

# REGIONAL GREENHOUSE GAS INITIATIVE STRATEGIC FUNDING PLAN

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STATE OF NEW JERSEY DEPARMENT OF ENVIRONMENTAL PROTECTION



YEARS 2020 THROUGH 2022

# RGGI STRATEGIC FUNDING PLAN

# Years 2020 through 2022

# Contents

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# Introduction and Background

New Jersey will invest its Regional Greenhouse Gas Initiative (RGGI) auction proceeds in programs and projects designed to help meet the State's climate, clean energy and equity goals. The *RGGI Strategic Funding Plan: Years 2020 through 2022* (hereafter referred to as the Plan) will support Governor Phil Murphy's commitment to reducing greenhouse gas emissions and vision for transitioning the state to 100% clean energy by 2050. The Plan identifies initiatives that will be funded by RGGI auction proceeds and how these investments complement emissions reductions, clean energy, and environmental justice priorities. While supporting transformational changes in energy systems that are necessary to avoid further adverse impacts from climate change, these strategic investments will also support New Jersey communities that have been disproportionately impacted by pollution, improving their environmental conditions and ensuring that they have equal access to the clean energy economy.

The Murphy Administration acknowledges that this Plan is being issued at a time of upheaval and economic uncertainty, as the novel coronavirus (COVID-19) outbreak has disrupted our lives and economy. The pandemic has also highlighted the inextricable link between public health and economic development, a relationship that drives the Murphy Administration's efforts to reduce the public health risks from pollution and climate change while building upon New Jersey's innovation economy. As we work to ensure that our economy recovers from this pandemic, supporting initiatives that promote health, equity, and environmental protection will promote a stronger and fairer New Jersey. The initiatives in this Plan are a roadmap for reducing greenhouse gas emissions, improving health outcomes, creating jobs and accelerating New Jersey's economic recovery. While improving air quality and reducing the public health and economic risks from climate change, the investments this Plan will make in the State's clean energy economy will strengthen main street businesses and spark high-quality job growth.

This Plan covers a three-year period, from 2020 through 2022. The New Jersey Department of Environmental Protection (NJDEP), the New Jersey Economic Development Authority (NJEDA), and the New Jersey Board of Public Utilities (NJBPU), are designated by law to distribute RGGI proceeds. The Plan also coordinates the initiatives across agencies to ensure their overall effectiveness in meeting New Jersey's greenhouse gas reduction, clean energy, and equity goals. The Plan also ensures cross-agency collaboration to leverage funding in support of other statewide strategic efforts, including those identified in the State Economic Development Plan, the Energy Master Plan, and the Electric Vehicle Law. Finally, although a new funding plan is required every three years, the agencies may revisit this Plan sooner, and each subsequent funding plan will summarize project and program spending and results achieved during the prior strategic funding period.



# **Public Engagement & Priorities**

This Plan reflects the thoughtful public input that was collected in the fall of 2019. Prior to the start of the public input period, the NJDEP, NJEDA and NJBPU jointly released the RGGI Auction Proceeds Scoping Document, designed to provide stakeholders with a common understanding of the legal and regulatory framework surrounding the distribution of the RGGI auction proceeds. The scoping document identified the specific legal and regulatory requirements underpinning the development of the Plan; funding priorities for the first Plan; and illustrative examples of potential funding initiatives. Throughout November and December of 2019, the agencies took turns hosting four public workshops and one webinar to gather public input. The workshops were hosted at various locations throughout the State and at various times of day, in both cases in order to help ensure participation by a diverse crosssection of the New Jersey public. In addition, the workshops utilized various methods to collect feedback from the public, including dot voting, a question and answer period and facilitated breakout sessions. The public also submitted feedback via a dedicated email address. The materials from each workshop, as well as a



RGGI Strategic Funding Plan Public Workshops were held across the state to capture a diverse cross-section of the public.

recording of the webinar, are posted on the State's RGGI website at <a href="www.nj.gov/rggi/">www.nj.gov/rggi/</a>.

In total, nearly 200 individuals representing a diverse array of organizations and areas of interest, including municipalities, unions, environmental groups, environmental justice communities, transportation planning, energy use, and natural resources conservation and use, attended the four workshops or participated in the webinar event. In addition, the agencies received over 30 comments via email. Overall, participants expressed general support for all the example initiatives in the scoping document, with the clean transportation and blue carbon initiative examples being assigned the highest priority by most stakeholders. Participants were highly engaged, asking clarifying questions about each initiative and offering suggestions for improvements and possible additional programs and projects that could be funded under each example initiative.



November 25, 2019 the NJEDA hosted a RGGI Strategic Funding Plan Stakeholder Meeting at Rutgers University, College Ave Student Center.

The agencies reviewed and took account of all the public comments, aligning them with the initial overarching priorities presented in the scoping document to provide meaningful benefits to communities most affected by pollution and climate change; and to catalyze the electrification of the various modes of transportation in the State.

Since the beginning of 2020, significant state actions have taken place that provide additional guidance on RGGI proceeds should be invested. These include:

- Governor Murphy's January 17, 2020 signing of landmark legislation to boost
  electric vehicles in New Jersey. Specifically, the law sets aggressive goals for
  New Jersey electric vehicle sales and public charging stations; requires the
  establishment of rebates for electric vehicle purchases; and directs the state
  government to lead by example by electrifying its own fleet. This law also
  modified the Global Warming Solutions Fund Act to allow NJBPU to spend its
  RGGI funds to support the plug-in electric vehicle goals established in the law.
- The January 27, 2020 release of a comprehensive Energy Master Plan that includes rigorous goals and spans multiple sectors and governmental agencies. The Energy Master Plan defines "100% clean energy by 2050" to mean 100% carbon-neutral electricity generation and maximum electrification of the transportation and building sectors to meet or exceed the Global Warming Response Act's (GWRA) 2050 emissions reduction limit. Energy system modeling conducted for the Energy Master Plan found that New Jersey can cost-effectively reach its goals of 100% clean energy and reduce its greenhouse gas emissions below the GWRA limit largely through electrifying the transportation and building sectors, promoting energy efficiency, and meeting more than a doubling of load growth with 94% carbon-free electricity (the remaining 6% can be provided with carbon neutral electricity, such as biogas).
- Governor Murphy's January 27, 2020 Executive Order 100 (2020), directing the adoption of NJ Protecting Against Climate Threats, or NJ PACT, a suite of rules to establish greenhouse gas monitoring and reporting and reduce emissions of carbon dioxide and, where necessary, short-lived climate pollutants (e.g., black carbon, hydrofluorocarbons and methane).

These three actions, taken together, paint a clear picture of the steps New Jersey will initially prioritize to reduce greenhouse gas emissions in order to attain its 2050 GWRA limit of 80% from 2006 levels by 2050. In addition, they are all, in effect, directives for state agencies to align their resources towards the transformation of New Jersey's transportation sector, with a focus on benefits in environmental justice areas. Given the scope of their collective mandates, it is clear that these ambitions cannot be achieved using State resources alone; New Jersey must find ways to align and leverage private sector funding to support the State's clean energy transformation.



# RGGI Proceeds Distribution: Legal and Regulatory Framework

In 2008, the Legislature passed P.L. 2008, c. 340, commonly referred to as the Global Warming Solutions Fund Act, which enabled the state to participate in a  $CO_2$  emission trading program and established specific state agency funding allocations and programmatic areas of focus. Funding is allocated by percentage to three state agencies (60% to the NJEDA, 20% to NJBPU and 20% to the NJDEP), and those agencies are required to spend funds within specific programs areas. These agency "funding lanes" set clear boundaries about each agency's target funding recipients and what their agency's proceeds can fund.

### **SUMMARY OF AGENCY FUNDING LANES**

	EDA	BPU	DE	P	
PROGRAM AREAS	Commercial, Institutional & Industrial Entities	Low Income & Moderate Income Residential Sector	Local Governments	Forest Tidal Marshes	
FUNDING ALLOCATION	60%	20%	10%	10%	
ELIGIBILITY	PROGRAMS TO SUPPORT:	PROGRAMS TO:	PROGRAMS TO: Plan, develop and	PROGRAMS TO:	
CRITERIA	<ul> <li>End-use energy efficiency projects.</li> <li>New, 'state of the art', efficient electric generation facilities.</li> <li>Combined heat and power production and other high efficiency electric generation facilities.</li> <li>Innovative carbon emissions abatement technologies.</li> <li>Development of qualified offshore wind projects.</li> </ul>	Reduce costs to electricity customers.  Support state electric vehicle goals.  With a focus on urban areas, and includes efforts to address heat island effect and reduce impacts on ratepayers attributable to the implementation of Global Warming Response Act.	rian, develop and implement measures to reduce greenhouse gas emissions including, but not limited to assistance to conduct and implement:  Energy efficiency.  Renewable energy.  Distributed energy programs.  Land use planning (where results are a measurable reduction of greenhouse gas emissions or energy demand).	Enhance the stewardship and restoration of State's forests and tidal marshes that provide opportunity to sequester or reduce greenhouse gas emissions.	

Projects and programs receiving monies under a sponsored initiative must align with the distributing agency's programmatic requirements. However, the agencies have discretion in the level of funding they can devote to specific projects and programs and are not required to fund all the program types prescribed by the Global Warming Solutions Fund Act. For example, while the Global Warming Solutions Fund Act lists five types of programs that NJEDA could fund, the NJEDA could decide to sponsor initiatives in a given Plan that support only two of those program types and split their funding between those two initiatives. Each state agency that receives an allocation from the Fund must sponsor one or more of the initiatives in the Plan.

The NJDEP's Global Warming Solutions Fund Rule defines an initiative as "a funding strategy predicted to advance one or more of the objectives¹ listed in N.J.A.C. 7:27D-2.2, which the agencies have identified as critical." In layman's terms, initiatives are broad areas of focus that seek to strategically address a well-defined issue or need and advance one or more of the six objectives defined in the Global Warming Solutions Fund Rule. The State agencies must rank Plan initiatives against these six objectives.

### SIX OBJECTIVES DEFINED IN THE GLOBAL WARMING SOLUTIONS FUND RULE

- 1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;
- 2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;
- 3. Reduction in energy use;
- 4. Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;
- 5. Provide co-benefits; and
- 6. Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.

Specifically, every initiative in the Plan must rank the importance of each objective as either "critical" or "beneficial" where critical means necessary, and beneficial means tending to help, but not necessary. In addition, each of these six objectives must be ranked critical to at least one of the initiatives, and together, the initiatives in the Plan must rank every objective critical. Appendix A outlines the state agencies' guidelines for the objectives, providing insight into how the agencies will interpret the language of the objectives when making their ranking determinations. To learn more about the objectives, see Appendix A and review the RGGI Auction Proceeds Scoping Document.

<sup>&</sup>lt;sup>1</sup> See Appendix A: Guidelines for the Objectives

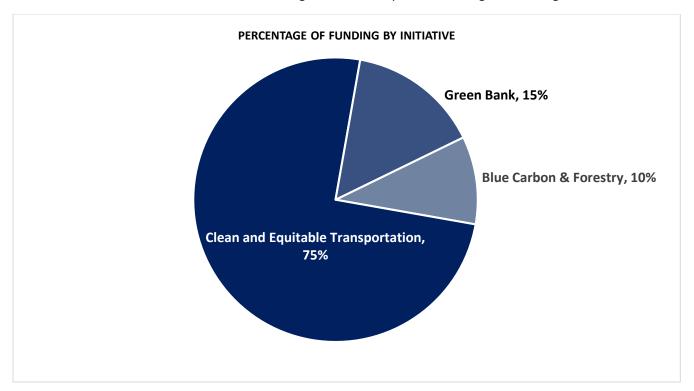
# **RGGI Funding Initiatives (2020 through 2022)**

The NJDEP, NJEDA and NJBPU will fund four initiatives during the first three-year RGGI funding period. Funding will be devoted to programs and projects that fall within the scope of:

- 1. Catalyzing Clean, Equitable Transportation;
- 2. Promoting Blue Carbon in Coastal Habitats;
- 3. Enhancing Forests and Urban Forests; and,
- 4. Creating a New Jersey Green Bank.

Each agency must sponsor (i.e., provide RGGI funds for programs or initiatives within) at least one initiative. All three agencies will sponsor *Initiative 1: Catalyze Clean, Equitable Transportation*. They will collaborate to accelerate the transition to electric transportation throughout the state, with a focus on environmental justice communities. The NJDEP is also sponsoring *Initiative 2: Promote Blue Carbon in Coastal Habitats*, and *Initiative 3: Enhance Forests and Urban Forests*. These two initiatives will focus on protecting and enhancing the State's natural resources, to ensure their continued role in sequestering carbon. Finally, the NJEDA will sponsor *Initiative 4: Creation of a New Jersey Green Bank*. This initiative will help drive improved energy efficiency and renewable energy uses in the industrial, commercial and institutional sectors.

These four initiatives were selected taking account of the directives of the three core 2020 state actions discussed above; previous funding priorities; the legislative mandates of the Global Warming Solutions Act; and public feedback collected during the 2018 RGGI rulemaking process as well as the November-December 2019 public stakeholder engagement process described above. They meet the agency-specific requirements, have at least one objective ranked critical, and are supported by data and research showing programs and projects under these initiatives would benefit the state's efforts to meet its clean energy and greenhouse gas reduction goals. Each initiative identifies its sponsoring agency or agencies, indicates which objectives are ranked critical or beneficial by the sponsoring agencies; and identifies the information and materials the agencies relied upon in selecting and ranking these initiatives.





# Initiative One: Catalyze Clean, Equitable Transportation

Initiative One seeks to accelerate transportation electrification in the State, focusing on reducing emissions from transportation sources in communities disproportionately impacted by the effects of environmental degradation and climate change. The largest source of emissions within the transportation sector is light-duty vehicles (i.e., cars), as discussed further below. However, medium- and heavy-duty vehicles are also major sources of emissions, especially in environmental justice communities. These sources include modes for transporting people, such as jitneys and buses, as well as cargo and freight-moving vehicles and other equipment that regularly operate on roads in or around disproportionately impacted communities (e.g., sanitation, delivery and drayage trucks) and off-road in these same areas (e.g., cargo moving equipment at ports and airports).

According to the NJDEP's 2018 Statewide Greenhouse Gas Emissions Inventory, transportation is New Jersey's largest source category, producing 42% of greenhouse gas emissions. That is more than double the next source category of electricity generation at 19%. As part of the Energy Master Plan development, state agencies partnered with Rocky Mountain Institute (RMI) and Evolved Energy Research (Evolved) to model and quantitatively assess various pathways to achieve State climate and energy objectives. The modeling scenarios were all bound by the policy mandates of 100% clean energy and an 80% reduction in greenhouse gas emissions from 2006 levels by 2050. The modeling revealed that a least-cost energy system in New Jersey that meets the State's 2050 goals includes electrification of most vehicles in the State. The Energy Master Plan builds on these findings by directing the conversion of almost all of New Jersey's transportation sector to electric power by 2050. Multiple efforts are underway to achieve this conversion, including the recently announced BPU program to provide rebates for light-duty (passenger) electric vehicle adoption, and Volkswagen settlement funding disbursed by DEP for the deployment in environmental justice communities of medium- and heavy-duty electric vehicles. The projects and programs funded under Initiative One will complement those existing efforts and accelerate New Jersey's transition to zero carbon transportation by 2050.

The Energy Master Plan modeling showed that although electrification of end-uses for both transportation and buildings would more than double electricity demand compared to 2020 levels, it would simultaneously reduce final energy demand because electric motors (to drive electric vehicles) and heat pumps (for heating of buildings) are far more efficient than gasoline- or diesel-fueled engines and natural gas-fired heating equipment.

The electric vehicle legislation signed by Governor Murphy on January 17, 2020<sup>2</sup> establishes the following light-duty-focused goals for New Jersey electric vehicle purchases and public charging stations:

- 330,000 registered electric vehicles by 2025, increasing to 2 million electric vehicles by 2040.
- By 2040, 85% of all light duty vehicles sold or leased in the state will be electric.
- 400 fast charging stations at 200 locations along major highways and communities by 2025.

The law also establishes goals for charging stations at multi-family homes and hotels. All these requirements align with the modeling and Energy Master Plan direction for more aggressive strategies to increase electric vehicle adoption.

New Jersey ranked second among states in the northeast for electric vehicle sales in 2018<sup>3</sup>, but only 1.5% of new vehicles sold in New Jersey are electric, compared to 2.1% nationwide. New Jersey is currently ranked 14<sup>th</sup> in the nation in terms of zero-emission vehicles sales (as % of total sales in 2018) and by the end of December 2019 there were 30,017 plug-in electric vehicles registered in the state.<sup>4</sup> The state ranks 39<sup>th</sup> in publicly available charging stations (FastCharging and Level 2 Ports) per capita.<sup>5</sup> These statistics show the need for focused planning and investment in transportation electrification to meet the legislative goals.

New Jersey's environmental justice communities are negatively impacted by the current transportation sector in several ways. These communities rely more heavily than others on public transportation, so tailpipe pollution from diesel buses impacts them both as bus passengers and by living and working in proximity to these bus routes. Even when they drive passenger vehicles, these tend to be older model year vehicles with higher emissions rates. New Jersey's urban neighborhoods are surrounded by major highways and other substantial roadways that are heavily travelled, both by cars and trucks. Finally, the proximity of many of these neighborhoods to the State's port system, the largest on the Eastern Seaboard, brings additional emissions from trucks, most of them diesel-fueled, moving freight in and out of the ports, as well as from cargo handling equipment within the ports themselves.

Accelerating the use of electrified transportation in and around these communities is key in achieving the state's environmental justice goals. JerseyRenews notes in a recent report that developing an electrified transit system can help close the health and wealth gap by reducing air pollution and mitigating climate change equitably.<sup>6</sup> This initiative's intention to prioritize transportation solutions in environmental justice areas aligns with the New Jersey Environmental Justice Alliance's (NJEJA) request for New Jersey to prioritize emission reductions for the parts of the state with the greatest needs in accordance with the state's Environmental Justice Executive Order #23.<sup>7</sup> NJEJA goes on to request that New Jersey invest in multiple electric modes of transportation such as public transit buses and trucks, private fleets, such as sanitation and delivery trucks, public fleets (local, county, and state vehicles), and alternative modes of transportation like electric scooters and ride-share programs. Prioritizing RGGI proceeds for this initiative will help ensure system-level approaches that are expedient, efficient, and effective means to achieving transportation equity.

### Agency Sponsorship

All three agencies are committed to sponsoring this initiative. Specifically, the NJEDA will dedicate 75-80% of its Fund allocation for industrial, commercial and institutional entities to this initiative. The NJBPU will allocate all its proceeds for

<sup>&</sup>lt;sup>2</sup>P.L. 2019, c. 362.

<sup>&</sup>lt;sup>3</sup> EV Adoption. EV Market Share by State. <a href="https://evadoption.com/ev-market-share/ev-market-share-state/">https://evadoption.com/ev-market-share/ev-market-share-state/</a>

<sup>&</sup>lt;sup>4</sup> Sources: <a href="https://autoalliance.org/economy/consumer-choice/electric-vehicles/NJ/">https://autoalliance.org/economy/consumer-choice/electric-vehicles/NJ/</a> and December 2019 AFV Report

<sup>&</sup>lt;sup>5</sup>Georgetown Climate Center. State Energy Analysis Tool: Electric Vehicle Fast-Charging Ports (per capita).

https://www.georgetownclimate.org/clean-energy/compare-states.html

<sup>&</sup>lt;sup>6</sup> http://jerseyrenews.org/wp-content/uploads/2019/06/TEEP-3.pdf

<sup>&</sup>lt;sup>7</sup> http://www.njeja.org/wp-content/uploads/2019/09/NJEJA-Transportation-Electrification.pdf

low- and moderate-income residential communities towards this initiative. The NJDEP will allocate all 10% of its proceeds legislatively allocated to local governments towards this initiative.

The NJEDA expects to use its funding to support the deployment of electric medium- and heavy-duty vehicles by commercial and industrial establishments. Programs are expected to use a cost-effective combination of grants and loans to fund actual vehicle purchases as well as the buildout of the high-capacity, fast-charging vehicle charging infrastructure that most of these establishments will require. These support programs will be targeted to specific vehicle types, as well as vehicle use cases, that can cost-effectively reduce emissions in environmental justice communities. In addition, NJEDA intends to use this funding to promote the development of medium- and heavy-duty electric vehicle supply chain activities in New Jersey. In this way, RGGI funding can support not only the deployment of more medium- and heavy-duty electric vehicles in the state, but it can also help enable the State to play an important role in the production and marketing of these vehicles for sale both within and outside of New Jersey. This will drive the creation of well-paying jobs, thereby helping to make a reality the Murphy Administration's goal of a New Jersey economy that is both stronger and fairer.

The system supporting the production of medium- and heavy-duty electric vehicles, such as vehicle battery chemistry and drive train power management, electric truck leasing and financing, and the manufacturing and/or assembly of complete vehicles or vehicle components, is relatively nascent as compared with the electric car industry, and this helps to create opportunities for New Jersey in various aspects of the supply chain. In addition to stimulating the supply chain by establishing New Jersey as a major U.S. hub of demand for these vehicles, NJEDA will also evaluate the potential benefit of offering direct financial incentives to individual businesses that locate their electric medium- and heavy-duty vehicle supply chain activities here in the state.

The NJBPU expects to use its RGGI funds to develop new or enhance existing programming enabling low- and moderate-income households, particularly those in environmental justice communities, to participate in and benefit from state efforts to improve access to clean transportation. Such targeted programming will put clean transportation options within reach of low- and moderate-income households, both economically and geographically. It will also complement existing state efforts to incorporate electric vehicle charging infrastructure throughout the state, including in urban areas and at multi-unit dwellings. Finally, NJBPU's programs, in tandem with programming from NJEDA and NJDEP, will drive a concerted effort to reduce air pollutants in overburdened communities.

The NJDEP expects to use its RGGI funds to continue the strategies introduced under the Volkswagen Mitigation Trust, particularly the replacement of diesel-fueled medium- and heavy-duty vehicles and non-road equipment with electric-powered in environmental justice communities. County and municipal governments own and operate medium- and heavy-duty vehicles involved in numerous community services, including garbage collection, student transport, and senior transport. Electrifying these vehicles will benefit sensitive populations. Also, understanding that the mobility needs of environmental justice communities differ from residents in other communities, NJDEP will pursue funding strategies that bring clean transportation options to underserved communities. These could include electric ride sharing and ride hailing, as well as electric transit buses, along with associated charging hubs.

All three agencies will collaborate on their respective plans to ensure complementary programming and funding for electric transportation initiatives and to maximize economic and administrative efficiencies wherever possible.

### **Priority Ranking**

The agencies have ranked five objectives as critical for Initiative One:

- A net reduction in greenhouse gas emissions or a net sequestration of carbon;
- Reduction in energy use;
- Be directly responsive to the recommendations submitted by the NJDEP to the Legislature pursuant to the Global Warming Response Act;
- Provide co-benefits; and,
- Be directly responsive to the negative effects of human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.

These objectives will be used to rank all projects and programs applying for funding from the agencies sponsoring this initiative. Agencies may also apply agency-specific criteria for selecting projects and programs. Details about satisfying the critical objectives and additional criteria will be provided in grant and financial aid guidelines released by agencies as part of their specific funding distribution mechanisms.

Objectives Priority Ranking  1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;	Initiative 1 Catalyze Clean, Equitable Transportation
2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;	В
3. Reduction in energy use;	С
<b>4.</b> Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;	С
5. Provide co-benefits; and	С
<b>6.</b> Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.	С
	K C = Critical
	B = Beneficial



## Initiative Two: Promote Blue Carbon in Coastal Habitats

Initiative Two seeks to promote, protect and maintain the beneficial role of New Jersey's tidal marshes in the carbon cycle. Blue Carbon ecosystems, such as salt marshes, tidal wetlands, seagrass beds and mangroves, are particularly important in the fight against climate change.<sup>8</sup> "Blue carbon" is the carbon stored by the soils and plants in these marine systems. Coastal ecosystems such as tidal marshes and seagrass meadows sequester more carbon per unit area than terrestrial forests and the carbon can be stored for millennia.<sup>9</sup> Although salt marshes cover only a small percentage of the United States, it has been estimated that they account for 21% of the carbon sequestered by ecosystems.<sup>10</sup> New Jersey has an estimated 191,178 acres of Blue Carbon resources.<sup>11</sup> However, as these ecosystems are degraded and lost, their carbon sink capacity declines, and existing stored carbon can be released, resulting in emissions of CO<sub>2</sub> that contribute to climate change. Modeling shows that between 9 and 19% of the State's existing salt marshes could be lost by 2050 due to sea level rise.<sup>12</sup> Furthermore, 67% of New Jersey's shoreline is ranked for vulnerability to erosion as high or very high.<sup>13</sup> As the soil erodes in these systems, the carbon stored in sediments can be exposed to oxygen and released back into the atmosphere as carbon dioxide.<sup>14</sup> To meet the state's 2050 goal of 80% reduction in greenhouse gases below 2006 levels, these valuable natural features must be restored and protected. The NJDEP is partnering with the Nicholas Institute for Environmental Policy Solutions at Duke University on an analysis to prioritize coastal habitats based upon both potential carbon sequestration and climate change

<sup>&</sup>lt;sup>8</sup> Howard, J. H. (2014). Coastal Blue Carbon: Methods for assessing carbon stocks and emissions factors in mangroves, tidal salt marshes, and seagrasses. Conservation International, Intergovernmental Oceanographic Commission of UNESCO, International Union for Conservation of Nature.: Arlington, Virginia, USA.

<sup>&</sup>lt;sup>9</sup> Pidgeon, E. (2009). Carbon Sequestration by Coastal Marine Habitats: Important Missing Sinks. In D. G. Laffoley, The Management of Natural Coastal Carbon Sinks. IUCN, Gland.

<sup>&</sup>lt;sup>10</sup> Nellemann, Christian, and Emily Corcoran, eds. *Blue carbon: the role of healthy oceans in binding carbon: a rapid response assessment*. UNEP/Earthprint, 2009.

 $<sup>^{\</sup>rm 11}$  Based on land cover calculations completed by the NJDEP Bureau of GIS, January 2020.

<sup>&</sup>lt;sup>12</sup> Lathrop, R. (2019). Documentation for the New Jersey Coastal Marsh Change Maps (2019 Version) which can be viewed through <a href="https://www.njfloodmapper.org/">https://www.njfloodmapper.org/</a>

<sup>&</sup>lt;sup>13</sup> New Jersey Department of Environmental Protection. New Jersey Coastal management Program Section 309 Assessment & Strategy 2016-2020.

<sup>&</sup>lt;sup>14</sup> Lovelock, Catherine; Fourqurean, James; and Morris, James. (2017). Modeled CO2 Emissions from Coastal Wetland Transitions to Other Land Uses: Tidal Marshes, Mangrove Forests, and Seagrass Beds. Frontiers in Marine Science.

resilience benefits. This analysis is anticipated to be completed by January 2021. This project is funded via the U.S. Climate Alliance Grant Program for Natural and Working Lands.

### Agency Sponsorship

The NJDEP will dedicate a portion of the 10% of the Fund allocated to Forest and Tidal Marshes, to this initiative. Projects and programs that could be funded under this Initiative include a variety of large-scale restoration projects with significant carbon sequestration potential. The exact portion of the 10% dedicated to this initiative and which projects and programs are funded will ultimately be determined by the Commissioner of the NJDEP after evaluating the potential programs and projects available for near-term implementation.

### **Priority Ranking**

Agencies have ranked two objectives as critical for Initiative Two:

- A net reduction in greenhouse gas emissions or a net sequestration of carbon; and,
- Provide co-benefits.

These objectives would be used to rank all projects and programs applying for funding from the agency sponsoring this initiative. NJDEP may also include agency-specific criteria for selecting projects and programs. Details about satisfying the critical objectives and additional criteria will be provided in grant and financial aid guidelines released by NJDEP after the Plan is finalized.

Objectives Priority Ranking  1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;	Initiative 2 Promote Blue Carbon in Coastal Habitats
2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;	В
3. Reduction in energy use;	В
<b>4.</b> Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;	В
5. Provide co-benefits; and	С
<b>6.</b> Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.	В



# Initiative Three: Enhance Forests and Urban Forests

Initiative Three focuses on enhancing New Jersey's forests and urban forests. To meet the State's 2050 goal of 80% reduction in greenhouse gases below 2006 levels, natural resources that sequester carbon must be promoted, protected, and maintained. Forests play a critical role in the carbon cycle serving as a stock of sequestered carbon and continually removing and storing additional carbon from the atmosphere. Additionally, urban and community forests contribute to demand side energy reductions by providing shade and reducing the need for air conditioning, avoided emissions, and are among the top five in carbon gain potential for natural climate solutions in New Jersey.<sup>15</sup>

Collectively, the State's natural resources, including all land uses in New Jersey, sequester the equivalent of 8.1 million metric tons CO<sub>2</sub>, approximately 8% of the State's total greenhouse gas emissions. This means that the State's natural features sequestered more carbon than generated by the waste sector in that same year. While terrestrial carbon sequestration regularly occurs in nature, there are human actions that can enhance or impede the carbon sequestration capacity of land and its ability to mitigate the effects of climate change. Changes in our land use can contribute to changes in carbon storage, causing the release of greenhouse gases. For example, between 1986 and 2015, New Jersey increased its developed (urban) lands by 360,000 acres, consequently seeing decreases in its upland forests, cropland, grassland and wetlands. While New Jersey's urban growth has slowed in more recent years, these historical land use decisions have reduced New Jersey's carbon pool to its current levels and impacted the State's annual rate of sequestration. In order to meet the State's 2050 greenhouse gas limit of an 80% reduction in emissions, the State needs to, at a minimum, maintain its current levels of terrestrial carbon sequestration, and ideally increase the amount of carbon sequestered in these natural sinks.

<sup>&</sup>lt;sup>15</sup> U.S. Climate Alliance. Natural and Working Lands Learning Lab, New Jersey Team Summary of Findings and Recommendations. (July 2018)

<sup>&</sup>lt;sup>16</sup> Based on land use change calculations completed by the NJDEP Bureau of GIS, January 2020.

### Agency Sponsorship

The NJDEP will dedicate a portion of the 10% of the Fund allocated to Forest and Tidal Marshes, to this initiative. Projects and programs that could be funded under this Initiative include grant programs and outreach efforts aligned with the Forest Stewardship Plan; stewardship and management of the State's forests; and/or support for the New Jersey Urban & Community Forestry Program. The exact portion of the 10% dedicated to this Initiative and which projects and programs are funded will ultimately be determined by the Commissioner of the NJDEP after evaluating the potential programs and projects available for near-term implementation. Any percentage allocated to this initiative would be governed by the mandates outlined under the Forest Stewardship Act at P.L. 2009, Chapter 256, C.13:1L-33 and the projects and programs will need to report on how they satisfied the critical objectives for this initiative in the next Strategic Funding Plan.

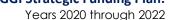
### **Priority Ranking**

Agencies have ranked three objectives as critical for Initiative Three:

- A net reduction in greenhouse gas emissions or a net sequestration of carbon;
- Significant reduction in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program; and,
- Provide co-benefits.

These objectives will be used to rank all projects and programs applying for funding from the agency sponsoring this initiative. NJDEP may also include agency-specific criteria for selecting projects and programs. Details about satisfying the critical objectives and additional criteria will be provided in grant and financial aid guidelines released by NJDEP after the Plan is finalized.

Objectives Priority Ranking  1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;	Initiative 3 Enhance Forests and Urban Forests
2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;	С
3. Reduction in energy use;	В
<b>4.</b> Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;	В
5. Provide co-benefits; and	С
<b>6.</b> Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.	В





# Initiative Four: Create a New Jersey Green Bank

Initiative Four seeks to increase the pace of clean energy investment and job growth across the State by creating a New Jersey Green Bank. The National Renewable Energy Laboratory (NREL) describes a green bank as an institution that helps secure low-cost capital for clean energy projects at favorable rates and terms to both traditional and underserved markets. [1] NREL quotes the Coalition for Green Capital (CGC) – a non-profit Green Bank advisory organization – definition of a Green Bank as "a focused institution, created to maximize clean energy adoption."

Consistent with the Plan's equity objectives, a substantial focus of a New Jersey Green Bank will be improving capital access for those who have traditionally had more difficulty in accessing the benefits of participation in the green economy. For example, a Green Bank could support projects such as rooftop solar in low-income areas or energy efficiency retrofits for smaller main street businesses. A Green Bank will also give priority to those projects that provide training and create high-quality jobs for New Jerseyans seeking to benefit from the State's clean energy transition.

To achieve these goals, a New Jersey Green Bank will provide direct loans and financial enhancements to clean energy projects, usually in partnership with private lenders. Green Bank investments will typically focus on economically and technically viable greenhouses gas emissions reduction projects (e.g., clean/renewable energy generation, energy storage, energy efficiency and power management). Financing these projects will accelerate the deployment of clean energy across New Jersey and drive the evolution of the grid and energy infrastructure to be more flexible, resilient, and cost-effective. By increasing the overall volume of clean energy projects in the State, over time the Green Bank will also improve the cost effectiveness of the New Jersey's clean energy transformation. As markets develop, government grant support for clean energy initiatives can be replaced by government loans and ultimately commercial loans.

The New Jersey Green Bank will have an especially strong impact on driving energy efficiency in the State's commercial and industrial sectors. The NJDEP's 2018 Statewide Greenhouse Gas Emissions Inventory calculated that greenhouse gas emissions from space heating and other combustion sources within the commercial and industrial

<sup>[1]</sup> https://www.nrel.gov/state-local-tribal/basics-green-banks.html

sectors accounted for 17% of New Jersey's greenhouse gas emissions - nearly equal to the second largest sector, electricity generation (19%). While the industrial sector's emissions decreased from 19.8 MMT CO2e to 7.2 MMT CO2e from 1990-2018; emissions from the commercial sector have held relatively steady at 10.7 MMT CO2e in 1990 to 9.4 MMT CO2e in 2018. Improving energy efficiency in these sectors is needed to achieve New Jersey's greenhouse gas reduction goals.

Strategy 7 of the 2019 Energy Master Plan focuses on efforts to expand the clean energy economy by investing in clean energy innovation services, and products that drive investments and grow jobs. To accomplish this strategy, New Jersey must support the growth of in-state clean energy industries through clean energy finance solutions like a State Green Bank.

### Agency Sponsorship

NJEDA will dedicate up to 20-25% of its allocated RGGI funding for the Commercial, Industrial and Institutional sectors (e.g., New Jersey-based commercial and industrial companies, as well as institutions and non-profits) to this initiative. Under this initiative, NJEDA will fund the capitalization of a new, statewide Green Bank to help to diversify financial sources and expand the overall level of private sector lending to meet the State's clean energy and climate goals, while at the same time enabling the creation of new jobs, enhancing economic equity and reducing energy costs for ratepayers in the State. As recognized in the Energy Master Plan, the State will have to expand opportunities for innovative and low-cost financing and leveraging public dollars to grow private sector investment to achieve its goals. Using public funds to attract and leverage private capital, lower interest rates, provide gap financing, and advance other financial mechanisms will enable the clean energy economy to grow faster with less impact to New Jersey's ratepayers.

Private sector loan financing that supports clean energy investments and reduction of greenhouse gas emissions in New Jersey currently comes through a variety of channels such as commercial banks, specialty lenders, vendors, and gas and electric utilities. New Jersey's Green Bank will provide direct loans or financial enhancements to incentivize private lending, accelerating the pace at which these private lenders embrace new project types, business models and transaction structures. The Green Bank would focus on the areas where private lenders have been hesitant to lend, for reasons such as excessive assessment of credit risk, or an unwillingness to incur the high transaction costs associated with being a "pioneer" in a new type of lending transaction. Projects and programs funded by the Green Bank could include clean/renewable energy generation, energy storage, energy efficiency and power management. The Green Bank will also concentrate on improving capital access in areas of the State that have not traditionally had ready access to affordable renewable energy and energy efficiency opportunities through projects such as rooftop solar for low-income households or energy efficiency retrofits for small businesses. Finally, the Green Bank will give residents of Environmental Justice communities priority access to job training and hiring in this growing sector of New Jersey's economy.

### **Priority Ranking**

Agencies ranked two objectives as critical for Initiative Four:

- A net reduction in greenhouse gas emissions or a net sequestration of carbon; and
- Significant reduction in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program.

These objectives will be used to rank all projects and programs applying for funding from the agency sponsoring this initiative. NJEDA may also include agency-specific criteria for selecting projects and programs. Details about satisfying the critical objectives and additional criteria will be provided in grant and financial aid guidelines released by the NJEDA after the Plan is finalized.

Objectives Priority Ranking  1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;	Initiative 4 Create a New Jersey Green Bank
2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;	С
3. Reduction in energy use;	В
<b>4.</b> Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;	В
5. Provide co-benefits; and	В
<b>6.</b> Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.	В

= Beneficial

# **Priority Ranking Summary**

NJDEP's Global Warming Solutions Fund Rule requires that every objective must be ranked critical by at least one initiative, and each initiative must have at least one objective ranked as critical. The four initiatives in the Plan meet this requirement, collectively ranking all six objectives as critical. It is important to note that the agencies must evaluate the degree to which each program or project is also predicted to advance the beneficial objectives. When choosing between two projects that are predicted to advance the critical objectives equally, then it is the project or program with the ability to advance the beneficial objectives more that will be given priority for funding.

	Initiative 1 Catalyze Clean, Equitable Transportation	Initiative 2 Promote Blue Carbon in Coastal Habitats	Initiative 3 Enhance Forests and Urban Forests	Initiative 4 Create a New Jersey Green Bank
Objectives	_	_	_	_
1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;	С	С	С	С
2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;	В	В	С	С
3. Reduction in energy use;	С	В	В	В
4. Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;	С	В	В	В
5. Provide co-benefits; and	С	С	С	В
<b>6.</b> Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.	С	В	В	В
Agency Sponsorship	NJ EDA		<b>©</b>	NJ EDA
			К	C = Critical

# **Anticipated Co-Benefits**

New Jersey anticipates a myriad of co-benefits beyond greenhouse gas reductions from the investment of the RGGI auction proceeds. Efforts to electrify New Jersey's transportation sector will significantly reduce criteria and other toxic air pollutants generated by internal combustion engines. On-road sources are the largest contributor to nitrogen oxides (NO<sub>x</sub>), one of the components needed to produce ground-level ozone, the only pollutant for which New Jersey, overall, does not meet the health-based National Ambient Air Quality Standard (NAAQS). In addition, a New Jersey analysis of the air toxics of concern for the State highlighted fourteen pollutants that are predicted to exceed their health benchmarks for one or more New Jersey counties; five of which were from primarily transportation sources. All five of the transportation-generated air toxics of concern are cancer-causing chemicals.<sup>17</sup> In fact, emissions from diesel fuel combustion pose the highest cancer risk of all air toxics in New Jersey. The investment of RGGI funds to deploy electric transportation will support better air quality and health outcomes throughout the state.

Alongside of its acceleration of the deployment of electric vehicles and the resulting mitigation of greenhouse gas and traditional pollutant emissions, the Clean, Equitable Transportation initiative will seek to direct its funding in ways that will help New Jersey to participate in the growth of the supply chain for electric vehicles and related charging infrastructure, particularly in the marketplace for electric medium- and heavy-duty vehicles. With the stimulation of the New Jersey-based supply chain, the state can realize critical benefits in the areas of job creation and investment. Likely areas of special focus to bolster New Jersey's strength in the clean transportation supply chain include battery chemistry and power systems management, vehicle manufacturing, and vehicle leasing and financing.

Efforts to enable New Jersey's commercial and industrial sectors to invest in and transition to clean energy resources through the Green Bank initiative will stimulate financial opportunities in New Jersey's clean energy innovation economy, driving new investments and creating new jobs. In addition, these new financing mechanisms to aid the transition will enable the reduction of other air pollutants and toxics generated by the fossil fuels, such NO<sub>x</sub> and volatile organic compounds (VOCs), as well as sulfur dioxide (SO<sub>2</sub>) which, along with NO<sub>x</sub>, contributes to acid rain formation.<sup>18</sup>

Beyond sequestering carbon, investing RGGI funds in promoting, protecting and maintaining New Jersey tidal wetlands and forests will provide resiliency benefits, as well as numerous environmental benefits above and beyond GHG emissions mitigation. Tidal marshes, and seagrass beds buffer coastal communities from storms, filter water and provide habitat for recreationally and commercially important fishes and birds. Trees in urban settings reduce ambient temperatures and help decrease energy use by directly shading buildings and mitigating urban heat island effects. Carbon defense policies, such as managing tree density, can help to ensure that natural lands avoid becoming net greenhouse gas emitters. Protecting these natural resources can also avoid habitat loss, fragmentation, and the introduction of invasive species. In addition, forests and trees play an important role in capturing rainfall, replenishing and cleaning our water supply and providing evaporative cooling, helping to cool the atmosphere.

<sup>&</sup>lt;sup>17</sup> https://www.nj.gov/dep/airtoxics/nataest14.htm

<sup>&</sup>lt;sup>18</sup> EPA (2018). 2014 National Emissions inventory, version 2, Technical Support Document.

<sup>19</sup> https://oceanservice.noaa.gov/news/nov16/marsh-baseline.html

<sup>&</sup>lt;sup>20</sup> Nowak, D. A. (2016). Residential building energy conservation and avoided power plant emissions by urban and community trees in the United States. Retrieved from https://www.fs.fed.us/nrs/pubs/jrnl/2017/nrs\_2017\_nowak\_001.p

<sup>&</sup>lt;sup>21</sup> Ontl, T. a. (2020). Forest Management for Carbon Sequestration and Climate Adaptation. Journal of Forestry.

<sup>&</sup>lt;sup>22</sup> New Jersey Division of Fish and Wildlife. (2019). Connecting Habitat Across New Jersey (CHANJ): Guidance Document, Version 1.0.

<sup>&</sup>lt;sup>23</sup> U.S. Environmental Protection Agency. (2008). U.S. Environmental Protection Agency. Reducing urban heat islands: Compendium of strategies. Draft. https://www.epa.gov/heat-islands/heat-island-compendium

<sup>&</sup>lt;sup>24</sup> Water Evaporated from Trees Cools Global Climate (2011). Carnegie Science. <a href="https://carnegiescience.edu/news/water-evaporated-trees-cools-global-climate">https://carnegiescience.edu/news/water-evaporated-trees-cools-global-climate</a>

<sup>&</sup>lt;sup>25</sup> Center for Watershed Protection. Forests and Drinking Water. <a href="https://www.cwp.org/forests-and-drinking-water/">https://www.cwp.org/forests-and-drinking-water/</a>

# **Appendix A: Guidelines for the Objectives**

Every initiative in the Strategic Funding Plan must rank the importance of each objective as either critical or beneficial, where critical means necessary and beneficial means tending to help, but not necessary. If the agencies rank an objective as critical to their sponsored initiative, any spending associated with that initiative must be predicted to provide measurable and verifiable benefits towards furthering that objective. To provide further clarity about what "critical" means for each objective, the agencies developed the following guidelines:

### 1. A net reduction in greenhouse gas emissions or a net sequestration of carbon;

In accordance with N.J.S.A. 26:2C-37 (the Global Warming Response Act), greenhouse gases are carbon dioxide, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and any other gas or substance determined by the Department of Environmental Protection to be a significant contributor to global warming. Revisions to the Global Warming Response Act signed by Governor Murphy on July 23, 2019 further states that while carbon dioxide is the primary and most abundant greenhouse gas, other greenhouse gases known as short-lived climate pollutants, including black carbon, fluorinated gases, and methane, create a warming influence on the climate that is many times more potent over a shorter period of time than that of carbon dioxide, and have a dramatic and detrimental effect on air quality, public health, and climate change; and that reducing emissions of these pollutants can have an immediate beneficial impact on climate change and public health.

A net reduction in greenhouse gas emissions is when the balance of greenhouse gas emissions is less due to the implementation of a project or program funded under a selected initiative. In the absence of the project or program occurring, overall greenhouse gas emissions would have been greater. Similarly, a net sequestration of carbon is when the balance of carbon stored/captured is greater due to the implementation of a project or program funded under a selected initiative.

2. Significant reductions in greenhouse gas emissions, reduction of impacts on ratepayers, and a significant contribution to the achievement of the State's 2050 Global Warming Response Act limit, relative to the cost of the project or program;

This objective weighs various benefits (i.e., reduction in greenhouse gas emissions, ratepayer impacts) against the relative cost of the program to determine cost-effectiveness. Cost-effectiveness is defined as the total cost (including administrative costs and the amount of cost share (if applicable)) of a project or program funded under a selected initiative divided by the specific benefits (either carbon dioxide equivalent (or  $CO_2e^{26}$ ) emissions avoided or ratepayer savings) over the effective lifetime of a project or program funded under a selected initiative.

A reduction in impacts on ratepayers is defined as avoided or reduced cost of utility (gas or electric) relative to the cost of a project or program funded under a selected initiative.

A program or project implemented under an initiative that has a "significant reduction in greenhouse gas emissions" or a "significant contribution to the achievement of the State's limit of greenhouse gas reductions of 80% below 2006 levels by 2050" would need to result in a net greenhouse gas emission reduction that is large enough to affect the state's greenhouse gas inventory.

 $<sup>^{26}</sup>$  CO<sub>2</sub>e is a standard unit for measuring carbon footprint, by expressing the impact of various greenhouse gases on the climate. It describes, for a given mixture and amount of greenhouse gases, the amount of CO<sub>2</sub> that would have the same global warming ability, when measured over a specified period (e.g., 100 years).

Projects will be evaluated based on their ability to cost effectively achieve reductions in greenhouse gas emissions or their ability to reduce impacts on ratepayers.

### 3. Reduction in energy use;

A reduction in energy use is defined as a decrease in the number of British Thermal Units (BTUs) or Megawatthours (Mwh) consumed by a project or program funded under a selected Initiative, with the outcome of transitioning away from carbon-intensive energy sources.

Any activity that requires energy to produce work (e.g. moving a car from point A to point B, or thermal heating) can be measured using two attributes:

- 1) Carbon intensity of the fuel used to create energy, a measure of how much carbon per unit volume of the fuel is required. When combusted, the fuel releases its carbon content as CO<sub>2</sub>; and,
- 2) Energy intensity, a measure of energy efficiency, of the activity to produce a given unit of work (e.g. kWh required to run the dishwasher once or miles per gallons).

In the absence of the project or program occurring, energy use would have been greater. As highlighted in the Energy Master Plan modeling, while the electrification of end-use for transportation would increase electricity demand compared to 2020 levels, it would simultaneously reduce final energy demand because electric motors are far more efficient than gasoline- or diesel-fueled internal combustion engines.

4. Be directly responsive to the recommendations submitted by the Department to the Legislature pursuant to the Global Warming Response Act;

The project or program funded under a selected initiative fulfills one of the recommendations or related actions outlined in the new Energy Master Plan released on January 27, 2020 or in New Jersey's 2050 Global Warming Response Act Recommendation Report, expected in July 2020.

### 5. Provide co-benefits; and

Co-benefits are defined as social, economic and/or environmental benefits that will be realized due to the implementation of the project or program funded under a selected initiative beyond the primary benefit of greenhouse gases reduced, energy saved or increase in carbon sequestration. Co-benefits include, but are not limited to, creating job opportunities, reducing criteria air pollutants and/or air toxics, improving health outcomes and lowering healthcare costs, water quality and stormwater protection, improving or restoring natural habitats, reducing cost to electricity and natural gas consumers, improving local electric system reliability and contributing to regional initiatives to reduce greenhouse gas emissions.

6. Be directly responsive to the negative effects on human health and the environment in communities that are disproportionately impacted by the effects of environmental degradation and climate change.

In developing the Global Warming Solutions Fund Rule, NJDEP identified environmental and public health improvements in environmental justice communities as a key objective for investment of RGGI proceeds. The method for identifying environmental justice communities is a component of an ongoing NJDEP effort under Executive Order No.23 to develop guidance on Environmental Justice issues for all Executive branch departments and agencies to consider and follow when implementing their rules. The draft <a href="E.O. 23 Guidance Document">E.O. 23 Guidance Document</a> looks to a number of criteria, such as the significant presence of residents of low-income and

minority status, as primary indicators of disproportionally impacted communities. The draft guidance also listed a number of secondary indicators that might point to a community's disproportionate vulnerability to environmental or health stressors, such as elevated asthma rates; a high proportion of vulnerable populations such as infants, small children and the elderly; a high concentration of facilities that discharge pollutants to air or water; high concentration of sites that have been contaminated with hazardous substances; or widespread educational or English language limitations that present obstacles to the community's ability to be well-represented in government or private sector decision-making.

Once this guidance is final, it will be used to determine critical evaluations on this objective for this funding plan. If an initiative ranks this objective as critical, projects and programs funded under that initiative must directly benefit these communities.