 80% clean electricity by 2030. The results were decisive: a combination of distributed solar (103 GW) and storage (137 GW) as well as utility scale solar (579 GW) and wind (442 GW wind) would meet those goals. On a national level, this would create 1.2 million jobs in the U.S. and, by ensuring 50% of the projects serve LMI neighborhoods, would benefit between 8-10 million households.[14] ***AEMA recommends that modeling tools such as the WIS:dom®-P Model that take into account customer-sited resources like solar and storage are used to determine the least cost methods for achieving emissions reductions in Louisiana.***

VII. Summary

In summary, AEMA recommends the following actions from the task force:

- Include DERs as part of ensuring climate resilience in the state climate plan;
- Consider DERs as powerful tools to mitigate greenhouse gas emissions in Louisiana;
- Include DERs as providing positive cost saving benefits in the climate action plan for Louisiana;
- Design access by communities of all economic levels into the climate policy and include DERs;
- Account for the positive competitiveness and economic attributes of including DERs in climate solutions for the state; and
- Use modeling tools that fully integrate cost-effective emissions reductions using customer-sited technologies.

VIII. Conclusion

[14] Report results can be found here: https://vibrantcleanenergy.com/wp-content/uploads/2021/10/US-Econ-Decarb_CCSA.pdf

We ask that the Task Force please consider AEMA a resource on distributed energy and demand response as solutions as the state develops much-needed policy to mitigate climate change impacts in Louisiana. We believe that consumer-sited resources should not only be considered, but are critical, to the success of any climate crisis policy. Should you have any questions or require further information on the comments above, please feel free to contact me at Katherine@aem-alliance.org or 202-524-8832. Thank you for taking on the critical issue of climate change and for consideration of our comments as providing some of those solutions.

Best regards,

Katherine Hamilton
Executive Director
Advanced Energy Management Alliance
1701 Rhode Island Ave., NW
Washington, DC 20036

October 8, 2021

Chip Kline
Director
Governor's Office of Coastal Activities
150 Terrace Ave.
Baton Rouge, LA 70802

RE: Comments in Response to the Draft, Partial, Final Report of the Louisiana Climate Action Plan

Chairman Kline,

The Louisiana Pulp and Paper Association (LPPA) thanks you for the time spent gathering information with regard to climate related issues and appreciates the opportunity to offer comments to the Climate Initiatives Task Force's (CTF) Report of the Climate Action Plan (Draft Report) in its current form.

LPPA is a state trade association representing Louisiana's robust forest products manufacturing industry including pulp and paper mills, converting facilities, and more. LPPA member companies directly provide high-paying jobs to thousands of hardworking women and men throughout the state's rural areas and indirectly create additional opportunities for thousands more individuals involved in the supply chain including logging and forestry industries. On a daily basis, right here in Louisiana, our companies sustainably manufacture essential products used in the shipment of a variety of goods across the country—and globe; we also produce critical packaging materials for everyday use in healthcare, beverage, personal hygiene markets, and more.

With that in mind LPPA is concerned with a couple provisions in the CTF Draft Report. In particular, the proposed cap-and-trade program referenced in Action 3.5 on Page 8 of the DRAFT Portfolio of Climate Strategies and Actions would negatively affect mills in Louisiana by increasing operating costs and reducing our competitiveness with neighboring states with which we regularly compete for capital. In other words, our members don't only compete against other companies in the marketplace they also

compete internally for capital with their counterparts in other states. The proposed regional cap-and-trade program fails to recognize biomass as carbon neutral, and for that reason we are opposed to this action item.

LPPA members have a well-documented history of sustainability and our industry continues to operate as one of the most prominent recyclers in the United States of America. Our industry heavily supports sustainable forestry management practices and is a leader in environmental responsibility among all aspects of manufacturing across our country.

The papermaking process is energy-intensive, and our member's mills generate substantial energy from biomass. Failing to recognize our primary fuel source as carbon neutral deviates from the practice of other states that participate in similar cap-and-trade programs as well as widely accepted international carbon accounting protocols.

I appreciate the time and effort that Gov. John Bel Edwards and you have put forth in this endeavor and hope you will give favorable consideration to recognizing biomass as carbon neutral in any proposals moving forward.

Please feel free to contact me at (318) 614-5043 or ahaddox@capitolresourcesllc.com with any questions or concerns.

Sincerely,

Adam Haddox
Executive Director
Louisiana Pulp and Paper Association

Companies Flee California Due to High Energy Prices

IER instituteforenergyresearch.org/the-grid/companies-flee-california-due-to-high-energy-prices

September 8, 2021

A new working paper from Stanford University's Hoover Institution explains that companies are moving their headquarters out of California in droves. The paper discusses several economic factors that are causing these relocations including tax policies, regulatory policies, labor costs, litigation costs, as well as high energy and utility costs.

As the paper explains, the number of companies that are relocating their headquarters out of California is increasing at an alarming rate:

> "Our findings indicate 265 companies moved their headquarters to other states just in the period from January 1, 2018, through June 30, 2021, based on the date of the announcement or date of documentation with the state, whichever came first. The losses are accelerating in that such relocations in the first half of 2021, which total 74, exceed that for all of 2020. Every month in 2021, twice as many companies are relocating their headquarters as in the prior year. The half-year monthly average for 2021 also significantly exceeds the monthly averages for 2018 and 2019."

One of the major factors driving this departure are high energy costs for commercial and industrial operations within the state:

> "The U.S. Energy Information Administration identifies California's energy costs for commercial operations as being quite high. California's cost per kilowatt-hour (kWh) ranks at No. 48, with only the non-contiguous states of Alaska and Hawaii being more expensive. Industrial rates are relevant because there are times when companies relocate their headquarters and manufacturing plants in unison. Here, again, California ranks quite low, at No. 44, with only New Hampshire, Massachusetts, Connecticut, Rhode Island, Alaska, and Hawaii at No. 50 being more costly for industrial users."

Moreover, as the paper explains, there doesn't appear to be hope for lower energy costs anywhere in sight:

> "Customers in all parts of California are likely to see energy cost increases by virtually every utility. PG&E Corp. submitted a proposal to regulators for a rate increase totaling $3.6 billion starting in 2023 to help make its system more reliable and safer by sparking fewer fires. PG&E serves a large swath of California from Shasta County near the Oregon border to Santa Barbara County near Los Angeles… Southern California Edison in April 2020 increased its rates by approximately 7 percent overall. In 2021, SCE requested an additional residential rate increase of 14 percent, while commercial rates are estimated to rise between 9 and 11 percent."

None of this should be surprising to anyone who has been paying attention to California's energy policies over the past few years. Policy-driven decarbonization of the power grid is causing severe operational and planning issues, adding costs each step of the way. California set its first renewable portfolio standard (RPS) in 2002 and currently requires 60 percent of its generation to come from renewable energy by 2030 with the next 40 percent of generation to come from zero-carbon sources by 2045. As others have noted, renewable portfolio standards raise retail electricity prices and are not a cost effective means of reducing carbon dioxide emissions.

In addition to these aggressive renewable portfolio standards, California is home to a litany of additional energy policies that restrict the use of dense, mineral energies and raise prices for consumers in the process. California is the epicenter of the nation's bans on new natural gas hookups, which are exacerbating the state's poverty problem by erecting barriers to entry in some of the country's wealthiest communities. Furthermore, in the quest to "electrify everything" California's policymakers are concentrating risks on the electric grid where the confluence of renewable energy mandates and aggressive zero emissions targets have rendered the electric grid unreliable.

In order to curb the production of fossil fuels in the state, California Governor Gavin Newsom recently ordered state agencies to stop issuing new fracking permits by 2024 and to look for ways to phase out oil extraction by 2045. The announcement adds to a list of executive actions that Newsom has taken on climate change in the past year. On September 23, Newsom ordered a ban on new gas-powered vehicle sales starting in 2035. Two weeks later,

on October 7, he signed an executive order setting a goal to conserve 30 percent of California's lands and coastal waters by 2030. All of this means that, to the extent that Californians are allowed to use fossil fuels, consumers will have to rely increasingly on imports from outside the state, likely raising prices in the process.

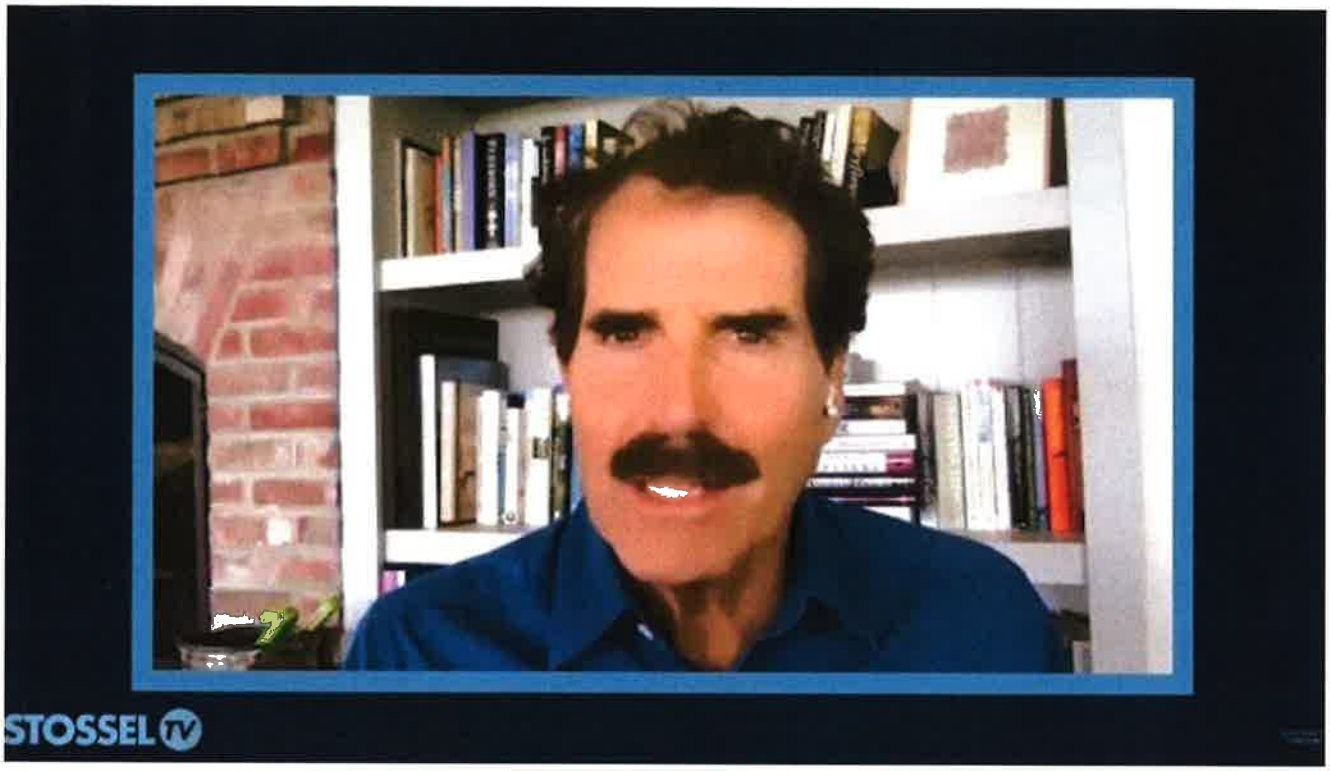
Finally, California also has the highest gasoline taxes in the country, which have helped raise gasoline prices in the state to their highest point in six years and they are currently the highest in the country. In 2017, the state legislature raised the tax by an additional 20.8 cents a gallon over a three year period. At the start of this year, California drivers were paying on average 63 cents a gallon in state and local taxes, compared with the 50-state average of 36.8 cents.

Together, all of these policies have undermined the ability of Californians to access affordable and reliable energy, which, in turn, is causing businesses to flee the state.

Go Green, Go Nuclear

newsbusters.org/blogs/nb/john-stossel/2021/04/21/go-green-go-nuclear

April 21st, 2021 3:41 PM



John Stossel
This Thursday, Earth Day, politicians and activists will shout more about "the climate crisis."

I don't think it's a crisis. COVID-19, malaria, exploding debt, millions of poor children dying from diarrhea -- those are genuine crises.

But global warming may become a real problem, so it's particularly absurd that Earth Day's activists rarely mention the form of energy that could most quickly reduce greenhouse gases: nuclear power.

When France converted to nuclear, it created the world's fastest reduction in carbon emissions.

But in America, nuclear growth came to a near halt 40 years ago, after an accident at the Three Mile Island plant in Pennsylvania.

The partial meltdown killed no one. It would probably have been forgotten had Hollywood not released a nuclear scare movie, "The China Syndrome," days before.

"People saw that and freaked out," complains Joshua Goldstein, author of "A Bright Future: How Some Countries Have Solved Climate Change (with nuclear power)."

One of the people still freaking out is solar activist Harvey Wasserman. "I live in terror of the next accident," he says in my latest video.

His anti-nuclear argument has basically won in most of the world. Nuclear plants are being shut down.

Why? I ask Wasserman. No one was hurt at Three Mile Island.

Wasserman replies that after the accident, he went to nearby homes and people showed him "their tumors, their hair loss, their lesions."

"It's bunk," I tell him. "It's been studied. People lose hair and get cancer and they attribute it to Three Mile Island, but it's not true."

"Having been there," Wasserman responds, "It's my clear assertion that people were killed."

Actual scientists don't agree. In fact, they find less cancer near Three Mile Island than in other parts of Pennsylvania.

But what about Fukushima? That was more serious. Today, clueless media quote Greenpeace claiming, Fukushima's radiation could "change our DNA!"

Also bunk. "There was heightened radiation, but it was all at this low level below what we consider to be safe," explains Goldstein.

The low level of radiation released at Fukushima was hardly a threat. What killed people was the panicked response.

"Everyone freaked out and ordered a massive sudden evacuation. That caused suicide, depression... Fear of radioactivity really did kill people."

One nuclear accident, Chernobyl, did kill, and its radiation may still kill thousands more.

But Chernobyl was built by socialists cutting corners to please dictators. No Chernobyl-like plant will ever be built again. And even with Chernobyl's deaths, nuclear power's safety record is better than that of coal, oil, and natural gas.

"But what about the nuclear waste!" shout the activists.

"It's a small problem," says Goldstein. "All the nuclear waste from all America's reactors for 60 years would fit into a Walmart."

While the anti-nuclear movement has stopped nuclear construction in most of the West, "other places are building them like crazy," says Goldstein. "China puts a nuclear reactor on the grid every two to three months."

America may soon finish... one. It took Georgia Power Company six years just to get permission to build a plant. Regulation is so heavy that, 15 years later, it still isn't operating.

Wasserman is proud he played a role in that. "If you want to accuse us of having raised the cost of building new nuclear plants by demanding more regulation, I plead guilty."

He claims countries can power themselves with rooftop solar panels and wind. Technology improvements did lower their prices, but what happens when the wind doesn't blow? Or the sun doesn't shine?

Store energy in batteries! replies Wasserman. "We are having a major technological and industrial revolution in battery capacity."

Goldstein scoffs in response, "The idea that a miracle battery is going to come along and save us is completely untested."

By contrast, nuclear energy has been tested. It could reduce greenhouse gasses, and provide reliable energy, if only we didn't fear it so much.

"The whole regulatory system is crazy," Goldstein concludes. "We're regulating this energy source as though it were the most dangerous thing out there, and it's actually the safest thing!"

John Stossel is author of "Give Me a Break: How I Exposed Hucksters, Cheats, and Scam Artists and Became the Scourge of the Liberal Media."

it is not the role of government to pick the winners and losers in the economy; as much as some members on the taskforce would like - the USA is not a socialist country

for those who believe in the de-growth movement - pack up your crap and move to a 3rd world country then you will find out how great it is to live in those conditions

DRAFT Portfolio of Climate Strategies and Actions

LOUISIANA CLIMATE INITIATIVES TASK FORCE

AUGUST 23, 2021

What happened to limited government? Government does not have the authority to do the majority of the actions listed.

This draft climate portfolio, containing strategies and specific action concepts across 9 priority areas, represents another step forward in Louisiana's collaborative effort to identify implementable solutions to reducing the greenhouse gas (GHG) emissions driving climate change. The actions contained in this document were developed from extensive input from members of the Climate Initiatives Task Force's (Task Force) six sector committees and submissions from the general public. (For cross-reference, noted at the end of each action description is a number corresponding to associated proposals received in April.) These actions were informed by feedback from the Task Force's four advisory groups, and by research on best practices in other states. They also benefit from the many conversations held throughout the numerous Task Force meetings, cross-sector workshops, and public comment periods.

Despite all the thought and effort that has gone into this document, this portfolio is still an initial attempt at striking the balance between the needs of different stakeholders as well as the urgent need to address the root causes of climate change that are already being felt across our state. The draft portfolio is also an attempt to organize nearly 100 actions to reduce GHG emissions across all aspects of the Louisiana economy in a way that is coherent and comprehensive. As such, readers should review all sections together as they consider the full implications of this draft portfolio.

In the coming months, this draft action portfolio will evolve. It will undergo several public rounds of discussion, critique, and refinement. Advisory groups will once again provide feedback on how aspects of this portfolio support values related to a more equitable society, quality of life, the environment, and the economy. The Water Institute of the Gulf will again provide estimates of the impact of this portfolio on Louisiana's GHG emissions using the Energy Policy Simulator modeling tool to guide their analysis. All of these findings will be brought before the Task Force in early October for additional conversation.

Collaboration across government, the private sector, academics, and members of the public has led to the creation of this draft climate action portfolio. While it contains the most clearly defined vision for climate policy in Louisiana thus far, it is still unfinished. In the months ahead, some new actions may be added, others may be deleted, and many will be adjusted to be more effective or accurate. This document was created through robust participation from stakeholders, and continued participation from everyone concerned about climate change and how GHG emissions can be reduced in Louisiana will help make it even better as we work towards the set of strategies and actions in the final plan.

*hurricanes and storms were around long before the man-made climate change and will still be around
*after the hurricanes come through - the solar panels are broken and become hazardous waste
*do you really think most households can afford the cost of hazardous waste disposal?
*if the green energy is so great, then why does it need taxpayer subsidies?
*so now you want utilities in the business of providing loans? what happens when a customer defaults? or moves? are the taxpayers on the hook to pay the loan off? the taxpayers already did that with the housing bubble remember. NO!

Acronyms

Term	Definition
BMP	Best Management Practice
CCUS	Carbon capture, utilization, and storage
CCS	Carbon capture and storage
CHP	Combined Heat and Power
CITF	Climate Initiatives Task Force
CO_2	Carbon dioxide
CPRA	Coastal Protection and Restoration Authority
CRMS	Coastwide Reference Monitoring System
DEQ	Department of Environmental Quality
DOA	Division of Administration
DOE	Department of Energy
DOTD	Department of Transportation and Development
DWF	Department of Wildlife and Fisheries
NRCS	Natural Resource Conservation Service
NRD	Louisiana Department of Natural Resources
EPA	U.S. Environmental Protection Agency
ERGS	Emission Reduction Generation and Supply
GHG	Greenhouse gas
HELP	Home Energy Loan Program
HERO	Home Energy Rebate Option
HOV	High-occupancy vehicle
IAC	Industrial Assessment Center
IRP	Integrated resource plan
LDAF	Louisiana Department of Agriculture and Forestry
LDAR	Leak Detection and Repair
LED	Louisiana Economic Development
LFA	Louisiana Forestry Association
LPSC	Louisiana Public Service Commission
LSU	Louisiana State University
LSUCCC	Louisiana State Uniform Construction Code Council
MISO	Midcontinent Independent System Operator
MPO	Metropolitan Planning Organization
NGO	Non-governmental organizations
OCM	Office of Coastal Management
OOC	Office of Conservation
OSR	Oilfield Site Restoration
PACE	Property-assessed clean energy
PPA	Power Purchase Agreement
RPP	Research Practitioner Partnership
SEM	Strategic Energy Management
SIT	State Inventory Tool
SPP	Southwest Power Pool
SWAMP	System Wide Assessment and Monitoring Program
SWCD	Soil and Water Conservation Districts
TDM	Travel Demand Management
USDA	U.S. Department of Agriculture
VMT	Vehicle miles travelled

The use of "green energy" must be the choice of consumer. No one on this taskforce was elected by the residents of Louisiana to make these types of "choices" in their names. The vast majority of people do not even know this is going on.

Clean Energy Transition

STRATEGY 1. Shift towards a clean, renewable, and resilient power grid

ACTION 1.1 Adopt a Renewable and Clean Portfolio Standard and create a statewide market for Renewable Energy Certificates

A Renewable and Clean Portfol is a law or regulat hat would require electricity used in Louisiana to be generated from an increasing perce ewable (ally replenishing with no GHG emissions; e.g., solar, wind, and geothermal) or clean (generation emit s; e.g., nuclear, biowaste and natural gas with carbon capture) sources. Power generation facilities reliant on t pture technology must capture at least 95% of facility emissions to qualify as clean energy. A Renewable an folio Standard would require that by 2035, 50% of electricity generation is to be generated from renew ource 30% from clean resources, and by 2050, 100% of electricity would need to be generated from rene clean reso s, with at least 80% from renewable resources. To support a Renewable and Clean Portfolio St enewable Ener ertificates play an important role in accounting, tracking, and assigning ownership to renew ctricity generation a use. Renewable Energy Certificates are market-based instruments that represent the pr ghts to the environmen l, social, and other non-power attributes of renewable electricity generation. This action es engagement of the Louisiana Public Service Commission (LPSC), Louisiana Legislature, utilities, and stakeholders to develop a Renewable and Clean Portfolio Standard and a statewide market for Renewable Energy Certificates. ***(Associated Submitted Action Proposals: 56, 172, 145, 152)***

ACTION 1.2 Improve electric generation resource planning and procurement to streamline the retirement and replacement of energy resources

only reason for the transition is because of being forced to

Utilities plan for future electric generation needs through integrated resource plans, or IRP's. IRP's identify future needs and different types of resources a utility can use to reliably serve Louisianans. Over the next decade, Louisiana's electric utilities will be undergoing a rapid transition from predominantly fossil fuel generation to renewable resources coupled with battery storage and new natural gas generation facilities necessary to ensure grid reliability. Where appropriate, the electric utility industry will move away from constructing large base load power stations towards smaller, more distributed generation facilities strategically located to enhance grid reliability and achieve emissions reductions. This action proposes working with the LPSC to evolve the IRP and regulatory process to accommodate the dynamic nature of the transition and to expedite renewable energy procurement in a way that will improve competition, reduce ratepayer costs, and improve Louisiana's air quality. Specific recommendations include: changing the IRP frequency to an annual process, amending existing Market Based Mechanism to require all-source competitive solicitation and loading order rules, considering a limited exemption from the 1983 certification order for new generation projects up to 50 MWs that are replacing existing capacity with zero emissions generation, considering exempting electric utilities from the LPSC Market Based Mechanism Order requirements for additions of replacement capacity of 100 MW or less with zero emission generation, and accounting for climate projections and impacts in resource planning. ***(Associated Submitted Action Proposals: 114, 116, 117)***

ACTION 1.3 Accelerate the decommissioning of coal and older natural gas-fired power generation

As utilities in Louisiana loo heir generation olio toward more zero-carbon generation resources, they are analyzing the benefits to custom ld b ed from deactivating legacy generation resources sooner than had historically been planned. Deactivat and older natural gas fired generation will eliminate the GHG emissions provided by those facilities an erall reduction in GHG emissions when those generation sources are replaced by renewable or more generat sources. Transitioning away from older inefficient fossil fuel generation will also reduce othe ollutants and ha lous air pollutants. The deactivation and retirement of older

generation resources, particularly on an accelerated basis, typically has impacts on customer rates; this impact can vary depending on the specific circumstances involving the generation resource as well as the level of investment that was required to maintain operation of the resource to provide reliable service to customers. This action would encourage utilities to continue to work with the utilities' stakeholders, customers, and local communities to analyze the costs and benefits of these early deactivations while working with the LPSC to provide the appropriate framework to address the necessary rate effects of such deactivations. ***(Associated Submitted Action Proposals: 112)***

and what about when the population grows? what about blackouts?

ACTION 1.4 Reduce energy usage by adopting an Energy Efficiency Resource Standard

Improving energy efficiency for all users lowers GHG emissions and brings down the overall need for electricity generation, which dec[illegible] the need for investments in ne[illegible]eration and can make the transition to clean energy easier. Reduci[illegible]ge also lowers electri[illegible]ills while decreasing other air pollutants associated with electricity productio[illegible]roposes the [illegible]gement of the LPSC, Louisiana Legislature, utilities, and stakeholders to implement an E[illegible]cy P[illegible]e Standard directing all electric and gas utilities subject to their jurisdiction to reduce energy sales b[illegible]levels by 0.2% annually until savings achieve an overall reduction of 2% annually. Efficiency programs to s[illegible]eting this standard would be available to all customer types and include programs specifically targeted t[illegible]d renter residents. ***(Associated Submitted Action Proposals: 16, 119, 162)***

ACTION 1.5 P[illegible]limate ran[illegible]s" for electric utilities to increase public awareness, transparency, and accou[illegible]

so you want to shame companies into submission?

Customers[illegible]ic utilities should hav[illegible]asy, understandable access to information about where and how their electricity[illegible]ced and how that power [illegible] changes over time. This action proposes engaging with the LPSC and utilities t[illegible]a climate scorecard and rea[illegible]me dashboard for electric utilities that synthesizes data on the diversity of a utility[illegible]ation portfolio, including load, energy mix, and renewables forecasting, as well as carbon dioxide (CO_2) and other emissions. Scorecard information would compare utility data and trends to other utilities around the state and the nation. ***(Associated Submitted Action Proposals: 108, 115)***

STRATEGY 2. Increase renewable electricity generation and access for all users

no more taxpayer handouts!

ACTION 2.1 Authorize tax incentives for residential, commercial, and community-based renewable energy installation and storage

Financial incentives for renewable energy installation and storage at household and commercial scales, particularly solar (electricity and wat[illegible]e important for ensuring e[illegible]e access to renewable energy across Louisiana. Similar tax incentives creat[illegible]na Department [illegible]enue have been employed in the past and this action would reinstate an updated pro[illegible]de a tax[illegible]e (e.g., 30% or number of kW installed) based on the cost of installation with a cap per hous[illegible] annual budget limit for the state. This action would also explore tax incentives or credits to promote and[illegible]mmunity-owned solar installations. Community solar refers to local solar facilities shared by multiple commu[illegible]s who receive credit on their electricity bills for their share of the power produced. The primary purpose[illegible]um[illegible] is to allow members of a community the opportunity to share the benefits of solar power eve[illegible]cannot o[illegible]r not to install solar panels on their property. If this action is implemented, it will be i[illegible]o ensure that [illegible]program is accessible for low/moderate income homeowners through mechanisms su[illegible]e-outs", availability[illegible]community solar and other non-ownership models, pairing with other incentives, targe[illegible]aging, and outreach. ***(As[illegible]iated Submitted Action Proposals: 113, 147, 126)***

ACTION 2.2 Enable on-bill financing for customers to pay for investments in clean energy, infrastructure, and efficiency upgrades through their utility bill

On-bill financing models allow utilities to incur the upfront costs for customers who upgrade to renewable/clean energy production (e.g., solar) and add additional facilities, electrification measures, demand response devices, and energy efficiency upgrades. Under this model, customers pay for these investments over time through monthly charges on their utility bill. This action proposes working with the LPSC and utilities to enable, design, and implement an on-bill financing program for Louisiana customers that is accessible, cost-effective, and inclusive of consumer protections. ***(Associated Submitted Acti 79, 175)***

ACTION tariffs

Green ta by utilities that allow customers to purc e or clean power from specific proj ate (fee structure). Opting to pay or renewable/clean energy helps customers d helps promote the de additional renewable energy generation projects s e working with the olish tariff offerings for renewable and/or clean power for industrial ugh a Utility Green Tariff program. ***(Associated Submitted Action***

ACTION 2.4 Enable and promote th chase Agreements (PPAs)

Power Purchase Agreements (PPAs) are long- ergy customers and renewable energy developers that allow purchase of renewable energy at cer ces. Renewable energy developers design, permit, finance, install, operate, maintain, and own ect. Basic co-benefits of PPAs are two-fold: 1) customers that enter PPAs can avoid the talling a renewable energy system while still increasing access to renewable power: rtainty that helps to finance the renewable energy project. Physical PPAs requi y de ustomers to be located within the same electricity market and provide for t of electric erator to the customer. Virtual PPAs are purely financial arrangements not receive el tly from the renewable project but do receive Renewable Energy Cr ot require the renew project and the customer to be in the same electricity market. Th rking with the LPSC to a sical PPAs and virtual PPAs as part of its Utility Green Tariff .3). ***(Associated Submitted A sals: 11, 47, 144)***

ACTION 2.5 Rede perty-assessed clean energy (PA ncing

This action provide or home and business owners to finance e ciency and renewable energy projects for thei perty-assessed clean energy (PACE). The types cts typically included under PACE include e vements (e.g., insulation, weather sealing, high-e water heaters) as well as solar and oth le energy systems. This program covers the up- ost of qualified energy improvement a local government and then spreads the repayments longer period such that the costs of t ents would be distributed over the lifetime of the project. ction proposes working with the Loui local governments to redesign, enable, and expand PACE uisiana. This includes education an ers, realtors, mortgage lenders, title companies, appraisers, d homeowners as well as streamlinin f practices among actors. ***(Associated Submitted Action Propo als: 146)***

not the role of government

ACTION 2.6 Re etail credit net metering for solar energy system owners and virtual net metering for comm solar participants

Many on-site (e.g., rooftop) solar energy system owners produce more electricity than they consume. Net metering is a billing mechanism that provides these customers with credit for the energy they add to the grid, and customers are then only billed for their "net" energy use. Virtual net metering applies similarly to the electricity bills of subscribers of community solar projects. When a solar system is built at a school, grocery store, or other consolidated site in a

community, residents can choose to share that solar system through partial ownership or "subscription." Net metering helps financially justify the cost of solar system installation thereby increasing demand for solar energy and creating jobs for those in the solar industry. The increased use of distributed solar energy also helps smooth the demand curve for electricity allowing utilities to better manage their peak electricity loads. This action includes working with the LPSC to reinstate full retail credit net metering for solar energy system owners and establish full retail credit virtual net metering for community solar, with special attention paid to underserved and overburdened communities. ***(Associated Submitted Action Proposals: 57, 126, 164)***

ACTION 2.7 Establish an Emission Reduction Generation and Supply (ERGS) program

Reduction of uncontrolled combustion flaring from th ector and conversio ergy otherwise wasted into electricity or heat via Combined Heat and Power (CHP) c source of y for other uses. Allowing excess co-generated power from industry to be purchased by public c b capacity for CHP at multiple scales can help maximize efficiency of energy production. This action woul LPSC establish an Emission Reduction Generation and Supply (ERGS) program that would authorize indust third parties to generate, share and/or transfer power from emission-reducing sources (e.g., CHP, batter e, c renewable energy generation, waste-heat generation) through privately-owned transmission infrast ithout cl ing the energy resource owner as a regulated electric public utility. This action would incentivize l customers t ld larger-scale reduced-emissions energy resources by allowing them to share the electrici ed. ***(Associated Su itted Action Proposals: 43, 52, 89, 124, 160)***

Industrial Decarbonization

STRATEGY 3. Monitor, inventory, certify, and support industrial decarbonization

not more reporting requirements ; GHG are already reported; stop trying to make government bigger

ACTION 3.1 Require self-reporting carbon intensity audits for industrial facilities to develop a state carbon intensity database

To accurately [illegible]pact of actions in this Climate Action Plan on GHG emissions from [illegible]trial sector, Louisiana [illegible]a baseline of current emissions on a facility-by-facility [illegible] action proposes mandat[illegible]rbon-intensity audits from all industrial facili[illegible]d provide a mechanism (e.g., a ca[illegible]tate-wide data can be stored and [illegible] available. A carbon intensity database wou[illegible]ailable datasets generate[illegible] Environmental Protection Agency (EPA) Greenhouse Ga[illegible] Clean Air Act Per[illegible]n, and others. Under this action, the Louisiana Department of E[illegible]) would c[illegible]brate existing data, ensure all facilities submit reports, update the data[illegible]ne[illegible]siana State University Industrial Assessment Center (LSU-IAC), University of Louisia[illegible] and Louisiana Department of Natural Resources (DNR) to complete assessments for energy[illegible]'s Office, state agencies, federal partners, industry, utilities, and environmental stakeholders wou[illegible]his database to ensure continual progress is made towards emission reduction. ***(Associated Su[illegible]51, 108, 140)***

ACTION 3.2 Develop an Industry[illegible]ogra[illegible]mission reduction activities

Louisiana's emission profile is[illegible]ous industri[illegible] unique operations and needs, therefore approaches to GHG emission[illegible]lexible to accomm[illegible]g industries. This action would establish a voluntary Industry Certifi[illegible]ndustries to propose an[illegible]t site-specific GHG emission reduction plans to meet emission[illegible]-specific plans would then be[illegible] by the certifying agency with annual certification required[illegible]ction in GHG emissions and mai[illegible]efits of program participation. This action proposes th[illegible]certifying agency and would develop cri[illegible]actions for program participation and certification[illegible]he public. DEQ would monitor and certify [illegible]issions reductions rather than specific actions[illegible]o participate in the Industry Certification Progra[illegible]d cover costs to increase staff capacity, allo[illegible]become self-funding and income-generating. Simila[illegible]ams have been successfully implemented[illegible]Texas alongside the EPA Natural Gas STAR Program[illegible]***sociated Submitted Action Proposals: 6***

ACTION 3.3 [illegible]wide comprehensive framework to reduce industrial GHG emissions

This action prop[illegible]d DNR jointly develop a statewide framework to achieve and enforce industrial emissions reductions, prevent waste from new and existing sources, and attract clean energy industry to the state. The framework should incorporate actions expressed in Louisiana's Climate Action Plan and strategic engagement with other state agencies, federal partners, industry, and environmental advocates to ensure a comprehensive approach is developed, implemented, and provides a tool for accountability. ***(Associated Submitted Action Proposals: N/A)***

ACTION 3.4 Increase capacity for Industrial Assessment Centers (IACs)

The U.S. Department of Energy (DOE) financially supports IACs across the nation, with a local program at LSU. The LSU-IAC is a team of university-based faculty and students that provide no-cost assessments to small and medium sized U.S. manufacturers to identify potential cost savings from energy efficiency improvements, waste minimization and pollution prevention, and productivity improvement. This action proposes the state work with the U.S. DOE to increase funding for the LSU-IAC so that it can provide extensive no-cost assessments and ad-hoc advice to industry, the DNR State Energy

stop trying to invent new schemes to suck money out of the private sector

Office, and the Governor's Office in implementing actions of Louisiana's Climate Action Plan and the DEQ-DNR statewide regulatory framework. IACs would partner with the DNR State Energy Office to convene stakeholder groups of small and mid-sized industry to develop strategies for meeting actions of the "Industrial Decarbonization" section of this Climate Action Plan. ***(Associated Submitted Action Proposals: N/A)***

ACTION 3.5 Initiate a regional cap-and-trade program for GHG emissions and direct proceeds toward the advancement of strat[illegible] the Louisiana [illegible]mate Action Plan

Cap-and-trade programs establis[illegible]aing li[illegible]on major sources of GHG emissions (a mandated "cap") and creates a powerful economic incentive for inve[illegible] cleaner, more efficient technologies. Under these programs, emissions allowances are purchased and sold by [illegible]entities (creating a market to "trade" allowances). This action proposes the Louisiana Legislature authorize [illegible] wo[illegible]th peer agencies in Texas, Oklahoma, Arkansas, Mississippi, Alabama, and Florida to establish a regiona[illegible]and-trade p[illegible]gram for GHG emissions from electric and gas utilities, industry, and other large GHG emitters. Proc[illegible]om the sales o[illegible]missions allowances would be used to support incentive programs for the equitable expansion [illegible]ewable energy de[illegible]loyment, electric vehicle adoption, weatherization and energy efficiency programs, workforc[illegible]nsition, climate change adaptation, and other goals established by the Louisiana Climate Action Plan. ***(Associated Submitted Action Proposals: 8, 48, 53, 173)***

STRATEGY 4. Improve efficiencies in and modernization of industrial processes and facilities

ACTION 4.1 Set Industry Efficiency Standards

Efficiency is the foundation of industrial decarbonization, which not only can reduce GHG emissions immediately but can also lower energy cost, mitigate risk, increase competitiveness, and make electrification more feasible. Near-term modifications to procedures and behaviors can be achieved while incurring little expense and prioritizing investments in modernized technologies. To meet Louisiana's energy efficiency target, this action proposes that the state both incentivizes and requires increased efficiencies through Industry Efficiency Standards (e.g., BTU per unit output) or pollution standards (e.g., CO_2 per unit output) established by DNR and DEQ. Standards would be minimum allowable criteria for existing and new facilities based on specified metrics, such as equipment, fuels, or per-unit-of-production basis. ***(Associated Submitted Action Proposals: N/A, EI citation)***

ACTION 4.2 Develop and implement a Strategic Energy Management Program

Strategic Energy Management (SEM) approaches efficiency through direct engagement with manufacturers to identify sources of significant energy use, implement efficiency measures, and track progress toward implementing energy efficiency standards. This action proposes the establishment of an SEM Program in Louisiana's DNR Energy Office that would ensure continual energy improvement is integrated into the culture of facility management. The SEM Program Manager, partnering closely with IACs and universities, may fund pilot projects that deploy efficient technology and assist manufacturers in meeting Industry Efficiency Standards. Through an SEM Program, DNR and DEQ would also develop a strategic engagement plan to partner with major and minor energy users as an opportunity to discuss and work through concerns, limitations, and feasibility of various methods to improve efficiencies. Working alongside manufacturers and IACs and universities, an SEM program may conduct studies on carbon intensity, life cycle accounting, competitiveness, resilience, and the impacts of energy-intensive industry for various processes to guide decisions, track progress, and set further standards. ***(Associated Submitted Action Proposals: n/a (citation 1, citation 2)***

the private sector will make the transition when the circumstances are right
why do those not working in industry or business think they are smart enough to know when the transition should be made?

STRATEGY 5. Accelerate industrial electrification, switching to low- or no-carbon fuels and low- or no-carbon feedstocks

ACTION 5.1 Invest in infrastructure to support industrial-scale electrification

Electrification has the potential to cut industrial emissions in half as numerous industrial technologies and processes that rely on compressed air, steam, and heat can be electrified today. Electrification hinges on the ability of utilities and other power providers to generate adequate amounts of affordable, clean energy to provide to industries (Steinberg, ACEEE). This action proposes the DNR Energy Office partner with utilities, the LPSC, and industry to incentivize transmission buildout, grid updates, and planning for electrification to increase access to clean energy around clusters of industrial facilities in Louisiana. This buildout would allow industry and customers to contract renewable power competitively, identify and purchase renewable energy, and allow new industry to contract with utilities for renewable energy. ***(Associated Submitted Action Proposals: 29, 71, 73, 139)***

ACTION 5.2 Demonstrate electrification of industrial processes and equipment through pilot projects

Replacing combustion-fueled technologies with electrification within an industrial facility directly reduces carbon emissions. If the source of the electricity (e.g., from the power grid) is from renewable energy sources or from less carbon-intensive process than was originally used at the facility, the result is reduced GHG emissions. Technology currently exists to electrify many types of systems and processes within industrial facilities, but the economic and practical feasibility of this technology has not been widely demonstrated. This action would include the development of pilot projects to electrify systems within Louisiana industrial facilities (e.g., building systems and motors) to explore economic feasibility and demonstrate the potential for more widespread implementation. ***(Associated Submitted Action Proposals: N/A)***

ACTION 5.3 Enact incentives that enable and encourage accelerated electrification

Electrification has extensive potential to reduce GHG emissions of the industrial sector. For example, electrification in manufacturing can increase efficiency by reducing thermal and material waste and can improve overall product quality. However, given the low cost of alternative fuel sources (e.g., natural gas), electrification is unlikely to be driven by economics alone. This acti… …e DNR Energy Office partner with indus… …utilities to determine roadblocks for electrification and wo… …tners to develop effective in… …to encourage a clean energy transition for industrial users. The in… …sed on criteria tha… …ze communities most closely impacted by industry and where explicit pollutio… …efits have … …ntified. Applicants seeking to take advantage of these incentives would be required to … …DN… …ar to ensure compliance with established criteria. ***(Associated Submitted Action Proposals: 29,***

ACTION 5.4 Promote low-carbon alternati… …nperature industrial processes

Industrial feedstocks (unprocessed materi… …upp… …facturing process) have traditionally been petroleum, natural gas, and their derivatives. Natu… …so widely … …ed in Louisiana to achieve high temperatures for chemical manufacturing and petr… …ng. Low-carbo… …titutes can replace energy-dense fuels that manufacturers currently rely on … …high temperatures … …d in many industrial processes, especially for refining and chemicals manufa… …ic furnaces for temperatu… …bove 350 °C are in development but not yet technologically mature for in… …herefore, fuel switching from … …al gas and other fossil fuels to low-carbon or renewable fuels (e.g., re… …ral gas, hydrogen, and biofuels) … …e most necessary and next less carbon-intensive option. This actio… …sking the DNR Energy Office and the … …s to explore which less-intensive carbon fuels could be used as alte… …ferent processes and then incentivizing … …ndustry to switch fuel sources to lower-carbon options. As a result… …ssments and the proposed DEQ Certification Program would recommend and incentivize low-carbon fuels fo… …ustrial heat processes that cannot currently be electrified. ***(Associated Submitted Action Proposals: 12, 107, 125, citation)***

ACTION 5.5 Invest in resea[illegible]ology, an[illegible]rastructure to produce renewables-powered bulk chemicals

Louisiana is one of the largest producers [illegible] chemicals, like ammonia, in the country, and chemical manufacturing accounts for over half of Louisiana's ind[illegible] emissions. The bulk chemicals are often intermediate products used to create end products like plastic [illegible]ers or f[illegible]lizer. To reduce emissions from this industry, this action proposes that the state support investment[illegible]t generation[illegible]w or no carbon bulk chemicals, created from renewables-powered electrochemistry (e.g ammonia[illegible]ced from green [illegible]ydrogen) captured CO2, or biogas. This action also proposes studies of whether additional in[illegible]ucture as well as studies of potential climate and air quality impacts from further development of green and non-green bulk chemicals. ***(Associated Submitted Action Proposals: 6, 51)***

ACTION 5.6 Support the safe and equitable deployment of carbon capture, utilization, and storage (CCUS) for high-intensity and hard-to-abate emissions

Carbon capture, utilization, and storage (CCUS) is a suite of technologies that can play a significant role in GHG emission reduction. Carbon capture can use a variety of techniques to remove emissions from industrial and power production operations post-combustion. With expansive geologic storage potential, highly concentrated industrial corridors, and a trained workforce, Louisiana has potential for deployment of this technology and infrastructure. For processes unable to be made efficient, electrified, or fuel switched, CCUS may be pursued. This action proposes the state continue to work with federal and state partners and industry to determine potential sites for storage, to identify a regulatory and legal framework that supports CCUS, and to determine impacts of capture and transport infrastructure buildout. Further actions in section "Safe and Resilient Energy and Infrastructure for Tomorrow's Needs" outline specific areas for impact analysis prior to permitting and deployment of infrastructure. ***(Associated Submitted Action Proposals: 7, 45, 49, 74, 155)***

ACTION 5.7 Invest in research for utilizations of captured carbon and life cycle analyses to understand their overall impact

The capture and use of carbon dioxide to create valuable products has potential to lower the net costs of reducing emissions and remove CO_2 from the atmosphere. This process of utilization refers to the use of CO_2 directly or as a feedstock in industrial or chemical processes, to produce valuable carbon-containing products, where CO_2 can generate economic value. Utilization technologies are still nascent in form and barriers to implementation remain, so more funding is needed to research and pilot various techniques. This action proposes that DNR would partner with universities to more comprehensively understand and study the various utilization techniques and their applicability and feasibility to reduce emissions in Louisiana industries. ***(Associated Submitted Action Proposals: n/a)***

STRATEGY 6. Promote reduced-carbon materials

ACTION 6.1 Develop a "Buy Clean Louisiana" policy for procurement of materials with lower carbon footprints for use in public co[illegible]truction projects

Adoption of a "Buy Clean Lou[illegible] incentivizes the us[illegible]uilding materials (e.g., concrete and steel) that are manufactured through lower carbo[illegible]ocesses t[illegible]e the GHG emission footprint of construction. This action, spurred by Louisiana's Division of Adm[illegible]DO[illegible]nce of Facility Planning and Control, and the Department of Transportation and Development (DOTD), w[illegible]e state agencies to consider embodied carbon emissions, all carbon dioxide emitted in producing materia[illegible]ial products when contracting for state infrastructure and non-infrastructure projects. This action wou[illegible] G[illegible]issions and spur further innovation in materials science. ***(Associated Submitted Action Propos[illegible]***

ACTION 6.2 Explore how circular economy principles can be applied to lifecycles of products created and used in Louisiana

A circular economy is a systemic approach to economic development based around an understanding of product lifecycles. Circular economies are designed to benefit businesses, society, and the environment while promoting zero waste – where every material after use becomes the feedstock for another use. Reducing GHG emissions by implementing material waste reduction programs, providing incentives for recycling, and investing in new technologies that consider the "lifecycle" of material products (e.g., plastics) are important actions to consider when reducing overall wasted energy. This action, coordinated by DEQ, other waste management entities, non-governmental organizations (NGOs) and private industry, includes reviewing opportunities to increase efficiency in recycling practices, exploring possible incentives for industrial use of recycled materials, and identifying other opportunities for the productive reuse of waste materials in Louisiana. After exploring options, this action would direct state agencies involved in the promotion of exports of goods and materials manufactured in Louisiana to develop specific proposals to help Louisiana manufacturers better engage in global markets already moving towards circular economy principles. ***(Associated Submitted Action Proposals: 72, 82, 85)***

how much of this work is expected to fund NGO's?
has anyone looked at how much these ideas will cost?
there is not a money fairy and the continued borrowing and spending is going to bankrupt our country.
Nothing is free of cost

Safe and Resilient Energy and Infrastructure for Tomorrow's Needs

STRATEGY 7. Increase the reliability and long-term resilience of tomorrow's energy infrastructure

ACTION 7.1 Support regional long-range transmission infrastructure planning

Long-range transmission planning ensures that the electricity grid can accommodate the changes occurring in the energy sector as Louisiana transitions to lower GHG-emitting sources (e.g., electrification, the growth of distributed generation, the retirement of aging or inefficient generation, offshore wind, development of reliable and affordable energy storage). Recognizing the important role of long-range transmission planning for achieving GHG emissions reduction goals and maintaining reliable service during extreme weather events, the Office of the Governor will join with the LPSC as an active participant and stakeholder in Louisiana's two regional transmission organizations, the Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP), to accomplish this action. This action would also ensure connectivity between the MISO and SPP infrastructure through operational agreements that manage joint coordination of transmission upgrades. ***(Associated Submitted Action Proposals: 122, 123, 165)***

ACTION 7.2 Strategically plan for and foster the development of resilient microgrids

Microgrids are localized "islands" of electricity generation that can be isolated from the larger macrogrid. This action, involving the Governor's Office of Homeland Security and Emergency Preparedness, Louisiana National Guard, the LPSC, and other stakeholders, would involve collaboration to plan implementation of microgrids for strategically important entities and underserved communities to build resilience against increasing natural disasters. This action may initially implement pilot projects for strategic assets in the near-term with the intention of broader deployment of microgrids to improve the resilience of other municipalities or user groups over the long-term. ***(Associated Submitted Action Proposals: 176)***

ACTION 7.3 Adopt an energy storage target

Energy storage is a necessary component of Louisiana's energy transition to ensure grid reliability and resilience. Storage enables larger quantities of and ...iance on clean energy sou... ...rough addressing intermittency and fluctuations of solar and wind pow... ...ny states, includi... ...nia and Pennsylvania, have enacted energy storage targets and a streamlined regula... ...nt that in... ...e energy storage. This action proposes the LPSC develop an energy storage target that mirrors ... ...nd... ... the Energy Storage Association for a benchmark of 1000 megawatts within five years. This action wou... ... the Louisiana Legislature assemble an Energy Storage Task Force that proposes recommendations for h... ...a will meet the target. ***(Associated Submitted Action Proposals: 174)***

ACTION 7.4 Strategically plan for the ...ment of offs... wind power

Given the availability of wind power as ... energy resource, L...iana's advantage as a strong offshore energy producing state, and the economic d... ...t opportunity that wind ...wer presents, it would be advantageous for Louisiana to continue collaboration ... ...tors and enhancing plans f... ...he accelerated implementation of offshore wind power generation. This action ... strategic collaboration acros... Louisiana state agencies and the federal government, transmission planning ...s, energy regulators, and the private sector, to take additional steps to advance development of offshore wind power generation. Possible activities under this action would include tool

development, exploring incentives, conducting research and identifying knowledge gaps, conducting stakeholder outreach, and preparing the transmission and workforce infrastructures needed to capitalize on the deployment of offshore wind in the Gulf of Mexico. ***(Associated Submitted Action Proposals: 61, 101)***

STRATEGY 8. Advance an equitable, efficient, and sustainable siting and permitting process for new energy and infrastructure projects

ACTION 8.1 Increase the resources and staffing capacity of the Department of Natural Resources (DNR) to plan for, oversee, and monitor the deployment of new clean energy technologies and infrastructure

DNR's jurisdiction over [illegible] and wind energy on state lands and water bottoms makes the agency central in deployment of clean energy in Louisiana. This action would enable DNR or the Louisiana Legislative Auditor to guide the development of a process to monitor, and make regulatory determinations on development of Carbon Capture and Storage (CCS), CCUS, clean/renewable energy infrastructure technologies (e.g., solar farming, transmission lines, offshore wind). Specifically related to CCS and CCUS, a new and unique set of research, technology, and monitoring needs are required within DNR prior to the permitting of any projects, this action would require an internal audit of the deploying agency to ensure they are adequately funded and prepared to assess, monitor, and make regulatory determinations (e.g., related to geologic storage in the development and maintenance of CCS well sites). This action also supports increased capacity of DNR to monitor potential air quality impacts, leaks at CCS well sites, complications of underground storage, and others. ***(Associated Submitted Action Proposals: n/a)***

ACTION 8.2 Solicit a study to more comprehensively understand potential impacts of CCUS technology and infrastructure on communities, ecosystems, and cultural resources to inform siting and permitting deployment

With mixed feedback and perception around the deployment of CCUS, this action proposes the state review existing research and solicit one or multiple studies to understand potential risks more comprehensively for Louisiana in buildout of this emission reduction technology. The study would expressly address but not be limited to the following concerns: air quality impacts on nearby communities, increased energy intensity for different industry processes, pipeline safety implications, wetland impact of pipeline buildout, potential incidents of geologic storage. ***(Associated Submitted Action Proposals: N/A)***

ACTION 8.3 Collaboratively develop regulatory frameworks and statewide siting plans for new energy technologies (e.g., solar farming, transmission lines, offshore wind, CCUS) with considerations for both climate and environmental justice

For emerging energy generation reductions reduction technologies in Louisiana (e.g., solar farming, offshore wind, CCUS), there is opportunity to [illegible] permitting and siting frameworks around the Principles and Fundamental Objectives identified in Louisiana's Climate Action Plan. Anticipation of the significant investment in and deployment of large-scale low- or no-carbon technologies, should establish an interagency working group that, with the benefit of robust public input particularly from those that face disproportionate climate and environmental impacts, will engage in a prospective, pre-permit siting [illegible] of the primary goals of this action is to ensure that future permitting and siting decisions for the above-mentioned emerging technologies would be carried out in a coordinated manner that is consistent with the Principles and Fundamental Objectives of Louisiana's Climate Action Plan and centered on an engagement process inclusive of environmental impacts, environmental justice considerations, and the needs of marginalized communities. To the extent possible, this effort would seek to identify areas where the necessary conditions (solar, atmospheric, geologic, and economic) for a given technology are highest and the potential for conflicts or adverse impacts (environmental, economic) are lowest. ***(Associated Submitted Action Proposals: 46, 92, 96)***

ACTION 8.4 Update existing permitting and facility siting practices and regulations to align with Louisiana's emission reduction goals

Currently, the construction of new and expanded industrial facilities are handled by multiple state agencies with multiple permit guidelines depending on the nature of the technology and the location of the proposed facility. Ostensibly all such decisions should be made in accordance with Article IX, §1 of the Louisiana Constitution which serves as the basis for what is known as the "Publ trine." However varying agency priorities atory nuances, and administrative or judicial decisions hav nd at-times disjointed proce tionally, siting decisions are made on a permit-by-permit basis with t of a comprehensi ide plan or framework. The ability of current permitting regulations to fully in ecent und g of climate impacts and environmental justice concerns is questionable. Via executive Go uld mandate that all facility siting decisions be made in accordance with the emission reduction g 8. This action would include convening an interagency panel (including DOTD, DEQ, DNR Office of Con C], DNR Office of Coastal Management (OCM), Louisiana Department of Agriculture and Forestry [LDAF ection and Restoration Authority [CPRA], Department of Wildlife and Fisheries [DWF]) with the ben f ut, particularly from those who face disproportionate climate and environmental impacts, wi ive to rev ting regulations and permitting practices to ensure that permitting and siting decisions eutral and are eeding the cumulative risk burden on vulnerable communities, tribal lands, or the ***(Associated Submit tion Proposals: N/A)***

ACTION 8.5 Ensure energ does not overburden vuln ilities communities

Based on Action 8.4, this enable the same interagency pa (DOTD, DEQ, DNR-OOC, DNR-OCM, LDAF, CPRA, DWF) to establish an t of requirements for facility expans s, new developments, and GHG-reducing activities to ensure these not exceed a cumulative risk burden for negative health impacts on nearby communities. Facilities subje environmental and public health impact review will include major sources of air pollution, resources recovery facilities, sewage treatment plants, landfills, recycling facilities, and CCUS. ***(Associated Submitted Action Proposals: 46)***

Actively Manage Methane Emissions

STRATEGY 9. Increase resources for decommissioning legacy oil and gas infrastructure

ACTION 9.1 Hold former well operators accountable for orphaned wells

Orphaned wells are abandoned oil and gas wells for which no viable responsible party can be located, or such party has failed to maintain the wellsite in accordance with Louisiana rules and regulations. Leaks from orphaned wells create a large source of methane emissions where operators are not legally held responsible after wells are plugged and abandoned. This action includes a combination of legislation and regulation by the DNR to ensure that former operators are held responsible for abandoned wells; this action would include but may not be limited to the following activities: changing the definition of "responsible party" within DNR rules to include all former operators; collecting and publishing a database of orphaned wells and responsible parties; and allowing landowners to sue responsible parties for abandoned wells. ***(Associated Submitted Action Proposals: 167)***

ACTION 9.2 Strengthen financial security requirements for plugging wells

The Oilfield Site Restoration (OSR) Program created within DNR focuses on properly plugging abandoned orphan wells and restoring sites to approximate pre-wellsite conditions suitable for redevelopment. Financial security requirements are state bonds that guarantee compliance of statutes and regulations for the issuance of permits for oil and gas exploration, drilling, and plugging. Lack of funding for the OSR Program, alongside loopholes in current state law and regulation that allow operators to avoid financial security requirements, leads to a failure to plug wells. This action proposes necessary comprehensive legislative reform to raise the amount of financial security, require additional bonding for coastal wells, remove the ability of operators to use blanket securities, and require site-specific trust accounts for wells in an ownership transfer. ***(Associated Submitted Action Proposals: 168)***

ACTION 9.3 Tighten the "future utility" designation and requirements for inactive wells

Under current regulation, industrial pipeline operators can classify inactive wells with a "future utility" status that indicates that the well has potential for use in the future. However, DNR's ability to grant indefinite extensions creates a higher risk for "future utility" wells to become orphaned wells and subsequently creating potential negative impacts on the environment and communities. For example, over 1500 wells have been classified as "future utility" status for over 25 years, over 400 over 50 years. Over 7000 wells are currently listed as "future utility" and have had that status over 5 years. This action, enacted by the Louisiana Legislation, would develop regulatory measures that tighten the definition and requirements of a "future utility" well designation in its application and would also limit the duration a well can remain at "future utility" status. Current "future utility" wells would be reviewed and added to the list of orphaned wells as appropriate. ***(Associated Submitted Action Proposals: 169)***

ACTION 9.4 Increase funding to the Oilfield Site Restoration (OSR) Fund to plug orphaned wells

The OSR Fund is the state's largest source of funding to plug orphaned wells. As noted by the Louisiana Legislative Auditor in 2014 and again in 2020, additional funding to the OSR is necessary to address and reduce the current population of orphaned wells, and exemptions and reduced fees result in approximately $4.4 million in lost revenues to the OSR Fund. This action by the Louisiana Legislation would increase existing (and identify additional) funds for OSR, including a removal of the OSR Fund cap on OSR fees, increase of the OSR fee, removal of exemptions and reductions in fees, and increase of the orphan well surcharge by 150%. ***(Associated Submitted Action Proposals: 166)***

ACTION 9.5 Provide workforce training to plug legacy wells

Current Louisiana law limits operator responsibility to initial plug and abandonment; however, even capped and plugged oil and gas wells weaken over time. Plugs are expected to last 100 years and provide limited methane mitigation, meaning that today: 1) millions of legacy wells are likely failing; and 2) all wells eventually become the responsibility of the government. For these reasons, this action proposes establishment of an Abandoned Well Pilot Program from federal and state funding that provides training and jobs for unemployed residents in Louisiana to plug orphaned wells. Initial activity of this action would include a pilot study conducted in parishes most impacted by legacy infrastructure. ***(Associated Submitted Action Proposals: 131)***

STRATEGY 10. Monitor and regulate methane emissions

ACTION 10.1 Enact methane waste rules

Methane is a potent GHG and has the potential to leak or be intentionally released into the atmosphere at the wellhead where it is produced, during its transportation and distribution, and when it is being cleaned, refined, or used in the manufacturing process. Reducing these methane emissions improves the GHG footprint of activities that currently use natural gas and is [illegible] important component of improving the overall effectiveness of deploying CCUS. Waste management facilities and [illegible] rces of methane emissions. This action proposes th[illegible]C and DEQ collaboratively develop [illegible] mitters to establish a baseline metha[illegible]pture rate, determined by their quarterly re[illegible] aste rules in line with those [illegible]es. States such as New Mexico and Colorado have re[illegible] aste rules to eliminat[illegible]ul practice with support from industry and environmental groups. [illegible]erators to ca[illegible] than 98% of produced gas by December 31, 2026, starting on April 1, 20[illegible] a st[illegible]nit, Colorado requires use of modern, zero-emitting (clean) components at all new a[illegible] methane emissions. ***(Associated Submitted Action Proposals: 43, 89, CO, NM)***

ACTION 10.2 Establish a Methane M[illegible]

To more comprehensively monitor e[illegible] DNR-OOC and DEQ collaboratively develop programs that effectively and efficiently m[illegible]ional a[illegible]methane emissions. Emerging technologies, such as remote sensing and satellite [illegible]e in-situ sen[illegible]reasing the feasibility of continuous monitoring of methane emissions. This a[illegible]nsure that data ar[illegible]at show regular fluxes in emissions are provided freely to the public. ***(As[illegible]d Action Proposals: 76,***

ACTION 10.3 En[illegible] Leak Detection and Repair ([illegible] Program

The most effect[illegible] leaks is to require frequent, and where [illegible]le continuous, monitoring. Many states have establish[illegible]h and Repair (LDAR) programs, modeled a[illegible]e U.S. EPA LDAR Program, to require owners and o[illegible]aky and malfunctioning equipment at product[illegible]cilities, compressor stations, natural gas storage f[illegible]ess plants, and then fix that equipment within a[illegible]time period of detection. Alongside reduced leak[illegible]d pipeline safety improvements make LDAR prog[illegible]ns very cost-effective. Many states have establish[illegible]ion and Repair (LDAR) programs, modeled after the U.S. EPA LDAR Program, to require owners and ope[illegible] leaky and malfunctioning equipment at production facilities, compressor stations, natural gas storage facilities, and process plants, and then fix that equipment within a set time period of detection. This action proposes a quarterly requirement of LDAR to ensure consistent monitoring. ***(Associated Submitted Action Proposals: 91)***

Transportation, Development, and the Built Environment

STRATEGY 11. Reduce vehicle miles traveled (VMT) and increase transportation efficiencies

ACTION 11.1 Reduce idling of public fleets

Up to one gallon of fuel is burned per hour of idling, with each gallon equivalent to 20 pounds of carbon dioxide. Idle reduction technologies and practices can reduce the time that vehicle engines idle. This action proposes instituting idle reduction policies for Louisiana's 81,000 publicly owned vehicles. Implementation of this action would be supported by the use of fleet telematics software, already installed in many state-owned vehicles, to manage fuel usage and set an automatic shutoff for vehicles after prolonged idling. Coordination with the DOA alongside training for fleet managers and operators would support telematics usage and successful implementation across public fleets. ***(Associated Submitted Action Proposals: 33, 100, 161)***

ACTION 11.2 Expand broadband internet access

The COVID-19 pandemic has accelerated the transition to online services, but this transition has not been widespread and accessible for all Louisianans due to limited broadband access in urban and rural areas. Expanding broadband, particularly for rural communities, can reduce overall transportation demand and therefore GHG emissions while facilitating e-commerce, telecommuting, and virtual health. This action proposes government serve as the subsurface conduit within public road rights-of-way: DOTD along state highways and local governments in their respective jurisdictions. ***(Associated Submitted Action Proposals: 25)***

ACTION 11.3 Enact a state policy that allows for hybrid workplaces and telecommuting

DOTD implements a variety of Travel Demand Management (TDM) strategies designed to maximize choice while reducing travel, single occupant trips, and congestion. TDM options are funded by DOTD and Metropolitan Planning Organizations and include biking, walking, ridesharing, public transit, and telecommuting. To further reduce regular travel demand in Louisiana, this action proposes DOA adopt a state policy that allows for and encourages hybrid workplaces and telecommuting for public workers. ***(Associated Submitted Action Proposals: 81)***

ACTION 11.4 Explore short-term opportunities and incentives to increase efficiency of freight transport

This action includes research into and incentives to increase the efficiency of freight transport for inter-city and/or interstate shipment of goods. This shift led by DOTD and DOA, in partnership with Ports and private freight companies (ground, rail, and water) could include efficiency incentives, traffic optimization, shore power at ports to reduce ship idling, and feasibility research into policy or pricing tools to encourage shifting freight to lower-carbon-intensity modes of transport. This action would continue and build upon existing DOTD congestion reduction programs. ***(Associated Submitted Action Proposals: 1, 33, 106)***

ACTION 11.5 Implement a state VMT reduction strategy

More efficient fuels and clean vehicles are valuable emission reduction actions but must also be accompanied by transportation mode shifting, where alternatives to automobile travel are chosen, in order to make a meaningful reduction in transportation-related emissions. To position Louisiana to encourage mode shift, this action proposes that DOTD develop a VMT reduction strategy that prioritizes, incentivizes, and enforces development of Complete Streets

infrastructure that enables and supports safe mobility for all users inclusive of pedestrians, bicyclists, or public transportation users. Complete Streets policies should be supported, planned, and incentivized at the state, regional, and local level. The VMT strategy proposed by this action would highlight and build on partnerships with nonprofits and advocacy groups that are focused on these practices. ***(Associated Submitted Action Proposals: 69, 70)***

STRATEGY 12. Accelerate adoption and accessibility of clean vehicles and fuels

ACTION 12.1 Expand availability of alternative fuels and electric vehicle charging

Increased availability of alternative fuel sources is critical to reducing GHG emissions and facilitating a smooth transition to clean transportation. This action p[illegible]ses increased: motorist access to alternative fuels, efficient and sustainable fuels (including aviation), the p[illegible]tations for electric vehicles, and investments i[illegible]on. Dependent on both local and state-wide [illegible] of a broader near-term transition to [illegible]gy for public utilities coordinated alongside state ag[illegible] of Revenue, DNR, LDAF, D[illegible] LPSC), utility companies, legislative efforts, and universities. (*[illegible]tion Proposals: 1[illegible]27, 94, 125)*

ACTION 12.2 Reduce socio-economic and [illegible]se accessibility to low- and zero-emission vehicles and supporting infrastructur[illegible]

As low- and zero-emission vehicles become increasingly ava[illegible] steps need to be taken to ensure intentional and equitable statewide buildout of vehicle electrification[illegible]pecial attention given to underserved and overburdened communities. Anticipated federal i[illegible]facilitate rapid deployment of siting infrastructure, but the state must strategically p[illegible]dout [illegible]stations to ensure equitable access. Alongside infrastructure, this action proposes t[illegible]or alternative[illegible]low- and zero-emission vehicles be reinstated, either in the form of a state t[illegible] program or tax [illegible]accelerate adoption and reduce barriers to access. This action would [illegible]ad community outreac[illegible]ducation central to increased accessibility and would facilitate trans[illegible] to take advantage of incenti[illegible] buildout of electric vehicles. ***(Associated Submitted Action Prop[illegible]75)***

ACTION 12.3 Shift public fle[illegible]d zero-emission vehicles

With over 80,000 public vehicle[illegible]ouisiana, significant GHG emissions reducti[illegible]an be realized through action taken to transition state [illegible]nment fleets to low- and zero-emission vehicl[illegible]and fuels. This action would set a statewide policy and [illegible]ansition of public fleet vehicles to clean and zero-emission vehicles and fuels; coordinate among DOTD, DOA[illegible]ncies, and local government to update procurement policies and practices, and work with fleet managers and mechanics to provide training for vehicle maintenance. ***(Associated Submitted Action Proposals: 28, 36, 41, 143, 157)***

ACTION 12.4 Begin infrastructure and technology planning to support transition of medium- and heavy-duty transportation, shipping, and aviation to clean and zero-emission

Medium- and heavy-duty vehicles weigh more than 10,000 pounds and have an outsized impact on GHG emissions. Technical solutions for shifting these larger vehicles to clean and zero-emission fuels are less certain and less widely available than for light-duty vehicles, especially as vehicle turnover is less frequent. Comprehensive decarbonization of heavier duty transportation will also require supporting infrastructure buildout, such as retrofits to depots and fueling stations. This action proposes DOTD begin long-range strategic planning for technology adoption, fleet turnover, and infrastructure needs to support deep decarbonization of medium- and heavy-duty transportation, shipping and aviation. Specific to shipping, many international ships dock at Louisiana-based ports, so planning efforts proposed by this action would also develop emission standards for these vessels that reduce GHGs and potentially alleviate air quality hazards for communities near them. ***(Associated Submitted Action Proposals: 12, 84)***

ACTION 12.5 Implement targeted pilot project and incentive programs to accelerate transition of medium- and heavy- duty vehicles to clean and zero-emission vehicles

Targeted pilot and incentive programs can encourage and accelerate a transition to cleaner heavy-duty vehicles. This action proposes DOTD, in partnership with DNR and DEQ, identify and implement targeted pilot projects and incentive programs that can make significant impact and/or test new technologies today. Such programs may include a targeted incentive program to accelerate the widespread deployment of electric yard trucks or terminal tractors, an expansion of the successful Port of New Orleans Clean Truck Replacement Incentive Program with other Louisiana Ports, and pilot program to replace diesel school buses with electric buses that can also be deployed as mobile power sources for critical facilities post-disaster. ***(Associated Submitted Action Proposals: 41, 84, 137)***

STRATEGY 13. Increase urban, rural, and regional public transit service

ACTION 13.1 Increase financial support to local transit operators to increase statewide ridership

More reliable and frequent public transit is necessary to increase ridership and reduce single-vehicle trips. Increased funding for local transit service will also benefit marginalized, transit-dependent populations in urban areas and provide competitive access to economic opportunity. This action proposes that DOTD increase funding for transit operations in eligible parishes and provide greater funding of the State Transportation Plan. The state would work with federal partners to ensure more federal funding moves down to subsidize annual transit operations and allows local jurisdictions to secure funding more easily for transit locally. ***(Associated Submitted Action Proposals: 95, 138)***

ACTION 13.2 Enable access to resources outside urban centers

Nearly 750,000 of Louisiana's 4.6 million residents live in rural areas. Therefore, a necessary measure to reduce light-duty vehicles on the road requires access to resources beyond urban centers and greater investment in rural transit service. This action proposes that DOTD, metropolitan planning organizations (MPOs), and local governments take a variety of measures to enable resource access: obtain smaller transit vehicles for more specialized trips, develop an on-demand ridership system, and planned trips to city centers coordinated and supported by the community. Federal funding from the infrastructure package would be prioritized for this transit buildout and for MPOs to develop on-demand public transit. ***(Associated Submitted Action Proposals: 81, 95, 128)***

ACTION 13.3 Invest in regional transit to connect communities to jobs and services across Louisiana

Alongside local transit, regional connectivity can encourage greater use of public transportation. Dedicated bus lanes and high-occupancy vehicle (HOV) lanes on interstates, state highways, and major arterial roadways allow for more efficient travel on highways and urban streets. A high-speed rail between New Orleans and Baton Rouge would minimize light-duty and bus travel between Louisiana's largest cities for daily commuters. This action proposes investment from DOTD, local MPOs, local governments, and municipalities to intentionally plan and build infrastructure that supports regional transit. ***(Associated Submitted Action Proposals: N/A)***

STRATEGY 14. Coordinate land use planning to reduce sprawl and support healthy and resilient communities

ACTION 14.1 Develop a statewide framework to guide resilient local land-use practices

Mitigation of the root emissions of climate change is interconnected with adaptation to the impacts of climate change, particularly as it pertains to land use and land use management. However, with many risks, vulnerabilities, and relevant ongoing initiatives throughout Louisiana, a statewide framework is needed to unify and guide holistic land use management. This action proposes the development of a land use framework that would guide a statewide authority to

coordinate decision making as it related to land use, and the authority would partner with DOTD in implementation of the state's VMT reduction strategy (Action 11.5). The statewide authority would also develop an education program that demonstrates the benefit of land us on achieving climate g nd reducing climate risk, and would assist locals in their development of com nd use plans ramework would consider needs of different communities across the state, particula derse and overburdened. ***(Associated Submitted Action Proposals: 18, 40, 69, 128)***

ACTION 14.2 Encourage compact develop local trainings, incentives, tools, and model standards and ordinances

A primary land-use practice to maximize r and emissio uction is compact development where land is used efficiently, creatively, and intentionally. development pr tes risk reduction and open space conservation while encouraging reuse and retrofit g structures, reduced MTs, mode shift, and energy efficiency. To work towards compact development, this oposes the state start b convening public, private, and local nonprofit bodies that plan and design compact ment, permitting, regulation, and incentives. After receiving feedback from local groups, the state would pilot promising approaches and design incentive and regulatory systems to support compact development, Complete Streets, and equitable transit access. ***(Associated Submitted Action Proposals: 65, 69, 70)***

ACTION 14.3 Develop a model solar ordinance for adoption by local governments

Communities are increasingly seeing interest by the solar industry to make investments in communities for solar energy generation. However, many - if not most - local governments lack the capacity and technical expertise to develop ordinances on their own. Furthermore, lack of knowledge or misinformation about solar energy facilities may leave communities unprepared and unprotected from the impact of this type of industry and land use. The model solar ordinance developed by this action would be a tool available to local governments and contain the comprehensive policy language needed to protect properties, environments, and people, as well as guide and support solar energy investments locally. This tool would provide context, information, and capacity to local governments, increase predictability of impact, and support current and future solar energy investments that can significantly help the state transition to renewable energy. ***(Associated Submitted Action Proposals: 20)***

ACTION 14.4 Align statewide transportation planning and decision making with land use planning

Transportation infrastructure often dictates how and where land is used and developed in Louisiana. To ensure compact development and other actions set forth in this section are a priority in the state, this action proposes that transportation planning align with smarter land use practices. Land use and transportation modeling tools can test land use scenarios and transportation pricing programs and should be incorporated into how decisions are made in transportation. This alignment would not only reduce VMT, allow for widespread implementation of Complete Streets, facilitate equitable access to public transit, and reduce the need for single-occupancy vehicles, but would also allow for greater implementation of green infrastructure and resilience measures to mitigate against Louisiana's flood risk. Alignment of transportation planning with smart land use would be led by the DOA and DOTD with close partnership by MPOs and local jurisdictions. ***(Associated Submitted Action Proposals: 65)***

ACTION 14.5 Reduce the negative impacts of state-funded transportation projects

Major transportation projects, such as the construction of new or expanded roadways, can have multiple cascading impacts on greenhouse gas emissions as well as community resilience—from the materials used in construction to the spurring of new areas of development to inducing more vehicle miles traveled. This action would require that proposals for medium- to large-scale state-funded transportation projects include an analysis by DOTD of their climate impacts, including induced greenhouse gas emissions as well impacts on community resilience to future weather events. Tools developed by DOTD for this analysis would be made freely available to Parish and municipal governments to inform their decisions about locally-funded transportation projects. This action would also require that DOTD monitor and evaluate all road building and expansion projects to determine if they increase congestion. Transportation spending can also help

jump start the "Buy Clean Louisiana" program (Action 6.1), prioritizing lower carbon intensity materials and advancing best practices and standards in road construction.

STRATEGY 15. Improve the efficiency and resilience of homes and non-residential buildings

ACTION 15.1 Improve energy efficiency in residential and commercial buildings by developing new retrofit programs and expanding existing weatherization programs

This action proposes that Louisiana will retrofit 5% of buildings each year through a combination of expanding existing programs and developing new retrofit programs focused on energy efficiency, including DNR's Home Energy Loan Program (HELP) and reviving the expired Home Energy Rebate Option (HERO) program. Programs would focus on improving insulation, air sealing, appliance efficiency, HVAC efficiency, and other low-hanging fruit that would provide a reduction in consumer electricity bills as well as a reduction in associated GHGs. Programs impacting public or commercial buildings can also improve indoor air quality and circulation to benefit human health. Implementation of these programs would create a network of trade allies who can perform retrofit work and create a workforce development pipeline. Lastly, program development through this action would coordinate and fund outreach and education to encourage homeowners and small businesses to understand their energy usage and identify possible areas for improved efficiency. ***(Associated Submitted Action Proposals: 16, 87, 102)***

ACTION 15.2 Set minimum thermal and lighting efficiency standards for residential, commercial, and public buildings

Minimum efficiency standards can reduce energy demand and the associated GHGs. Under La. R.S. 30:1203, with some exceptions, this action proposes that DNR enact regulations for minimum thermal efficiency standards for new residential and light commercial buildings, minimum thermal and lighting efficiency standards for new and renovated commercial buildings, minimum lighting efficiency standards for existing public buildings, and procedures for the issuance of certificates certifying compliance with energy efficiency standards for buildings. Thermal efficiency relates to non-electric heating and cooling systems and well as hot water systems. ***(Associated Submitted Action Proposals: 133)***

ACTION 15.3 Lead by example in Louisiana through energy benchmarking in state public buildings

The Louisiana Legislature passed Act 1184 in 2001, requiring benchmarking and disclosure of energy performance of buildings constructed with state funds. However, it has never been implemented. This action proposes that the state fund the implementation of Act 1184 and develop a system for benchmarking the energy performance of public buildings in Louisiana, using a life-cycle analysis methodology to calculate the carbon impacts from construction, materials, and operations over time. This system can be used to guide scoping, design, and procurement, but also in evaluating the carbon impacts of retrofits compared to a new build alternative. The energy savings from improved building performance can be recycled into additional audits, repairs, and improvements. Once developed, the energy benchmarking system could also be used by state subdivisions, parishes, and municipalities. Parishes may seek to accelerate this by developing their own initiatives, such as the St. Tammany Healthy Resilient Buildings Initiative, that can realize energy cost savings and improved air quality. ***(Associated Submitted Action Proposals: 50, 87, 104, 134, 161)***

ACTION 15.4 Update statewide building and energy efficiency codes

The Louisiana State Uniform Construction Code Council (LSUCCC) is tasked with reviewing and approving updates to the state's building code. The Louisiana Legislature has, in the past, directed the LSUCCC to review and adopt new codes, such as the plumbing code. Currently, Louisiana's energy codes are from 2007 – more than 12 years out of date. This action directs LSUCCC to similarly review and adopt new codes pertaining to energy efficiency. In implementing this action, the Louisiana Legislature would also change the LSUCCC authorization and require them to adopt the latest codes

automatically as new versions are published, except if overridden by a high threshold of the LSUCCC such as a 3/4 vote. These updates would also include promoting a performance-based building code that sets targets for energy consumption per building. If newer building codes were adopted, building projects could take advantage of the latest low-carbon materials such as mass timber. ***(Associated Submitted Action Proposals: 75, 133, 50)***

ACTION 15.5 Promote the electrification of building appliances

Appliances and systems like water heaters, HVACs, driers, and stoves account for the bulk of building energy use. Electrifying these appliances and systems not only reduce GHG emissions when they are powered by renewable or clean electricity, but they also save the user money due to increased energy efficiency. This action would direct rebates for the purchase of efficient electric appliances and systems to customers. To improve equitable access, rebates would be on a graduated scale based on income. This action would also work with retailers, contractors, and distributors to increase stocking of these appliances, so they are available options for unplanned upgrades (i.e. appliance breaks). It also includes making more widely available point-of-purchase materials to increase awareness.

Natural and Working Lands and Wetlands

Strategy 16. Preserve and expand natural lands and urban green spaces to maximize climate mitigation and adaptation goals

ACTION 16.1 Conserve Louisiana's interior natural lands, prioritizing forested lands, floodplains, wetlands and riparian areas

This action would set a baseline and target for percentage of interior natural lands conserved or protected statewide; strategically identify priority areas for conservation that maximize ecological and social co-benefits, with a focus on forested lands as well as floodplains, wetlands, and riparian areas that provide critical watershed function and flood hazard mitigation; and expand the use of conservation servitudes and other conservation tools in partnership with landowners and local government. This action would also work to align and incorporate climate mitigation goals with the Louisiana Watershed Initiative. ***(Associated Submitted Action Proposals: 40, 68)***

ACTION 16.2 Support the expansion of urban tree canopy and green spaces

Activities that reforest public areas in urban environments (including rights-of-way and adjudicated properties) and increase urban green spaces (e.g., parks, gardens, farms) can sequester carbon while also reducing heat island effect, reducing localized flooding, and increasing access to open space. This action proposes the state government act as convenor among Parish and municipal governments to promote a coherent, statewide approach to promote tree planting and maintenance in urban areas along streets to help lower cooling loads and improve climate resilience. This action would prioritize tree-planting in historically underserved communities. In addition, this action would also include surveys of existing tree canopies in Louisiana urban areas, with progress tracked and reported annually, and would require that state-funded transportation projects dedicate at least 3% of project costs to the planting of trees and the provision of landscape-based stormwater runoff management. Finally, this action would promote inclusion of equity-focused conservation actions for urban green spaces in both regional and local plans (e.g., State Watershed Plan, Hazard Mitigation Plan, Comprehensive Plans). ***(Associated Submitted Action Proposals: 2, 4, 44, 64, 68, 78)***

STRATEGY 17. Restore and conserve Louisiana's coastal wetlands to maximize climate mitigation and adaptation goals

ACTION 17.1 Leverage the carbon sequestration potential of Louisiana's coastal wetlands to accelerate implementation of Coastal Master Plan projects

Implementation of Louisiana's Coastal Master Plan includes coastal restoration actions to reduce land loss with a focus on risk reduction to support coastal communities. Implemented currently and over the long-term by CPRA, LDAF, and the U.S. Army Corps of Engineers, restoration of wetlands will inherently lead to continuous carbon offsets by way of the increased plant biomass and carbon sequestration in the soil as well as mitigation of hazards related to relative sea-level rise and storm surge impacting vulnerable coastal communities. Incorporating climate mitigation goals and measures (e.g., carbon sequestration potential of natural wetlands) into future iterations of the Coastal Master Plan as well as into project design and prioritization could further make the case for investment in Louisiana's coastal program and unlock additional resources for project implementation. ***(Associated Submitted Action Proposals: 77)***

ACTION 17.2 Quantify and monitor the potential coastal blue carbon in Louisiana habitats and Coastal Master Plan projects

Development of a quantification and monitoring strategy to assess net carbon flux of Louisiana's coastal wetland habitats (fresh, intermediate/brackish, and saline; also known as coastal blue carbon) is a crucial step towards building a robust carbon finance framework. Carbon financing presents an opportunity for the state to partner with industry to expand coastal wetland restoration initiatives. Near-term, this action would include: 1) research and development led by the state, non-profits, and/or academic institutions to create accurate biogeochemical models that will allow quantification of Louisiana's coastal blue carbon over time and across variable environmental conditions; and 2) expanding support and monitoring capacity of existing foundational monitoring programs (e.g., System Wide Assessment and Monitoring Program (SWAMP) that includes the Coastwide Reference Monitoring System [CRMS]) to quantify coastal blue carbon across coastal Louisiana over time. ***(Associated Submitted Action Proposals: 59, 60, 77)***

STRATEGY 18. Support the sustainable management and conservation of working agricultural and forestry lands

ACTION 18.1 Establish a Louisiana Conservation Innovation Program

Many states have established Conservation Innovation Programs to promote development of innovative conservation practices unique to the state. In implementing this action, a Louisiana Conservation Innovation Program would be created within the LDAF that will stimulate development and adoption of innovative conservation approaches and technologies that curtail and sequester GHG emissions. Through partnering with the U.S. Department of Agriculture (USDA) Conservation Innovation Grant Program, the LDAF will promote pilot projects, field demonstrations, and on-farm conservation research. ***(Associated Submitted Action Proposals: 42, 110)***

ACTION 18.2 Support the transition to regenerative agriculture and forestry practices

Regenerative agriculture can be generally described as a system of farming principles and practices that seeks to rehabilitate and enhance farm ecosystems by placing an emphasis on soil health, water management, fertilizer use, and other best management practices. Transition to regenerative agriculture and forestry practices is essential to minimize the agricultural sector's GHG emissions, maximize agricultural sequestration potential, and promote healthy soils and ecosystems. However, many barriers impede widespread transition. This action proposes that LDAF and local Soil and Water Conservation Districts (SWCDs) convene focus groups of farmers, ranchers, and foresters to identify barriers to adoption of various conservation practices and identify opportunities and solutions to overcome those challenges. SWCDs are local units of state government that provide conservation planning services to landowners. This action would also propose increased funding for the LDAF to be distributed to local SWCDs. Adequate resources would allow SWCDs to build on, coordinate, and expand sustainable agriculture programs and partnerships across stakeholder groups and their districts. ***(Associated Submitted Action Proposals: 88)***

ACTION 18.3 Establish a technical assistance grant program for farmers and foresters

As consensus is built around impediments to adoption of regenerative agriculture and forestry conservation practices (see Action 18.2), this action would promote partnerships between LDAF, SWCDs, and the USDA Natural Resource Conservation Service (NRCS) to develop a competitive grant program that offers technical and financial assistance to landowners that would guide and support transition and lower barriers to utilize on-farm conservation practices. ***(Associated Submitted Action Proposals: N/A)***

ACTION 18.4 Expand implementation of on-farm conservation programs

On-farm conservation programs have had the largest success in transitioning farmers, ranchers, and forest landowners to implementing conservation practices. The Louisiana Conservation Delivery Program, a partnership of the USDA NRCS

and local SWCDs along with individual landowners, focusses on enhancing and conserving soil, water, and related natural resources through implementation of voluntary on-farm conservation plans of sustainable practices. This action uplifts this successful program and would expand federal and state funding for it. ***(Associated Submitted Action Proposals: 38, 39)***

ACTION 18.5 Measure carbon sequestration potential of conservation farming best management practices

Best management practices are central to regenerative and conservation farming, though their emission reduction and carbon sequestration potential have not been quantified. This action would task state research institutions to study, monitor, and publish data on the co-benefits and impacts of best management practices to abate GHG emissions, improve soil and water quality, improve natural ecosystems, and sequester carbon. ***(Associated Submitted Action Proposals: 34)***

ACTION 18.6 Establish an urban agriculture and conservation program in the LDAF

The LDAF currently offers a variety of approaches to conservation through partnerships, programs, and projects through its Office of Soil and Water Conservation and SWCDs. To build on this work and to create additional conservation involvement and education opportunities for the greatest diversity of producers and landowners, this action promotes an urban agriculture and conservation program within the LDAF. The proposed program would provide educational resources, workforce development and training, marketing assistance, and grant support for farmers, landowners, foresters, and other stakeholders as they work to adopt sustainable and regenerative agriculture practices that build resilience, mitigate GHG emissions, and sequester carbon across all Louisiana landscapes. ***(Associated Submitted Action Proposals: 88)***

ACTION 18.7 Establish a statewide compost facility and accompanying local programs

Composting is an effective waste and GHG reduction measure that diverts organic materials from landfills and incinerators and converts those materials into valuable fertilizer to replenish and stabilize the soil. The state already implements an Agriculture Solid Waste Best Management Practice (BMP) Program, though compost is not always the beneficial use at the end of the waste stream. This action proposes the state designate a statewide compost facility, promote compost as a solid waste BMP, and partner with parish- and municipal-level compost programs. Public compost facilities would also increase the viability of community gardens that further promote sustainable and local agriculture, providing resources to underserved and overburdened communities. ***(Associated Submitted Action Proposals: 154, 158, 159, 160)***

ACTION 18.8 Promote market driven strategies that encourage smarter forest management and greater use of Louisiana forest products for construction

Markets for wood products create incentives for landowners to plant more trees and keep forests as forests. Educating landowners on the management of forests and encouraging use of forest products through market driven incentives would increase the amount of carbon captured and stored by the forest. This action proposes the state encourage the use of Louisiana forest products—in the form of lumber, plywood, paper, wood pellets, and biomass—in state capital projects and other construction projects. Markets for low-value forest products and residuals, such as residuals generated during milling and production and woody fiber for biofuels and bioenergy, further incentivize forest management and forest products manufacturing, resulting in more carbon sequestration and storage. Implementation of this action would include research and development of new technologies by the state of Louisiana (LDAF, Louisiana Economic Development [LED], Louisiana Forestry Association [LFA], DNR, and the energy sector) related to increasing the use of cellulose (plant-based) products can innovate Louisiana's manufacturing, construction, and energy sectors while reducing GHG emissions. ***(Associated Submitted Action Proposals: 26, 31, 67)***

An Inclusive, Low-Carbon Economy

STRATEGY 19. Strengthen climate education, research, and innovation as a focus of Louisiana's energy transition

ACTION 19.1 Establish a Research Practitioner Partnership (RPP) Program to support climate education

This action, enabled through the Louisiana Department of Education STEM Team and the LA STEM Council, proposes a Research Practitioner Partnership (RPP) Program to would provide dedicated, yearly funding and support for K-12 climate education projects and curricula implemented by educators, researchers, practitioners, industry, and policy makers. This is seen as a critical step towards ensuring that the next generation is prepared, resilient, and innovative when facing future climate threats. ***(Associated Submitted Action Proposals: 54)***

ACTION 19.2 Teach, re-train, and employ Louisiana residents in clean energy sectors

Training Louisiana workers is a critical step towards transitioning and growing the state's local clean energy industry. This action, enabled by the Louisiana Board of Regents, the Louisiana Legislature, and the Louisiana Department of Labor, would create a Climate Corps P... al community colleges and Louisiana ...ities to provide education, training, and re-training nece... growth of the renewable ...ndustry. This action would also encourage the growth of rural j... ...tage of natural ... sequestration, such as encouraging employment of foresters and land mana... ...nd the b... ...ces for natural carbon sequestration. This action would provide training and career trac... ...ra... ...form of four-year degrees, two-year degrees, and industry certificate programs offered in the fo... ...rmation technology, electrical engineering, utility management, and electrical vehicles (manufacturi... ...s, maintenance). ***(Associated Submitted Action Proposals: 23,99, 137)***

ACTION 19.3 Coordinate climate chang... ...and ac... ...n research needs across Louisiana's university network

Louisiana's extensive research institu... ...versity network offers ...spread expertise well-suited to inform climate action. Many universities are ...ting in and undertaking re... ...h related to various aspects of climate action, though this research and d... ...s often not coordinated. This a... proposes The Water Institute of the Gulf (TWI), as the state's Innovati... ...oration Hub, first inventory interdi... ...linary climate research capabilities across the state to provide a broa... ...ing of existing in-state expertise in cl... ...te action. Following completion of this inventory, TWI would launch ... ...o program to serve as the coordinating unit that identifies state research needs, convenes institutions to dis... ...rging work, and partners among universities on grant and project proposals that seek to understand existing emissions and emission reduction measures by sector. Partners of this program would meet quarterly to coordinate ongoing work and identify emerging opportunities for research, development, and demonstration/pilot projects for the state. ***(Associated Submitted Action Proposals: N/A)***

STRATEGY 20. Prioritize Louisiana workers and businesses in the transition to a low-carbon economy

ACTION 20.1 Promote and inv[illegible] Louisiana sola[illegible]nd offshore wind industries, including specialized worker training and long-term ec[illegible] devel[illegible]ment planning to recruit, develop, and retain firms and workers

Louisiana has many programs and investm[illegible]ce to promote the energy industry, and the state could retool these programs to promote and invest in the [illegible] of the [illegible]ture, especially solar and offshore wind. As other states invest in the energy transformation, Louisiana [illegible]ot afford to [illegible] left behind. This action proposes a combination of legislative and executive actions to adjust tax [illegible]ntives, permits, [illegible]orker training programs, and determine other ways to speed and smooth the transformation of t[illegible]te's energy systems. ***(Associated Submitted Action Proposals: 23, 61, 93)***

ACTION 20.2 Coordinate worker training opportunities with the development of renewable power generation at distributed and utility scales, so that workers are qualified to install and maintain systems at both scales

The technical needs of renewable power generation are different at the utility scale than at the distributed (individual building) scale. However, with training, a worker could be qualified to work on either type of installation. This action, based on improving the likelihood of workers maintaining steady work across utility and distributed projects, implemented by the state coordinates training opportunities with planned installations so that workers can benefit from hands-on experience and training for renewable energy work across Louisiana. ***(Associated Submitted Action Proposals: N/A)***

ACTION 20.3 Establish and expand state offices in under-resourced communities to provide tailored programs and services for the energy transition that include procurement and development opportunities for small businesses and workers

If the energy transition is to reach communities most impacted by climate change and disinvestment, Louisiana should extend the physical reach of state offices and programs to these communities. Implementation of this action would include extending existing offices and programs, like Small Business Assistance Centers run by the LED, and could expand to new services specifically needed for the energy transition (e.g., Rapid Response teams, Action 20.4). This action incorporates targeted outreach specifically for procurement and development opportunities for small businesses and workers in these communities, ensuring they can benefit from investments in renewable energy. ***(Associated Submitted Action Proposals: N/A)***

ACTION 20.4 Create Louisiana Rapid Response teams to support transition services for oil and gas workers facing job displace[illegible] [illegible]layoffs

Louisiana has lost thousands of jobs [illegible]d [illegible]over the last decade, and as the energy transition accelerates it is inevitable that additional oil and gas worke[illegible]ace layoffs. To make sure that these workers are supported, this action proposes the creation of Rapid Response [illegible]t can "deploy" to communities facing job losses and facility closures. These Rapid Response teams could [illegible]ith the [illegible]rkers and their families as part of a Just Transition, ensuring that the workers receive unemploymen[illegible]fits, suppor[illegible]ervices, and that relevant training or new job opportunities are identified. Louisiana's oil and gas [illegible]rs are skilled an[illegible] valued, and the state should proactively work to place them in new high-quality jobs where their [illegible] can be used, even if not every worker can transition to the renewable energy industry. ***(Associated Submitted Action Proposals: 153)***

ACTION 20.5 Establish partnerships with Louisiana unions and businesses to guarantee job placements for workers in clean energy training programs

Enrolling in a training program is often too risky, with foregone wages not worth the opportunity cost of gaining a new certification. Still riskier is the prospect of no job waiting at the end of a training program. This action would create

partnerships between the state, unions, and businesses to guarantee job training placements for workers so that they know the investment in their skills will be worth the risk. A job guarantee would increase the number of workers enrolled and completing training programs in clean energy and other skills needed for the energy transition. ***(Associated Submitted Action Proposals: N/A)***

STRATEGY 21. Build a more just and resilient future for all Louisiana residents

ACTION 21.1 Establish the [illegible]ffice of Economic [illegible]nence

This action proposes the establishm[illegible]isiana Of[illegible] Economic Resilience to help provide strategic direction and support to the state, workers, and sm[illegible]ey manage economic transitions. This Office would conduct research and develop programming dealing w[illegible]ons resulting from globalization and trade disruptions, rapid technological shifts including increased auto[illegible]ges to fossil fuel prices and demand, widespread efforts to decarbonize the energy sector, and other[illegible]ges [illegible]g from climate change. In addition, the Office would also implement a Just Transition Program t[illegible]economic[illegible]rtunity is created for those hardest hit by the transition. This action would be a joint effort by[illegible]the Louisiana [illegible]force Commission which would also help promote and prepare workers for emerging opp[illegible]related to the manu[illegible]turing, installation, and servicing of renewable energy systems, batteries and other f[illegible]energy storage, natura[illegible]nd engineered carbon sequestration, and energy efficiency.

Collaboration and Partnerships to Ensure Successful Implementation

STRATEGY 22. Ensure Louisiana is prepared to maximize potential federal funding opportunities

Federal funding opportunities can help prepare Louisiana for the transition to a low-carbon economy. These opportunities could include but are not limited to:

- Converting state and local fleets; buildout of electric vehicle infrastructure (SA# 158, 162, 29, 27, 36)
- School bus electrification (SA# 137)
- Plug, remediate, and reclaim orphaned wells (SA# 166, 167, 168)
- Expand monitoring of methane leaks (SA# 91, 151)
- Measuring, monitoring, and enhancing wetland sequestration (SA# 59, 60)
- Pre-disaster mitigation and community-focused resilience (SA# 152)
- 45Q carbon sequestration (SA# 109, 120, 121)
- Hydrogen Hubs and Direct Air Capture Hubs
- Accelerate offshore wind opportunity in Louisiana (SA# 61, 101)
- Attracting clean energy industries and investments (SA# 29)
- Investments in Energy Efficiency Improvements and Weatherization Programs (SA#119, 162, 16, 177)
- Expanding the Trade Adjustment Assistance program to include workers displaced by climate or energy transitions (SA# 153, 23)
- Advocating for a streamlined federal acknowledgement process for Louisiana tribes
- Investing in rural broadband (SA# 25)
- Sustainable agriculture, forestry, and soil management
- Environmental data scientists

STRATEGY 23. Position Louisiana as a climate leader through engaging in national and regional dialogues and planning

Partnerships are essential to make meaningful progress towards Louisiana's targets. Regional partners are necessary to advance cap-and-trade, electricity transmission planning, offshore wind development, and climate adaptation. This strategy recommends that Louisiana initiate and participate in discussions with surrounding states to establish a regional cap-and-trade program, intentionally plan expansion of electricity transmission infrastructure and offshore wind development, and set goals towards climate resilience with states facing similar threats. National partners are also essential to secure and ensure support for the state's goals and to pilot nationwide initiatives that move towards carbon neutrality. In addition to federal priorities mentioned above, Louisiana supports a national carbon price policy and would work to advance this action with federal partners.

STRATEGY 24. Align climate action app[illegible]cross state government

A whole-of-government approach within Louisiana is necessar[illegible]ance emission reduction actions. The Governor's Office will encourage cross-agency collaboration and alig[illegible], the[illegible]tting of climate-related goals within individual

agencies, and the strengthening of partnerships with local government, communities, and Indigenous peoples to coordinate and carry out actions that cross and extend beyond agency jurisdictions. As the central implementer of this Climate Action Plan, state agencies must maintain alignment and function as a coordinated unit for climate action to be successful. The Governor's Office will also seek to collaborate with other state entities such as the LPSC and the Louisiana Legislature.

STRATEGY 25. Coordinate action with local governments

Local governments are significant collaborators and implementers of climate action within their jurisdictions. State partners will work alongside local government to encourage local climate action planning to complement Louisiana's Climate Action Plan, reduce emissions locally, enhance economic activities, and advance equity around local concerns as climate mitigation activities are implemented. Alongside engagement with communities on climate change emissions, parishes and municipalities will work to build community awareness, safer regulation, sufficient funding, and collective implementation of equitable disaster planning and recovery across the rural to urban gradient.

STRATEGY 26. Call upon the private sector to align their practices and play a leading role in climate action

Businesses are crucial partners for developing innovative and technical solutions to reduce emissions and critical sources of resources to meet environmental goals. The Governor's Office and state partners must work with and engage in solution building continuously with the private sector and regulated utilities, to implement the actions set forth in this Climate Action Plan. One action that would require such a public-private partnership is the establishment of a Green Bank. Private sector and utilities would collaborate with the state to develop a Green Bank that leverages public and private dollars for the implementation of climate mitigation and adaptation initiative, particularly for low-wealth households with community involvement in how funds are spent.

STRATEGY 27. Improve engagement with disadvantaged communities and Indigenous peoples

Disadvantaged communities and Indigenous peoples must be at the center of collaboration and partnership in the development and implementation of climate action. In development, the Climate Initiatives Task Force will ensure actions set forth in this Climate Action Plan create new opportunities for and benefits to disadvantaged communities and Indigenous peoples, particularly those historically marginalized, those who face disproportionate climate impacts, and those of low-to-moderate income. In implementation, the Climate Initiatives Task Force must enable and encourage communities and Indigenous peoples are enabled and encouraged to engage in knowledge sharing, solution building, and decision making. The Governor's Office and its state agencies must invest in sustainable two-way communication of needs and progress with Indigenous peoples and marginalized communities.

Accountability and Adaptability to Ensure Lasting Success

STRATEGY 28. Ensure that Climate Action Plan strategies are effectively and transparently implemented

ACTION 28.1 Establish the Governor's Office of Climate Resilience

As seen in the actions established in this Louisiana Climate Action Plan, climate change mitigation and adaptation require extensive coordination across multiple stakeholders inside and outside of government. It also requires focus to oversee the implem an and assess progress toward meeting the Governor's GHG emission red . This action overnor's Office of Climate Resilience within the Governe ensure the succ s contained in this Climate Action.

ACTION 2 ate Initiatives Task Force (arterly meetings

This action by the le regular Climate I orce (CITF) meetings to ensure progress is made toward on reduction ctions; the impacts of these actions on the people, environment, a unde ncy is maintained; and the critical issue of climate change in Louisiana rema would ensure the impacts of these actions are tracked and provided to the public, a the effectiveness of action implementation in practice are identified and pursued.

STRATEGY 29. Track progre emissions reductions and adapt the approaches t ed

ACTION 29.1 Establish a itoring program

Regular collection of GH is vital to providing check G reduction to adaptively manage emission reduction a ectors. This action includes de of a GHG Monitoring Program established by DE ata, which could be used in conju regular updates of the GHG inventory. In addi acilitate benchmarking that could be use mine whether the strategies and actions inc limate Action Plan are effective once implem

ACTION 29 GHG inventory biennially

In conjunc tion of GHG data (Action 29.1), updates to the GHG invent necessary to monitor progress a untable for progressing towards reduction goals. This action p s that the Louisiana Legislatur iennial updates to the GHG inventory with consistent funding pport these efforts. In addition upport work by the state to continue to increase the accuracy hat assessment as technologie PA State Inventory Tool (SIT) model has been used as the primary information source for inventory upd ethodology has known and acknowledged limitations. This proposed action would include investments in sensing, satellite imagery, and other tools to provide more accurate and comprehensive monitoring of GHG emissions in Louisiana, as well as incorporating criteria pollutants monitored by the DEQ Air Quality Monitoring Program into the GHG inventory.

ACTION 29.3 Update the Louisiana Climate Action Plan every five years

The strategies and actions outlined in the Louisiana Climate Action Plan have been selected based on their expected effectiveness in reducing net GHG emissions while also having the best anticipated outcomes for the state and its people. An updated GHG inventory would reveal where those actions were effective, while at the same time new strategies or actions may become available due to advances in technology or increased understanding of the most effective approaches in net GHG emission reduction. This action would allow updates to Louisiana's Climate Action Plan every five years by the Governor's Office to ensure that it continues to be based on the best available science and that the actions taken demonstrate benefits to Louisiana's communities, environment, and economy to the greatest extent possible. Regular updates would ensure ineffective actions could be modified or replaced, the greatest investment is in the most effective approaches, and new technologies could be incorporated when available.

HERITAGE EXPLAINS

The Right Way to Ensure a Cleaner Environment

Big-government climate policies are all economic pain, no environmental gain.

In the 1970s, Americans were told we were in a global cooling crisis and if something weren't done, we'd enter a new ice age.

When that didn't happen, a few decades later we were told that entire nations could be wiped off the face of the Earth by rising sea levels if the global warming trend was not reversed by the year 2000.

Despite the consistent failure of these apocalyptic warnings, that hasn't stopped climate change alarmism. We're now being told we only have 12 years to combat climate change and the solution is to fundamentally dismantle the system of free enterprise. That means Washington controls things like how we produce our energy, what food we eat and what type of cars we drive.

The question is, even if we believed their alarmist, catastrophic predictions, would their proposals work?

Not according to the climate scientists' own models. Based on those models, even if the United States cut its carbon dioxide emissions to zero, it would only avert global warming by

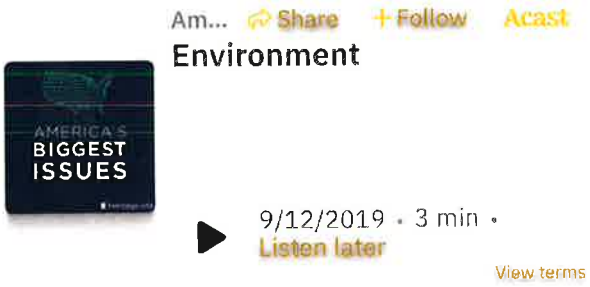
a few tenths of a degree Celsius — in 80 years!

We would see no noticeable difference in the climate, yet it would come at an enormous cost to the American people. Climate change is happening and human activity undoubtedly plays a role, but big-government climate policies are all economic pain, no environmental gain.

After all, the purpose of climate change regulations is to drive energy prices higher so families and businesses use less energy. Abundant energy sources such as coal, oil and natural gas have allowed Americans to affordably drive to their jobs, light and heat their homes, and power their refrigerators, computers, and iPhones.

On the other hand, more heavy-handed climate regulations would drive up electricity bills and prices at the pump. Families would be hurt multiple times over, paying not just more for energy but also more for food, clothing, and healthcare, as energy is critical for every stage of planting, harvesting, manufacturing, and transporting goods to consumers.

These rising costs would stifle economic growth, one of the most important factors for maintaining a cleaner environment. As a country's economy grows, the financial ability of its citizens to take care of the environment grows, too. So creating more economy-killing climate regulations and taxes would not only harm the livelihoods of the American people, they would also harm our ability to protect our environment.



Instead, government should focus on keeping the economy strong by reducing taxes and eliminating regulatory barriers to energy innovation. For example, some states produce clean, cheap natural gas, but excessive regulations and litigation prevent the construction of pipelines to distribute natural gas to other parts of the country. Furthermore, competitive electricity markets can give consumers the option to buy 100 percent renewable power if they like. And fixing a broken regulatory system will allow new, innovative commercial nuclear technologies to get off the ground.

This is how we can ensure affordable, reliable, and cleaner energy. It's how we can keep our economy growing. And ultimately, it's how we can ensure a cleaner environment for America.

View more of America's Biggest Issues

COMMENTARY Environment

Climate Change Report Isn't a Blank Check for Green Policies

Aug 28th, 2021 3 min read

Katie Tubb

Senior Policy Analyst

Katie Tubb is a senior policy analyst for energy and environmental issues in the Thomas A. Roe Institute for Economic Policy Studies.

KEY TAKEAWAYS

The United Nations' Intergovernmental Panel on Climate Change (IPCC) recently published the first major installment of its Sixth Assessment Report.

Copernicus, Kepler, and Galileo would be among the first to tell us that science is not primarily about consensus but discovery.

Americans should ask: To what degree will policy really affect global temperatures? What will it cost, who will bear those costs? Are there unintended consequences?

The United Nations' Intergovernmental Panel on Climate Change (IPCC) recently published the first major installment of its Sixth Assessment Report. It's a big deal, but it's not the last word in climate science.

Two more sections of the report will be published in the coming year. Taken together, they attempt to define the consensus, scientific view of where we are now in terms of climate change and global warming, and what future changes are likely to come.

But even when all three sections are out, there will be more to be said about climate science. Copernicus, Kepler, and Galileo would be among the first to tell us that science is not primarily about consensus but discovery. It can take just one person with sound evidence and an argument to flip the scientific paradigm. So it's important to read the IPCC's report with humility and critical thinking.

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>>> Using Financial Regulation to Fight Climate Change: A Losing Battle

Climate analysis employs a good deal of statistical modeling and data science. It involves far more than looking out the window, no matter how alarming the weather is or whatever you think you remember about how it was "back when."

Climate is a wickedly complex system. It involves long-term patterns, the dynamic interactions between clouds and oceans, influences from human activity and natural forces like volcanoes and solar activity, and physics, to name just a few major factors.

No one person has a mastery of all that knowledge, which makes the IPCC report a useful tool in understanding the issue. But our knowledge is always growing.

More studies continue to highlight persistent problems with climate models exaggerating warming.

That said, what does this first installment of the IPCC report say? Here are a few highlights:
The IPCC estimates warming since 1850 amounts to 1.1°C.
The most extreme projections for warming—those deemed "most likely" in the 2014 Assessment Report—have been downgraded to "low likelihood."
It finds no discernible trends for hurricanes, winter storms, floods, tornadoes or thunderstorms. It does find trends in heat waves, heavy precipitation and some kinds of drought.

Not surprisingly, these findings were scarcely mentioned in coverage of the report.

Unfortunately, politicians are all too ready to follow suit, claiming "the science" as a mandate for action and acceptance of extreme policy prescriptions. Too often they use "the science" as a shield to avoid defending what are actually policy choices or to deflect accountability for the costs of those policies.

But some of these proposed policies would cost Americans trillions of dollars and intend to fundamentally rework how Americans relate to their government. With stakes that high, debate is critical.

It might be easy for Americans, especially those without a doctorate in a relevant scientific field, to feel helpless in the melee. But here is level ground—most politicians aren't climate scientists either.

Therefore, it's incumbent on citizens to ask good questions of their elected representatives when they advocate for policies like the Green New Deal, subsidies for electric vehicles or regulations on electricity generation. And politicians should not be given a free pass by claiming to act on a supposed mandate of "the science," as presented in reports like the IPCC's.

Americans should ask: To what degree will this policy actually affect global temperatures? What will it cost, and who will bear those costs? Are there unintended consequences?

>>> Climate Change, Taiwan and U.S. Foreign Policy

As aptly stated by one climate scientist: "We need to remind ourselves that addressing climate change isn't an end in itself, and that climate change is not the only problem that the world is facing. The objective should be to improve human well-being in the 21st century, while protecting the environment as much as we can."

Regardless of what one believes about the various scientific debates, we shouldn't be interested in policies that give a show of "doing something" but don't actually accomplish anything. Unfortunately, the IPCC's latest report, like its predecessors, was immediately used as a bludgeon to demand political conformity in support of massively expensive "green" policies.

That's harmful both for scientific discovery, which depends on questioning consensus, and for the political process, which depends on genuine debate, to work out the best decision about what to do next.

This piece originally appeared in Detroit News

Last Name:

Email:

COMMENTARY Environment

Follow the (Climate Change) Money

Dec 18th, 2018 3 min read

Stephen Moore

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On Temporary Leave of Absence |Distinguished Visiting Fellow

On Temporary Leave | Stephen Moore is the Distinguished Visiting Fellow for Project for Economic Growth at The Heritage Foundation.

The first iron rule of American politics is: Follow the money. This explains, oh, about 80 percent of what goes on in Washington.

Shortly after the latest Chicken Little climate change report was published last month, I noted on CNN that one reason so many hundreds of scientists are persuaded that the sky is falling is that they are paid handsomely to do so.

I noted that "In America and around the globe governments have created a multi-billion dollar Climate Change Industrial Complex." And then I added: "A lot of people are getting really, really rich off of the climate change industry." According to a recent report by the U.S. Government Accountability Office, "Federal funding for climate change research, technology, international assistance, and adaptation has increased from $2.4 billion in 1993 to $11.6 billion in 2014, with an additional $26.1 billion for climate change programs and activities provided by the American Recovery and Reinvestment Act in 2009."

This doesn't mean that the planet isn't warming. But the tidal wave of funding does reveal a powerful financial motive for scientists to conclude that the apocalypse is upon us. No one hires a fireman if there are no fires. No one hires a climate scientist (there are thousands of them now) if there is no catastrophic change in the weather. Why doesn't anyone in the media ever mention this?

But when I lifted this hood, it incited more hate mail than from anything I've said on TV or written. Could it be that this rhetorical missile hit way too close to home?

How dare I impugn the integrity of scientists and left-wing think-tanks by suggesting that their research findings are perverted by hundreds of billions of dollars of taxpayer handouts. The irony of this indignation is that any academic whose research dares question the "settled science" of the climate change complex is instantly accused of being a shill for the oil and gas industry or the Koch brothers.

Apparently, if you take money from the private sector to fund research, your work is inherently biased, but if you get multimillion-dollar grants from Uncle Sam, you are as pure as the freshly fallen snow.

How big is the Climate Change Industrial Complex today? Surprisingly, no one seems to be keeping track of all the channels of funding. A few years ago Forbes magazine went through the federal budget and estimated about $150 billion in spending on climate change and green energy subsidies during President Obama's first term.

That didn't include the tax subsidies that provide a 30 percent tax credit for wind and solar power — so add to those numbers about $8 billion to $10 billion a year. Then add billions more in costs attributable to the 29 states with renewable energy mandates that require utilities to buy expensive "green" energy.

Worldwide the numbers are gargantuan. Five years ago, a leftist group called the Climate Policy Initiative issued a study which found that "Global investment in climate change" reached $359 billion that year. Then to give you a sense of how

money-hungry these planet-saviors are, the CPI moaned that this spending "falls far short of what's needed" a number estimated at $5 trillion.

For $5 trillion we could feed everyone on the planet, end malaria, and provide clean water and reliable electricity to every remote village in Africa. And we would probably have enough money left over to find a cure for cancer and Alzheimers.

The entire Apollo project to put a man on the moon cost less than $200 billion. We are spending twice that much every year on climate change.

This tsunami of government money distorts science in hidden ways that even the scientists who are corrupted often don't appreciate. If you are a young eager-beaver researcher who decides to devote your life to the study of global warming, you're probably not going to do your career any good or get famous by publishing research that the crisis isn't happening.

But if you've built bogus models that predict the crisis is getting worse by the day, then step right up and get a multimillion dollar grant.

Now here's the real scandal of the near trillion dollars that governments have stolen from taxpayers to fund climate change hysteria and research. By the industry's own admission there has been almost no progress worldwide in actually combatting climate change. The latest reports by the U.S. government and the United Nations say the problem is getting worse not better and we have not delayed the apocalypse by a single day.

Has there ever been such a massive government expenditure that has had such miniscule returns on investment? After three decades of "research" the only "solution" is for the world to stop using fossil fuels, which is like saying that we should stop growing food.

Really? The greatest minds of the world entrusted with hundreds of billions of dollars can only come up with a solution that would entail the largest government power grab in world history, shutting down industrial production (just look at the

catastrophe in Germany when they went all in for green energy), and throwing perhaps billions of human beings into poverty? If that's the remedy, I will take my chances on a warming planet.

President Trump should tell these "scientists" that "you're fired." And we taxpayers should demand our money back.

This piece originally appeared in The Washington Times

Louisiana Climate Action Plan

Draft, Partial, Final Report

DRAFT Sections for Public Comment
August 23, 2021

GOVERNOR'S OFFICE OF COASTAL ACTIVITIES

Contents

Climate Initiatives Task Force (CITF) Membership List

- **Chip Kline**, Executive Assistant to the Governor for Coastal Activities, Task Force Chair
  - Designee: **Harry Vorhoff**, Deputy Director, Governor's Office of Coastal Activities
- **Gregory M. Bowser**, President and CEO, Louisiana Chemical Association
- **Jonathan Bourg**, Director of Resource Planning and Market Operations at Entergy, as a representative of an electric utility
- **Dr. Chuck Brown**, Secretary, Louisiana Department of Environmental Quality
  - Designee: **Lourdes Iturralde**, Assistant Secretary, Office of Environmental Compliance
- **Dr. Virginia Burkett**, Chief Scientist for Climate and Land Use Change at the United States Geological Survey, as a nonvoting representative of a federal scientific agency
- **Selby Bush**, BHP Petroleum, designee for the Louisiana Speaker of the House Clay Schexnayder
- **Dr. Terrence Chambers**, Director of the Energy Efficiency and Sustainable Energy Center at the University of Louisiana at Lafayette, as a member of Louisiana's academic community
- **Flozell Daniels**, President and CEO of the Foundation for Louisiana, as a member with experience in community development and engagement
- **Jay Dardenne**, Commissioner of Administration, Division of Administration
  - Designee: **Mark Moses**, Assistant Commissioner, Facility Planning & Control
- **Karen Gautreaux**, Director of Government Relations for Louisiana at the Nature Conservancy, as a member of the environmental nonprofit community
- **Tyler Gray**, President and General Counsel, Louisiana Mid-Continent Oil and Gas Association
- **Bren Haase**, Executive Director, Coastal Protection and Restoration Authority
- **Timothy Hardy**, Breazeale, Sachse & Wilson, L.L.P., designee for Louisiana Senate President Page Cortez
- **Thomas Harris**, Secretary, Louisiana Department of Natural Resources
  - Designee: **Jason Lanclos**, Director, State Energy Office
- **Camille Manning-Broome**, President and CEO of the Center for Planning Excellence, as a member at-large
- **Chief Shirell Parfait-Dardar**, Tribal Chief of the Grand Caillou/Dulac Band of the Biloxi-Chitimacha-Choctaw, as a member of an indigenous tribe, nation, or community
- **Colette Pichon Battle**, Executive Director of the Gulf Coast Center for Law and Policy, as a member of the environmental and climate justice community
- **Don Pierson**, Secretary, Louisiana Economic Development
  - Designee: **Brad Lambert**, Deputy Secretary, Louisiana Economic Development

- **Bill Robertson**, designee of Public Service Commissioner Foster Campbell
- **Jeff Schwartz**, Director of Economic Development for the City of New Orleans, as a representative of local government perspective
- **Mike Strain**, Commissioner, Louisiana Department of Agriculture and Forestry
    - Designee: **Joey Breaux**, Assistant Commissioner, Office of Soil and Water Conservation
- **Dr. Shawn Wilson**, Secretary, Department of Transportation and Development
    - Designee: **Dr. Eric Kalivoda**, Deputy Secretary, Department of Transportation and Development
- **Robert Verchick**, Gauthier-St. Martin Eminent Scholar and Chair in Environmental Law at Loyola University New Orleans, as a member with special qualifications and experience in climate change policy

Glossary of Terms and Acronyms

Action: a specific policy, program, or project that can be directly implemented to achieve a specific goal or complete a process

Adaptation: Long-term adjustments that can be made to aid in withstanding current and future changes in environmental conditions

Adaptive Governance Initiative: State-led effort to increase the resilience of state agencies to the impacts of the coastal crisis. Working through resilience coordinators at each agency, the adaptive governance initiative seeks to integrate projections from the coastal master plan into decision making and develop and institutionalize resilience actions within and across state government

Blue Carbon: Carbon stored in the sediment and plants of coastal and marine ecosystems, such as mangroves, tidal marshes, and seagrass beds

Blue Hydrogen: Hydrogen is a fuel source that has multiple applications in transportation, electricity generation, industrial uses, and many more. Blue hydrogen is produced through the typical reforming process used to create most of the hydrogen used today, but the carbon dioxide that is emitted from that process is captured and stored rather than being released into the atmosphere

Carbon Capture: The process of pulling carbon dioxide from the atmosphere naturally or through engineered methods from a point source emitter

Carbon Sequestration: The long-term capture and storage of carbon in oceans, soils, vegetation, and geologic formations, which can occur either naturally or through anthropogenic (human) mechanisms

Carbon Sink: Any reservoir, natural or otherwise, that accumulates and stores some carbon-containing chemical compound for an indefinite period and thereby lowers the concentration of CO_2 from the atmosphere by storing more carbon than it emits

Carbon Storage: The containment of captured carbon when it is injected into deep, underground geological formations, where it is stored long-term, rather than being released into the atmosphere. Storage sites used for CO_2 include former oil and gas reservoirs, deep saline formations, and coal beds

Carbon Dioxide (CO_2) Equivalent: The number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas (GHG)

Climate Equity: a people-centered approach to addressing the global climate crisis through action that seeks to achieve long-term equality of outcomes by acknowledging institutionalized harms to historically marginalized people and communities and by holding accountable those who benefit from the root causes of climate change that disproportionately impact the most vulnerable

Coastal Protection and Restoration Authority Board (CPRA Board): Group that represents the state's position in policy relative to the protection, conservation, enhancement, and restoration of the coastal area of the state. They do so by overseeing the Coastal Protection and Restoration Trust Fund, developing a master plan an annual plan for integrated coastal protection, and enforcing compliance with the Coastal Master Plan

Coastal Master Plan: The state's 50-year blueprint for large-scale restoration and protection of Louisiana's critical coastal areas. The plan, authored by the Louisiana Coastal Protection and Restoration Authority (CPRA), is updated every five years as required by law to account for evolving science and changing environmental conditions. It combines projects that restore, build or maintain coastal wetlands with projects that provide enhanced risk reduction for coastal communities from storms and flooding

Equity: Fairness or justice in the way people are treated, recognizing that we do not all start from the same place and must acknowledge and make adjustments to imbalances. This can be achieved by expanding access to opportunity, quality of life and prosperity

Emissions Pathway: The modelled trajectories of global anthropogenic emissions over the 21st century based on predictions of how concentrations of GHG in the atmosphere will change in the future as a result of human activities

Fundamental Objectives: In Structured Decision Making (SDM), these are essential goals or solutions of this work that have been informed by the Climate Initiatives Task Force, Advisory Groups, Sector Committees, and public that guide development and evaluation of strategies and actions

Green Hydrogen: Hydrogen is a fuel source that has multiple applications in transportation, electricity generation, industrial uses, and many more. Green hydrogen is produced using renewable energy through electrolysis. This is a process that splits water into its basic elements - hydrogen and oxygen - using an electric current. The electricity used in the process comes from renewable resources

Greenhouse Gas (GHG): A gas that contributes traps heat in the atmosphere by absorbing infrared radiation. The primary GHG in Earth's atmosphere are water vapor, CO_2, methane, nitrous oxide, and ozone. Many GHGs are naturally occurring, though concentrations can be affected based on human input

GHG Inventory: A list of emission sources, sinks, and the associated emissions over a certain period of time, quantified using standardized methods

Intergovernmental Panel on Climate Change (IPCC): An intergovernmental body of the United Nations that is dedicated to providing the world with objective, scientific information relevant to understanding the scientific basis of the risk of human-induced climate change, its natural, political, and economic impacts and risks, and possible response options

Louisiana Watershed Initiative: State-led program through which floodplain management responsibilities are coordinated across federal, state, and local agencies, with the goal being to leverage the state's past and present flood-risk reduction and resilience efforts through a variety of projects

Mitigation: Generally, The reduction of something harmful or the reduction of the severity, seriousness, or painfulness of its harmful effects. In the climate context, mitigation refers to efforts to avoid and reduce the emission of GHG

National Academy of Sciences: A United States nonprofit, non-governmental organization charged with providing independent, objective advice to the nation on matters related to science and technology. The organization is committed to furthering science in America, and its members are active contributors to the international scientific community

National Climate Assessment: Summary reports detailing the impacts of climate change on the U.S. now and in the future. They are updated and released approximately every 5 years, starting in 2000, through the Global Change Research Act of 1990. The reports are extensively reviewed by the public and experts, including federal agencies and a panel of the National Academy of Sciences

Office of the Governor–Coastal Activities (GOCA): Team within the Governor's Office that develops and implements policies, plans, and programs relative to the protection and restoration of Louisiana's unique coastal resources and the flood protection of communities in the state, as well as climate and coastal resiliency

Planning Team: Consists of staff from the Office of the Governor–Coastal Activities and the Water Institute of the Gulf (TWI) tasked with coordinating the planning process for the development of the Climate Action Plan and its timely completion

Portfolio: A comprehensive set of strategies and actions towards achieving the GHG reduction targets and other fundamental objectives

Relative Sea Level Rise: A combination of the absolute (global) sea level rise, which is the change in the height of the ocean surface above the center of the earth, plus changes (up or down) in land elevation for the relevant coastal area. Sea level rise at specific locations may be more or less than the global average due to many local factors such as subsidence, ocean currents, variations in land height, and whether the land is still rebounding from the compressive weight of Ice Age glaciers

Resilient Louisiana Commission: State entity charged with examining Louisiana's economy amid the COVID-19 pandemic and making recommendations for more resilient business-related activities and commerce that includes a task force structure dedicated to strengthening specific sectors of Louisiana's economy. The RLC was specifically created to guide the state through the Covid-19 crisis and expand the economy so that it can cope more easily with any future crises

Water Institute of the Gulf: An independent, non-profit, applied research institution advancing science and developing integrated methods to solve complex environmental and societal challenges. The Water Institute is a part of the Water Campus and works to develop scientific and technological solutions to coastal and deltaic issues in Louisiana and the Gulf in general. The Institute connects academic, public, and private research providers and conducts applied research to serve communities and industry and that will help coastal

communities and economies become more resilient to land subsidence, storms, rising sea levels, and other coastal threats

Strategy: A high-level path (plan of action or policy) designed to achieve a major or overall aim/ one or more long-term or overall goals under conditions of uncertainty (e.g., GHG emissions reduction)

Structured Decision Making (SDM): An explicit and transparent approach that utilizes a broad set of methods for analyzing decisions and identifying solutions that achieve desired outcomes. This approach supports decisions based on clearly articulated fundamental objectives, integrates science and policy, and remains flexible to legal mandates and public preferences (or values) in decision making

Vector-Borne Disease: Human illnesses caused by parasites, viruses and bacteria that are transmitted by vectors, which are living organisms that can transmit infectious pathogens between humans, or from animals to humans

Milton Friedman: 1960s Wisdom for Today

IER instituteforenergyresearch.org/uncategorized/milton-friedman-1960s-wisdom-for-today

July 29, 2021

Adam Smith's masterworks from the 18th century inform today's debates in political economy. In more recent times, Ludwig von Mises's *Human Action*, first penned in 1940, continues to advise economics at the frontiers.

Milton Friedman's 1962 book, *Capitalism and Freedom*, translated into nearly 20 languages with a million copies sold, has also earned a special place in the annals of classical-liberal thought. As we approach the anniversary of Friedman's birthdate, July 31, 1912, this book's insight deserves renewed appreciation.

Energy was not a subject of this book, as it was of *Free to Choose*, written by Milton and Rose Friedman in 1979. In the 1960s, energy was a backwater. "For all its importance to the way we lived," three MIT-affiliated authors wrote, "energy was invisible, and never got in our way. Only those who made their living from it read books about it."

But consider these Friedman quotations from 1962 in terms of today's energy and climate debates.

Perils of Government Intervention

> "There is still a tendency to regard any existing government intervention as desirable, to attribute all evils to the market, and to evaluate new proposals for government control in their ideal form, as they might work if run by able, disinterested men, free from the pressure of special interest groups." (p. 197)

> "The central defect of [interventionist policies] is that they seek through government to force people to act against their own immediate interests in order to promote a supposedly general interest.... They substitute the values of outsiders for the values of participants; either some telling others what is good for them, or the government taking from some to benefit others." (p. 200)

> "Concentrated power is not rendered harmless by the good intentions of those who create it." (p. 201)

> "Even though the men who wield this power initially be of good will and even though they be not corrupted by the power they exercise, the power will both attract and form men of a different stamp." (p. 2)

Advantages of Freedom

> "Government can never duplicate the variety and diversity of individual action." (p. 4)

> "... a major source of objection to a free-economy is precisely that it ... gives people what they want instead of what a particular group thinks they ought to want. Underlying most arguments against the free market is a lack of belief in freedom itself." (p. 15)

Decentralization

> "If government is to exercise power, better in the county than in the state, better in the state than in Washington.... The preservation of freedom is the protective reason for limiting and decentralizing government power." (p. 3)

Business and Politics

> "The view has been gaining widespread acceptance that corporate officials and labor leaders have a 'social responsibility' that goes beyond serving the interest of their stockholders or their members. This view shows a fundamental misconception of the character and nature of a free economy." (133)

> "Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible. This is a fundamentally subversive doctrine. If businessmen do have a social responsibility other than making maximum profits for stockholders, how are they to know what it is?" (p. 133)

> "If businessmen are civil servants rather than the employees of their stockholders then in a democracy they will, sooner or later, be chosen by the public techniques of election and appointment." (p. 134)

> "... There is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rule so the game, which is to say, engages in open and free competition, without deception or fraud." (p. 133)

Threats to Freedom

> "Make the advocacy of radical causes sufficiently remunerative, and the supply of advocates will be unlimited." (p. 18)

> "Freedom is a rare and delicate plant." (p. 2)

Executive Summary

An executive summary will be included in the final report.

What statute was passed to create this taskforce? Rules and regulations are passed by the legislature. The authority of a government agency is provided through legislation that has gone through the administrative procedures act and passed by the elected officials. Has there been any legislation enacted to grant legitimate authority?

This action plan serves the purpose of "gas-lighting" the public into believing exaggerated claims of the world coming to an end because of humans by the end of the century. It is a theory and NOT conclusive fact that global temperatures are slightly rising due to man-made GHG emissions.
The climate crisis fantasy is a mechanism for the government to slap on more regulations, increase taxes, government picked winners and losers, steal personal liberty, limit personal choice, and redistribute taxpayer funds.

Decades ago the scare was global cooling. Then the eco-tyrants changed the message to global warming. Well now the message has had to be revised again to climate change (how ambiguous). You mean like what normal people refer to as weather?

"[C]hina emitted more carbon dioxide than any other country in 2019-nearly double that of the United States. China now ranks number one globally for consumption and production of coal, second for oil consumption, and third for natural gas consumption. In fact, in 2020 China's coal fleet grew by 30 gigawatts while global capacity fell. ... They've committed to maxing out their greenhouse gases by around 2030. ... They're just promising to promise that they will reduce emissions by a certain date." [4]
So tell me why is the governor and the eco-tyrant groups telling the western civilized countries to cut GHG emissions when China is going to keep blowing-and-going? Why hurt our economy and residents?

"[S]wiss voters nixed a trio of expensive environmental proposals, including a carbon tax, and artificial pesticide ban, and a redirection of subsidies. ... The doubts and concerns are a natural result of any commonsense cost and benefit analysis of the Paris climate agreement's carbon dioxide emissions limits. They are very likely to be shared by many Americans who are frightened by the tax and regulation-rich plans of the Biden administration's climate change policy." [5]

no legislation was passed to create this taskforce, just because Gov. Edwards decided he wanted it. Must be nice to be king - oh wait a minute. The USA is a republic so there is no king.

Introduction

In August of 2020, Governor John Bel Edwards signed executive order JBE 2020-18, formally creating the Climate Initiatives Task Force (CITF) to make recommendations for how Louisiana could play its part in reducing the greenhouse gas (GHG) emissions driving up global temperatures and changing the world's climate, a crisis with direct and immediate impacts for Louisiana's people and future. After multiple public meetings of the CITF and across supporting groups of experts, this Louisiana Climate Action Plan [will be] formally adopted in January of 2022.

"experts" do not automatically instill trust anymore with many people after dealing with the virus

This plan provides an overview of the Governor's vision for climate action in Louisiana, establishes the urgent need for action based on the global and local threats posed by increasingly severe impacts of climate change, and discusses opportunities for Louisiana presented by considered climate action. It explains the planning process and utilized to arrive at this strategy, provide an update to Louisiana's GHG sources and sinks inventory, and lay out the strategies and actions recommended for economy-wide reductions to GHG emissions alongside projections for how implementing this plan will reduce GHG emissions and provide co-benefits to our state.

people need good paying jobs

There is no single solution that will fix the world's climate problems overnight, and many damaging changes to the environment with harmful human consequences are already being felt and will be felt in Louisiana no matter the success of this Climate Action Plan. However, choosing to act in the face of these difficult truths is still essential work.

Both of these paragraphs are not truthful.

Not taking action is a choice to pass even more harmful impacts resulting from climate change down to the next generation and makes the task of adapting to life on the edge of the Gulf of Mexico even more difficult and costly. Choosing inaction ignores the long-standing inequities present in our state that contribute to the disparate climate impacts felt across our communities and turns a blind eye to the new injustices created and magnified by a rapidly changing climate. Inaction is also the surest way to miss opportunities. By taking action to address GHG emissions in Louisiana, our state has an opportunity to improve the health and enhance the quality of life for our people and to create a more vibrant, inclusive economy. Ultimately, it is a chance to ensure that this state remains one that we, our children, and children's children want and can invest in.

The dedicated members of the CITF, its sector committees, and advisory groups worked relentlessly over 16 months to choose action over inaction. This diverse group of leaders came together to have hard conversations, set priorities, discuss tradeoffs, and produce this Louisiana Climate Action Plan which establishes a pathway to reach the state's emission reduction goals and a to a healthier, safer, more equitable, and vibrant state. While this plan is an important first step toward decarbonization, the road to 2050 will include many new developments and inevitable setbacks, and the strategies and actions laid out here will need to be revisited for their ambition, effectiveness, and continued relevance in the years to come. But the first, crucial order of business will be the effective implementation of this plan, a task that will depend on the continued collaboration, public engagement, and commitment that produced this plan and much more.

"[L]omborg pointed out that the Intergovernmental Panel on Climate Change estimated that if 'we do nothing' by the 2070s, 'the net impact' will only be the equivalent of the world population losing '0.2 and 2 percent of their income.'..." [1]

"[I]f all presidents for the next 70 years followed Biden in cutting emissions, Lomborg noted, 'it will reduce temperatures trivially.' Lomborg said the reduction would only be a meaningless '0.07 Fahrenheit. And this is through the UN climate model. So, it's going to be very hard. It's going to be very costly. It'll have virtually no impact.' ..."[1]

Objectives and Targets

BACKGROUND & EXECUTIVE ORDER

Shortly after his inauguration in February of 2020, Governor Edwards held a press conference to announce his second term policy priorities for the coastal program. Attended by nearly every member of his cabinet, Governor Edwards committed to forming the CITF that would develop a set of recommendations to address the state's GHG emissions. This effort was formalized at the August 2020 Coastal Protection and Restoration Authority (CPRA) Board meeting when he signed Executive Order JBE 2020-18.

additional gas lighting - there is not an international scientific consensus

2008 Senate Minority Report has more than 650 scientists dissent[2] Referencing the value of Louisiana's coast and the projections for an additional 2,250 to 4,120 square miles of coastal land loss over the next fifty years, Executive Order JBE 2020-18 connects Louisiana's coastal crisis, the catastrophic human costs of natural disasters, and the international scientific consensus that GHG emissions are causing unprecedented global warming. "To improve our resilience, sustain our coast, and help avoid the worst impacts of climate change," the order states, "Louisiana must proactively work to reduce the GHG emissions that are driving up global temperatures, raising sea levels, and increasing risks that threaten our health and safety, quality of life, economic growth, and vital habitats and ecosystems." Governor Edwards also clearly articulated his desire for solutions to this problem to be developed in partnership with multiple stakeholders with the ultimate goal of reaching a "balanced" set of strategies that would both help "limit the impacts of climate change that harm our state's natural and cultural heritage," and provide ways for us to adapt "to maintain [our] position as a world leader in energy, industry, agriculture, and transportation."

The Executive Order established a twenty-three-member CITF, supported by six sector committees and four advisory groups, and called for an updated GHG emissions inventory, an interim report in February of 2021, and a final climate strategy by February of 2022.

If the sea levels are rising, why did Obama purchase a home on Martha's Vineyard for almost $12 million?

GHG EMISSIONS REDUCTION GOALS

Importantly, the Executive Order also established ambitious GHG reduction goals to focus the work of the CITF on the best approaches to meet these goals. According to the Executive Order, by 2025, Louisiana should: 1) reduce its net GHG emissions by 26-28% from 2005 levels; 2) reduce its net GHG emissions by 40-50% from 2005 levels by 2030; and 3) aim to be a net zero GHG emitter by 2050.

These goals are derived in part from the declaration by the Intergovernmental Panel on Climate Change (IPCC) that "global net human-caused emissions of carbon dioxide...would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050."[1] It also aligns with the U.S.' Nationally Determined Contributions (NDCs) which represent its commitment in the Paris Agreement to limit global warming to 1.5°C,[2] and are calibrated to 2005 to correspond to Louisiana's 2010 GHG inventory which was built on data from 2005. Additionally, Governor Edwards' goals put Louisiana in line with commitments made by dozens of other states, and businesses operating in multiple sectors internationally, nationally, and within Louisiana. These businesses are from a variety of industrial

"[F]ormer President Barack Obama's Under Secretary for Science at the U.S. Dept. of Energy Steven Koonin mocked the 'rising sea level' scare narrative in March:'[The] sea level is rising at the spectacular rate of 1 foot per century and was doing it at about the same rate 80 years ago.'[3]

sectors including energy producers, public utilities, chemical manufacturers, technology firms, and finance.

VISION

Governor Edwards' Executive Order also clearly established a vision for Louisiana, one that addresses climate change head on while being open to opportunities that stretch our traditional economic strengths to remain competitive in a global, low-carbon economy. Our state "can and will reduce GHG emissions to limit the impacts of climate change that harm the state's natural and cultural heritage while adapting to maintain its position as a world leader in energy, industry, agriculture, and transportation."

The realization of that vision has been the central mission of the CITF. With input from the public and experts, it has investigated and offered recommended actions including in this plan for the reduction of GHG emissions in Louisiana to achieve the stated GHG emissions reduction goals. In addition to GHG reductions, the CITF also considered other important outcomes in the formulation of this plan including: improving the health and welfare of the people of Louisiana, becoming a more equitable society, strengthening our ability to adapt to environmental hazards, and advancing Louisiana's economic and energy profile. Notably, the CITF exists alongside and builds upon other state efforts such as the Louisiana Watershed Initiative, the Coastal Master Plan, the Adaptive Governance Initiative, and the Resilient Louisiana Commission.

oil and gas revenue taxes help to support the coastline restoration
climate change fantasies will not support the coastline

Just because Edwards wants to put in place this scheme, doesn't mean that it should be done or must be done. People in hell want ice water.

Planning Process

Governor Edwards called on the CITF to produce a Climate Action Plan that outlines actions to reduce net GHG emissions from all sectors of the economy and to set Louisiana on a path to meet its short-, medium-, and long-term emission reduction goals. Actions and strategies reduce GHG emissions while achieving other co-benefits for Louisiana's communities, environment, and economy. Achieving this vision and the state's emission reduction goals in a manner that is inclusive and balanced required a deliberate and transparent planning process.

STRUCTURE

The CITF, its sector committees, and advisory groups comprise over 140 experts from state government, colleges and universities, the private sector, and civil society that have advised and contributed to the portfolio of strategies and actions contained in this Climate Action Plan (see Figure 1).

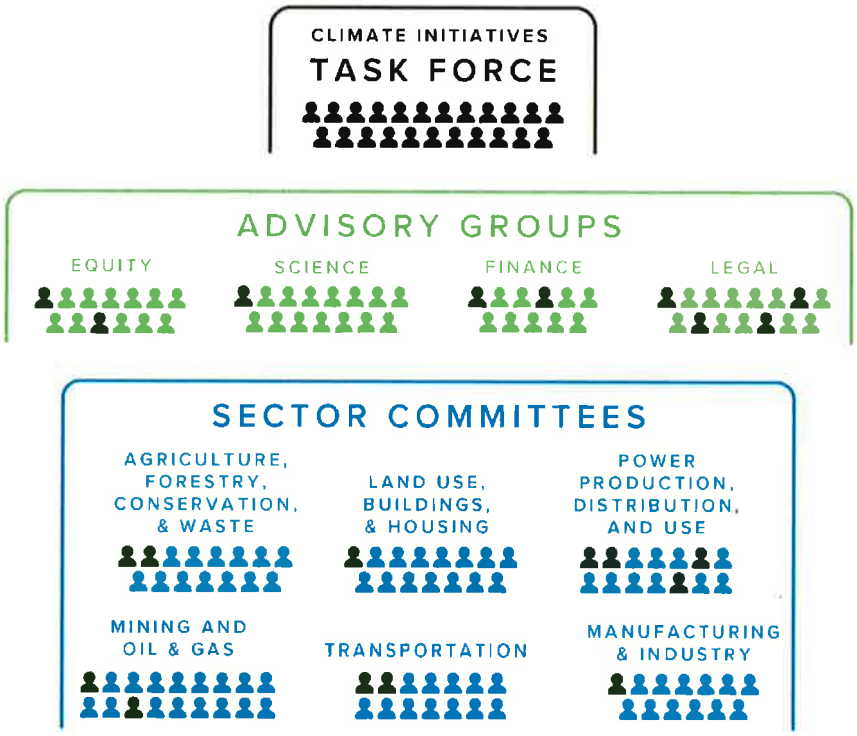

Figure 1. Climate Initiatives Organizational Structure

The CITF is the decision-making body tasked with submitting an interim report and Climate Action Plan to Governor Edwards in accordance with the executive order. This twenty-three-member body set priorities for the overall planning process, weighed trade-offs among different approaches, and ultimately approved a set of recommendations for the Climate Action Plan.

The four advisory groups were charged with providing technical expertise to the CITF and committees throughout the process and upon request regarding questions that transcend individual committee scopes. While each of the four advisory areas are reflected in the membership of the CITF and sector committees, specific opportunities to evaluate and improve actions and strategies are necessary to ensure the planning process accounts for equitable impacts, sound science, financial feasibility and economic implications, and legal considerations in each step. In addition to discussions during meetings, advisory groups provided key feedback during two rounds of consequence analysis. At each round, advisory group members expressed how groups of actions to reduce GHG emissions could result in positive or negative impacts on the social, economic, and resilience outcomes of the plan. More information about the membership and charges of the equity, financial, legal, and scientific advisory groups can be found later in this document.

GHG emission sources and sinks are present in all aspects of the Louisiana economy. To acknowledge the progress already being made and discuss the specific opportunities to reduce emissions from a broad range of operations and activities in each sector, six sector committees were charged with developing and evaluating implementable emission reduction actions and comprehensive strategies that significantly reduce net GHG emissions across all aspects of their respective sector. Committees are reflective of the Governor's vision to achieve balance through their broad-based composition with representatives from corporate entities, advocacy organizations, regulators, academics, and community representatives. Bringing together a variety of stakeholders with seemingly separate interests and opposing values allowed for robust and challenging discussions that ensure the end result of comprehensive strategies that set Louisiana on a path to reach short-, medium-, and long-term GHG emission reduction goals.

spread the blame for sinking the state's economy even more

The CITF is chaired and staffed by the Office of the Governor, Coastal Activities (GOCA). Under leadership of the Executive Assistant to the Governor for Coastal Activities, GOCA serves as the staff and managers of the CITF, advisory groups, and sector committees in coordination with advisory and committee chairs. As staff of this effort, GOCA also works alongside all members, state agencies, outside stakeholders, and the public to build investment in the process, expand partnerships, and coordinate among all entities. As Louisiana's Innovation and Collaboration Hub, the Water Institute of the Gulf (TWI), assists GOCA as it led the planning process for and development of the Climate Action Plan. This Planning Team, comprised of GOCA and TWI, ensures the CITF remains on track to meet deliverables within their respective timelines.

STRUCTURED DECISION MAKING

The planning process for developing the Climate Action Plan is grounded in a Structured Decision Making (SDM) approach. In basic terms, SDM is "a formalization of common sense for decision problems which are too complex for informal use of common sense".[3,4] SDM is an approach that integrates science and policy to break down complex decisions and identify solutions that achieve the desired ends (referred to as "fundamental objectives" in SDM) in a manner that is explicit and transparent. SDM is not a prescriptive approach to problem solving, but rather it encompasses broad methods that rely on clearly articulating fundamental objectives and analyzing potential impacts to those objectives using data-driven analysis. See Figure 2 for the six steps of the iterative SDM

process. The charges to the sector committees and advisory groups supported the SDM process and helped the CITF make informed, data-driven decisions on which strategies to pursue to best meet the emission reduction goals and other desired outcomes for Louisiana.

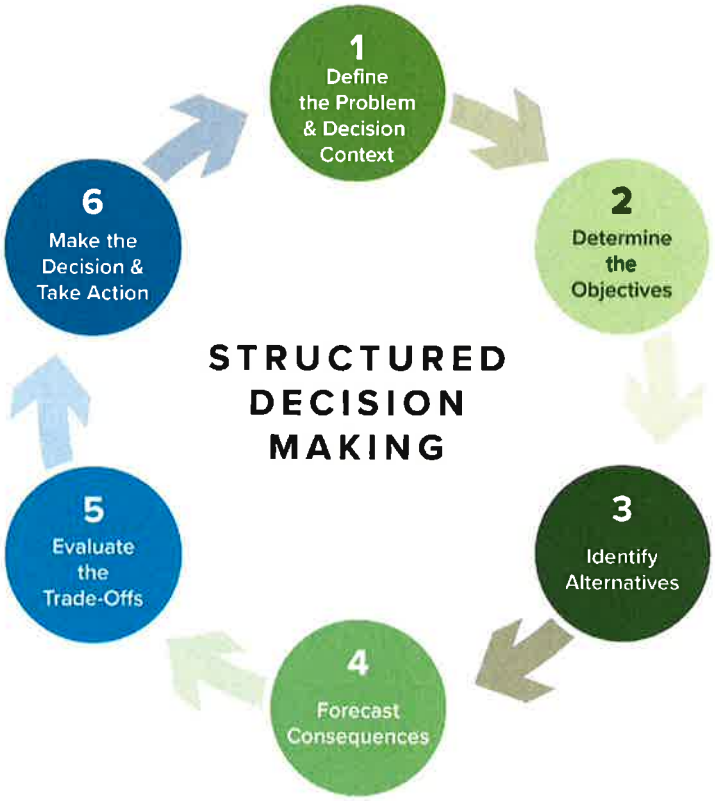

Figure 2. The Six-Step SDM Process

The following iterative six-step SDM process provides the framework for the development of the Climate Action Plan.

1. **Defining the Problem and Decision Context:** A critical first step is ensuring all parties share a common understanding of the problem that has initiated the process, as outlined in the Executive Order. Louisiana's Climate Action Plan synthesizes the science on current and future risk to Louisiana posed by climate change that makes the case for reducing GHG emissions. This plan also contains an overview of the Louisiana's updated 2020 GHG Emissions Inventory which shows baseline information about Louisiana's emissions sources and sinks that provide context informing the solutions in this plan and benchmarks by which to measure progress toward achieving the Governor's goals.
2. **Determining the Objectives:** The CITF has established a set of "fundamental objectives" that are essential goals of this effort and guided the development and evaluation of actions and strategies. The CITF's fundamental objectives include reduction of net GHG emissions as well as economic and societal goals considered important in how co-benefits and consequences are evaluated. A full list of the fundamental objectives can be found in the "Synthesized Fundamental Objectives" section.

3. **Identifying Alternatives:** Proposed emissions reduction actions (specific policies, programs, or projects) have been developed collaboratively by the CITF, committees, advisory groups, GOCA, and public submissions using a common template. Throughout an iterative process that resulted in the actions contained in this final plan, "alternative means" to achieve emissions reductions and the goals of the additional fundamental objectives were refined before being included in this plan.

4. **Forecasting Consequences:** The advisory groups and GOCA evaluated the impact of proposed actions, strategies, and alternative emission pathways on the fundamental objectives and collectively achieving the GHG emission reduction targets. Evaluations of the GHG emission reduction potential were conducted using the Energy Policy Simulator Modeling Tool. Impacts to the other fundamental objectives were evaluated through two rounds of consequence analysis surveys by the advisory groups.

5. **Discussing the Trade-offs:** Before arriving at the final Climate Action Plan, trade-offs in approach, timing, and prioritization were analyzed and discussed by the CITF, informing their recommendations about which strategies and actions to pursue and how.

6. **Making the Decision and Taking Action:** Recommendations put forth by the CITF based on trade-off discussions were provided to the Governor for consideration. After incorporating public comment, the CITF finalized the Climate Action Plan in January of 2022, in accordance with the timeline established in the Governor's executive order.

just 2 rounds of forecasting consequences? with so many people depending on the government not to screw this up there would be more than 2.

Synthesized Fundamental Objectives

Fundamental objectives are the essential goals of this effort and served to guide the development and evaluation of actions and strategies. The objectives below represent strongly held values and helped to identify co-benefits of climate mitigation action and potential negative consequences of the actions considered in this plan. The fundamental objectives (in bold) are grouped here by theme.

REDUCING NET GHG EMISSIONS

Minimize net GHG emissions.

IMPROVING QUALITY OF LIFE FOR RESIDENTS AND COMMUNITIES

Maximize quality of and access to essential goods, services, and infrastructure for residents.

Maximize positive public health outcomes and public safety.

Maximize the preservation of cultural heritage.

CREATING A MORE EQUITABLE SOCIETY

Reduce socioeconomic, demographic, and geographic disparities in future opportunities and outcomes.

Maximize reduction and mitigation of historic and structural inequities and their impacts for underserved and marginalized communities, including communities of color and Indigenous peoples.

Maximize engagement with and participation of communities in decision-making and implementation.

MANAGING FOR SHORT- AND LONG-TERM SUCCESS

Maximize confidence of the public and stakeholders in the outcome of emissions-reduction strategies to increase support for their implementation.

Maximize the efficiency and effectiveness of emissions-reduction strategies.

Maximize timely implementation of emissions-reduction strategies.

Maximize the durability of emissions-reduction strategies in an uncertain future.

STRENGTHENING THE ECONOMY AND WORKFORCE

Maximize employment, economic opportunity, and support for Louisiana workers.

Maximize economic growth.

CONSERVING NATURAL RESOURCES & PROTECTING THE ENVIRONMENT

Maximize preservation of natural resources and ecosystem services.

Maximize environmental stewardship and support of healthy ecosystems.

ADAPTING TO A CHANGING CLIMATE

Increase resilience of the built and natural environment to climate change.

Increase the resilience of communities to climate change.

Towards this end, we present the primary conclusions of NIPCC's latest report -- as they are stated in its SPM:

1. We conclude that neither the rate nor the magnitude of the reported late 20th century surface warming (1979 to 2000) lies outside normal natural variability, nor is it in any way unusual compared to earlier episodes in Earth's history. Furthermore, solar forcing of temperature change is more important than currently recognized, and evidence is lacking that a 2-degree C rise in temperature (from whatever cause) would be globally harmful.

2. We conclude that no unambiguous evidence exists for adverse changes to the global environment caused by human-related CO2 emission. In particular, the cryosphere is not melting at an enhanced rate, sea-level rise is not accelerating, and no systematic changes have been documented in evaporation or rainfall, or in the magnitude or intensity of extreme meteorological events. An increased release of methane into the atmosphere from permafrost or sub-seabed gas hydrates is unlikely.

3. We conclude that the current generation of global climate models is unable to make accurate projections of climate even 10 years ahead -- let alone the 100-year period that has been adopted by policy planners. The output of such models should therefore not be used to guide public-policy formulation until they have been validated and shown to have predictive value.

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This essay is based on a Policy Brief published by NIPCC in October 2013, entitled "Scientific Critique of IPCC's 2013 'Summary for Policymakers,' by Craig D. Idso, Robert M. Carter, S. Fred Singer, and Willie Soon." It can be accessed at
http://heartland.org/sites/default/files/critique_of_ipcc_spm.pdf 6
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Here are the specific points about climate change highlighted in the letter:

1 Natural as well as anthropogenic factors cause warming.
2. Warming is far slower than predicted.
3. Climate policy relies on inadequate models.
4. CO2 is not a pollutant. It is a plant food that is essential to all life on Earth. Photosynthesis is a blessing. More CO2 is beneficial for nature, greening the Earth: additional CO2 in the air has promoted growth in global plant biomass. It is also good for agriculture, increasing the yields of crops worldwide. 7
5. Global warming has not increased natural disasters.
6. Climate policy must respect scientific and economic realities.
7. There is no climate emergency. Therefore, there is no cause for panic.

The language used is fear mongering and inflicts mental stress on residents. The best way to help anyone out of poverty is to provide a quality education. Louisiana education scores have been down in the bottom of rankings for years. You want to address climate change but still have not managed to raise the education ranking to the top half. Education needs the attention.

The Need for Action: Climate Risks to Louisiana

Climate change is a planetary threat being driven by human-induced increases in GHG concentrations in the atmosphere that have raised global temperatures and made extreme weather more common.[5] In 2019, carbon dioxide (CO_2) concentrations in the atmosphere were at their highest over the last 2 million years,[6] and 19 of the 20 warmest years on record have occurred since 2000[7], arctic summer sea ice reached its lowest level on record in 2012,[8] and global average sea level has risen faster in the past century than at any time in the past 1000 years.[9] The unprecedented fires, droughts, floods, and heatwaves the world is already experiencing will intensify as global temperature continue to go up putting millions of lives and trillions of dollars of assets at risk.[10] Throughout this ongoing upheaval, the most severe impacts have and will continue to fall on the poor and otherwise marginalized communities.

Louisiana is among the most vulnerable states in the United Stations to the impacts of climate change. Impacts from climate change are significantly affecting the amount of coast that can be preserved and the effectiveness of state and local restoration and protection efforts. Inland from the coast, other climate impacts are making flooding more common and heat more unbearable, and they are straining our best efforts to become more resilient. Most of all, these changes to the environment are translating into hardships for the people who call this state home—hardships that will continue to increase in scope, scale, and intensity unless the world comes together to dramatically reduce global GHG emissions. life is hard and not fair - that is a fact
people have to stop the victim mentality and take responsibility for their own lives

The impacts to people being felt today in Louisiana include direct physical, mental, and financial tolls from extreme weather and indirect impacts to social systems and infrastructure that is struggling to cope with the increasing prevalence and severity of natural disasters. As is the case globally, Louisiana's low-income communities, communities of color, Indigenous people, and other marginalized residents without the resources to mitigate and adapt to these evolving environmental hazards are being hit especially hard. These groups have been excluded from the opportunity to build wealth for generations, they are more likely to live and work near heavily-polluting facilities, are more likely to live in areas with higher flood risk, and more likely to experience insufficient or delayed investments in infrastructure and disaster recovery efforts. the facilities are permitted to operate by the state

The need for climate action in Louisiana is paramount. Throughout the state whole communities are being displaced. Workers regularly lose their cars to flooding from abnormal rain events. Some are unable to evacuate from hurricanes because they lack the means or must stay and work in order to keep their jobs. We are losing our coast and the culture that it supports. And our economy is consistently challenged by the disruption and damages of disaster, response, and recovery. The remainder of this section will provide an overview of the scientific underpinnings to the problem of global climate change and more details on how those environmental changes are producing impacts to communities, ecosystems, and the economy in Louisiana.

A significant reason for coastal erosion is due to the Miss. River levee system. The work done to guard against flooding has also resulted in sediment deposition not being able to replenish the coastline. Invasive species like the nutrea have impacted vegetation that holds soil together.

March 16, 2009 press release from the US Senate Committee on Environment and Public Works provided an "[U]pdate: 59 Additional Scientists Join Senate Report ... More Than 700 International Scientists Dissent Over Man-Made Global Warming Claims" [9]

SCIENTIFIC UNDERPINNINGS

Since 1988, the Intergovernmental Panel on Climate Change (IPCC) has provided scientific information to governments at all levels for the development of climate policy. The regular reports issued by the IPCC represent contributions from thousands of scientists spanning the globe who assess the latest published works to arrive at a comprehensive summary of what is known about climate change. They report on the drivers of climate change, the impacts and future risks associated with climate change, and how adaptation and mitigation can reduce current and future exposure.

In 2018, the IPCC issued its *Special Report: Global Warming of 1.5 °C* to inform the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. This report affirmed that human activities are estimated to have contributed to 1°C of global warming above pre-industrial levels and that global warming is anticipated to reach 1.5°C above preindustrial levels between 2032 and 2050 if current rates continue. This rate of global warming, the IPCC concluded, will increase the overall "climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth." These risks further increase as global temperatures rise to 2°C above pre-industrial levels.

In August of 2021, the IPCC released a working group report on the latest scientific understandings of climate change as well as projections for future warming and its impact on the Earth's systems. Some of the report's conclusions include:

- Human-induced climate change is already affecting many weather and climate extremes in every region across the globe.
- Global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO_2 and other GHG emissions occur in the coming decades.
- Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, and heavy precipitation, agricultural and ecological droughts in some regions, and proportion of intense tropical cyclones, as well as reductions in Arctic Sea ice, snow cover and permafrost.
- With further global warming, every region is projected to increasingly experience concurrent and multiple changes in climatic impact-drivers. Changes in several climatic impact-drivers would be more widespread at 2°C compared to 1.5°C global warming and even more widespread and/or pronounced for higher warming levels.
- From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO_2 emissions, reaching at least net zero CO_2 emissions, along with strong reductions in other GHG emissions. Strong, rapid and sustained reductions in methane emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality.[11]

Scientists working across the U.S. government and the National Academy of Sciences also produce summary reports detailing the impacts of climate change on the U.S. specifically known as the National Climate Assessment. In 2018, the most recent National Climate Assessment was released with similar findings as the IPCC report, including the conclusion that "climate change creates new risks and

" '[U]nfortunately, Climate Science has become Political Science... It is tragic that some perhaps well-meaning but politically motivated scientists who should know better have whipped up a global frenzy about a phenomena which is statistically questionable at best,' Austin told the minority staff on the Environment and Public Works Committee on March 2, 2009." [9]

"[T]his result strongly suggests that increasing levels of CO2 will not lead to significant changes in earth temperature and that increases in CH4 and N2O will have very little discernable impact." [10]

exacerbates existing vulnerabilities in communities across the U.S., presenting growing challenges to human health and safety, quality of life, and the rate of economic growth."[12]

Another point made by both the IPCC and the National Climate Assessment is the unequal distribution of climate impacts. The vulnerable, those who are low income, communities of color, children, the elderly, Indigenous populations, and others who are marginalized have a lower capacity to prepare for and cope with extreme weather, climate-related events, and other changes. Vulnerable populations may also be disproportionately affected by actions taken to address the underlying causes and impacts of climate change if those inequities and circumstances are not considered explicitly.

Louisiana is particularly vulnerable to the impact of climate change. The National Climate Assessment produced four key messages for the southeastern region of the U.S., and each resonates deeply with Louisiana.

1. **Urban Infrastructure and Health Risks.** Compared to cities in other regions of the country, cities in the southeast are particularly vulnerable to climate change impacts to infrastructure and human health specifically from increasing heat, flooding, and vector-borne diseases.
2. **Increasing Flood Risks in Coastal and Low-Lying Regions.** Home to people, critical industries, cultural resources, and tourism economies, the coastal plain and low-lying regions of the southeast are extremely vulnerable to climate change impacts. Flood frequencies, extreme rainfall events, and sea level rise will affect property values and the viability of infrastructure.
3. **Natural Ecosystems will be Transformed.** Diverse natural ecosystems that provide multiple social benefits will be transformed by climate change through changing winter temperature extremes, wildfire patterns, sea levels, hurricanes, floods, droughts, and warming oceans that will redistribute species and greatly modify ecosystems. "Future generations can expect to experience and interact with natural systems that are much different than those that we see today."
4. **Economic and Health Risks for Rural Communities.** More regular extreme heat and changing seasonal climates are projected to have impacts on exposure-linked health and economic vulnerabilities in agricultural, timber, and manufacturing sectors. Reduced labor hours from extreme heat can also compound existing social stresses.

With climate risks manifesting every day and all but certain to grow in severity in the future, the need to reduce GHG emissions driving global warming is crucial. Reducing GHG emissions is a viable way to mitigate climate-related risks and increase opportunities for people and improve or protect their quality of life in the long run. As is made clear in national and international scientific reports, the evidence of human-caused climate change is overwhelming, the impacts of climate change are present today and intensifying, and the threats to physical, social, and economic well-being are on the rise.[13] In the coming sections, brief glimpses of climate change's current and future potential impacts on Louisiana will be explored through the lenses of social, health, equity, economic, and environmental outcomes.

"[J]oe Bastardi, Meteorologist: Well, life has never been better on planet Earth, and that's because we adapt to whatever warming is actually taking place lot better than if it actually gets a lot colder." [11]

HUMAN AND ENVIRONMENTAL IMPACTS TO LOUISIANA

Louisiana's human and physical geography makes it one of the earliest and hardest hit areas of the U.S. when it comes to experiencing the negative impacts of climate change. The state's hot and humid climate and location at the mouth of the Mississippi River and the edge of the Gulf of Mexico carry environmental challenges that have direct and indirect impacts on communities. While the widespread risks from climate change are alarming, this troubling fact can be a unifying force across an often fractured political and social spectrum, serving to point us all toward common action. Despite the commonality of risk experienced across Louisiana, it is also true that some communities are feeling more pain, greater disruption, and more severe impacts to their health, quality of life, and economic stability than others. This reality is observed by both the IPCC and the National Climate Assessment and manifests in Louisiana along racial, income, ethnic, and age categories. This section will provide an overview of the ways that climate change is today producing impacts to communities and the environment in Louisiana as well as how those impacts are projected to change in the future.

HEALTH IMPACTS

According to the National Climate Assessment, climate change is already producing negative health effects for Americans that will worsen as climate change progresses. In addition to the intensification of current health challenges, climate change will also bring new challenges to individual and public health. These challenges will arise as more people are exposed to hazardous conditions like heat waves, floods, droughts, vector-, food-, and water-borne diseases, as the quality and safety of water, air, and food deteriorate, and as these many conditions create additional strains on mental health and well-being.[14] Beyond the direct health effects of extreme weather events, human health can also suffer from the disruption of vital public health, healthcare, and related systems in ways that can be harmful to health long after a weather event. The following sections will look at national and Louisiana-specific ways that human health suffers because of climate change.

Heat

Globally, more than 1/3 of heat-related deaths can be attributed to the extra warming associated with climate change which, in many locations, adds up to dozens to hundreds of deaths each year[15] and in the U.S., more deaths are caused by extreme heat than any other severe weather event.[16] As the climate continues to change, the dangers of heat exposure will increase as extreme heat becomes more frequent with both higher summer temperatures overall and the onset of high temperatures earlier in the spring and lasting longer into the fall.

Even when it is not deadly, heat remains dangerous for human health especially for children, the elderly, the sick, and for people who are low income. High heat essentially overwhelms the body's capacity to cool itself which can lead to heat exhaustion and ultimately heat stroke.[17] When the heart beats faster in attempts to regulate body temperature, people with heart disease can be particularly vulnerable.[18] Dehydration, loss of labor productivity, and even decreased learning can also result from exposure to high heat.[19] Another type of heat-related threat of relevance to Louisiana is the danger of so called "wet-bulb" temperature events– when high humidity combined with high heat slows and can stop the evaporation of sweat. This combination of high heat and humidity prevents the natural ability of the human body to cool itself which can lead to organ failure and death. According to a study published in May of 2020, the Gulf South experienced multiple incidences of wet-bulb temperatures above 88°F.[20]

to attribute these deaths to climate change is dishonest; did the author know the physical condition of the people? did the author know the personal eating and drinking habits of those that died?

 heat waves, floods, droughts and disease have challenged human existence for thousands of years.

Are you saying that people in poor communities will not plant trees in order to have more shade? Projects to create more green areas in low income areas can be implemented. But the lack of green areas and trees in low income areas is not caused by climate change.

Extreme heat is already on the rise in Louisiana, particularly in urban areas that experience higher air temperatures associated with the urban heat island effect. A report by Climate Central, a research and journalism organization, published in 2020 found that cities in Louisiana are experiencing at least two more weeks of extremely hot days compared to 50 years ago. Shreveport felt 31 more days above 95°F, Baton Rouge, Lake Charles, and Monroe each saw 22 more days above 95°F, Lafayette had 20 additional days, New Orleans 15, and Alexandria had 13 additional days over 95°F compared to 1970.[21] In July of 2021, Climate Central published another study of the urban heat island effect in U.S. cities and ranked New Orleans the worst of 159 cities nationwide. This study found that temperatures in New Orleans could be as much as 9° warmer inside the city than in areas outside of developed areas. Lafayette, Louisiana also ranked 19th.[22] Looking to the future, a study by the Union of Concerned Scientists estimated that Louisianans will suffer three full months where the heat index is over 105 by the end of the century.[23]

Within a city, factors like the amount of green space and tree canopy, the amount of heat absorbing and radiating surfaces like asphalt, highways, and parking lots, as well as architectural choices and surface reflectivity can create a "heat gap" between neighborhoods that can be disproportionately experienced along racial and economic lines. National studies have documented a lack of tree canopy and a greater instance of impervious surfaces in low-income communities relative to higher income communities[24] and parts of cities that are poorer and with higher concentrations of residents of color can be 5 to 20° hotter in the summer than wealthier and whiter areas of the same city.[25] According to a 2021 study in the journal *Nature Communications*, the average person of color lives in a census tract with a higher surface urban heat island intensity than non-Hispanic whites in all but 6 of the 175 largest urbanized areas in the continental U.S. A similar pattern was found for people living in households below the poverty line relative to households more than two times the poverty line.[26]

In 2016, a study by the University of Richmond found that this heat gap was a reflection of redlining practices perpetrated throughout the 1900s. Beginning in the 1930s, the federal Home Owners' Loan Corporation created racially-biased "residential security" maps in hundreds of cities that helped fuel the practice of denying access to federally backed mortgages and credit to racial minorities. Within New Orleans, the only Louisiana city included in the University of Richmond study, a 4.6-degree heat gap between the "most desirable" neighborhoods in New Orleans and those labeled "hazardous" by HOLC maps. **is this practice still going on? if not, get over it and quit thinking like a victim**

High heat also carries environmental and economic implications for Louisiana. Seasonal changes to temperature caused by climate change are disrupting the natural system and the ability for people to make a living from those systems. By the end of the century, it is estimated that health concerns from increased heat will result in a reduction of labor hours by more five hundred million in the Southeast for high-risk industries, such as agriculture, forestry, fishing, mining, manufacturing, transportation, and utilities.[27]

There has always been seasonal changes : some winters are colder than others, some summers are hotter than others, etc ...

Air Quality

According to the National Climate Assessment "more than 100 million people in the U.S. live in communities where air pollution exceeds health-based air quality standards" and unless specific action to improve air quality is taken, "climate change will worsen existing air pollution levels."[28] Common air pollutants that pose a serious threat to respiratory and cardiovascular health and are most linked to changes brought on by climate change include ground level ozone and particulate matter. The adverse reactions to these air pollutants include premature death, respiratory hospital

the US has some of the most strict environmental laws in the world; because of the laws, air quality has improved greatly and the amount of air pollution has declined

admissions, aggravated asthma, lost days of school, and reduced productivity among outdoor workers.[29] Higher temperatures also promote the increased formation of ozone and higher concentrations of particulate matter which carry their own deleterious health effects like triggering asthma attacks and increased risk from premature death from heart or lung disease.[30] As the climate continues to change, heat-related health risks will intensify and progress toward clean air will become even more difficult.[31]

Even with population and economic growth, ozone air quality in the U.S. has improved dramatically due to control efforts for specific emissions over the past few decades dropping by 22% between 1990 and 2016. Louisiana has also shared in this positive trend but not to the degree of the rest of the country. According to a ProPublica, Times Picayune and The Advocate analysis, toxic air emissions in Louisiana's 50 most polluted census blocks improved by an estimated 75% from 1988 to 2017 compared to the median 94% improvement rate for the nation's most polluted block groups.[32] The analysis also identified that the state's share of the most heavily polluted census blocks nationwide increased from 3% to 7%.[33] The National Climate Assessment warns that, "the prevailing evidence strongly suggests" that climate change will partially counteract the progress made in reducing ozone precursors.[34]

The National Climate Assessment clearly documents that these impacts to air quality will harm certain groups more than others: the elderly, children, and those with chronic illnesses are particularly vulnerable to ozone and particulate matter-related effects.[35] In Louisiana, where 200 facilities along the Mississippi River between Baton Rouge and New Orleans report air emissions to the Environmental Protection Agency, a historical and racial element underscores the imbalanced distribution of these facilities' air quality impacts. During Reconstruction, groups of former slaves purchased small slivers of former plantations along the river, while the majority of the large plantations were retained by white land owners. This practice resulted in "a pattern along the river of large, contiguous blocks of open land under a single ownership...separated by communities of freed blacks and poorer whites."[36,37] Many of the residents in these communities today are descendants of the slaves who worked the adjacent land, which has seen significant industrial development due in part to the size of the tracts and their access to the Mississippi River's trade corridor. These communities of color are disproportionately affected by the pollution emanating from oil refineries, plastics plants, and chemical facilities along this corridor, formerly dubbed as "Plantation Country" and now called "Cancer Alley."

some people may call it that but it is not correct; lifestyle is the largest contributing factor; the state epidemiologist office has already demonstrated this is false

Disease

Mosquitos, ticks, and other disease-carrying animals, or "vectors," can be expected to have altered ranges, seasonal distributions, or abundance as climate change continues to impact weather patterns, ecosystems, and human land use and demographics. The southeastern region of the U.S. already has the most favorable conditions for the *Aedes aegypti* mosquito which can carry diseases such as dengue fever and the Zika virus.[38]

Water is also an extremely powerful disease vector being affected by climate change. As water temperatures increase, it can change the seasonality and range of pathogens and harmful algae. As rainfall events become more frequent and intense, runoff can create negative impacts for recreational bodies of water and drinking water sources and cause additional problems for inadequate water and sewer infrastructure that can in turn lead to bacterial and viral contamination of water that can be harmful to public health.

government has the responsibility to maintain the infrastructure; the problem is it costs a lot of money and not easy to see where the money was spent

climate change is quite the boogy-man
not having a job is a huge stress
constantly telling people climate change is going to end the world causes stress for the people who believe it

Mental Health

A number of mental health impacts can be attributed to the stress and distresses caused by climate change-related circumstances. These mental health effects interact with other health, social, and environmental stressors in ways that can compound and negatively affect an individual's mental well-being. As with so many other from climate change, some groups are more likely than others to be at risk to the negative mental health effects including those with preexisting mental illness, first responders, the elderly, pregnant women, the economically disadvantaged, and Indigenous people.[39] Experiencing a flood, even flood risk has been documented to produce higher levels of depression and anxiety that can persist for years after the event.[40] Disasters and droughts are also linked to increased use of alcohol and tobacco, higher temperatures can lead to an increase in aggressive behaviors.

IMPACTS TO INDIGENOUS PEOPLES

who are the indigenous peoples?
how can climate change make them loose their traditional foods and practices?

In addition to the ways that everyone is affected by climate change, Indigenous peoples are also uniquely and disproportionately impacted particularly because of impacts to ecosystems, species, and lands that are culturally, economically, and historically significant; and by the compounding health issues related to the loss of traditional foods, practices, or the mental stress of adaptation or relocation.[41] The National Climate Assessment contains an entire chapter dedicated to the challenges posed by an ever-changing climate on Indigenous peoples nationwide and the contributions Indigenous peoples have made to an understanding of local and national climate change risks in earlier assessments. The efforts by Indigenous peoples to adapt to climate-change-induced changes can also be curtailed by limitations to self-determination that arise differently for federally or state recognized tribes and non-federally and non-state recognized tribes.[42]

In matters of health, Indigenous peoples can be even more vulnerable to the physical challenges brought on by climate change because of "social determinants of health" related to historic and ongoing social, political, and economic factors with tangible impacts on human health. While health outcomes vary regionally, Indigenous peoples are disproportionately more likely to suffer from asthma, cardiovascular disease, Alzheimer's disease or dementia, diabetes, and obesity, disparities that can be exacerbated by climate-induced changes to pollen, air quality, and exposure to extreme weather events.[43]

In coastal Louisiana, hurricanes, saltwater intrusion, erosion, subsidence, sea level rise, and manmade challenges like the creation of canals splitting the wetlands and the *Deepwater Horizon* oil spill have all undermined the ability of Indigenous people to carry on traditional activities and threaten their survival. In 2020, four non-federally recognized tribes from coastal Louisiana joined with another tribe from Alaska in a protest to the United Nations arguing that sea level rise and coastal erosion had overcome burial sites and that continued land loss threatens food sources of food and that federal and state government had done too little to address it.[44] Indigenous peoples in coastal Louisiana are also working toward or actively pursuing relocating as an adaptation strategy to accelerating environmental risk.[45]

ENVIRONMENTAL IMPACTS

Louisiana's coastal plain has been slowly sinking for nearly 90 years with nearly 2,000 square miles of land lost since the 1930s. As climate change-driven global warming increases sea levels, coastal Louisiana's current challenges to staying above water will also increase. According to the National Climate Assessment, relative to the year 2000, global mean sea level rise is very likely to increase by 1 to 4.3 feet by 2100 with the western Gulf of Mexico likely to experience relative sea level rise that is greater than the global average.[46] As sea levels rise, some coastal ecosystems will be submerged and converted to open water, saltwater penetration will move further inland displacing inland ecosystems, and hurricane impacts will stretch further on shore causing additional ecological changes that will affect inland ecosystems and drinking water supplies.[47]

Already, Louisiana's coastal land loss crisis has exposed nearly 2 million people to the dangers of storm surge-based flooding with some communities threatened to be completely submerged just three or four decades into the future. Projections in the 2017 Coastal Master Plan indicate that without significant investment in coastal restoration and protection projects southern Louisiana could lose between 2,254 and 4,123 square miles of additional land over the next fifty years. Even with an investment of $50 billion in the implementation of every project in the master plan, 1,454-2,965 square miles of coastline are still likely to be submerged due to continued subsidence and sea level rise.[48]

for decades the state did not address the erosion and so the problem became worse - how most go in the state

This loss of land translates directly into greater exposure to hurricane risk, an exposure that will also increase as hurricane characteristics change in response to global warming. This level of risk poses an existential threat to individuals, families, neighborhoods, and entire towns and economies; to vibrant cultural traditions, hunting and fishing grounds, and long held, sacred lands all of which are endangered as land turns to open water. By 2014, the National Oceanic and Atmospheric Administration (NOAA) had already removed 40 place names from nautical maps of Louisiana including bays, bayous, and small islands because they had become indistinguishable from open water.[49] The National Climate Assessment estimates that one meter of sea level rise will erase over 13,000 recorded historic and prehistoric archaeological sites and more than 1,000 locations that are currently eligible for inclusion on the National Register of Historic Places across the southeast.[50]

Climate change is also having an impact on coastal residents' ability to get out of harm's way when hurricanes approach. The rapid intensification of hurricanes, as seen most recently in Hurricanes Harvey, Michael, Laura, and Delta, has been partially attributed to climate change.[51] Hurricane Delta, for example went from a Tropical Depression to a Category 4 storm in less than two days.[52] Fast moving changes to a hurricane's strength, especially just before landfall can pose challenges for forecasters and can make effective evacuations, which are already challenging for some senior citizens, people with disabilities, workers who cannot take time off, and those physically or economically unable to leave their homes, impossible. Indirect challenges to populations from storm surge and coastal flooding events can also be disastrous as a result of impacts to transportation networks and healthcare facilities.

Other types of environmental change are also affecting fishing. According to the National Climate Assessment, fishing and oyster harvesting activities along the coast will face "substantial challenges."

many people had a hard time evacuating because of the interstate and highways being backed up with traffic; that is not climate change - that is infrastructure

These challenges like increased ocean temperature, acidification, and sea level rise translate to a decline in oyster harvests by between 20 and 46%.[53]

Across Louisiana, people and ecosystems must adjust to the extremes of too much or too little water. Flooding—be it from storm surge, persistent high tides, increasingly heavy downpours, or from rivers swollen from changes to up-basin precipitation patterns is affecting populations throughout the state. Even floods that do not force people from their homes disrupt lives, add financial and emotional stress to individuals and families, and strain resources that could otherwise be invested elsewhere. Shortly after the 2016 floods in Louisiana, which forced the evacuation of thirty thousand people and flooded at least sixty thousand homes across twelve parishes, NOAA and collaborators at the World Weather Attribution (WWA) conducted a rapid assessment of the role of climate change on the event. Researchers found that heat-trapping GHG increased the likelihood of this type of event by at least 40% as compared to events that occurred back in 1900.[54]

Temperature and rainfall changes create challenges for crops and livestock as well. While some crops may become newly viable alternatives under changing conditions, the overall impact will be negative. Decreasing productivity in cotton, corn, soybeans, and rice is expected with higher temperatures as are increased stresses on livestock.[55] Changes in precipitation patterns can be expected to impact forestry.

when people build along the coastline - there wil bel economic impacts from storms

over time the cost to replace the dwellings increases - that's just how it works

ECONOMIC IMPACTS TO LOUISIANA

The impacts of climate change are exceedingly costly. These costs strain individual households, cities, states, and countries and can even threaten the health of the entire financial system.[56] According to NOAA's National Centers for Environmental Information, in 2020 "[t]here were 22 separate billion-dollar weather or climate related disaster events, shattering the previous annual record of 16 events, which occurred in 2017 and 2011."[57] It was also the sixth year in a row with 10 or more billion-dollar natural disasters.[58] The costliest event in 2020 occurred in Louisiana when Hurricane Laura caused $19 billion in damage.[59] According to the National Climate Assessment, without sustained and substantial mitigation and adaptation efforts, "climate change is expected to cause growing losses to American infrastructure and property and impede the rate of economic growth over this century." In combination with other loses caused from impacts to human health and the environment, annual economic losses have the potential to reach hundreds of billions of dollars by the end of the century, which is more than the gross domestic product of many states.[60]

so much fear porn dripping from this paragraph

Estimates of future risk to Louisiana include two prominent examples from the coast. Estimates of economic risk to Louisiana from the 2017 Coastal Master Plan suggest that coast-wide expected annual damages from storms with a 1% chance of occurring in a year at the end of 50 years could reach $12.1 billion dollars under the medium scenario.[61] And an economic study by LSU estimated that a storm with a similar track to Katrina could cause $138 billion in damages to the New Orleans region in a future without master plan investments even with the existing $14.5 billion Hurricane Storm Damage Risk Reduction System.

Climate change also increases the frequency and likelihood of chronic conditions that can also pose high economic costs for states like Louisiana. Rainfall events that do not rise to the level of a federal let the free market based economy create well paying jobs so that residents can take care of themselves and pay taxes that go toward infrastructure repairs; stop taxing residents at such high rates so they will have more of the money they earned to save for hard times

how can you say climate change is contributing to a weakened infrastructure? Maintaining the infrastructure is a responsibility of government. That is what our taxes go toward.

disaster, nuisance flooding, and saltwater intrusion all bring financial costs to homeowners, municipalities, and serve to weaken infrastructure that is costly to repair, replace, or redesign. Damages to the economy also occur as transportation networks and commodities flows that are significant for the state and national economy are interrupted by major and minor climate-related events. There is also considerable unknown risk in the built environment because existing federal flood insurance rate maps do not account for the future flood risk anticipated as a result of climate change or new development that may also reduce a floodplain's ability to manage stormwater. The nonprofit First Street Foundation created a tool to estimate and communicate a property's flood risk that includes risk from riverine, rainfall, tidal and storm surge sources as well as how that risk can change over time due to environmental factors affected by climate change. According to their calculations, 14.6 million properties across the country are at substantial risk including 5.9 million who are currently not identified as being within a FEMA special flood hazard area. Louisiana, already one of the most at-risk states, will see an increase in flood risk of 69.7% by 2050.[62]

Other types of future economic losses are possible as markets and investors make decisions about community capacity to address climate risk and about the ability of existing industrial facilities to minimize their carbon footprint. Today, investors, large financial institutions, and bond ratings agencies are beginning to consider risks posed by climate change in their decisions. These determinations could have real impacts on a community's ability to finance infrastructure or a business's cost of raising capital. Additionally, as global demand gradually shifts away from carbon-based fuels, some plants will close either because of reduced demand or because the cost of continued operations is too high to remain profitable. The most high-profile example of this was the closure of the Shell Convent refinery at the end of 2020. The 1,100 employee operation that formerly manufactured jet fuel, gasoline, and diesel, and was the largest employer in St. James Parish,[63] was shuttered as "part of the company's global strategy to invest in a core set of uniquely integrated manufacturing sites that are strategically positioned for the transition to a low-carbon future."[64]

Opportunities Posed by Climate Action

the paragraph below is false, misleading, and not based on verifiable facts

The dangers of inaction in the face of climate change in Louisiana are staggering. They threaten tremendous harm to our people, natural environment, and economy. The silver lining is that the state is joining a growing chorus of countries, states, and private corporations that are endeavoring to do their part to lower the GHG emissions that are driving these catastrophic changes to the earth's atmosphere. While dangerous consequences from climate change are already manifesting here and around the world, these risks can be mitigated and adaptation efforts can be more successful if the global community is successful in keeping global warming below 1.5°, or even 2°C, by the end of this century.[65] Every actor at every level has a role to play in achieving this global goal, including Louisiana.

To achieve the level of GHG mitigation needed to avert the worst impacts of climate change, an unprecedented investment of time, resources, and labor will be required across every sector of the economy. The International Energy Agency estimated that annual investments in clean energy alone would need to reach $4 trillion by 2030 to meet next zero emissions targets.[66] These investments to mitigate the effects of climate change will help avoid some of the negative impacts of climate change

what a scheme to steal more money from tax payers

pie-in-the -sky fantasy

detailed in the previous section of this report and also create a once-in-a-generation opportunity to reshape our state: to preserve and care for our abundant natural resources, to create thousands of good-paying jobs in an inclusive clean energy economy, to breathe new life into communities by sharing more equitably the opportunities to create wealth while adapting to a low carbon economy, and to lead by example for other states and communities.

This section will identify a few key areas of opportunity for Louisiana as it begins to take action to reduce the GHG emissions fueling global climate change.

the majority of the solar panels are made in China; and we know how great their environmental record is right?

ECONOMIC OPPORTUNITIES

fossil fuels are still needed to make and transport the green energy equipment

In recent decades, Louisiana has found economic benefits from aggressively taking action against the coastal crisis.[67] Just as investment in the state's coastal program has created expertise and experience for Louisiana businesses to export around the world, state investment and leadership in the work of GHG emissions mitigation and in a low-carbon economy could also provide significant economic opportunities to the people of this state–creating and mobilizing new technologies in clean energy, batteries, hydrogen electrolysis, carbon capture, and direct air capture will create millions of new jobs globally.[68] the cost has been subsidized by tax payers funds

land cannot be used for anything else when there is a solar farm

One area of considerable job growth and economic opportunity is in renewable energy. A dramatic drop in costs for solar energy and onshore wind have helped lead investments in renewable power across the country. Interest in solar development is growing inside the state[69] and Louisiana is working with the Bureau of Ocean Energy Management (BOEM) to complete the necessary steps to hold a lease sale in the Gulf of Mexico for offshore wind power production. According to the National Renewable Energy Laboratory, Louisiana ranks fourth in the nation for offshore wind technical potential[70] and a single offshore wind project could create 4,470 construction jobs and 150 full time operations jobs.[71] In addition to offshore wind deployment, Louisiana is well positioned to be a manufacturing and servicing hub for offshore wind being proposed and implemented across the U.S. In fact, Louisiana companies were integral to the design, fabrication, and construction of the nation's first commercial offshore wind farm in Block Island, Rhode Island.[72]

Reducing net GHG emission may also be an impetus for greater investment in the state's coastal master plan. By constructing projects to restore coastal ecosystems, we can adapt to the impacts of climate change and sequester CO_2. Through a Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States (RESTORE) Act planning grant, CPRA and the TWI will examine in more detail the carbon capture potential of coastal ecosystem restoration known as "blue carbon." Information will be developed about current coastal carbon storage conditions, how coastal restoration could influence those conditions, and the modeling tools and markets available to assess and support coastal carbon capture.

Finally, the work of the CITF is presenting the state with an opportunity to address the challenges of a changing economy head on. Production of oil and gas has declined in Louisiana over the past several years as have the number of jobs provide by that traditionally strong industry in the state economy. Global markets and policy decisions being made far outside of Louisiana may have continued impacts

oil and gas production has gone down in the state because of government policy and thanks to Gov. Edwards going after the industry; also thanks to Biden policy

flowery language not based in reality
will end up hurting state residents

on segments of the state economy that are carbon intensive. Navigating the need and capacity for existing industries to adapt and innovate to meet the needs of a low carbon economy will be critically important for the state. This too is an opportunity to revisit and address long-standing questions about who benefits from economic growth in Louisiana and who must carry the burden of transitions. It is also an opportunity to recommit to the importance of human and environmental health for any thriving economy. As the CITF does its work, it must be vigilant in its pursuit of a more inclusive, thriving, adaptable economy that provides benefits for all Louisianans.

HEALTH BENEFITS

where are lifestyle choices accounted for?
government policy has contributed in large part to people's mental health decline, stress and anxiety increase

The public health impacts associated with GHG emissions are tremendously costly for Louisiana. In addition to the direct impacts of diseases, climate change and its impacts are detrimental to mental health. The stress, anxiety, and trauma of continued and worsening cycles of hurricanes, flooding, extreme heat, sea level rise, and coastal degradation are heavy burdens to bear. But addressing emissions through policies and programs to reduce the risks brought on by climate change can have short and long-term benefits for human health.[73]

use of faulty assumptions to burp out these unsubstantiated fantasies

Keeping GHG emissions in line with lower emissions scenarios by the end of the century can save thousands of lives and hundreds of billions of dollars in costs associated with health care. These positive benefits accumulate from reductions in heat intensity, infectious disease, and water.[74] Many of the processes that produce GHG emissions also release hundreds of other air pollutants that can cause serious illness and premature death creating. Because of this relationship, cutting GHG emissions to reduce the impacts of climate change can also mitigation other harmful impacts on human health.[75] The adverse impacts caused by these pollutants are particularly severe for elderly, children, and those with chronic illnesses and among Black and Indigenous communities. Addressing GHG emissions can also provide an opportunity to mitigate against longer pollen seasons, increased pollen production by plants, and altered degrees of allergic reaction.[76]

ADVANCING CLIMATE EQUITY

Why are they the least responsible? Do they drive vehicles? Do they use electricity? Do they BBQ? Do they mow grass?

In Louisiana and around the world, climate change and GHG emissions disproportionately impact low-income, Black, Indigenous, and coastal communities. These communities are the least responsible for emissions, but bear the highest costs in health, environmental degradation, and even migration. Actions and strategies to reduce GHG emissions must be informed, designed, and implemented to prioritize and offer tangible benefits to these communities and also allow them to design, participate, and lead the envisioning and work of repairing our environment and building an equitable and sustainable clean energy future.

Without intentional policy design, Louisiana's actions to build a new, low-carbon economy will reinforce and replicate the stratification and divisions that are so fundamental to the old economy. From disasters like Hurricanes Katrina and Laura that laid bare the intertwined environmental hazards compounded by systems of historic and current racism and segregation, generational poverty, and discriminatory inequitable disaster recovery strategies, to the everyday struggles of residents in the River Parishes, to farmers and agricultural workers along our state's great rivers, and other fence-line communities, to the loss of land and community that has impacted Indigenous and long-standing communities in the coastal zone – there is no shortage of examples of the connections between climate impacts, environmental injustice, disaster, class and race.

why is Hurricane Rita not brought up? is it because the people impacted didn't wait for the government to start picking up the pieces but did it themselves?

people have to be educated and stop depending on the government; vast majority of the time the government will not help fast enough if they help at all; the role of government is not to take care of every need or want of residents

perpetuating government dependence leads to community and culture decline; government policies that hinder the family unit cause decline in the ability for people to move up and better themselves; it breeds stagnation

> In spite of the challenges, low-income, Black, and Indigenous communities are crucial to Louisiana's climate future. These communities hold tremendous knowledge of the state's lands, waters, wildlife, and environment and are leaders in the implementation of GHG reductions. The CITF is developing actions and strategies with climate equity at the forefront. Commitments to equity are reflected in the composition of the CITF and the supporting committees and in the conversations taking place in their meetings. In addition, an equity advisory group was formed to specifically consider the potential outcomes of policy proposals for advancing or negating progress toward a more equitable society. A definition of climate equity was created and criteria were developed to help measure each proposed policy's potential impact on the three equity fundamental objectives.
>
> By intentionally moving considerations of climate equity to the forefront, the CITF aims to ensure that the costs of mitigation or adaptation actions do not to fall unequally on the already disadvantaged and that this opportunity to use climate mitigation and adaptation to address long standing historical inequities is fully realized. This work begins with the CITF, but will continue for years to come.

*the Constitution of the United States does not mention the word equitable but does equal
*there is a difference in equitable and equal
*everyone should have the equal opportunity to grow and thrive - which is in the Constitution
*the Constitution does not say everyone will have the same outcome in life, same living conditions, same pay for labor - this is what the equality movement wants regardless of the work and effort put forth by the individual
*it is not virtuous, noble, or righteous to steal income from the people that have earned the money for their labor and then give it to those who have made the choice not to work to provide for themselves

"[E]lectric vehicle batteries contain cobalt, manganese, and nickel, which do not degrade on their own. Manganese, for example, pollutes the air, water, and soil, and more than 500 micrograms per cubic meter in the air can cause manganese poisoning.... Another major source of pollution in lithium-ion batteries is the electrolyte. The lithium hexafluorophosphate in the electrolyte is hydrolyzed in the air to produce phosphorus pentafluoride, hydrogen fluoride, and other harmful substances, which is a major threat to soil and water resources. Phosphorus pentafluoride is a strong irritant to human skin, eyes, and mucous membranes, and it is also a very reactive compound that hydrolyzes in humid air to produce toxic and corrosive white fumes of hydrogen fluoride." [12]

"[M]anufacturing solar panels often requires the use of several noxious chemicals. ... Very pure silicon must be used because the crystal structure it forms is most conductive to letting electrons flow. Production commonly includes nitrogen trifluoride and sulfur hexafluoride, some of the most harmful greenhouse gases around. Normally silicon is recyclable, but to improve the solar cells' electrical efficiency, metals such as cadium and lead are added." [13]

"[W]ind and solar power have a real-world capacity factor of approximately 30%, meaning vagaries in sunshine and wind speeds prevent these power sources from producing more than about 30% of their power capacity. For example, when a press release for a new solar project claims the project can provide 'enough electricity to power a town of X,XXX people,' divide that number by 3 to determine the power that will actually be produced. Also, because the power output varies and cannot be pre-planned with precision, wind and solar power rated at 10 units of power capacity is less valuable than conventional power rated at 3 units of power capacity. Moreover, enough conventional power must be built and ready to produce power for times when darkness, cloud cover, or insufficient winds keep wind and solar power to near zero production. ... Rare earth mining is an environmentally devastating process. Also, solar power facilities and - especially - wind power facilities require the development of large swaths of land. Hundreds of square miles of wind turbines are required to generate the same power as a single conventional power plant, and the more optimal locations for wind turbines tend to be ecologically sensitive coastal shorelines, mountaintop ridges, and open plains. Transmitting wind power from these locations to urban centers requires the construction of new power lines, disrupting still more pristine lands. And wind turbines themselves already kill more than a million birds and bats each year in the United States, including many endangered and protected species." [14]

The National Renewable Energy Laboratory's Global Horizontal Solar Irradiance map shows Louisiana >= 5.75 kWh/m^2/day for the months of April through August/September. So what happens during the rest of the months when solar irradiance is too low?

Problem Context: Emissions in Louisiana

This section will be updated for the final report based on information from the final 2020 GHG Inventory.

Climate Portfolio (strategies and actions)

This section will be updated for the final report.

"[W]hen officials with the National Fish and Wildlife Forensics Laboratory saw one of these endangered birds last year (Yuma clapper rail), it was not laughing matter. It was dead. It was one of the 233 birds recovered from the sites of 3 California desert solar power plants as part of a federal investigation. The laboratory's wildlife equivalents of CSI stars concluded that many of the birds had been fatally singed, broken, or otherwise fatally crippled by the facilities. ... Much of the problem appears to lie in the 'lake effect,'in which birds and their insect prey can mistake a reflective solar facility for a water body, or spot water ponds at the site, then hone in on it. Because of the power of the lake effect, the federal investigators described such solar farms as 'mega-traps' in their report. ... The other solar farms analyzed by the investigators were of the newfangled trough and solar power tower varieties. They included the Genesis Solar Energy Project, also in Riverside County, which uses a trough system in which parabolic mirrors focus sunrays into a tube where water boils into steam that spins a turbine to produce electricity. The mirrors pose similar threats to birds as solar panels. The third facility studied was the Ivanpah Solar Electric Generating System in Bernardino County, Calif., where birds can be burned as they pass through concentrated sunrays that are reflected off thousands of mirrors toward a solar power tower, where water is boiled to produce electricity-generating steam." [15]

"[M]igratory bat populations, including the hoary bat, could go extinct, say scientists, if the expansion of wind energy in North America continues. ... Wind turbines on California's Altamont Pass killed an estimated 4,700 bird kills annually including Golden Eagles. 'Some lose their wings,' says the Audubon Society, 'others are decapitated, and still others are cut in half." ... 'To prevent extinctions in the future,' argued novelist and birder, Jonathan Franzen, in *The New Yorker*, 'it's not enough to curb our carbon emissions. *We also have to keep a whole lot of wild birds alive right now.*' ... Franzen's essay resonated. One month after it was published in 2015, the American Bird Conservancy told CBS News, bluntly, 'Wind turbines are among the fastest-growing threats to our nation's birds.'" [16]

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October 6, 2021

Governor John Bel Edwards
Office of the Governor
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climate@la.gov

Re: Comments on the Climate Initiatives Task Force (CITF) Draft Partial Final Report and Draft Action Portfolio

Chairman and members of the Climate Initiatives Task Force,

As our region faces the ongoing and severe effects of climate change, it is important that we all work together to find answers to this unfolding crisis. Our Restore the Mississippi River Delta campaign offers science-based solutions to rebuilding Louisiana's coast through a comprehensive approach to restoration for the protection of people, wildlife and jobs. We are represented by conservation, policy, science and outreach experts from Environmental Defense Fund, National Audubon Society, the National Wildlife Federation, Coalition to Restore Coastal Louisiana and Pontchartrain Conservancy, and several other local partnering organizations. We appreciate this opportunity to comment on the Climate Initiatives Task Force's (CITF) recently released Draft Partial Final Report and Draft Action Portfolio (Louisiana's Climate Action Plan).

Louisiana has been at the forefront of climate change for decades, though previous solutions proposed to combat rising seas and increasing storm events and related flooding were primarily focused on adaptation measures in the form of coastal restoration and protection projects. As warnings regarding greenhouse gas (GHG) emissions continue to emerge, we are excited to see Louisiana stepping up to the challenge of climate mitigation in its first-ever Climate Action Plan.

Initial observations on the Partial Final Report:

- The report clearly and succinctly lays out the structure through which the CITF operates and the process through which decisions are made.
- We agree with the methods described and appreciate the breadth of expertise found in the various working groups and the task force itself.
- The "Need for Action" section of the Partial Final Report paints a grim but realistic picture of the problem for Louisiana's environment and communities into the future.
- Neither the Partial Final Report nor the Actions Portfolio contain a table of contents or any listing of the strategies and actions and the associated section titles: this would be very helpful for future reviews.

We applaud the state's wholesale adoption of the science from both the International Panel on Climate Change (IPCC) and the National Climate Assessment that recognize and call out Louisiana's considerable vulnerability to climate change. Attempting to address these challenges cannot truly be meaningful unless the reality of the situation is faced and embraced.

The Climate Strategies and Actions piece is the primary focus of this preliminary review. Initially, we have some overarching comments in support of a variety of themes throughout the draft:

- We support investments in identification of research needs and evaluation of technologies and monitoring to improve the understanding of carbon sequestration potential (Example actions: 8.2, 10.2, 17.2, 18.5, 19.3, 29.1).
- We support conserving and restoring Louisiana's floodplains and wetlands and leveraging their carbon sequestration potential to help implement the Coastal Master Plan (Example actions: 16.1, 17.1).
- We are pleased to see the recognition that underserved, rural, and vulnerable communities face disproportionate impacts and challenges and need to be involved in the decision-making and solutions (Example action 5.6, 8.5, 11.2, 13.2, 20.3, 27).
- We support planning for the long-term at both the state and federal levels to build and keep momentum for climate action and establish Louisiana as a leader (Example actions: 7.4, 22, 23, 24, 28, 29.3).

In order to complete the full Climate Action Plan, manage the Climate Initiatives Task Force, and ensure implementation of the strategies contained in the plan, the Governor's Office of Climate Resilience needs to be formally created within the Office of the Governor. The office must be given adequate resources and staffing capacity to conduct the business of the office now and in future administrations. We also agree with the suggestion in the plan that the Department of Natural Resources needs some additional staffing capacity and resources to oversee and monitor new clean energy technologies and infrastructure. We look forward to seeing more specifics on the role of an Office of State Planning and an Office of Economic Resilience for the purposes noted in the plan. Management of climate initiatives must be supported by a solid governance framework in order to be successful.

At present, funding from settlements from the 2010 BP oil spill comprise most of the state's funding for the Coastal Protection and Restoration Authority's (CPRA) Coastal Master Plan. With those funds winding down by 2032, the CPRA Master Plan will need abundant monetary support to achieve its ultimate objectives. If industrial decarbonization lends to initiation of a regional cap and trade program, a portion of proceeds at least large enough to stabilize funding for restoration and resilience projects found in the Coastal Master Plan should be made a priority.

Near term work should be identified as such in the next round of this plan. There are several items discussed within the plan that could be implemented easily and with no real cost to the state. Those should be rolled out as soon as possible. Additionally, there are some other opportunities that require funding but

that are available now that would allow the state to begin to meet its GHG reduction goals (e.g. DNR Oilfield Site Restoration Program).

We recognize that this first round of planning will be modified within the coming weeks and months, and we plan to follow the work closely and offer more specific comments on the Mid-November draft report and the final report in February of 2022 for consideration. With this initiative in place, we believe the opportunity exists for Louisiana to not only press for the continued implementation of Coastal Master Plan projects, but to also seek new opportunities to bolster the program's success through the Climate Initiatives Task Force and the administration's leadership on the national stage, including identification of other sources of funding and coalition-building opportunities that will serve to meet Louisiana's longer-term goals for success. We stand ready to assist with this effort in any way that may be useful to the state.

Sincerely,

Brian Moore,
Vice President, Gulf of Mexico Policy
National Audubon Society

Kim Reyher,
Executive Director
Coalition to Restore Coastal Louisiana

Cathleen Berthelot,
Senior Manager, Coastal Resilience
Environmental Defense Fund

Kristi Trail,
Executive Director
Pontchartrain Conservancy

David Muth
Mississippi River Delta and Gulf Restoration
National Wildlife Federation

Steve Cochran,
Campaign Director,
Restore the MRD


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SIERRA CLUB

Delta (Louisiana) Chapter

Comments from Conservation Committee of the Delta (Louisiana) Chapter of Sierra Club on Draft Portfolio and Revised Draft Partial Final Report of Louisiana Climate Initiatives Task Force

October 8, 2021

To the Louisiana Climate Initiatives Task Force:

The Conservation Committee Delta Chapter of the Sierra Club submits the following comments on the Task Force Draft Portfolio and Revised Draft Partial Final Report.

The priorities of the Delta Chapter include raising awareness about the effects of human-caused climate change, educating the public about the opportunities for clean energy, and protecting ecosystems in Louisiana such as scenic rivers and remaining native forests.

We have a number of comments and concerns about the Chapter on "Natural and Working Lands and Wetlands".

1) The importance of relying on science-based policies and proposals should be paramount. It is critically important that all proposed actions, policies, and projects are based in science and the most recent data.

2) Recent science on the role of standing forests in relation to climate demonstrates the important role of older, mature forests in storing carbon. This includes the vitally important components of carbon storage in root systems and the soil. Older trees and forests, along with currently standing mature forests, play an important role in efforts at carbon sequestration, and a number of recent papers point out their heightened functions for carbon storage.

One such paper, by W.A. Moomlaw, et.al (2019) made the following points:

> The old dogma about old forests being unproductive and “decadent” has also been overturned by recent research. Extensive measurements in old-growth forests have revealed that these ecosystems continue to take up more CO2 than they emit, with no apparent age plateau, an issue reviewed by Keeton (2018) in a recent edited book on old-growth forests. Old forests are anything but wastelands; science has shown us that they are diverse, thriving ecosystems.

Moomaw et al. (2019) cite studies showing that the largest 1% of trees account for 30-50% of the biomass in forests, depending on the location, and trees over one meter in diameter (about 39”) take up the carbon equivalent of an entire 10-20 cm (4-8”) diameter tree in one year.

There are remnants of old growth cypress forests throughout Louisiana, including in the Atchafalaya Basin, Pearl River Basin, and along many other rivers throughout the state. It is crucial, therefore, for the Task Force to recognize the importance of the remaining old-growth and mature standing forests in Louisiana for the climate issue, along with their importance for wildlife habitat, scenic beauty, flood control, and other values. Remnant old growth and mature Louisiana forests should be inventoried, mapped, and documented in all official La Dept of Agriculture and Forestry atlases and reports on forest cover in the state, including the US Forest Service, "Louisiana 2010, Forest Inventory Analysis and Factsheet”.

3) For these reasons, we are concerned about several assertions made in Section/Action 18.8 of the Chapter on "Natural and Working Lands and Wetlands":

> "Educating landowners on the management of forests and encouraging use of forest products through market driven incentives would increase the amount of carbon capture and stored by the forest.
>
> "This action proposes the state encourage the use of Louisiana forest products - in the form of lumber, plywood, paper, wood pellets, and biomass - in state capital projects and other construction projects.
>
> "Markets for low-value forest products and residuals, such as residuals generated during milling and production and woody fiber for biofuels and bioenergy, further incentivize forest management and forest products manufacturing, resulting in more carbon sequestration and storage,.

These statements represent assertions by industry interests, but present no science to support their claims. The promotion of wood biofuels such as pellets as a climate mitigation policy has been shown to be highly flawed, and largely results from policies adopted by the European Union that source forests for fuel from other countries and regions such as the U.S. Southeast to supposedly offset E.U. emissions.

4) The combustion of wood as fuel may be the lowest of the "low-value" production of forest products, and its expansion raises predictable questions and concerns about its sustainability and the environmental impacts on source areas. It also continues a history of promoting such low-value forest products in Louisiana, from pulp to wood chips to cypress mulch. Each such approach raises the same issues of scale related to sustainability, where expanded production of what were originally limited residual materials from value-added wood production becomes a market in itself that backers seek to grow and increase.

Adequately assessing the impacts of these activities requires including the full industrial cycle involved. Wood production facilities in Louisiana have pollution impacts on air and water quality, as reflected in their permits under Louisiana Department of Environmental Quality rules. Those industrial impacts also include GHG emissions.

5) These issues point up as well an inadequate process of assessing the environmental impacts of such industries in Louisiana, in particular regarding the state's forests. A search of the website of the Louisiana Department of Agriculture and Forestry shows that the last state Forest Inventory was apparently completed in 1991. A 2002 report from the U.S. Forest Service on "Louisiana's Timber Industry" is also referenced. A web search shows an additional USFS 2010 "Forest Inventory and Fact Sheet" for the state. All of this information is outdated at this point.

The previous Louisiana Greenhouse Gas Inventory (2011) listed all "forestlands" in the state as carbon sinks, with no in-depth assessment of on the ground conditions or actual carbon data. The new GHG Inventory cannot repeat this error.

7) An additional factor that should be included in assessing the carbon capture potential of Louisiana's forests is the impact of hurricanes on forests and timberland. Hurricanes Laura and Ida leveled extensive areas of pine plantations and successional forests in the areas it impacted, as did previous storms like Katrina and Andrew. Natural regrowth and replanting efforts should be assessed with up to date ground-truthing work to assess their carbon-related impacts.

8) In conclusion, while we support broadly the overall goals articulated in several Strategies presented in this Chapter, such as "Preserve and expand natural lands and urban green spaces" (Strategy 16), "Restore and conserve Louisiana's coastal wetlands" (Strategy 17), and "Sustainable management and conservation of working agricultural and forestry lands" (Strategy 18), how such strategies are actually defined and implemented makes a critical difference for their benefit to climate mitigation policy.

Sincerely,
Harvey Stern
Delta Chapter Sierra Club Conservation Committee
740 7th St.
New Orleans La 70115

References

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Pontchartrain Conservancy

SCIENCE FOR OUR COAST. SINCE 1989.

October 8, 2021

Governor John Bel Edwards
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P.O. Box 94004
Baton Rouge, LA 70804

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Comments on the Climate Initiatives Task Force Draft Climate Action Plan

Dear Chairman and members of the Climate Initiatives Task Force,

At Pontchartrain Conservancy (PC), we envision a Louisiana coast that is environmentally sustainable, prosperous, and resilient. Our mission is to drive environmental sustainability and stewardship through scientific research, education, and advocacy. For over 30 years, our environmental non-profit organization has addressed natural and anthropogenic issues related to the health of the basin ecosystem. Our body of work in coastal Louisiana includes projects and programs that span the Pontchartrain Basin to benefit the coastal ecosystem including water quality monitoring, hydrologic modeling, tree plantings, construction of oyster brood stock reefs, and marine debris clean up including derelict crab traps. It is through the lens of science and advocacy that we offer these comments on the state's first draft of the Climate Action Plan.

Our organization is pleased to see Louisiana undertaking the development of this Climate Action Plan to identify implementable solutions driving climate change. We appreciate this opportunity to comment on the Climate Initiatives Task Force's (CITF) recently released Climate Action Plan in the form of a) the Draft Partial Final Report and b) the Draft Action Portfolio and offer the following comments.

The Climate Action Plan goals are ambitious, but necessary, if Louisiana is serious about meeting the stated goal of cutting carbon emissions 25-28% by 2025 and reaching "net zero" by 2050. We encourage the CITF to coordinate closely with the Governor's Office of Coastal Activities, the Coastal Protection Restoration Authority, the Louisiana Watershed Initiative, and key divisions within the Louisiana Departments of Natural Resources (LDNR) and Environmental Quality (LDEQ) to reduce governmental redundancies while implementing actions identified in the plan.

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We support continued investigation of Strategy #3—monitor, inventory, certify, and support industrial decarbonization. Without a quantified baseline of emissions, a robust statewide database, and a regulatory framework through which LDEQ and LDNR can enforce industrial emissions reductions, the actual task of reducing emissions will fall short. With a significant portion of the GHGs emitted in Louisiana emanating from the industrial sector, working with industry is integral to Louisiana's success.

We are encouraged to see actions under Strategy #14 to coordinate land-use planning to reduce sprawl, including development of a statewide framework to guide resilient local land-use practices (14.1), as well as encouraging compact development through local trainings, incentives, tools, and model standards and ordinances. This is key to the future of community resilience as we move further into an era of more frequent and more intense storms, utility outages, and flooding events.

We also support continued evaluation of technologies and monitoring plans to improve the understanding of carbon sequestration potential. There are a range of opportunities to sequester carbon and a variety of opinions as to the best ways to achieve the optimal results. We encourage the state to continue to explore the options, conduct modeling, and educate stakeholders on available technologies and associated management and monitoring schemes that may achieve the state's stated goals.

Finally, Executive Order JBE 2020-19 provides steps to improve state government by coordinating adaptation efforts more comprehensively across state agencies under the leadership of the state's first Chief Resilience Officer (CRO). We encourage the creation of an Office of Resilience as identified in Strategy #28 of the plan to ensure that Climate Action Plan strategies are implemented. This office, and all state offices that will directly engage in implementation of the Climate Action Plan (e.g. LDNR, LDEQ), should have the staff capacity and resources to do the work necessary to achieve the results as outlined in the climate plan and the Executive Order.

Thank you for your continued support of critical environmental and climatic issues that affect Louisiana's residents and ecosystems. Again, we appreciate the opportunity to provide initial comments. We will defer more detailed comments until the second draft is released in mid-November.

Sincerely,

Kristi Trail
Executive Director

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PRESERVATION
RESOURCE CENTER
of NEW ORLEANS

Oct. 8, 2021

Climate Initiatives Task Force
Office of the Governor
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re: Draft Portfolio of Climate Strategies and Actions

Dear Task Force Members, Committees and Staff,

This week's announcement from Gov. John Bel Edwards that Louisiana will join the United Nations Framework Convention on Climate Change's "Race to Zero" campaign and that he will attend the COP26 summit in Glasgow served as a welcome reminder of the administration's commitment to reach net zero by 2050. The Draft Portfolio of Climate Strategies and Actions represents an important roadmap to that goal.

Thank you for including actions supported by the Preservation Resource Center of New Orleans using the Action Proposal Template as well as related actions we verbally endorsed at Task Force meetings. Specifically:

- ACTION 15.3 Lead by example in Louisiana through energy benchmarking in state public buildings; and
- ACTION 6.1 Develop a "Buy Clean Louisiana" policy for procurement of materials with lower carbon footprints for use in public construction projects.

Improving the performance of public buildings while avoiding unnecessary carbon-intensive construction will not only further our state's climate goals, but will also save taxpayers money by lowering costs for heating, cooling and lighting over time. Architects and designers now have access to numerous building energy models, life-cycle assessment tools and embodied carbon calculators to inform everything from project scoping to specifications. The state's leadership in this area can be emulated and scaled by Louisiana-based institutions, such as universities, and corporations.

Through this type of leadership, the state can also help further establish proficiency in low-carbon design and construction -- particularly building

reuse and renewal -- among Louisiana firms. This complements existing proficiencies in the areas of historic restoration and flood risk resilience.

Many of the additional actions implicate our privately owned existing and historic buildings, including:

- ACTION 1.4 Reduce energy usage by adopting an Energy Efficiency Resource Standard;
- ACTION 2.1 Authorize tax incentives for residential, commercial, and community-based renewable energy installation and storage;
- ACTION 2.2 Enable on-bill financing for customers to pay for investments in clean energy, infrastructure, and efficiency upgrades through their utility bill;
- ACTION 2.5 Redesign and expand property-assessed clean energy (PACE) financing;
- ACTION 15.1 Improve energy efficiency in residential and commercial buildings by developing new retrofit programs and expanding existing weatherization programs; and
- ACTION 15.5 Promote the electrification of building appliances.

We strongly endorse these measures, particularly insofar as they assist property owners who cannot otherwise afford to make the upfront investments necessary to achieve long-term savings. It may be helpful to consider financing mechanisms that pair energy performance upgrades with other aspects of routine maintenance and resilience. This would have a positive impact for low- and moderate-income families living in older homes with deferred maintenance. A comprehensive package might include air sealing, insulation, hurricane straps, re-roofing, solar installation, gutters and rainwater cisterns -- all of which are in some way linked to the attic and roof of a structure. Finance New Orleans is now piloting a Green Mortgage Program which allows for buyers to bundle resilience and sustainability improvements into a home purchase or refinance. This model should be evaluated, tweaked as needed and replicated in more communities.

The value of technical assistance cannot be understated. Many property owners who can afford to improve a building's energy performance simply do not act because they don't know where to start. Others may be swayed by salespeople to make costlier purchases, such as replacement windows or even solar panels, without having made minor alterations such as insulation and air sealing. More basic upgrades are labor-intensive rather than product intensive, but as a result they support an energy-efficiency workforce while making buildings electrification- and solar-ready.

Preservation Resource Center and nonprofits like ours have a role to play in educating historic property owners of the particular considerations when retrofitting older buildings. It is a misperception that old homes cannot be retrofitted for energy efficiency, but it is true that inappropriate materials and installation techniques can cause damage, particularly if they allow moisture accumulation. Already, we have begun to address this topic in public programming and our free, Maintain Right, video course, which was made possible by support from the Louisiana Division of Historic Preservation. As the actions listed above gain traction, it will be valuable to engage that agency, the many Certified Local Governments in Louisiana which have local

historic commissions, and preservation nonprofits to partner with the state and utilities in program design and delivery.

Finally, some of the actions in the Draft Portfolio focus on new construction but would likely be applied to major renovations, which often trigger code compliance. These include:

- ACTION 15.4 Update statewide building and energy efficiency codes; and
- ACTION 15.2 Set minimum thermal and lighting efficiency standards for residential, commercial, and public buildings.

These code improvements and standards are needed to shift the building performance baseline for Louisiana's design and construction sector. However, when implemented they should also recognize the peculiarities of existing and historic buildings. In some cases, local laws or federal incentive programs may require the retention or replacement in-kind of certain historic elements. A solution may be to take a holistic rather than prescriptive approach when life-safety is not a factor. Looking for example, at projected energy use intensity per square foot rather than simply individual components like wall assemblies or lighting ballasts. Building energy modeling followed by the commissioning of building systems to verify performance are some of the tools that support design flexibility without sacrificing the end goal of energy efficiency.

. . .

The transition to carbon neutrality is at once ambitious and existential -- the warming temperatures, rising seas and stronger storms that result from climate change are already acutely felt in Louisiana. Moreover, in order to make already needed investments in climate readiness and resilience, particularly along our coast, Louisiana must make this transition while maintaining economic vigor. Investmenting in our existing buildings will not only liberate Louisianans from over-reliance on polluting energy sources, it will create direct jobs and produce communities that can attract and incubate new businesses.

All the best,

Nathan Lott
Policy Research Director &
Advocacy Coordinator

Comments on "Draft Final Report" and "Draft Portfolio..."

Michael Tritico <michaeltritico@yahoo.com>

Fri 10/8/2021 9:40 AM

To:Climate <climate@la.gov>;

Cc:Coastal <coastal@LA.GOV>; Lindsay Cooper <Lindsay.Cooper@LA.GOV>;

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October 8, 2021

State of Louisiana
Office of the Governor – Coastal Activities
Comments on Climate Initiatives Task Force Documents:
"Revised Draft Partial Final Report" and "Draft Portfolio of Strategies and Actions"

Dear CITF:

The membership of the Task Force is quite obviously overloaded with greenhouse-gas-producing-industry-loyalists which explains why the entire effort has culminated in a massive burial in quicksand of many good ideas.

The only way for the Governor to salvage his attempt to set Louisiana's goals for reduction of our State's contributions to the disasters being wrought by manmade climate change is for the Governor to focus on *the one key thing that will accomplish our necessary reductions in greenhouse gases*: giving the Louisiana Departments of Environmental Quality and Natural Resources clear, non-ambiguous authority and RESPONSIBLITY to **require** all industrial enterprises to immediately begin specified cutbacks in each greenhouse gas emitted.

Every permission the State has issued for pollution contains a "reopener clause." It is time NOW to reopen all those permits and **insert numerical limits for greenhouse gas molecules**.

If a company cannot make a profit under its new duties then it is not a viable free enterprise and is an insult to capitalism.

Sincerely,

Michael Tritico, Biologist and President of RESTORE

Restore **E**xplicit **S**ymmetry **T**o **O**ur **R**avaged **E**arth

Public Comment For Draft Strategy and Action Plan

Zachary Lang <zachary@vayla-no.org>

Fri 10/8/2021 9:28 AM

To: Climate <climate@la.gov>;

To the members of the Climate Initiative Task Force,

My name is Zachary Lang and I am a resident of New Orleans. As an advocate for clean and renewable energy I am thrilled at the work that the Climate Initiative Task Force has started to take. In our state's goal of decarbonization by 2050 it is vital that we reject false climate solutions, such as carbon capture and sequestration and focus on solutions that value and promote a healthy future for all Louisiana residents. Instead, we must focus on safe and proven solutions like wind and solar. Whenever possible we as a state need to focus on solutions that give local communities more control, like community solar and microgrids.
As a state we can no longer prioritize industrial corporations and must hold these polluting industries accountable for the harm they have caused to our communities. We can do this by ensuring these polluting industries are held responsible for sealing their abandoned and orphaned wells and pipelines scattered throughout the state. For our decarbonization and equity goals, we must immediately stop the approval of new petrochemical facilities and halt new permits of high greenhouse gas producing industries. If we are serious about our decarbonization goals, the petrochemical buildout occurring in our state must end.

Thank You.

Respectfully,
Zachary Lang