December 31, 2021

Please accept these comments on the December 22, 2021 Louisiana Climate Initiatives Task Force Draft Final Plan, from the Alliance for Affordable Energy.

At the direction of Governor John Bel Edwards in Executive Order JBE 2020-19 the Governor's Climate Initiatives Task Force, supportive planning team, and various advisory and working groups has undertaken perhaps the most complicated effort expected of a group of citizens in Louisiana's history: chart a path forward to eliminate greenhouse gas emissions within the state in order to mitigate the catastrophic impacts of climate change. This is a messy and intersectional effort for a state with a unique land, people, economy, and emissions profile, but an effort which is crucial for our survival. Without question Louisiana's future depends on decisions and actions that will follow the Task Force's 2022 final report. Once this report is complete, the question will remain: will the state's agencies and elected officials, appointed and elected to represent the interests of the people and land of Louisiana, undertake the actions necessary?

The comments below should only be construed as a direct response to the draft report document, not political or media attention paid inside or outside the Task Force to certain projects or policies. Lack of response to any specific action should also not be read as tacit support or opposition by the Alliance for Affordable Energy.

CLEAR CALL TO ACTION

The draft final report, titled Louisiana Climate Action Plan, outlines Louisiana's complexities, ranging from social, environmental, engineering, political, to economic, and throughout highlights the **necessity of aggressive action.** The bulk of the report lays out vital solutions that would benefit the state even without the climate-driven imperative. Cleaner air, more affordable energy and housing, improved food systems, protected and stabilized wetlands, better coordinated government agencies, and an effort to identify federal funds to support the people of the state, while addressing economic instability for families and racial inequities are all outcomes that will improve life for Louisianans. Based on experiences in other states and countries, most of the proposed actions have proven successful at reducing emissions.

The draft final report is also clear about inaction. Simply put, if Louisiana maintains the status quo, slow walks "no regrets" solutions, and does not take decisive action in the coming years to reduce fossil fuel use, the state will not meet *any* of the goals laid out by the Governor's executive order, and this effort will have been for naught. Increased harm is not only a risk it is a certainty. As the report explains on page 25, the Governor's interim goals (2025 and likely 2030) are *already* out of reach because of the growth of the industrial sector in our state and historic lack of action. **Therefore this report should be read as a call to action: half-measures, delays, and adding any new emissions must be halted.**

Using the Louisiana Energy Policy Simulator (EPS) tool, it is evident that there are three strategies that must be applied quickly: **1) Transition to renewable and clean electricity for all uses. 2) Electrify the industrial sector. 3) Switch to green hydrogen for industrial processes that cannot be electrified.** As suggested in the draft on page 27, this hydrogen should come from electrolysis, using renewable electricity, commonly referred to as Green Hydrogen. To transition using hydrogen generated from sources that emit additional GHGs, like Blue Hydrogen, would undermine the effort. Unfortunately, while the report explains these top three strategies on page 26 and on 105, the draft does not show explicitly the relative impact of the GHG reduction projected from these three, or *any* of the other recommended portfolio strategies or actions. This leaves any stakeholder guessing as to the emissions reductions projected from each action. **If the state is to move aggressively enough, and direct limited resources to the most impactful and likely successful strategies, the final report must not mince words.** Additional charts labeled with strategies/actions, or including likely emissions reductions associated with each strategy would support prioritization and give policymakers a sense of where to direct attention and resources in the short term.

The Alliance understands there are always modeling limitations, and that that some actions included here may not be readily modeled by the Energy Innovation EPS tool. However, at the very least, categorizing strategies or actions likely to represent more than (for example) 10% of emissions reductions, and on what timeline of likely implementation, would be useful for resource deployment. One example of how this can be done using the EPS can be found in a report described on page 29 of the draft[1] which models Louisiana following the Paris Climate Agreements, and provides a clear wedge chart of policy impacts with greater detail than the draft report's Figure 8. Such an emissions reductions projection should also take into account or describe

[1] Ashmoore, Olivia, Robbie Orvis, Zack Subin, Nathan Iyer, Lainie Rowland, Kyle Clark-Sutton, and Jun Shepard. November 2021. "Louisiana Energy Policy Simulator Insights: Current Emissions Trajectory, NDC Scenario. Energy Innovation. https://energyinnovation.org/wp-content/uploads/2021/11/Louisiana-Energy-Policy-Simulator-Insights-Current-Emissions-Trajectory-NDC- Scenario.pdf

the relative likelihood of success. Again, it is understood that there is uncertainty in developing industries, thus recommendations that carry such uncertainty must be clearly identified. If a technology or policy does not have a track record of success, stakeholders must be made aware.

Similarly, a potential timeline, or order of efforts should be included for stakeholders. For example, a read of this draft offers zero confidence that Action 26.2, to conduct a study on the potential impacts of CCUS will happen before Action 5.3, to support the development of CCUS. It would be absurd to conduct these actions simultaneously. The state certainly wouldn't undertake coastal restoration efforts without having conducted research and stakeholder efforts to understand impacts and success. As the report points out, there is well founded concern that the very same communities that have been forced and targeted to bear the burdens of Louisiana's industry will bear new burdens as un-tested "solutions" are prioritized. This simply must not be the case. In the continued interest of stakeholder participation and equitable outcomes, this report and its implementation must not simply extend historic practices. A timeline that puts people first, rather than full-steam ahead on uncertain new industrial efforts would signal this Task Force's intention to carry the objectives of creating a more Equitable Society and Improving Health and Quality of Life forward.

MISSING FROM THE REPORT

An essential element is missing from this report: What happens if Louisiana takes the aggressive actions outlined in the plan, but also allows the continued growth of our industrial sector? Figure 8 on page 26 gets close to describing the irrationality of continued petrochemical growth while attempting to aggressively reduce GHG emissions. The math simply won't work. Even so, Figure 8 doesn't appear to model the various policies against the low or high potential intensity. Fundamentally the Task Force's final report should show a roadmap to zero, and how the state can reach zero under these potential futures.

There is no other state in the nation with the outsized proportion of industrial emissions that must be addressed here. And indeed, as the report describes, the state's unique vulnerabilities to both climate change and the impacts of industries that are driving it make aggressive action urgent. While politically complicated, from an emissions reductions perspective, one **clear answer to reduce industrial emissions is to reduce production of petrochemicals, exports of fossil fuels, and associated products.** Even while the draft report points out that international policy and market drivers may impact Louisiana's emissions and economy due to lower demand, unfortunately managed reduction of industry is never explored in the report. Instead, the objective of maximizing economic growth and "solving" emissions from incumbent industries remains the focus.

ADVISORY LENS

The draft report describes the structure of the Climate Task Force (page 3) and its multiple advisory groups and sector committees. From the beginning of this process, stakeholders understood that these advisory groups would lend their expertise to provide some assessment of financial, legal, scientific, and equitable feasibility. While this final draft plan is robust in its offerings of possible actions, there is little information as to the financial or scientific feasibility of some of these policies. And while the implementation matrix (page 107) points out funding is required for nearly all of the actions, **approximate fiscal notes are not included, and little is described about technical feasibility.** Similar to the concern listed above about enumerating relative emissions reductions for various policies, this missing information makes it nearly impossible for stakeholders to understand the costs, benefits, and prioritization for each strategy or action.

ACCOUNTABILITY

Louisiana must have consistent and transparent GHG emissions tracking. If anything, this report underscores the need for regular updates to the state's GHG inventory. On page 12 the report explains that not until half-way through the Task Force's work (mid-2021) was it evident that emissions had remained essentially flat since 2005. Annual GHG reporting is now commonplace internationally[2] and this inventory should be maintained and accessible to the public, policy makers, and the Climate Initiatives Task Force, which should continue to meet at least annually, as required by Section 5 of Executive Order JBE 2020-19. Without including this accountability and implementation measure in the final report, the Task Force will have already reduced the oversight and accountability initially designed by the Governor's office. Without regular tracking and attention, emissions are unlikely to fall. Climate action is simply not set it and forget it. And without an annual report card, stakeholders will not have the tools necessary to address shortcomings.

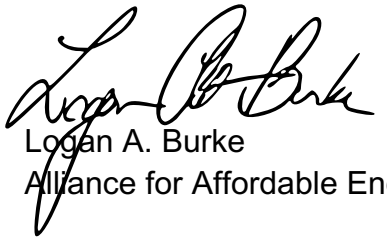
Additionally, the Comprehensive State Energy Planning effort that is apparently underway at the state's Department of Natural Resources should be included in any climate action implementation plan. In August 2020, DNR released Request for Proposal #3000015546 for Louisiana's first ever comprehensive state energy plan, which is necessary for the state to receive any competitive State Energy Program funds from the US Department of Energy. Unfortunately, this planning process has not been conducted in coordination with the Climate Initiatives Task Force, and its recommendations may run counter to this Task Force's final 2022 report, which is inexplicable and must not continue. In the coming years **a coordinated state energy plan will be fundamental to the success of climate action**, as the Governor's office undertakes coordination across multiple existing and new state agencies,

[2] https://www.cdp.net/en

CONCLUSION

The efforts of the planning staff, task force, and various stakeholder groups are obvious in this report, and the refrain is unmistakable: **take real and effective action now.** If this is to happen policy makers and the public deserve the additional information outlined above: expected emissions reduction impacts for strategies and actions, proposed timeline, consideration of reduced production/exports, scientific feasibility, and likelihood of success, more regular and transparent GHG tracking. Without this information, policymakers and community members are left with a list of 28 potential actions with no coherent way to begin.

Thank you,



Logan A. Burke
Alliance for Affordable Energy

LOUISIANA CLIMATE INITIATIVES TASK FORCE
Revised Draft Portfolio of Climate Strategies and Actions
December 2021

Comments by Bill Robertson,
CITF Member and Co-chair of Power Committee

Wednesday, 29 December 2021, Shreveport

Page 2, First Paragraph: Last sentence is incomplete.

Page 6, First Paragraph: Hydropower is not listed as a form of renewable power even though it is in use in the Mississippi River at Vidalia and the Sabine River at Toledo Bend. In addition, developers have applied for federal permits to install low-flow, in-stream hydropower units in Louisiana rivers.

Page 7, Action 1.2: I am very concerned about CITF endorsing "new, high-efficiency natural gas generation facilities necessary to ensure grid reliability." In Louisiana we have barely begun to realize the potential for electric power generated by renewables, cogeneration and combined heat and power, battery storage and clean-power purchases from transmission networks. LPSC needs to ensure that these clean and low- or zero-carbon techniques are treated fairly, if not preferentially, in its regulatory treatment of new utility generation plans. *How can utilities meet our climate goals if they continue building fossil-fuel power plants?*

Page 16, Strategy 4, **Improve Efficiency of Industrial Processes**: This would be an appropriate place to call for build-out of cogeneration and combined heat and power projects by Louisiana's industrial sector. The efficiency and environmental virtues of CHP and cogeneration are undisputed, yet their ability to improve the economic resilience of these industrial plants – a consensus goal -- is often overlooked.

Toward this goal, LPSC should comprehensively review its treatment of CHP and cogeneration, particularly the propensity of utilities to discount electric rates of industries contemplating such improvements.

Page 36, Action 13.4: LPSC reviews and approves rate tariffs used by Louisiana electric utilities to charge for streetlights. LPSC should conduct a comprehensive review of these tariffs on file to stimulate statewide adoption of streetlights using light-emitting-diode or LED technology. In particular, these tariffs should be scrutinized to ensure they reflect the reduced cost of operating and maintaining LED streetlights versus old technology.

Page 43, 16.6: Increase promotion through LSU Ag Center or similar entities of backyard composting of yard and food waste by Louisiana residents. This is one of the easiest and most cost-effective ways to reduce residential solid waste and its negative climate impacts.

Page 53, Strategy 21: In the bullet point about how this strategy ("Position Louisiana as a Climate Leader") benefits Louisiana, it should be stated that an aggressive climate plan put forward by the "oil and gas state" of Louisiana will help dispel the pervasive negative reviews of our state and its poor ranking for education, economy and environment.

Page 59, Add a 26.5: The Climate Portfolio should call for climate scoring of all industrial projects applying for state and local tax breaks and economic incentives. LED, the Board of Commerce and Industry and other entities granting these incentives should be *required to transparently take these climate scores into account before choosing projects to support with tax dollars*.

Bill Robertson
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Comments on Revised Portfolio of Strategies and Actions

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

Fri 12/31/2021 3:10 PM

To: Climate <climate@la.gov>;

Cc: angelle.bradford@sierraclub.org <angelle.bradford@sierraclub.org>;

Hello,

I believe that CCS and CCUS are overly represented in this document, as the technology is both dangerous and unproven and will not help us meet our climate goals as a state nor country. Additionally, there needs to be greater accountability and actionability in the document. For example, which actions will actually most robustly and feasibly get us to zero emissions in time to meet the UN's IPCC recommendations for stopping climate change? That is not apparent within the portfolio. How are we tracking actions and what are their respective timelines for both implementation and outcomes to be achieved? What are the milestones and metrics?

I look forward to additional and final output from the CITF in the coming months.

In Solidarity,

Angelle Bradford
Sierra Club, Delta Chapter Ex Com
Intern Manager and Sierra Student Liaison
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Lindsay Cooper

From: Burkett, Virginia <virginia_burkett@usgs.gov>
Sent: Friday, December 31, 2021 11:04 AM
To: Lindsay Cooper
Cc: Mark E Zappi; Harry Vorhoff
Subject: RE: [EXTERNAL] Comment Deadline: Revised Portfolio 12/31

Hi Lindsay,
Below are comments from me and Mark that I presented at the last Task Force meeting. The main themes are how GHG emissions are projected under future scenarios, interoperability of tools and methods, and technological readiness – most of which can be addressed in the "next steps" of the Task Force and the SAG. One of our SAG members, Alex Kolker, has offered to draft an approach for assessing technological readiness level tailored for Louisiana's unique needs. Mark is also particularly interested in this aspect.
Virginia

After reviewing the available documents, I think we all agree that the Energy Policy Simulator (EPS tool) and the Draft Portfolio of Strategies and Actions (S+A Portfolio) need further work before they can be used to quantitatively guide (and track) emissions reductions for Louisiana's Climate Initiative. The SAG was not asked to review the portfolio or the EPS in the same manner that we reviewed the GHG inventory. On behalf of the SAG Co-Chairs, I offer the following comments and suggestions, most of which relate to future work that is described in the state Climate Action Plan (or the Task Force report):

1. There is not yet a clear connection between the EPS tool and the S+A Portfolio. Ideally, each emission reductions option in the EPS tool would clearly connect to a strategy or action, and vice-versa. If this is not possible, the Climate Action Plan should carefully frame the intended use of the EPS tool and the S+A Portfolio and describe how future work will help connect the two. We also suggest that other simulation tools be explored in the next phase, to crosswalk better with the S+A Portfolio. Ultimately the State could develop its own tool – drawing on open source software and using what applies from EPS and other tools (e.g. RMI/Energy Innovation).

2. Each strategy and action in the S+A Portfolio should be linked to quantities of emissions reduced (or increased) in Million Metric Tons of CO2 equivalent along with estimates of the timing of when each strategy or action is expected to be implemented. Currently, the complete state-specific Greenhouse Gas Inventory produced by LSU for this effort is not incorporated into the EPS projections. For example, wetland data, including the effects of wetland loss and wetland restoration, are not presently accounted for in the EPS tool, though wetland restoration is a component of the S+A Portfolio (i.e., Action 17.1). Louisiana's Coastal Master Plan, where projects are linked to metrics of land building and flood risk reduction, could serve as a model on how to develop future technological scenarios.

3. An evaluation of the state of technological readiness of options in the EPS tool and the potential applicability to Louisiana of the various technologies that are proposed in the EPS tool and S+A Portfolio should be included. Further work should clarify future pathways if technologies bear out as more or less successful than originally projected. The SAG could help with this assessment of technological readiness, building on methods used by the US Department of Energy and the International Energy Agency.

4. The EPS tool and S+A Portfolio need more accurate accounting for the plausible range of scenarios in which emissions could change, including the construction of new facilities. The EPS tool or results should bracket a range of uncertain futures and assess the effectiveness of various actions and strategies against these scenarios. This is the basic approach

used by the IPCC to model future emissions and development pathways. Louisiana's Coastal Master Plan, which has high, medium and low scenarios bracketing uncertainties in subsidence and future global sea-level rise, is another useful guide in this regard. The uncertainty analysis could be an aspirational goal for the next phase of the state Climate Action Plan. The EPS tool, the GHG inventory, and any other tool that the state is relying upon to estimate future emissions, should be updated annually to account for changes in the energy and emissions environment.

We suggest that the Science Advisory Group remain intact in the targeted transition period through 2050. We recommend that every five years, the SAG membership be reviewed and new appointments made as necessary to ensure active, willing members fill the SAG and the required expertise is present. The expanded SAG could provide to the Governor's Office a concise technology state of development report in 2023 and the SAG could update that assessment every four or five years. We propose that development level be assessed via the assignment of a Louisiana Technology Readiness Level (LTRL) that reflects each particular technology's developmental status and availability/feasibility in Louisiana. This assessment will provide fundamental information needed for the uncertainty analysis and scenarios described in points 3 and 4 above. The SAG could be formally assisted by state agencies and sectoral experts, as needed, but technical assistance could also be sought from the state's universities where the needed breath and diversity of expertise exists (the universities are heavily engaged in R&D concerning the technologies of interest).

From: Lindsay Cooper <Lindsay.Cooper@LA.GOV>
Sent: Thursday, December 30, 2021 11:32 AM
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Subject: [EXTERNAL] Comment Deadline: Revised Portfolio 12/31

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Good morning everyone,

A final reminder that the deadline to submit comments on the Revised Portfolio of Strategies and Actions is 11:59PM tomorrow (12/31), and comments should be sent to climate@la.gov. The Revised Portfolio can be accessed here: https://gov.louisiana.gov/assets/docs/CCI-Task-force/October21/CTFRevisedPortfolio12032021.pdf.

Additionally, I circulated the Full Draft Action Plan last Wednesday, which includes the portfolio as well as an updated version of context sections. Please see my email below for further context on the draft. The full draft action plan can be accessed here: https://gov.louisiana.gov/assets/docs/CCI-Task-force/website/CTFDraftFinalPlan12222021.pdf.

I hope you all have been and are still enjoying the holidays. Don't hesitate to reach out with any questions.

Best,
Lindsay

Lindsay Cooper
Policy Advisor
Office of the Governor- Coastal
Project Manager, Louisiana Climate Initiative
225.888.5477 *cell*
225.342.6932 *office*

OFFICE of the GOVERNOR
JOHN BEL EDWARDS

lindsay.cooper@la.gov
gov.louisiana.gov

From: Lindsay Cooper
Sent: Wednesday, December 22, 2021 3:27 PM
Subject: Draft Climate Action Plan: For Your Review
Importance: High

Climate Task Force Members,

I am excited to share with you the Draft Climate Action Plan attached here.

This Draft Plan brings together all context sections, which underwent a comment period in the spring and another in the summer, and the Revised Portfolio, which underwent a comment period in the summer and again now. We added a few sections (an Executive Summary, Benefits of Climate Action, and Next Steps) to provide connectivity across the plan and reflect recommendations of comments received. Since major components of the plan have gone through two extensive comment periods already, we will not solicit comments on this Draft Plan. However, I encourage you all to read the plan thoroughly, as it addresses concerns raised in last week's Task Force meeting and draws together important concepts of this work.

Though there is no formal comment period, don't hesitate to reach out to me with further thoughts or questions on this draft. I have copied sector committees and advisory groups for their review as well, and the draft will also be published on the CTF webpage for visibility and public review. We will discuss this full plan in the January 11 CTF Meeting, alongside changes made to the portfolio through the current comment period.

With that in mind, please submit your action-specific comments and feedback on the Revised Portfolio of Strategies and Actions by December 31, 2021, at 11:59PM to climate@la.gov.

I hope you all enjoy a wonderful holiday!

Best,
Lindsay

Lindsay Cooper
Policy Advisor
Office of the Governor- Coastal
Project Manager, Louisiana Climate Initiative
225.888.5477 *cell*
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JOHN BEL EDWARDS

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Comments on Draft Portfolio of Climate Strategies and Actions

General Comments on the Clean Energy Transition section:

Readers of this should be aware that the document is lacking in any cost or risk analysis, even at a high level. During the meeting on December 16, 2021, the statement was made that considerations for both positive and negative impacts were incorporated however it isn't evident where any negative impacts have been provided. Things to be considered that would have detrimental impacts are: (1) Expenses born by rate payers for the replacement generation by regulated utilities with clean sources; (2) stranded asset expenses passed to rate payers; and (3) the elimination of direct and indirect jobs at fossil generation stations.

With respect to *Economy and Jobs*, It is somewhat misleading to say that this strategy "can lead to the creation of new jobs" without providing a caveat that there will be realized job losses with the closure of fossil fuel power plants. A net job creation number on a permanent basis would be in order here.

With respect to *Community Resilience*, historically, "down-time" related to weather events is not caused by failures at the power generation level. Failures at the transmission and distribution levels e.g. wires down, poles down, transformer failures, etc., are the causes for power interruptions. Replacing generation with renewable and other clean sources alone will not change this.

Comments for various Action items from the Clean Energy Transition section include:

- *ACTION 1.1 Adopt a Renewable and Clean Portfolio Standard and create a statewide market for Renewable Energy Certificates.*
  This action proposes that electricity generation come from an increasing percentage of clean/renewable sources with all generation coming from clean/renewable sources by 2035 like the proposed federal requirement. Generators should be forced to purchase Renewable energy certificates if need be to comply.

  Comments:
  - There is no federal requirement to meet a 2035 target.
  - By 2035, Louisiana cannot acquire the transmission infrastructure and renewable and clean generation technology to generate the 80% renewable/clean requirement outlined here. To create laws or regulations requiring goals that are unachievable with current and developing technologies would be imprudent.
  - By simply following Federal requirements for reducing carbon emissions, the State will be involved in a uniform national approach to emission reductions and emission trading markets, which will be a fairer and more economical way of participating in the reduction of carbon emissions. Louisiana having its own REC market would create a market that is highly illiquid. Louisiana has a significant low-income population, and residents should not be forced to absorb an unduly heavier cost burden. Any individual Louisiana mandate should be crafted through adoption of the coming Federal requirements which are expected to be flexible with respect to types of clean generation. Therefore, we propose that Action 1.1 not require a clean energy portfolio for Louisiana only.

- The renewable energy certificates are just a cap & trade program. There are not enough generating units in the State to support a cap & trade program.
- The costs of this Action to the ratepayers should be included in its description.

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

This action states, "Over the next decade, Louisiana's electric utilities will be undergoing a rapid transition from predominantly fossil fuel generation to more renewable resources (coupled with energy storage) and new, high-efficiency natural gas generation facilities necessary to ensure grid reliability."

Comments: By 2035, Louisiana utilities will likely still be generating electricity predominantly from fossil fuel generation. Most of what the Action proposes already takes place in the IRP process. The evolving/changing of the IRP process to accommodate the anticipated rate of change of generation is a broad proposal and would have to be done in a way that the process continues to sufficiently consider all resources, consider stakeholder feedback, and should keep the important provision of affordable electricity costs to customers as a critical part of the IRP process.

Action 1.2 also contains a statement regarding Dolet Hills Power Station that is misleading. The $9 to $15 savings that is mentioned is the cost of Dolet Hills generation compared to future MISO market pricing, not renewables exclusively.

ACTION 1.5 Explore the role of Power Purchase Agreements and deregulating power generation in the energy transition

Comments: Although this action espouses the benefits of PPA's and deregulation, it states nothing about the potential cost impacts and the reliability risks associated with deregulated generation markets (e.g. Texas).

ACTION 1.6 Develop a regional long-range transmission infrastructure plan to meet Louisiana's transmission goal

Action 1.6 recommends the Department of Natural Resources (DNR) Energy Office join with the LPSC, MISO, and SPP to develop a strategic plan for the buildout of Louisiana's grid and transmission infrastructure to meet a near-term goal of 30% increase by 2030 and a long-term goal of 100% increase by 2050.

***Comment**:* It is unclear what the 30% increase and 100% increase represent

ACTION 1.8 Publish "climate rankings" for electric utilities within the statewide GHG monitoring program to increase public awareness, transparency, and accountability.

Action 1.8 proposes that LPSC, LDEQ, and utilities to develop a regularly updated "report

card" that synthesizes data on the diversity of a utility's generation portfolio. The report should include load, mixture of energy, production sources, and renewables forecasting, as well as carbon dioxide (CO2) and other emissions. Updates to this report card should be completed every two years to incentivize, track, and reward decarbonization of utilities. In the medium and long term, a climate scorecard should be developed to compare data and trends across utilities around the state and the nation, develop decarbonization challenges across utilities, and promote leadership within the state.

Comments:
Cleco belongs to MISO-South, the Midcontinent Independent System Operator, and offers its generation into a much larger pool of generators on a daily basis. MISO dispatches generating units daily based on an economic dispatch model. It will be very difficult for customers to get information of this nature without MISO providing the information required.

Comments on Draft Climate Action Plan

Craig E Colten <ccolten@lsu.edu>

Mon 12/27/2021 9:03 AM

To: Climate <climate@la.gov>;

My comments on the draft plan are:

Strategy 1
Will this ensure jobs at all skill/training levels?
Will community resilience be equitable in terms of costs to families?
Action 1.2 how will efficiency of distributed energy facilities be ensured?
Action 1.7 – how will costs of storage impact household prices for energy?

Strategy 2
Will this strategy foster jobs at all skill/training levels?
Action 2.3 – it would be preferable to eliminate the term "natural disaster" from this document, 60 years of hazards research has clearly demonstrated disasters all have a human component, so to be in line with current thinking, we can improve this document with this one minor edit – "disasters" is fine

Strategy 3
How effective and reliable has self reporting been in other endeavors (has not been adequate in air and water quality monitoring)
Action 3.4 – how does this action address equity?

Strategy 4
All industrial modernization should include energy conserving designs
Conservation can yield huge energy reductions, without having to await the new technologies of carbon capture/storage; can this entire section be prioritized, accelerated?

Strategy 5
Does this strategy adequately consider environmental justice issues at new facilities?
Action 5.1 - accelerated electrification if it relies on green energy sources
Action 5.3 – the carbon capture option actually promotes continuation of current mix of energy, conservation, needs to be prioritized ahead of Carbon Capture
Action 5.5 – carbon capture/storage should not be subsidized with public funds or tax breaks, it seeks to perpetuate consumption of GHG producing fuels, let industries seeking this option pay for R&D

Strategy 7
Action 7.1 – it is critical to hold legacy well operators accountable, but lessons from Superfund prove such after the fact enforcement is extremely difficult

Strategy 9
Shift to clean vehicles needs to be designed to avoid the typical pattern that allows those with financial means to acquire clean vehicles, and the poor end up buying used gas guzzlers and end up with the more expensive fuel costs,
And, strategy needs to be built on clean energy – not oil, gas or lignite
Action 9.2 – needs to discourage passing inefficient vehicles to low income drivers

Strategy 10
Action 10.3 – this action should also include telemedicine

Strategy 11
Public transit for rural areas should a desirable component of this – local rural bus service is common in rural Europe and other parts of the world
Action 11.2 – efficient rural and urban transit hubs are essential ingredients

Strategy 12

This strategy can include various approaches for preserving rural lands for agriculture/open space, and floodplains for mitigation

Strategy 13
This component is exceptionally important for low income populations

Strategy 14
Action 14.2 - for long term, reduction/elimination of hard structural protection will reduce energy consumption and on-going energy use

Strategy 16
Action 16.6 – composting should include food wastes from grocers and restaurants

Strategy 17
Action 17.1 – transition should be built on existing strengths, but also seek to convert crops that cannot compete in global economy with more effective land uses (e.g. sugar)

Strategy 18
Action 18.3 - again build on existing strengths

Craig E. Colten
Professor Emeritus
Department of Geography and Anthropology
Louisiana State University
Baton Rouge, Louisiana 70803
225-578-6180

Public Comment on Revised Portfolio of Strategies and Actions, December 16, 2021

Justin Kozak <jkozak@cpex.org>

Thu 12/16/2021 10:57 AM

To: Climate <climate@la.gov>;

The following is a public comment from the Center for Planning Excellence:

CPEX thanks the Governor for his leadership in prioritizing the need to act on climate change and the GOCA Team for putting in the hard work of organizing this effort and developing this portfolio to serve as a foundation that can guide our actions. It is critical for the long-term health and well being of our state.

After reviewing the final draft, we would like to offer the following recommendations for consideration:

- We must ensure the state has the necessary capacity and prioritizes implementation of this work, especially if we are to be "adaptively managing" this effort over time. This must be intentional and include the resources and leadership necessary to sustain this effort. We would like to see an implementation matrix connecting each action item to the entity that will be responsible for implementation and a process for accountability.

- The emissions tool is a great first step, but it must be connected to the action items in order for us to better gauge priorities and guide our decisions as we move from the big picture items in the Portfolio to individual on-the-ground actions. For example, we would like to see such a tool be used to guide permitting processes to understand the impact new facilities would have on the state's climate goals.

- While we understand that the majority of emissions in Louisiana come from oil, gas, and petrochemical industries, 20% come from the transportation sector. The state and its local governments continue to permit and subsidize sprawling development and road expansions that are not only counter to our climate goals but also detrimental to equity and public health. We would like to see the language strengthened in several of the action items (which we will submit to the GOCA team) and believe that the state could lead and should prioritize emission reduction in the transportation sector through reducing roadway expansion and development and prioritizing complete streets, public transit, and incentivizing density through capital outlay, where possible.

- We're hopeful to see the state prioritizing renewables in this portfolio and highlighting the huge opportunities that the infrastructure bill and, if passed, the Build Back Better bill would offer for kickstarting implementation; however, it will take deliberate action and strong leadership across many groups to truly capitalize on these opportunities. It is vitally important that these efforts are coordinated at the local level to ensure the siting and development of new infrastructure does not harm local communities. The state must prioritize equity in this economic transition and help lift people out of the widespread poverty that stands as a major barrier to resilience in Louisiana. Workforce training, economic development, and education must all be part of a concerted effort to bring this strategy to fruition.

--
Justin P. Kozak, PhD, CFM
Project Manager
Center for Planning Excellence
100 Lafayette Street
Baton Rouge, LA 70801
630.805.1575

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"A society grows great when old men plant trees in whose shade they know they shall never sit." -Greek proverb

COALITION TO RESTORE COASTAL LOUISIANA • 3801 CANAL STREET, SUITE 400, NEW ORLEANS, LA 70119 • 504.264.6749

December 17, 2021
Governor John Bel Edwards
Office of the Governor
P.O. Box 94004
Baton Rouge, LA 70804
climate@la.gov

Re: Comments on the Climate Initiative Task Force Revised Draft Portfolio of Climate Strategies and Actions

Chairman and members of the Climate Initiatives Task Force,

We thank you for the opportunity to comment on this important report and we congratulate you on the historic nature of this task force in Louisiana. We are the Coalition to Restore Coastal Louisiana, the first coastal advocacy nonprofit in Louisiana. Our mission is to drive bold, science-based action to sustain a dynamic coastal Louisiana through engagement and advocacy. With that context, we will focus our comments on sections of the report focusing on coastal issues and governance, though we believe the rest of the report has important work worthy of comment as well.

The report itself is a great accomplishment, as are the many meetings the task force has held that have solicited extensive public comment throughout the process. We also applaud the Governor's goal for Louisiana to reach net zero by 2050. As you know, we are one of the states in the nation most at risk for negative impacts from climate change. Rising sea levels and increased, higher intensity, storm events threaten our people and communities. This, combined with subsidence, is causing us to lose land at one of the greatest rates in the world. A future in which we can continue to live in coastal Louisiana requires that we, as a country and as a state, take aggressive action to reduce greenhouse gas emissions and mitigate for damages that we cannot avoid.

We believe that this report is thorough, and well populated with suggestions that have been made by the public at various stages during its development. We are providing comments on each section, below.

Clean Energy Transition

We support the state's transition to a clean energy future, including wind power (Action 1.3). We also support the passage of the RISEE Act which would bring revenue from offshore wind energy, if/when that occurs in Louisiana. We believe that it is necessary to pursue new forms of energy, both to reduce greenhouse gas emissions and to develop a new economy in Louisiana to provide job opportunities as oil and gas activity dwindles. We believe that it is necessary to prioritize reducing greenhouse gas emissions over mitigating, to the extent possible.

Natural and Working Lands and Wetlands

We broadly support conserving Louisiana's natural lands (Action 14.1) and support the expansion of the tree canopy (Action 14.2). We also support restoring and conserving Louisiana's wetlands (Strategy 15) including looking at the capacity of Louisiana's wetlands to sequester carbon (Action 15.1) and more fully understanding the potential coastal blue carbon in Louisiana's wetlands (Action 15.2). We also support the development of a blue carbon market in Louisiana (Action 15.3) and the sustainable management and conservation of working agricultural and forestry lands (Strategy 16). These actions are necessary to restore our coast, as well as sequester carbon in our natural features. There are many important non-profit organizations in the state that are helping to support these actions, including ours, and we encourage you to reach out to them to partner.

An Inclusive, Low-Carbon Economy

We support building a more inclusive and resilient economy for all Louisiana residents (Strategy 17). We believe centering equity in all future state plans is vital to building a future for all Louisianans. We also believe that it would be worthwhile to strengthen climate education, research and innovation (Strategy 18) and to prioritize Louisiana workers and businesses in the transition to a low-carbon future (Strategy 19). Workforce development is critical as we shift to a future that will prioritize new forms of energy development, so we can ensure that all Louisianans are employed in well paying, meaningful forms of labor.

Collaboration and Partnerships to Ensure Successful Implementation

We broadly support all of the strategies listed under this action item (including the desire of the state to maximize potential federal funding opportunities (Strategy 20), the state's desire to position Louisiana as a climate leader by engaging in national and regional dialogues (Strategy 21), the need to align climate approaches across state government (Strategy 22), the need to coordinate actions with local governments (Strategy 23), the desire to call upon the private sector to align their practices and play a leading role in climate action (Strategy 24), and the need to improve engagement with disadvantaged communities and Indigenous peoples (Strategy 25)). Indeed, these actions are all extremely necessary for all the challenges we face as a state in regards to not only climate change but also coastal restoration. Partnerships will be critical as we work together to determine the best ways to restore our coast and our state as we are threatened by climate change.

Accountability and Adaptability to Ensure Lasting Success

We support efforts to ensure that Climate Action Plan strategies are effectively and transparently implemented (Strategy 27) and we support the need to track progress in reducing net GHG emissions reductions and adapt the approaches taken as needed (Strategy 28).

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Summary

Over the next century we will be threatened by some of the darkest days our state has faced as climate change intensifies and storms become more intense and more frequent. At the same time, we can expect subsidence to continue, increasing land loss across coastal Louisiana. We will begin to struggle with fully implementing our Coastal Master Plan as Deepwater Horizon settlement money will run out. We urge the task force to identify new sources of money for funding the vital actions listed in this portfolio and also memorialize these actions in legislation. For its next steps, following the finalization of this portfolio, we encourage the task force to consider the best mechanisms to ensure that the actions in this portfolio are tracked over time and implemented regardless of the political administration. Key to this will be determining the appropriate state agencies and entities who are responsible for implementing said actions and making sure they have appropriate funding to implement these recommendations. We believe that it would be advantageous to station a new office within the Office of the Governor which specifically focuses on climate resilience. Efforts to reduce our state's greenhouse gas emissions must be owned by all state agencies, not just the ones focused on our natural resources. We stand ready to assist the task force as asks are made at the state legislature for funding and other authorizations needed to carry out the actions listed in this portfolio.

Again, we congratulate the task force on this monumental achievement and its work towards this worthy goal.

Sincerely,

Emily Capton

Policy Director

John Bel Edwards
GOVERNOR

Thomas F. Harris
SECRETARY

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE SECRETARY

MEMORANDUM

To: Lindsay Cooper, Project Manager, Louisiana Climate Initiative

From: Thomas F. Harris, Secretary – Louisiana Department of Natural Resources

Re: LDNR Comments on Revised Draft Portfolio of Climate Strategies and Actions, dated December 3, 2021

First, let me express my appreciation for being allowed to participate in addressing issues of such critical importance for the future of Louisiana and the world. The Louisiana Department of Natural Resources (LDNR) strongly supports the Governor's goals to reduce greenhouse gas (GHG) emissions and to ensure that Louisiana is able to continually improve its effectiveness as a steward of the environment while creating new economic opportunities for its citizens. In reviewing the draft portfolio of climate strategies and actions, I can see that the role envisioned for LDNR is both impressive and significant. At least 21 different action items specifically mention LDNR, while many more envision LDNR's input and involvement. This clearly identifies the unique make-up and importance of our agency in energy planning and regulation and in conservation of the State's natural resources and environment.

While several of the action items specifically naming LDNR concern actions the agency is already in the process of undertaking, such as promoting Louisiana as a potential hub for clean hydrogen storage (see Action 5.2) and pushing for the creation of model ordinances for solar power generation facilities (see Action 12.5) - several proposed actions appear to envision significant increases in our agency's current roles. For example, the development and enforcement of regulations on renewable infrastructure in proposed Action 26.1 and methane emission standards in proposed Action 8.1 will likely require new legislative authority to implement, and substantial increases to funding and staffing in order to support programs that actually achieve the stated goals. Lack of legislative and budgetary support for several of the proposed actions involving LDNR would significantly delay implementation of those actions. Additionally, many of the proposed actions envision the development and implementation of policies and regulations in highly complex and consequential areas surrounding the energy transition. As witnessed in the creation of the Climate Initiative Task Force's recommendations,

the development of these policies will be time consuming and require the input of many parties across all areas of society and the consideration of how these policies will interact with decisions made in other states, at the federal level, and across the globe. Thus, LDNR recommends that appropriate timetables for stakeholder input, changes in departmental authority and achieving legislative approval of funding needs be built into plans to implement such action items as the state moves forward.

LDNR provides the following specific comments to the language of the draft portfolio: 1) in Action 7.1 we note that the definition of "responsible party," which the portfolio recommends being changed via rule amendment, may be limited by statutory definitions and requirements; therefore, we propose amending that recommendation to acknowledge that statutory changes may also be required; 2) Action 7.4 states that "millions of legacy wells are likely failing," without any citation or modification; since there have been far fewer than 1 million wells drilled in Louisiana's history this statement should either be removed or appropriately modified.

LDNR commits to working towards the CITF's recommendations consistent with its statutory authority, and as allowed by its funding and staffing, while still performing its existing programmatic duties and obligations. LDNR further commits to working with the administration, state and federal agencies, and the Legislature towards obtaining needed authority and resources moving forward.

REVISED draft Portfolio of Climate Strategies and Actions

Louisiana Climate Initiatives Task Force

December 29, 2021

Comments By: Eric Kalivoda
Deputy Secretary
Department of Transportation and Development

Comments submitted via: climate@la.gov

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 market for Renewable Energy Certificates

Comment: This action calls for transitioning to clean electricity generation by 2050 with at least 80% coming from "renewable" sources (solar, wind, geothermal) and no more than 20% coming from "clean" sources (nuclear, biowaste, and natural gas with carbon capture). This is based on "A Renewable and Clean Portfolio Standard" which is defined as "a law or regulation that would require electricity used in Louisiana to be …." Such a law or regulation does not currently exist. If we are going to adopt such a law or regulation, it should not reference shares among "renewable" and "clean" energy sources. By 2030, x% needs to come from renewable or clean sources and by 2050, 100% needs to come from renewable or clean sources. Our objective is to reduce GHG emissions, not to mandate "renewable" energy sources, so it's okay if more than 20 percent comes from "clean" sources, in fact that is desirable. We have all been taught, or should have been taught, not to put all of our eggs in one basket. What we need is energy diversity; no source should provide a disproportionate share of our power supply.

Strategy 11. Increase urban, rural, and regional public transit service

Action 11.1. Increase financial support to urban transit operators to increase statewide ridership

Comment: Remove the word "statewide" from the title; this action concerns urban local transit

Comment: State funding for urban transit is provided by the State Legislature through the Mass Transit Account within the Parish Transportation Fund and is distributed by formula specified in state statute. Further, the Federal Transit Administration has established a direct relationship with urban transit providers. Urban transit agencies have boards of directors, a CEO, and professional staff. The Parish Transportation Fund is the mechanism for increasing funding for urban transit. DOTD has no role in this proposed action; please remove reference to DOTD from Action 11.1.

Comment: Add the following sentence to Action 11.1 "Urban transit providers need to consider adding smaller vehicles and demand-responsive operations to serve transit deserts."

Action 11.2. Enable access to resources outside urban centers for rural transit access

Comment: Change the title to "Increase financial support for rural transit service including connectivity to urban transit systems"

Comment: DOTD administers federal funds for rural transit capital expenditures and works with rural transit providers on planning and training activities. DOTD can administer state resources appropriated for rural transit service. All rural transit service already is provided with smaller vehicles and already is demand-responsive; please strike reference to these from Action 11.2. Strike the last sentence as well; federal funding is already available for rural transit; the issue is insufficient matching funds and that is where the focus needs to be.

Action 11.3. Invest in regional transit to connect communities to jobs and services across Louisiana

Comment: In the second sentence, replace, "…allow for more efficient travel on highways and urban streets." With "…encourage transit usage and carpooling." Replace the third and fourth sentences with "The federal Infrastructure Investment and Jobs Act (IIJA) includes funding to expand passenger rail service to increase travel options between cities and states. This action proposes coordination among applicable federal, state, and local agencies to take advantage of available funding opportunities through IIJA to advance these regional transit initiatives."

Strategy 12. Coordinate land use planning to reduce sprawl and support healthy and resilient communities

Action 12.1. Create a statewide authority to provide guidance for resilient local land-use practices

Comment: Land use planning and regulation is the purview of local governments. While DOTD encourages land use planning at the local level, DOTD will not require it, attempt to regulate land use, or engage in coercion regarding any particular type of development. Rather, DOTD encourages local officials to plan for the future to develop communities that provide the lifestyle and quality of life their citizens desire. Compact development may, or may not, fit into those plans.

Action 12.2. Encourage compact development through local trainings, incentives, tools, and model standards and ordinances

Comment: Replace "compact development" with "land use planning" in the title of this action.

Comment: While DOTD encourages land use planning at the local level, DOTD will not require it, attempt to regulate land use, or engage in coercion regarding any particular type of development. Rather, DOTD encourages local officials to plan for the future to develop communities that provide the lifestyle and quality of life their citizens desire. Compact development may, or may not, fit into those plans.

Action 12.3. Align statewide transportation planning and decision-making with land use compact development planning

Comment: Change the title to "Align transportation planning with land-use planning"

Comment: Land use planning and regulation is the purview of local governments. While DOTD encourages land use planning at the local level, DOTD will not require it, attempt to regulate land use, or engage in coercion regarding any particular type of development. Rather, DOTD encourages local officials to plan for the future to develop communities that provide the lifestyle and quality of life their citizens desire. Compact development may, or may not, fit into those plans. Local governments and MPOs are already empowered and encouraged to align transportation planning with land use planning.

Government regulation and policy cannot force people to do what they don't want to do, including forcing them into compact development and forcing a reliance on transit. Louisiana is largely a rural state with small and medium sized cities. Socioeconomic forecasts indicate that will continue to be the case over the next 30 years. The growth in most of our urban areas over the next 30 years will be very limited. Only the Baton Rouge, Lafayette, and North Shore metropolitan areas are likely to see population growth in excess of 25,000. If a community wants to be a transit community, fine; it's their choice. If a community wants to be a bicycle and pedestrian community, fine; it's their choice. However, if a community wants to be an automobile community, that's fine too; it's their choice.

Action 12.4. Evaluate the climate impacts of major state-funded transportation projects

Comment: This action is not acceptable to DOTD. This action is what national activist organizations have been trying to incorporate into federal law, unsuccessfully, to impede any expansion of the highway system. In moving to low carbon or no carbon vehicles, the argument against such projects becomes even more tenuous. This action should be deleted from the portfolio.

Louisiana is largely a rural state with small- and medium-sized cities. Socioeconomic forecasts indicate that will continue to be the case over the next 30 years. The growth in most of our urban areas over the next 30 years will be very limited. Only the Baton Rouge, Lafayette, and North Shore metropolitan areas are likely to see population growth in excess of 25,000. That growth will necessitate the expansion of the roadway network in those areas.

The Interstate Highway System, and much of the National Highway System, in both urban and rural areas is worn out and will need to be reconstructed over the next 20 to 30 years. Further, I-10/I-12 and I-20 are major freight corridors for the nation and improvements beyond what is already planned will likely be needed. Similarly, the I-49 corridor will continue to be developed for safety, hurricane evacuation, and intra- and interstate commerce.

Strategy 14. Preserve and expand natural lands and urban green spaces to maximize climate mitigation and adaptation goals

Action 14.2. Support the expansion of urban tree canopy and green spaces

While this is a worthy action, the proposed funding mechanism is illogical and inappropriate. Urban transportation projects, state-funded or otherwise, should include measures to improve the urban tree canopy where sufficient road right-of-way exists and a local maintenance sponsor can be identified. Further, to the extent practicable, the provision of landscaped-based stormwater runoff management should be considered as well. Beyond that, a different funding mechanism is needed, perhaps revenues generated through a carbon tax, should such a tax be implemented. Further, why are we not supplementing this recommendation to include a voluntary program to encourage homeowners and businesses to plant trees? It doesn't all have to be government.

Strategy 16. Support the sustainable management and conservation of working agricultural and forestry lands

Action 16.6. Establish regional compost facilities and accompanying local programs

Comment: Regional compost facilities need to include methane recovery. Just like landfills, composting involves anaerobic digestion resulting in the generation of methane.

Strategy 18. Strengthen climate education, research, and innovation as a focus of Louisiana's energy transition

Action 18.2. Teach, re-train, and employ Louisiana residents in clean energy sectors

Comment: Delete "With the ability to utilize federal funding from President Biden's Build Back Better Framework," from the fourth sentence. Please leave the politics out of the document.

Comment: Change "electrical vehicle" to "alternative-fueled vehicles" in the last sentence.

Strategy 20. Ensure Louisiana is prepared to maximize potential federal funding opportunities

Comment: Delete "alongside continued momentum around President Biden's Build Back Better Framework" from the first sentence in the introductory paragraph. Please leave the politics out of the document.

Strategy 28. Track progress in reducing net GHG emissions reductions and adapt the approaches taken as needed.

Action 28.2. Update the state GHG inventory every five years

Comment: Add the following sentence "This action further proposes the development of off-model analyses to supplement the EPA SIT model such as in carbon sequestration from coastal restoration and Louisiana-specific reforestation and afforestation."

COMMENTS on CITF "REVISED Draft Portfolio of Climate Strategies and Actions." Comment Deadline Dec. 31, 2021.

Thank you for carrying out the Climate Initiative Task Force and all the work involve.

Thank you for the opportunity to comment.

First note:

I (with a team) submitted action proposal 103: To create an Office of Climate Justice. I do not see it in the current document, nor did I see it in "DRAFT Portfolio of Climate Strategies and Actions .I did see:

Strategy 21-1: form an Office Of Economic Resilience and 28-1 form an Office Of Climate Resilience.

Even though neither is exactly what we proposed, I was nevertheless disappointed that neither made it into the revisions. I can only assume that Strategies 17.1 and 2 in the more recent document are meant to substitute. These are so far removed from the original intent as to be meaningless.

Comments on Revised document:

Action 1.1 RCPS is not the same as RPS. The "C" for clean is added to greenwash "nuclear' other nonrenewable sources of energy. The RECs are greenwashing.

Action 1.2 Develop: "new, high-efficiency natural gas generation facilities." Natural gas (methane) is neither clean, nor renewable. It is not required for grid reliability.

Action 1.2 (State IRP) should be linked to Actions 1.3 offshore. 1.6, long rang transmission. 1.7, battery storage

Action 1.3. --- 5 GW seems like a very low target for an entire offshore wind energy industry. Texas produced 7 GWhours in one month in 2021. https://www.chooseenergy.com/data-center/wind-generation-by-state/ Louisiana is currently producing turbine blades for other states.

Action 1.4. The described "green tariff" program is voluntary. And companies to pass on expenses to consumers. To be effective, Green tariffs need to be compulsory. And companies need to bear the burden, not pass it on to consumers.

Action 1.7. --1 GW seems low for battery storage, statewide.

Action 1.8: "Scorecard" –really should be a public real-time, on-line dashboard for energy and emissions.

Actions 2. All good.

Action 3.1. Self-reporting emissions. This is modeled after EPA's GHGRP program. However, the EPA's program has penalties for noncompliance. I don't see penalties here. Also, a minimal emissions level

required for self-reporting is not given. It should be relatively low, such as 1000 tons/ year. (EPA's is 25,000 tons/year.)

Action 3.3: "Carbon Tax." Should be stronger language than "advocate" and "explore." The CCL plan for a carbon tax is revenue neutral and sends dividends to families.

Action 3.4: Strategy to reduce emissions. Doesn't give quantitative target and timeline. Needs to be in line with Paris accords.

Strategy 3, 4 and 5: Says to set standard, and low carbon stocks but gives no indication of level. Needs finite target, timeline and needs to be in line with Paris accords.

Strategy 5: Alternative fuels sounds do-able. However, low carbon feedstock is not. "Feedstock" IS high carbon, so unless the impetus is to genuinely develop alternatives to plastics, this strategy appears disingenuous.

Action 5.4: "Invest in CCS." This has been tried and failed globally for decades. Eliminate this "Action." CCS only serves to perpetuate existing fossil fuel interests.

Strategy 7 "Actively manage methane emissions." While the first several Actions are on target, stopping fugitive emissions and leaks from orphaned and abandoned wells, this part is misnamed. It should be STOP methane emissions. Moreover, any actions should be paid for by industry, not taxpayers.

Strategy 8 assumes a continuing methane mining program. The goal should be to stop methane mining (fracking).

Strategy 9: Good, but needs to be faster. I suggest 50% by 2030 and 100% by 2040. Outcomes needs to be quantified and compared to UNFCC guidelines.

Strategy 11: Need to make rapid and cheap public transit the first choice for everyone. Example: better bus and train between NOLA and BR would help a lot.

Also, the "last mile" problem needs to be addressed. This is that people would rather drive a private car than figure out how to negotiate the small distance from where public transit ends and their destination. Example: currently one cannot put bike on Intercity buses.

Strategy 13: would be better stated as: Develop a Climate-Safe Statewide building code.

Action 15.1 & 3. Unclear what "carbon sequestration potential of Louisiana's coastal wetlands" means. If it means more vegetation, that's good. If it means seeking geological features for industrial carbon sequestration, see comment on Action 5. If it means selling credits on our wetlands, No.

Strategy 17. Why is inclusivity added as an afterthought? It should be in every "Action."

Action 17.1. Good, but: 1. Proposal has no specific goals and no timeline. 2. Authority may be too diffuse. Leadership in the form of an office of Climate Justice might help. (Action Proposal 103)

Action 18.1. Need assurance that Climate education is not co-opted by corporate interests. No external sponsorship should be allowed.

Strategy 20. “45Q” tax credits should not be permitted. This is throwing away our federal taxes for technology that is expensive, has not worked and continues subsidizing the fossil fuel economy.

Action 26.2. No. See previous comments. This would be a waste of state taxpayer money.

Action 27.2. Good, but also establish a climate caucus in the state legislature.

Thank you,

Marion “Penny” Freistadt

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December 31, 2021

Dear GOCA staff,

Thank you for the opportunity to comment on the Revised Draft Portfolio of Climate Strategies and Actions. What follows are our comments on specific sections of the revised draft portfolio.
We incorporate by reference our overall comments provided in a separate letter dated December 31, 2021, that was signed by other members of the Equity Advisory Group. We also incorporate our comments provided on October 8, 2021, many of which went unaddressed.

Action 1.1: The "clean energy" standard includes forms of energy that are not clean such as technologies that rely on natural gas and fracking. This form of energy is not clean, contributes to the climate crisis, and generates air and water pollution that harm the public health.[1] The state should aim for a fully renewable portfolio standard.

Action 1.1: We oppose the recommendation of Renewable Energy Certificates. The goal of the energy transition is to eliminate greenhouse gas emissions by switching to renewable energy sources. Allowing utilities to purchase offsets does not achieve this goal and allows for continued emissions.

Action 1.2: We object to the myth that natural gas plants support a reliable grid. We saw this clearly during Hurricane Ida in New Orleans when the New Orleans East gas plant was unable to provide power to the city.[2]

[1] Qingmin Meng, "The impacts of fracking on the environment: A total environmental study paradigm," Science of The Total Environment, Volume 580, 2017, Pages 953-957, ISSN 0048-9697, https://doi.org/10.1016/j.scitotenv.2016.12.045.

[2] https://www.nytimes.com/2021/09/10/us/ida-new-orleans-power.html

Action 1.4: We object to the inclusion of “clean power” in the tariff options. “Clean power” is a false solution.[3]

Industrial decarbonization section: Acknowledge that the permitted facilities that have not been built yet would add another 100 million metric tons of annual greenhouse gas emissions and that building these facilities would make reaching net zero nearly impossible.

Action 3.1: Delete “self-reported” and add “monitored by a neutral third party or a state agency.”

Action 3.3: The section on carbon taxes mentions that companies could continue emitting greenhouse gases and pay for it. The Task Force should be explicit that equity requires that we must reduce emissions, both greenhouse gases and other toxic chemicals.

Action 3.4: It’s unclear what the section is providing. The role of the Task Force is already to provide a strategy for reducing industrial emissions. The Task Force should not abdicate this responsibility.

Action 5.1: The action mentions demonstration projects and incentives, but it should also include new regulation and enforcement as a meaningful driver of innovation. This comment could apply to many other sections of the Portfolio as well. We need sticks as well as carrots to reach our decarbonization targets.

Action 5.2: This section mentions “low and no carbon hydrogen.” This phrase also appears elsewhere in the document. In every such instance, the Portfolio should clarify that only green hydrogen powered by renewable energy is a climate solution. The state’s own modeling and other independent studies have shown that blue hydrogen actually increases emissions.[4]

Action 5.3: CCUS will require a buildout of pipelines in Louisiana's wetlands and decrease protection from hurricanes.[5] This is unacceptable.

Action 5.4: Creating new markets for CO2 creates more incentives for companies to continue extracting fossil fuels, which are causing the climate crisis.

Action 5.5: Based on this section and numerous comments at Task Force meetings, the state sees “industrial clusters” as an economic opportunity to be celebrated. These areas are sacrifice zones where Louisiana residents are suffering from increased air pollution, and the state should look to wind down production in these areas.

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[3] https://www.ewg.org/news-insights/news/none-above-false-energy-solutions-america-doesnt-need

[4] https://onlinelibrary.wiley.com/doi/full/10.1002/ese3.956

[5] https://www.ciel.org/carbon-capture-and-storage-an-expensive-and-dangerous-proposition-for-louisiana-communities/

Action 6.2: The portfolio should acknowledge that many types of recycling, particularly those involving plastics, are a myth.[6] The state must also focus on curbing the production and consumption of goods.

Action 7.4: Pilot programs should prioritize communities of greatest financial need, particularly those with high concentrations of Black and Indigenous people.

Action 8.2: The most effective way to reduce leaks is not constant monitoring. It's to eliminate fossil fuel extraction.

Action 9.1: "Renewable diesel" needs to be defined and made clear that it does not include fuels made from industrial grains that contribute to the Gulf of Mexico Dead Zone and other forms of water pollution through runoff.

Action 9.2: "Special attention" needs to be defined. In general, more specificity is needed for all sections that address equity.

Action 9.3: This action needs to clarify that biofuels derived from industrial agriculture and blue/gray hydrogen should be rejected as they are net negatives for climate.

Strategy 10: This section is strong. This same level of specificity and commitment to reducing energy demand could be applied to other emissions sectors.

Action 13.1: We need to be more aggressive with retrofits to hit emissions targets. At least 15 percent per year.

Action 13.1: Rather than loans or rebates, many low-income households need up-front grants to be able to participate in programs like this.

Action 13.3: Low income households should be given upfront grants rather than rebates to cover the costs. This will accelerate the transition and have a positive redistributive effect.

Action 15.3: Delete this section. Louisiana must conserve its wetlands as a matter of good policy. Using coastal wetlands for offsetting allows for continued pollution in other places that needs to be eliminated.

Strategy 16: This section mentions the potential positive impacts of regenerative agriculture but does not have a plan to reduce negative impacts of fossil fuel-based agriculture. Transitioning from fossil fuels is essentially for curbing the state's emissions.

[6] https://www.reuters.com/investigates/special-report/environment-plastic-oil-recycling/

Action 16.7: This section should clarify that sustainable forest practices does not include clear cutting and monocrop replanting.[7]

Action 16.7: Clarify that wood pellets and some forms of biomass increase deforestation. Deforestation is not a climate solution. Burning wood pellets is worse in the short term for the climate than coal.[8]

Action 19.1: Make it explicit that only green hydrogen is a climate solution and that the state should not pursue investment in biofuels that increase agricultural pollution.

Strategy 20: Blue/gray hydrogen and carbon capture are false solutions that will harm Louisiana communities and degrade the environment. The state should not pursue them, regardless of federal incentives.

Strategy 21: Louisiana should not pursue a cap and trade program that allows for offsets. These programs are not effective and allow for continued pollution.[9]

Strategy 25: Should be explicit that the state will honor all Indigenous treaty rights.

Accountability and Adaptability to Ensure Lasting Success: Overall we still feel like quantitative equity metrics are needed. We recommend tracking economic metrics such as poverty and GINI coefficient, as well as health, housing, and education metrics to track success.

Action 26.1: This section should recommend that no project should be permitted that includes building new pipelines in the coastal zone.

Action 26.2: We don't need a new study to know that air pollution level are unacceptable in the industrial corridor or that pipelines harms wetlands. These things can be clearly stated in this portfolio and drawn from the advice of the Scientific Advisory Committee.

Action 26.3: Louisiana should adopt the principles of Free, Prior and Informed Consent for Indigenous and Environmental Justice Communities.[10]

Thank you,

Colette Pichon Battle, Esq.
Executive Director, Gulf Coast Center for Law & Policy
Louisiana Climate Initiatives Task Force Member,
Chair of the Task Force Equity Advisory Group

[7] https://www.sciencedirect.com/science/article/pii/S235198941830088X
[8] https://iopscience.iop.org/article/10.1088/1748-9326/aaa512/meta
[9] https://bostonreview.net/articles/leah-c-stokes-matto-mildenberger-tk/
[10] https://www.fao.org/indigenous-peoples/our-pillars/fpic/en/

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December 31, 2021

Dear GOCA staff,

Thank you for your continued work on improving the Louisiana Climate Task Force Portfolio of Climate Strategies and Actions ("Portfolio"). We have seen over time that you all are considering and responding to community feedback, and we think the plan is stronger than when we started. As the Draft Partial Final Report ("Report") makes clear, the need to act swiftly and decisively on the climate crisis is necessary to protect the state, its people, and its culture. The Report also stresses the importance of achieving equity, an admirable goal. While the Portfolio currently falls short of that goal, the final Portfolio could be improved and made more equitable by adopting the following suggestions.

A Net Zero Mandate Requires the Phase Out of Fuel Production in Louisiana

The climate crisis is already harming, immiserating, and displacing Lousianans. The impacts are being felt most acutely by poor people, who are disproportionately Black, Indigenous, rural, and people of color. We know that the climate crisis is driven by the extraction and processing of fossil fuels, which in turn releases greenhouse gas (GHG) emissions into the atmosphere. The primary charge of this Climate Initiatives Task Force ("Task Force") is to equitably eliminate the emission of greenhouse gases to mitigate the impacts of the global climate crisis. This necessarily requires eliminating the extraction and processing of fossil fuels.

This current Portfolio allows for more harm to Louisiana's communities and violates the legal Executive Order JBE 2020 – 18, which outlines the duty of the Task Force to investigate and make recommendations for the reduction of greenhouse gas emissions originating in Louisiana to *net zero by 2050*. Using the best available science, the Task Force must put forth recommendations that would achieve net zero or we are in violation of the Executive Order. At the December 16th Task Force meeting, members were told that the final Portfolio being suggested would likely fail to reduce the state's GHG

emissions to net zero. This most recent recommended Portfolio allows a final goal of an estimated more than 50 million metric tons of annual CO2 equivalent emissions from our state- roughly the equivalent annual emissions of the country of Austria.[1] GOCA staff stated that the modeling could not be relied upon to achieve the net zero goal. And while modeling is an imperfect science, it is essential to making sound climate policy. All net zero plans rely on modeling. Without it, the Task Force would be left to make blind guesses on which actions and strategies effectively reduce greenhouse gas emissions. Deputy Director Vorhoff stating that the current Portfolio would put the state on "a pathway to net zero" is misleading. If the current Portfolio is not projected to take us to net zero, then any steps taken on this pathway are taking us to a different destination all together.

Louisiana's massive GHG emitting industrial sector makes it unique with respect to the challenge of achieving significant emissions reductions. Decarbonizing the industrial sector is not just an option, it is a moral necessity. The only way for Louisiana to guarantee that these emissions will be eliminated is to reduce the overall energy demand of the state, the overwhelming majority of which come from the industrial sector. All sectors should look to reduce energy demand, but the industrial sector must lead the way by reducing production and processing of fossil fuels and its GHG-emitting by-products. Reducing production in the industrial sector also offers the most equitable approach to GHG reduction because reducing production and processing of fossil fuels will reduce the other toxic emissions that harm Louisiana's communities located on the fenceline of industrial facilities.

Reduce Louisiana's Industrial Production & Processing of Fossil Fuels
The Industrial Decarbonization section should include a strategy for equitably reducing industrial production. This can be achieved by implementing:

1. An overall cap on emissions. The state should establish an overall cap on greenhouse gas emissions that decreases each year until it hits zero in 2050. This–combined with vigorous compliance enforcement–will give the state emissions reductions certainty.

2. A moratorium on all new facilities and infrastructure that facilitate or rely upon the extraction and processing of fossil fuels and their derivatives. David Dismukes of LSU, after compiling the 2021 Louisiana Greenhouse Gas Inventory used as a main tool by the Task Force, stated that permitted industrial facilities that have not been built yet but are slated for construction could add more than 100 million metric tons of greenhouse emissions annually to the state's emissions burden.[2] Simply put, new facilities move us in the wrong direction. The only logical solution is to stop building the facilities, pipelines, and other infrastructure that vent climate accelerating emissions and poison Louisiana's water, soil, and air.

[1] Ritchie, Hannah and Max Roser, "Austria: CO2 Country Profile," Our World in Data, https://ourworldindata.org/co2/country/austria.
[2] Dismuikes, David, "Louisiana 2021 Greenhouse Gas Inventory," October 2021, https://www.lsu.edu/ces/publications/2021/louisiana-2021-greehouse-gas-inventory-df-rev_reduced.pdf .

3. An assessment of non-essential facilities. Some of Louisiana's industrial products may not have a place in a low- to no-carbon future. For example, the world may be able to survive without most of the currently produced single-use plastics. We may be able to reduce the demand for synthetic fertilizers with compost or other alternatives. The state should commission a study for products that have existing alternatives or could be replaced with future technologies.

4. Retirement Plan for Aging facilities. All industrial facilities have a lifespan. Using the information collected in the study of non-essential industrial facilities mentioned above, the state should plan for their retirement. This would include not renewing the permits of aging industrial facilities and disallowing improvements that lengthen their lifespans.

5. Voluntary and Equitable Community Buy-outs. Communities who live near industrial sites that are deemed essential should be informed of the cumulative impacts of all emissions coming from nearby industrial facilities. Those who do not feel safe should be offered a buy-out for the equitable value of lost cultural ties and an equivalent property in a non-polluted area.

6. Executive Order Revoking the permits of serial polluters. Louisiana has a number of facilities that are dangerous to the public, as well as facilities that routinely violate the conditions of their air and water permits.[3] The state should use its authority to close these facilities. In 2019, Illinois Governor J.B. Pritzker ordered the shutdown of an industrial facility that was releasing ethylene oxide because it posed significant public health risks.[4]

7. Remediation Plan for Outdated Industrial Sites. It is not enough to simply retire old facilities. We must also help heal the land and take care of our people. By creating a program to remediate old industrial sites, the state can improve health outcomes and create jobs in the process that will help replace any jobs lost in the industrial sector.

Establish Standards of Monitoring Progress on Equity as Part of State-wide GHG Reduction Plan

The Draft Report and the Portfolio make frequent nods to equity. We commend the GOCA staff for including that language and for taking this issue seriously. However, much like achieving net zero relies on quantifying and tracking greenhouse gas emissions, achieving equity also needs us to look at data and measure our progress. We believe the state's equity goals should be as ambitious as its emission reduction goals. To that end, the state must adopt one or more metrics that would align with equity and set a target for success. This can be achieved by measuring:

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[3] Mitchell, David J. "EPA oversight sought on settlement with Nucor over toxic sulfur pollution that wasn't allowed," The Advocate, November 7, 2021, https://www.theadvocate.com/baton_rouge/news/article_42b1ff7c-3da0-11ec-a504-8394e218748a.html .

[4] Hawthorne, Michael, "Alarmed by cancer-causing ethylene oxide pollution, Gov. J.B. Pritzker orders shutdown of Sterigenics in Willowbrook," Chicago Tribune, February 15, 2019, https://www.chicagotribune.com/news/breaking/ct-met-pritzker-sterigenics-shutdown-willowbrook-20190215-story.html .

1. Poverty Rates & Income Inequality among Louisiana's Workers and Residents. The state of Louisiana generates a lot of economic activity. With a pre-pandemic GDP of more than $250 billion,[5] its economy is about the size of the country of Finland.[6] However, Louisiana has the second most poverty of any U.S. state at around 19 percent.[7] The state of Louisiana should set an ambitious goal to eliminate or seriously reduce its poverty rate. This data should be tracked and include a breakdown of poverty rates by race, gender, and level of education. The GINI coefficient is a statistic that represents wealth or income inequality in a region. Louisiana is the third most unequal state in the nation.[8] It is rare to find both high poverty and high inequality in one place, which reflects how little of the state's profits are shared by the working class. Louisiana's goal could be to reduce the GINI coefficient number as much as possible to advance equity. This data should be tracked and include a breakdown of inequality rates by race, gender, and level of education.

2. Health Outcomes of Louisiana's Communities. A key outcome of equity is the ability to lead a long and healthy life. In Louisiana, Black men have a life expectancy of 9 years less than the average American.[9] White men in Louisiana live 4.4 years less than the national average. One metric to track equitable health outcomes is life expectancy, but another is the Human Development Index. The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. Now is the time for Louisiana to broaden its definition of success from a simple calculation of economic value to a more comprehensive valuation of human potential. This data should be tracked for Louisiana and include a breakdown of health outcomes by race, gender, proximity to polluting facilities, and level of education.

3. Access to Accurate Information and Climate Relevant Education. Quality K-12 education is always an indicator of upward social and economic mobility. But we are now faced with a new climate reality that requires access to the most up to date scientific information on natural resources; the most current information on disaster response and recovery; and the traditional ecological knowledge that can mitigate the negative impact of the climate crisis be provided as a base standard and monitored as a broader standard of equity for communities in our state.

4. Access to fair, Non-polluted, Climate Resilient Housing for Louisianians. Equity requires tracking which members of our state have or lack information and access to fair, non-polluted, climate resilient housing, especially as it relates to current industry pollution and changes in riverine

[5] Federal Reserve Economic Data, "Gross Domestic Product: All Industry Total in Louisiana," https://fred.stlouisfed.org/series/LANGSP.
[6] The World Bank, "GDP Per Capita (Current $US)," https://data.worldbank.org/indicator/NY.GDP.PCAP.CD.
[7] Louisiana Budget Project, "Poverty in Louisiana: Census 2019," https://www.labudget.org/wp-content/uploads/2020/09/LBP-Census-2019.pdf.
[8] Martin, Emmie, "US states with the highest levels of income inequality," CNBC, March 12, 2018, https://www.cnbc.com/2018/03/12/us-states-with-the-highest-levels-of-income-inequality.html.
[9] Lewis, Kristen, "A Portrait of Louisiana 2020: Human Development in an Age of Uncertainty," Measure of America, 2020, https://ssrc-static.s3.amazonaws.com/moa/A_Portrait_of_Louisiana_2020.pdf.

flooding, extreme temperatures and more destructive storms already being experienced by Louisisna's communities. Monitoring the physical state of our housing stock and annual assessment of what is required to ensure the human right to housing is a priority of action and opportunity as the impacts of previous emissions continue to confront our state.

Conclusion

The Task Force has made minimal progress towards recommendations that GCCLP or its allies can be proud of. What began with industry and state agency representatives calling for adherence to data and science has now turned into a political battle funneling public resources to technologies that will not help reach the emissions reduction goals and will continue to put Louisiana's communities in jeopardy. The state must look at data and hold ourselves accountable. For the Task Force to fulfill the executive order, it must put forth recommendations that advance equity and achieve net zero emissions. We recommend that GOCA find a pathway to net zero emissions that will prioritize reducing industrial production and improving health and equity outcomes for Louisiana residents. To advance equity, we recommend adopting a goal of reducing poverty and inequality while improving health, education, and housing outcomes. If we take these steps, we can avoid the worst impacts of the climate crisis and make a better Louisiana along the way.

Sincerely,

Colette Pichon Battle, Esq.
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Louisiana Climate Initiatives Task Force Member,
Chair of the Task Force Equity Advisory Group

Chief Shirell Parfait-Dardar
Louisiana Climate Initiatives Task Force Member
Equity Advisory Group member

Charles Allen
Equity Advisory Group member

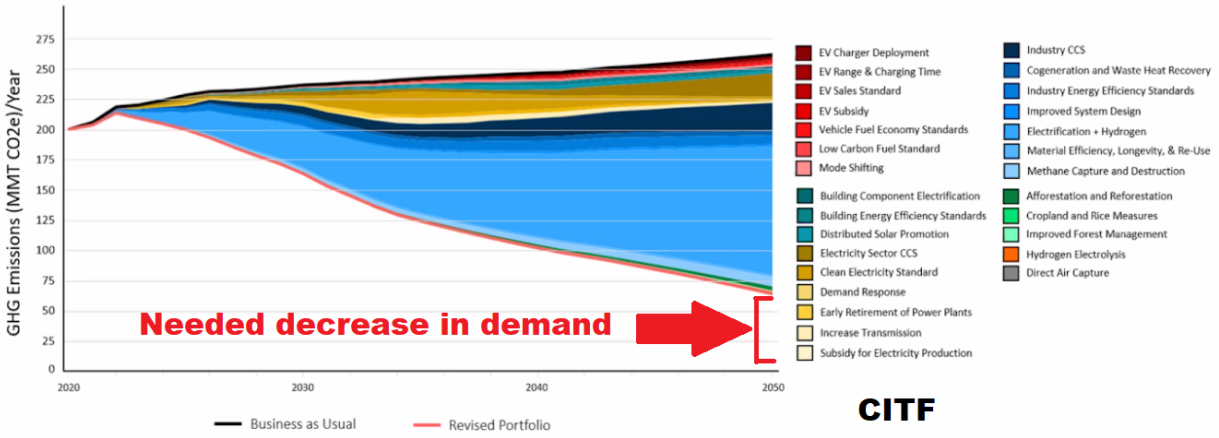
Liz Williams Russell
Climate Justice Programs Director, Foundation for Louisiana
Equity Advisory Group member

Craig Colten
Equity Advisory Group member

Rodney Wallis
Equity Advisory Group Member

ATTACHMENT A

Contribution to emissions reduction by policy



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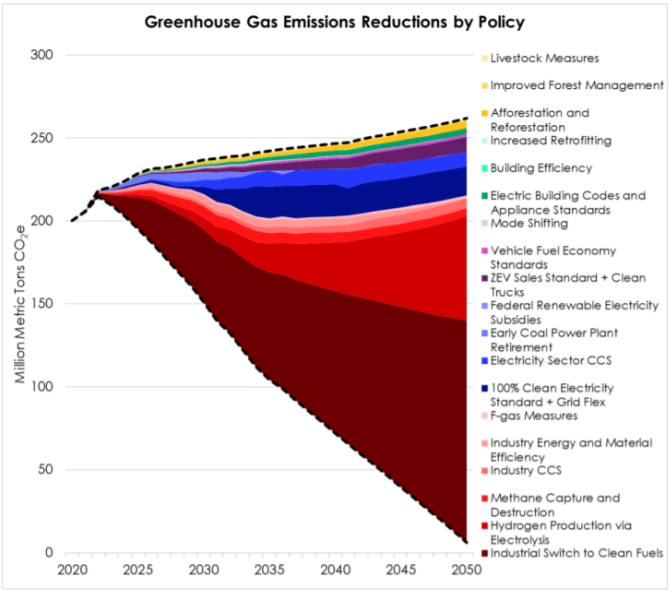

Energy Innovation

The Greater New Orleans Interfaith Climate Coalition asks Governor Edwards and his Climate Initiatives Task Force to consider the following enhancements to its draft plan:

1. **Leverage the recently passed Infrastructure Bill to build long range transmission of renewable energy from the Midwest and Western States. This will reduce costs of electricity for Louisiana consumers, reduce the State's carbon footprint and provide a broader market for renewable energy development in Louisiana.**
2. **Develop a detailed plan to increase the production of renewable energy in Louisiana including the development of wind turbines in the Gulf of Mexico, thereby creating increased economic development, and reducing greenhouse gases.**
3. **Provide incentives to make Louisiana the hub of the United States for the manufacture of wind turbines to enhance economic development.**
4. **Encourage the Public Services Commission to develop a Renewable Portfolio Standard with a goal of achieving zero carbon emissions in the production of electricity by 2040 and commend the City of New Orleans for the development and implementation of their Renewable and Clean Energy Portfolio.**
5. **Add the Customer Lowered Electrical Price approach to the demand side tools highlighted in the CITF draft plans to encourage individuals to reduce peak energy demand and reduce their carbon footprint.**

Thank you for your consideration.

Pastor Gregory Manning for the Greater New Orleans Interfaith Climate Coalition

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To: Members of the Climate Initiatives Task Force

From: Randy Hayden—Executive Director of the La. Propane Gas Association

RE: Public Comment on the Task Force Findings

Thank you for the opportunity to comment on the substantial work product offered by members of the Task Force. We are particularly interested in providing insight and fact regarding the propane gas industry that may not have been presented or available at your meetings.

First and most important, the odorized and non-odorized propane markets in Louisiana are incredibly important to our state's economy, America's energy independence and our country's safety in the world.

As an overview, Louisiana's economy had an average growth rate of 0.97% in the period of 2014-2019. This is lower than the regional average (2.16%) and the national average (2.49%). Louisiana's 2018 medium income of $47,942 is significantly lower than the national medium income of $59,116. When incomes are dropping or lower than average, consumers become increasingly price conscious about all purchases including fuel choice.

In addition, Louisiana's energy consumption has grown from 2013 to 2018 with the largest growth seen in the industrial and transportation sectors. Specifically, Louisiana is one of America's leading producers of propane. Almost 600-million gallons of non-odorized propane was produced in 2018. Unofficial numbers from 2020 show that number will increase 30%. (These numbers are just for Louisiana's chemical sector for non-odorized propane.) The total market value of odorized propane in 2018 was $94 million and the industry's total contribution to Louisiana's GDP was $913 million. This DOES NOT include the non-odorized gas which makes up about 52% of the product throughout America.

In breaking down the uses for odorized propane in Louisiana, 32% is used for residential heating, cooking, and cleaning; 29% in commercial establishments; 13% for internal combustion engines such as school busses; 8% for retailers; 7% for agricultural purposes; and 4% for industrial uses.

Regarding across the state labor impacts, production jobs specific to propane provide 394 retail jobs, 311 production positions and 54 transportation jobs for a total of 759 direct propane jobs with an annual payroll of $57,823,000.

Northern and rural parishes in Louisiana show the greatest use of residential propane with almost 20% of homes in West Carrol Parish reliant on propane for home heating. Eighteen parishes have shown growth in propane market share in the past 5 years and 17 parishes have show an increase in the absolute number of propane fueled homes.

In the commercial sector, new growth is expected as 38% of the sector is dependent on weather related issues. And the other growth area for propane is expected to be in the use of school busses. Currently Louisiana has 249 school busses fueled by propane (3.69%). While the national average is 4.85% of busses, Louisiana ranks 25 of 51 (Washington DC) for the total number of propane school busses. With state-level incentive programs, this number can grow significantly.

Finally, for off-road internal combustion engines, Louisiana ranks sixth in the total number of forklifts in the country but only 29th in the total number of propane forklifts. And regarding landscaping, propane demand for turf maintenance and landscaping equipment could continue to decline without incentive programs.

(All the above data is referenced in the following link from the Propane Education and Research Council:

https://propane.com/providers/national-and-state-propane-profiles/)

As for specific recommendations, the state had an incentive program for alternative fuel vehicles. However, the program was cut back before finally being killed by the Legislature. Since the transportation sector of our economy has a great deal to do with our air quality, we suggest an even greater emphasis on alternative fuel vehicles and reinstating the tax incentive programs for both infrastructure and vehicles.

Regarding vehicles, it is almost shameful that we make children ride in run-down diesel-spewing busses on sweltering summer days when cleaner, quieter, environmentally friendly propane busses are available. Let us save money while we are at it—Maintenance, and wear and tear costs are reduced with propane busses.

https://www.npga.org/news-resources/reports-studies/georgia-school-bus-study/

https://www.npga.org/news-resources/reports-studies/perc-wv-study/

All economic data for recommendation should include TOTAL costs. This means “Source to Site” costs. We cannot say electricity is clean when it is produced by coal or nuclear sources. We cannot say it is cheap when we do not include production, maintenance, transmission, and retirement costs.

Finally, propane makes an excellent back-up, emergency energy source. It is readily available, it’s portable and there are literally thousands of propane generators already in operation in Louisiana. Any legitimate future energy plan MUST have back-up provisions. We cannot just believe that batteries and storage facilities will miraculously become available. We have existing resources that can and must be built into any future equation.

https://www.npga.org/impact/environment/the-big-question-for-renewable-propane/

https://www.npga.org/wp-content/uploads/2020/11/PERC-Enviroment-FactSheet6-02-20.pdf

https://www.npga.org/wp-content/uploads/2020/11/zero-net-energy-infographic.pdf

https://propane.com/environment/stories/the-path-to-zero/

https://cdn.propane.com/wp-content/uploads/2020/05/PERC-Enviroment-FactSheet6-02-20.pdf

Thank you for the opportunity to comment. I look forward to your group reviewing these suggestions and giving strong consideration to incorporating them into your plan.

Randy Hayden

Executive Director, Louisiana Propane Gas Assn.

Louisiana Hypoxia Working Group
Room 1197
Energy, Coast, & Environment Building
Louisiana State University
Baton Rouge, LA 70803

December 31, 2021

Louisiana Climate Initiatives Task Force
c/o Coastal Protection and Restoration Authority
P.O. Box 9004
Baton Rouge, LA 70804-9004

Re: Comments on December 2021 Draft Portfolio of Climate Strategies and Actions

I am submitting the following comments on behalf of the Louisiana Hypoxia Working Group (LHWG). The LHWG serves as a monthly forum for agencies, researchers, and stakeholders to share information and ideas about implementation of the *Gulf Hypoxia Action Plan* (GHAP) in the state and the Mississippi River Basin.

The GHAP is a cooperative agreement between 12 States on the Mississippi and Ohio Rivers, along with federal partner agencies. Its core components are achieving a 20% reduction in nitrogen and phosphorus loading from the Mississippi/Atchafalaya Rivers to the Gulf of Mexico by 2025, and reaching an average annual size of the Gulf Hypoxic Zone of 5000 square kilometers/1950 square miles by 2035.

The Strategies and Actions outlined in the "Natural Working Lands and Wetlands" Chapter of the Draft Climate document intersect with the GHAP and a number of other initiatives in several key ways, with opportunities for implementation on private and public lands. Agricultural conservation and management practices, along with ecosystem protection and restoration efforts in the watersheds that drain to the Mississippi/Atchafalaya Rivers and the Gulf of Mexico, can achieve multiple collateral benefits for climate/carbon sequestration and water quality, as well as enhancing other values such as outdoor recreation and wildlife habitat.

Action 16.1, under Strategy 16 (“Support sustainable management and conservation of working agricultural and forestry lands”), highlights the U.S. Department of Agriculture (USDA) Conservation Innovation Grant Program, which has been in operation for a number of years. Other programs that are helping to achieve collateral benefits for water quality and related values are the USDA Mississippi River Healthy Watershed Initiative (MRBI), the USDA Regional Conservation Partnership Program (RCPP), and the USDA National Water Quality Initiative (NWQI). The MRBI is focused on the states draining to the Gulf through the Mississippi River Basin (MRB), while the MRB is included as a Critical Conservation Area under the RCPP.

These programs and initiatives work on a cooperative basis with landowners and producers, along with partner agencies and institutions such as the Louisiana Department of Agriculture and Forestry, the USDA Natural Resources Conservation Service (NRCS), the Louisiana Soil and Water Conservation Districts and the LSU Agriculture Center.

An additional area of conservation opportunity comes from ecosystem and habitat protection and restoration efforts. The Land and Water Conservation Fund (LWCF) has been in place since 1965, helping to establish areas for public outdoor recreation, such as National, State, and local parks, National Wildlife Refuges, and State Wildlife Management Areas. Where such sites are located adjacent or in proximity to rivers and streams, and include floodplain and/or wetland habitat, they can also act as natural flood infrastructure, with collateral benefits for water quality.

Two such projects in Louisiana that were carried out with the help of the LWCF include the Mollicy Farms Project in Morehouse Parish north of Monroe, and an expansion of the Red River National Wildlife Refuge outside of Shreveport. Both sites have helped relieve flooding from recent high water events on their respective rivers (Ouachita, Red) that would have inundated populated areas. Both include wetlands that help improve water quality along with providing flood retention capacity.

The passage of the Great American Outdoors Act (GAOA) in 2020 has provided millions of additional LWCF dollars each year for Louisiana and other states to create and enhance areas for public outdoor recreation. This programmatic area brings in additional partners such as the Louisiana Department of Wildlife and Fisheries, Office of State Parks, U.S. Fish and Wildlife Service, and local governments. There is also potential for matching dollars for these programs and funds provided from the Louisiana Watershed Initiative that are being utilized to set aside areas to serve as natural flood risk reduction infrastructure, as well as RESTORE Act funds designated for use in the state's coastal zone.

The programs and projects referenced above, in addition to others not mentioned, can also contribute to the goal set out in Action 14.1 of conserving interior natural lands, with a priority towards forested lands, floodplains, wetlands, and riparian areas. The Draft Portfolio proposes a target of conserving and protecting 30% of Louisiana's interior natural lands by 2030. That target can complement and benefit from the similar goal set in the "America the Beautiful" initiative launched by the White House.

There has been a history of investment by private and public interests in natural carbon sequestration projects in Louisiana over the past two decades, many of them in the same watersheds that are being prioritized for water quality improvement under initiatives like the Gulf Hypoxia Action Plan. It would benefit the state’s climate effort to compile information on the condition and status of these efforts, which would could form an ancillary part of the “baseline of areas most in need of conservation” listed as a Near-Term Action (Action 14.1).

Sincerely,

Doug Daigle
Coordinator
Louisiana Hypoxia Working Group

Lindsay Cooper

From: Andrew Jacoby <andrew@parishlawyer.com>
Sent: Thursday, December 30, 2021 10:41 AM
To: Lindsay Cooper; Harry Vorhoff; Kristi Trail; INACTIVE - Brent Campbell; Adam Peltz (apeltz@edf.org)
Subject: Re: Draft Climate Action Plan: For Your Review

Follow Up Flag: Follow up
Flag Status: Flagged

Lindsay and Harry,
Just following up on my below email. I know y'all are busy and it is the holiday season. I see that the deadline for comments is tomorrow.
-Andy

On Wed, Dec 22, 2021 at 7:16 PM Andrew Jacoby <andrew@parishlawyer.com> wrote:

> Lindsay and Harry,
>
> Great work on the Draft CAP. I have reviewed it and, per Lindsay's emails, I have the following comments and questions. I am a part of the sub-sub-committee on orphan wells. Namely, the Oil and Gas Subcommittee's subcommittee on "Orphan Well Action Proposal Development" (CC'd here).
>
> The Draft CAP's "Strategy #7" on abandoned wells does not incorporate all the suggestions our committee made. Specifically, the Draft CAP leaves off the following recommendations:
>
> From Proposed Action "Improve Oilfield Site Restoration Fund funding to P&A wells":
>
> - Remove the OSR Fund cap on OSR fees
> - Increase the OSR Fee from 1.5 cents per barrel to 9 cents per barrel

- Remove all exemptions and reductions in fees (e.g., stripper wells, incapable wells)
- Increase the orphan well surcharge to drill permit fee by 150%

From Proposed Action "Ensure that former operators are held responsible for their orphan wells":

- Charge DNR with the duty to pursue responsible parties to plug wells and clear sites.
- Allow DNR to obtain judgment by a court in advance that a responsible party must pay for site restoration and site clearance (rather than after-the-fact recovery of costs).
- Create a right of action for landowners with abandoned wells on their property to sue responsible parties to force well plugging and site clearance.
- Mandate that the Commissioner of Conservation collect full ownership, officer, and director information from operators, including Social Security numbers.
- Mandate that DNR review operator information to ensure orphan well operators do not commence new operations
- Prohibit operators from including as owner, operator, officer, director, or employee, any person who was an owner, operator, officer, or director of any operator with any well currently on the orphan well list.
- Mandate that DNR permit applicants attest to compliance with the law prohibiting those associated with orphan wells from serving as owner, operator, officer, director, or employee of the applicant.

From Action Proposal "Reform "future utility" laws and rules to prevent inactive wells from unduly lingering unplugged":

- Mandate that six months after a well ceases production (or is not in use as a service well), and only if the well is not designated as a "future utility" well, that the Commissioner should order the well be plugged and send notice to all current and former operators (as responsible parties).
- Mandate that for an operator to qualify a well for the "future utility" exemption from plug and abandonment, the operator must apply for the exemption, and the Commissioner must review the application to ensure that there is good cause to allow for the well to remain unplugged and unused. If "good cause" is found, the exemption must require that the operator (A) caps the well; (B) ensures that no methane is escaping or will escape from the well by performing an

annual MIPT, and attest to that fact; and (C) shall provide for an additional fifty-thousand dollar security bond to ensure the well is eventually plugged.
- Mandate that any well lingering in "future utility" status for greater than ten years must be removed from "future utility" status unless the operator reapplies for the status and the Commissioner reevaluates the financial security for the well.
- Direct DNR, as a matter of policy, to review current "future utility" wells to potentially add to the orphan well list, given that forthcoming federal funding may be based on the number of orphan wells of each state, and thus the need to maximize federal funding requires as complete an orphan well list as possible

From Action Proposal: "Improve financial security to ensure legacy sites are plugged and cleaned up":

- Require an additional $50,000 in bonding for coastal wells.
- Require site-specific trust accounts for all wells involved in an ownership transfer.

These recommendations were made, and I have not seen any discussion as to why some recommendations were kept and some were jettisoned. Can you please direct me to where this decision-making took place?

Thank you.
-Andrew Jacoby

On Wed, Dec 22, 2021 at 5:30 PM Lindsay Cooper <Lindsay.Cooper@la.gov> wrote:

> Climate Task Force Members,
>
> I am excited to share with you the Draft Climate Action Plan attached here.
>
> This Draft Plan brings together all context sections, which underwent a comment period in the spring and another in the summer, and the Revised Portfolio, which underwent a comment period in the summer and again now. We added a few sections (an Executive Summary, Benefits of Climate Action, and Next Steps) to provide connectivity across the plan and reflect recommendations of comments received. Since major components of the plan have gone through two extensive comment periods already, we will not solicit comments on this Draft Plan. However, I encourage you all to read the plan thoroughly, as it addresses concerns raised in last week's Task Force meeting and draws together important concepts of this work.

Though there is no formal comment period, don't hesitate to reach out to me with further thoughts or questions on this draft. I have copied sector committees and advisory groups for their review as well, and the draft will also be published on the CTF webpage for visibility and public review. We will discuss this full plan in the January 11 CTF Meeting, alongside changes made to the portfolio through the current comment period.

With that in mind, please submit your action-specific comments and feedback on the Revised Portfolio of Strategies and Actions by December 31, 2021, at 11:59PM to climate@la.gov.

I hope you all enjoy a wonderful holiday!

Best,

Lindsay

Lindsay Cooper

Policy Advisor

Office of the Governor- Coastal

Project Manager, Louisiana Climate Initiative

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225.342.6932 *office*

OFFICE of the GOVERNOR
JOHN BEL EDWARDS

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Comments on Draft Portfolio

Richard Keim <rkeim@lsu.edu>

Fri 12/31/2021 7:37 AM

To: Climate <climate@la.gov>;

ACTION 14.1 Conserve Louisiana's interior natural lands, prioritizing forested lands, floodplains, wetlands and riparian areas

This action does not say exactly what would constitute conservation. I think it is worth mentioning that conservation of floodplains, wetlands, and riparian areas is critically dependent on maintaining hydrological regimes. It would be a failure of conservation in general, and of carbon conservation in particular, if these places were protected from, say, vegetation conversion or development, without any regard for hydrologic processes. Recognizing hydrological conservation is a critical element in the action because it is the most likely degradation these ecosystems may experience. Specifically, flood control projects can easily be in direct conflict with hydrologic conservation, and integrated planning for off-site impacts is necessary.

Richard Keim
Science Advisory Group

Comments, Draft Strategies And Actions,

Alex Kolker <akolker@lumcon.edu>

Fri 12/31/2021 2:04 PM

To: Climate <climate@la.gov>;

Cc: Lindsay Cooper <Lindsay.Cooper@LA.GOV>;

Dear Climate Task Force Members and Facilitators,
I am writing to provide my feedback to the REVISED Draft Portfolio of Climate Strategies and Actions. While I see many thoughtful parts of this document, I also note that several areas where improvements are still needed.

The first, "big picture," problem is that there is no metric relating the strategies and actions to specific, or even estimated, levels of greenhouse gas reduction. This is problematic for several reasons.

*The strategies and actions do not meet the level of specificity that is found in some of the most comprehensive greenhouse gas reduction plans.

*The lack of specificity about greenhouse gas reductions could be problematic the task force members as they vote on the proposal. Task Force members may want to know whether the strategies and actions meet the goals established by Governor Edwards. The present document could leave that question unanswered.

*The lack of specificity could reduce the level of public acceptance of the plan. Members of the public may wonder whether the task force has adopted a plan that does indeed reduce Louisiana's greenhouse gases, and the lack of specificity may reduce public acceptance of the plan.

*The lack of specificity could lead to problems with implementation. If members of Louisiana's governance community are not fully informed about what actions will lead to the greatest greenhouse gas reductions, they may choose a less optimal implementation strategy.

Despite these concerns, there are ways to provide more clarity about how specific strategies and actions will reduce greenhouse gases. While earlier discussions have focused on the need to better utilize the Energy Policy Solutions (EPS) tool, after continued review, I am beginning to suspect that the EPS tool will not provide the level of clarity needed to address this issue. To provide further guidance I suggest, that the Strategies and Actions should reference the Greenhouse Gas Inventory produced by LSU's Center For Energy Studies, and other publicly available information to provide a guide for the level of emissions produced by various strategy components.

The Draft Strategies and Actions takes a step in the right direction at the start of Strategy 3, when it notes that "Industrial sector emissions are Louisiana's largest contributing source of GHG emissions, accounting for over 65% of total state GHG emissions in 2018 based on the 2021 Greenhouse Gas Inventory." More statements like this one are needed for each sector and strategy. I encourage the members of the task force and the climate initiative team to consult with Dr. Dismukes about how the Greenhouse Gas Inventory can help guide efforts to quantify greenhouse gas reduction, and I also my services, as a member of the Science Advisory Council in this effort.

I recognize that there will be uncertainties, and the estimates of greenhouse gas reductions should be frank and forthcoming about them. For example strategies 7 and 8 call seek to identify and then reduce leaks from oil and gas infrastructure. Since many of these leaks have not been identified, we don't know how large they are, and so we don't know what level of reduction can be achieved.

Fortunately, the LSU Greenhouse Gas Inventory provides some guidance in how to address uncertainty. For example, with respect to methane emissions, the LSU Greenhouse Gas Inventory notes that,

"One such study, published in 2018 in Science, notes that the SIT inventory methods may underestimate methane releases by as much as 60 percent since the methods fail to capture releases that can arise from abnormal operations. For purposes of this study, it is important to keep in mind that the releases from production sources in Louisiana are likely to have some degree of uncertainty. Thus, it would not be unreasonable to consider "grossed up" inventory estimates from the oil and gas sector in evaluating policies and strategies to address such uncertainties" (p33).

Additionally, Strategies 27 and 28, which focus on accountability of the climate plan should be strengthened to specifically note that all future plans should provide clear and transparent metrics for how future strategies and actions will reduce greenhouse gases.

As a minor note, action 28.1 (Establish a Louisiana GHG monitoring program) should describe how emerging technologies are making it easier to quantify and identify greenhouse gas sources. For example, new text could read, "To measure greenhouse gases, Louisiana should use both traditional methods, like the EPA SIT tool, as well as emerging technologies in remote sensing and big data to provide the most accurate accounting of Louisiana's total net greenhouse gas emissions as well as the locations and actions that lead to emissions."

An additional, "big picture," issue is the need to address the, "Technological Readiness," of the various strategies and actions. Many of these strategies and actions rely on technologies that have not yet been fully developed and deployed at the scale needed to substantially reduce net greenhouse gas emissions. It is not entirely unreasonable for a 30-year plan to rely on technologies that are predicted to be available at year 15, for example. However, this plan, and the associated strategies and actions need to be forthcoming and transparent about the current state of the technology and their readiness to be deployed.

"Technology readiness factors," are a useful way to address this issue. This system was originally developed by NASA in the 1970s and has been used widely in industry and technology since. Technology readiness factors typically consist of a scale that ranges from 1 to 9, where low numbers represent an idea, medium numbers reflect systems that have been developed in lab, moderately high numbers reflect systems where demonstration systems have been completed, and the highest numbers reflect systems that are technologically ready. I have been in contact with Science Advisory Group Co-Chairs Virginia Burkett and Mark Zappi, and our group will be communicating this to the task force early in the year, as part of our comments on the draft plan.

Finally, I would like to point out that the section on natural and working lands could do more to expand Louisiana's forests. Louisiana's forests are one of our largest greenhouse gas sinks, and expanding these forests seems like an relatively easy way to increase our natural sinks. I encourage members of the task force to members of the Agriculture, Forestry, Conservation and Waste Sector Committee to find ways to expand Louisiana's forest carbon sink.

I thank you for all of the time and effort in examining these comments, and more broadly for all the efforts of so many involved in making this task force work. Should you have questions about my comments, please feel free to reach out. You can reach me at me via email and akolker@lumcon.edu, or via cell at (504) 579-2427.

Sincerely,
Dr. Alexander S. Kolker, PhD
Associate Professor
Louisiana Universities Marine Consortium

--
Alexander S. Kolker, Ph.D.
Associate Professor
Louisiana Universities Marine Consortium
8124 Highway 56
Chauvin, LA 70344
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(504) 579-2427
2019-2020 Fulbright Scholar- Morocco
2021-2025 Fulbright Specialist

December 30, 2021

To: Governor's Office of Coastal Activities
Office of the Governor
PO Box 94004
Baton Rouge, LA 70804
climate@la.gov

RE: Comments in Response to the December 2021 Louisiana Climate Action Plan Draft Final Report

The following comments in response to the Draft Climate Action Plan are submitted by Sustainable Energy Economy Solutions, a sole proprietorship consulting entity of Andy Kowalczyk. SEES is a public interest organization focused on sustainable, equitable and affordable solutions for the necessary energy transition from fossil fuels that is needed to mitigate global warming.

Background

As an intervenor in state and city regulatory proceedings I have focused on creating a responsible path to phasing out fossil resources in coming decades in the state of Louisiana. This has included the initiation, through a group petition to the City Council of New Orleans of a renewable portfolio standard, now known as the Renewable and Clean Portfolio Standard (RCPS). I also intervened on behalf of the 501(c)(3) nonprofit 350 New Orleans in the City of New Orleans dockets UD-19-01 (RCPS), UD-18-03 (Community Solar), and UD-18-06 (90 MW of Solar), UD-17-03 (2018 ENO IRP), and at the Mississippi Public Service Commission, 21-AD-52 (Investigation of Entergy Mississippi membership in the Midcontinent Independent System Operator or 'MISO').

In addition to this experience, I am an Environmental Sector stakeholder representing 350 New Orleans in MISO stakeholder meetings and comments on issues related to market reforms, cost allocation and transmission planning , as well as in group comments submitted to the Federal Energy Regulatory Commission on transmission planning and cost allocation reforms.

These efforts, which I have undertaken alongside many other colleagues, have been important and valuable contributions to the larger challenge of decarbonizing the power sector in the state and regional grid in the MISO power market that Louisiana's utilities Entergy Louisiana and CLECO have been members of since 2013.

Response Comments re:

CLEAN ENERGY TRANSITION | ACTION 1.6 Develop a regional long-range transmission infrastructure plan to meet Louisiana's transmission goal

In late 2020, MISO began the process of developing a portfolio of transmission projects called the Long Range Transmission Plan. The mission statement for these projects is to reliably and affordably meet electricity needs throughout MISO's 15 state footprint in the coming decades as the generation mix changes from thermal resources, to renewable energy resources.

The necessity for the Long Range Transmission Plan, is supported by scenario planning[1], which considers policy and market shifts, as well as commitments by MISO member utilities to retire fossil fuel assets throughout the footprint. MISO's Futures[2] represent 'bookends' that show a range of transformation throughout their footprint, to inform investment decisions needed to secure reliable and affordable access to electricity for states throughout MISO's footprint. Future 1 represents a modest case in which not all utility or state goals are met by 2039[3], Future 2 shows provides a case in which all announced utility and state goals are met 100%[4], and Future 3 provides an accelerated market transformation that results in 81% decrease in emissions throughout their entire footprint and increases the share of renewables from roughly 9% today, to nearly 46% energy in 2039[5].

While the pace of transformation is unknown, and MISO's Futures are projections that present possible outcomes, the imperative to plan ahead is made clear by MISO's Renewable Integration Impact Assessment (RIIA). In this assessment, renewable energy penetrations of 22% (close to the energy penetration shown in Future 1) still require a transmission infrastructure planning approach to ensure that there is adequate, safe and reliable power.

The conclusions of MISO's Futures, and RIIA are the result of an immensely methodical and data driven approach that has spanned years and relied on simulated weather and demand patterns, power flows and an assessment of critical hours of power grid vulnerability coming from these simulations. The response

[1] Big oil companies like Royal Dutch Shell have utilized scenario planning for decades to inform investment decisions.
(https://www.shell.com/energy-and-innovation/the-energy-future/scenarios/the-energy-transformation-scenarios.html#iframe=L3dlYmFwcHMvU2NlbmFyaW9zX2xvbmdfaG9yaXpvbnMv)

[2] MISO Futures Report December 2021
(https://cdn.misoenergy.org/MISO%20Futures%20Report538224.pdf)

[3] Ibid. pg. 4

[4] Ibid. pg. 5

[5] Ibid. pg. 6

to this analysis is the Long Range Transmission Plan which will provide transmission solutions that are screened to meet North American Reliability Council (NERC) criteria as well as provide additional economic and reliability benefits above the cost of the projects.

In pursuing the decarbonization of Louisiana's power grid, it's important for the state to be active and supportive of the Long Range Transmission Plan that MISO is engaging in. Power system modeling is complex and costly, and the forum that MISO provides for stakeholder input from members that share the system including Louisiana is invaluable. The priorities of the Climate Task Force should be represented in this process, and accurately, to ensure that transmission solutions provide a competitive market in Louisiana, which stimulates economic growth and provides access to reliable and affordable renewable energy resources to meet the needs of consumers in the state. Since the preferred loading order for electrification is to decarbonize the electricity system, now is the time to support MISO's Long Range Transmission Planning effort through endorsement, encouragement and partnership in meeting the state's decarbonization goals.

While challenges remain across other sectors in Louisiana's efforts to decarbonize, MISO's Long Range Transmission Plan is an effort that can boost decarbonization efforts far into the future while creating a clearer path forward. Most importantly, this effort can help to efficiently, and economically facilitate clean energy goals like the Draft Climate Action Plan's 5GW Offshore Wind goal. It has been widely agreed that transmission planning for the purpose of facilitating renewable energy goals can not only result in other widespread benefits, but also, result in more competitive solicitation, and lower costs for consumers. A transmission plan that results in a boom in offshore wind can follow the example of efforts like MISO's Multi-Value Projects[6], and the Competitive Renewable Energy Zones[7] which both facilitated massive expansions of wind power, while driving down costs to consumers.

Conclusion

The responsibility that decision makers in Louisiana, and worldwide have to address climate emissions, is undeniable. For world leaders to fail in meeting climate targets would have a catastrophic impact on Louisiana, but would also have a catastrophic impact worldwide. Leadership is desperately needed from decision makers everywhere, and especially those leaders whose countries, states and jurisdictions have had their fortunes historically tied to industries that contribute to climate emissions. The steps made by

[6] Clean Grid Alliance 'Supporting the 'farm-to-market' road for renewables' (https://cleangridalliance.org/our-work/mvps)
[7] Americans For a Clean Energy Grid 'Texas as a National Model for Bringing Clean Energy to the Grid' (https://cleanenergygrid.org/texas-national-model-bringing-clean-energy-grid/)

the Governor's Climate Task Force to inform state level decision making should be ongoing, adaptive, and holistic in efforts to address the scale of economic development needed to address climate change as well as consequent impacts. While there are uncertainties related to the effectiveness of some climate solutions, there are much more certain paths for other climate solutions. I've provided one crucial bedrock to the decarbonization of the power sector, an efficient regional expansion of the transmission system, but there are others at the electric distribution level which can also be effective in complementing efforts and also providing economic development like energy efficiency standards, updated building codes, rooftop solar and energy storage, as well as renewable energy microgrids.

The imperative to act today is the responsibility of all elected leaders with the power to act while there is still an opportunity to do so. Without leadership and progress made in decarbonization efforts, climate goals become even more obscure, while the impact of catastrophic climate change becomes even more crystal clear.

Sustainable Energy Economy Solutions

Andy Kowalczyk
819 Saint Roch Avenue
New Orleans, LA 70117
andy@senergysolutions.org

Louisiana Chemical Association

Gregory M. Bowser, President & CEO

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

Dear Chairman Kline,

The Louisiana Chemical Association (LCA) is providing these comments to the Governor's Office on the Climate Initiatives Task Force's (CITF) Revised Portfolio of Climate Strategies and Actions (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 the Portfolio.

In general, LCA supports and appreciates the hard work and effort that has gone into the Portfolio. LCA adopts and incorporates by reference and re-urges earlier extensive comments submitted by the Association on October 8, 2021, on the CITF's Draft Portfolio of Climate Strategies and Actions (Draft Portfolio). In addition, LCA has a couple of comments on Action 3.1 of the Portfolio:

- As industry already reports GHG emissions annually to the EPA GHG Reporting Program, LCA questions what additional data would be expected to provide to LDEQ.
- LCA requests clarification on what a "carbon-intensity" audit is and also on how "carbon intensity" is calculated.

LCA also hereby adopts and incorporates by reference those comments on the Portfolio made by the Louisiana Mid-Continent Oil and Gas Association, to the extent such comments are not inconsistent with the comments made herein and provided previously by LCA.

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 Portfolio. As a stakeholder in this process, LCA reiterates its commitment to helping the State achieve its climate goals and requests the opportunity to remain an active partner in the process of helping to develop and implement the programs, strategies, and actions described in the Portfolio.

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
Vice President of Environmental Affairs and
General Counsel
Louisiana Chemical Association

REVISED Draft Portfolio of Climate Strategies and Actions

LOUISIANA CLIMATE INITIATIVES TASK FORCE

DECEMBER 3, 2021

Introduction

This revised draft climate portfolio, containing high-level strategies and specific actions across eight priority areas, represents another step forward in Louisiana's collaborative effort to identify implementable–steps to reducing the greenhouse gas (GHG) emissions driving climate change. This portfolio is an update to the August 23-Draft Portfolio of Climate Strategies and Actions shared for six weeks of public comment, Task Force consideration, discussion with state agencies, and evaluation against the fundamental objectives of the Climate Initiatives Task Force through a robust consequence analysis that included GHG modeling and expert input from advisory group members on anticipated social, environmental, and economic outcomes. While the Task Force held three meetings in this period, 40 public comments, 40 comments from sector committee members, and 22 evaluations from advisory groups.

The Governor's Office of Coastal Activities (GOCA) reviewed all points of feedback and evaluation, considered diverging priorities and perspectives, carefully weighed trade-offs, sought ways to improve anticipated outcomes, and clarified implementation details in revising this draft portfolio. This update also includes new language introducing each strategy, including highlights of how it can realize additional benefits to Louisiana's communities, economy, and environment. Highlighted benefits listed in the strategy introductions are not meant to be comprehensive, but rather illustrative of some of the greatest potential co-benefits of climate action and important considerations for realizing them in implementation. Further identified in this update are specific targets and goals, identified and strengthened in the portfolio to provide specificity and direction for individual action. These goals were established based on their ability to drive down emissions towards net zero, determined through research and utilization of Energy Innovation's Louisiana Energy Policy Simulator Tool (EPS) released in October 2021 and best practices from other states pursuing similar ambition.

This revised draft portfolio represents a further effort at striking the balance between the needs and perspectives of different stakeholders, meeting the urgent need to address the root causes of climate change, while also supporting values related to a more equitable society, quality of life, the environment, resilience, and the economy. This draft will be discussed by the Task Force in their December 16 meeting and shared again with the public. A round of final edits to the portfolio will be made and presented to the Task Force again in early January before the final plan is sent to the Governor for his consideration on February 1, 2022.

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Table of Contents

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
DNR	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
LHC	Louisiana Housing Corporation
LPSC	Louisiana Public Service Commission
LSU	Louisiana State University
LSUCCC	Louisiana State Uniform Construction Code Council
LWC	Louisiana Workforce Commission
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

Clean Energy Transition

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

The transformation of our electricity grid to clean and renewable energy sources is a fundamental building block for meeting Louisiana's climate action goals. Here, "clean" is defined as energy generation that results in emission of little to zero GHGs (e.g., nuclear, biowaste, and natural gas with carbon capture) and "renewable" is defined as naturally replenishing energy sources with zero GHG emissions (e.g., solar, wind, and geothermal). As we shift energy sources to electricity used by Louisiana's industries, vehicles, buildings, and more, overall demand for electricity will increase and the source of that electricity becomes increasingly important. Actions under this strategy are directed at the electric grid and power generation facilities, including the utilities that aim to reliably meet the rapidly increasing demands of an electrified economy. Here, actions are aimed at increasing clean and renewable sources of power generation, while also increasing the reliability and resilience of the electricity grid.

Highlights of how this strategy can realize benefits for Louisiana:

- *Public Health:* Generating electricity from increasingly renewable sources can improve air quality and reduce negative public health impacts to communities living near power plants.
- *Economy and Jobs:* Investment in local renewable power production can lead to the creation of new jobs and economic opportunity for Louisianans, particularly with accompanying strategies to support local job training and economic development.
- *Community Resilience:* Updating and modernizing the electrical grid may reduce downtime due to weather or other disruptions, thus supporting communities by improving electrical grid dependability.

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

A Renewable and Clean Portfolio Standard (RCPS) is a law or regulation that reduces the GHG emissions associated with electricity generation. Louisiana's RCPS would require electricity used in the state to be generated from an increasing percentage of renewable or clean sources with clear guidelines for how combined heat and power generation should be considered. To qualify as clean energy, power generation facilities reliant on carbon capture technology should capture at least 90% of facility emissions, which is currently a typical target for CCS projects, but the capture efficiency requirement should increase as the technology improves and costs decline over time, Louisiana's RCPS should align with proposed federal requirements that all electricity generation be generated from renewable or clean resources by 2035, with at least 80% from renewable sources. and encourage improvements in efficiency as well as a reduction in GHG emissions. To reduce generation from unabated natural gas peaker plants, demand response should also be included as a mechanism to achieve targets.

To support the RCPS, Louisiana should also establish a statewide market for Renewable Energy Certificates (RECs) which are market-based instruments that represent the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. RECs play an important role in accounting, tracking, and assigning ownership to renewable electricity generation and use. The REC value and market would be underpinned by requiring utilities to purchase RECs as an alternate mechanism for meeting the RCPS. This action proposes engagement of the Louisiana Public Service Commission (LPSC), utilities, and stakeholders to develop and implement a RCPS and a statewide market for RECs. ***(Associated Submitted Action Proposals: 16, 56, 119, 145, 152, 162, 172)***

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

Integrated Resource Plans, or IRPs, are how utilities plan for future electric generation needs. IRPs identify future needs and different types of resources a utility can use to reliably serve customers in Louisiana. Over the next decade, Louisiana's electric utilities will be undergoing a rapid transition from predominantly fossil fuel generation to more renewable resources (coupled with energy storage) and new, high-efficiency natural gas generation facilities necessary to ensure grid reliability. Beyond the next decade, the federal government will likely require 30-year assets be low- or no-carbon by 2050, further emphasizing the importance of planning now. Where appropriate, the electric utility industry should complement large base load power stations with 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 1) accommodate the dynamic nature of the transition; 2) evaluate the costs and benefits of operating older generation facilities; 3) examine the risk of early retirement or substantial retrofitting of new fossil fuel-based generation facilities due to future federal climate action; 4) expedite renewable energy procurement in a way that will improve competition, reduce ratepayer costs, and improve Louisiana's air quality, and (5) better incorporate distributed energy resources. For example, when the Dolet Hills power station, one of Louisiana's few remaining coal-fired power plants, was closed in the fall of 2021, five years ahead of schedule, it was reported to save utility customers between $9 and $15 each month because of the lower cost of renewable power that would replace it. (***Associated Submitted Action Proposals: 112, 114, 116, 117***)

ACTION 1.3 Strategically plan for the development of offshore wind power

Given the availability of wind power as a potential energy resource from the Gulf of Mexico, Louisiana's advantage as a strong offshore energy producing state, and the economic development opportunity that wind power presents, Louisiana should continue collaboration across sectors and develop plans for the accelerated implementation of offshore wind power generation. This action proposes enactment of an offshore wind power generation goal of 5 gigawatts by 2035. This goal requires 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. To spur large-scale development, efforts should prioritize early and repeated stakeholder outreach, strategic planning for anticipated transmission and workforce needs, and improving understanding of potential environmental and social impacts and opportunities to avoid or address them. ***(Associated Submitted Action Proposals: 61, 101)***

ACTION 1.4 Establish utility green tariffs

Green tariffs are optional programs offered by utilities that allow customers to purchase renewable or clean power from specific projects through a special utility tariff rate (fee structure). Opting to pay a green tariff for renewable or clean energy helps customers meet sustainability targets and helps promote the development of additional renewable energy generation projects sooner. To maximize market participation and consumer choice, a green tariff program should provide separate renewable power and clean power tariff options. This action would include utilities working with the LPSC to establish tariff offerings for renewable and/or clean power for residential, commercial, industrial, non-profit, and governmental customers through a Utility Green Tariffs program. ***(Associated Submitted Action Proposals: 111, 118, 175)***

ACTION 1.5 Explore the role of Power Purchase Agreements and deregulating power generation in the energy transition

Power Purchase Agreements (PPAs) are long-term contracts between 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. This action requests the LPSC to further review the benefits and costs of physical PPAs and deregulated power generation as mechanisms to efficiently and expeditiously add renewable energy generation to the grid and make electrification more accessible to industrial facilities. ***(Associated Submitted Action Proposals: 11, 47, 144)***

ACTION 1.6 Develop a regional long-range transmission infrastructure plan to meet Louisiana's transmission goal

Long-range transmission planning, which seeks to optimize regional transmission infrastructure investments over a 20-to-30-year planning horizon, 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). The gap between current and 2035 targets for renewable electricity generation indicates the necessity to rely on regional transmission infrastructure and import renewable power that creates a system of longevity and continuity. Louisiana is an active participant in two regional transmission organizations, the Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP), through the LPSC, where states collaborate on and share infrastructure to support regional transmission. Recognizing the important role of long-range transmission planning for achieving GHG emissions reduction goals and maintaining reliable service during extreme weather events, this action recommends the Department of Natural Resources (DNR) Energy Office join with the LPSC, MISO, and SPP to develop a strategic plan for the buildout of Louisiana's grid and transmission infrastructure to meet a near-term goal of 30% increase by 2030 and a long-term goal of 100% increase by 2050. This action should begin in the short-term with an understanding of where and how much electricity is most needed across the state, with particular attention to industrial clusters and power facilities. From this baseline, the LPSC, MISO, and SPP can plan for and ensure connectivity across the MISO and SPP infrastructure that supports Louisiana's renewable power needs, emphasized in the "Clean Energy Transition" and "Industrial Decarbonization" Sections. ***(Associated Submitted Action Proposals: 122, 123, 165)***

ACTION 1.7 Adopt and develop measures to meet an energy storage target

Energy storage is a necessary component of Louisiana's energy transition infrastructure to ensure grid reliability and resilience. Storage enables larger quantities of and greater reliance on renewable energy sources by storing intermittent solar and wind power generation and "dispatching" them when the renewable energy is not being generated. Many states, including Virginia and Nevada, have enacted energy storage targets and a streamlined regulatory environment that incentivize energy storage. This action proposes the LPSC evaluate the role that energy storage can play in increasing reliability and resilience and enabling deployment of renewable energy. This action proposes working with utilities and DNR's Office of Energy to develop energy storage pilot projects and consider a goal of 1000 megawatts by 2030 and setting a higher target for 2050 to ensure continued progress towards a reliable, clean power grid. ***(Associated Submitted Action Proposals: 174)***

ACTION 1.8 Publish "climate rankings" for electric utilities within the statewide GHG monitoring program 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 mixture of energy production sources changes over time. This action proposes engaging with the LPSC, Department of Environmental Quality (DEQ), and utilities to develop a regularly updated "report card" that synthesizes data on the diversity of a utility's generation portfolio. This should include load, mixture of energy production sources, and renewables forecasting, as well as carbon dioxide (CO_2) and other emissions, to incorporate into DEQ's statewide GHG monitoring program. Much of this data is available, so actions to compile and synthesize data should begin immediately, noting any gaps in monitoring data and capacity. DEQ should work with utilities to fill monitoring gaps and ensure the report card is comprehensive of this energy source mix and emissions profile. Updates to this report card should be completed every two years to incentivize, track, and reward decarbonization of utilities. In the medium and long term, a climate scorecard should be developed to compare data and trends across utilities around the state and the nation, develop decarbonization challenges across utilities, and promote leadership within the state. ***(Associated Submitted Action Proposals: 108, 115)***

STRATEGY 2. Increase access to and deployment of distributed energy resources

In addition to utility-scale actions, investments in distributed renewable resources—local generation of electricity at or near where it will be used—can accelerate the deployment of renewable technologies and projects in Louisiana. Actions under this strategy provide a range of mechanisms to support more affordable access to and financing of distributed renewable resources for residential, community-based, commercial, institutional, and industrial consumers.

Highlights of how this strategy can realize benefits for Louisiana:

- *Economy and Jobs:* Investments in distributed renewable projects can support the growth of local businesses and jobs within the solar, wind, and other renewable industries in Louisiana.
- *Energy Affordability:* Distributed renewable generation provides an opportunity for energy customers to control their energy supply, reduce their energy costs, and in some cases profit from their surplus energy production. Additional attention in policy design and implementation of actions will be necessary to ensure that programs are accessible to low-income residents, including renters. Models like community-owned solar can expand access to the benefits of distributed renewable projects for all users.
- *Community Resilience:* Local renewable electricity generation, when combined with storage, can provide backup power to local businesses, residents, and community facilities during a grid outage, such as after a storm. This can ensure the continued provision of essential services to communities.
- *Protecting the Environment:* Distributed energy generation reduces the power generation needed from large-scale solar or wind farms, potentially reducing the amount of land (or offshore acreage) that would need to be converted from natural areas.

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 have been employed in the past and this action would reinstate and update that 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 program would prioritize low-income households. This action would also work to implement 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 (renters, or those with homes or roofs unsuitable for solar for example) 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- and 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 Review net metering and crediting policies for on-site and community solar energy system owners and participants

Many on-site (e.g., rooftop) solar energy system owners produce more electricity than they consume. Billing mechanisms can provide these customers with credit for the energy they generate or add to the grid. Virtual net metering applies similarly to the electricity bills of subscribers of community solar projects. When a solar energy 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 energy system installation thereby increasing demand for solar energy and creating jobs for those in the solar industry. In PSC jurisdictions, owners of systems installed prior to 2020 are grandfathered into a full retail credit net-metering schedule until the end of 2034, while owners of systems installed in or after 2020 only receive credit for the utility's "avoided cost" when selling excess energy back to the grid. This action proposes working with the LPSC to review its prior ruling on net metering for solar energy system owners and community solar participants to ensure customer rate schedules are equitable while fully accounting for the value of the distributed solar energy generation. ***(Associated Submitted Action Proposals: 57, 126, 164)***

ACTION 2.3 Strategically foster the development of resilient microgrids and dispatchable batteries

Microgrids are localized "islands" of electricity generation that can be isolated from the larger macrogrid to supply power. Dispatchable battery units can likewise supply power in response to outages. With the ability to disconnect and operate independently, microgrid systems can provide for grid resilience, mitigate disturbances by natural disasters, and allow for faster response system and recovery. This action requires collaboration across the U.S. Federal Emergency Management Agency (FEMA), the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), Louisiana National Guard, the LPSC, and local stakeholders to plan deployment and implementation of microgrids and dispatchable battery units for businesses and communities to build resilience against increasing natural disasters. With near-term federal funding available through the Infrastructure Investment and Jobs Act, this action recommends immediate implementation through pilot projects for strategic assets with a goal of broader deployment of microgrids and dispatchable batteries to improve the resilience of at-risk communities over the long-term. ***(Associated Submitted Action Proposals: 176)***

ACTION 2.4 Evaluate an Emission Reduction Generation and Supply (ERGS) program

Maximizing the usefulness of the simultaneous cogeneration of electricity and heat or renewable sources by industrial facilities can encourage more efficient onsite energy generation for large consumers, reduce energy waste, and lower the demand on the energy grid while potentially providing energy for additional uses or users. This action would request that the LPSC evaluate the creation of an Emission Reduction Generation and Supply (ERGS) program in which industry or other third-party generation created from emission-reducing sources (e.g., CHP, battery storage, on-site renewable energy generation, waste-heat generation) could be automatically sold back to the grid on an as available basis, or made available to nearby facilities through privately-owned transmission infrastructure without classifying the energy resource owner as a regulated electric public utility. This action would evaluate the benefits and costs of incentivizing industrial customers to build or utilize 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

Industrial sector emissions are Louisiana's largest contributing source of GHG emissions, accounting for over 65% of total state GHG emissions in 2018 based on the 2021 Greenhouse Gas Inventory. An accurate baseline understanding of Louisiana's industrial emissions is a critical first step towards measuring, certifying, supporting, and accounting for reductions from the industrial sector. Baseline information, with robust and reliable monitoring efforts, will allow for comprehensive tracking of Louisiana's emissions across a diverse and complex industrial profile and ensure accountability in reduction.

Highlights of how this strategy can realize benefits for Louisiana:

- *Public Confidence:* Tracking and monitoring industrial emissions alongside transparent communication of emissions reductions to the people of Louisiana are critical for ensuring confidence in this climate action plan.
- *Human and Environmental Health:* Monitoring programs that track GHG emissions can also be used to monitor other toxic and potentially hazardous emissions. Improving Louisiana's understanding of all industrial emissions will help inform and mitigate potential impacts to communities and the natural environment.
- *Maximizing Future Success:* Monitoring and inventorying industrial emissions allows the efficacy and impacts of all actions to reduce these emissions to be evaluated and improved as the plan is implemented over time.

ACTION 3.1 Require self-reporting carbon intensity and emissions audits from industrial facilities to incorporate into the statewide GHG monitoring program

To establish a baseline of current emissions on a facility-by-facility basis, this action proposes mandatory, self-reported emissions and carbon-intensity audits from all industrial facilities and a repository in which state-wide data can be stored and made publicly available. This database should be a component of the broader DEQ GHG Monitoring Program, described in Action 28.1, and 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 DEQ should compile and calibrate existing data, ensure all facilities submit reports, and update the GHG monitoring database annually with emissions and intensity information for all facilities. Immediate implementation is recommended so that the Governor's Office, state agencies, federal partners, industry, utilities, and environmental stakeholders are able to ensure continual progress towards emission reduction in this sector. ***(Associated Submitted Action Proposals: 51, 108, 140)***

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

With a sufficient baseline of industrial emissions and a monitoring program to track reduction, Louisiana can creatively develop approaches that mitigate emissions and accommodate varying types, sizes, and operations of industries. To offer such flexibility in implementation and reward decarbonization, this action establishes a voluntary Industry Certification Program in DEQ that incentivize industries to implement GHG reduction measures. This program would require participating industries to propose and implement site-specific GHG emission reduction plans, tailored to their industry and locational needs on an achievable timeline towards net zero by 2050. Plans should then be evaluated and certified by DEQ using a common metric to evaluate and track success, updated by annual site visits and certification renewals.

Industries will only be required to pay a small participation fee but benefit in many ways: recognition in emission reduction, use of the program's promotional material and monitoring capability, advantages in government procurement, potential grants for GHG-reducing facility improvements, and information sharing across industry peers. The participation fee Industry Certification Program would cover costs to increase agency 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. Medium-term implementation of this action is most beneficial, to ensure a firm baseline of emissions is established first and drives the certification program. ***(Associated Submitted Action Proposals: 62)***

ACTION 3.3 Advocate for a national carbon price and explore joining a multi-state carbon pricing system to advance GHG emissions reduction and direct proceeds toward the advancement of strategies in the Louisiana Climate Action Plan

As inherent in its name, a carbon price applies the external cost of GHG emissions (e.g., public or social costs for damage to crops from drought, community loss from flooding, etc.) to the source of emissions through a price, intended to shift the burden for damage of GHG emissions back to those who are responsible for it and who can avoid it. Carbon price can either encourage emitters to shift activities to lower emissions or continue emitting and pay for it. Multiple mechanisms can be used for carbon pricing, with cap-and-trade and carbon tax as leading methods, applied economy-wide or to a specific emissions sector. 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). Alternatively, carbon tax is a more straightforward system, where government sets a price that emitters pay for each ton of GHG emissions emitted. These mechanisms are used by states, regions, and nations, designed to support intended outcomes, needed flexibility, and political feasibility. This action tasks Louisiana's DEQ to explore joining a multi-state carbon pricing system. Alongside exploring and joining a regional system, this action tasks state leaders to continue advocating for a national carbon pricing system, where the federal government sets a national price on carbon to avoid carbon leakage across states. Regardless of the system pursued, this action directs proceeds from the sales of emissions allowances 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)***

ACTION 3.4 Develop a comprehensive strategy to reduce industrial GHG emissions

Industrial sector actions require intentional engagement and support to ensure GHG-reducing regulations, incentives, and programs are implementable for a wide range of facility sizes, types, and operations. With many solutions and approaches set forth in this section, this action tasks DEQ and DNR jointly to develop a statewide strategy to achieve actions of this section, enforce industrial emissions reductions, prevent waste from new and existing sources, and attract clean energy industry to the state. DEQ, with its monitoring and regulatory authority, and DNR, with its permitting authority and energy office, are central implementers of monitoring, inventorying, certifying, and supporting industrial decarbonization. This cooperative endeavor should outline a strategic path forward to implement actions of Louisiana's Climate Action Plan and to monitor and reduce industrial emissions. Alongside ensuring agency collaboration and role in implementation, this framework should create opportunities for 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. Particularly, this effort should also include specific outreach and engagement with Louisiana's top emitters to develop targeted measures to decarbonize their facilities. Alongside the GHG monitoring program, this framework would benefit the Climate Action Plan most through immediate implementation to set Louisiana on a trajectory to address its largest emission sector and to best support major emitters of the sector. ***(Associated Submitted Action Proposals: N/A)***

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

Improving the efficiency of industrial processes is the quickest, simplest way to reduce industrial energy demand and corresponding GHG emissions. Efficiency can also lower energy cost, mitigate risk, increase competitiveness, and make electrification more feasible. Efficiency approaches can encompass internal operations, supply chains, products and services, and cross-cutting issues across a variety of types and sizes of industry. Actions under this strategy are directed at increasing efficiency via implementation of standards and direct engagement with energy users and manufacturers.

Highlights of how this strategy can realize benefits for Louisiana:

- *Timely Implementation*: Increasing industrial efficiency can occur now. Technologies are currently available to increase efficiencies in the near-term.
- *Quality Improvements*: Increasing energy efficiency can improve other important aspects of industrial operation including product quality, worker health and safety, and environmental performance.
- *Economy and Jobs:* Investment in the development and deployment of new technologies to improve efficiency creates jobs in research and development (R&D) and installation. The implementation of energy efficiency projects and good energy management practices can save energy and reduce costs for companies, thereby increasing industrial competitiveness.

ACTION 4.1 Set Industry Efficiency Standards

Mandatory standards are necessary to signal a commitment to efficiency. This action proposes that the state further energy efficiency through Industry Efficiency Standards. To ensure that the benefits of efficiency are realized, DNR should immediately pursue Industry Efficiency Standards through rulemaking, based on total building or structure performance. Near- and long-term standards will ensure efficiency remains a priority even after appropriate phase-in measures and near-term goals are met. Agency resources must be allocated to ensure accountability that standards are followed and goals are met across facilities. ***(Associated Submitted Action Proposals: N/A. Referenced Resources: 1)***

ACTION 4.2 Develop and implement a Strategic Energy Management Program

Education, technical assistance, and financial incentives must accompany mandatory standards to ensure their widespread adoption and success. Strategic Energy Management (SEM) encourages 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 should partner closely with and expand upon existing work of Industrial Assessment Centers (IACs), federally funded partnerships with local universities to identify energy efficiency improvements for small and medium-sized manufacturers. Louisiana's IAC is a team of Louisiana State University (LSU) 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, pollution prevention, and productivity improvement. Through an SEM Program, state agencies, industries, and universities should discuss and address concerns, limitations, and feasibility of various methods to improve efficiencies, building on experience and knowledge of the LSU IAC. The SEM program may fund pilot projects and 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. Alongside efficiency standards, the SEM is immediately implementable and would ensure successful adoption of efficiency standards. ***(Associated Submitted Action Proposals: n/a. Referenced Resources: 1, 2)***

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

The fossil-derived energy used to power Louisiana's industrial sector is the state's largest source of GHG emissions. Moving this energy demand to zero-carbon electricity and fuels is the most powerful action that can be taken to mitigate Louisiana's emissions and ensure Louisiana remains a global industry leader in a net-zero future. Some electrification technology is readily available and deployable across various industrial processes, particularly for those of low- and medium-heat and for green hydrogen in high-heat processes. However, decarbonizing industrial processes is a newer challenge with few blueprints to follow. Several actions under this strategy highlight the importance of research and development and pilot projects to better understand how electrification, low- and no-carbon fuels, and carbon capture, use, and storage (CCUS) can best be deployed in Louisiana's industrial facilities.

Highlights of how this strategy can realize benefits for Louisiana:

- *Public Confidence:* Tackling Louisiana's largest emissions sources head-on will inspire additional action at the local and facility levels. Leadership from the state and industry, showing that Louisiana is serious about mitigating its hardest-to-abate emissions, will increase confidence in the state's industrial future and commitment to the clean energy transition.
- *Economy and Jobs:* Investments in electrification and industrial fuel-switching will create jobs in retrofit and new facility projects, piloting technology and approaches that can be used on industrial facilities around the world with Louisiana leading the way.
- *Human and Environmental Health:* Reducing fossil energy combustion in and near industrial facilities can reduce not just GHG emissions, but other pollutants as well, improving the health of fenceline communities and benefitting the environment.

ACTION 5.1 Accelerate electrification of industrial processes and equipment through pilot projects, incentives, and requirements

Technology currently exists to electrify many types of systems and processes within industrial facilities, but the economic and feasibility and scalability of this technology has not been widely demonstrated in Louisiana. This action proposes the development of pilot projects to electrify systems within Louisiana industrial facilities (e.g., building systems and motors) to demonstrate the potential for more widespread implementation. Electric furnaces for temperatures above 350°C are also ripe for pilot projects, as they are in development but not yet technologically mature for industrial use.

Alongside demonstration projects, incentives will meaningfully drive changes in industrial investment. This action tasks Louisiana to advocate for a federal industrial-scale electrification incentivize, similar to the 45Q tax credit for carbon capture and storage (CCS). Such large-scale, near-term federal investment will drive demand for electrification, facilitating accelerated progress towards industrial decarbonization and grid transformation. Any incentives should be based on criteria that prioritize communities most closely impacted by industry and where explicit reduction co-benefits of replacement technology have been identified and will be most quickly realized. Alongside federal investment, this action tasks Louisiana Economic Development (LED) to work with DNR and LPSC to begin developing regulatory requirements for industrial transformation to electrification by 2050. ***(Associated Submitted Action Proposals: 29, 63)***

ACTION 5.2 Promote low-carbon alternative fuels and feedstocks for petrochemical industrial processes

Industrial feedstocks (raw 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. 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. As well as being a large producer of bulk chemicals, Louisiana also utilizes bulk chemicals as intermediate products to create end products like plastic containers and fertilizers. To reduce emissions from chemicals production and refining manufacturing, low- and no-carbon hydrogen as well as captured CO_2 can replace carbon-intensive feedstocks. Low-carbon fuels can also replace carbon intensive fuels that manufacturers currently rely on to achieve the high temperatures needed in many industrial processes. This action proposes investment in research, development, and demonstration of low- and no-carbon fuels and feedstocks, such as clean hydrogen, to complement industrial electrification for a comprehensive decarbonization strategy for Louisiana's heavy chemical industry. The DNR Energy Office should partner with the U.S. Department of Energy (DOE) to solicit funding for Louisiana to lead research, development, and demonstration in this area and become a clean hydrogen hub for the nation. As electrified equipment become more available in the coming years, this action also proposes Louisiana lead in piloting and deploying clean technologies. ***(Associated Submitted Action Proposals: 6, 12, 51, 107, 125. Referenced Resources: 1)***

ACTION 5.3 Support the safe and responsible deployment of carbon capture, utilization, and storage for high-intensity and hard-to-abate emissions

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 pre- and 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. CCUS has a critical role to play in decarbonizing the global economy. This is particularly true in the industrial sector, where high temperature processes cannot be readily transitioned to electrification or low-carbon alternatives and where process emissions from chemical reactions are unavoidable except with CCUS.

This action proposes that the state continue to work with federal and state partners, industry, and communities to determine potential sites for safe carbon capture storage, to identify a regulatory and legal framework that supports CCUS, and to determine impacts of capture and transport infrastructure buildout. While the overall impacts of CCUS deployment are expected to be positive as they relate to air quality, further assessment, quantification, and engagement of local communities is needed to fully understand potential impacts of CCUS on local criteria air pollutants and other emissions resulting from carbon capture retrofits at industrial facilities. These efforts should result in responsible CCUS projects that address cumulative pollution and incorporate environmental justice and equity concerns into siting and decision making. Further actions under Strategy 26 outline specific areas for impact analysis needed in the near-term prior to permitting and deployment of infrastructure. ***(Associated Submitted Action Proposals: 7, 45, 49, 74, 155)***

ACTION 5.4 Invest in research for utilizations of captured carbon and life cycle analyses to understand their overall impact

The capture and use of CO_2 to create valuable products (CCUS) has potential to lower the net costs of reducing emissions while removing 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 carbon-containing products that generate economic value. Utilization technologies of CCUS 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 Louisiana universities solicit funding for studies that more comprehensively understand various utilization techniques and their applicability and feasibility to reduce emissions from Louisiana industries. Research should begin in the short-term to influence and inform medium- and long-term implementation. ***(Associated Submitted Action Proposals: n/a)***

Action 5.5 Develop Industrial Cluster Decarbonizations Plans to plan for and direct facility-level investment

Louisiana is home to three major "industrial clusters," geographic areas where industries are co-located and share resources. Though they are major emission sources, clusters provide opportunities for deployment of decarbonization technologies at scale, sharing of risks and resources of their location, and aggregation and optimization of energy demand. This action proposes the U.S. DOE, DEQ, and DNR Energy Office partner with utilities, the LPSC, industrial clusters, and nearby communities to develop site-specific Industrial Cluster Decarbonization Plans ("Cluster Plans") that utilize industry co-location to develop facility-level decarbonization measures. Cluster Plans should be led by companies in the respective clusters with leadership from the U.S. DOE, DEQ, DNR Energy Office, and neighboring communities and focus on transmission buildout, grid updates, and storage capacity to facilitate industrial-scale electrification, alongside development and utilization of hydrogen and CCS hubs. State leadership should build upon initiative taken by state agencies in Action 3.4, with federal engagement regarding funding opportunities and pilot projects. Since success is dependent upon collaboration and unified action across all stakeholders, development and adoption of Cluster Plans allows industry to tailor action to their specific needs and locations, while also meaningfully engaging and addressing the needs of surrounding communities. Action by facilities in major industrial clusters is central in meaningful reduction of industrial emissions and grid transformation, so results of this action should further those of this strategy and of the "Clean Energy Transition" section. ***(Associated Submitted Action Proposals: 29, 71, 73, 139)***

STRATEGY 6. Promote reduced-carbon materials

The lifecycle emissions and embodied carbon in fuels, construction materials, and other products are an easily overlooked source of GHG emissions that can be mitigated. Using the government's power of the purse to encourage and incentivize selection of materials and products created through lower carbon intensity processes is a powerful tool for building cleaner while creating a stronger market for lower-carbon products. Actions under this strategy aim to address material sourcing in a systematic approach, from public construction projects to household recycling, to reduce Louisiana's reliance on higher carbon intensity products.

Highlights of how this strategy can realize benefits for Louisiana:

- *Economy and Jobs:* An understanding of the GHG emissions from materials production and supply chains can help state and federal entities make better choices when investing in construction projects. Increased government demand for lower carbon alternatives, with requirements to source from within the U.S., will spur economic growth and innovation to meet new requirements.
- *Community Engagement and Environmental Stewardship:* State and local programs that consider the life cycle of products can serve as an entry point for greater public engagement in climate action. Commitment from the state and private sector to identify reuse opportunities for waste streams can inspire individual action to continue waste reduction.

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 utilizes procurement to create market shifts and incentivize the use of building materials (e.g., concrete and steel) manufactured through lower carbon intensity processes to reduce the GHG emission footprint of construction. This action, spurred by Louisiana's Division of Administration (DOA), would require all state agencies to consider embodied carbon emissions (all CO_2 emitted in producing materials) of industrial products when contracting for state infrastructure and non-infrastructure projects. Securing green vendors through procurement is immediately implementable through adjusting procurement procedures of DOA. However, incentivizing use of green vendors through weighted scoring criteria requires legislative action that should be worked towards. Buy Clean has been pursued by other states, with programs in development for Texas, Colorado, New York, Oregon, Minnesota, Connecticut, New Jersey, and Washington, and one established in California. ***(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 on 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 across DEQ, waste management entities, non-governmental organizations (NGOs), and private industry, tasks university partners with 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. Louisiana universities should then work with state agencies and manufacturers involved in the promotion of exports of goods and materials manufactured in Louisiana to develop specific supply chain opportunities for circular economy principles. ***(Associated Submitted Action Proposals: 72, 82, 85)***

Actively Manage Methane Emissions

STRATEGY 7. Increase and mobilize resources for decommissioning legacy oil and gas infrastructure

Charting a course for Louisiana's clean energy transition must address the persistent and complex challenge of methane emitted from oil and gas infrastructure, particularly orphaned wells. Orphaned wells are abandoned oil and gas wells for which no one is a responsible party or the responsible party has failed to maintain the infrastructure. Management of this legacy and inactive infrastructure presents a unique challenge since legal responsibility and potential safety may shift over time. Without steps that tighten active enforcement and make available additional resources to adequately manage these sites, methane leakage from legacy infrastructure will continue to impose an economic, environmental, and public health toll on surrounding communities. Actions under this strategy aim to address legacy infrastructure through tightening regulations and enforcement at the state level while aligning with near-term federal funding opportunities.

Highlights of how this strategy can realize benefits for Louisiana:

- *Economy, Jobs, and Education:* Investment of funds specifically for worker training and retraining in plugging leaks of legacy and abandoned wells can position Louisiana's residents for increased employment opportunities and additional career pathways. Engagement with community colleges across the state should be central in implementation.
- *Public Health:* Addressing legacy infrastructure can reduce potential negative environmental and public health impacts of these sites to surrounding communities.
- *Environmental Protection:* Legacy site remediation reduces potential harm of orphaned and abandoned wells to surrounding ecosystems and can even improve ecosystem functioning through restoration practices.

ACTION 7.1 Hold former well operators accountable for orphaned wells

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 recommends DNR take legislative and regulatory measures to ensure that former operators are held responsible for abandoned wells. Through rulemaking, the DNR Office of Conservation should amend the definition of "responsible party" to include all former operators. This definition of "responsible party" is significant to ensure responsibility for abandoned infrastructure does not shift to the state over time. DNR should also collect and publish a database of orphaned wells that indicates their responsible parties to clearly identify the location and ownership of infrastructure in the event leaks are detected and need to be repaired immediately. We recommend this action be pursued immediately to identify responsible parties and kickstart methane reductions. ***(Associated Submitted Action Proposals: 167)***

ACTION 7.2 Strengthen financial security requirements for plugging wells

Financial security requirements are state bonds that guarantee compliance of operators with regulations for the issuance of permits for oil and gas exploration, drilling, and plugging. Since 2014, DNR's Office of Conservation has implemented stronger regulatory practices of requiring financial security from operators and more frequent inspections, which has caused the number of identified orphaned wells to nearly double. However, extensive loopholes in financial security regulation allows operators to avoid financial security requirements, leading to a failure to plug wells. Of the 716 wells that have been orphaned since financial security became a requirement, 55% were exempt from financial security. Therefore, this action recommends comprehensive legislative reform to raise the amount of financial security and remove the ability of operators to use blanket securities, which allows the operator to circumvent financial security. Additional financial security should be added to the Oilfield Site Restoration (OSR) Program to fund plugging of abandoned infrastructure. ***(Associated Submitted Action Proposals: 166, 168)***

ACTION 7.3 Tighten the "future utility" designation and requirements for inactive wells

Under current regulation, operators can classify inactive wells with a "future utility" status if 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 creates potential negative impacts on the environment and communities. For example, over 1500 wells have been classified as "future utility" status for more than 25 years, over 400 more than 50 years. Over 7000 wells are currently listed as "future utility" and have had that status more than 5 years. This action recommends that DNR's Office of Conservation develop measures that tighten the definition and requirements of a "future utility" designation in its application and limit the duration a well can remain at "future utility" status. Under this action, current "future utility" wells would be reviewed and added to the list of orphaned wells as appropriate. Similar to other actions of Strategy 7, this action requires, and would benefit from, immediate action. ***(Associated Submitted Action Proposals: 169)***

ACTION 7.4 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 and leak over time. Plugs are expected to last 100 years, even without enduring environmental stressors, and provide limited methane mitigation. This means 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 investment in training Louisiana's workforce to monitor wells and quickly respond to leaks by plugging them. This action tasks DNR's Office of Conservation to establish an Abandoned Well Pilot Program from federal and state funding that provides training and jobs for unemployed residents in Louisiana to plug orphaned wells. Pilots of this program should be initiated in parishes with the highest concentration of oil and gas infrastructure. ***(Associated Submitted Action Proposals: 131)***

STRATEGY 8. Monitor and regulate methane emissions

Methane, more than twenty-five times more potent than CO_2, is a common and elusive GHG that must be monitored and abated for Louisiana to meet its emissions goals. Alongside leakage in pipeline infrastructure, methane is also intentionally and unintentionally released into the atmosphere through routine industrial practices, including at the wellhead of extraction, during transport and storage, refining, and direct use. Waste management facilities and sites are also sources of methane emissions that require monitoring and regulation. Stopping these leaks and avoiding intentional methane releases both require new techniques for monitoring, measuring, and capturing methane, set forth in actions of this strategy.

Highlights of how this strategy can realize benefits for Louisiana:

- *Economy & Jobs*: Increasing the efficiency of methane extraction, reducing methane leakage, and maximizing methane recapture creates fewer economic losses from waste and leaks. Repairing methane leaks will also create jobs.
- *Effectiveness and Longevity*: Methane leaks and intentional releases are not fully known or tracked, so monitoring programs with emerging technologies can ensure leaks are detected and quickly repaired, increasing the effectiveness of methane reduction.
- *Human and Environmental Health*: Reducing methane leaks can improve air quality and pipeline safety, benefiting Louisiana's ecosystems and residents. Data freely available to the public can build community support for actions directed at curbing emissions. With transparent access to methane emission information, communities can see realized benefits of investment in methane reduction.

ACTION 8.1 Enact methane waste rules

This action proposes that, through the interagency framework of Action 3.3, DNR's Office of Conservation and DEQ collaboratively develop rules that require methane emitters to establish a baseline methane waste capture rate, determined by their quarterly reports, and enact methane waste rules in line with rules 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. DEQ and DNR should immediately begin studying the standard best suited for regulating methane waste in Louisiana and begin the rulemaking process to align with the progress of other states. ***(Associated Submitted Action Proposals: 43, 89, CO, NM)***

ACTION 8.2 Establish methane monitoring stations in the GHG Monitoring Program

The most effective way to reduce leaks is to require frequent, and where possible, continuous monitoring. To more comprehensively monitor potent methane emissions, this action proposes that DEQ incorporate methane monitoring capabilities into the DEQ GHG Monitoring Program, proposed in Action 28.1 to ensure methane emissions are adequately understood and monitored. DEQ should work with outside stakeholders to utilize and deploy emerging technologies, such as remote sensing and satellite imagery, alongside traditional in-situ sensing for continuous monitoring of methane emissions. The GHG Monitoring Program should also ensure that data and maps that show regular fluxes in methane emissions are provided freely to the public and are updated on an annual basis. ***(Associated Submitted Action Proposals: 76, 151)***

ACTION 8.3 Enable an effective Leak Detection and Repair Program

To align with federal rules to curb methane emissions by 30% by 2030, more regularly scheduled inspections, sufficient oversight measures, facility-wide leak rate goals, frequent component monitoring, and other measures are needed to complement federal funding and comprehensive monitoring to ensure leaks throughout the supply chain are swiftly detected and repaired. Many states have established Leak Detection and Repair (LDAR) programs, modeled after the U.S. EPA LDAR Program and Best Practices Guide, to monitor GHG emissions and criteria pollutants and require owners and operators to find and fix leaky and malfunctioning equipment at production facilities, compressor stations, natural gas storage facilities, and process plants within a set time period of detection. Alongside reduced emissions, air quality and pipeline safety improvements make LDAR programs very cost-effective for all parties involved. Provided with the proper funds, DNR and DEQ, through their implementation framework in Action 3.3, should build on existing LDAR programs for criteria pollutants and develop a methane LDAR program. ***(Associated Submitted Action Proposals: 91)***

Transportation, Development, and the Built Environment

STRATEGY 9. Accelerate adoption and accessibility of clean vehicles and fuels

Transitioning transportation from fossil fuel combustion to electric vehicles and low-carbon fuels will play a critical role in reducing emissions from this sector. Louisiana can support greater adoption of clean vehicles by expanding the infrastructure to support this transition, including charging and fueling stations that are accessible to more drivers and passengers across income levels. This strategy includes actions focused on light-duty passenger vehicles as well as actions tailored to the additional technological and infrastructural needs to transition medium- and heavy-duty transportation, shipping, and aviation to low or zero-carbon fuels. The state of Louisiana can lead by example through efforts to transition public fleets to clean and zero-emission vehicles.

Highlights of how this strategy can realize benefits for Louisiana:

- *Supporting the Workforce*: Investments enhancing transportation infrastructure, in conjunction with targeted job training, can provide employment opportunities to Louisianans, including those of differing educational backgrounds.
- *Strengthening the Economy:* Global and national trends may lead to broad, increased use of electric vehicles. This shift may alter expectations of residents, tourists, and commercial interests alike, and proactive preparation will enable a smooth transition and mitigate negative economic impacts.
- *Human and Environmental Health:* Increasing use of electric vehicles – which produce limited or no tailpipe emissions – can improve overall air quality with subsequent benefits to public health and the environment.

ACTION 9.1 Shift public fleets to low and zero-emission vehicles

With over 80,000 public vehicles operating in Louisiana, significant GHG emissions reduction can be realized by transitioning 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 50% of public fleet vehicles to low- and zero-emission vehicles and fuels by 2035 and 100% by 2050. Unless agency needs dictate otherwise, passenger, light-duty vehicles should move to zero-emission, electric vehicles, while heavy-duty trucks and vehicles transition to low-carbon alternative fuels, such as renewable diesel, that can be used in existing vehicles. Action should be led by DOA but requires coordination across state agencies, local government, and other public fleet users (e.g., levee boards) to update procurement policies and practices. To ensure successful implementation, training for vehicle maintenance should be made available to fleet managers. In order to meet the fleet transition goal, implementation must begin immediately with DOA prioritizing a transition for passenger, light-duty vehicles while technology continues to evolve for medium- and heavy-duty vehicles. ***(Associated Submitted Action Proposals: 28, 36, 41, 143, 157)***

ACTION 9.2 Expand the availability and reduce socio-economic and geographic barriers of low- and zero-emission passenger vehicles and supporting infrastructure

As low- and zero-emission vehicles become increasingly available for passenger transit, steps need to be taken to ensure strategic and equitable statewide buildout of vehicle electrification infrastructure, with special attention given to underserved and overburdened communities. Louisiana's Department of Transportation and Development (DOTD), in partnership with Louisiana Clean Fuels and others with local knowledge, can utilize federal funds to deploy electric vehicle charging infrastructure across the state in a way that is strategic and increases access for all communities. Together, DOTD and partners should also provide community education to increase the demand for and adoption of electric vehicles. A goal of 250 stations per 100,000 residents by 2050 should be adopted to ensure progress is made towards this action. Alongside charging infrastructure, action must also be taken to ensure access to the vehicles themselves across more income levels. To this end, incentives for low- and zero-emission vehicles should be reinstated by the Legislature, either in the form of a targeted incentive program or tax credit according to income, to accelerate adoption and reduce barriers to vehicle access. ***(Associated Submitted Action Proposals: 83, 137, 175)***

ACTION 9.3 Prepare for the expanded availability of alternative fuels for waterborne transport, medium- and heavy-duty vehicles, and aviation

Increased availability of alternative fuel sources is critical to reducing GHG emissions and facilitating a smooth transition to carbon neutral transportation. This action proposes increased access to alternative fuels (particularly for heavy trucks), efficient and sustainable fuels (particularly for aviation), and investments in innovation (particularly for waterborne transportation). DOTD's Transportation Research Center can immediately take the lead in advancing and innovating solutions that will reduce the GHG emissions from medium- and heavy-duty vehicles, waterborne shipping, and aviation. Meanwhile, other successful programs like the Port of New Orleans' Clean Truck Replacement Incentive Program should be implemented with other Louisiana ports. ***(Associated Submitted Action Proposals: 12, 13, 22, 27, 84, 94, 125)***

ACTION 9.4 Implement targeted pilot projects to accelerate transition of medium- and heavy- duty vehicles to low- and zero-emission vehicles

Targeted pilot programs and demonstration projects can encourage and accelerate a transition to low- emission medium- and heavy-duty vehicles now, while technology advances to become more accessible and deployable at scale in the long-term. This action proposes DOTD, in partnership with DNR and DEQ, identify and implement targeted pilot projects to test emerging technologies in the near term that prepare for deployment at scale of clean medium- and heavy-duty transit. With recent federal investment in freight truck electrification, states agencies should partner with the U.S. DOE to access and serve as a conduit for freight decarbonization across the nation. Similarly, funding to replace diesel-fueled with electric school buses is available at the federal level. These vehicle transitions not only reduce emissions but can also serve as mobile power sources to meet community energy needs post-disaster. ***(Associated Submitted Action Proposals: 41, 84, 137)***

STRATEGY 10. Reduce vehicle miles traveled and increase transportation efficiencies

A central approach to reduce GHG emissions from the transportation sector is to reduce total travel demand and overall fuel usage by passenger and freight vehicles. Fewer trips and fewer vehicles on the road also reduce traffic congestion and traffic-related accidents. This strategy pursues efficiency through reduced vehicle idling, lowers the number of trips taken by expanding access to online services and remote work capabilities, and shifts passenger and freight trips to more efficient modes of transportation.

Highlights of how this strategy can realize benefits for Louisiana:

- *Human and Environmental Health:* In addition to reducing GHG emissions, reduction of vehicle miles traveled would reduce the production of other pollutants found in vehicle exhaust that can be harmful to public health and the environment. Furthermore, increasing safe access to active transportation options such as walking and biking provides more opportunities for exercise and is tied to improved public health outcomes.
- *Broader Access to Essential Services and Job Opportunities:* Increasing internet access and teleworking opportunities can provide additional access to essential services and employment opportunities to individuals for whom working or traveling outside the home may be challenging.

ACTION 10.1 Promote opportunities to reduce vehicle miles traveled

Vehicle Miles Traveled, or VMT, are a common measure of transportation demand and can serve as a proxy for reducing GHG emissions associated with the movement of people or goods. Promoting alternatives to VMT can be accomplished through transportation mode shifting, where alternatives to automobile travel like walking or bike riding are encouraged, low-carbon or more fuel-efficient freight options, or where multiple individual trips are consolidated through carpooling or public transit. This action proposes that Louisiana set goals of doubling use of alternative modes of transportation by 2035. To meet this goal, the action tasks DOTD to support regional Metropolitan Planning Organizations (MPOs) and local governments to implement VMT reduction strategies that support, promote, and incentivize: 1) Complete Streets infrastructure (where the safe mobility for all users including pedestrians, bicyclists, public transit users, and automotive users is enabled and supported); and 2) the effective integration of local and regional transit and land use strategies, such as evaluating how project design criteria and scoping can be modified for different outcomes. This action pairs with the transit initiatives in Strategy 13 and the compact development actions in Strategy 14 and should build on existing success stories from partnerships with local government, nonprofits, and advocacy groups. ***(Associated Submitted Action Proposals: 69, 70)***

ACTION 10.2 Expand broadband internet access

The COVID-19 pandemic has accelerated the transition to online services and work from home opportunities, but this transition has not been widespread nor accessible for all Louisianans due to limited access to broadband internet connections. Expanding broadband, particularly for rural communities, can facilitate easier access to e-commerce, telecommuting, employment opportunities, and virtual health while reducing overall transportation demand and GHG emissions. The state established the Broadband for Everyone in Louisiana (BEL) Commission in 2019 to facilitate adoption by private sector providers, public entities, and other stakeholders and availability of broadband for Louisiana residents. This action proposes partnering with the BEL Commission and their 2020 Action Plan to maximize the potential of expanding broadband availability to mitigate GHG emissions and ensure cross-government and collaboration with multiple stakeholders to build out broadband effectively, efficiently, and equitably in public rights of ways and through other means. Specifically, with available federal funds from the 2021 Infrastructure Investment and Jobs Act, this action tasks the BEL Commission to apply for grants that connect Louisiana's underserved communities to expanded broadband access and deployment. ***(Associated Submitted Action Proposals: 25)***

ACTION 10.3 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 MPOs and include biking, walking, ridesharing, public transit, and telecommuting. To further reduce regular travel demand in Louisiana, this action proposes DOA adopt a statewide policy that allows for and encourages hybrid workplaces with reduced or staggered in-office days with telecommuting for public employees. Alongside reducing emissions, this policy eliminates time spent commuting and can cut energy usage in public buildings. ***(Associated Submitted Action Proposals: 81)***

ACTION 10.4 Reduce idling of public fleets

One gallon of fuel can be burned per hour of idling, wasting fuel and producing up to 20 pounds of CO_2. Idle reduction technologies and practices can reduce the time that vehicle engines run while at rest and reduce these unnecessary GHG emissions and fuel waste. This action proposes that DOA requires idle reduction telematics be placed on all of Louisiana's publicly owned GHG emitting vehicles. Implementation of this action would be supported by fleet telematics software, already installed in many state-owned vehicles, to manage fuel usage and set an automatic shutoff for vehicles after prolonged idling. Training for fleet managers and operators in all agencies is necessary to support telematics usage and successful implementation across public fleets. Telematics requirements should be pursued in the short-term to reduce emissions from gasoline-fueled vehicles as the public fleet transitions to zero-emission vehicles. ***(Associated Submitted Action Proposals: 33, 100, 161)***

ACTION 10.5 Explore short-term opportunities and incentives to increase efficiency of freight transport

Given the disparity between needed investments for freight infrastructure and available funding, DOTD, in partnership with DOA and LED, should work with private freight companies (ground, rail, ports, and aviation) to elicit, prioritize, and fund project proposals that can improve the efficiency of freight transportation in and through the state. Project examples include targeting emissions reductions for freight transport along highways, at ports, and at airports such as those that optimize traffic, directly reduce emissions and idling such as shore power, reduce carbon intensity, and explore mode shifting in ways that build upon existing DOTD congestion reduction programs. ***(Associated Submitted Action Proposals: 1, 33, 106)***

STRATEGY 11. Increase urban, rural, and regional public transit service

Reliable public transit systems are pivotal in the effort to reduce VMT and vehicle emissions. The hallmarks of a successful public transit system include consistent, high rates of ridership and stability of the systems that support both frequency and reliability of public transit service. To meet VMT reduction goals, more funding should be allocated to the State Transportation Plan and transit operations across Louisiana. Additionally, it will be important to coordinate more on-demand rural transit services and improve regional transit connectivity. This has the potential to connect communities to employment opportunities and other essential services across the state that are otherwise inaccessible.

Highlights of how this strategy can realize benefits for Louisiana:

- *Strengthening the Economy and Providing Access to Jobs and Services:* Investing in public transit can provide direct employment opportunities that strengthen the economy in the short-term, while increasing access to jobs more broadly by connecting workers to opportunities and providing long-term increases in workforce productivity.
- *Improving Quality of Life:* Public transportation infrastructure in both rural and urban settings can enable all Louisianans broader regional access to goods and services. It expands access to groceries, health services, and other basic necessities as well as avenues for recreation or entertainment for individuals and families that do not own a private vehicle—including members of historically marginalized communities.

ACTION 11.1 Increase financial support to urban 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, particularly in high-population areas of low-wage workers known as "transit deserts," will also benefit marginalized, transit-dependent populations in urban areas and provide competitive access to economic opportunity. This action proposes that more resources be allocated to DOTD through the state budget and the Infrastructure Investment and Jobs Act to increase funding for transit operations in "transit deserts" and provide greater funding of the State Transportation Plan. The state should work with federal partners to ensure more federal funding moves down to regional MPOs to subsidize annual transit operations, provide resources to urban transit deserts, and allow local jurisdictions to secure funding more easily for transit locally. ***(Associated Submitted Action Proposals: 95, 138)***

ACTION 11.2 Enable access to resources outside urban centers for rural transit access

Nearly 750,000 of Louisiana's 4.6 million residents live in rural areas. Therefore, a necessary measure to reduce passenger vehicles on the road requires access to resources beyond urban centers and greater investment in rural transit service. This action builds on the prior action focused on local transit in urban areas and proposes that DOTD, local governments and rural transit providers take a variety of measures to enable resource access to rural communities including obtaining smaller transit vehicles for more specialized trips, developing an on-demand ridership system, and scheduling planned trips to city centers coordinated and supported by the community. Federal funding, allocated to the State Transportation Plan, should be prioritized for these expanded services. (***Associated Submitted Action Proposals: 81, 95, 128***)

ACTION 11.3 Invest in regional transit to connect communities to jobs and services across Louisiana

Alongside local and intra-city transit, regional connectivity can encourage greater use of public transportation across rural and urban areas and transport systems. 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. For example, a portion of the $66 billion available for passenger rail in the federal Infrastructure Investment and Jobs Act could be used to support a high-speed rail between New Orleans and Baton Rouge that could help minimize light-duty and bus travel between Louisiana's largest cities for daily commuters, increase tourism economic activity, and participation in cultural or entertainment events. This action proposes federal investment through Louisiana DOTD, local MPOs, rural governments, and municipalities to intentionally begin collaborating on and planning in the short-term to build infrastructure that supports medium- and long-term regional connectivity across Louisiana. ***(Associated Submitted Action Proposals: N/A)***

STRATEGY 12. Coordinate land use planning to reduce sprawl and support healthy and resilient communities

Mitigating the emissions causing climate change is interconnected with adapting to the impacts of climate change, particularly as it pertains to land use and land use management. Reducing sprawl and promoting compact development, a practice where land is used efficiently and intentionally, reduces GHG emissions and makes communities more resilient. Compact development promotes risk reduction and open space conservation while encouraging reuse and retrofit of existing structures, energy efficiency, use of public transit and active modes of transportation like walking and biking, and reduced VMT. In order to coordinate across risks, vulnerabilities, relevant ongoing initiatives, and land use objectives throughout Louisiana, a statewide framework is needed to unify and guide holistic land use management. Actions under this strategy aim to improve the coordination of land use practices across the state and to assist local communities in planning for a climate-ready future.

Highlights of how this strategy can realize benefits for Louisiana:

- *Protecting the Environment:* Reducing sprawl slows expansion of new development into natural settings, preventing negative impacts to ecosystems and reducing the destruction of habitats.
- *Strengthening Community Resilience:* Smart land use planning enables communities to anticipate and mitigate the potential negative impacts of forces beyond their control, such as designing transportation systems that can withstand climate-related disasters and formulating proactive solutions to manage population growth.

ACTION 12.1 Create a statewide authority to provide guidance for resilient local land-use practices

This action proposes the creation of an Office of State Planning housed within DOA. This Office should facilitate coordinated decision making as it relates to comprehensive land use, prioritizing initiatives that support flood risk reduction, maximizes community resilience, and reduces GHGs. The Office of State Planning should build strong partnerships across state agencies and with local and regional officials to demonstrate the potential for land use practices to help meet climate goals and reduce climate risk. The Office should support locals in the development of comprehensive land use plan and climate adaptation and mitigation plans that address the spectrum of relevant community challenges and incorporate the needs of underserved and overburdened populations. This land use authority should also partner with DOTD to promote and implement ways to VMT reduction measures (Action 10.1) and compact development practices (Action 12.2). ***(Associated Submitted Action Proposals: 18, 40, 69, 128)***

ACTION 12.2 Encourage compact development through local trainings, incentives, tools, and model standards and ordinances

To encourage compact development, this action proposes DOTD and the Office of State Planning start in the near-term by convening public, private, and local government bodies that plan and design compact development, permitting, and regulation to maximize land conservation, community resilience, and reduced VMT. After receiving feedback from local groups, the state, through DOTD and the Office of State Planning, should pilot promising approaches to local planning and design incentives and regulatory systems that support compact development, Complete Streets, and equitable transit access. ***(Associated Submitted Action Proposals: 65, 69, 70)***

ACTION 12.3 Align statewide transportation planning and decision making with land use and compact development planning

Transportation infrastructure often dictates how and where land is used and developed in Louisiana. To ensure compact development, regional transit, and other actions set forth in this section are prioritized in the state, this action proposes that transportation planning align with smart 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. This action proposes empowering local governments and MPOs to develop tools that provide adequate information on alignment of these priorities, led by DOA's Office of State Planning for land use guidance in partnership with DOTD in transportation guidance. Alignment of transportation planning with smart land use would be led by DOA with support from DOTD in close partnership by MPOs and local jurisdictions. ***(Associated Submitted Action Proposals: 65)***

ACTION 12.4 Evaluate the climate impacts of major state-funded transportation projects

Major transportation projects, such as the construction of new or expanded roadways, can have multiple cascading impacts on GHG emissions as well as community resilience—from the materials used in construction to the spurring of new areas of development to inducing more VMT and increased congestion. This action should require that proposals for medium- to large-scale state-funded transportation projects include an analysis by DOTD of their climate impacts, including induced GHG emissions as well impacts on community resilience from 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. 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. Further, this action prepares Louisiana for policies set forth through the US Department of Transportation's Climate Action Plan, released in August of 2021. ***(Associated Submitted Action Proposals: N/A)***

ACTION 12.5 Develop a model solar ordinance for adoption by local governments

The interest by solar developers in building out infrastructure in Louisiana communities is increasing steadily and will need to continue to grow to meet Louisiana's clean power needs. Ordinances can be important tools for guiding these developments while achieving community goals and standards. 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. This action recommends DOA Office of State Planning, in partnership with DNR, be the lead and authorizing entity to provide guidance for local governments and coordination with local land use. ***(Associated Submitted Action Proposals: 20)***

STRATEGY 13. Improve the efficiency and resilience of homes and non-residential buildings

Energy efficiency improvements and electrification of building components and appliances can reduce GHG emissions from residential and commercial buildings, while also reducing utility costs and potentially decreasing other air pollutants associated with electricity production. Combining energy efficiency retrofits with storm weatherization and other resilience improvements can ensure Louisiana homes and businesses are prepared for the future. Actions under this strategy support building retrofit programs as well as updates to energy efficiency standards and building codes.

Highlights of how this strategy can realize benefits for Louisiana:

- *Energy Affordability:* Enhancing the efficiency of homes decreases overall energy costs for families, through improved insulation, air sealing, and appliance and HVAC efficiency. Examples include increasing home insulation, reducing heating needs, and replacing lighting with lower wattage bulbs.
- *Economy and Jobs*: A regular pipeline of building retrofits and energy efficiency upgrades could create a steady pipeline of jobs in the construction trades.
- *Increased Quality of Life:* Retrofitting of homes provides opportunities to enhance the quality of life for residents by mitigating excess energy usage and improving indoor air quality and circulation, while conducting efficiency upgrades, such as remediation of lead and mold.

ACTION 13.1 Accelerate the retrofitting of existing residential and commercial buildings to support comprehensive energy efficiency and resilience upgrades

With multiple residential and commercial efficiency programs in existence, this action proposes that the LPSC, in partnership with the Louisiana Housing Corporation, DNR, Office of Community Development, and local governments, streamline existing programs and leverage federal funds to reach a 5% retrofit per year retrofit target. Multiple programs across various governing entities, including DNR's Home Energy Loan Program (HELP), the expired Home Energy Rebate Option (HERO) program, and the Louisiana Housing Corporation (LHC) Weatherization Assistance Program (WAP), often obfuscate eligibility and requirements for potential applicants. Similar to the New Orleans EnergySmart Program, this action should provide a centralized home assessment for homeowners needed to apply for any programs, clarify the intents of various efficiency programs, and direct residents and building owners to the application best suited for their needs. Lastly, program development through this action should coordinate outreach to encourage homeowners and small businesses to understand their energy usage, identify possible areas for improved efficiency, and develop loans or rebates for low-income communities to participate. This outreach is necessary to ensure equitable access to efficiency programs and to provide assistance for low-income communities. As mentioned in prior actions, opportunities for federal funding will flow through existing weatherization programs, which will provide immediately realized benefits upon implementation of this action. Alongside federal funding explicit for weatherization, federal pre- and post-disaster funding disbursed by the state should be required to incorporate energy efficiency and weatherization best practices into residential and commercial new builds and retrofits of buildings. ***(Associated Submitted Action Proposals: 16, 87, 102)***

ACTION 13.2 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 under PACE tend to include energy efficiency improvements (e.g., insulation, weather sealing, high-efficiency water heaters) as well as solar and other on-site renewable energy systems. Retrofitting low-income homes should also consider roof repairs, which may be a prerequisite for the effective deployment of rooftop solar. 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 with specific provisions to provide access to low-income households, and to provide consumer protections. 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 13.3 Incentivize the electrification of building components in residential and commercial buildings

Alongside the need to retrofit homes for increased efficiency and weatherization, appliances and systems (e.g., water heaters, HVACs, driers, and stoves) account for a large share of building energy use. Electrifying these building components 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 proposes that the Louisiana Legislature develop a rebate program to incentivize the purchase of efficient electric appliances and systems by homeowners and small businesses. To improve equitable access, rebates should 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. ***(Associated Submitted Action Proposals: 29)***

ACTION 13.4 Strengthen minimum energy and lighting efficiency standards for residential, commercial, and public buildings

Minimum efficiency standards can reduce energy demand and the associated GHGs from buildings. Currently, the authority to set energy efficiency standards for buildings and structures is distributed across multiple state entities, including the Louisiana State Uniform Construction Code Council (LSUCCC), the state fire marshal, and DNR. This action proposes that the Louisiana Legislature allow the LSUCCC to update Part IV-Energy Conservation of the International Residential Code beyond the 2009 edition. This action further proposes that the state fire marshal update the Commercial Building Energy Conservation Code to strengthen energy efficiency standards. The state fire marshal, and the LSUCCC should it receive authority to update the Residential Energy Conservation Code, should consult with the DNR Office of Energy, DOA Office of Facility Planning and Control, local governments, the LPSC, LHC, residents, and key stakeholders when updating these respective codes. ***(Associated Submitted Action Proposals: 133)***

ACTION 13.5 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, funding constraints has impeded implemented by DOA's Office of Facility Planning and Control. With immediate emission reductions that can be actualized, this action proposes that the state allocate funding in the near-term for DOA's implementation of Act 1184 and development of a system for benchmarking the energy performance of public buildings in Louisiana. This benchmarking system would use 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. Once developed, the energy benchmarking system could also be used by state subdivisions, parishes, and municipalities in the medium- and long-term as a guide for 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 13.6 Update statewide building 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. In the near-term, this action encourages the LSUCCC to complete the process of code adoption that is underway and adopt stronger minimum energy performance standards and codes for Louisiana by July 1, 2022. If newer building codes were adopted, building projects could take advantage of the latest low-carbon materials such as mass timber. In implementing this action, the Louisiana Legislature should also change the LSUCCC authorization and require them to adopt the latest model codes (such as the residential I-Codes or the ASHRAE 90.1 energy code) automatically as new versions are published, except if overridden by a majority vote of the LSUCCC. ***(Associated Submitted Action Proposals: 75, 133, 50)***

Natural and Working Lands and Wetlands

Strategy 14. Preserve and expand natural lands and urban green spaces to maximize climate mitigation and adaptation goals

Louisiana's natural lands, from bottomland hardwood forests to urban green spaces, sequester carbon while also providing multiple ecosystem services and playing an important role in statewide resilience to the effects of climate change. The continuation and enhancement of these co-benefits hinges on natural land and urban green space preservation, conservation, and expansion. The actions within this strategy emphasize the importance of social equity in conservation planning to ensure that co-benefits can be realized for all Louisianans and ecosystems.

Highlights of how this strategy can realize benefits for Louisiana:

- *Access to Healthy Ecosystems:* Preservation and restoration of natural lands such as riparian buffers can contribute to continued access to clean water and productive ecosystems that also support fishing and hunting resources, both recreational and commercial. Natural lands are central to Louisiana's cultural heritage, including Indigenous cultures.
- *Reduced Environmental Disparities:* Investments in urban green spaces and natural lands can directly benefit local communities by increasing access to recreational amenities and reducing urban heat island effects through shading building surfaces, deflecting radiation from the sun, and releasing oxygen. Thoughtfully focusing investments in historically underserved communities can narrow existing socioeconomic disparities in access to green space and its benefits.

ACTION 14.1 Conserve Louisiana's interior natural lands, prioritizing forested lands, floodplains, wetlands and riparian areas

This action sets a target for 30% of Louisiana's interior natural lands be conserved or protected by 2030. This is a reasonably ambitious target based on the data and information that we have to date; however, a comprehensive baseline assessment of existing conserved and protected lands and areas to prioritize for conservation that maximize ecological and social co-benefits will be a critical first step towards meeting this target and refining it if necessary. Because of the state's flood risk, action should focus on forested land, floodplains, wetlands, and riparian areas that provide critical watershed function and flood risk mitigation. Priority areas should be preserved in partnership with private landowners through voluntary expansion of conservation servitudes and other conservation tools in partnership with landowners, land trusts, Louisiana Department of Agriculture and Forestry (LDAF), and local government. This action should also ensure alignment with projects and models of flood risk from the Coastal Master Plan and Louisiana Watershed Initiative. ***(Associated Submitted Action Proposals: 40, 68)***

ACTION 14.2 Support the expansion of urban tree canopy and green spaces

Activities that reforest public areas in urban environments 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, through LDAF, serve as convenor of parish and municipal governments to develop and promote a coherent, statewide approach that supports tree plantings and maintenance in urban areas, particularly in historically underserved communities. In addition to this statewide approach, this action should empower locals to survey existing tree canopies in urban areas, with progress tracked and reported annually. Funding for this initiative should come from a requirement 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, with a specific focus on conservation in low-income, urban areas 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 15. Restore and conserve Louisiana's coastal wetlands to maximize climate mitigation and adaptation goals

As with Louisiana's inland natural lands, our coastal wetlands sequester carbon and provide important ecosystem services, while also serving a critical role in buffering against rising sea levels and severe storms. Restoring and maintaining coastal wetlands for mitigation against these climate change-related threats can benefit Louisiana's vulnerable coastal communities and ecosystems, as realized though implementation of Louisiana's Coastal Master Plan. While sources of GHG emissions are well characterized in the 2021 GHG Emissions Inventory, significant knowledge gaps remain related to sequestration of carbon by the diverse ecosystems of Louisiana. Actions in this strategy include mechanisms to fill knowledge gaps and improve the accuracy of our data on natural carbon sinks in Louisiana.

Highlights of how this strategy can realize benefits for Louisiana:

- *Resilience to a Changing Environment:* Investments in restoration and conservation planning can increase community resilience to the threats of sea level rise and severe storms by providing a natural buffer to these threats.
- *Cultural Heritage:* The unique cultural heritage of South Louisiana is intrinsically tied to the natural environment of the coast, highlighting the need to protect environments important to traditional living cultures, including Indigenous cultures and traditional fishing communities. Project-by-project considerations are important for understanding how restoration projects impact cultural heritage.
- *Economy and Jobs:* Louisiana's coast is a working coast, with 20% of U.S. waterborne commerce coming through our ports and coastal wetland that provide important habitat for commercially important fish and game species. Conservation and restoration of Louisiana's coastal habitats is critical to both our local and national economy.

ACTION 15.1 Optimize the carbon sequestration potential of Louisiana's coastal wetlands through 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. This action proposes that the Coastal Protection and Restoration Authority (CPRA) incorporate climate mitigation goals and measures (e.g., carbon sequestration potential of wetlands) into future iterations of the Coastal Master Plan as well as into project design and prioritization. Carbon sequestration potential should further make the case for investment in Louisiana's coastal program and unlock additional resources for project implementation. ***(Associated Submitted Action Proposals: 77***

ACTION 15.2 Quantify and monitor the potential coastal blue carbon in Louisiana habitats and Coastal Master Plan projects

Quantification and monitoring to assess net carbon flux of Louisiana's coastal wetland habitats (fresh, intermediate/brackish, saline, and submerged aquatic vegetation; also known as coastal blue carbon) and open water habitats 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. Though a comprehensive understanding of blue carbon requires long-term study, existing efforts should continue through: 1) research and development led by the state, non-profits, the private sector, and/or academic institutions to create accurate models that will allow quantification of Louisiana's coastal blue carbon over time and across variable environmental conditions; and 2) expanded 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)***

ACTION 15.3 Develop crediting mechanism and market specific to blue carbon

Existing carbon markets are designed primarily for terrestrial forests and have not readily accommodated crediting of coastal wetlands. Specifically, standards for additionality and permanency must be tailored for dynamic coastal wetlands to recognize and account for their GHG benefits while being grounded in the realities of those dynamic systems. The natural carbon sequestration potential of Louisiana's coastal habitats is too valuable to be entirely precluded from market-based systems that can support the conservation and restoration of these important ecosystems. Louisiana should evaluate the design and market interest for the creation of a specialized carbon credit and market specific to Louisiana's coastal wetland habitats. This potential Louisiana credit and market would more directly take into account the sequestration potential of coastal wetland habitats as well as the shorter time scales that conservation or restoration efforts would be expected to offer given the dynamic nature of deltaic systems. This credit and market would attempt to match the local and global demand for natural carbon credits with the urgent need to protect and restore Louisiana's wetland ecosystems for the preservation of the state's culture, communities, economy, and environment. ***(Associated Submitted Action Proposals: 59, 60, 77)***

STRATEGY 16. Support the sustainable management and conservation of working agricultural and forestry lands

Agriculture and forestry are a large component of Louisiana's economic prosperity as a state and requires intentional management to curtail and sequester GHG emissions. Best management practices and adoption of new technologies can help Louisiana reduce emissions from land practices while restoring natural ecosystems and biodiversity. Adoption of such practices will benefit from rural and urban focus, where equitable access for all farmers and foresters to such practices and technologies can be explored through grants and research programs. Actions within this strategy emphasize collaboration across all stakeholders and agencies to support the transition of Louisiana's farmers to adopting less GHG-intensive agricultural and forestry practices.

Highlights of how this strategy can realize benefits for Louisiana:

- *Public Health and Safety:* Agricultural best management practices can reduce nutrient runoff and improve water quality leading to lower incidences of harmful algal blooms, higher productivity for local ecosystems, and additional benefits to public health and safety.
- *Community Engagement and Participation*: Stakeholder engagement is critical in encouraging voluntary adoption of new practices and technology that better manage and increase the carbon sequestration potential in Louisiana's agricultural and forestry lands. Implementation of this strategy must consider engagement at multiple scales and through multiple mechanisms to communicate benefits of transitioning away from high GHG-emitting practices.
- *Strengthening Louisiana's Economy*: Sustainable use of working lands leads to healthier soils, which promote long-term management and greater longevity of production. Moreover, encouraging Louisiana's investment in its own consumption of Louisiana-derived agricultural and forestry products will provide further strength to the state's economy while reducing GHG emissions ~~stemming from product export~~.

ACTION 16.1 Establish a Louisiana Conservation Innovation Program

Founded on the U.S. Department of Agriculture (USDA) Conservation Innovation Grant Program, many states have established Conservation Innovation Programs to incite creativity and promote development of innovative conservation practices uniquely tailored to benefit the state. This action proposes creation of a Louisiana Conservation Innovation Program within the LDAF to stimulate development and adoption of innovative conservation approaches and technologies that curtail and sequester GHG emissions. Through partnering with USDA, the LDAF should request funding to promote pilot projects, field demonstrations, and on-farm conservation research for the development of innovative practices specific to Louisiana. ***(Associated Submitted Action Proposals: 42, 110)***

ACTION 16.2 Support the transition to regenerative agriculture and forestry practices

Regenerative agriculture is a system of farming principles and practices that seeks to rehabilitate and enhance farm ecosystems by emphasizing 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, in the short-term, 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. As consensus is built around impediments to adoption of regenerative agriculture and forestry conservation practices 16.2 LDAF, SWCDs, and the USDA Natural Resource Conservation Service (NRCS) should collaborate to develop a competitive grant program that offers technical and financial assistance to landowners that guide and support transition and lower barriers to on-farm conservation practices. ***(Associated Submitted Action Proposals: 88)***

ACTION 16.3 Expand implementation of on-farm conservation plans

On-farm conservation plans 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 with individual landowners, is responsible for development of voluntary on-farm conservation plans of sustainable practices through enhancing and conserving soil, water, and related natural resources. This action proposes uplifting this successful collaboration and program through advocating for expansion of federal and state funding. With more funding, the program should incorporate and fund ~~removal of marginal lands (land that has little or no agricultural or industrial value) from production~~ into conservation plans. ***(Associated Submitted Action Proposals: 38, 39)***

ACTION 16.4 Measure carbon sequestration potential of conservation farming and forestry best management practices

Best management practices (BMPs) are central in the transition to regenerative and conservation farming and forestry, though their emission reduction and carbon sequestration potential have not been uniformly quantified. This action tasks Louisiana's research institutions to study, monitor, and publish data on the co-benefits and impacts of BMPs to abate GHG emissions, improve soil and water quality, improve natural ecosystems, and sequester carbon. We recommend this study begin immediately so that results can be incorporated into best management practices and on-farm and on-forest conservation programs implemented. ***(Associated Submitted Action Proposals: 34)***

ACTION 16.5 Establish an urban agriculture and conservation program in the LDAF

As expressed in prior actions, 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 extensive work and bring more stakeholders to the conservation conversation, this action proposes the development of an urban agriculture and conservation program within the LDAF to ensure adoption of regenerative and sustainable practices across all Louisiana landscapes. The proposed program should provide educational resources, workforce development and training, marketing assistance, and grant support for farmers, landowners, foresters, and other stakeholders in urban areas. We recommend near-term creation of this program to ensure a comprehensive and inclusive approach to conservation across Louisiana. ***(Associated Submitted Action Proposals: 88)***

ACTION 16.6 Establish regional compost facilities 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. ~~LDEQ~~ already implements an Agriculture Solid Waste BMP Program, ~~though compost is not always the use at the end of the waste stream~~. This action proposes LDEQ and LDAF partner to designate regional compost facilities, promote compost as a solid waste BMP, and partner with parish- and municipal-level compost programs. LDEQ should designate and fund regional compost facilities for partnership with local entities, and LDAF should work with farmers to promote on-farm compost. Near-term implementation of these actions will increase the viability of local compost program and 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 16.7 Encourage sustainable forest management and greater use of Louisiana forest products for construction

Markets for wood products create incentives for landowners to plant more trees and better management forests, resulting in more carbon sequestered. Educating landowners on sustainable forestry practices that maximize carbon sequestration and how to participate in carbon markets as well as encouraging manufacturers and end users to use of sustainably forested products in construction and consumer products increases the amount of carbon stored by trees. This action proposes LDAF's Forestry Protection Program and the Louisiana Forestry Association (LFA) partner to educate major foresters on the sustainable management of forests and the necessary steps to engage in existing carbon markets. DOA and LED should also encourage use of Louisiana forest products — lumber, plywood, paper, wood pellets, and biomass — in state capital projects and other construction projects. Cognizant of Louisiana's forestry resources and markets, it is recommended that outreach to foresters, manufacturers, and end users begin immediately for this transition to be effective. ***(Associated Submitted Action Proposals: 26, 31, 67)***

An Inclusive, Low-Carbon Economy

STRATEGY 17. Build a more inclusive and resilient economy for all Louisiana residents

Deliberate action is necessary to ensure that all Louisianans have equitable access to future economic opportunities and that any disruptions to the economy associated with the energy transition do not fall disproportionately on any one community. By prioritizing the success of those who have historically been excluded from the benefits of prior economic transitions and those who are most directly affected by the energy transition, the shift to a low carbon economy can more broadly, inclusively, and equitably provide benefits throughout the state.

Highlights of how this strategy can realize benefits for Louisiana:

- *Supporting historically marginalized groups:* Targeted effort to address historical and ongoing inequities is more likely to lead to positive outcomes for the clean energy transition and for historically marginalized communities and residents, including communities of color and Indigenous peoples.
- *Strengthening the economy:* By proactively providing training and opportunities, Louisiana can ensure that people and communities historically left out of previous economic booms can be part of building Louisiana's clean energy future.

ACTION 17.1 Establish a Louisiana Plan for Economic Transition

This action proposes the establishment of a Louisiana Plan for Economic Transition to help provide strategic direction and support to the state, workers, and small businesses as they manage overlapping economic transitions. This planning effort should conduct research and develop a statewide and regional strategies for addressing the transitions resulting from globalization and trade disruptions, rapid technological shifts such as increased automation, changes to fossil fuel prices and demand, global efforts to decarbonize the energy sector, and other challenges resulting from climate change. The Plan for Economic Transition should consider opportunities for economic development that diversify the Louisiana economy while also encouraging growth in low-carbon industries like renewable energy and outline educational and training opportunities and programs to support and grow Louisiana's workforce. This planning effort would also identify specific strategies and programming to ensure that current workers in the energy industry are assisted as the energy transition occurs, and that economic opportunities are available and tailored to communities that have been historically marginalized or excluded from participating in economic advancement. This action would be a joint effort by LED, the Board of Regents, regional economic development organizations, the Louisiana Technical and Community College System, and the LWC. Together, these entities would help promote and attract new economic opportunities to the state while also preparing workers for emerging opportunities related to the low-carbon economy of the future.

STRATEGY 18. Strengthen climate education, research, and innovation as a focus of Louisiana's energy transition

To build climate leadership throughout the state, it is critical that Louisiana allocates the funding and resources necessary to coordinate climate education programs across the state and facilitate better collaboration among research institutions that specialize in climate change mitigation and adaptation. Education, at all levels, and applied research are the foundation of a more inclusive, low-carbon economy and critical to ensuring that the next generation is prepared, resilient, and innovative when facing future climate threats.

Highlights of how this strategy can realize benefits for Louisiana:

- *Economy and Jobs:* The national and global focus on climate change and reduction of GHG emissions will present numerous opportunities for researchers, innovators, and practitioners to apply climate-related expertise in locations outside of Louisiana and bring revenue and opportunities to the state.
- *Increasing the Likelihood of Success:* Many promising technologies to reduce net GHG emissions reductions, particularly from industrial sectors that form key parts of the Louisiana economy, have yet to be fully developed or applied at scale. Research and development to advance GHG reduction solutions is vital to achieving success as a low-carbon economy.

ACTION 18.1 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, led by the Louisiana Department of Education, to provide dedicated, yearly funding and support for K-12 climate education projects and curricula implemented by educators, researchers, practitioners, industry, and policy makers. Expansion of climate education is a critical step towards ensuring that the next generation is prepared, resilient, and innovative when facing future climate threats. This action recommends the Department of Education begin conversations with the LA STEM Council to build a framework for climate education with long-term ambition to establish the RPP Program followed by schools across Louisiana in K-12 education, ***(Associated Submitted Action Proposals: 54)***

ACTION 18.2 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 and the Louisiana Workforce Commission (LWC), would create a Climate Corps Program in the LWC 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. With the ability to utilize federal funding from President Biden's Build Back Better Framework, near-term leadership from the LWC will enable training and career track transition programs in the form of four-year degrees, two-year degrees, and industry certificate programs to be offered by universities and community colleges in the following areas: information technology, electrical engineering, utility management, and electrical vehicles (manufacturing, operations, maintenance). ***(Associated Submitted Action Proposals: 23,99, 137)***

ACTION 18.3 Coordinate climate change mitigation and adaptation research needs across Louisiana's academic, public, and private institutions

Louisiana's extensive research institution and university networks offer widespread expertise well-suited to inform climate action. Many research institutions 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 centralized coordination of climate action across the public, private, and academic networks. Immediate action should be taken by the Water Institute of the Gulf (TWI), designed as the state's Innovation and Collaboration Hub, to inventory interdisciplinary climate research capabilities across the state and provide a broad understanding of existing in-state expertise in climate action to the Governor's Office. Following completion of this inventory, TWI should launch a partnership program to serve as the coordinating unit that convenes institutions to identify state research needs, discuss emerging work, and partner across universities on grant and project proposals that seek to understand existing emissions and emission reduction measures. Partners of this program would meet semi-annually beginning in 2023 to coordinate ongoing work and identify emerging opportunities for research, development, and demonstration or pilot projects for the state. ***(Associated Submitted Action Proposals: N/A)***

STRATEGY 19. Prioritize Louisiana workers and businesses in the transition to a low-carbon economy

For Louisiana to successfully shift to a low-carbon economy, the state must invest in the training and preparation that Louisiana workers need to build and maintain clean energy infrastructure and find opportunities in other industries and sectors as the economy retools. This will require targeted training and re-training initiatives, a strong commitment to the development of renewables industries, and the creation of proactive programs that ensure the successful transition of oil and gas workers to job placements in clean energy and beyond.

Highlights of how this strategy can realize benefits for Louisiana:

- *Supporting the Workforce:* The state of Louisiana is likely to see shifts in the types of industries providing employment opportunities for workers, particularly those with varying educational backgrounds. Workers can benefit from the transition to a low-carbon economy through targeted training that will equip them with the high-demand skill sets needed to deploy the strategies laid out in this plan.
- *Strengthening the Economy:* By ensuring that Louisianans have the knowledge and skill sets needed to support building and maintaining the infrastructure needed to reduce net GHG emissions, this transition can serve as an economic driver and attract future investment into the state.

ACTION 19.1 Promote and invest in Louisiana-based low-carbon 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 existing energy industry that could be modeled or retooled to promote and invest in emerging low-carbon opportunities such as renewable energy, coastal blue carbon, hydrogen, and low carbon fuels. For example, the technical needs of solar power generation can be different at the utility scale than the distributed scale. However, with the proper training, a worker could be qualified to work on either installation thereby improving the likelihood of maintaining steady work across utility and distributed projects. This action recommends a combination of legislative and executive actions by LED, regional economic development organizations, the Board of Regents, the Louisiana Community and Technical College System, and the LWC to adjust and propose tax incentives, worker training programs, and determine other ways to speed and smooth the transformation of the state's energy systems, workforce, and economy. ***(Associated Submitted Action Proposals: 23, 61, 93)***

ACTION 19.2 Establish and expand entrepreneurial and jobs programs in under-resourced communities to meet the needs of the energy transition

If the energy transition is to reach communities most impacted by climate change and disinvestment, Louisiana should extend the physical reach of entrepreneurial and workforce training programs specifically to these communities. Implementation of this action includes extending existing offices and programs, like the Small Business Assistance Centers run by the LED, to all communities and expanding new services specific to the energy transition for all communities (e.g., Rapid Response teams, Action 19.3). This action recommends LED identify and plan targeted outreach opportunities to assist disadvantaged business enterprises with state and federal procurement, alongside identifying business development opportunities for small businesses and workers in these communities. A combination of community- and business-based outreach will help ensure access to and widespread benefit from investments in renewable energy and other aspects of the energy transition. ***(Associated Submitted Action Proposals: N/A)***

ACTION 19.3 Enhance the Louisiana Workforce Commission's Rapid Response services to anticipate and provide tailored support to oil and gas and related 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 workers in this industry will face layoffs. To make sure that these workers are supported and assisted, this action proposes the enhancement of the Louisiana Workforce Commission's Rapid Response teams to anticipate and provide specific support and services for those facing job losses and facility closures. These Rapid Response teams should partner with the workers and their families, 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. This action instructs the LWC to review its existing Rapid Response programming and make improvements so that energy workers and their families are better served throughout a changing energy and economic landscape. ***(Associated Submitted Action Proposals: 153)***

ACTION 19.4 Establish partnerships with Louisiana educational and non-profit institutions, businesses, and unions to better guarantee job placements for workers in low carbon training programs

Enrolling in a training or educational program can mean lost time, taking on personal expense, and missed wages. Still riskier is the chance that there will be no jobs available at the end of the program. This action creates partnerships between educational and non-profit institutions, businesses, and unions to better guarantee job placements for graduates of training programs in low-carbon sectors so that workers know and see their investment to gain new skills is worth the risk. Closer coordination and improved job placements will increase the number of workers enrolled and completing training programs in clean energy and other skills needed for the energy transition, necessary for successful implementation of all actions in this strategy and of Action 17.1. ***(Associated Submitted Action Proposals: N/A)***

Collaboration and Partnerships to Ensure Successful Implementation

STRATEGY 20. Ensure Louisiana is prepared to maximize potential federal funding opportunities

With passage of the 2021 Infrastructure Investment and Jobs Act alongside continued momentum around President Biden's Build Back Better Framework, numerous federal opportunities exist in the coming years for increased funding for climate mitigation and resilience initiatives across all emission sectors and fundamental objectives. Louisiana's efforts to utilize allocated funding and to compete for available federal resources should be coordinated across agencies to maximize the potential for success and the realization of many goals and values of the Climate Action Plan. This coordination should be led through the Office of the Governor with leadership and input from departments identified as eligible applicants or recipients. Federal funding is imperative for Louisiana's successful transition to a low-carbon economy, so Louisiana must be proactive in advocating for increased federal support, inclusive but not limited to the following priority areas:

- Converting public fleets and heavy-duty vehicles to zero-emission vehicles; buildout of electric vehicle infrastructure (SA# 158, 162, 29, 27, 36, 137)
- Plugging, remediating, and reclaiming orphaned wells (SA# 166, 167, 168)
- Expanding monitoring of methane and other GHGs (SA# 91, 151)
- Measuring, monitoring, and enhancing wetland sequestration (SA# 59, 60)
- Pre-disaster mitigation and community-focused resilience (SA# 152)
- 45Q for industrial carbon capture and sequestration (SA# 109, 120, 121)
- 45Q equivalent for industrial-scale electrification
- Hydrogen Hubs and Direct Air Capture Hubs
- Accelerating 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 programs that assist workers displaced by climate or energy transitions (SA# 153, 23)
- Advocating for a streamlined federal acknowledgement process for Louisiana tribes
- Investing in statewide broadband (SA# 25)
- Sustainable and regenerative agriculture, forestry, and soil management

Highlights of how this strategy can realize benefits for Louisiana:

- *Reducing the Cost of Transition:* Federal funding can offset some of the costs of a transition to a low carbon economy, reducing the state and private investment needed to implement the strategies and actions contained in this plan.
- *Quality of Life:* Federal programs can help catalyze the broader social, economic, and health benefits associated with the strategies and actions of the Louisiana Climate Plan, such as the reduction of pollution resulting from vehicle electrification and capping of orphan methane wells.
- *Ensuring Effectiveness and Durability:* Positioning Louisiana to capitalize on Federal resources expands the resources available to support plan implementation into the future.

STRATEGY 21. Position Louisiana as a climate leader by 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 carbon pricing systems, electricity transmission planning, offshore wind development, regional transit connectivity, and climate adaptation. This strategy recommends that Louisiana initiate and participate in discussions with other states to establish a regional cap-and-trade or carbon tax program, intentionally plan expansion of electrified transmission infrastructure and offshore wind development, strategize connectivity of interstate communities, and set goals towards climate resilience with states facing similar threats. Regional partnerships are essential to reduce incidence of carbon leakage and to ensure states collaborate in working towards similar goals. However, state-level action is not sufficient alone to lead economy-wide transitions. Local and national partners are also essential to secure funding 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, this strategy also recommends Louisiana pursue intercity partnerships and lessons learned from other cities.

Highlights of how this strategy can realize benefits for Louisiana:

- *Ensuring Effectiveness and Durability:* Through proactive engagement with federal and state partners, Louisiana can help shape the discussion on the national stage to support strategies and actions that require federal policy shifts—or infrastructure updates—for successful implementation.
- *Strengthening the Economy:* Louisiana can become a leader in a global transition to a low-carbon economy. Engagement and leadership at the regional and national scale can help ensure that the potential economic benefits of state leadership are realized, such as the development of infrastructure for transmission of renewable energy generated within and offshore of Louisiana.

STRATEGY 22. 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, LDAF, and the Louisiana Legislature.

Highlights of how this strategy can realize benefits for Louisiana:

- *Timely Implementation:* Through close coordination of state agencies, the strategies and actions of the Climate Action Plan can be implemented as quickly and efficiently as possible, resulting in faster realization of benefits for the people of the state.
- *Durability and Long-Term Success:* The net GHG emission reduction strategies and actions in this plan span across sectors that are supported or regulated by multiple state agencies. Close coordination of those agencies ensures that new policies, incentives, and regulations are complementary and effective in reducing net GHG emissions and providing other benefits to Louisiana, while also streamlining implementation.

STRATEGY 23. Coordinate action with local governments

Local governments are significant collaborators and implementers of climate action within their jurisdictions. State partners must work alongside local government to encourage local climate action planning that complements Louisiana's Climate Action Plan, reduces emissions locally, enhances economic activities, and advances 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.

Highlights of how this strategy can realize benefits for Louisiana:

- *Enhancing the Local Benefits of Climate Action:* Active engagement of local government can help ensure that individual communities fully realize the potential economic, societal, and health co-benefits of a low-carbon economy transition.
- *Increasing Public Trust:* The close ties that local government has within the community provide the most direct connection to the people of Louisiana and therefore the most effective avenues of enhancing community outreach and engagement.

STRATEGY 24. 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 continuous solution-building with the private sector and regulated utilities to implement the actions set forth in this Climate Action Plan. This can be done through direct engagement with business leaders to support mutually beneficial steps toward climate action and by the establishment of entities like a Resilience Fund. A Louisiana Resilience Fund should leverage public and private dollars for the implementation of climate mitigation and adaptation initiatives, particularly for underserved low carbon and resilient financing markets. Similar institutions around the country have been used to provide bridge loans for renewable energy projects and energy efficiency retrofits, direct financing for community solar, and credit enhancement to increase the willingness of private actors to provide capital for resilience projects.

Highlights of how this strategy can realize benefits for Louisiana:

- *Strengthening the Economy:* Louisiana-based technological and industrial solutions necessary for successful implementation of multiple actions within the Climate Action Plan can be marketed and deployed nationally and globally.
- *Enabling Timely Implementation:* Technological innovation is vital for reducing net GHG emissions from the industrial sector. Given the high percentage of emissions that result from industrial processes within the state, the timeliness of success is closely tied to the development of effective solutions by the private sector.

STRATEGY 25. 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, this action tasks the CITF with ensuring 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, this action tasks the CITF with enabling and encouraging communities and Indigenous peoples to engage in knowledge sharing, solution building, and decision making. This action further tasks the Governor's Office and state agencies with investing in sustainable two-way communication of needs and progress with Indigenous peoples and marginalized communities.

This approach to engagement can be seen specifically in Actions within this plan, such as Actions 13.1 (Retrofitting Buildings and Homes), 18.2 (Clean Energy Job Training), 19.2 and 19.4 (Targeting Job Placements and Energy Transition Opportunities), and 26.3 (Incorporating Environmental Justice into Statewide Siting Planning). The outreach and community consultation as part of these Actions will be a starting point for a programmatic approach to engagement that centers these communities in the state's climate plan implementation.

Highlights of how this strategy can realize benefits for Louisiana:

- *Supporting Historically Marginalized Groups:* Meaningful engagement of—and leadership by—disadvantaged communities and Indigenous peoples is critical for achieving widespread success and equitable outcomes of a low carbon transition.
- *Preservation of Culture and Cultural Resources:* Indigenous people and communities have the greatest understanding and ties to cultural resources, and incorporating their input into action implementation will help ensure that the rich cultural history of the state is preserved.

Accountability and Adaptability to Ensure Lasting Success

STRATEGY 26. Advance an equitable, efficient, and sustainable siting and permitting process for new energy and infrastructure projects

Implementation of this plan will require the construction of new energy and infrastructure projects, such as renewable energy generation (e.g., solar farming, offshore wind), expanded electricity transmission infrastructure, charging stations and battery storage, and CCUS facilities and pipelines. Our state's siting and permitting processes must be updated to ensure that new projects are safely and equitably developed. Meeting our climate goals will also require revisiting Louisiana's existing practices and regulations that guide the development of new and expanded industrial facilities. This strategy aims to ensure that new projects align with Louisiana's climate action goals, mitigate adverse impacts to communities and environments now and into the future, and incorporate environmental justice considerations.

Highlights of how this strategy can realize benefits for Louisiana:

- *Human and Environmental Health:* Amending permitting and siting regulations to reflect Louisiana's emission reduction targets will mitigate impacts to air quality throughout the state. Additionally, the development of new permitting and siting processes that prioritize environmental justice and consider the needs of marginalized communities that have been disproportionately impacted by pollution-related health impacts will improve public health outcomes.
- *Community Engagement:* Community input into revised permitting and siting practices is necessary to ensure the updated processes are equitable and sensitive to the needs of groups who have historically been marginalized.
- *Timely Implementation, Durability, and Long-Term Success.* Updating permitting and siting processes to be more streamlined enables the fastest implementation of actions requiring new infrastructure. At the same time, aligning those processes to support net-GHG emission reductions and other objectives associated increases the likelihood of long-term success.

ACTION 26.1 Increase the resources and staffing capacity of participating state agencies 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 recommends DNR guide the development of a process to assess, monitor, and make regulatory determinations on development of 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 and technology needs have been identified for DNR alongside monitoring needs from DEQ. Prior to the permitting of any projects, this action requires an internal audit of the deploying agency to ensure that it is adequately funded and prepared to assess, monitor, and make regulatory determinations for the specific project (e.g., related to geologic storage in the development and maintenance of CCS well sites). This action also supports increased capacity of DNR and DEQ to monitor potential air quality impacts, leaks at CCS well sites, complications of underground storage, and others. Since proposed clean and renewable energy infrastructure projects currently are undergoing the permitting process, this action proposes state funding be allocated to DNR and DEQ in the near term. ***(Associated Submitted Action Proposals: n/a)***

ACTION 26.2 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 Louisiana's extensive geologic storage potential and federal incentives for near-term investment, Louisiana is seeing significant interest and investment in the deployment of CCUS to address industrial GHG emissions. Members of the Task Force and the public have raised concerns related to the capture process at facilities, transport through pipelines, and geologic storage underground. To address these concerns, this action recommends the state and its research institutions synthesize existing research on CCUS and disseminate information and materials for public education. The state and its research institutions should also promote a comprehensive understanding of CCUS impacts, including but not limited to siting impacts on cultural characteristics of neighboring populations, air quality impacts on nearby communities, increased energy intensity for different industry processes, pipeline safety implications, environmental and resilience impact of pipeline buildout, potential incidents of geologic storage, and long-term risks and costs. ***(Associated Submitted Action Proposals: N/A)***

ACTION 26.3 Collaboratively develop regulatory frameworks and statewide siting plans for new energy technologies 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 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 establishes 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 are consistent with the Fundamental Objectives of Louisiana's Climate Action Plan and address the potential impacts on and preferences of nearby communities, environmental impacts, and environmental justice considerations. 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 26.4 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. All such decisions must 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, as addressed by Action 26.3. Members of the Task Force and the public have raised concerns about the ability of current permitting regulations to fully integrate the most recent understanding of climate impacts and environmental justice concerns. Via executive order (EO), the Governor should mandate that all project, permitting, and facility siting decisions align with goal of net zero GHG emissions by 2050 and consider opportunities to practicably avoid or minimize GHG emissions. This action would include convening an interagency panel (including DOA, DOTD, DEQ, DNR Office of Conservation, DNR Office of Coastal Management (OCM), LDAF, CPRA, Department of Wildlife and Fisheries (LDWF)) with the benefit of robust public input, particularly from those who face disproportionate climate and environmental impacts, to review and update projects, regulations, and permitting practices to ensure that project, permitting, and siting decisions are climate neutral and are not exceeding the cumulative risk burden on vulnerable communities, tribal lands, or the environment. With the ultimate goal to streamline permitting processes, this action ensures efficient and strategic development of energy infrastructure that benefits all participating stakeholders. ***(Associated Submitted Action Proposals: 46)***

STRATEGY 27. Ensure that Climate Action Plan strategies are effectively and transparently implemented

Realizing lasting success in reducing net GHG emissions reductions and ensuring positive overall benefit to the state requires that the actions and strategies outlined here translate to meaningful change. This success must be founded on continued transparency as well as regular monitoring and oversight of plan implementation. Actions under this strategy are designed to maintain that transparency and oversight, ensuring that the people of Louisiana can have confidence that the economy, environment, and their well-being will be maintained and improved while GHG emissions are reduced.

Highlights of how this strategy can realize benefits for Louisiana:

- *Effectiveness and Durability:* Establishing mechanisms for active management and public engagement of Climate Action Plan implementation ensures that actions in the plan are carried out as intended.
- *Public Confidence:* The confidence of the public in the effectiveness and outcomes of the Climate Action Plan – and support for its continued implementation – relies on transparency in execution and clear accountability of the state's progress towards its GHG emission reduction goals.

ACTION 27.1 Establish a statutory and organizational framework for coordinating and implementing statewide climate resilience

Climate change mitigation and adaptation require extensive coordination across multiple stakeholders inside and outside of government. It also requires focus and authority to oversee the implementation of this plan and assess progress toward meeting the Governor's GHG emission reduction goals. In the near-term this action proposes that the Edwards administration work with the Louisiana Legislature to create a statutory and organizational framework to staff, coordinate, and implement continued management of climate and resilience initiatives and ensure the successful implementation of the actions contained in this Climate Action Plan. Through this organizational framework, the Governor, his staff, and cabinet members and agencies would receive advice on action related to climate mitigation and adaptation to ensure vision and action for decarbonization are threaded across the Administration. This near-term action prepares the Administration to advocate for a more permanent framework that governs climate change mitigation and adaptation across agencies, levels of government, and external stakeholders.

ACTION 27.2 Legislatively establish the Climate Initiatives Task Force and support for statewide goal of net zero GHG emissions by 2050

Alongside a designated organizational framework to coordinate and oversee climate and resilience initiatives across the State of Louisiana, longevity of the CITF is necessary to ensure public coordination and oversight of climate and resilience actions. Formally recognizing and establishing the CITF in statute would enable regular 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 and accountability are maintained; and the critical issue of climate change in Louisiana remains in focus across changes in executive leadership. Regular meetings of the CITF would chart progress on implementation of the climate mitigation efforts, provide a forum for public engagement and oversight, and identify opportunities to increase the effectiveness of action implementation. Creating the CITF in statute requires near-term legislative enablement to ensure efforts to meet the Governor's emission reduction goals remain central for the state for years to come.

STRATEGY 28. Track progress in reducing net GHG emissions reductions and adapt the approaches taken as needed

Another vital component to catalyzing the success of the Climate Action Plan is monitoring the progress of the actions and strategies in driving net GHG emissions reductions. In addition, these outcomes must be used as part of a data-driven approach to revisit and update the Climate Action Plan over time through an adaptive management process. Actions that have proven successful can be continued as part of this process, while actions that have not been as impactful in practice as anticipated can be refined or updated. Implementation of actions under this strategy will ensure that there is a framework for making updates to the Climate Action Plan and for collecting the data and information necessary to make adaptive management decisions.

Highlights of how this strategy can realize benefits for Louisiana:

- *Flexibility and Adaptability:* New technologies, processes, approaches, and programs aimed at reducing net GHG emissions can be incorporated into this Climate Action Plan as they become available. Demonstration of new technologies and approaches at an operational scale via pilot projects can serve as an important first step.
- *Continued Success:* By using data to monitor progress in the near-term, the trajectory of Louisiana towards meetings its goals can be objectively tracked. Tracking and evaluation of this Climate Action Plan over time can also identify and strengthen the most effective actions and strategies as part of reaching the state's long-term goals. As a living plan, adaptive management of all strategies and actions is key for long-term success in an uncertain future.

ACTION 28.1 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 directs immediate creation of a GHG Monitoring Program by DEQ to collect GHG data across all emission sectors, which will be used in conjunction with regular updates of the GHG inventory. As mentioned in prior actions, the GHG monitoring program will incorporate detailed data for specific sectors, including utility climate rankings (Action 1.5), carbon intensity and emission audits from facilities (Action 3.1), and the methane monitoring stations (Action 10.2). Immediate integration of and regular updates to these detailed datasets is essential for tracking progress, ensuring accountability, and repairing leaks across high-intensive emission sectors. 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 28.2 Update the state GHG inventory every five years

In conjunction with regular collection of GHG data (Action 28.1), updates to the GHG inventory are necessary to consistently monitor progress and hold the state accountable for progress towards reduction goals. This action tasks the Louisiana Legislature to statutorily mandate updates to the GHG inventory every five years with consistent funding to support these efforts, with the ability of the CITF to request a GHG inventory sooner than five years if the technology has significantly improved. Additionally, this action supports work by the state to continue to increase the accuracy of this 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 action proposes investment in remote sensing, satellite imagery, and other tools to provide more accurate and comprehensive monitoring of GHG emissions in Louisiana, as well as incorporating more continuous data from the GHG monitoring program (Action 28.1) and criteria pollutants monitored by the existing DEQ Air Quality Monitoring Program into the GHG inventory.

ACTION 28.3 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. Regular GHG monitoring (Action 28.1) and updated GHG inventories (Action 28.2) will reveal where those actions are 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. Therefore, the Climate Action Plan should be updated one-year following each updated GHG inventory (Action 28.2). Through near-term legislation, this action would allow and require updates to Louisiana's Climate Action Plan every five years by the Governor's Office to ensure that climate action 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. Planned updates are necessary to 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.

LEAN/LMRK Comments on La CCTF Draft Strategy and Action Portfolio

John Daigle <lmriverkeeper@gmail.com>

Fri 12/31/2021 3:46 PM

To: Climate <climate@la.gov>;

December 31, 2021

The Louisiana Environmental Action Network (LEAN) and Lower Mississippi Riverkeeper (LMRK) welcome the opportunity to submit comments on the Draft Portfolio of Strategies and Actions for the Louisiana Climate Action Plan.

The Draft provides an updated picture of Louisiana's Greenhouse Gas (GHG) Emission picture, utilizing the new state Greenhouse Gas Inventory (GHGI) carried out by the LSU Energy Center. Net Louisiana GHG emissions in 2018 were 216 million metric tons (MMT) of CO2 equivalent (CO2E), with 66% of overall emissions coming from the industrial sector, 19% from the transportation sector, and 13% from the electric power production sector.

The GHG Emission Reduction Goals laid out in Governor Edwards' Executive Order form the core component of this effort. They are divided into three:

A reduction of 26-28% of 2005 GHG levels by 2025;
A reduction of 40-50% of 2005 GHG levels by 2030;
Achieving Net Zero GHG emission levels by 2050.

The Draft Portfolio states that these goals are calibrated to 2005 emission levels to correspond to methods used in the 2010 Greenhouse Gas Inventory (GHGI).

The 2025 reduction goal is clearly a key milestone for achieving subsequent targets in the Plan, in addition to being a measurable level of reduction. It will need to be reached using our current infrastructure system, and should engage participation from all sectors (cf. Strategy 24, "Call upon the private sector to align its practices and play a leading role in climate action.")

A major tool for achieving significant GHG reductions in the near term is addressing emissions of methane, a potent GHG. The Draft accords a central place to the methane reduction issue, which is appropriate, focusing on the energy and industrial sectors, and including legacy/orphaned sources along with current production facilities and infrastructure.

A gap in the Draft's approach comes in its treatment of the issue of federal policies. The Draft refers to "near-term federal funding opportunities," an important potential source of revenue to address legacy/orphan sources for which responsible legal parties can no longer be found.

Major developments in federal policy towards the methane issue are underway, however. The U.S. Environmental Protection Agency (EPA) has released a proposed rule to limit emissions of methane from oil and gas facilities and infrastructure under section 111 of the Clean Air Act.

The proposed rule is currently out for public comment, and a process of public engagement is underway. Louisiana, like other states, should engage in this process in a constructive way, and work to align proposals under the Draft Portfolio to the final version of the federal rule. A number of the proposed Strategies and Actions in the Louisiana Plan will tie in directly with policies proposed in the EPA rule, in particular: coverage of existing facilities, detection and repair of leaks, and provisions dealing with flaring, venting, storage tanks, and pumps.

At the same time, the Pipeline and Hazardous Safety Materials Administration has finaled a methane rule that expands oversight on onshore gathering lines that were previously unregulated, and require annual reports on pipelines and leak incident reports.

Addressing the methane issue and achieving reductions of that GHG is a key step in federal, state, and private sectors that can impact climate trends in the near term.

Strategy 21 in the Draft states the goal of positioning Louisiana as a "climate leader" by engaging in national and regional dialogues and planning. Engaging on the proposed EPA methane rule in a constructive way would be a key step towards achieving this Strategy, as well as marking a contrast with previous state policy under the administration that preceded Governor Edwards.

Action 26.4 - "Update existing permitting and facility siting practices and regulations to align with Louisiana's emission reduction goals" is another centrally important provision. We pointed out in our previous comments that the state permit process represents a major point of action for dealing with the GHG issue in the state. While there are, as the draft notes, multiple state agencies and permit guidelines involved, those same agencies have a large amount of influence in how those policies are implemented. The state legislature also plays a role that includes largely controlling the final vote on agency funding levels.

Strategy 17 calls on the state to build a more inclusive and resilient economy for Louisiana residents, and the importance of including the interests and needs of vulnerable communities should continue in each area of Strategies and Actions. Addressing current health and safety risks from legacy pollution and active production production processes will continue to merit the state's attention.

LEAN has worked with communities and stakeholders across the state to address these issues, and can offer the products of this engagement for utilization by the state climate plan, including our Community Empowerment Program (https://leanweb.org/about/projects/community-empowerment-program) that includes a Community Atlas of past and current environmental and health challenges facing neighborhoods and residents across Louisiana (https://leanweb.org/community-atlas).

Sincerely,

Marylee Orr
Executive Director
LEAN

Michael Orr
Director
LMRK

P.O. Box 66323
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LOUISIANA ECONOMIC DEVELOPMENT

John Bel Edwards
Governor

Don Pierson
Secretary

MEMORANDUM
December 31, 2021

To: Lindsay Cooper, Project Manager, Louisiana Climate Initiative
From: Don Pierson, Secretary
Re: Revised Draft Portfolio of Climate Strategies and Actions, dated December 3, 2021

Please accept this as general reaction of Louisiana Economic Development (LED) to the early December 2021 Revised Portfolio prepared for/by the Louisiana Climate Initiatives Task Force.

Louisiana is unquestionably on the front lines of climate change. Stronger and more frequent tropical weather and sea level rise combined with continued coastal wetland loss have created unprecedented challenges. The state's response has been consistently proactive: Louisiana is now recognized internationally as a leader in coastal mitigation and restoration, and has been on the forefront of identifying opportunities that both protect the environment and grow our economy. We have already proven these dual purposes are achievable, which is cause for confidence and optimism as we enter an exciting new phase of developing and advancing technology, amid an urgency to act.

To some extent, Louisiana's future quality of life depends on our ability to adapt and address the issue head on. Governor John Bel Edwards's actions thus far can certainly be characterized as "leading from the front." Just this year, Governor Edwards provided testimony in front of the U.S. Senate Committee on Energy and Natural Resources and traveled overseas to participate in COP26.

Simultaneously, Louisiana remains a significant player in a global supply chain that still, for the time being at least, relies heavily on fossil fuels and petrochemical products to produce and transport essential consumer goods. Shifts are underway, but a tremendous portion of Louisiana's economy, tax revenue and jobs remain tied to these industrial pursuits.

LED is fully engaged in developing and pursuing energy transition opportunities for the state – currently provided by solar and biofuels, and eventually by carbon capture and storage, offshore wind and hydrogen. There is a growing private-sector market pull, and ESG considerations are driving private-sector companies toward lower emissions and cleaner operational processes. Louisiana's unique geographic, infrastructure and workforce advantages are already attracting billions of dollars of new capital investment.

Real transformation, however, will require both urgency and patience. At the World Petroleum Congress in Houston earlier this month, the Houston Chronicle cited energy historian Daniel Yergin's observation that "governments have oversold their ability to transition, pointing out that while North America's first oil wells came online in 1859, it took until the 1960s for petroleum to overtake coal as the world's No. 1 energy source."

"We're trying to do it in a very short period of time," Yergin told the conference. "All other energy transitions happened over a long time."

That does not mean that we should not move as fast as technology allows. It does mean that we should be realistic about what can be accomplished over a defined time frame.

The groundwork is being laid for Louisiana to be a leader in the energy transition and for our workers and companies to adapt and adjust to the changes that are coming. We hear it from companies who are considering Louisiana in their future development plans. We hear it from in-state companies who are planning for a different future in different lines of work, but with similar skills and expertise. These activities are all part of the transition that is only just beginning.

In the context of that early momentum, LED suggests a cautious approach to the adoption of regulatory frameworks that create additional layers of governmental approvals. Moving too hastily in this direction could embolden other Gulf South states vying for new energy investment and possibly impact Louisiana's competitive business development and retention advantages. These neighboring states are our most immediate economic development competitors, and we should not underestimate the extent to which a revamped Louisiana regulatory structure could advantage them.

LED recognizes and appreciates the extensive work that the Climate Initiatives Task Force has undertaken since its first meeting in November 2020. As we stated, Louisiana is "leading from the front" as a result of the direction from and leadership of Governor Edwards. We look forward to continuing to participate in this important and transformational effort. And we remain steadfast in the belief that our mission of expanding Louisiana's economic opportunity, and the Task Force's mission of building Louisiana's climate resilience, are perfectly aligned.

Public Comments on the Climate Initiative Task Force
Revised Draft Portfolio
Louisiana Energy Users Group
December 31, 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 (CHP) 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) Revised Draft Portfolio of Climate Strategies and Actions (Draft Portfolio).[1]

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 access to and deployment of distributed energy resources." As stated in prior comments, many of the proposed Actions in Strategies 1 and 2 fall directly within the jurisdiction of the LPSC. As a result, the LPSC will conduct the appropriate rulemaking or other proceedings, permitting input from all interested parties, prior to deciding on the adoption, rejection and/or modification of the proposed Action items. Because the "devil is in the details" on these complex issues, the serious and in-depth consideration that will occur in the LPSC proceeding is necessary to ensure that CITF goals associated with the electric power supply are achieved in a manner that is in the public interest. This is an area where "one size does not fit all" and the unique resources, economy, strengths and vulnerabilities of Louisiana must be factored in to any plan that is adopted to make sure that when we reach 2035, and even 2050, we will continue to have a reliable, affordable and economic power supply for all Louisiana customer classes.

LEUG appreciates the opportunity to participate in this process and plans to participate fully in the LPSC process considering these issues.

[1] LEUG, through counsel Katherine King, is a member of the Power Production Sector Committee.

Strategy 1

Action 1.1: This Action proposes the adoption of a Renewable and Clean Portfolio Standard (RCPS) in which, beginning in 2035, all electricity generation must come from renewable or clean resources. There is also a reference that at least 80% of the generation necessary to serve Louisiana load must come from renewable resources, but it is not clear whether the 80% renewable requirement applies in 2035 or 2050.

The decision to adopt a RCPS will be made by the LPSC. There are a number of factors that should be taken into consideration in determining whether to adopt such a standard and, if adopted, the structure and timing of the standard. Such factors include reliability needs, rate impacts and resulting competitiveness of rates, required transmission upgrades and their cost and timing, resilience impacts, etc. The goal of 100% renewable and clean power resources by 2035 is very aggressive, and while this may be the target, it should be clear in the Action that the requirements of reliability and maintaining an economic source of power for the state as we transition to the 2050 net zero target should take precedence. This will require the flexibility to allow review and revision as may be needed to address unintended consequences that may occur along the way, as well as other unpredictable events (such as hurricanes) which may alter the ability to achieve specific goals.

Any percentage limitations associated with the use of clean versus renewable energy should be developed only after the in-depth LPSC proceedings covering all relevant factors. LEUG believes that such a review will support the elimination of percentage limitations on clean power. The definition of "clean" power included in the Draft Portfolio requires that such generation capture at least 90% of emissions, with a continuing obligation to increase the amount of capture as technology improves and costs are reduced. If clean energy is producing few emissions by 2035 and no emissions by 2050, why should it be limited to 20% of the portfolio at either point in time, particularly if it provides a means to maintain a reliable and economic power supply? The percentage restriction on clean power complicates planning and serves as a disincentive to the investment in clean power generation. There will be little or no incentive to invest in the development and implementation of clean power technologies that may be eliminated by 2035 due to the 20% portfolio restriction. Even if the 20% restriction does not apply until 2050, it will have a chilling effect on investment. The period from approval of an RCPS to 2050 puts a thirty year operational life at risk for such new clean generation, considering the time required for project development and construction. LEUG supports the removal of the 20% limitation on clean energy in any RCPS included in the Draft Portfolio.

Further, the adoption of a state-wide REC market may make it more difficult and potentially more expensive for utilities to meet RCPS requirements because of the limited scope of the market. A better approach would be to adopt policies to participate in the largest and most efficient REC market available to Louisiana utilities. We anticipate that this issue will be addressed in LPSC proceedings.

Action 1.5 – This Action requests that the LPSC further review the benefits and costs of physical PPAs and deregulated power generation as mechanisms to add renewable energy generation to the grid and make electrification more accessible to industry, in light of the enormous

industrial electrification transition that is being proposed. LEUG fully supports this Action and suggests that the review include PPAs for clean energy as well as renewable energy. Industrial facilities with unused waste heat that can be used to efficiently produce energy could be further incented to produce additional power for consumption from that energy source if it could be sold to a third party for retail use without overly burdensome regulatory requirements, such as being treated as a regulated utility. One key aspect of this Action for both renewable and clean energy is how the power will be delivered to the retail purchaser. Therefore, the LPSC must also consider requiring utilities to deliver the power sold pursuant to the PPAs over the transmission system for compensation and we suggest that be included in the Action as a matter for LPSC consideration.

Action 1.6 – This Action proposes a 30% increase in transmission by 2030 and a 100% increase by 2050 to accommodate the changes that will be occurring in the energy sector. While there is general agreement that there will have to be transmission investment to meet the net zero electricity goals, how much transmission investment is needed will depend on any number of factors, including the location of new generation and the load that it will serve. Other developments such as changes in line ratings could also impact the level of transmission required along any path. It is not clear from the Action what the 30% and 100% targets refer to or the timing in making the determination of whether the standard is met – does it mean that there needs to be 30% more transmission infrastructure in 2030 than what exists when the CITF adopts the final report, or a 30% increase in transmission capacity, or a 30% increase in transmission investment? Rather than specifying a set percentage of required expansion, the Action should be revised to require transmission expansion that is linked to the specific needs identified in transmission planning studies related to reliability, economical power supply and renewable and clean energy power projects. Grid reliability and cost issues specific to hurricane-prone areas like south Louisiana and associated with the transmission buildout that will be needed to meet renewable requirements are also factors to be considered in transmission build-out plans.

Strategy 2

Action 2.4 - This Action requests that the LPSC evaluate the creation of an "Emission Reduction Generation and Supply" (ERGS) program in which industry and other third party generation from emission reducing sources (CHP, battery, on-site renewable, waste-heat generation) can be sold back to the grid on an "as available" basis or made available to nearby facilities through privately-owned transmission without being classified as a regulated electric public utility. LEUG initially proposed the ERGS program and appreciates its continued inclusion in the Draft Portfolio. However, we would like to clarify our proposal for purposes of the CITF's and LPSC's evaluation.

LEUG continues to support the ability to sell, at retail, to nearby facilities using private transmission without being classified as an electric public utility. This would clearly provide an incentive to industrial facilities to develop emission reducing generation.

For Qualifying Facilities under the Public Utilities Regulatory Policy Act of 1978 (PURPA) (those that are cogeneration facilities 20 MW and larger and located in the ELL service territory), the ability to "put" power to ELL at avoided cost on an "as available" basis is no longer available.

However, there is the ability to sell such excess power into the MISO energy market, although there are some additional regulatory hurdles that must be achieved in order to do that. LEUG has not requested that ELL's obligation to purchase such power on an "as available" basis be reinstated but is not opposing the recommendation that this be considered.

Instead, LEUG proposes an additional incentive to develop emission-reducing generation for an industrial company that has multiple facility locations or affiliate facility locations, which are not adjacent to the generation location. In other words, this incentive would apply where private transmission lines would not be economic. A company's ability to share or sell power from its emission-reducing generation to non-adjacent locations under common or affiliate ownership would offset the purchased power costs at those non-adjacent locations, likely producing cost savings, and provide a means to meet the GHG reduction goals of the company. These benefits will provide an incentive for the company's investment in the new emission-reducing generation or in the expansion of such existing generation. In order for the power to be delivered to the non-adjacent location, however, utilities must be required to deliver the power with their delivery costs recovered from the generator company or the consumer company.

Therefore, this Action should be amended to include the LPSC's consideration of the ability to share or sell electricity produced from emission-reducing power sources, at retail, to non-adjacent locations under common or affiliate ownership, without being classified as a regulated electric utility. It should also specifically include the consideration of the ability to purchase transmission/distribution from local utilities for the delivery of such power.

LMOGA

Louisiana Mid-Continent Oil & Gas Association

December 31, 2021

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

RE: Revised Draft Portfolio of Climate Strategies and Actions Comments

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) revised Draft Portfolio of Climate Strategies and Actions (Portfolio).

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 climate-related 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 contributions toward 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.

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 achieve 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.

LMOGA and our members remain committed to working collaboratively to develop climate solutions that grow Louisiana's economy.

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

- Action 1.1 – Mandated changes, like a clean portfolio standard, could introduce additional complexities to our energy supply and could impact affordability – which would adversely impact lower income populations
    - Market-based mechanisms to encourage investment would be preferrable to increased regulatory burden.

- Action 1.3 – Existing energy infrastructure and offshore expertise are potential areas of strength for Louisiana in the offshore wind space. That said, development of an offshore wind energy industry should be driven by market-based forces and not by regulation.

- Strategy 3 – One point of clarification needs to be made with regards to the industrial sector's share of Louisiana's total GHG emissions when compared to other states.
    - The concentrated nature of Louisiana's industrial corridor and the size and output of the facilities is wholly due to the fact that there is demand for products produced in Louisiana in other parts of the nation and the world.
    - For example, states in the Northeast that do not have a significant manufacturing sector still purchase products produced by industry, effectively "outsourcing" their emissions, particularly from an emissions inventory perspective.

- Action 3.1 – Facilities already report GHG emissions, as required by the EPA, which is how the state GHG inventory is assembled.
    - Additionally, LMOGA would like additional information regarding carbon intensity audits, such as the method for calculating carbon intensity, oversight/data security and other such details.

- Action 3.3 – To have the desired effect of lowering <u>total</u> emissions, any carbon pricing mechanism must be applied nationwide or – preferably – internationally. This is necessary to maintain competitiveness and to prevent "leakage," or GHG emissions that leave a more restrictive state for another, less restrictive state or country (resulting in no positive impact on overall, global emissions).

- Action 3.4 – Market-based mechanisms to encourage investment are preferrable to increased regulatory burden. Competitiveness with other states must factor into any decisions.
    - Also, Louisiana is home to several small, independent refineries, many of which are the primary source of jobs and tax revenue in their respective communities. Increased regulatory burden will disproportionately impact facilities such as these and could drive some to shut down. This scenario would be absolutely devastating to the towns and parishes relying on the facilities for employment and tax revenue.

- Action 4.1 – There is not enough detail in the Portfolio to fully contemplate this proposed action.
    - While the concept seems effective from a GHG reductions perspective, this is an extremely complicated and nuanced policy to implement due to countless variables between different facilities (size, products, design, age, etc.). The primary

risk is that Louisiana mandates that facilities make changes or capital expenditures without financial justification, putting Louisiana industry at risk.
    - Facilities already have incentives to operate efficiently in the form of energy costs/savings, stockholder pressure to meet certain environmental/climate performance goals and many others.
    - In summary, the market should drive investment and capital expenditure decisions.

- Action 5.1 – LMOGA appreciates the fact that the CTF acknowledges the challenges associated with achieving 100% electrification of industrial processes.
    - LMOGA also supports the creative use of incentives, pilot project grants and other mechanisms to encourage continued investment into developing the technology necessary to achieve large-scale electrification of industrial processes.
        - When contemplating the prioritization of projects/facilities receiving incentives, we certainly should be focusing on the projects that are most effective from an emissions reduction perspective. That said, since GHG emissions have global impacts, the physical location of the facility is secondary in importance to the GHG reductions.

- Action 5.2 – LMOGA supports this concept. Hydrogen continues to show promise as an alternative fuel, feedstock, etc.
    - Both green hydrogen (which is produced using 100% renewable energy) and blue hydrogen (which is conventionally produced but all GHG emissions are captured and sequestered) are viable options for producing hydrogen without increasing GHG emissions.
    - Based on today's technology, Louisiana's electricity production portfolio (and renewable potential) and Louisiana's sequestration potential, blue hydrogen would most likely have the greatest impact, at least in the near to medium term.

- Action 5.3 – LMOGA fully supports the safe deployment of carbon capture, utilization and storage (CCS).
    - Louisiana is extremely well suited for CCS from the perspectives of geology, workforce, concentration of industrial CO2 sources, infrastructure and industrial knowledge and history.
    - 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[i]. For an industrial state like Louisiana, CCS can be done safely and represents an area of strength and an opportunity for continued economic growth.[ii]
    - Installing and operating carbon capture equipment could potentially lead to a reduction in overall criteria pollutants in the impacted emissions stream. That said, GHG emissions are a global issue, while the impacts of criteria pollutants are more local or regional in nature. Therefore, any impacts to criteria pollutants should be considered a secondary benefit and should not drive any decisions regarding permitting, etc. of CCS projects.

- Action 5.5 – LMOGA supports the development of decarbonization "clusters,' particularly when considering the large-scale implementation of CCS and hydrogen production. Clusters allow for sharing of resources and expertise, which lowers the barriers to entry and investment.

- Action 6.2 – LMOGA supports implementation of circular economy principles. In fact, LMOGA members are constantly looking for ways to creatively reuse materials to reduce waste and environmental impacts.

- Action 7.1, 7.2 and 7.3 – The Commission for Louisiana's Energy, Environment and Restoration (CLEER) was established to evaluate how the state handles orphaned wells and to provide recommendations to improve.
    - Existing mechanisms are in place to hold prior operators responsible for orphan wells. No new private right of action for landowners with abandoned wells on their property needs to be created; existing landowners currently file private "legacy" lawsuits or have regulatory relief available.
    - Other than emergency situations, the definition of "responsible party" does not need modification; the regulator has the ability to recover costs from prior operators under R.S.30:93. Active enforcement of existing mechanisms will provide practical improvement.

- Action 7.4 – LMOGA supports this in concept and is curious to see what recommendations CLEER puts forward on this issue.
    - An additional challenge is the contractor selection process, which at times can impose unnecessary burdens on the OSR as they work to plug wells.

- Action 8.1 – In recent years, Louisiana has transitioned away from an oil producing state to become more of a gas producing state. As such, operators have a financial incentive to prevent methane waste, as methane has now become their product.
    - LMOGA notes EPA's recent notice of intent to implement more stringent methane regulations at the federal level, which includes regulation of most existing wells through state implementation plans. Additional state action would be duplicative, and the regulatory burden is unlikely to provide meaningful improvement over the new federal regulations.

- Action 8.2 – LDEQ already enforces Leak Detection and Repair (LDAR) regulations that are intended to detect and mitigate fugitive emissions.

- Action 8.3 – As mentioned above, LDEQ already enforces EPA's LDAR program. Rather than additional requirements, consider adding increased flexibility in how facilities comply with regulations.
    - LDEQ should adopt the LDAR methodologies described in EPA's recent notice of intent to implement more stringent methane regulations, as well as provide a streamlined methodology that allows for approval of alternate LDAR programs.

- Strategy 9 – LMOGA appreciates the fact that the CTF acknowledges the importance of liquid fuels in our modern economy, particularly in the fields of shipping and heavy vehicles.

- Action 13.4 – Affordability of housing needs to be factored into the decision when updating efficiency standards in buildings.

- Actions 15.1 and 15.2 – LMOGA supports these proposed actions. Louisiana's coastal wetlands hold enormous potential as a carbon sink, and we should be maximizing the employment of this resource.

- Action 15.3 – While LMOGA is generally supportive of market-based mechanisms, the question needs to be asked if the CTF envisions this being a Louisiana-only credit, or more broadly applied.

- Strategy 20 – LMOGA supports the leveraging of potential federal funding opportunities.
    - 45Q represents a huge opportunity for Louisiana. Properly supported by the state, 45Q unlocks economic opportunities and supports existing industry.
    - Federal funding for plugging wells or addressing other sources of methane benefit other stakeholders, as well.
    - The State needs to be prepared to properly prioritize and deploy funds in a way that maximizes impact in the most efficient way possible, which may require some updates to the contractor bid/selection laws and regulations.

- Strategy 21 – To maintain competitiveness and to prevent leakage, climate policies are best implemented on the national (or ideally international) level. If not national, policy should at least be enacted via regional partnerships. State-only climate policies and regulations may not have the desired impact on emissions and could cost the state future investment and jobs.

- Strategy 24 – LMOGA appreciates the fact that Governor Edwards recognizes the important role that industry will play in developing climate change solutions. LMOGA members have been and continue to invest heavily into improving efficiency of their operations and driving down emissions.
    - There are questions to be answered regarding the idea of the Resiliency Fund, such as the funding sources, fund dedication, oversight, etc.

- Action 26.1 – Prior to a state agency being granted primacy over any federally regulated program, they must undergo a rigorous application process that includes an assessment of the agency's capabilities to adequately assess permit applications and enforce regulations in a way that ensures the public's safety.
    - An example of this is the current application for primacy for LDNR for regulating Class VI (carbon sequestration) wells. This application has been under review for some time, including rigorous review by the EPA, public comment periods and a public hearing.
    - Since the federal regulator is already assessing the state agencies' preparedness as a regulator, LMOGA wonders what other entity would potentially be performing additional audits and whether it is necessary.

- Action 26.2 – Once granted primacy to regulate Class VI wells, LDNR will be the permitting authority and would be assessing permit applications. What entity would be performing the study described, and what would the scope of the study entail?
    - It seems as though this particular action needs more clarification prior to inclusion in the larger portfolio.

- Action 26.4 – As contemplated previously, climate and GHG emissions have global implications. Therefore, climate policy and regulations are most effective when applied as broadly as possible.
    - Any Louisiana-focused policy or regulation that drives up the cost of doing business will lead to imbalances in the cost of products produced in Louisiana and will impact competitiveness with neighboring states and international trading partners (what % of Louisiana's production is exported globally? Do we know?), which could drive investment elsewhere. This scenario harms our economy with little benefit to overall GHG emissions.
    - Additionally, there are many scenarios in which greenfield industrial development is not feasible or is not the best option from an efficiency or safety of operations standpoint. This must be considered when discussing siting requirements.

- Action 27.1 – LMOGA would appreciate an opportunity to participate in the process described in this action.

- Action 27.2 – LMOGA would appreciate the opportunity to continue participating in the CTF.

- Action 28.3 – LMOGA would appreciate an opportunity to participate in the process described in this action.

LMOGA appreciates the opportunity to provide comments and input on the CTF's Draft Portfolio, 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

CC: Harry Vorhoff
Lindsay Cooper

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

[ii] 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.

Comments

Stacy Methvin <spmethvin@gmail.com>

Fri 12/31/2021 7:57 AM

To: Climate <climate@la.gov>;

EXTERNAL EMAIL: Please do not click on links or attachments unless you know the content is safe.

I have focused my review on the industrial emissions reductions and have two comments.
1) The LDAR programs are important tools in the detection and repair of leaks. However, the report implies that the EPA program should be followed as well as other actions underway in other states. I think this section can be strengthened by the new work that is underway to be much more innovative in the early detection of leaks. This can include infrared technology, flyovers, etc. The EPA has not encouraged this technology development by not allowing it as an acceptable alternative to the traditional sniffer program. We can cite better examples of what is currently being developed to encourage better monitoring and faster repair.
2) I don't think there is any mention of flaring reduction. Flares are a source of CO2 as well as methane (inefficient burning of the gases) and have become too commonplace. Flares should only be an emergency system or minimally used during maintenance at a plant or gathering facility, not a routinely used "vent". Policies should be strengthened at the State level to restrict flaring, reduce waivers, and prevent their routine use.

I am happy to work with someone on this section if there is interest in beefing it up.

Kind regards,
Stacy

Stacy Methvin
832-603-2402 (cell)

Sent from my iPad

December 30, 2021

Honorable John Bel Edwards
Office of the Governor
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Baton Rouge, Louisiana 70804
climate@la.gov

Re: Comments on the Climate Initiatives Task Force (CITF) Revised Draft Portfolio of Climate Strategies and Actions

Governor Edwards, Chairman Kline and members of the Climate Initiatives Task Force,

As our region faces the ongoing and severe effects of climate change, it is important we all work together to find answers to this unfolding crisis. Our Restore the Mississippi River Delta coalition has a vision for a just, climate resilient coast where people and nature thrive, and we work towards achieving this through our mission of advancing an equitable, safer, and flourishing coast for Louisiana's communities, ecosystems, and economies. 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. Our coalition appreciates this final opportunity to comment on the Climate Initiatives Task Force's (CITF) recently released Revised Draft Portfolio of Climate Strategies and Actions.

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. However, we quickly recognized that adaptation alone is not enough. The best outcomes for the future of Louisiana require coupling adaptation measures with the reduction of greenhouse gas (GHG) emissions. As warnings regarding greenhouse gas emissions continue to emerge, we are supportive of Louisiana's continued progress in framing important discussions and developing solutions to directly address the challenges of climate mitigation.

Overall observations for the revised portfolio:

- We appreciate the sheer amount of time and effort put into developing this revised portfolio. Thank you for including a table of contents with strategies, actions and the associated section title. This is helpful for stakeholder review. This report strives to strike a balance between the many, diverse stakeholders on this complex issue.

We believe the revised portfolio makes a strong effort to address topics and ideas raised after the release of the partial draft, and this revision represents a solid step forward in framing and continuing this critical conversation, while putting forth tangible actions to be considered. We are concerned, however, the current proposals still fall significantly short of the net emissions goals set forth by the Governor, but we recognize continued progress is possible and Louisiana's efforts will only succeed as part of a broader international commitment to a fundamentally re-ordered system beyond the scope of this initiative.

- We must keep climate mitigation plans in lock step and balanced with Louisiana's coastal protection and restoration efforts. These efforts, which could reach over $1 billion in annual expenditures, also demand their own dedicated workforce, industry partners, long-term funding, and policy considerations. We will work to ensure these two initiatives remain aligned and supportive with one another.
- We understand this Revised Draft Portfolio is a work in progress, and we believe that with focus on the best available tools, refined accounting, and stakeholder engagement and transparency, this effort can lead Louisiana toward a more sustainable, and resilient future. We do acknowledge such outcomes will require a sustained and supported effort beyond this initial plan development.

More specifically, we support the following priorities, strategies and actions:

- **Natural and Working Lands and Wetlands**: this strategy should also take into consideration Louisiana's Comprehensive Coastal Master Plan, the science-driven document which could help maximize climate mitigation and adaptation goals, as well as the work on the Louisiana Watershed Initiative, which can help plan to reduce localized flooding in the case of more frequent extreme weather events. Specifically, the Coastal Protection and Restoration Authority (CPRA) should incorporate climate mitigation goals and measures (e.g., carbon sequestration potential of wetlands) into future iterations of the Coastal Master Plan as well as into project design and prioritization.
- **An Inclusive, Low Carbon Economy:** we, too, share the vision to build a more inclusive and resilient economy for all Louisiana residents which could incorporate both climate mitigation, including the development of an array of energy sources and associated employment, as well as the expanding water management sector responsible for implementing coastal restoration and protection projects. This begins with education through secondary and vocational training schools and follows through to the deepening of a workforce in Louisiana's community college, four-year universities, and graduate and post-graduate studies. Additionally, there remains the need to continue and coordinate climate change mitigation and adaptation research needs across Louisiana's academic, public, and private institutions, not limited to just the Water Institute or Louisiana institutions but expands to include national and international-level research outlets available to Louisiana.

- **Collaboration and Partnerships to Ensure Successful Implementation:** it is critical Louisiana's varying agencies coordinate and maximize potential federal funding opportunities. Implementation policy surrounding the recently passed bipartisan infrastructure package funding is currently being developed and, even more timely, significant funding is being considered through the Build Back Better bill under consideration by Congress. At present, funding from the 2010 BP oil spill settlements comprise most of the state's restoration 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. Coordination at this level will demand strong partnerships across state and local governments. Private industry and contractors also play a critical role by aligning their own best practices and putting "Louisiana first" with regards to hiring and contracting as much as possible.
- **Accountability and Adaptability to Ensure Lasting Success:** Louisiana should establish a statutory and organizational framework for coordinating and implementing statewide climate resilience. 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 additional staffing capacity and resources to oversee and monitor new clean energy technologies and infrastructure. Management of climate initiatives must be supported by a solid governance framework in order to be successful. Additionally, we are supportive of a legislatively mandated update to the actions and strategies every five years. In the case of Louisiana's Coastal Master Plan, we have found this scheduled review is an excellent practice to evaluate the most current technology, science, standards, and examples of action and results available not just nationally, but internationally.

In summary, without action, Louisiana's communities, ecosystems and economy are all in peril due to a number of factors, including climate change-driven impacts. With an eye towards changing our future with action, we are appreciative of the steps by our state to strike the balance between the needs and perspectives of different stakeholders, meeting the urgent need to address the root causes of climate change, while also supporting values related to a more equitable and resilient society, environment, and economy.

Sincerely,

Simone Maloz

Campaign Director

Restore the Mississippi River Delta

Kristi Trail

Executive Director

Pontchartrain Conservancy

Kimberly Davis Reyher

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December 30, 2021

Honorable John Bel Edwards
Office of the Governor
P.O. Box 94004
Baton Rouge, Louisiana 70804
Via email: climate@la.gov

Re: Comments on the Climate Initiatives Task Force (CITF) Revised Draft Portfolio of Climate Strategies and Actions

Dear Governor Edwards, Chairman Kline and Members of the Climate Initiatives Task Force,

Thank you for the opportunity to provide a public comment on the revised Draft Portfolio of Climate Strategies and Actions ("the draft plan") developed by the Louisiana Climate Initiatives Task Force ("CITF"). We appreciate the work of the CITF and staff of the Governor's Office of Coastal Activities ("GOCA") in developing a bold plan to advance climate mitigation, adaptation measures and community resilience to ensure that Louisiana's communities and economies thrive for the benefit of future generations.

The National Wildlife Federation ("NWF") is the nation's largest conservation education and advocacy organization with nearly seven million members and supporters and conservation affiliate organizations in forty-nine states and territories. We have a long history of advocating for restoration of ecosystems and protection of land and water resources in Louisiana and across the U.S. Gulf Coast.

Recent Hurricanes Laura and Ida as well as past storms, extreme precipitation events, and unprecedented high river events showed very clearly how vulnerable our communities and infrastructure are to climate change impacts. Factoring in accelerated sea level rise and compounded impacts of severe weather and extreme events, climate change is clearly the greatest long-term threat that Louisiana faces. Although these threats are imminent, we have an opportunity to mitigate those threats by taking intentional action to reduce greenhouse gas emissions (GHG) to help avoid the worst impacts of climate change and to sustain as much of our coast as possible.

The draft plan includes near-term and long-term strategies designed to address climate adaptation and mitigation challenges while prudently balancing coastal protection and restoration priorities as well as the interests of varied stakeholders. While we recognize that this is a challenge, we believe that striking the right balance can result in a win-win scenario for this Initiative and the Coastal program where resources are bolstered and a path is charted for future funding pursuits.

We are encouraged by the work of the CITF as it moves closer to a vote on a final plan that will serve as a road map to action. We are impressed by the level of urgency and broad scope that the draft plan entails.

However, ultimate success hinges on accelerated leadership, coordination, implementation, and follow through.

We also fully recognize that the draft plan represents only a first step, but a vitally important one, on the path to decarbonization and climate stabilization. In having the courage to take that first step, Louisiana is demonstrating its determination to become among the leaders in tackling this most complex problem, rather than simply a victim of forces that it cannot confront alone. When faced with the worst coastal land loss rate in the world, Louisiana developed an aggressive, economically feasible, science-based process in response. We see in this initiative a parallel, and recognize that the process is more important than the initial plan. We strongly urge the state to codify the process and to periodically update the plan. Louisiana cannot reverse climate change alone. Only a concerted international effort can bring us to net zero and beyond, and in that global process many of the ideas outlined herein will be tested, improved or discarded. Most importantly, new solutions, policies, incentives and economies of scale will emerge, and Louisiana must be ready to adapt.

Much of Louisiana's coastal land loss crisis occurred because of actions taken to insure a functioning national economy, whether for navigation on the river to facilitate our agricultural exports or the dredging of a vast infrastructure for the extraction of oil and gas to fuel America's emergence as the world's leading economy. Louisiana's coastal ecosystem, and eventually its coastal communities, paid and are paying the price. Just as Louisiana began to tackle the issue of coastal land loss due to past actions, we discovered that future sea level rise looms as a potentially greater threat than the losses of the past. Louisiana has been forced to modify project proposals, measures of success, and expectations as a result. Louisiana has been forced to accept the prospect of a vastly shrunken geographic footprint.

But with better utilization of riverine resources, that footprint can be more biologically productive than that which is being lost. At the same time, it is proving that a restoration and adaptation economy can provide increased opportunities for coastal communities and citizens as the state adapts. But eventually Louisiana will lose it all to runaway sea level rise unless the world weans itself of carbon. Much of what led to Louisiana's current crisis was done in service to the very processes that drive sea level rise, and much of our state's current outsized carbon footprint is here because of manufacturing fuels and chemicals that are used elsewhere. Just as with the increased opportunities provided by the restoration and adaptation economy, a transformed carbon economy can lead Louisiana to better economic opportunity, less dependence on exploitative industries, cleaner air and water, and a physically sustainable landscape in which to live.

Strategic Alignment of The Plan with Goals of Coastal Master Plan

NWF encourages strong coordination between the Climate Action Plan and the Coastal Master Plan ("CPRA Master Plan"). As laid out in Strategy 15, climate mitigation goals and measures should be incorporated into future iterations of the CPRA Master Plan and restoration project implementation. We support the further exploration and commitment to quantifying carbon sequestration and blue carbon potential as a source of future funding for wetland restoration and protection.

Governance Framework

Management of climate initiatives must be supported by a solid governance framework in order to be successful. 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. As stated in a previous letter, we agree that the Department of Natural Resources needs some additional staffing capacity and resources to oversee and monitor new clean energy technologies and infrastructure.

Agency Coordination

Combating climate change requires decisive and intentional action across all sectors and levels of government to ensure that communities and infrastructure are resilient against future storms and the impacts of climate change. Climate action and environmental justice considerations must be a top priority and woven into the fabric of every state agency. Further, the state should make siting and land decisions within an established comprehensive state-wide plan or framework to avoid and/or minimize greenhouse gasses. Decisions about where and how we develop will have profound and lasting effects on our GHG and energy use. They will be with us for generations. Poor land-use decisions not only lead to poor outcomes now, but they limit ability to address in the future.

Collaboration and Partnerships to Ensure Successful Implementation

We applaud the commitment to broad, strategic, and equitable partnerships. These strategies are critical to the legitimacy, success, and sustainability of the Climate Action Plan. Regarding Strategy 20, maximizing potential for federal investment in the advancement of the plan is imperative. While Louisiana currently funds its vital coastal restoration program primarily with BP oil spill funds, the funding is finite and a federal investment to help sustain the coastal program should be prioritized within the next decade. 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.

We believe that with the climate initiative in place, Louisiana has an opportunity to press for the continued implementation of Coastal Master Plan projects and 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.

Workforce Development

Prioritizing the local Louisiana workforce transition to a low-carbon economy and providing training opportunities to historically marginalized and disadvantaged communities is not only essential to an equitable and just future for the state, but also a prime opportunity to transform the economic trajectory of Louisiana.

Rooted in Equity and Justice

Collaboration with and direction from Louisiana's frontline communities – those who have been impacted first and worst - should be a consideration. Frontline communities include Black, Indigenous and other communities of color – including low income communities and other groups that are exposed to industrial pollution along the Mississippi River Corridor and in the Lake Charles area.

Additional Comments

We are supportive of a legislatively mandated update to the actions and strategies every five years. In the case of Louisiana's Coastal Master Plan, we have found this is an excellent practice to review and incorporate the most current technology, science, standards, and examples of action and results available not just nationally, but internationally. It will also be necessary to cure legal and policy impediments and pave new pathways in order to accomplish the goals of any plan. We recognize that while official updates would occur every five years, this work will be an ongoing process with needs for regular task force and working group meetings as well as continuous outreach and engagement.

Relative to clean energy, this an exciting moment for development, including offshore wind energy in the Gulf of Mexico as wind energy (strategy 1.3) will continue to be part of our nation's energy mix and an integral part of Louisiana's economy. As development moves forward, NWF urges that it be developed in a way that's responsible and safeguards communities, river and ocean habitat and wildlife.

We are pleased to see that robust monitoring and tracking are built in to the plan (strategies 1.8, 3, 8, 15, 16, 26, 27 and 28), that the plan includes a proactive item to address broadband access, particularly in rural communities (strategy 10.2), and that is includes an update to include emissions for newly permitted and sited facilities (strategy 26).

NWF appreciates the continued efforts of CITF as this initiative progresses to a final phase. We encourage the state to begin implementing action items that we can take more immediately to improve lives for residents and communities as soon as practicable. Thank you again for the opportunity to provide comments on this revised Draft Portfolio.

Sincerely,

David P. Muth
National Wildlife Federation

climate task force response

bobby@parksair.com

Thu 12/30/2021 6:22 PM

To: Climate <climate@la.gov>;

1 attachments (436 KB)

Robert (Bobby) Parks CV.pdf;

Respectfully,

I completely agree that Louisiana needs to and should ***"Strengthen minimum energy and lighting efficiency standards for residential, commercial, and public buildings"*** (ACTION 13.4), but there is an equally important aspect to this ability to do so. That is the ability to also **"*to review and adopt new codes*"** (Action 13.6). This was stated even more accurately in the Associated Submitted Action Proposals: 133 ***"Louisiana has adopted a number of codes from national and international code organizations, with amendments, in order to ensure public health, safety and welfare".***

Because Louisiana is one of only two states that are completely encompassed in the Hot Humid/Fringe Climate Zone (the other state being Florida), it is **EXTREMELY important** that Louisiana always maintains the ability to not only "review and adopt" but maintain our ability to "AMEND" , just as the current code process allows for all other related building codes.

Louisiana's climate zones, being unique with our sustained, long-term high humidity conditions and combined with the fact that these zones only make up <10% of the United States, this factor is often overlook and/or not appropriately considered nor understood by the other 90% of the country that has promulgated these energy upgrades. I have seen this first hand after serving on ICC's 2018 IECC Code Development Committee, serving on ICC's 2021 IRC Mechanical and Plumbing Consensus Committee and currently serving as a principle member on the newly developed ICC 2024 IECC Residential Standards Development Committee. Its easy to say "*hot and humid*" climate… but you really can't **understand it** until you try to walk from your Baton Rouge hotel room, to your car, on a hot humid morning, in the middle of July and August!

Its not that Louisiana cannot "meet" the energy upgrades, but that the manner in which we have to achieve them is very different, often 180 degrees opposite, than the other central and northern climate zones.

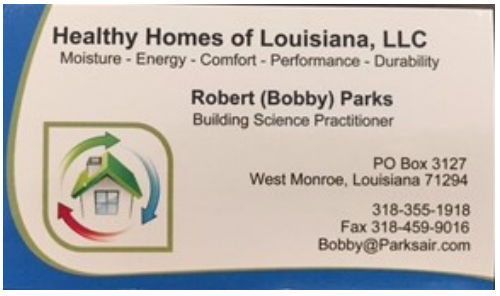
DO NOT allow ourselves to be trapped in a situation where we are forced to "**adopt the latest standard**", without leeway to "review, amend and adopt"… only to later find ourselves trapped in a situation that is causing significant moisture related issues in our structures (like many other states, which lacked the foresight, have experienced). We must preserve the right to "**review, amend and adopt the latest energy standards**"… for the well being of our Louisiana citizens… ***" in order to ensure public health, safety and welfare".***

Respectfully submitted,
Robert (Bobby) Parks
Building Science Expert and Practitioner of over 30 years (CV Attached)

References below:
ACTION 13.4 **Strengthen minimum energy and lighting efficiency standards for residential, commercial, and public buildings** Minimum efficiency standards can reduce energy demand and the associated GHGs from buildings. Currently, the authority to set energy efficiency standards for buildings and structures is distributed across multiple state entities, including the Louisiana State Uniform Construction Code Council (LSUCCC), the state fire marshal, and DNR. This action proposes that the Louisiana Legislature allow the LSUCCC to update Part IV-Energy Conservation of the International Residential Code beyond the 2009 edition. This action further proposes that the state fire marshal update the Commercial Building Energy Conservation Code to strengthen energy efficiency standards. The state fire marshal, and the LSUCCC should it receive authority to update the Residential Energy Conservation Code, should consult with the DNR Office of Energy, DOA Office of Facility Planning and Control, local governments, the LPSC, LHC, residents, and key stakeholders when updating these respective codes. (Associated Submitted Action Proposals: 133)

ACTION 13.6 Update statewide building 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. In the near-term, this action encourages the LSUCCC to complete the process of code adoption that is underway and adopt stronger minimum energy performance standards and codes for Louisiana by July 1, 2022. If newer building codes were adopted, building projects could take advantage of the latest low-carbon materials such as mass timber. In implementing this action, the Louisiana Legislature should also change the LSUCCC authorization and require them to adopt the latest model codes (such as the residential I-Codes or the ASHRAE 90.1 energy code) automatically as new versions are published, except if overridden by a majority vote of the LSUCCC. (Associated Submitted Action Proposals: 75, 133, 50)

Associated Submitted Action Proposals: 133 Louisiana has adopted a number of codes from national and international code organizations**, with amendments, in order to ensure public heath, safety and welfare**. These codes govern many aspects of buildings, including building structure, mechanical and plumbing systems, and energy consumption. These code organizations update their reference code periodically--typically every three years, based on advances in technology impacting both safety and cost-effectiveness. However, Louisiana does not automatically advance to the most recent versions of these but defers this to State Council



Comment on CITF Draft Report

Pooja Prazid <p.prazid@gmail.com>

Thu 12/23/2021 3:09 PM

To: Climate <climate@la.gov>;

To Governor John Bel Edwards and the Climate Initiatives Task Force:

My name is Pooja Prazid and I am a resident of Chalmette in St. Bernard Parish. I am an engineer at Domino Sugar, and the energy mix in our electric grid is of high priority to my work and my home life.

I urge you to make the following enhancements to the draft plan:

1) Leverage the recently passed Infrastructure Bill to build long range transmission of renewable energy from the Midwest and Western States. This will reduce costs of electricity for Louisiana consumers, reduce the State's carbon footprint and provide a broader market for renewable energy development in Louisiana

2) Develop a detailed plan to increase the production of renewable energy in Louisiana including the development of wind turbines in the Gulf of Mexico, thereby creating increased economic development, and reducing greenhouse gases

3) Provide incentives to make Louisiana the hub of the United States for the manufacture of wind turbines to enhance economic development

4) Encourage the Public Services Commission to develop a Renewable Portfolio Standard with a goal of achieving zero carbon emissions in the production of electricity by 2040 and commend the City of New Orleans for the development and implementation of their Renewable and Clean Energy Portfolio

5) Add the Customer Lowered Electrical Price approach to the demand side tools highlighted in the CITF draft plans to encourage individuals to reduce peak energy demand and reduce their carbon footprint.

Thank you,

Pooja Prazid
7900 Patricia St. #3304 Chalmette LA 70043
(916)-952-9955

SIERRA CLUB

Delta (Louisiana) Chapter

December 31, 2021

The Delta (Louisiana) Chapter of the Sierra Club submits the following comments amplifying resubmitted October 8th comments related to the following sections of Louisiana Climate Action Plan Draft Final Report.
Under the Chapter "Natural Working Lands and Wetlands" we are referring specifically to:

> STRATEGY 16. "Support the sustainable management and conservation of working agricultural and forestry lands"
> ACTION 16.1 "Establish a Louisiana Conservation Innovation Program"
> ACTION 16.2 "Support the transition to regenerative agriculture and forestry practices"
> ACTION 16.3 "Expand implementation of on-farm conservation plans"
> ACTION 16.4 "Measure carbon sequestration potential of conservation farming and forestry best management practices"
> ACTION 16.5 "Establish an urban agriculture and conservation program in the LDAF"
> ACTION 16.7 - Encourage sustainable forest management and greater use of Louisiana forest products for construction

Strategy 16 and associated actions must explicitly state the necessity to retain Louisiana's extensive coverage of older growth forests (including secondary growth) as a key to promoting significant carbon sequestration and reduce the impact of climate change in Louisiana's **near term future**. **Promoting tree planting as a sustainable forest practice—as is frequently mentioned in Strategy 16—is counterproductive if the replanted trees are replacing harvested mature trees with much higher capacity for carbon capture.** Are "sustainably managed working forests" (mentioned in an excerpt from the La Forest Action Plan—see below), from **managed tree farms of younger trees** or instead from unmanaged older growth forests in "family " ownership?

Frequent mention of forestry "best management practices" fails to explicitly state that retention of existing mature forests (including older second growth areas) should be given priority over commercial logging with respect to carbon sequestration. Forestry Best Management practices should limit logging to managed commercial tree farms and ecologically justified thinning of unmanaged forest areas

Action 16.7 – "Encourage sustainable forest management and greater use of Louisiana forest products for construction - is still problematic". The opening assertion - 'Markets for wood products create incentives for landowners to plant more trees and better management [sic] forest, resulting in more carbon sequestration' - is an unproven claim that is at odds with much available evidence. The published references cited below on the value of mature older forests and their soils for carbon sequestration are only part of the evidence that accelerating logging and wood

consumption, and incentivizing tree planting that may not be scientifically guided, are not beneficial for carbon sequestration.

Similarly, the action calling for encouraging the use of Louisiana forest products, including wood pellets and biomass, in state capital projects and other construction projects, is confusing. Wood pellets and biomass are being promoted as fuel, so their role in construction projects is unclear. Their use as energy products, as we have pointed out in previous comments, is based on misguided European Union policies that are impacting forests in multiple countries and is not a clear aid in carbon sequestration. It is also unclear what encouragement the CCTF Report is proposing, and whether this includes subsidization of private activities for this purpose, which would also be problematic."

In this regard we quote from Louisiana's 2020 Forest Action Plan (http://www.ldaf.state.la.us/wp-content/uploads/2021/03/LA_FAP_2020_FINAL-Jan-2021.pdf), regarding the apparently well intentioned Forest Legacy Program (page 64) :

"The Morehouse Family Forests Initiative supports family forest landowners in northeastern Louisiana and southeastern Arkansas by providing tools and resources to implement forest management best practices to increase commercial, recreational, and ecological value of their lands. Participating landowners receive technical assistance in development of site-specific land management plans. **Drax Biomass Inc. and the American Forest Foundation recently announced a five-year, $1.1 million project to invest in small family landowners surrounding Drax's Morehouse BioEnergy facility in northeastern Louisiana. Drax Biomass manufactures compressed wood pellets produced from *sustainably managed working forests*.** Keeping family forests healthy and productive is vital to the continued supply of sustainably-produced wood pellets. The Morehouse Family Forests Initiative encourages habitat improvements, forest biodiversity, and certification through American Tree Farm, an internationally recognized certification program designed for family forest owners and administered through American Forest Foundation. Morehouse Family Forests Initiative supports the Southern Woods for At-Risk Wildlife Partnership, a recent partnership of American Forest Foundation and the National Fish and Wildlife Foundation seeking to protect sustainable wood production and at-risk wildlife."

- The stated goals of the La. Forest legacy Program are laudable—promoting the watershed/ecological value of sustainably managed forests , but there is no mention of forest conservation and stewardship to promote carbon sequestration**. Similarly The Louisiana Climate Action Plan Draft final report fails to link preservation and stewardship of the State's substantial unmanaged forest acreage to carbon sequestration and mitigation of climate change impact, particularly when it comes to inventorying and prioritizing retention of substantial acres of older growth forests**

- The Forest Legacy Program's Morehouse Family Forests Initiative should only use pellets from younger trees – trees under 50 years old would be a good benchmark .Trees 50 years and older should be recognized as having greater carbon sequestration capacity than younger trees in the short to medium term and **should not** be harvested for biofuel/wood pellet marketing. (see resubmitted Delta Chapter Sierra Club comments below on value of old growth forests and necessity to inventory older growth forests).

- The National Geographic Article "Europe-burns controversial renewable energy trees from US" reinforces need to reassess climate change reduction benefits from biomass/wood pellet fuel alternatives to fossil fuel. https://www.nationalgeographic.com/environment/article/europe-burns-controversial-renewable-energy-trees-from-us?cmpid=org=ngp::mc=crm-email::src=ngp::cmp=editorial::add=Planet_Possible_20211116::rid=BD9683050FDC644BE995E19B91CB4284

References

Effects on Carbon Storage of Conversion of Old-Growth Forests to Young Forests

MARK E. HARMON, WILLIAM K. FERRELL, AND JERRY F. FRANKLIN

SCIENCE • 9 Feb 1990 • Vol 247, Issue 4943 • pp. 699-702 • DOI: 10.1126/science.247.4943.699

Abstract

Simulations of carbon storage suggest that conversion of old-growth forests to young fast-growing forests will not decrease atmospheric carbon dioxide (CO_2) in general, as has been suggested recently. During simulated timber harvest, on-site carbon storage is reduced considerably and does not approach old-growth storage capacity for at least 200 years. Even when sequestration of carbon in wooden buildings is included in the models, timber harvest results in a net flux of CO_2 to the atmosphere. To offset this effect, the production of lumber and other long-term wood products, as well as the life-span of buildings, would have to increase markedly. Mass balance calculations indicate that the conversion of 5×10^6 hectares of old-growth forests to younger plantations in western Oregon and Washington in the last 100 years has added 1.5×10^9 to 1.8×10^9 megagrams of carbon to the atmosphere.

- Published: 11 September 2008

Old-growth forests as global carbon sinks

- Sebastiaan Luyssaert, E. -Detlef Schulze, , Philippe CiaisAnnett Börner, Alexander Knohl, Dominik Hessenmöller,Beverly E. Law & John Grace

Nature **volume 455**, pages213–215 (2008)

Abstract

Old-growth forests remove carbon dioxide from the atmosphere[1,2] at rates that vary with climate and nitrogen deposition[3]. The sequestered carbon dioxide is stored in live woody tissues and slowly decomposing organic matter in litter and soil[4]. Old-growth forests therefore serve as a global carbon dioxide sink, but they are not protected by international treaties, because it is generally thought that ageing forests cease to accumulate carbon[5,6]. Here we report a search of literature and databases for forest carbon-flux estimates. We find that in forests between 15 and 800 years of age, net ecosystem productivity (the net carbon balance of the forest including soils) is usually positive. Our results demonstrate that old-growth forests can continue to accumulate carbon, contrary to the long-standing view that they are carbon neutral. Over 30 per cent of the global forest area is unmanaged primary forest, and this area contains the remaining old-growth forests[7]. Half of the primary forests (6×10^8 hectares) are located in the boreal and temperate regions of the Northern Hemisphere. On the basis of our analysis, these forests alone sequester about 1.3 ± 0.5 gigatonnes of carbon per year. Thus, our findings suggest that 15 per cent of the global forest area, which is currently not considered when offsetting increasing atmospheric carbon dioxide concentrations, provides at least 10 per cent of the global net ecosystem productivity[8]. Old-growth forests accumulate carbon for centuries and contain large quantities of it. We expect, however, that much of this carbon, even soil carbon[9], will move back to the atmosphere if these forests are disturbed

Sincerely,
Harvey Stern
Delta Chapter Sierra Club Conservation Committee
740 7th St.
New Orleans La 70115

****

.Sierra Club Delta Chapter Comments submitted October 8th 2021

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

Louisiana Forest Inventory 1991 reference - https://www.ldaf.state.la.us/forestry/management/forest-product-marketing-utilization-development/

US Forest Service, "Louisiana's timber industry - an assessment of timber product output and use, 2002," https://www.fs.usda.gov/treesearch/pubs/9531

ENS Comments on December 3rd draft portfolio of Climate Strategies and Actions 12/31/21

The following are my comments on the revised draft "Portfolio of Climate Strategies and Actions" dated 12-3-21. My congratulations to those charged with reducing a veritable mountain of opinion, some informed, and some not so much, into a readable, generally informative, and eminently usable document.

My comments:

Strategy 1, page 2, I suggest new bullet in green section under highlights:

"Loss of existing jobs can be minimized by both targeted retraining as well as by targeted life extension of existing infrastructure."

page 3, Action 1.4, insert "and clean" between renewable and energy at end of third line.

page 4, Action 1.6 line 4, after generation, insert "add" before offshore wind,

add "refocusing of nuclear power facilities to support green hydrogen production" before development.

page 5, Action 1.8, line 4 replace "synthesizes" with "produces valid" before data

Strategy 2, page 7, Action 2.3, line 10 insert "or other energy storage devices," after batteries

Strategy 3 in line 6 replace "in reduction" with "for all reductions" after "accountability" at end of first paragraph

Strategy 3.2 second paragraph, first line, insert "they can" after "but" and before "benefit"

Strategy 3.3 in line 15 insert "and clean" between "renewable" and "energy"

Strategy 5, Action 5.1, page 13, second paragraph, line 2 replace "incentivize" with "incentive"

page 13, second paragraph, line 3 insert "and state" between "federal" and "investment"

page 13 second paragraph, line 6 insert "and state" between "federal" and "investment"

Strategy 5, Action 5.2 page 14, line 7 replace "replace" with "reduce" between "can" and "carbon-intensive"

page 14, line 13 replace "become" with "becomes" between "equipment" and "more"

Strategy 5, Action 5.5 page 15, line 12, insert "should allow" for "allows" after "Plans" and before "industry"

Strategy 6, first para., page 16, line 6 insert “the use of” after “on” and before “higher”

Strategy 6, Action 6.1, page 16 line 7, insert “will require” for “requires” between “criteria” and “legislative”

line 7, replace “worked towards” with “expedited” between “be” and “. Buy”

Strategy 6, Action 6.2, page 16, line 3, insert “,” after “material” and before ”becomes”

line 13, insert “the application of” after “for” and before “circular”

Strategy 7, first para., page 18, line 3 insert “can be identified as the” after “one” and before “a”

insert “where” after “or” and before “the”

Strategy 7, Action 7.2, page 19, line 5, replace “allows” with “allow”; insert “meeting” between “avoid and “financial”

line 8, insert “a technique” after “securities,’ and before “which”

line 10, insert “where no responsible party can be identified.” after “infrastructure.”

Strategy 7, Action 7.4, page 19, line 1 insert “properly” between “even” and “capped”

line 2 insert “can” between “wells” and “weaken”.

line 3 replace “millions” with“additional”.

line 4 insert “do” between “wells” and “eventually”.

line 6 insert “, equipment” after “training” and before “and”

Strategy 8, first para. page 20, line 4, replace “of” with “during”; insert “Waste” with “Multiple waste”

Strategy 8, Highlights, page 20, bullet 1, line 2 replace “will” with “can”

bullet 2, line 2 replace “with” with “using existing and”

Strategy 8, Action 8.2, page 20, line 6 delete “fluxes in” after “regular” and before “methane”

Strategy 8, Action 8.3, page 21, line 10 insert “more comprehensive” between “a” and “methane”

Strategy 9, Highlights, page 23, add fourth bullet “However, more effort is required concerning the emissions associated with the extraction of raw materials and their conversion into operating EVs”

Strategy 8, Action 9.1, page 23, line 10 insert “and other” between “passenger” and “light duty“.

Strategy 10, Action 10.5, page 27, line 2, replace “ports” with “maritime facilities (blue and brown water)”

Strategy 18, action 18.2, page 43, delete “With the ability to utilize federal funding from President Biden’s Build Back Better Framework” and capitalize “Near-term”.

Strategy 19, 1st para., page 45, line 4, insert “renewable and lower carbon, clean” and delete “renewables” after “of” and before “industries”. Also, add “existing” after “of” and before “oil”.

Strategy 20, 1st para., page 48, 10th bullet, insert “and retaining” after “Attracting”.

Strategy 21, 1st para., line 10, insert “interstate” between “pursue” and “partnerships. Also, insert “sharing of” after and before “lessons”. Also, on line 11 add “states after “cities”

Strategy 22, 1st para., line 1, insert “state” between “advance” and “emission”

Strategy 24 1st para., line 7, replace “underserved” with “underutilized” between “for” and “low”

Strategy 26, 1st para., page 53, line 1, insert “modification of existing energy infrastructure and the” after “the’ and before “construction”

line 2, inset “vehicle” after “infrastructure” and before “charging”

line 3, replace “battery” with “energy” after “and” and before “storage”

Strategy 26, Action 26.2, line 10, add new sentence:

“Ensure that Louisiana’s ongoing application with the EPA to obtain regulatory and administrative control of so called “Class 6” disposal wells in Louisiana is successful as this will then allow Louisiana to effectively manage all of its CCUS storage options for both CO2 and for other non-hydrocarbon liquids and gases. At present, Illinois is the only state with permission to manage such wells.”

Southern Renewable Energy Association
11610 Pleasant Ridge Rd., Suite 103 #176, Little Rock, AR 72223

December 31, 2021

Office of the Governor
PO Box 94004
Baton Rouge, LA 70804

To the Louisiana Climate Initiatives Task Force,

The Southern Renewable Energy Association (SREA) is a nonprofit trade association of large-scale renewable energy and energy storage companies. SREA has been an active participant in the LACITF's Power Production, Distribution, and Use Sector Committee since its inception, and we are proud of the progress of that Committee. In early December, the Task Force and Committees were provided with an updated Revised Portfolio of various actions and activities that would help achieve Governor Edward's ambitious carbon emission goals. SREA would like to voice our support for many of the strategies and actions the Task Force has developed over these many months, specifically the work in Strategy 1 regarding a clean, renewable, and resilient power grid.

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

- This action includes a renewable energy requirement of 80% by 2035 and rightly identifies the Louisiana Public Service Commission as the lead organization to help scope and implement this proposal.

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

- This action recognizes the need for reforming Louisiana's Integrated Resource Planning (IRP) processes, with a focus on expediting renewable energy resources. The Louisiana Public Service Commission could immediately open a rulemaking docket to solicit feedback on IRP improvements, that can also include historically non-jurisdictional utilities, like cooperative and municipal utilities. IRP's can incorporate many of the Task Forces' recommendations, such as evaluating an RCPS, offshore wind, green tariffs, power purchase agreements, transmission development, and energy storage targets.

ACTION 1.3 Strategically plan for the development of offshore wind power

- This action sets a 5 gigawatt offshore wind goal by 2035, aligning Louisiana with other states' goals such as Connecticut (2GW x 2030), Massachusetts (5.6 GW x 2027), Maryland (1.6 GW x 2030), New Jersey (7.5 GW x 2035), New York (9 GW x 2035), and Virginia (5.2 GW x 2035).

ACTION 1.4 Establish utility green tariffs

- This action recognizes the strong work already underway at the LPSC and the need to formalize those efforts.

ACTION 1.5 Explore the role of Power Purchase Agreements and deregulating power generation in the energy transition

- This action encourages the LPSC to further review the "benefits and costs of physical PPAs". SREA would like to encourage the Task Force to remove the word "physical", as all PPA types should be evaluated for opportunities, and risk. Further, SREA would like to encourage the Task Force to recommend that the LPSC review the Market-Based Mechanism (MBM) for effective competition.

ACTION 1.6 Develop a regional long-range transmission infrastructure plan to meet Louisiana's transmission goal

- This action recognizes the important work at the Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP). SREA recommends that the Task Force also note in this action that expanded transmission would enable Louisiana to export clean energy resources, like solar and wind resources, to neighboring states. This action also recommends a 30% increase in transmission by 2030, and a long-term goal of 100% by 2050, based on work in the Louisiana Energy Policy Simulator by Energy Innovation. SREA would recommend clarifying this goal to state the increase is based on megawatt-miles (MW-mile).

ACTION 1.7 Adopt and develop measures to meet an energy storage target

- This action sets a goal of deploying 1,000 megawatts of energy storage by 2030 and would align Louisiana with other states with similar targets like Connecticut (1 GW x 2030), Maine (0.4 GW x 2030), New York (3 GW x 2030), Nevada (1 GW x 2030), New Jersey (2 GW x 2030), and Virginia (3.1 GW x 2035).

ACTION 12.5 Develop a model solar ordinance for adoption by local governments

- This action recommends the Division of Administration's Office of State Planning, in partnership with the Department of Natural Resources, develop a model ordinance that could be adopted by local governments.

At the Task Force meeting on December 16, 2021, several Task Force members expressed concern regarding the effectiveness of the draft report. SREA shares some of these concerns; however, the actions proposed in Strategy 1 are well-known and successful energy policies with significant positive benefits, and little to no negative impacts. Unlike other more difficult sectors, the actions in Strategy 1 are clearly measurable with firm timelines. SREA would like to encourage the Task Force to continue the hard work to find solutions to difficult problems, while enacting and supporting the clearly valuable actions in Strategy 1.

Sincerely,

Simon Mahan
SREA Executive Director

The Nature Conservancy- Louisiana
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12/31/21

Governor John Bel Edwards
P. O. Box 94004
Baton Rouge, LA 70804

Dear Governor Edwards,

Please accept the following as The Nature Conservancy in Louisiana's (TNC) comments on the Revised Draft Climate Portfolio.

The Nature Conservancy is a non-profit conservation organization whose mission is to protect the lands and waters upon which all life depends. We have over 1 million members, work in 72 countries around the world, and have protected nearly 120 million acres. In Louisiana, we have contributed to the conservation of over 300,000 acres. We recognize climate change is an existential threat to people and nature, and as such, mitigating climate change impacts is a priority for our organization.

Given that Louisiana is especially vulnerable to the impacts of climate change, we commend you for establishing the Climate Initiatives Task Force with its ambitious goals and participation by numerous sectors in developing its recommendations. We are also thankful to your staff for doing such impressive work in moving the deliberations of the Task Force and Advisory Groups forward in the time specified by Executive Order JBE 20-18.

Specific to the Revised Draft Climate Portfolio we offer the following suggestions for consideration:

- The state of Louisiana could benefit by enabling/creating a carbon market for Louisiana. There may be opportunities to work with other states (possibly Mississippi, Alabama, Texas and Arkansas) to develop a geographically focused portfolio of carbon sequestration projects.

- The state should provide enabling conditions for a carbon project development industry, with attention to incentives for landowners and agricultural producers to participate in that industry.

- Action 14.1 – We concur that forested wetlands provide opportunities for carbon sequestration and flood storage co-benefits. The great majority of lands in conservation lin Louisiana are alluvial, riparian, or coastal wetland forests and various types of marsh. Many of these areas are already afforded some protection via regulatory programs and

generally less likely to be developed than uplands. There is potentially a conservation lift in targeting non-major alluvial wetlands (like current or former flatwoods savanna) and uplands, which are disproportionately far less conserved and harbor a disproportionate number of rare species and communities. The Louisiana Department of Wildlife and Fisheries (LDWF) and conservation organizations could work together in identifying conservation priority areas such as those included in the State Wildlife Action Plan, TNC's Ecoregional Plans as well as other organization's conservation plans.

- Strategy 15 - Blue carbon experts, carbon verifiers, and coastal ecologists should be engaged to determine how long coastal carbon pools can be expected to be sustained in light of the on-going challenges to our coastal ecosystem. Projections of sea level rise and associated natural community shifts should be accounted for when developing coastal carbon projects.

- Although soil carbon verification and offset markets are in their infancy, we believe they offer great potential, see https://carbonplan.org/research/soil-protocols-explainer/. Rice University's 'BCarbon' program is new but it is our understanding that it is considered one of the best such programs at present. BCarbon doesn't stipulate how organic carbon is added (e.g. landowners can determine their own 'best practices'), as long as carbon in the soil is not disturbed and they commit to retaining the land in its present use for 10 years. Landowners are paid based on how much carbon is added over time, and each time they accept a payment for this, it renews the 10-year commitment. We recommend as part of a larger local carbon market, soil carbon be incorporated.

- Relative to the previous comment, we would advocate for native and/or semi-native grasslands and savanna and woodland within a ranching/agroforestry context to be part of agricultural conservation initiatives. Given their great ecological benefit, practices which establish and maintain native grasses should be given high priority for funding.

- Action 26.3 – We appreciate the recognition that there will be environmental impacts from commercial- and industrial-scale solar installations and would stress that these impacts include will wildlife/plant habitat. We recommend that LDWF be included on an interagency working group on siting and regulatory framework for solar energy, and that conservation organizations have opportunities to participate in related discussions.

- Education – LSU AgCenter could be well-positioned to offer a course on carbon project development for consulting foresters and environmental consultants.

- We suggest that the state Coastal Master Plan integrate carbon projects and that the structure of the Master Planning effort (5-year updates with annual plans providing programmatic details) be used for a science-based state Climate Plan.

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- We also suggest legislative creation of a State Resiliency Office, preferably housed in the Governor's Office, similar to the Governor's Office of Coastal Activities, to lead climate policy efforts and coordinate same among state agencies.

We appreciate that the February report will be the first milestone of an effort that will continue into the future as Louisiana seeks to mitigate the impacts of climate change as well as pursue opportunities related to same. We appreciate the opportunity to participate on the Task Force and look forward to supporting future efforts that will contribute to the resiliency of our state and world.

Sincerely,

Karen Gautreaux

State Director

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December 28, 2021

Governor John Bel Edwards' Climate Initiative Task Force
climate@la.gov

Comments on Revised Portfolio of Strategies and Actions

Dear Climate Initiatives Task Force/Governor's Office of Coastal Affairs:

General Comments

1. I usually do not create such cumbersome and disjointed comments but I have tried to follow the framework of the Portfolio.

2. Since the "Portfolio" seems meant to provide the basis for Actions the Governor expects the State stakeholders to implement, as directed in the master plan "Draft Climate Action Plan", the many flaws in the Portfolio must be removed or corrected. Those flaws include critical concepts along with a writing style that uses unnecessarily complex statements to obscure central thoughts while diluting them and shifting focus to side issues.

3. Throughout the Portfolio there is reliance upon Federal taxpayer funding to accomplish things that should be paid for by the prime contributor to Louisiana's greenhouse gas emissions, industry. That subsidizing socialized business assistance to the culprits should not happen.

4. The emphasized theme of finding ways to delay industry's movement away from the status quo overshadows greatly the minimized themes of requiring direct, immediate reductions in greenhouse gas emissions and immediate implementations of renewable energy endeavors.

5. Although the Portfolio does contain many important revelations, ideas, and suggestions, those have diminished impact because of the frequent distorted pandering to the short-term interests of the industrial stakeholders.

Specifics:

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INTRODUCTION

The most telling sentence is the one that shows a failure of the entire effort to recognize that the time has long since passed for "balance" between the need to address the crisis and the interests of the "economy." *The crisis is here **now**.*
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CLEAN ENERGY TRANSITION

The inclusion of natural gas with carbon capture and sequestration as one of the "clean" energy sources rewards greenhouse gas (ghg) emitters with decades of delay instead of pushing them to go to direct removal of those gases and toward accelerated conversion to "renewable" energy sources such as wind and solar.

Action 1.1 Allowing companies to buy their way out of having to attain 90% in actual reductions in greenhouse gas emissions by purchasing Renewable Energy Certificates is a scheme that does nothing to reduce actual emissions. It just gives emitters an unpluggable loophole.

Action 1.2 Uses the concept of increasing methane utilization for power generation as an excuse for providing at least a decade of relief from electricity generators to convert to renewable energy systems. {Figure 23 of the new Louisiana 2021 Greenhouse Gas Emissions Inventory report by the LSU Center for Energy Studies shows an incredible ***quadrupling*** *of those emissions across just the next four years!* Although most of that is associated with the escaping methane from the LNG buildout, that does not excuse allowing existing methane emitters to resist self-control.}

Action 1.3 The Portfolio hopes for 5 gigawatts of electric power to come from offshore wind-powered generation by the year 2035. Although onshore, the State of Iowa already has 11 gigawatts, Texas has 33 gigawatts, and China has 237 gigawatts. Encouraging a pitifully-small token amount of wind-derived gigawatts is a missed opportunity to re-focus regional thinking and decision-making. That kind of tacit approval of dismissing the value of renewable energy sources shows the fossil-fuel-addicted mindset of the preparers of the Portfolio.

Action 1.4 A green tariff scheme, separating the incentives for fossil-fuel-derived electricity generation from renewables-derived generation incentives is another way to prop up the old decisions that have adherent dependencies on greenhouse gas emissions. Do not give incentives that enable further decades of fossil fuel use.

Action 1.6 Across a 20 to 30 year planning horizon for building out a better electrical grid, the emphasis will be on making sure that there will be reliable service to "industrial clusters." Most of the actual sufferings from Hurricanes Rita, Laura, Delta, and Ida were not by industrial executives but by the hundreds of thousands of families suddenly weaned off their energy nourishment for many weeks. The population at large deserves special attention, not the big corporations.

Action 1.7 The United States other than Louisiana already have 25 gigawatts of electricity storage capacity. The writers of the Portfolio again encourage just a token 1 gigawatt for Louisiana by the year 2030. Paltry thinking yields paltry results.

Action 1.8 Publishing a "report card" within the DEQ statewide greenhouse gas system does not make that information *readily available* to the average consumer. The information should be
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included at least once a year in an annual report mailed to the consumer just as LDHH requires an annual report to be mailed to each person served by a public water system, that report called "The Water We Drink." "The Electricity We Use" should cover all the things suggested in Action 1.8 but not "synthesized" into a presentation that masks specific details, such as the tonnage of greenhouse gas each customer's electricity use generated for that year.

The first sentence in Action 2.4 is a good example of the Portfolio's writing style that uses unnecessarily complex statements to obscure central thoughts while diluting them and shifting focus to side issues.

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INDUSTRIAL DECARBONIZATION

Strangely, throughout the Portfolio, there seems to be a failure to keep in focus the first sentence of this chapter: "Industrial sector emissions are Louisiana's largest contributing source of GHG emissions, accounting for over 65% of total state GHG emissions in 2018 based on the 2021 Greenhouse Gas Inventory."

Figure 4 of that LSU report shows that the 66% is **separate** from the 13% contributed by electric power generation. *Therefore the industrial contribution will not be alleviated even if all electricity generated comes someday from renewable sources such as wind and solar.*

Action Items 3.1 and 3.2 involves self-reporting of ghg emissions and yet another program to reward facilities for reported reductions. That approach smells like déjà vu – from the initial days of the Toxic Release Inventory. The first, experimental year of self-reported numbers was greatly-eclipsed by the "corrected" second year. The second year's numbers created a huge baseline for the self-reported toxic discharges. Then the releaser could refer back to that number in subsequent years to **appear** to make meaningful reductions. It will be interesting to see if that works again with greenhouse gases.

Action 3.3 returns to the concept of allowing a polluter to pay for its right to pollute. That is just crooked logic.

Making the cap and trade or carbon tax regional instead of compartmentalized within this state which has an inordinate contribution of greenhouse gases from industrial sources, gives Louisiana's environmental degraders more deal-making territory, more facilities from places like Arkansas, with lesser major ghg emitters also looking for trade buddies, from which to purchase allowances. If the slack being contemplated by the ideas for any of the pay-to-pollute tricks are kept within the borders of each state THAT will do more for incentivizing emission cutbacks than the financial contrivances themselves. It will be hard for a polluter to buy degradation credits from the other polluters who need to keep the credits for themselves. All of the polluters will then be forced to get serious about greenhouse gas reductions.

Action 3.4 placing the responsibilities for much of the State's effort to reduce greenhouse gases on the existing Departments of Natural Resources and Environmental Quality would make sense if those departments had track records living up to their stated missions. They do not. They are
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the darlings of industry. They have not been champions of the citizens or of the dynamic natural equilibria that had been provided to us, a beautiful heritage with abundant renewable resources. Making excuses for failed missions will not excuse assigning more missions to failed departments.

Action 3.4 parrots the pervasive political "beggar mentality" of "attracting clean energy industry to the state" instead of encouraging development of renewable energy sources by *in-state entrepreneurs.*

The last sentence in Action 3.4 expresses the need to "best support major emitters…" Clearly the Portfolio authors have their hearts in the industrial world, not the world of planet earth as a whole.

Strategy 4 The first sentence says that improving the efficiency of industrial processes is the quickest, simplest way to reduce industrial energy demand and corresponding ghg emissions.

Again, the energy demand associated with industry is **NOT** the primary source of their emissions. The biggest factor in industrial emissions is industry's by-production of greenhouse gases during the exercise of those already-energized processes.

Table 6 in the LSU Inventory shows that in 2018 a total of 57, 376,309 tons of ghg emissions from industrial sources compared with (Table 5) industry's electricity demand causing only 14, 920,000 tons of greenhouse gas emissions. The manufacturing-process-created ghg emissions were therefore at least 3 times as significant as industry's energy utilization emissions.

Nevertheless the Portfolio concentrates not on pressuring the companies to modify their manufacturing processes ("take the environment out of the loop" as was suggested in the late seventies by the late Philip McGee, an engineer who was also a RESTORE member), but instead shifts the focus to the 14,920,000 ton per year subset. *Chemists and chemical engineers must redesign* ***production techniques*** to recycle all by-products into saleable products instead of using a public subsidy of free dumpsites: our air, water, and soil.

Action 4.2 reinforces the diversion of attention from process alteration to energy demand. Although a Strategic Energy Management program could bring about noticeable reductions in greenhouse gas emissions a Strategic Manufacturing Process Management program would have a lot larger compartment of reducible emissions available for near-term cutting.

In this Industrial Decarbonization chapter, industry efficiency seems to be repeatedly reduced to an energy usage issue instead of getting at the core set of emission sources, the manufacturing processes that create the greenhouse gases.

Portfolio PDF Page 17, sentence number 1, is a contradiction of the LSU 2021 Greenhouse Gas Inventory report. That sentence says "The fossil fuel derived energy used to power Louisiana's industrial sector is the state's largest source of ghg emissions." The Inventory itself actually, on its PDF Page 58 shows electrical power to have contributed in 2018 about 34 million tons of CO_{2e} but industrial processes to have contributed over 132 million tons. The Portfolio writers

need to go back, re-read the Inventory and adjust their sentences accordingly.

Strategy 5 As for the push to help companies electrify, certainly electrification of some industrial machinery might cut a company's overall emissions. (Such an alternative, electric motor driven compressors at a natural gas pipeline station, has been recently proposed by one applicant for an air permit because the onsite electric motors will not release the pollutants discharged by diesel motors traditionally used at such stations. However, shifting the greenhouse gas emission from one company's compressor station to another company's electric generating station will merely alter the graphs in the Inventory, not really result in slowing global warming.) Maybe that is what the Task Force has in mind, change the graphs to make industry LOOK better by shifting the apparent emissions to a sector that is a lesser contributor.

The periodic resurrection in the Portfolio of the false promise of carbon capture and sequestration is counterproductive. Different companies have declared in their public responses to the Federal Energy Regulatory Commission and the Louisiana Department of Environmental Quality that carbon capture is too expensive to qualify as an available control technology – and FERC and LDEQ have agreed with that position by not pushing carbon capture whatsoever.

Furthermore, there are big problems with the Sequestration part of CCUS, such as the earthquake caused in the Sulphur, Louisiana area when a hazardous waste injection well attempted to sequester its clients' discarded toxins. The pressures caused a local fault to slip frightening the public. Fracturing the subsurface for the convenience of limited liability corporations is like a COVID-19 patient coughing on his fellow travelers, getting it out of his system and into someone else's. Louisiana's stratigraphic layers include aquifers such as the widespread Sole Source Aquifer of Southwestern Louisiana and Southeast Texas, the Chicot Aquifer. No company should be allowed to jeopardize either the quality or the stability of the aquifers just to get rid of waste that it need not have created.

Believing, as is written on PDF Page 18 that some "process emissions from chemical reactions are unavoidable except with CCUS" is surrendering to industry's sometimes convenient lack of confidence in science.

Proposing that the Federal taxpayers finance improvement of the carbon capture and sequestration dream is hucksterism, as is the pitch for taxpayer involvement in the hydrogen fuel undertaking.

All those *false promise promotions* can do will be to delay what must be done **now**.

Action 5.5 Puts companies themselves in charge of development of "Cluster Plans," Industrial Cluster Decarbonization Plans. The idea is to make it easier to get taxpayer subsidies for implementation of dreams like carbon capture, sequestration, hydrogen hubs, and industrial electrifications. That is a cluster of things that can do nothing but complicate actual emissions reductions and retard the pace at which any such reductions will happen.

Action 6.2 – the Circular Economy – another way of saying take the environment out of the loop, create nothing to be wasted, everything to be recycled or made into something useful – **finally a**

practical Action!

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ACTIVELY MANAGE METHANE EMISSIONS

The undeniably huge contribution of methane from the thousands of poorly-sealed "legacy" oil and gas wells, their tanks, and surface pipings, do present an opportunity for significant reductions in the State's greenhouse gas flushings. However, letting off the hook the people who made their millions using those wells and then just walked off fat and happy is not the American way even if it used to be the Louisiana way. It is time now to hook those false-capitalists back into play and make them pay. Any Federal tax dollars spent quickly to diminish the legacy methane problem must be recovered from the people of record, the owners who profited at each methane source.

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TRANSPORTATION, DEVELOPMENT, AND THE BUILT ENVIRONMENT

There are noticeably more pages in this chapter in proportion to the sector's contribution to ghg emissions than there are for the industrial sector, again drawing attention away from the 66% contribution to emissions made by industrial manufacturing and putting extra attention on the 19% contributed by transportation.

There are good ideas in this chapter although some of them need clarification such as "sustainable fuels (particularly for aviation.)"

I remember traveling from Lake Charles to Shreveport and New Orleans by train. I have made Amtrak trips around the country. Rail travel is comfortable and safer than sharing an Interstate with convoys of 18-wheelers. It would be a lot less nerve-wracking than driving on a two-lane road from Longville to Dequincy and then to Sulphur trying to avoid morons. If you insist on "incentivizing" private companies to do good things, get the existing railroads to re-instate their passenger train services. Make it lucrative for them to dedicate a certain percentage of track time to intra-regional express shuttles that would run on a predictable schedule so that people would enjoy leaving their cars at home. Bring back the trains!

Something that might not occur to many planners is the reality that thousands of Louisianans must make their ways to Shreveport for great, life-saving medical care. There is no "controlled access" highway between Southwest Louisiana and Shreveport and even if there were, many people are too sick or injured to drive, or too newly-income-limited to pay for a ride or qualify for a "LA Transit" lift. Create a special on-demand shuttle service for the LSU Shreveport Medical Service patients statewide.

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NATURAL AND WORKING LANDS AND WETLANDS CHAPTER

Most of this chapter is worthwhile. The recognitions of the values of forests and wetlands are long overdue. There are good ideas in the chapter, such as the proposal for budgeting within
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each transportation project 3% for tree planting and landscape-based stormwater runoff.

With CPRA being an important agency involved in the implementation of the concepts covered in this section of the Portfolio there should be a clear statement that expenditures of funds should be accompanied by a mechanism for frequent evaluation and regular reporting on the survival of attempted projects so that repetitive destructions by tropical storms does not occur, wasting money on actions that cannot last.

ACTION 15.3 Develop crediting mechanism and market specific to blue carbon -

It is just wrong to suggest pimping wetlands out into a world where money does all the talking. A beautiful ecosystem deserves more respect than being reduced to chips on a craps table.

STRATEGY 16 Agricultural and Forestry Lands

Louisiana could lead mankind away from the almost complete dependence upon the Haber-Bosch process for fertilizer production by investigating and implementing something talked about in a recent article presented online by Chemical and Engineering News at:

https://cen.acs.org/articles/95/i18/Nabbing-nitrogen-from-the-air-to-make-fertilizer-on-the-farm.html

which talks about “small-scale systems in which every farmer could use a solar cell to run an enzymatic bioelectrosynthesis cell or set of cells to make ammonia, rather than buying it delivered in trailer-mounted tanks as many currently do. Farmers could use the excess electricity to help power their operations or they could sell it to the power grid.”

Removal of native forests greatly diminishes biological diversity. Part of the focus on utilizing forests in efficient ways to capture and sequester carbon must encourage fewer acres being put into monoculture. Additionally there should be an emphasis on restoration of native species such as Longleaf Pine. For urban replantings and plantings beside pipeline, electrical, and highway corridors, there should be an emphasis on choosing the native species of hardwoods that are most efficient at carbon sequestration.

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AN INCLUSIVE LOW-CARBON ECONOMY

For decades our environmental group, RESTORE, has been saying that “In Louisiana we have traded the old way of life for new ways of death.” We went from a sustainable-resource-based economy in which nobody would starve or freeze to death to a depletable-resource-based economy in which people are too many steps removed from their food and fuel sources and get poisoned by the toxic by-products of industry.

The trusting people of Louisiana, suppressed at first by Reconstruction and then by the Industrial Revolution Carpetbaggers, were persuaded by local scalawag hustlers, their politicians, to go along with that shift away from self-sufficiency. Now that series of mistakes by several generations is having a powerful and negative impact on the entire planet.

To reverse that situation and to get back to a common-sense economic framework, as is said in
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Strategy 19, “This will require targeted training and re-training initiatives, a strong commitment to the development of renewables industries, and the creation of proactive programs that ensure the successful transition of oil and gas workers to job placements in clean energy and beyond.”

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COLLABORATION AND PARTNERSHIPS TO ENSURE SUCCESSFUL IMPLEMENTATION

Strategy 20 shifts the burdens of Louisiana’s greenhouse gas reductions to the Federal taxpayers. Everything from plugging abandoned wells on behalf of their owners to promotion of carbon capture technology development and implementation to more “beggar mentality” projects like “attracting more” natural gas industries assumes that the taxpayers in other states do not have their own pressing ideas for spending their money.

Strategy 21 sees partnerships with other bodies to create cap and trade and carbon tax mechanisms that will sustain Louisiana’s industrial status quo instead of focusing on direct reductions of emissions.

The other strategies in this chapter are admirable but are obviously considered subordinate to the industrial stakeholder reliefs.

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ACCOUNTABILITY AND ADAPTABILITY TO ENSURE LASTING SUCCESS

Suddenly, after all these decades, the State will pay attention to “siting” considerations, for renewable energy facilities such as wind and solar. It is odd that the concept of thinking ahead before building a plant now becomes an official process. Yes, it will be good not to “drain the swamp” to get some cheap land upon which to locate a big windmill, but meanwhile I see no slowdown in the permitting processes at LDNR, LDEQ, ACE, and FERC to “expedite” approvals for new pipelines, compressor stations, LNG plants, and all the greenhouse gas emissions those facilities discharge into our common atmosphere. Inherent hypocrisies in the way Louisiana “does business” have made their way deeply into the portfolio so even its good ideas are not likely to happen until the hypocrites have all died or been removed.

Action 26.1 assumes that the Louisiana Departments of Natural Resources and Environmental Quality can handle much more than they already mishandle. No amount of increased taxpayer assistance to those departments will change their mindsets and the inertia of taking the easiest paths forward to avoid conflict with powerful special interest groups, groups in which the average citizen and the other living things are not members.

Action 26.2 sustains the avoidance of direct reduction of industrial greenhouse gas emissions with a suggestion that the numerous practical limits to implementation of carbon capture and sequestration might someday be overcome by research – so meanwhile industry, just blow and go as usual.

Action 26.3 talks in an idealistic way of "robust public input particularly from those who face disproportionate climate and environmental impacts," but loses sight of the reality that those impacts affect ALL people on the planet, most of the billions of those people not having any way to provide input on the Governor's plans.

Action 26.4 Update existing permitting and facility siting practices and regulations to align with Louisiana's emission reduction goals – This Action does recognize the failure of the existing system to do what it was supposed to do. It would be nice if the recommended Executive Order by the Governor could straighten out the mess but the suggested preliminary involvement of an interagency panel of at least nine State Departments along with the "robust public input" from disadvantaged communities will create a decade or more of delay with the addition of more distracting complexities instead letting him just purge the incompetent and reward the eager, insightful, holistically-thinking executors.

The rest of this chapter envisions masses of bureaucrats forever working to watch the greenhouse gas situation deteriorate. Every five years they will repeat this process. ***The crisis is here <u>NOW</u>.***

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Sincerely,

Michael Tritico, Biologist and President of RESTORE

Restore **E**xplicit **S**ymmetry **T**o **O**ur **R**avaged **E**arth
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LOYOLA UNIVERSITY NEW ORLEANS | COLLEGE OF LAW

Robert R.M. Verchick
Gauthier-St. Martin Chair in Environmental Law

December 31, 2021

RE: Louisiana 2021 Greenhouse Gas Inventory and Conflict of Interest

Fellow Members of the Climate Initiatives Task Force:

I wish to incorporate the attached document, "The False Promise of Carbon Capture as a Climate Solution in Louisiana and Beyond," into the record as a public comment. Thanks and happy new year.

Sincerely,

Robert R.M. Verchick

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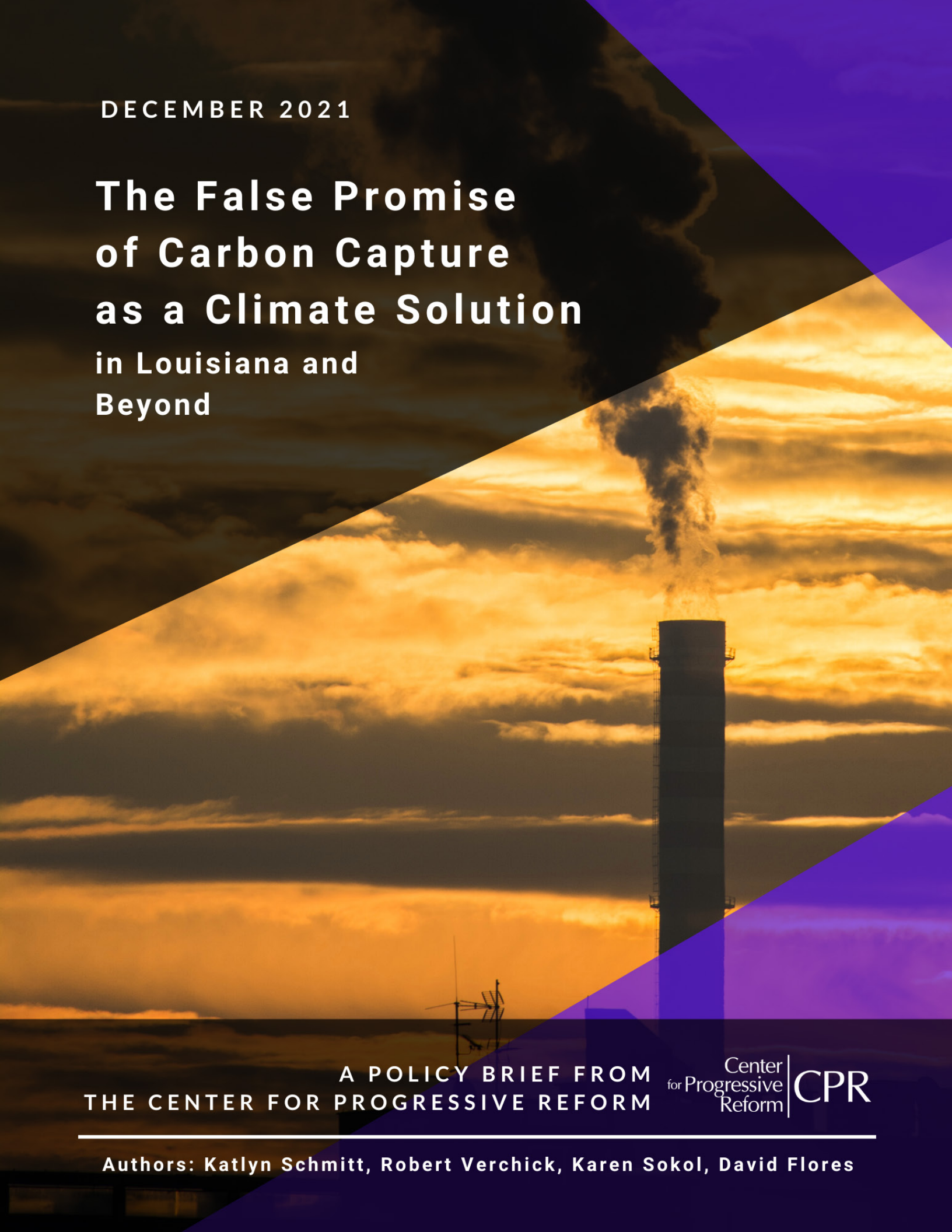

DECEMBER 2021

The False Promise of Carbon Capture as a Climate Solution

in Louisiana and Beyond

A POLICY BRIEF FROM THE CENTER FOR PROGRESSIVE REFORM

Center for Progressive Reform | CPR

Authors: Katlyn Schmitt, Robert Verchick, Karen Sokol, David Flores

The False Promise of Carbon Capture as a Climate Solution in Louisiana and Beyond

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Kendall Dix, Gulf Coast Center for Law & Policy
Dr. Terrence L. Chambers, University of Louisiana
Justin Kozak

*Organizational affiliations are provided for identification purposes only.

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Introduction: The False Promise of Carbon Capture

Carbon capture use and storage ("carbon capture"),[1] heavily promoted by the coal, oil, and gas industries, is now at the center of the national climate policy debate.[2] Today when industries burn fossil fuels, the resulting carbon dioxide and methane soars into the atmosphere, traps heat, and contributes to climate breakdown. Using carbon capture technology, industries claim they will recover post-combustion carbon dioxide from their flues and smokestacks and either "store" the gas permanently underground in sedimentary rock or "use" the gas to recover oil or make other products. Proponents claim it's a win-win — benefiting both the planet and the fossil fuel industry.

But, on closer inspection, the large-scale roll-out of such technologies is a false promise. Neither the technology to capture most, much less all, carbon dioxide emissions from polluting facilities nor the ability to safely contain gas permanently underground has been proven, and the United States does not have the regulatory structure to monitor either. And using carbon dioxide to produce other goods will not keep the gas permanently out of circulation since all things eventually deteriorate. (Of course, using the gas to produce more combustible oil would only further fuel the climate crisis.) On top of this, wide-scale industrial expansion of carbon technology promises to harm historically marginalized communities that already bear disproportionate environmental burdens.

In the United States, the oil and gas industry has targeted Louisiana as an emerging hub for carbon capture, mainly because of the large concentration of industrial facilities that emit carbon dioxide in the stretch of land between New Orleans and Baton Rouge.[3] Louisiana Governor John Bel Edwards and state regulators openly support carbon capture as a way to meet the state's goal of reducing greenhouse gas emissions to net-zero by 2050.[4] While Louisiana must move quickly and aggressively in pursuit of climate change solutions, such expansive deployment of carbon capture would only do more harm.[5]

Deploying large-scale carbon capture at polluting facilities is not a climate solution; indeed, it would further entrench fossil fuel production and thus put the Paris Agreement's goal of limiting global temperature to 1.5 degrees Celsius above preindustrial levels out of reach.[6] In this way, such investment has the potential to expand fossil fuel industries in Louisiana under the claim that carbon dioxide emissions would be stored permanently underground. Even worse, companies would likely use much of the captured carbon dioxide to extract more oil, accelerating climate change and widening existing social inequities.[7]

Carbon capture is not the right choice for Louisiana because the technology would not slow global warming in ways needed to keep the rise in mean global temperature to 1.5 degrees Celsius — the goal of the United Nations Paris Agreement recently reaffirmed by the Glasgow Climate Pact.[8] Deploying carbon capture in Louisiana would also lead to climate injustice by foisting the risks and burdens of this technology on the state's historically marginalized

communities. Instead, the right choice for Louisiana involves a rapid shift toward energy efficiency and carbon-free energy sources in both industrial and non-industrial sectors of the economy.

Carbon capture (post-combustion) is an energy-intensive, cost-prohibitive, and risk-laden process that involves capturing carbon dioxide from a smokestack and compressing it into what's known as a supercritical fluid.[9] Supercritical carbon dioxide is held at or above its critical pressure, adopting properties in between a gaseous and liquid state to be transported.[10] From there, the carbon dioxide is sent through a pressurized pipeline to an underground injection well, where it is either deposited into dominantly sedimentary rock formations for long-term storage (carbon capture and storage, or CCS) or, more commonly, used (carbon capture and use, or CCU) in an extractive process called enhanced oil recovery.[11] Carbon dioxide acts as a solvent that can break down rock formations and extract any remaining oil in depleted fields and reservoirs.[12] There are approximately 180,000 wells, known as Class II injection wells, commercially used for enhanced oil recovery.[13] By comparison, there are only two active permits in the United States for CCS wells that inject carbon dioxide for long-term storage, known as Class VI injection wells,[14] along with a handful of government-supported research and development CCS projects.[15]

Carbon capture projects have also oversold their ability to reduce carbon dioxide emissions from smokestacks. The Petra Nova project, one of the world's largest post-combustion carbon capture projects located in southeast Texas, claimed it would have captured as much as 90 percent of the plant's overall carbon dioxide emissions; in actuality, it only captured 7 percent,[16] all of which was used for enhanced oil recovery.[17] (The Petra Nova Project was shuttered in 2020 because low oil prices "made it uneconomic to sell carbon dioxide to boost oil drilling operations.")[18]

There is also no proof to claims of "permanent" storage of injected carbon dioxide from CCU or CCS.[19] A recent report from the National Energy Technology Laboratory estimates that only between 30 and 40 percent of the carbon dioxide used for enhanced oil recovery remains underground after each injection cycle.[20] The rest of the carbon dioxide escapes back into the atmosphere. Compounding matters, Louisiana's Department of Natural Resources estimates there are more than 4,000 abandoned or orphaned oil and gas wells in the state.[21] These wells create even more pathways by which carbon dioxide can leak back into the atmosphere,[22] not to mention the other social, environmental, and climate costs associated with these wells.[23]

With CCS, stored carbon dioxide must be adequately contained and regulated for *thousands of years to come* — and too many risks and uncertainties are associated with this relatively new technology. A recent report from the Intergovernmental Panel on Climate Change (IPCC) noted eight critical knowledge gaps related to CCS, including that storage and capacity estimates are imperfect and that the mechanisms for long-term storage are not fully understood.[24] Other key uncertainties include the long-term behavior of carbon dioxide in the subsurface and the long-term evolution of leakage rates.[25] At best, moving forward with the planned industry-wide buildout means consigning future generations to deal with a colossal amount of waste — a ticking time bomb of carbon dioxide stored underground — with no guarantee it will remain secure. A recent study published in *American Geophysical Union* predicts that CCS could have a neutral or even negative impact on climate change, accounting for the energy needed to capture and store carbon dioxide and the delayed carbon dioxide emissions associated with "even low leakage rates" due to imperfect storage.[26]

The primary federal incentive for carbon capture, known as the 45Q Tax Credit — offering companies a tax credit per ton of carbon dioxide captured for use or storage through 2026 — does not ensure the permanent storage of injected carbon dioxide.[27] The International Energy Agency (IEA) estimates that, by 2026, a majority of the tax credit will go to enhanced oil recovery projects and other forms of CCU.[28] Because of this, the IEA forecasts that the 45Q Tax Credit could increase oil production by *50,000 to 100,000 barrels per day*.[29] Companies are only on the hook to repay the credit if claimed carbon dioxide leaks or escapes into the atmosphere within the first three years of use or storage, but verification is virtually nonexistent.[30] Compounding matters, Louisiana has a poor track record for oversight of the oil, gas, and coal industries,[31] and these industries have a poor track record of keeping harmful substances contained.[32]

Perhaps most problematic are the human and health threats that carbon capture projects pose to nearby Black, Indigenous, Hispanic, Asian, and low-income communities in Louisiana. The industrial corridor in Louisiana targeted for carbon capture is home to more than 200 oil and gas refineries, petrochemical plants, and other industrial chemical facilities that release significant quantities of carbon dioxide, among other harmful pollutants.[33] This area was formerly known as "Plantation Country" because it held more than 500 sugarcane plantations.[34] Today, the corridor is known as "Cancer Alley" because decades of poor air and water quality from industrial pollution have heightened cancer rates and other health ailments.[35]

The predominantly Black, Hispanic, and low-income communities in Cancer Alley suffer the brunt of these poor health outcomes; similarly, Indigenous and other marginalized groups on the coast suffer poor health effects on account of other pollution related to the petroleum industry.[36] According to one study, cancer risks from air toxics in Cancer Alley disproportionately affect historically marginalized communities, with more significant impacts skewing toward the poorest communities and those with the highest percentage of Black populations.[37] Forensic Architecture, a research agency based at Goldsmiths, University of London, aptly points out that in Cancer Alley, "environmental degradation and cancer risk manifest as the byproducts of colonialism and slavery."[38] Now, these same communities stand to face continued degradation from carbon capture and its associated infrastructure. They are being asked to do the impossible: trust a set of industries that have historically polluted their air, land, and water, so much so that it has made them sick and shortened their expected life spans.

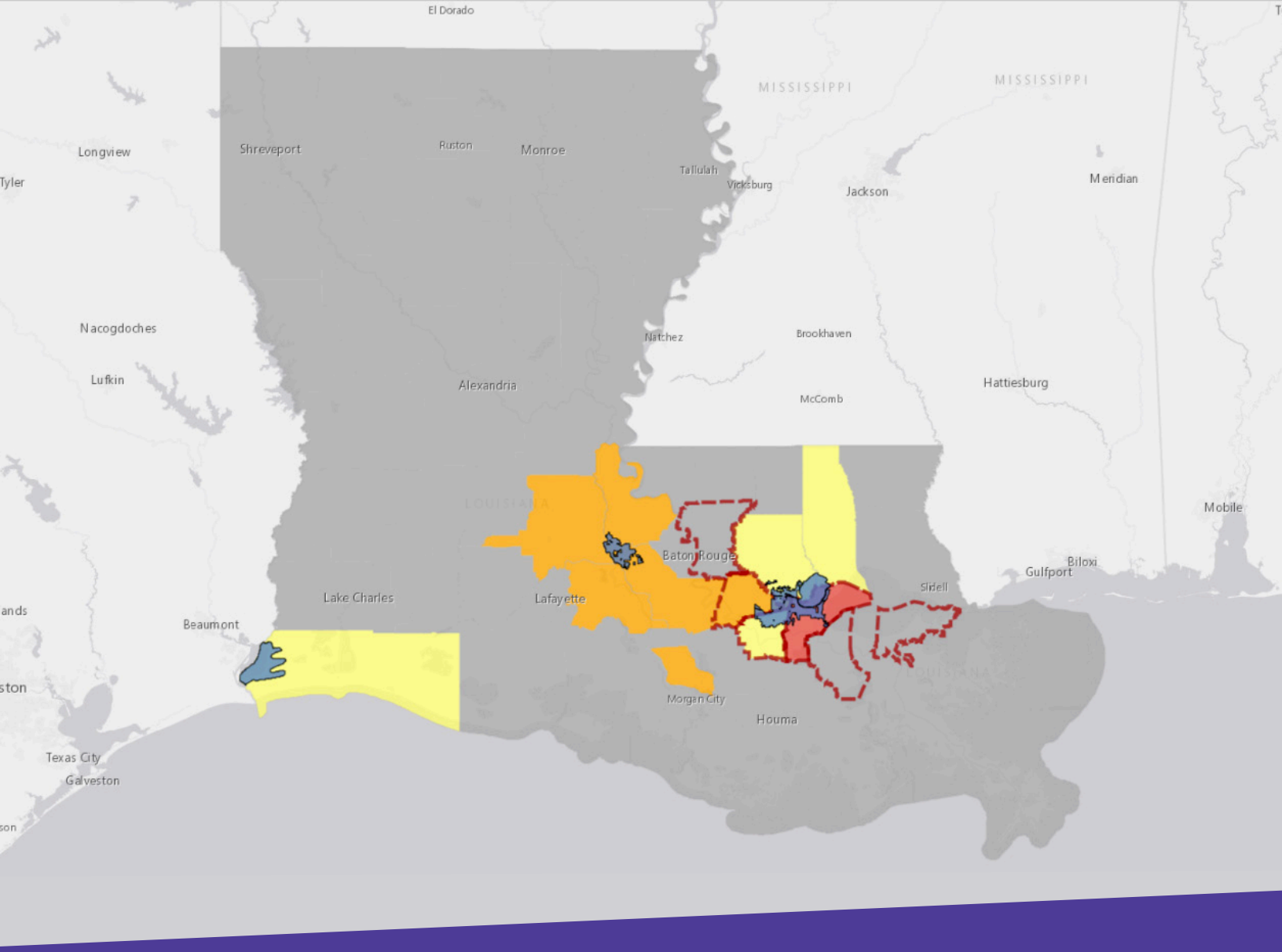
Carbon Capture Storage Proposed in Cancer Alley

In October 2021, Governor John Bel Edwards announced that Air Products Blue Energy ("Air Products") would develop the world's largest carbon capture and geologic sequestration project in Ascension Parish.[39] The $4.5 billion project would involve the construction of a manufacturing plant — where hydrogen is created by converting natural gas in a process

called steam methane reforming[40] — and at least 35 miles of pipeline to transport the captured carbon dioxide east of the manufacturing plant to underground injection wells in the state-owned Maurepas Swamp Wildlife Management Area.[41]

Air Products claims that it will capture, transport, and store roughly 5 million metric tons of carbon dioxide per year.[42] It has already obtained preliminary approval from the Louisiana State Mineral and Energy Board,[43] which has given Air Products its blessing to use more than 122,000 acres of state-owned land in Livingston, St. James, St. John the Baptist, Cameron, and Tangipahoa parishes for the project.[44] A recent study concludes that using carbon capture processes in hydrogen manufacture (described by industry marketers as "blue hydrogen"), in fact, produces much more damaging greenhouse-gas emissions than natural-gas or coal-powered heat-generating facilities.[45] The study, produced by Cornell University and the Park Foundation, finds that the greenhouse gas footprint of "blue hydrogen" is more than 20 percent greater than burning natural gas or coal for heat and approximately 60 percent greater than burning diesel for heat.[46]

The Louisiana State Mineral and Energy Board also recently struck an agreement with Capio Sequestration to drill underground injection wells in the Maurepas Swamp Wildlife Management Area. The state granted Capio Sequestration property interests in more than 44,000 acres of land in Ascension, Iberville, Pointe Coupee, St. John the Baptist, St. Martin, and St. Landry parishes for its project.[47] Capio Sequestration will inject captured carbon dioxide generated by a $9.2 billion renewable diesel refinery at the Port of Baton Rouge — roughly 50 miles away from the underground injection wells in the Maurepas Swamp Wildlife Management Area.[48] The carbon dioxide pipelines transporting the captured carbon dioxide from the biomass diesel refinery will likely span dozens of miles across Cancer Alley.



Red Outline: Cancer Alley

Yellow (Air Products CCS): Livingston, St. James, Cameron, and Tangipahoa Parishes

Orange (Capio Sequestration CCS): Ascension, Iberville, Pointe Coupee, St. Martin, and St. Landry Parishes

Red (Both Projects): St. John the Baptist Parish

Blue: Maurepas Swamp Wildlife Management Area, Sherburne Wildlife Management Area, Lake Maurepas, and Sabine Lake

The Social and Environmental Harms of Carbon Capture

Grave social and environmental harms are associated with carbon capture.[49] The White House Environmental Justice Advisory Council has voiced strong opposition to carbon capture, concluding that it is not a measure that will provide any "benefit" to communities."[50] Carbon capture requires a significant amount of energy and infrastructure to operate — resulting in increased fuel consumption and air pollution.[51] A recent study by researchers at the National Renewable Energy Laboratory and the Lawrence Livermore National Laboratory demonstrates that, from a social cost perspective, the installation and operation of carbon capture equipment powered by natural gas or other fossil fuels cause more damage than doing nothing at all.[52] The social costs include the equipment costs, the poor health outcomes associated with the installation and operation of the infrastructure, and the climate costs associated with burning more fossil fuels to capture carbon dioxide that will then be used to extract more oil.[53] In addition, the injection of carbon dioxide for long-term storage poses a threat to groundwater and drinking water resources.[54]

Carbon capture systems also increase particulate matter, which already has a catastrophic health impact on low-income communities of color near industrial facilities.[55] Particulate matter—a term that includes a range of airborne particles from soot to pollen to dust—is associated with many health risks, including premature death, upper respiratory illnesses, and heart disease.[56] Recent studies show that it is twice as deadly as previously thought.[57]

Another notable environmental and public health concern involves the construction and operation of hundreds of miles of pressurized pipelines that will transport captured carbon dioxide (along with varying amounts of industrial chemicals) across Cancer Alley to coastal areas for "permanent" underground storage.[58] While proponents of carbon capture have suggested using existing natural gas pipelines in Louisiana to transport carbon dioxide, a recent feasibility study finds that only 1 percent of the region's 5,112 pipeline segments could support conversion for carbon dioxide transportation.[59] That's because carbon dioxide must be transported in a highly pressurized state, much higher than natural gas, and corrodes steel, increasing the risk of leaks, fractures, and ruptures.[60]

Carbon dioxide is a Class 2 hazardous material regulated by the U.S. Department of Transportation and an asphyxiant that has devastating impacts on nearby humans, animals, and the environment during and after leaks.[61] Carbon dioxide can escape, leak, or rupture via many avenues during various stages in the carbon capture process.[62] Likewise, the construction of carbon dioxide pipelines and related carbon capture infrastructure will likely destroy thousands of acres of wetlands (compounding existing wetland loss),[63] forests, and coastal areas in southeast Louisiana.

Many other risks are associated with carbon capture — from aboveground leakage and rupture of captured carbon dioxide, underground leakage into drinking water, induced earthquakes, degradation of coastal ecosystems targeted for storage, and increased fossil fuel extraction and use.[64]

The Legal and Regulatory Landscape of Carbon Capture in Louisiana

In Louisiana and the rest of the United States, an uneven patchwork of laws and regulations governs carbon capture. The Louisiana Geologic Sequestration of Carbon Dioxide Act, first passed in 2009, limits business liabilities and the inevitable legal consequences for carbon capture developers.[65] Carbon capture projects are subject to only a haphazard permitting process. The law's piecemeal nature prevents Louisiana and the U.S. Environmental Protection Agency (EPA) from addressing the cumulative impacts associated with any given carbon capture project, let alone the cumulative effects associated with a regional carbon capture system or the long-term risks associated with storing millions of metric tons of carbon underground.

Federal Laws that May Apply to Carbon Capture in Louisiana

Any company wishing to operate an underground injection well for carbon storage, a class VI well, must obtain a Safe Drinking Water Act permit.[66] These wells are also subject to the Clean Air Act's Greenhouse Gas Reporting Program, which requires assorted monitoring and reporting requirements related to carbon dioxide emissions based on the well class.[67] If any part of the carbon capture and storage operation involves construction in wetlands, it will likely require a Section 404 permit under the Clean Water Act[68] and trigger other requirements under the Coastal Zone Management Act[69] and Louisiana's State and Local Coastal Resources Management Act.[70] Approximately 40 percent of the country's wetlands are located in the southern coastal region of Louisiana, the area targeted for carbon capture development.[71]

Installation of carbon capture equipment or a compressor station at an industrial facility may also trigger the Clean Air Act's New Source Review program, resulting in stricter pollution control requirements at the facility.[72] For any carbon capture developer that proposes to construct a new industrial facility, rather than utilizing the carbon dioxide emissions from an existing facility, the developer must obtain multiple permits under the Clean Air and Clean Water Acts. The development and operation of carbon capture infrastructure in Louisiana may also be subject to the Endangered Species Act[73] and other state laws, like Louisiana's Public Trust Doctrine.[74] Lastly, the National Environmental Policy Act will play a role in ensuring that an environmental impact statement is issued for various federal checkpoints in the carbon capture approval process.[75] For instance, the law may require an environmental impact statement for any part of the carbon capture infrastructure that has received federal permission to operate (such as an EPA permit for a Class VI well). The law is also triggered if any "connected" part of the infrastructure has a federal nexus (i.e., a pipeline crosses federal lands or waterways or receives a certain level of federal funding).[76]

Louisiana law delegates eminent domain authority to private companies for the purpose of acquiring private property (subsurface and surface rights) for the construction and maintenance of storage facilities and pipelines (Louisiana Revised Statute 30:1108(A)(1)). This would include projects involving CCS. The fossil fuel industry has abused such delegated authority in the past, confiscating the property of Louisiana land owners in violation of law (e.g. ***Bayou Bridge Pipeline, LLC v. 38.00 Acres***). While the process is somewhat controversial, an operator may exercise eminent domain delegated by the state only after obtaining a Certificate of Public Convenience and Necessity for a particular project (Louisiana Revised Statute 30:1102). Opponents of such actions are entitled to voice their concerns in public hearings that the Office of Conservation must hold before granting or denying any certificate (Louisiana Revised Statute 30:1107). While the state of Louisiana has preemptively declared carbon capture "in the public interest," Louisiana courts and the Office of Conservation must still determine the exact limits of the delegation of state eminent domain powers where CCS is concerned.

In April 2021, Louisiana applied for primary regulatory and oversight authority, or "primacy" under the Safe Drinking Water Act, over Class VI underground injection wells used for CCS.[77] In determining whether to grant Louisiana primacy over this particular class of wells, the EPA must consider various factors, including whether the state's Office of Conservation can effectively administer a Class VI program that is as stringent as the EPA's.[78]

If Louisiana were to gain primary authority to regulate Class VI wells, the state's Department of Natural Resources Office of Conservation (DNR-OC) would oversee the facilities. But DNR-OC lacks the necessary resources to provide proper oversight and ensure widespread compliance with its existing programs,[79] calling into question its ability to provide the requisite level of oversight for these wells.

The agency already retains primacy over Class I, II, III, IV, and V wells and has a poor track record in regulating Class II wells used by the oil and gas industry.[80] A legislative audit found that the agency failed to "sufficiently monitor wells to determine if they comply with regulations" and did "not always take enforcement action when it identifies noncompliance."[81] The audit also found that that the agency did not conduct required routine inspections for more than half (53 percent) of the active oil and gas wells by the specified timeframes."[82] Expanding the agency's programmatic authority would further stretch its limited resources, indirectly encouraging widespread noncompliance. Since the minimum regulations set by the EPA for Class VI wells are far more extensive than the rules for Class II wells and require greater oversight,[83] the EPA should not grant the Louisiana DNR-OC primacy for Class VI wells.

Climate Justice for Louisianans

Compliance with environmental laws alone will not fully address the long list of risks associated with carbon capture. Indeed, carbon capture will only delay the rapid transformation of our energy sector needed to keep global heating to 1.5 degrees Celsius or below.[84] Instead, Louisiana lawmakers and regulators should pursue actions and policies that emphasize an ambitious transition of the state's infrastructure to renewable energy sources, like solar, geothermal, tidal, and wind (both onshore and offshore).[85] Of the utmost importance, any new infrastructure built in the state of Louisiana must not further harm or endanger the historically marginalized and environmental justice communities living there.

While sources of carbon dioxide in Louisiana are plentiful, carbon-free clean energy projects are few and far between.[86] Federal and state funding should prioritize carbon-free energy projects, shifting current incentives from carbon capture (e.g., approximately $10.3 billion in federal funding for carbon capture over the next four years)[87] to expanding carbon-free, clean, and renewable energy infrastructure. Abandoned oil and gas infrastructure should be used to retrofit geothermal projects to harness pressurized heat deep underground.[88] Some areas in northern Louisiana, in particular, have ideal subsurface environments for tapping into the earth's geothermal energy sources.[89]

Equally as important, communities in Cancer Alley and other communities who have borne the brunt of the climate crisis must be at the front of the line for any climate or toxic pollution mitigation and climate adaptation efforts.[90] These community members, who have long suffered from oil and gas operations, require immediate attention. They are entitled to reap the benefits of this clean energy transition, including the decent-paying jobs it will create.[91] Thus, climate solutions should involve local communities at every stage of development. An equitable climate justice transition means leaving no one behind, with environmental justice communities being a primary beneficiary of all the positive outcomes this new era promises.[92]

Recommendations

- The Louisiana State Legislature should pass a statewide moratorium on the siting of any new carbon capture and storage projects in or near any community overburdened by polluting facilities or in or near environmentally fragile areas such as coastal wetlands.

- Industrial carbon capture projects at polluting facilities should be ineligible for any state (and federal) subsidies. Subsidies for new technologies should instead be directed toward electrifying high-heat industrial processes, expanding carbon-free chemical manufacturing processes, designing offshore wind technologies for use in the Gulf of Mexico and utilizing the abundance of solar and geothermal energy sources the state boasts.

- Philanthropic leaders and organizations should make sufficient resources available to support environmental justice communities and advocacy groups in Louisiana's Cancer Alley so they can use the array of legal tools available to oppose carbon capture and hold Louisiana, the EPA, and private developers accountable for any proposed construction of carbon capture and storage operations.

- State governors and policymakers, including in Louisiana, should allocate resources and create incentives to support the necessary transition away from fossil fuels and production to carbon-free, clean, and renewable energy sources.

- Significant investments must be made in Cancer Alley and Louisiana's coastal communities to enhance the quality of life, mitigate the decades of harm done to communities by toxic industries, and support a community-driven recovery that prioritizes the voices of those most impacted.

Appendix: Carbon Capture Projects and Socioeconomic Data in Louisiana Parishes

	Parish	*Population Size*	*Race & Ethnicity*	*Median Household Income*	*U.S. Median Household Income* ($65,712)
Air Products					
	Livingston	142,282	White (80.7%) Black (7.8%) Hispanic (6.1%)	$63,389	Below
	St. James	20,192	White (49.1%) Black (46.9%) Other (1.7%)	$51,603	Below
	St. John the Baptist	42,477	Black (56.6%) White (31.4%) Hispanic (7.7%)	$57,429	Below
	Cameron	5,617	White (92.1%) Hispanic (3.5%) Other (2.2%)	$53,423	Below
	Tangipahoa	133,157	White (59.9%) Black (29.8%) Hispanic (5.4%)	$47,832	Below
Capio Sequestration					
	Ascension	126,500	White (62.9%) Black (23.9%) Hispanic (8.2%)	$80,527	Above
	Iberville	30,241	Black (44.0%) Hispanic (4.6%) White (48.3%)	$50,161	Below
	Pointe Coupee	20,758	White (58.9%) Black (34.7%) Hispanic (3.0%)	$41,480	Below
	St. John the Baptist	42,477	Black (56.6%) White (31.4%) Hispanic (7.7%)	$57,429	Below
	St. Martin	51,767	White (63.5%) Black (29.0%) Hispanic (3.2%)	$48,656	Below
	St. Landry	82,540	White (52.3%) Black (41.4%) Hispanic (2.6%)	$36,403	Below

Endnotes

[1] The analysis in this report only extends to industrial, post-combustion activities, in which the carbon dioxide that results from industrial processes or from the burning of fossil fuels to generate electricity or heat is captured before it can be released into the atmosphere and is then stored in dominantly sedimentary rock formations or is used to recover oil or make another product.

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[14] United States Environmental Protection Agency, *Class VI Wells Permitted by EPA*, https://www.epa.gov/uic/class-vi-wells-permitted-epa (last visited October 12, 2021).

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[17] *Id.*

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[32] Congressional Research Service, *U.S. Rail Transportation of Crude Oil: Background and Issues for Congress* (2014); see also Emerson, M., *Pipeline pipedreams: Oil spills, pipeline accidents, and the local truths embedding fossil fuels in the Yellowstone River Valley, United States*, Energy Research & Social Science (2021), https://www.sciencedirect.com/science/article/abs/pii/S2214629620304345; see also Epstein, P., et al., *OIL: A LIFE CYCLE ANALYSIS OF ITS HEALTH AND ENVIRONMENTAL IMPACTS*, The Center for Health and the Global Environment Harvard Medical School (2002).

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[34] Forensic Architecture, *Environmental Racism in Death Alley, Louisiana* (2021), https://forensic-architecture.org/investigation/environmental-racism-in-death-alley-louisiana; see also United Nations News, *Environmental racism in Louisiana's 'Cancer Alley', must end, say UN human rights experts* (2021), https://news.un.org/en/story/2021/03/1086172.

[35] Forensic Architecture, *Environmental Racism in Death Alley, Louisiana* (2021), https://forensic-architecture.org/investigation/environmental-racism-in-death-alley-louisianal; see also James, W., et al., *Uneven Magnitude of Disparities in Cancer Risks from Air Toxics*, International Journal of Environmental Research and Public Health (2012), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546767/.

[36] Hemmerling, C., et al., *Tracing the Flow of Oil and Gas: A Spatial and Temporal Analysis of Environmental Justice in Coastal Louisiana from 1980 to 2010*, Environmental Justice (2021), https://www.liebertpub.com/doi/10.1089/env.2020.0052.

[37] Wesley, J., et al., *Uneven Magnitude of Disparities in Cancer Risks from Air Toxics*, International Journal of Environmental Research and Public Health (2012), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546767/.

[38] Forensic Architecture, *Environmental Racism in Death Alley, Louisiana* (2021), https://forensic-architecture.org/investigation/environmental-racism-in-death-alley-louisiana.

[39] Louisiana Office of the Governor, *Gov. Edwards, Air Products Announce $4.5 Billion Blue Hydrogen Clean Energy Complex* (2021), https://gov.louisiana.gov/index.cfm/newsroom/detail/3421; see also Younes, L., et al., *In a Notoriously Polluted Area of the Country, Massive New Chemical Plants Are Still Moving In*, ProPublica (2019), https://projects.propublica.org/louisiana-toxic-air/?source=advocate.

[40] Howarth, R., et al., *How green is blue hydrogen?*, Energy Science & Engineering (2021),

https://onlinelibrary.wiley.com/doi/full/10.1002/ese3.956.

[41] Louisiana Office of the Governor, *Gov. Edwards, Air Products Announce $4.5 Billion Blue Hydrogen Clean Energy Complex* (2021), https://gov.louisiana.gov/index.cfm/newsroom/detail/3421; see also Younes, L., et al., *In a Notoriously Polluted Area of the Country, Massive New Chemical Plants Are Still Moving In*, ProPublica (2019), https://projects.propublica.org/louisiana-toxic-air/?source=advocate.

[42] Younes, L., et al., *In a Notoriously Polluted Area of the Country, Massive New Chemical Plants Are Still Moving In*, ProPublica (2019), https://projects.propublica.org/louisiana-toxic-air/?source=advocate.

[43] Louisiana State Mineral and Energy Board, *La. R.S. 30:209(4)(e) Operating Agreement* (2021), http://www.dnr.louisiana.gov/assets/OMR/Board_MTG_Agendas/2021/Draft_OA_Capio_20211013.pdf.

[44] Louisiana State Mineral and Energy Board, *La. R.S. 30:209(4)(e) Operating Agreement* (2021), http://www.dnr.louisiana.gov/assets/OMR/Board_MTG_Agendas/2021/Draft_OA_AirProducts_20211013.pdf.

[45] Howarth, R., et al., *How green is blue hydrogen?*, Energy Science & Engineering (2021), https://onlinelibrary.wiley.com/doi/full/10.1002/ese3.956.

[46] *Id.*

[47] Louisiana State Mineral and Energy Board, *La. R.S. 30:209(4)(e) Operating Agreement* (2021), http://www.dnr.louisiana.gov/assets/OMR/Board_MTG_Agendas/2021/Draft_OA_Capio_20211013.pdf.

[48] Wesley, J., et al., *Uneven Magnitude of Disparities in Cancer Risks from Air Toxics*, International Journal of Environmental Research and Public Health (2012), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546767/.

[49] Jacobson, M., et al., *The health and climate impacts of carbon capture and direct air capture*, Energy & Environmental Science (December 15 2020), https://web.stanford.edu/group/efmh/jacobson/Articles/Others/19-CCS-DAC.pdf.

[50] White House Environmental Justice Advisory Council, *Final Recommendations: Justice40 Climate and Economic Justice Screening Tool & Executive Order 12898 Revisions* (2021), https://www.epa.gov/sites/default/files/2021-05/documents/whiteh2.pdf.

[51] Intergovernmental Panel on Climate Change, *Carbon dioxide Capture and Storage* (2018), https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_wholereport-1.pdf.

[52] Newmark, R., et al., *Water Challenges for Geologic Carbon Capture and Sequestration*, Environmental Management (2010), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2854354/.

[53] Jacobson, M., et al., *The health and climate impacts of carbon capture and direct air capture*, Energy & Environmental Science (2020), https://web.stanford.edu/group/efmh/jacobson/Articles/Others/19-CCS-DAC.pdf.

[54] *Id*.

[55] Mikati, I., et al., *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*, American Journal of Public Health (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5844406/ ; see also Fleischman, L., et al., *Fumes Across the Fence-Line: The Health Impacts of Air Pollution from Oil & Gas Facilities on African American Communities*, Clean Air Task Force (2017), https://www.catf.us/wp-content/uploads/2017/11/CATF_Pub_FumesAcrossTheFenceLine.pdf?swpmtx=1a8c74f75f7eb74f57201fd9371c469f&swpmtxnonce=a33d1b01e2.

[56] United States Environmental Protection Agency, *How Does PM Affect Human Health?*, https://www3.epa.gov/region1/airquality/pm-human-health.html#:~:text=Health%20studies%20have%20shown%20a,as%20asthma%20attacks%20and%20bronchitis (last visited October 11, 2021).

[57] Karn Vohra, Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem, Environmental Research, Volume 195 (2021), https://www.sciencedirect.com/science/article/pii/S0013935121000487.

[58] Zegart, D., *Gassing Satartia: Carbon dioxide Pipeline Linked to Mass Poisoning* (2021), https://www.huffpost.com/entry/gassing-satartia-mississippi-carbon dioxide-pipeline_n_60ddea9fe4b0ddef8b0ddc8f.

[59] David E. Dismukes, et al., *Integrated Carbon Capture and Storage in the Louisiana Chemical Corridor*, Louisiana State University (2019), https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf.

[60] *Id.;* see also Aursand, E., et al., *Fracture propagation control in carbon dioxide pipelines: Validation of a coupled fluid-structure model*, SINTEF Energy Research (2016), http://www.pvv.org/~stm/research/coupled-carbon dioxide_preprint.pdf.

[61] Liu, X., et al., *Source strength and dispersion of carbon dioxide releases from high-pressure pipelines: CFD model using real gas equation of state*, Applied Energy (2014), https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.687.19&rep=rep1&type=pdf; see also Doctor, R., et al., *IPCC Special Report on Carbon dioxide Capture and Storage: Transport of carbon dioxide,* International Panel on Climate Change (2018), https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_chapter4-1.pdf.

[62] David E. Dismukes, et al., *Integrated Carbon Capture and Storage in the Louisiana Chemical Corridor*, Louisiana State University (2019), https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf.

[63] Louisiana Oil Spill: Applied Research & Development, *Louisiana's Disappearing Wetlands*, https://www2.southeastern.edu/orgs/oilspill/wetlands.html (last visited October 18, 2021).

[64] Jacobson, M., et al., *The health and climate impacts of carbon capture and direct air capture*, Energy & Environmental Science (2020), https://web.stanford.edu/group/efmh/jacobson/Articles/Others/19-CCS-DAC.pdf.

[65] This law still has some outstanding questions regarding ownership and other issues; it still has not been tested in state court.

[66] 42 U.S.C. §§300f-300j-26.

[67] Congressional Research Service, *Reporting Carbon dioxide Injection and Storage: Federal Authorities and Programs* (2021), https://sgp.fas.org/crs/misc/R46757.pdf.

[68] David E. Dismukes, et al., *Integrated Carbon Capture and Storage in the Louisiana Chemical Corridor*, Louisiana State University (2019), https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf.

[69] *Id.*

[70] *Id.*

[71] United States Geological Survey, *Louisiana Coastal Wetlands: A Resource at Risk*, https://pubs.usgs.gov/fs/la-wetlands/ (last visited October 18, 2021).

[72] Environmental & Energy Law Program, *New Source Review* (2018), https://eelp.law.harvard.edu/2018/12/new-source-review/.

[73] 16 U.S.C. 1531, et seq.

[74] LA CONST Art. 9, § 1.

[75] 42 U.S.C. § 4332(2)(C)

[76] David E. Dismukes, et al., *Integrated Carbon Capture and Storage in the Louisiana Chemical Corridor*, Louisiana State University (2019), https://www.lsu.edu/ces/publications/2019/doe_carbonsafe_02-18-19.pdf.

[77] *Id*.

[78] 85 FR 64053 (2020).

[79] Louisiana Legislative Auditor Performance Audit, *Regulation of Oil and Gas Wells and Management of Orphaned Wells* (2014), https://www.lla.la.gov/PublicReports.nsf/D6A0EBE279B83B9F86257CE700506EAD/$FILE/000010BC.pdf.

[80] *Id*.

[81] *Id*.

[82] *Id*.

[83] Unlike Class VI wells, the permits for Class II wells do not require certain scoping, integrity testing, continuous monitoring, analysis, reporting, or verification related to carbon dioxide leakage, pressure, and stream characteristics. Congressional Research Service, *carbon dioxide Underground Injection Regulations: Selected Differences for Enhanced Oil Recovery and Geologic Sequestration* (2020), https://www.everycrsreport.com/files/2020-06-16_IF11578_0b018994c1a08efcade94af8db8abbf64f64f0b5.pdf.

[84] International Panel on Climate Change, *Global Warming of 1.5 ºC* (2021), https://www.ipcc.ch/sr15/.

[85] Bu, X., et al., *Geothermal energy production utilizing abandoned oil and gas wells*, Renewable Energy (2012), https://doi.org/10.1016/j.renene.2011.10.009; see also United States Energy Information Administration, *Louisiana State Profile and Energy Estimates* (2021), https://www.eia.gov/state/analysis.php?sid=LA.

[86] United States Energy Information Administration, *Louisiana State Profile and Energy Estimates* (2021), https://www.eia.gov/state/analysis.php?sid=LA.

[87] Federal Infrastructure Bill Appropriations for Carbon Capture Storage, Transport and Utilization (§40302 - §40308) (2021)

[88] Gulf South for a Green New Deal Policy Platform (2018), https://b185c73d-2e2f-4286-97a8-664227c1633c.filesusr.com/ugd/a491a1_637aea05b7814ad5b917daca77777118.pdf.

[89] Hermes, T., *Potential for Geothermal Energy in Northern Louisiana: Analysis of the Subsurface Environment in Union and Morehouse Parishes*, Louisiana State University Digital Commons (2015), https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=3657&context=gradschool_theses.

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[91] Gulf South for a Green New Deal Policy Platform (2018), https://b185c73d-2e2f-4286-97a8-664227c1633c.filesusr.com/ugd/a491a1_637aea05b7814ad5b917daca77777118.pdf.

[92] White House Environmental Justice Advisory Council, *Final Recommendations: Justice40 Climate and Economic Justice Screening Tool & Executive Order 12898 Revisions* (2021), https://www.epa.gov/sites/default/files/2021-05/documents/whiteh2.pdf.

LOYOLA UNIVERSITY NEW ORLEANS | COLLEGE OF LAW

Robert R.M. Verchick
Gauthier-St. Martin Chair in Environmental Law

December 31, 2021

RE: The Revised Portfolio of Climate Strategies and Actions

Fellow Members of the Climate Initiatives Task Force:

Like many of you, I have provided in the course of our work many comments and recommendations regarding our portfolio of climate strategies and actions. There is no question that the portfolio is improving. For me, it remains to be seen if the final version submitted to us for will indeed meet the ambitious goal Governor Edwards charged us with in his Executive Order, that is, to develop "policies, strategies, and incentives" that are "designed to achieve" the net emissions reductions assigned for years 2025, 2030, and 2050 (the last being "zero").[1]

My overarching concern at this point is whether or not the portfolio of "policies, strategies, and incentives" that we ultimately consider can plausibly be understood as "designed to achieve" the targets the Governor assigned to us, including the target of net-zero emissions by 2050.

Based on the latest Draft Final Report, dated December 22, 2021, it appears that the answer is in doubt. Figure 8 of this report, on page 26, indicates that "Aggressive State Action" and "Stronger Agriculture, Forestry, and Wetland Sinks" (which I take to mean the aspects that are part of the portfolio) would at best leave the state with 50 million metric tons of carbon dioxide equivalent being emitted annually by 2050.[2] That is slightly less than a quarter of what the state currently emits.

To achieve the Governor's goal of "net zero," the draft report assumes the implementation of "Federal Action and Regional Cooperation" and of something called a "Net Zero Industry Standard." Of these two, the latter is expected to fill most of the gap. It's unclear to me what is meant by the term "Net Zero Industry Standard." I am assuming this refers to a voluntary standard that a private consortium of fossil fuel companies might deploy—something like the "Net Zero Standard for Oil and Gas," outlined by the Institutional Investors Group on Climate Change (IIGCC).[3]

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[1] EXECUTIVE DEPARTMENT OF THE STATE OF LOUISIANA, EXECUTIVE ORDER NUMBER JBE 2020-18, §2.
[2] GOVERNOR'S OFFICE OF COASTAL ACTIVITIES, LOUISIANA CLIMATE ACTION PLAN: FINAL DRAFT, 26, Fig. 8. Dec. 20, 2021, https://gov.louisiana.gov/assets/docs/CCI-Task-force/website/CTFDraftFinalPlan12222021.pdf.
[3] IIGCC, NEW ZERO STANDARD FOR OIL AND GAS, Sept. 2021, https://www.iigcc.org/download/iigcc-net-zero-standard-for-oil-and-gas/?wpdmdl=4866&refresh=61cf7709ea4531640986377.

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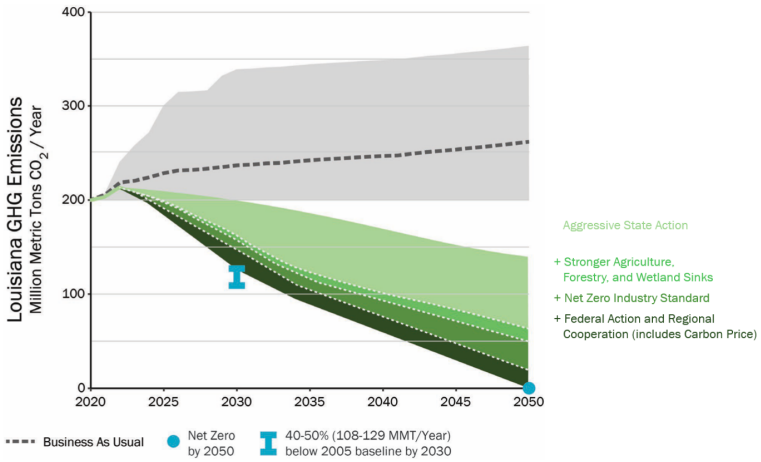

FIGURE 8. GHG EMISSIONS FOR LOUISIANA, 2020-2050. THE MODELLED GHG EMISSIONS REDUCTIONS (GREEN) ARE BASED ON THE STRATEGIES AND ACTIONS WITHIN THIS PLAN. INTERIM (2030) AND NET ZERO (2050) GOALS ARE INDICATED. THE BAU SCENARIO (GREY) IS ALSO PROVIDED FOR COMPARISON.

The problem with that is that oil and gas companies have proved exceedingly unreliable in addressing the climate crisis, to put it mildly. Indeed, some of the world's largest oil companies are now at the center of a federal investigation into the role their industry has played in undermining the scientific consensus that the burning of fossil fuels is a root cause of global warming.[4] At any rate, relying on the voluntary acts of the fossil fuel industry to take Louisiana to "net zero" seems almost comically naïve.

And unnecessary. This is because many of the policies and strategies that the industry could take up voluntarily, could also be imposed involuntarily using state law and administrative procedures. To take one example, the IIGCC's net zero industry standard contemplates a voluntary policy of reducing fuel production and curbing carbon emissions. There is ample authority under the state's land use and permitting authorities to reach similar outcomes. One could imagine setting a regulatory "trigger" in which the state says, in effect, go ahead and work toward voluntary reductions; if you achieve them, great, if not, we will impose them. If that sounds harsh, keep in mind that one of the reasons that IIGCC members appear willing to at least discuss "voluntary" reductions, is that courts and legislatures around the world have been imposing their own involuntary reductions on them.[5]

To move forward, I suggest the Task Force needs more information about the projected reductions that can be assigned to specific policies. First, the Task Force should be provided with the projected reductions tied to particular aspects of "Aggressive State Action." Second, the Task Force should be provided with projected reductions tied to particular aspects of the "Net Zero

[4] Hiroko Tabuchi, *House Panel Expands Inquiry into Climate Disinformation by Oil Giants,* N.Y. TIMES, Oct. 28, 2021, https://www.nytimes.com/2021/09/16/climate/exxon-oil-disinformation-house-probe.html.
[5] See, e.g., Stanley Reed and Claire Moses, *A Dutch Court Rules That Shell Must Step up Its Climate Change Efforts*, N.Y. TIMES, Oct. 28, 2021, https://www.nytimes.com/2021/05/26/business/royal-dutch-shell-climate-change.html. Shell is a member of the IIGCC.

Industry Standard." With that information, we may be able figure out how to take better advantage of the options that are available.

Sincerely,

Robert R.M. Verchick

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Robert R.M. Verchick
Gauthier-St. Martin Chair in Environmental Law

December 31, 2021

RE: Louisiana 2021 Greenhouse Gas Inventory and Conflict of Interest

Fellow Members of the Climate Initiative Task Force:

I write to notify you and the members of the public of a concern I have about how the Louisiana 2021 Greenhouse Gas Inventory was developed. Specifically, I believe Dr. David Dismukes, the Inventory's lead author, has or could be reasonably perceived as having a conflict of interest arising from his position as a current officer and principal of a consultancy that serves fossil fuel industry clients and from his extensive record of consulting for and testifying on behalf of the interests of fossil fuel companies. This conflict (actual or reasonably perceived) adds a modest level of legal vulnerability to any administrative decisions that will be based on the 2021 Inventory. This conflict may also diminish the credibility that the Task Force has worked so hard to build, along with its stated commitment to "integrity," "transparency," and analysis informed by "the best available science."[1]

As conflicts of interest are not always disqualifying, they are often dealt with easily and transparently with only small changes in vetting or supervision. Thus what is disappointing to me is that even when the stakes were low and a fix seemed relatively easy, the Task Force leadership did not publicly acknowledge or address the conflict in what I would consider a responsible and meaningful way. It's an unforced error—perhaps not as weighty as other issues the Task Force has before it—but one that we should be aware of.

Four Points Up Front

Before going further, I want to underline four points. First, I am writing today in my capacity as an individual Task Force member and Chair of the Task Force's Legal Advisory Group (LAG). My comments here do not speak for the LAG as a body, which has not met to discuss this issue.

[1] GOCA, POWERPOINT PRESENTATION, CLIMATE CHANGE INITIATIVES TASK FORCE: LEGAL ADVISORY GROUP MEETING 1 at 5 (Dec. 27, 2020) (listing as guiding values: "Respect," "Integrity," "Transparency," "Science-Based," and "Consensus-Driven"); GOV. JOHN BEL EDWARDS, CLIMATE INITIATIVES TASK FORCE OVERVIEW, https://gov.louisiana.gov/page/climate-initiatives-task-force (promising the use of "best available science").

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(Further, my comments do not reflect the views of my employer, Loyola University New Orleans, or any other organization with which I'm affiliated.)

Second, *I am not questioning the methodology or the accuracy of the 2021 Inventory*. I am not an expert in preparing such documents and have no way of evaluating it on my own.

Third, *I am not questioning Dr. Dismukes's behavior, his character, or even his ability to remain objective despite a conflict of interest*. Those things are irrelevant in identifying a conflict of interest or in responding to one. For the purposes of this discussion, we may assume the very best about Dr. Dismukes's capabilities and intentions.

Fourth, whatever information I have about Dr. Dismukes's financial interests and consulting relationships comes from information that is available to the public and easily accessible online (basically state business records and material available on his company's website). I do not vouch for its accuracy. I can only assess whether, in my legal opinion, it appears that Dr. Dismukes has interests that do or could reasonably be perceived as competing against each other.

Conflict of Interest

I believe Dr. Dismukes has or could be reasonably perceived as having a conflict between his interests as the lead author of the 2021 Inventory and his interests in serving fossil fuel industry clients as a current officer and principal of a consultancy and as a long-time consultant and expert witness.

A conflict of interest occurs when an individual with many interests finds themself in a decision-making situation when serving one of those interests would harm another. Interests include many different types of commitments, including fiduciary duties, professional duties, and business interests. *Having a conflict of interest does not mean an individual has done anything wrong, has a bias, or lacks the ability to remain objective.*[2] It simply means that the individual has interests that do compete or could reasonably be perceived as competing against each other.

In policymaking, best practices counsel against selecting an individual to make decisions in an area in which they have or could be reasonably perceived as having a conflicting interest of this kind. Sometimes conflicts of interest are unavoidable for practical or other reasons. In such cases, best practices recommend that the public and those relying on the individual's work product be clearly notified of the conflict so that they may weigh the information in their decision-making. Often, specific protocols are put into effect to insulate the research process from a bias that may or may not be actually present as a means of instilling credibility in the process. Importantly, these protocols are specific to ameliorating the identified conflict and go beyond the normal "quality control" methods used in most research.

Dr. Dismukes was retained to design and produce an updated version of Louisiana's Greenhouse Gas Inventory. The purpose of the inventory is to inform the Task Force in making recommendations to the Governor on (among other things) how to eliminate carbon emissions

[2] *See, e.g.,* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IPCC CONFLICT OF INTEREST POLICY, ¶12, *in* DECISIONS TAKEN WITH RESPECT TO THE REVIEW OF IPCC PROCESSES AND PROCEDURES, Appendix I (2011), https://bit.ly/3HtqUcz.

from the state's fossil fuel industry. It is anticipated that this Inventory will provide the technical and legal basis for future administrative actions (permitting, standard setting, etc.) under both state and federal law. As such, the Inventory directly affects the financial interests of nearly all actors in the state's fossil fuel sector.

At the same time, Dr. Dismukes appears to have direct and substantial financial ties to a consultancy that serves many clients with an interest in the fossil fuel sector. According to the Louisiana Secretary of State's Office, Dr. Dismukes is an "officer" and "agent" of Acadian Consulting Group, a consultancy that represents government agencies and private companies, including many with interests in the fossil fuel and chemical industries (Transcontinental Gas Pipeline Corp., Trunkline Gas Co., Dow Chemical, Richland Chemical Products, the U.S. Oil and Gas Association, and many others). According to his C.V., Dr. Dismukes is also a "principal" of Acadian Consulting. The company's website indicates that Dr. Dismukes has, over the course of 28 years, "prepared expert witness testimony, reports, and affidavits in over 130 proceedings" in 25 states, Washington D.C., and before the Federal Energy Regulatory Commission.

Relationships like these have long been considered classic examples of a conflict of interest. As an example, conflict-of-interest disclosure forms routinely list "consulting relationships" or ties to "consultancies" in their examples of potential conflicts.[3] Similarly, the federal courts have ruled that a past record of either consulting for or testifying on behalf clients with a financial stake in an administrative decision can constitute a conflict of interest.[4]

The existence of such conflicts is a problem for two reasons. First, as a matter of public policy, actual or apparent conflicts of interest undermine the credibility of the administrative process and erode the public's trust in government. Second, such conflicts add a modest level of legal vulnerability to later administrative actions that would not otherwise exist. Federal agencies, for instance, are bound by federal law to ensure that decisions they make are not "arbitrary" or "capricious" and are adequately supported by evidence.[5] Should a federal agency make or approve a permitting or standard-setting decision based on the 2021 Inventory, a complaining party would be able to use any weakness in the supporting record to support its case. That could include concerns about the actual or perceived financial conflicts held by the lead author. This could implicate even the decisions of state agencies since those entities often operate under federal authority or supervision.

Earlier I mentioned that when a conflict of interest exists and when it is seen as practically unavoidable, best practices recommend that the public be clearly notified of the conflict and that specific protocols may be put into effect, beyond the normal "quality control" methods, so as to instill public confidence in the process. To my knowledge these relatively easy actions were not

[3] See, e.g., IPCC CONFLICT OF INTEREST POLICY at ¶16 (listing "employment relationships, consulting relationships" and "financial investments" as examples of financial ties that may constitute a conflict of interest).

[4] *See, e.g.,* Lorillard v. United States Food and Drug Administration, 56 F.Supp.3d 37, 52-53, 54-55 (D. D.C. 2014) *vacated on other grounds*, R.J. Reynolds Tobacco v. U.S. Food and Drug Admin., 810 F.3d 827 (D.C. Cir. 2016).

[5] 5 U.S.C. §706.

taken with respect to the 2021 Inventory, the findings of which are foundational to the work of the Task Force. I believe that is a loss. While, in my opinion, it may not be disqualifying as a matter of policy, it is a weakness that diminishes the credibility of the process and adds unnecessarily to the legal vulnerability of future administrative actions.

As a member of the Task Force, I remain committed to the goals expressed in the Governor's Executive Order on climate action and will continue to do my best to work toward an outcome that we can all be proud of.

Sincerely,

Robert R.M. Verchick

Comment on Action 13.1: (Retrofit)

Z Smith <zsmith@eskewdumezripple.com>

Fri 12/31/2021 10:49 AM

To: Climate <climate@la.gov>;

Cc: Camille Manning Broome <camille@cpex.org>; Andreanecia Morris <amorris@housingnola.org>;

The current wording of Action 13.1 (Accelerate the retrofitting of existing residential and commercial buildings to support comprehensive energy efficiency and resilience upgrades) could be improved significantly by having the residential programs prioritize equity by starting with the housing of those facing the greatest energy burden (percentage of income paid for energy bills). High energy burdens lead to housing insecurity--where inability to pay energy bills puts residents of losing their housing. In the past, incentive programs such as HERO and the Louisiana Solar Tax Credit have tended to be most fully accessed by those with the greatest access to capital--the wealthy. Instead, retrofit programs combining energy efficiency with solar and storage should prioritize Louisiana residents (homeowners **and** renters) paying more than 5% of their income for energy--which generally corresponds to those with incomes below 60% of Area Median Income (AMI). These residents should be first in line.

Thanks!

Z Smith, FAIA, LEED Fellow, WELL AP, Fitwel & Living Building Ambassador
Principal | Director of Sustainability & Building Performance
(he / him / his)

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