

DRAFT Portfolio of Climate Strategies and Actions

LOUISIANA CLIMATE INITIATIVES TASK FORCE

AUGUST 23, 2021

This draft climate portfolio, containing strategies and specific action concepts across 9 priority areas, represents another step forward in Louisiana’s collaborative effort to identify implementable solutions to reducing the greenhouse gas (GHG) emissions driving climate change. The actions contained in this document were developed from extensive input from members of the Climate Initiatives Task Force’s (Task Force) six sector committees and submissions from the general public. (For cross-reference, noted at the end of each action description is a number corresponding to associated [proposals](#) received in April.) These actions were informed by feedback from the Task Force’s four advisory groups, and by research on best practices in other states. They also benefit from the many conversations held throughout the numerous Task Force meetings, cross-sector workshops, and public comment periods.

Despite all the thought and effort that has gone into this document, this portfolio is still an initial attempt at striking the balance between the needs of different stakeholders as well as the urgent need to address the root causes of climate change that are already being felt across our state. The draft portfolio is also an attempt to organize nearly 100 actions to reduce GHG emissions across all aspects of the Louisiana economy in a way that is coherent and comprehensive. As such, readers should review all sections together as they consider the full implications of this draft portfolio.

In the coming months, this draft action portfolio will evolve. It will undergo several public rounds of discussion, critique, and refinement. Advisory groups will once again provide feedback on how aspects of this portfolio support values related to a more equitable society, quality of life, the environment, and the economy. The Water Institute of the Gulf will again provide estimates of the impact of this portfolio on Louisiana’s GHG emissions using the Energy Policy Simulator modeling tool to guide their analysis. All of these findings will be brought before the Task Force in early October for additional conversation.

Collaboration across government, the private sector, academics, and members of the public has led to the creation of this draft climate action portfolio. While it contains the most clearly defined vision for climate policy in Louisiana thus far, it is still unfinished. In the months ahead, some new actions may be added, others may be deleted, and many will be adjusted to be more effective or accurate. This document was created through robust participation from stakeholders, and continued participation from everyone concerned about climate change and how GHG emissions can be reduced in Louisiana will help make it even better as we work towards the set of strategies and actions in the final plan.

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
CO₂	Carbon dioxide
CPRA	Coastal Protection and Restoration Authority
CRMS	Coastwide Reference Monitoring System
DEQ	Department of Environmental Quality
DOA	Division of Administration
DOE	Department of Energy
DOTD	Department of Transportation and Development
DWF	Department of Wildlife and Fisheries
NRCS	Natural Resource Conservation Service
NRD	Louisiana Department of Natural Resources
EPA	U.S. Environmental Protection Agency
ERGS	Emission Reduction Generation and Supply
GHG	Greenhouse gas
HELP	Home Energy Loan Program
HERO	Home Energy Rebate Option
HOV	High-occupancy vehicle
IAC	Industrial Assessment Center
IRP	Integrated resource plan
LDAF	Louisiana Department of Agriculture and Forestry
LDAR	Leak Detection and Repair
LED	Louisiana Economic Development
LFA	Louisiana Forestry Association
LPSC	Louisiana Public Service Commission
LSU	Louisiana State University
LSUCCC	Louisiana State Uniform Construction Code Council
MISO	Midcontinent Independent System Operator
MPO	Metropolitan Planning Organization
NGO	Non-governmental organizations
OCM	Office of Coastal Management
OOC	Office of Conservation
OSR	Oilfield Site Restoration
PACE	Property-assessed clean energy
PPA	Power Purchase Agreement
RPP	Research Practitioner Partnership
SEM	Strategic Energy Management
SIT	State Inventory Tool
SPP	Southwest Power Pool
SWAMP	System Wide Assessment and Monitoring Program
SWCD	Soil and Water Conservation Districts
TDM	Travel Demand Management
USDA	U.S. Department of Agriculture
VMT	Vehicle miles travelled

Clean Energy Transition

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

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

A Renewable and Clean Portfolio Standard is a law or regulation that would require electricity used in Louisiana to be generated from an increasing percentage of renewable (naturally replenishing with no GHG emissions; e.g., solar, wind, and geothermal) or clean (generation emits little to no GHGs; e.g., nuclear, biowaste and natural gas with carbon capture) sources. Power generation facilities reliant on carbon capture technology must capture at least 95% of facility emissions to qualify as clean energy. A Renewable and Clean Portfolio Standard would require that by 2035, 50% of electricity generation is to be generated from renewable resources and 30% from clean resources, and by 2050, 100% of electricity would need to be generated from renewable or clean resources, with at least 80% from renewable resources. To support a Renewable and Clean Portfolio Standard, Renewable Energy Certificates play an important role in accounting, tracking, and assigning ownership to renewable electricity generation and use. Renewable Energy Certificates are market-based instruments that represent the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. This action proposes engagement of the Louisiana Public Service Commission (LPSC), Louisiana Legislature, utilities, and stakeholders to develop a Renewable and Clean Portfolio Standard and a statewide market for Renewable Energy Certificates. **(Associated Submitted Action Proposals: 56, 172, 145, 152)**

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

Utilities plan for future electric generation needs through integrated resource plans, or IRP's. IRP's identify future needs and different types of resources a utility can use to reliably serve Louisianans. Over the next decade, Louisiana's electric utilities will be undergoing a rapid transition from predominantly fossil fuel generation to renewable resources coupled with battery storage and new natural gas generation facilities necessary to ensure grid reliability. Where appropriate, the electric utility industry will move away from constructing large base load power stations towards smaller, more distributed generation facilities strategically located to enhance grid reliability and achieve emissions reductions. This action proposes working with the LPSC to evolve the IRP and regulatory process to accommodate the dynamic nature of the transition and to expedite renewable energy procurement in a way that will improve competition, reduce ratepayer costs, and improve Louisiana's air quality. Specific recommendations include: changing the IRP frequency to an annual process, amending existing Market Based Mechanism to require all-source competitive solicitation and loading order rules, considering a limited exemption from the 1983 certification order for new generation projects up to 50 MWs that are replacing existing capacity with zero emissions generation, considering exempting electric utilities from the LPSC Market Based Mechanism Order requirements for additions of replacement capacity of 100 MW or less with zero emission generation, and accounting for climate projections and impacts in resource planning. **(Associated Submitted Action Proposals: 114, 116, 117)**

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

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

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

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

Improving energy efficiency for all users lowers GHG emissions and brings down the overall need for electricity generation, which decreases the need for investments in new generation and can make the transition to clean energy easier. Reducing energy usage also lowers electricity bills while decreasing other air pollutants associated with electricity production. This action proposes the engagement of the LPSC, Louisiana Legislature, utilities, and stakeholders to implement an Energy Efficiency Resource Standard directing all electric and gas utilities subject to their jurisdiction to reduce energy sales based on 2019 levels by 0.2% annually until savings achieve an overall reduction of 2% annually. Efficiency programs to support meeting this standard would be available to all customer types and include programs specifically targeted to low-income and renter residents. **(Associated Submitted Action Proposals: 16, 119, 162)**

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

Customers of electric utilities should have easy, understandable access to information about where and how their electricity is produced and how that power mix changes over time. This action proposes engaging with the LPSC and utilities to develop a climate scorecard and real time dashboard for electric utilities that synthesizes data on the diversity of a utility's generation portfolio, including load, energy mix, and renewables forecasting, as well as carbon dioxide (CO₂) and other emissions. Scorecard information would compare utility data and trends to other utilities around the state and the nation. **(Associated Submitted Action Proposals: 108, 115)**

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

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

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

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

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

ACTION 2.3 Establish utility green tariffs

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

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

Power Purchase Agreements (PPAs) are long-term contracts between energy customers and renewable energy developers that allow purchase of renewable energy at certain volumes and prices. Renewable energy developers design, permit, finance, install, operate, maintain, and own a renewable energy project. Basic co-benefits of PPAs are two-fold: 1) customers that enter PPAs can avoid the up-front capital costs of installing a renewable energy system while still increasing access to renewable power; and 2) developers get revenue certainty that helps to finance the renewable energy project. Physical PPAs require renewable energy developers and customers to be located within the same electricity market and provide for the physical transfer of electricity from the generator to the customer. Virtual PPAs are purely financial arrangements where customers do not receive electricity directly from the renewable project but do receive Renewable Energy Credits, and this does not require the renewable energy project and the customer to be in the same electricity market. This action proposes working with the LPSC to allow for physical PPAs and virtual PPAs as part of its Utility Green Tariff program (see Action 2.3). **(Associated Submitted Action Proposals: 11, 47, 144)**

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

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

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

Many on-site (e.g., rooftop) solar energy system owners produce more electricity than they consume. Net metering is a billing mechanism that provides these customers with credit for the energy they add to the grid, and customers are then only billed for their “net” energy use. Virtual net metering applies similarly to the electricity bills of subscribers of community solar projects. When a solar system is built at a school, grocery store, or other consolidated site in a

community, residents can choose to share that solar system through partial ownership or “subscription.” Net metering helps financially justify the cost of solar system installation thereby increasing demand for solar energy and creating jobs for those in the solar industry. The increased use of distributed solar energy also helps smooth the demand curve for electricity allowing utilities to better manage their peak electricity loads. This action includes working with the LPSC to reinstate full retail credit net metering for solar energy system owners and establish full retail credit virtual net metering for community solar, with special attention paid to underserved and overburdened communities. **(Associated Submitted Action Proposals: 57, 126, 164)**

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

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

Industrial Decarbonization

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

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

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

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

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

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

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

ACTION 3.4 Increase capacity for Industrial Assessment Centers (IACs)

The U.S. Department of Energy (DOE) financially supports IACs across the nation, with a local program at LSU. The LSU-IAC is a team of university-based faculty and students that provide no-cost assessments to small and medium sized U.S. manufacturers to identify potential cost savings from energy efficiency improvements, waste minimization and pollution prevention, and productivity improvement. This action proposes the state work with the U.S. DOE to increase funding for the LSU-IAC so that it can provide extensive no-cost assessments and ad-hoc advice to industry, the DNR State Energy

Office, and the Governor's Office in implementing actions of Louisiana's Climate Action Plan and the DEQ-DNR statewide regulatory framework. IACs would partner with the DNR State Energy Office to convene stakeholder groups of small and mid-sized industry to develop strategies for meeting actions of the "Industrial Decarbonization" section of this Climate Action Plan. **(Associated Submitted Action Proposals: N/A)**

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

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

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

ACTION 4.1 Set Industry Efficiency Standards

Efficiency is the foundation of industrial decarbonization, which not only can reduce GHG emissions immediately but can also lower energy cost, mitigate risk, increase competitiveness, and make electrification more feasible. Near-term modifications to procedures and behaviors can be achieved while incurring little expense and prioritizing investments in modernized technologies. To meet Louisiana's energy efficiency target, this action proposes that the state both incentivizes and requires increased efficiencies through Industry Efficiency Standards (e.g., BTU per unit output) or pollution standards (e.g., CO₂ per unit output) established by DNR and DEQ. Standards would be minimum allowable criteria for existing and new facilities based on specified metrics, such as equipment, fuels, or per-unit-of-production basis. **(Associated Submitted Action Proposals: N/A, El citation)**

ACTION 4.2 Develop and implement a Strategic Energy Management Program

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

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

ACTION 5.1 Invest in infrastructure to support industrial-scale electrification

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

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

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

ACTION 5.3 Enact incentives that enable and encourage accelerated electrification

Electrification has extensive potential to reduce GHG emissions of the industrial sector. For example, electrification in manufacturing can increase efficiency by reducing thermal and material waste and can improve overall product quality. However, given the low cost of alternative fuel sources (e.g., natural gas), electrification is unlikely to be driven by economics alone. This action proposes the DNR Energy Office partner with industry and utilities to determine roadblocks for electrification and work with other state partners to develop effective incentives to encourage a clean energy transition for industrial users. The incentives would be based on criteria that prioritize communities most closely impacted by industry and where explicit pollution reduction co-benefits have been identified. Applicants seeking to take advantage of these incentives would be required to reapply through DNR each year to ensure compliance with established criteria. **(Associated Submitted Action Proposals: 29, 63)**

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

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

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

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

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

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

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

The capture and use of carbon dioxide to create valuable products has potential to lower the net costs of reducing emissions and remove CO₂ from the atmosphere. This process of utilization refers to the use of CO₂ directly or as a feedstock in industrial or chemical processes, to produce valuable carbon-containing products, where CO₂ can generate economic value. Utilization technologies are still nascent in form and barriers to implementation remain, so more funding is needed to research and pilot various techniques. This action proposes that DNR would partner with universities to more comprehensively understand and study the various utilization techniques and their applicability and feasibility to reduce emissions in Louisiana industries. *(Associated Submitted Action Proposals: n/a)*

STRATEGY 6. Promote reduced-carbon materials

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

Adoption of a "Buy Clean Louisiana" policy incentivizes the use of building materials (e.g., concrete and steel) that are manufactured through lower carbon intensity processes to reduce the GHG emission footprint of construction. This action, spurred by Louisiana's Division of Administration (DOA), Office of Facility Planning and Control, and the Department of Transportation and Development (DOTD), would require state agencies to consider embodied carbon emissions, all carbon dioxide emitted in producing materials, of industrial products when contracting for state infrastructure and non-infrastructure projects. This action would lower GHG emissions and spur further innovation in materials science. *(Associated Submitted Action Proposals: 135)*

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

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

Safe and Resilient Energy and Infrastructure for Tomorrow's Needs

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

ACTION 7.1 Support regional long-range transmission infrastructure planning

Long-range transmission planning ensures that the electricity grid can accommodate the changes occurring in the energy sector as Louisiana transitions to lower GHG-emitting sources (e.g., electrification, the growth of distributed generation, the retirement of aging or inefficient generation, offshore wind, development of reliable and affordable energy storage). Recognizing the important role of long-range transmission planning for achieving GHG emissions reduction goals and maintaining reliable service during extreme weather events, the Office of the Governor will join with the LPSC as an active participant and stakeholder in Louisiana's two regional transmission organizations, the Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP), to accomplish this action. This action would also ensure connectivity between the MISO and SPP infrastructure through operational agreements that manage joint coordination of transmission upgrades. **(Associated Submitted Action Proposals: 122, 123, 165)**

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

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

ACTION 7.3 Adopt an energy storage target

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

ACTION 7.4 Strategically plan for the development of offshore wind power

Given the availability of wind power as a potential energy resource, Louisiana's advantage as a strong offshore energy producing state, and the economic development opportunity that wind power presents, it would be advantageous for Louisiana to continue collaboration across sectors and enhancing plans for the accelerated implementation of offshore wind power generation. This action proposes strategic collaboration across Louisiana state agencies and the federal government, transmission planning agencies, energy regulators, and the private sector, to take additional steps to advance development of offshore wind power generation. Possible activities under this action would include tool

development, exploring incentives, conducting research and identifying knowledge gaps, conducting stakeholder outreach, and preparing the transmission and workforce infrastructures needed to capitalize on the deployment of offshore wind in the Gulf of Mexico. **(Associated Submitted Action Proposals: 61, 101)**

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

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

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

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

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

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

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

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

Currently, the construction of new and expanded industrial facilities are handled by multiple state agencies with multiple permit guidelines depending on the nature of the technology and the location of the proposed facility. Ostensibly all such decisions should be made in accordance with Article IX, §1 of the Louisiana Constitution which serves as the basis for what is known as the “Public Trust Doctrine.” However varying agency priorities, regulatory nuances, and administrative or judicial decisions have led to a complex and at-times disjointed process. Additionally, siting decisions are made on a permit-by-permit basis without having the benefit of a comprehensive statewide plan or framework. The ability of current permitting regulations to fully integrate the most recent understanding of climate impacts and environmental justice concerns is questionable. Via executive order (EO), the Governor would mandate that all facility siting decisions be made in accordance with the emission reduction goals of EO JBE 20-18. This action would include convening an interagency panel (including DOTD, DEQ, DNR Office of Conservation [OOC], DNR Office of Coastal Management (OCM), Louisiana Department of Agriculture and Forestry [LDAF], the Coastal Protection and Restoration Authority [CPRA], Department of Wildlife and Fisheries [DWF]) with the benefit of robust public input, particularly from those who face disproportionate climate and environmental impacts, with the objective to review existing regulations and permitting practices to ensure that permitting and siting decisions are climate neutral and are not exceeding the cumulative risk burden on vulnerable communities, tribal lands, or the environment. **(Associated Submitted Action Proposals: N/A)**

ACTION 8.5 Ensure energy transition does not overburden vulnerabilities communities

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

Actively Manage Methane Emissions

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

ACTION 9.1 Hold former well operators accountable for orphaned wells

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

ACTION 9.2 Strengthen financial security requirements for plugging wells

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

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

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

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

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

ACTION 9.5 Provide workforce training to plug legacy wells

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

STRATEGY 10. Monitor and regulate methane emissions

ACTION 10.1 Enact methane waste rules

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

ACTION 10.2 Establish a Methane Monitoring Program

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

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

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

Transportation, Development, and the Built Environment

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

ACTION 11.1 Reduce idling of public fleets

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

ACTION 11.2 Expand broadband internet access

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

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

DOTD implements a variety of Travel Demand Management (TDM) strategies designed to maximize choice while reducing travel, single occupant trips, and congestion. TDM options are funded by DOTD and Metropolitan Planning Organizations and include biking, walking, ridesharing, public transit, and telecommuting. To further reduce regular travel demand in Louisiana, this action proposes DOA adopt a state policy that allows for and encourages hybrid workplaces and telecommuting for public workers. **(Associated Submitted Action Proposals: 81)**

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

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

ACTION 11.5 Implement a state VMT reduction strategy

More efficient fuels and clean vehicles are valuable emission reduction actions but must also be accompanied by transportation mode shifting, where alternatives to automobile travel are chosen, in order to make a meaningful reduction in transportation-related emissions. To position Louisiana to encourage mode shift, this action proposes that DOTD develop a VMT reduction strategy that promotes, incentivizes, and enforces development of Complete Streets

infrastructure that enables and supports safe mobility for all users inclusive of pedestrians, bicyclists, or public transportation users. Complete Streets policies should be supported, planned, and incentivized at the state, regional, and local level. The VMT strategy proposed by this action would highlight and build on partnerships with nonprofits and advocacy groups that are focused on these practices. **(Associated Submitted Action Proposals: 69, 70)**

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

ACTION 12.1 Expand availability of alternative fuels and electric vehicle charging

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

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

As low- and zero-emission vehicles become increasingly available, purposeful steps need to be taken to ensure intentional and equitable statewide buildout of vehicle electrification infrastructure, with special attention given to underserved and overburdened communities. Anticipated federal infrastructure funding will facilitate rapid deployment of siting infrastructure, but the state must strategically plan for the buildout of charging stations to ensure equitable access. Alongside infrastructure, this action proposes that incentives for alternative fuels and low- and zero-emission vehicles be reinstated, either in the form of a state targeted incentive program or tax credit, to accelerate adoption and reduce barriers to access. This action would also include broad community outreach and education central to increased accessibility and would facilitate transitioning behavior to take advantage of incentives and buildout of electric vehicles. **(Associated Submitted Action Proposals: 83, 137, 175)**

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

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

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

Medium- and heavy-duty vehicles weigh more than 10,000 pounds and have an outsized impact on GHG emissions. Technical solutions for shifting these larger vehicles to clean and zero-emission fuels are less certain and less widely available than for light-duty vehicles, especially as vehicle turnover is less frequent. Comprehensive decarbonization of heavier duty transportation will also require supporting infrastructure buildout, such as retrofits to depots and fueling stations. This action proposes DOTD begin long-range strategic planning for technology adoption, fleet turnover, and infrastructure needs to support deep decarbonization of medium- and heavy-duty transportation, shipping and aviation. Specific to shipping, many international ships dock at Louisiana-based ports, so planning efforts proposed by this action would also develop emission standards for these vessels that reduce GHGs and potentially alleviate air quality hazards for communities near them. **(Associated Submitted Action Proposals: 12, 84)**

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

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

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

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

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

ACTION 13.2 Enable access to resources outside urban centers

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

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

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

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

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

Mitigation of the root emissions of climate change is interconnected with adaptation to the impacts of climate change, particularly as it pertains to land use and land use management. However, with many risks, vulnerabilities, and relevant ongoing initiatives throughout Louisiana, a statewide framework is needed to unify and guide holistic land use management. This action proposes the development of a land use framework that would guide a statewide authority to

coordinate decision making as it related to land use, and the authority would partner with DOTD in implementation of the state's VMT reduction strategy (Action 11.5). The statewide authority would also develop an education program that demonstrates the benefit of land use practices on achieving climate goals and reducing climate risk, and would assist locals in their development of comprehensive land use plans. The framework would consider needs of different communities across the state, particularly those underserved and overburdened. **(Associated Submitted Action Proposals: 18, 40, 69, 128)**

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

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

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

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

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

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

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

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

jump start the “Buy Clean Louisiana” program (Action 6.1), prioritizing lower carbon intensity materials and advancing best practices and standards in road construction.

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

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

This action proposes that Louisiana will retrofit 5% of buildings each year through a combination of expanding existing programs and developing new retrofit programs focused on energy efficiency, including DNR’s Home Energy Loan Program (HELP) and reviving the expired Home Energy Rebate Option (HERO) program. Programs would focus on improving insulation, air sealing, appliance efficiency, HVAC efficiency, and other low-hanging fruit that would provide a reduction in consumer electricity bills as well as a reduction in associated GHGs. Programs impacting public or commercial buildings can also improve indoor air quality and circulation to benefit human health. Implementation of these programs would create a network of trade allies who can perform retrofit work and create a workforce development pipeline. Lastly, program development through this action would coordinate and fund outreach and education to encourage homeowners and small businesses to understand their energy usage and identify possible areas for improved efficiency. *(Associated Submitted Action Proposals: 16, 87, 102)*

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

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

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

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

ACTION 15.4 Update statewide building and energy efficiency codes

The Louisiana State Uniform Construction Code Council (LSUCCC) is tasked with reviewing and approving updates to the state’s building code. The Louisiana Legislature has, in the past, directed the LSUCCC to review and adopt new codes, such as the plumbing code. Currently, Louisiana’s energy codes are from 2007 – more than 12 years out of date. This action directs LSUCCC to similarly review and adopt new codes pertaining to energy efficiency. In implementing this action, the Louisiana Legislature would also change the LSUCCC authorization and require them to adopt the latest codes

automatically as new versions are published, except if overridden by a high threshold of the LSUCCC such as a 3/4 vote. These updates would also include promoting a performance-based building code that sets targets for energy consumption per building. If newer building codes were adopted, building projects could take advantage of the latest low-carbon materials such as mass timber. (*Associated Submitted Action Proposals: 75, 133, 50*)

ACTION 15.5 Promote the electrification of building appliances

Appliances and systems like water heaters, HVACs, driers, and stoves account for the bulk of building energy use. Electrifying these appliances and systems not only reduce GHG emissions when they are powered by renewable or clean electricity, but they also save the user money due to increased energy efficiency. This action would direct rebates for the purchase of efficient electric appliances and systems to customers. To improve equitable access, rebates would be on a graduated scale based on income. This action would also work with retailers, contractors, and distributors to increase stocking of these appliances, so they are available options for unplanned upgrades (i.e. appliance breaks). It also includes making more widely available point-of-purchase materials to increase awareness.

Natural and Working Lands and Wetlands

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

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

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

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

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

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

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

Implementation of Louisiana’s Coastal Master Plan includes coastal restoration actions to reduce land loss with a focus on risk reduction to support coastal communities. Implemented currently and over the long-term by CPRA, LDAF, and the U.S. Army Corps of Engineers, restoration of wetlands will inherently lead to continuous carbon offsets by way of the increased plant biomass and carbon sequestration in the soil as well as mitigation of hazards related to relative sea-level rise and storm surge impacting vulnerable coastal communities. Incorporating climate mitigation goals and measures (e.g., carbon sequestration potential of natural wetlands) into future iterations of the Coastal Master Plan as well as into project design and prioritization could further make the case for investment in Louisiana’s coastal program and unlock additional resources for project implementation. *(Associated Submitted Action Proposals: 77)*

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

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

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

ACTION 18.1 Establish a Louisiana Conservation Innovation Program

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

ACTION 18.2 Support the transition to regenerative agriculture and forestry practices

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

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

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

ACTION 18.4 Expand implementation of on-farm conservation programs

On-farm conservation programs have had the largest success in transitioning farmers, ranchers, and forest landowners to implementing conservation practices. The Louisiana Conservation Delivery Program, a partnership of the USDA NRCS

and local SWCDs along with individual landowners, focusses on enhancing and conserving soil, water, and related natural resources through implementation of voluntary on-farm conservation plans of sustainable practices. This action uplifts this successful program and would expand federal and state funding for it. **(Associated Submitted Action Proposals: 38, 39)**

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

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

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

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

ACTION 18.7 Establish a statewide compost facility and accompanying local programs

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

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

Markets for wood products create incentives for landowners to plant more trees and keep forests as forests. Educating landowners on the management of forests and encouraging use of forest products through market driven incentives would increase the amount of carbon captured and stored by the forest. This action proposes the state encourage the use of Louisiana forest products—in the form of lumber, plywood, paper, wood pellets, and biomass—in state capital projects and other construction projects. Markets for low-value forest products and residuals, such as residuals generated during milling and production and woody fiber for biofuels and bioenergy, further incentivize forest management and forest products manufacturing, resulting in more carbon sequestration and storage. Implementation of this action would include research and development of new technologies by the state of Louisiana (LDAF, Louisiana Economic Development [LED], Louisiana Forestry Association [LFA], DNR, and the energy sector) related to increasing the use of cellulose (plant-based) products can innovate Louisiana's manufacturing, construction, and energy sectors while reducing GHG emissions. **(Associated Submitted Action Proposals: 26, 31, 67)**

An Inclusive, Low-Carbon Economy

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ACTION 21.1 Establish the Louisiana Office of Economic Resilience

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

Collaboration and Partnerships to Ensure Successful Implementation

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

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

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

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

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

STRATEGY 24. Align climate action approaches across state government

A whole-of-government approach within Louisiana is necessary to advance emission reduction actions. The Governor's Office will encourage cross-agency collaboration and alignment, the setting of climate-related goals within individual

agencies, and the strengthening of partnerships with local government, communities, and Indigenous peoples to coordinate and carry out actions that cross and extend beyond agency jurisdictions. As the central implementer of this Climate Action Plan, state agencies must maintain alignment and function as a coordinated unit for climate action to be successful. The Governor's Office will also seek to collaborate with other state entities such as the LPSC and the Louisiana Legislature.

STRATEGY 25. Coordinate action with local governments

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

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

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

STRATEGY 27. Improve engagement with disadvantaged communities and Indigenous peoples

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

Accountability and Adaptability to Ensure Lasting Success

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

ACTION 28.1 Establish the Governor's Office of Climate Resilience

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

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

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

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

ACTION 29.1 Establish a Louisiana GHG monitoring program

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

ACTION 29.2 Update the state GHG inventory biennially

In conjunction with regular collection of GHG data (Action 29.1), updates to the GHG inventory are necessary to monitor progress and hold the state accountable for progressing towards reduction goals. This action proposes that the Louisiana Legislature statutorily mandate biennial updates to the GHG inventory with consistent funding to support these efforts. In addition, this action would support work by the state to continue to increase the accuracy of that assessment as technologies evolve. The U.S. EPA State Inventory Tool (SIT) model has been used as the primary information source for inventory updates, but this methodology has known and acknowledged limitations. This proposed action would include investments in remote sensing, satellite imagery, and other tools to provide more accurate and comprehensive monitoring of GHG emissions in Louisiana, as well as incorporating criteria pollutants monitored by the DEQ Air Quality Monitoring Program into the GHG inventory.

ACTION 29.3 Update the Louisiana Climate Action Plan every five years

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