
Superior Court of New Jersey
Appellate Division

Docket No. A-001461-21

EMPOWERNJ, BLUEWAVENJ,	:	CIVIL ACTION
CLEAN WATER ACTIONNJ,	:	
DELAWARE RIVERKEEPER	:	ON APPEAL FROM A
NETWORK, DON'T GAS THE	:	DECISION OF THE
MEADOWLANDS COALITION	:	DEPARTMENT OF
and FOOD & WATER WATCH,	:	ENVIRONMENTAL
	:	PROTECTION, DATED
<i>Petitioners-Appellants,</i>	:	DECEMBER 14, 2021
	:	
vs.	:	
	:	
DEPARTMENT OF	:	
ENVIRONMENTAL	:	
PROTECTION,	:	
	:	
<i>Respondent-Respondent.</i>	:	
	:	

**BRIEF AND APPENDIX ON BEHALF
OF PETITIONERS-APPELLANTS**

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PRELIMINARY STATEMENT

This appeal concerns the failure of the New Jersey Department of Environmental Protection ("DEP") to adopt rules establishing interim benchmarks for reducing greenhouse gas emissions and measures necessary to achieve that reduction as required by the Global Warming Response Act ("GWRA"), N.J.S.A. 26:2C-37 et. seq.

The Legislature first passed the GWRA in 2007. It requires New Jersey to reduce its greenhouse gas emissions ("GHGs") by 80% below 2006 levels by 2050, the 80x50 Goal. During the following 12 years, the climate crisis worsened, and the climate science improved. The incontrovertible scientific consensus is that GHG's must be dramatically reduced by 2030 to avoid climate catastrophe.

In response to this scientific consensus and the accelerating devastation caused by climate change, the Legislature amended the GWRA in 2019 to require DEP to take more immediate action to address the climate crisis. It directed DEP to (1) prepare a report, subsequently known as the 80x50 Report, making specific recommendations for legislative and regulatory action; and (2) convert the recommendations in the 80x50 Report into rules and regulations within 18 months of the issuance of the 80x50 Report. N.J.S.A. 26:2C-41(d) provides that "the department **shall** adopt ... rules and regulations establishing interim benchmarks necessary to achieve the 2050 limit, and measures necessary to achieve the 2050 limit and the established interim benchmarks." (emphasis added).

DEP belatedly prepared the 80x50 Report but did not proceed with the required rulemaking. Petitioners then filed the petition at issue in this appeal (the "Petition") demanding that DEP adopt rules setting interim benchmark for reducing GHGs ("Interim Benchmarks" and measures implementing the benchmarks ("Implementing Measures")) as required by the GWRA.

While the Petition was still pending, Governor Murphy signed Executive Order 274 ("EO 274"), which established as State policy the goal of reducing GHGs by 50 percent below 2006 levels by 2030, the "50x30 Goal," and directed all state agencies to implement the objectives of EO 274

Surprisingly and inexplicably, and in conflict with the GWRA, EO 274, climate science and the urgency of the climate crisis, DEP denied the Petition in its entirety (the "Denial"). While DEP acknowledged EO 274 and that immediate and aggressive action was needed to address the climate crisis, it presented two rationales for the Denial: (i) it has "discretion" whether to adopt rules setting Interim Benchmarks and Implementing Measures; and (ii) the 80x50 Report, the State's Energy Master Plan ("EMP") and updates to those reports "presently represent appropriate and effective vehicles for establishing any interim benchmarks."

DEP does not have, as a matter of law, "discretion"; whether to adopt rules setting Interim Benchmarks and Implementing Measures; they are mandatory under the GWRA. **When shall is used**

in a statute, as is the case here, it means that the action is required and mandatory. DEP says in its Denial that it will "consider the role of benchmark codification in advancing the State's climate policy objectives." That is not DEP's choice; the Legislature made that choice for it. Statutes cannot be changed by administrative fiat.

Putting aside DEP's erroneous legal position that it can countermand the Legislature, DEP's substantive reason for denying the Petition -- that its reports could be "vehicles" for setting Interim Benchmarks -- is arbitrary, capricious and, indeed, nonsensical. While wide discretion is usually afforded administrative decisions, that discretion is not unbounded. A decision will be overturned and found to be unreasonable, when it does not conform with relevant law, is not supported by credible evidence or the agency clearly erred in applying the relevant law to the facts.

All these factors are present here. The 80x50 Report and EMP, like all other reports, are not substitutes for binding rules. They do not have the force of law and their recommendations cannot be implemented without those rules. As the Legislature clearly directed in the GWRA, the 80x50 Report was supposed to be the basis for enacting rules and not be the end of its work. DEP's Denial of the Petition is irrational and should be overturned.

PROCEDURAL HISTORY AND STATEMENT OF FACTS¹

Petitioners' Interest in the Proceeding

Petitioner EmpowerNJ is a coalition of environment, community, religious and grassroots groups located in New Jersey. EmpowerNJ's mission, which is endorsed by its coalition partners, is to seek the reduction of GHG emissions and other pollutants. (30a).

Each of the Petitioners actively seeks the reduction of GHGs and other pollutants and recognizes that climate change constitutes an existential threat to New Jersey, the country and the world. Indeed, every New Jersey citizen has an interest in the relief that Petitioners sought from the DEP and are seeking in this appeal. (30a).

The Accelerating Climate Change Crisis

The effects of climate change have been known for decades but it is occurring at a far faster rate than anyone had previously predicted. With each passing day, the crisis becomes more acute, the need for immediate action becomes greater, and the economic cost and human toll from inadequate action increases. (33a).

DEP acknowledges this repeatedly in its Denial. (3-6a). DEP began its analysis by stating, "Global atmospheric warming, caused

¹ Appellants have combined the Statement of Facts with the Procedural History for the convenience of the Court because they are inextricably intertwined.

largely by the burning of fossil fuels, is leading to significant changes in climate patterns here in New Jersey, across the United States, and around the world, representing the single greatest long-term threat currently facing humanity.” (3a). “Climate change ‘poses a severe threat to the environment, human health and welfare, and the economy—in New Jersey, across the United States, and around the world.’” (5a) (citation omitted).

New Jersey is particularly at risk. As DEP states, “[climate change] risks are heightened in New Jersey due to, among other things, the State’s coastal location and population density. Rising sea-levels, higher temperature, more precipitation, more intense storms and droughts, and flooding are just some of the climate change threats that are and will continue to impact the State. These impacts have stressed and will continue to stress the State’s public health, ecological, social, and economic systems.” (5-6a). New Jersey (and Florida) are ground zero for climate change in the United States as is evident from the devastating and still ongoing impact from Superstorm Sandy and Hurricane Ida. (34a). A June 18, 2018 Union of Concerned Scientists report stated, “Of the roughly 14,000 commercial properties at risk on U.S. coasts within the next 30 years, more than one-third are in Florida and New Jersey.” (34a).

DEP’s 2020 *Scientific Report on Climate Change* also lays out how devastating climate change has been and will be for New Jersey

unless GHG emissions are curtailed, swiftly and dramatically. (34-36a). New Jersey will experience significant direct and secondary changes in its environment including increases in temperature, variability in precipitation, frequency and intensity of storms, sea-level rise, ocean acidification and the associated impacts to ecological systems, natural resources, built environments, human health, and the economy.

The key findings of DEP's 2020 *Scientific Report on Climate Change* are:

- Historically unprecedented warming is projected for the 21st century, resulting in longer and more frequent heat waves that impact larger geographic areas.
- Annual precipitation is expected to increase from 7% to 11% by 2050 and occur in more intense rain events that could result in an increase in localized flooding.
- By 2050, there is a 50% chance that sea-level rise will meet or exceed 1.4 feet and a 17% chance it will meet or exceed 2.1 feet, resulting in increased coastal flooding during sunny days and storm events, impacting infrastructure, residents and businesses. Sea level will further increase by 2100 -- by as much as 6 feet or more. A NOAA report released this month found sunny day flooding in New Jersey has doubled over the past 20 years and is predicted to double again in 10 years if

mitigation efforts do not improve.

- Periods between rain events may be longer, causing more frequent drought conditions, increasing the potential for reduced water supply availability, reductions in agricultural capacity that lead to shortages in food production and increased prices, and economic loss from impacts to livestock, and reductions in hydroelectric power production.
- Unabated CO2 emissions would reduce ocean pH, creating a more acidic ocean that could impact important marine and estuarine life and New Jersey's thriving fishing industry.
- Increases in temperature expected as a result of climate change could intensify air pollution as well as respiratory and cardiovascular health concerns. Such impacts are of particular concern for already overburdened environmental justice communities and in urban areas due to the heat island effect.
- New Jersey's agricultural yields could suffer as water supplies are stressed from an expanded growing season, while some crops may not thrive in warmer temperatures.
- Wildfire seasons could lengthen or become more intense as a result of hot, dry periods resulting from increased

temperatures, potentially increasing the risk to New Jersey communities.

- The frequency and intensity of harmful algae blooms may increase, disrupting swimming and fishing in New Jersey's lakes, and posing risks to drinking water reservoirs. (35-36a).

DEP's Denial also acknowledged the dire 2021 report of the International Panel on Climate Change ("IPCC"), prepared by the world's leading climate change experts, which the United Nations Secretary General described as "a code red for humanity." (5a). The report "is unequivocal in finding that effects of climate change are already happening and will worsen over the coming decades without aggressive, rapid and widespread emissions cuts." (5a). The bottom line of the IPCC report is that global GHGs need to fall by 45 percent from 2010 levels by 2030 to keep global temperatures from increasing by more than 1.5° C, the tipping point where damage from climate change becomes irreversible. (34a).

The GWRA

Recognizing the growing climate crisis, the Legislature passed the GWRA in 2007. The Act states that GHGs are causing global warming and "that if steps are not taken to reverse these trends, the effects on human, animal and plant life on Earth may be catastrophic; that solutions exist to halt the increasing of greenhouse gases in the atmosphere and reduce these emissions;

that, as a global issue, each country and region within a country must do its part to reduce these greenhouse gases that threaten the globe; and that, as a State, there are specific actions that can be taken to attack the problem of global warming, through reductions of greenhouse gas emissions in the State.” The GWRA established this State’s 80x50 Goal of reducing GHGs by 80% from 2006 levels by 2050. N.J.S.A. 26:2C-38.

In 2019, in response to the worsening climate crisis and the scientific consensus that GHGs must be sharply and quickly well before 2050, the Legislature amended and updated the GWRA. It directed DEP to prepare a report, subsequently known as the 80x50 Report, no later than one year from the enactment of the amendment, making “specific recommendations for legislative and regulatory action that will be necessary to achieve the 2050 limit and any established interim benchmarks.” N.J.S.A. 26:2C-42. The Act became effective on July 23, 2019, thereby requiring DEP to prepare the 80x50 Report by July 23, 2020. DEP subsequently missed that deadline.

The Legislature further directed DEP to convert the recommendations in the 80x50 Report into rules and regulations within 18 months of the issuance of the 80x50 Report. N.J.S.A. 26:2C-41(d) provides:

No later than 18 months after the department prepares and transmits the [80x50] report ... the department shall adopt, pursuant to the

"Administrative Procedure Act," P.L.1968, c. 410 (C.52:14B-1 et seq.), rules and regulations establishing interim benchmarks necessary to achieve the 2050 limit, and measures necessary to achieve the 2050 limit and the established interim benchmarks.

Under the timeline directed by the Legislature, DEP should have adopted rules setting Interim Benchmarks and Implementing Measures by no later than January 2022.

The 80x50 Report

On October 15, 2020, DEP issued the 80x50 Report required by the GWRA. (51-52a). The introduction to the Report, ironically entitled "A Call To Action," states that unless there are steep and permanent reductions in global GHGs "within the next several years," New Jersey will experience significant adverse effects of climate change.

Over the past three decades, the scientific community's understanding of the trends and underlying causes of climate change has evolved to the point where there is no credible doubt that significant and rapid warming of the earth's climate is occurring. Climate change is primarily caused by human activities, and it poses a severe threat to the environment, human health and welfare, security, and the economy—in New Jersey, across the United States, and around the world. New Jersey is especially vulnerable to the adverse effects of climate change due to its coastal location and population density. Minimizing these risks requires immediate, decisive, long-term commitments across all levels of government and sectors of the economy to facilitate the steep reductions of greenhouse gas (GHG) emissions that are

necessary to protect New Jersey's economic, social, and environmental vitality.

Without steep and permanent reductions in global GHG emissions **within the next several years**, New Jersey's people and their property will experience significant adverse effects of climate change, including rising sea-levels, increases in temperature and precipitation causing periods of both intense storms and drought, and chronic inundation from flooding. These changes in climate will cause or exacerbate stress on the state's public health, ecological, social and economic systems. (emphasis added). (Aa51-52).

The Report quickly proved to be correct. In 2021, Hurricane Ida struck New Jersey killing 30 people in New Jersey, far more than in any other State, and causing untold property damage.² In 2021, there were 20 separate billion-dollar weather and climate disasters in the United States, causing damages of \$145 billion. The total cost of these events for the last five years has been \$742.1 billion.³

² Appellants hereby ask the Court to take judicial notice of this pursuant to N.J.R. Evid. 201(b)(1)(2)(3), 202. Available at <https://www.nj.com/weather/2021/09/ida-death-total-in-nj-climbs-to-30-murphy-ays.html>; <https://www.washingtonpost.com/weather/2021/09/03/hurricane-ida-numbers-surge-wind-pressure-damage/>.

³ Appellants hereby ask the Court to take judicial notice of this pursuant to N.J.R. Evid. 201(a), 202. Available at <https://coast.noaa.gov/states/fast-facts/hurricane-costs.html>.

DEP's Rule-Making Proceedings

The Denial references what DEP describes as “the first phase of its Climate Pollutant Reduction (CPR) regulatory reforms, a part of the larger New Jersey Protecting Against Climate Threats (NJPACT) initiative directed by Executive Order 100 (2020).” (10a). These consist of three proposed rules: a GHG monitoring and reporting rule, a clean truck rule and a rule to reduce carbon dioxide emissions from fossil fuel powered generating plants.

As the petition states, these proposed, piecemeal rules do not provide, and will not provide, the Interim Benchmarks and Implementing Measures required by the GWRA (48a), and DEP is not claiming otherwise. Instead, DEP states that it will only adopt the rules required by the GWRA at a time and place of its choosing (“The Department will therefore continue to consider the role of benchmark codification in advancing the State’s climate policy objectives...”) (14a).

The Petition

On July 21, 2021, when it became apparent that DEP was not complying with the GWRA’s directives, Petitioners filed the Petition requesting that DEP comply with the GWRA and adopt rules setting Interim Benchmarks and Implementing Measures as the statute directs. (28,48a). Petitioners also sought other relief including but not be limited to, restricting the issuance of operating permits for new fossil fuel infrastructure projects, and

stopping public forest logging programs, which are not the subject of this appeal. (32-33a).

Executive Order 274

On November 10, 2021, while the Petition was pending, Governor Murphy issued EO 274, which established, as State policy, the 50x30 Goal. (72-77a).

EO 274 recognizes that "global atmospheric warming, caused largely by the burning of fossil fuels, constitutes one of the greatest long-term threats currently facing humanity and is leading to significant changes in climate patterns here in New Jersey, across the United States, and around the world, resulting in rising sea levels, increased flooding, more frequent and severe extreme weather events, and numerous other adverse environmental impacts" and that "reducing the severity of adverse climate change impacts requires steep and immediate reductions in greenhouse gas emissions on an economy-wide basis." (72a).

EO 274 further recognized that "New Jersey's communities and economy are uniquely vulnerable to the devastating impacts of climate change, with potentially disastrous consequences for public health and safety, as well as for the social and economic vitality of the State. (72a).

EO 274 establishes the 50x30 Goal as State policy and requires all state agencies to implement the objectives of EO 274 and

develop strategies detailed in the EMP and the 80x50 Report. (76-77a).

EO 274 constituted a clear directive to DEP to adopt the rules required by the GWRA.

The Denial of the Petition

On December 14, 2021, DEP denied the Petition in its entirety, referencing EO 274 and its 50x30 Goal, but then ignoring them in making its decision. DEP did not contest the facts set out in the Petition, including the severity and immediacy of the climate crisis or the need to take immediate and aggressive action to address it. (3-6a). Indeed, the Denial recognizes "that it is the policy of the State to take aggressive climate action by reducing the emissions of climate pollutants on an economy-wide basis, charting a just and equitable transition away from our reliance on fossil fuels." (3-4a).

DEP nevertheless denied the Petition, providing two rationales for the Denial: (i) it has "discretion" whether to set Interim Benchmarks and Implementing Measures (13-14a); and (ii) the 80x50 Repo, EMP and any updates "presently represent appropriate and effective vehicles for establishing any interim benchmarks." (14a).

Remarkably, DEP would not commit to complying with EO 274 and the 50x30 Goal. The Denial states that "New Jersey **could** reduce its emissions of climate pollutants by approximately 40 percent or

more by 2030, 50 percent by 2035, and 80 percent by 2050.” (11a) (emphasis added). Even that less than ambitious goal, which is inconsistent with EO 274, cannot happen by issuing reports and having good intentions.

ARGUMENT

I. DEP WAS REQUIRED TO ADOPT RULES SETTING INTERIM BENCHMARKS AND IMPLEMENTING MEASURES (1a)

A. The Standard of Review

“‘[Q]uestions of law are the province of the judicial branch, [and courts are] in no way bound by an agency’s interpretation of a statute or its determination of a strictly legal issue[.]’” Russo v. Bd. of Trs., Police and Firemen's Ret. Sys., 206 N.J. 14, 27 (2011) (internal citations and quotation marks omitted). See also In re Board's Main Extension Rules N.J.A.C. 14:3-8.1, 426 N.J. Super. 538, 548 (App. Div. 2012) (“Because the present appeal involves a ‘strictly legal issue,’ the applicable standard of review is de novo.”). “A court will not permit an agency’s legal determination to stand if the court believes it to be error.” Russo, 206 N.J. at 27 (citation and internal quotation marks omitted). Although courts defer to the expertise of agencies in reviewing discretionary exercises of an agency’s statutory powers, the interpretation of a statute is primarily a question of law. See Wyzkowski v. Rizas, 132 N.J. 509, 518 (1993).

Whether DEP was required to set Interim Benchmarks under the

GWRA presents a strictly legal issue. This Court owes DEP no deference on this issue and should decide the question of whether DEP was required to set Interim Benchmarks de novo.

B. DEP was Required Set Interim Benchmarks and Implementing Measures (1a)

The Legislature's direction that DEP "shall" set Interim Benchmarks and Implementing Measures was mandatory, not discretionary.

The Legislature can make administrative action either discretionary or mandatory and it generally does that by using the words "may" or "shall." In re State Bd. of Educ.'s Denial of Petition, 422 N.J. Super. 521, 530 (App. Div. 2011) (ordering the Department of Education to adopt regulations implementing the High School Voter Registration Law). "When according to statutes their plain meaning, 'the word "may" ordinarily is permissive and the word "shall" generally is mandatory.'" Id. at 532, (quoting Aponte-Correa v. Allstate Ins. Co., 162 N.J. 318, 325 (2000)). It is not uncommon for legislation to direct an agency to adopt rules "as may be necessary" or similar language, which gives an agency discretion whether to adopt rules. Id. at 533. In contrast, "shall" indicates a "mandatory intent." Id.

The only rare situation where the use of the term "shall" is discretionary and only conveys a suggestion, that something be done, rather than a mandate to do it, is when it relates "to the

form of the matter in which the law is to be carried out" and "no public benefit ensues."

In those rare situations, the word "shall" conveys only a suggestion that something be done, rather than a mandate to do it. This exception applies where the Legislature's use of the term "shall" only "relates to the form and manner in which the law is to be carried out." *N.J. Educ. Assn. v. State*, 412 *N.J. Super.* 192, 213, 989 A.2d 282 (App.Div.), *certif. denied*, 202 *N.J.* 347, 997 A.2d 232 (2010); see also *State v. Jorn*, 340 *N.J. Super.* 192, 196, 774 A.2d 507 (App.Div.2001); *Franklin Estates, Inc. v. Twp. of Edison*, 142 *N.J. Super.* 179, 184, 361 A.2d 53 (App.Div.1976), *aff'd*, 73 *N.J.* 462, 375 A.2d 658 (1977). In *Jorn* and in *Franklin Estates*, we concluded that such an exceptional construction of the word "shall" is only warranted if "no public benefit ensues and no private right is insured" by construing "shall" as imperative. *Jorn, supra*, 340 *N.J. Super.* at 196, 774 A.2d 507 (emphasis added) (quoting *Franklin Estates, supra*, 142 *N.J. Super.* at 184, 361 A.2d 53). *In re State Bd. of Educ.'s Denial of Petition, supra*, 422 *N.J. Super.* at 532-33.

Applying these standards here, there is no serious question that the Legislature's directive to DEP to set Interim Benchmarks and Implementing Measures was mandatory. The GWRA unequivocally states that DEP **shall** by rule establish Interim Benchmarks and Implementing Measures. *N.J.S.A. 26:2C-41(d)*. The rare exception to interpreting "shall" as anything but mandatory does not apply here. The GWRA specifically calls for DEP to act by means of "rules and regulations" and this directive ensures an important public benefit.

It is not within DEP's "discretion" whether to initiate rule-making; it must do so. In reviewing administrative decisions, this Court's role is "'to enforce the will of the Legislature because [s]tatutes cannot be amended by administrative fiat.'" In re Agric., Aquacultural, & Horticultural Water Usage Certification Rules, 410 N.J. Super. 209, 223 (App. Div. 2009) (alterations in original) (citations and internal quotation marks omitted)."
Hackensack Riverkeeper, Inc. v. NJDEP, 443 N.J. Super 293, 302 (App. Div. 2015). An action that is plainly at odds with a statute must be set aside. Id.

DEP cannot countermand the Legislature's mandate. The Denial should be overturned, and DEP should be directed to follow the GWRA's directive by adopting rules that set Interim Benchmarks and Implementing Measures.

II. DEP'S REFUSAL TO SET INTERIM BENCHMARKS AND IMPLEMENTING MEASURES WAS UNREASONABLE (1a)

Assuming (wrongly) that DEP has discretion whether to adopt the rules called for under the GWRA, its refusal to do so was irrational and an abuse of discretion.

"It is firmly settled that arbitrary and capricious action by an administrative or executive agency should be overturned. Henry v. Rahway State Prison, 81 N.J. 571, 580, 410 A.2d 686 (1980); Mayflower Securities v. Bureau of Securities, 64 N.J. 85, 93, 312 A.2d 497 (1973); Campbell v. Civil Service Dept., 39 N.J. 556,

562, 189 A.2d 712 (1963). The test is essentially one of rational basis. 'Arbitrary and capricious action of administrative bodies means willful and unreasoning action, without consideration and in disregard of circumstances.'" Worthington v. Fauver, 88 N.J. 183, 204-5 (1982).

In determining whether an agency's action is arbitrary, capricious, or unreasonable, "courts consider whether the decision conforms with relevant law, whether there is substantial credible evidence in the record as a whole to support the agency's decision, and whether in applying the relevant law to the facts, the agency clearly erred in reaching its conclusion." Matter of Request to Modify Prison Sentences, 242 N.J. 357, 390 (2020) (internal quotations omitted). While wide discretion is afforded to administrative decisions because of an agency's specialized knowledge, that discretion is not unbounded. Id.

DEP's refusal to set GHG reduction targets does not conform to State law and policy and is unsupported by its own findings about the urgency of the climate crisis and the need to take immediate action. As discussed above, DEP has repeatedly acknowledged that climate change represents the "greatest long-term threat for humanity" (5a) and without "steep and permanent reductions" in GHG emissions within the "next several years New Jersey's people and property will experience significant adverse effects of climate change." (51-52a). This is exactly what the

Legislature recognized when it amended the GWRA in 2019 to require Interim Benchmarks and Implementing Measures.

DEP's reasoning for not enacting rules and denying the Petition DEP's reason for denying the Petition - that the 80x50 Report, EMP, and any updates thereto are appropriate and effective vehicles for establishing any interim benchmark (Aa14) - does not even make sense on its face. The EMP and the 80x50 Report are what their titles indicate, plans and reports. They do not have the force of law and do not even recommend specific Interim Benchmarks. As the Legislature directed, the 80x50 Report is supposed to be the basis for DEP to then enact rules and regulations. The idea that issuing some reports and doing some piecemeal rulemaking is sufficient to satisfy the GWRA and address the climate crisis flies in the face of EO 274, numerous governmental reports (including many issued by the DEP), climate science, the very facts laid out in the Denial and common sense.

DEP's Denial of the Petition is irrational and should be overturned.

CONCLUSION

Petitioners respectfully request that this Court reverse the Denial of the Petition and order DEP to adopt rules and regulations setting Interim Benchmarks and Implementing Measures as the GWRA specifically requires.

Respectfully submitted,

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Dated: May 16, 2022

APPENDIX

ENVIRONMENTAL PROTECTION

AIR QUALITY, ENERGY, AND SUSTAINABILITY

DIVISION OF AIR QUALITY

NOTICE OF ACTION ON PETITION FOR RULEMAKING

Air Pollution Control, N.J.A.C. 7:27

Petitioners: EmpowerNJ, BlueWaveNJ, Clean Water Action NJ, Delaware Riverkeeper Network, Don't Gas the Meadowlands Coalition, Environment New Jersey, Food & Water Watch, and New Jersey Sierra Club

Take notice that the Department of Environmental Protection (Department) has denied the petition for rulemaking filed by EmpowerNJ, BlueWaveNJ, Clean Water Action NJ, Delaware Riverkeeper Network, Don't Gas the Meadowlands Coalition, Environment New Jersey, Food & Water Watch, and New Jersey Sierra Club (petitioners) described below. The Department received the petition on July 21, 2021, and published notice of receipt of the petition in the September 7, 2021, New Jersey Register (53 N.J.R. 1529(b)). On September 16, 2021, the Department sent notice to petitioners that the petition was being referred for further deliberation. The referral was published in the October 18, 2021, New Jersey Register (53 N.J.R. 1819(a)). On November 8, 2021, petitioners submitted a supplement in further support of their petition.

The Petition

The petitioners request that the Department adopt rules that 1) set a target to reduce by 2030, greenhouse gas emissions 50 percent from 2005 levels, 2) implement the means

necessary to achieve the reductions, and 3) impose additional restrictions for new fossil fuel projects in the State. The petition specifically requests that these rules include “restricting the issuance of operating permits for new fossil fuel infrastructure projects” and stopping “public forest logging programs.”

Petitioners state that New Jersey, as a member of the United States Climate Alliance, committed itself to implement policies that advance the goals of the Paris Agreement to keep temperature increases below 1.5 degrees Celsius by committing to reduce collective net greenhouse gas emissions at least 50 to 52 percent below 2005 levels by 2030. Petitioners assert that New Jersey is not taking the actions needed to meet the 2030 commitment and to comply with the goals of the Global Warming Response Act, N.J.S.A. 26:2C-37 et seq. (GWRA), to reduce greenhouse gases by 80 percent by 2050. Petitioners request that the Department promulgate rules denying permits for any new fossil fuel project unless it certifies that (1) the 2030 greenhouse gas reduction target, interim benchmarks, and the 2050 clean energy standards can be met if the facility is constructed and operates, (2) there are no renewable energy alternatives to provide the energy the project would produce, and (3) New Jersey’s energy requirements cannot be met by any other means, including through energy efficiency measures.

In support of the petition, the petitioners highlight an accelerating global climate change crisis; the impact of climate change on New Jersey in particular; the health and environmental costs associated with the extraction and combustion of fossil fuels; the need for and availability of renewable energy sources to replace natural gas; jobs that renewable energy projects will create; and purport that New Jersey has taken less aggressive actions to reduce greenhouse gases than the Federal, foreign and other state and local governments.

In their supplement, petitioners stated their petition was supported by two recent orders issued by the New York State Department of Environmental Conservation that separately denied two Title V permits under the State of New York’s Climate Leadership and Community Protection Act.

The Department’s Response to the Petition

Global atmospheric warming, caused largely by the burning of fossil fuels, is leading to significant changes in climate patterns here in New Jersey, across the United States, and around the world, representing the single greatest long-term threat currently facing humanity. New Jersey communities and the State’s economy are uniquely vulnerable to its devastating effects. In an early acknowledgment of the deep need for State-based climate action, the New Jersey Legislature passed the GWRA in 2007 and updated the law in 2019, establishing a Statewide goal for reducing greenhouse gas emissions to 80% below 2006 levels by 2050 (the 80x50 goal) and requiring the Department to routinely assess the State’s greenhouse gas emissions and, in collaboration with other State agencies, present recommendations for reducing emissions to the Legislature.

Recognizing the gravity of climate change and its impacts upon the State, as well as New Jersey’s opportunities to spur innovation and economic growth in response to this challenge, through Executive Orders Nos. 7, 8, 23, and 28 (2018), Nos. 89 and 92 (2019), No. 100 (2020), and Nos. 221 and 274 (2021), Governor Philip D. Murphy established that it is the policy of the State to take aggressive climate action by reducing the emissions of climate pollutants on an economy-wide basis, charting a just and equitable transition away from our reliance on fossil

fuels while building a stronger and fairer economy fueled by clean and renewable energy, protecting and promoting the resilience of New Jersey's communities from the current and anticipated impacts of climate change through planning and regulation, and investing in climate solutions that create new economic opportunity and broadly shared prosperity. The most recent of these, Executive Order No. 274, established an interim benchmark for emissions reductions, declaring it the policy of the State to reduce greenhouse gas emissions to 50% below 2006 levels by the year 2030 (the 50x30 goal).

Pursuant to the foregoing directives, the Department and other State agencies have taken and continue to take significant steps to reduce emissions of climate pollutants in order to limit a worsening of adverse climate change impacts; while simultaneously working to enhance the State's resilience to those climate effects that cannot be avoided. Specific to the subject of this petition, on October 15, 2020, the Department delivered to the Legislature New Jersey's Global Warming Response Act 80x50 Report (80x50 Report), which communicated the limitations of existing State legislation, policies, and programs in reaching the 80x50 goal and provided detailed recommendations, across eight distinct emissions sectors, to assist policymakers in crafting new initiatives to bridge the resulting emissions reductions gap. See <https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf>.

As outlined in the 80x50 Report, meeting the State's greenhouse gas emissions reduction goals requires deliberate and coordinated action by all levels of government, economic sectors, communities and individuals to transform the State's building sector, transportation sector, and electricity generation systems and the associated infrastructure. Given the need for such a comprehensive and coordinated approach, no single State agency or any one regulatory reform

or set of regulatory reforms by the Department can itself bring about the structural, economic, and societal changes necessary to reduce the worsening effects of climate change. For these reasons, and as explained more fully below, the Department has denied the petition.

Climate Change Science

Issued on August 6, 2021, Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC) – described by the United Nations Secretary General as “a code red for humanity” – is unequivocal in finding that effects of climate change are already happening and will worsen over the coming decades without aggressive, rapid and widespread emissions cuts. Intergovernmental Panel on Climate Change, 2021: Summary for Policymakers. In: *Climate Change 2021, The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf.

Climate change “poses a severe threat to the environment, human health and welfare, and the economy—in New Jersey, across the United States, and around the world.” 80x50 Report, October 15, 2020, Executive Summary, p. v, <https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf>. These risks are heightened in New Jersey due to, among other things, the State’s coastal location and population density. Rising sea-levels, higher temperature, more precipitation, more intense storms and droughts, and flooding are just some of the climate change threats that are and will continue to

impact the State. These impacts have stressed and will continue to stress the State's public health, ecological, social, and economic systems. See *ibid.*; New Jersey Scientific Report on Climate Change, Version 1.0 (Eds. R. Hill, M.M. Rutkowski, L.A. Lester, H. Genievich, N.A. Procopio) Trenton, NJ 184 pp. (2020 Report on Climate Change), <https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf>.

Global Warming Response Act (GWRA) Goals

In 2007, in recognition of the growing climate crisis, the Legislature passed the GWRA, the terms of which established two greenhouse gas emission reduction goals. The first stated goal of the GWRA was to reduce emissions to 1990 levels by 2020, referred to as the "20x20 goal." The second stated goal of the GWRA is to reduce Statewide greenhouse gas emissions to 80 percent below the 2006 level by 2050, referred to as the 80x50 goal. Pursuant to Executive Order No. 274, and consistent with the GWRA amendments of 2019, Governor Murphy established an interim benchmark for reducing greenhouse gas emissions to 50 percent below 2006 levels by 2030, referred to as the "50x30 goal."

The State calculates its greenhouse gas emissions using the metric of carbon dioxide (CO₂) equivalent (CO₂e). CO₂e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of carbon dioxide CO₂ which would have the equivalent global warming impact, based on their relative global warming potential (GWP). See 80x50 Report, at p. 4, <https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf>; 2019 Energy Master Plan: Pathway to 2050, at p. 22, https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf (2019 EMP). In 2006, New Jersey's net emissions totaled 120.6 million metric tons (MMT) CO₂e. Therefore, New Jersey's 80x50 net

emission goal is 24.1 MMT CO₂e and the State's interim benchmark or 50x30 goal is 60.3 MMT CO₂e. See 80x50 Report at p.v.

Cross-Sector Coordination to Reduce Emissions of Climate Pollutants

Given the State's need for aggressive and concerted action to reduce emissions of climate pollutants on an economy-wide basis while charting a just and equitable transition away from the State's reliance on fossil fuels, Governor Murphy issued a series of Executive Orders that directed the Department and other State agencies, including the Board of Public Utilities (BPU), to develop the policy guidance to inform the cross-agency actions necessary to meet the State's 80x50 and 100 percent clean energy goals and strengthen social and economic resilience. See, e.g., Executive Order No. 28 (2018) (Energy Master Plan); Executive Order No. 100 (2020) (Protecting Against Climate Threats regulations); Executive Order No. 221 (2021) (Governor's Office of Climate Action and the Green Economy). Pursuant to Executive Order No. 28 (2018), the BPU updated the New Jersey Energy Master Plan, which includes a blueprint to convert the State's energy production profile to 100 percent clean energy by 2050, with complete conversion to clean energy a critical component of the State's emission reduction strategy. As the BPU explained in the 2019 EMP, bold action is needed to reach these goals and the path to emission reduction through the conversion to clean energy not linear. "New Jersey's total energy system is a combination of electricity generation and consumption, transportation fuel, and building use, including heating, appliances, and industrial use." 2019 EMP at p. 35. Energy production and consumption generate 87 percent of the State's total greenhouse gas emissions. *Id.* at p. 23. Transportation and buildings are the source of the State's highest energy consumption and emissions, and electricity demand is only expected to increase. *Ibid.* Indeed, with the

electrification of buildings and transportation, the EMP predicts more than doubling energy demand and in-State dispatchable generation will be required to meet the State’s energy demand. See *id.* at. pp. 17, 37. Fossil fuel-fired electric generation in the State will continue to be needed until clean energy sources come online and clean energy technology advances to meet anticipated electric demand.

As a result, “New Jersey must look broadly across the entire energy system and engage in a holistic transition to moderate the effects of climate change while continuing to grow the economy and maintain a modern way of life.” *Id.* at 24. The 2019 EMP thus included extensive modeling that resulted in the identification of seven overarching strategies deployed over the next several decades that the State should pursue to meet the 80x50 goal and 100 percent clean energy goal.

As required pursuant to the GWRA, the Department followed the 2019 EMP with the 80x50 Report, which was released on October 15, 2020. The 80x50 Report builds on the 2019 EMP by analyzing New Jersey’s emissions reductions, evaluating plans presently in place for further reducing emissions, and presenting a set of strategies across seven emission sectors for policymakers to consider in formulating legislation, rules, policies, and programs to ensure that New Jersey achieves the 80x50 goal. See 80x50 Report at p. v. The Department recommended various measures to meet the 80x50 goal, including interim goals for 2030 and 2035 consistent with the 2019 EMP and its attendant modeling. For example, the Department identified specific measures focused on the three sectors that represent the largest sources of greenhouse gas emissions—electric generation, transportation, and buildings. With respect to the transportation sector, the Department identified measures, such as targets for zero-emission sales of light-

medium-, and heavy-duty vehicle, which implicates DEP authorities as well as those of the State's transportation agencies. See 80x50 Report at pp. 10, 14, 20, and 29. With respect to the buildings sector, the Department explained that, to achieve the 80x50 goal, "policies requiring net-zero emissions for new construction must be paired with aggressive requirements for electrification of older residential and commercial buildings," which must begin by 2030. *Id.* at pp. xii, 49. The necessary transition of the buildings sector will require the State to transition away from the natural gas use that fuels 75 percent of New Jersey residences to, for example, modern heat pumps. *Ibid.* With respect to the electric generation sector, the 80x50 Report identifies three emissions reduction pathways: (1) reducing energy demand; (2) transitioning from fossil fuel electric generation to renewable energy; and (3) procuring out-of-State renewable energy. *Id.* at pp. 66-73. Among other things, the Department evaluated the emission reductions associated with the expansion of in-State solar, offshore wind, and renewable biofuels envisioned in the 2019 EMP. *Ibid.* The Department noted that while emissions continuously drop under the 2019 EMP's least cost scenario, "the least cost pathway cannot foresee future developments and therefore cannot be viewed as establishing rigid tests of success or failure. Instead, it establishes timelines and targets that mark progress toward achieving the state's goals." *Id.* at 68.

As explained in the 80x50 Report, these measures require action by other State agencies, including the BPU, the Department of Transportation (DOT), the Motor Vehicle Commission (MVC), and the Department of Community Affairs (DCA). Recognizing that the Department, through its regulatory authorities and programs, could not alone facilitate the cross-sector transformation necessary to limit the worsening adverse impacts of climate change that

continued emissions will generate, the 80x50 Report recommended a number of initiatives for both executive branch agency and legislative action. Id. at 73-78.

With respect to climate mitigation actions within the Department’s jurisdiction, the Department commenced the first phase of its Climate Pollutant Reduction (CPR) regulatory reforms, a part of the larger New Jersey Protecting Against Climate Threats (NJPACT) initiative directed by Executive Order 100 (2020). Phase I of CPR, which has been subject to early stakeholder feedback since the issuance of Executive Order 100, includes a suite of reforms to air quality regulations, three of which have been formally proposed as of the time of this petition response. These include a new Greenhouse Gas Monitoring and Reporting Rule, 53 N.J.R. 1063(a), which will better quantify emissions of climate pollutants to support future reduction reforms, an Advanced Clean Trucks and Fleet Reporting Rule, 53 N.J.R. 588(a), which will reduce the emissions of climate pollutants by increasing the percentage of electric vehicles sold in New Jersey through the institution of manufacturer sales requirements, and a Control and Prohibition of Carbon Dioxide Emissions Rule, 53 N.J.R. 1945(a), which will reduce emissions from fossil fuel-powered electric generating plants over the next decade consistent with 2019 EMP, further supporting the State’s clean energy transition. The Department intends to pursue additional regulatory reforms consistent with the recommendations within the 80x50 Report.

Reasons for Denial of Petition

The Department fully recognizes, and its work is motivated by, the urgency of the climate crisis. That the Department joins petitioners in their call to action is evident in the Department’s work to support and share the science of climate change, including through its issuance of the New Jersey Scientific Report on Climate Change,

<https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf>, the development of policy prescriptions for meeting the State’s emissions targets detailed in the 80x50 Report, and the regulatory actions that the Department has proposed, as well as those under active development.

As the Department reported in the 80x50 Report, without immediate, steep, and permanent reductions in emissions within the next several years, New Jersey will continue to experience worsening climate impacts for the foreseeable future. In the years ahead, New Jersey must implement an economy-wide transformation that steadily phases out the use of fossil fuels, expedites the deployment of renewable energy resources, electrifies new and existing buildings, facilitates a swift and steady transition from fossil fuel-powered to electric vehicles, and protects and expands upon existing natural carbon sinks such as marshlands and forests, among many other initiatives.

By aggressively pursuing the recommendations in the 80x50 Report and the 2019 EMP, New Jersey could reduce its emissions of climate pollutants by approximately 40 percent or more by 2030, 50 percent by 2035, and 80 percent by 2050. Governor Murphy recently acknowledged the need to further accelerate this work, establishing the interim benchmark of reducing emissions by 50 percent by 2030 as a matter of Statewide policy pursuant to Executive Order 274. To reach the State’s emissions goals and successfully transition to 100 percent clean energy by 2050 while ensuring the delivery of reliable and affordable energy, there must be “thorough analysis and planning across the state and regional energy system.” 2019 EMP at p. 32. Further emissions reduction and carbon sequestration strategies likewise implicate policy, planning and

regulatory actions by multiple State, local and non-governmental actors over time, as well as fundamental shifts in the way individuals approach their daily lives. 80x50 Report at p. v.

As examples of the transformative work before the State, the Clean Energy Act sets forth such goals as increasing the State's renewable portfolio standard to 50 percent by 2030, generating 3,500 MW of offshore wind and installing 2,000 MW of energy storage by 2030, increasing energy efficiency standards by 2024, and new solar programs—all of which are essential to achieving the State's interim and ultimate emission reduction goals. See 2019 EMP at p. 27; 2050 Report at p. 43. Similarly, the 80x50 Report establishes how New Jersey can transition to all-electric methods of transportation, conserve more land-based resources for purposes of sequestering carbon, reimagine agricultural and waste management practices to promote circularity and reduce emissions, and fundamentally change how we build and power our homes and businesses.

Consistent Statewide climate policy development underway since January 29, 2018, has demonstrated that New Jersey's response to the climate crisis is not a matter of environmental regulation alone; rather, it is a composite of concerted structural, economic, and societal change across sectors, aided by supportive regulatory reform where applicable. The complexity of achieving emissions reductions on the scale necessary does not lend to simplistic regulatory formulations as proposed by petitioners. Moreover, achieving these reductions implicates, *inter alia*, the regulation of energy markets, solicitation of renewable energy capacity, establishment of Statewide building codes, management of transportation systems, and other areas where the Department may lack sole authority. In areas of Department jurisdiction, including authorities arising under the Air Pollution Control Act, N.J.S.A 26:2C-1, et seq., the Commissioner has

proposed and continues to propose successive climate pollutant reduction rules as part of the Department's iterative NJPACT initiative.

Petitioners' Request to Codify Interim Benchmark as a Department Rule. Petitioners submit that the Department has not fulfilled the Legislative directive of the GWRA and seek the promulgation of rules establishing interim benchmarks and limiting the development of new fossil fuel infrastructure in the State. However, the Department has fulfilled the Legislature's direction in the 2007 GWRA, N.J.S.A. 26:2C-42, to prepare a report recommending measures necessary to achieve the 80x50 goal. On October 15, 2020, the Department delivered the 80x50 Report to the Legislature, identifying the limitations of existing legislation, policies, and programs in achieving the 80x50 goal and providing detailed recommendations for bridging the resulting emissions reductions gap. The 2019 GWRA amendments also directed the Department to adopt, within 18 months of transmittal of the 80x50 Report, rules establishing any interim benchmarks and measures necessary to meet both the 80x50 goal and any interim benchmarks. N.J.S.A. 26:2C-41. Thus, 2019 amendments effectively directed the Department to prepare the 80x50 Report recommending policy actions while simultaneously adopting rules to facilitate their implementation. In accordance with this statutory direction, the Department worked on parallel tracks to advance the long-term directional policy planning (in the form of the 80x50 Report) and commence the first phase of the CPR rules.

While petitioners seek the establishment of interim benchmarks by rule, the Department interprets N.J.S.A. 26:2C-41 as giving the Department discretion to first determine if establishing interim benchmarks as a matter of regulation is a prerequisite to achieving the 80x50 goal. By directing the Department to "include specific recommendations for legislative and regulatory

action that will be necessary to achieve the 2050 limit and *any* established interim benchmarks,” the GWRA also appears to give the Department discretion to promulgate interim benchmarks by rule. Since the filing of the subject petition, an interim benchmark, *i.e.*, the 50x30 goal, has since been established pursuant to Executive Order 274. It bears noting, however, that other interim benchmarks have been accomplished without a specific regulatory codification. For example, the State achieved the 20x20 goal principally through ongoing efforts to reduce emissions in the electric generating sector. See New Jersey Department of Environmental Protection, *Environmental Trends, Greenhouse Gas Emissions Chapter*, September 2020, p. 2, <https://www.nj.gov/dep/dsr/trends/ghg.pdf>. The State also met the U.S. Climate Alliance goal of reducing emissions to 26 to 28 percent below 2005 levels without having codified the goal through rulemaking. 2019 EMP at p.22.

Achieving these prior benchmarks, of course, does not diminish the formidable task before the State, as meeting the 50x30 and 80x50 goals will require transitions on a far greater scale and far faster timeline. The Department will therefore continue to consider the role of benchmark codification in advancing the State’s climate policy objectives, especially as the Department continues its pursuit of successive CPR rule proposals. With respect to the subject petition, however, it is the Department’s view that the 80x50 Report, 2019 EMP, and any updates thereto, presently represent appropriate and effective vehicles for establishing any interim benchmarks, as these directional policy supports “are designed to be living documents to be continually reassessed, remodeled, and reprioritized as early objectives are achieved and newly emerging pathways mature.” 2019 EMP at p. 33, 2050 Report at p. 3.

The State's use of such living, directional guideposts is appropriate. For example, as New Jersey moves toward the increased electrification of the transportation and buildings sectors, the State must consider multiple factors, including, but not limited to, the added demand for electric supply, the sources of electricity generated in New Jersey and through the regional transmission organization (PJM) for use in New Jersey, emerging technologies, and the costs associated with technologies and infrastructure. Each of these factors is variable; therefore, reporting and modeling must be updated periodically. For this reason, as stated in the 80x50 Report and the 2019 EMP, the Department, in collaboration with the BPU and multiple other State agencies, will regularly update the strategies and recommendations contained therein to consider the State's progress in reducing emissions, current modeling, emerging pathways and technologies, and a reassessment of priorities. See 80x50 Report at p. 3; 2019 EMP at p. 18.

Petitioners' Request to Limit Fossil Fuel Infrastructure Projects. In the course of New Jersey's just transition to a clean energy-based economy, there is and will continue to be a public need for the State to ensure the reliability and resilience of New Jersey's existing energy system, notwithstanding its reliance on fossil fuels. In light of this public need, and given that the Department alone cannot mandate all of the measures necessary to achieve the 50x30 or 80x50 goals, it would be impractical for the Department to undertake the broad rulemaking requested by petitioners to categorically limit fossil fuel project development in the State. The Department will nonetheless continue and accelerate its efforts to establish regulations, policies, and programs intended to reduce the emissions of climate pollutants consistent with Executive Order Nos. 100, 221, and 274, and in further coordination with the Governor's Office of Climate Action and the Green Economy, as well as other State, local and non-government actors.

For example, and as discussed above, the Department intends to continue its successive reforms as directed in Executive Order 100 and Administrative Order No. 2020-01 (2020). In accordance with these directives, throughout 2020, the Department conducted a series of stakeholder engagements sessions where several potential CPR rules were explored, including those that would reduce climate pollution from emissions sources in the electric generating and transportation sectors. Throughout 2021, potential rule proposals were developed, several were proposed in the New Jersey Register, and further proposals are being actively explored by the Department. More specifically:

On April 19, 2021, the Department published the proposed Advanced Clean Trucks and Fleet Reporting Rule (ACT Rules), 53 N.J.R. 588(a), aimed at reducing emissions of CO₂ and other climate pollutants from the transportation sector by incorporating by reference California's Advanced Clean Trucks regulation. The proposed ACT Rules require manufacturers of vehicles over 8,500 pounds gross vehicle weight rating (GVWR) to participate in a credit/deficit program intended to increase the percentage of zero-emission vehicles sold in New Jersey. The proposed ACT Rules include a one-time reporting requirement, in order that the Department can obtain information that will inform future decisions concerning further emission reductions from the transportation sector.

On June 20, 2021, the Department published proposed Greenhouse Gas Monitoring and Reporting rules, 53 N.J.R. 1063(a), to add a reporting threshold for methane. The proposed new rules also require natural gas public utilities to report information about their distribution pipelines in the State, including leaks and maintenance events that emit methane, the primary component of natural gas, and owners and operators of large, stationary, non-residential

refrigeration systems to track their use of halogenated gases. This information, along with the Department's emissions inventory which the Department has published since 2008, will assist the State's efforts to mitigate climate change.

On December 6, 2021, the Department published proposed rules, 53 N.J.R. 1945(a), to reduce carbon dioxide emissions from: (1) fossil fuel-fired electric generating units through the application of emission limits, (2) certain commercial and industrial fossil fuel-fired boilers based upon additional permit requirements, and (3) No. 4 and No. 6 fuel oil by banning its sale and use. If adopted, these new rules will have the additional benefit of reducing criteria air pollutants such as oxides of nitrogen, sulfur dioxide, direct particulate matter, and hazardous air pollutants.

Additionally, the Department engaged with stakeholders across multiple sectors about other potential near-term rulemakings intended to reduce emissions from 1) fossil fuel-fired vehicles by adopting California's heavy-duty engine and vehicle omnibus regulation, and 2) cargo handling equipment at ports also by adopting California's regulations. Other rulemaking concepts explored involved oceangoing vessels, cargo handling equipment at airports, and zero-emission fleets, each of which will be considered by the Department for successive proposals. See, e.g., NJ PACT: Protecting Against Climate Threats, <https://www.nj.gov/dep/njpact/materials.html>.

The Department intends to propose additional rulemakings in 2022 and beyond in its continuing work to reduce emissions of climate pollutants and thereby limit the risk of worsening climate impacts upon the State, its communities, residents, and businesses. Finally, in accordance with Administrative Order 2020-01, the Department will issue a broader plan that will set the

course for further policy and program change—including actions may not require rulemaking—
for the express purposes of implementing the strategies of the 80x50 Report and 2019 EMP.


For the reasons stated hereinabove, the subject petition is hereby denied.

A copy of this notice has been mailed to the petitioner as required by N.J.A.C. 1:30-3.6.

Date: December 14, 2021



Shawn LaTourette, Commissioner
Department of Environmental Protection

 <div style="text-align: center;"> <p>New Jersey Judiciary Superior Court - Appellate Division Notice of Appeal</p> </div>					
<p>TITLE IN FULL (AS CAPTIONED BELOW)</p> <p>EMPOWERNJ V DEPARTMENT OF ENVIRONMENTAL PROTECTION</p>	<p>ATTORNEY / LAW FIRM / PRO SE LITIGANT</p> <p>NAME JOHN H REICHMAN, Esq.</p> <p>STREET ADDRESS 56 OAKWOOD AVE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">CITY MONTCLAIR</td> <td style="width: 15%;">STATE NJ</td> <td style="width: 20%;">ZIP 07043</td> <td style="width: 40%;">PHONE NUMBER 917-626-8025</td> </tr> </table> <p>EMAIL ADDRESS john@johnreichmanlaw.com john@johnreichmanlaw.com</p>	CITY MONTCLAIR	STATE NJ	ZIP 07043	PHONE NUMBER 917-626-8025
CITY MONTCLAIR	STATE NJ	ZIP 07043	PHONE NUMBER 917-626-8025		
<p>ON APPEAL FROM</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">TRIAL COURT JUDGE</td> <td style="width: 33%;">TRIAL COURT OR STATE AGENCY ENVIRONMENTAL PROTECTION</td> <td style="width: 34%;">TRIAL COURT OR AGENCY NUMBER N/A</td> </tr> </table>		TRIAL COURT JUDGE	TRIAL COURT OR STATE AGENCY ENVIRONMENTAL PROTECTION	TRIAL COURT OR AGENCY NUMBER N/A	
TRIAL COURT JUDGE	TRIAL COURT OR STATE AGENCY ENVIRONMENTAL PROTECTION	TRIAL COURT OR AGENCY NUMBER N/A			
<p style="text-align: center;">EMPOWERNJ, BLUEWAVENJ, CLEAN WATER ACTIONNJ, DELAWARE RIVERKEEPER NETWORK, DON'T GAS THE MEADOWLANDS COALITION, FOOD & WATER WATCH</p> <p>Notice is hereby given that <u>COALITION, FOOD & WATER WATCH</u> appeals to the Appellate Division from a <input type="checkbox"/> Judgment or <input type="checkbox"/> Order entered on _____ in the <input type="checkbox"/> Civil <input type="checkbox"/> Criminal or <input type="checkbox"/> Family Part of the Superior Court <input type="checkbox"/> Tax Court or from a <input checked="" type="checkbox"/> State Agency decision entered on <u>12/14/2021</u></p> <p>If not appealing the entire judgment, order or agency decision, specify what parts or paragraphs are being appealed.</p>					
<p>For criminal, quasi-criminal and juvenile actions only:</p> <p>Give a concise statement of the offense and the judgment including date entered and any sentence or disposition imposed:</p> <p>This appeal is from a <input type="checkbox"/> conviction <input type="checkbox"/> post judgment motion <input type="checkbox"/> post-conviction relief <input type="checkbox"/> pre-trial detention If post-conviction relief, is it the <input type="checkbox"/> 1st <input type="checkbox"/> 2nd <input type="checkbox"/> other _____ specify</p> <p>Is defendant incarcerated? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Was bail granted or the sentence or disposition stayed? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If in custody, name the place of confinement:</p> <p>Defendant was represented below by:</p> <p><input type="checkbox"/> Public Defender <input type="checkbox"/> self <input type="checkbox"/> private counsel _____ specify</p>					

(*) truncated due to space limit. Please find full information in the additional pages of the form.
Revised effective: 09/01/2008, CN 10502 (Notice of Appeal)

Notice of appeal and attached case information statement have been served where applicable on the following:

	Name	Date of Service
Trial Court Judge		
Trial Court Division Manager		
Tax Court Administrator		
State Agency	ENVIRONMENTAL PROTECTION	01/20/2022
Attorney General or Attorney for other Governmental body pursuant to R. 2:5-1(a), (e) or (h)		01/20/2022

Other parties in this action:

Name and Designation	Attorney Name, Address and Telephone No.	Date of Service
ENVIRONMENTAL PROTECTION	MELISSA H RAKSA, Esq. ATTORNEY GENERAL LAW 25 MARKET ST PO BOX 112 TRENTON NJ 08625 609-984-3900 dol.appeals@law.njoag.gov (DOLAPPEALS@LPS.STATE.NJ.US,DOLAPPEALS@LPS.STATE.NJ.US)	01/20/2022

Attached transcript request form has been served where applicable on the following:

	Name	Date of Service
Transcript Office		
Clerk of the Tax Court		
State Agency		

Exempt from submitting the transcript request form due to the following:

- There is no verbatim record for this appeal.
- Transcript in possession of attorney or pro se litigant (four copies of the transcript must be submitted along with an electronic copy).

List the date(s) of the trial or hearing:

- Motion for abbreviation of transcript filed with the court or agency below. Attach copy.
- Motion for free transcript filed with the court below. Attach copy.

I certify that the foregoing statements are true to the best of my knowledge, information and belief. I also certify that, unless exempt, the filing fee required by *N.J.S.A. 22A:2* has been paid.

01/20/2022
 Date

s/ JOHN H REICHMAN, Esq.
 Signature of Attorney or Pro Se Litigant

(*) truncated due to space limit. Please find full information in the additional pages of the form.
 Revised effective: 09/01/2008, CN 10502 (Notice of Appeal)

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New Jersey Judiciary
Superior Court - Appellate Division
Notice of Appeal

Additional appellants continued below

Additional respondents continued below

Additional parties continued below

Appellant's attorney email address continued below

Respondent's attorney email address continued below

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Before Appellate Division,
Superior Court of New Jersey
DOCKET NO.

STATE AGENCY

EMPOWERNJ

V

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PROOF OF SERVICE

I hereby certify that an original of the following documents, **NOTICE OF APPEAL, PROOF OF SERVICE, TRIAL COURT ORDER, CASE INFORMATION STATEMENT** were submitted and transmitted to the parties listed below in the following format:

ELECTRONICALLY TO:

ATTORNEY NAME: MELISSA H RAKSA, Esq.
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STATE AGENCY: ENVIRONMENTAL PROTECTION

BY MAIL:

I certify that the forgoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Attorney for APPELLANT
EMPOWERNJ, BLUEWAVENJ, CLEAN
WATER ACTIONNJ, DELAWARE
RIVERKEEPER NETWORK, DON'T GAS
THE MEADOWLANDS COALITION, FOOD &
WATER WATCH

Dated: **01/20/2022**

By: **S/ JOHN H REICHMAN, Esq.**



New Jersey Judiciary
 Superior Court - Appellate Division
Civil Case Information Statement

Please type or clearly print all information.

Title in Full EMPOVERNJ V DEPARTMENT OF ENVIRONMENTAL PROTECTION	Trial Court or Agency Docket Number N/A
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• Attach additional sheets as necessary for any information below.

Appellant's Attorney Email Address: **john@johnreichmanlaw.com**
john@johnreichmanlaw.com

Plaintiff Defendant Other (Specify) **PETITIONER**

Name JOHN H REICHMAN, Esq.	Client EMPOVERNJ, BLUEWAVENJ, CLEAN WATER ACTIONNJ, DELAWARE RIVERKEEPER NETWORK, DON'T GAS THE MEADOWLANDS COALITION, FOOD & WATER WATCH
Street Address 56 OAKWOOD AVE	City State Zip Telephone Number MONTCLAIR NJ 07043 917-626-8025

Respondent's Attorney Email Address: **dol.appeals@law.njoag.gov**
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Plaintiff Defendant Other (Specify) **STATE AGENCY**

Name MELISSA H RAKSA, Esq.	Client ENVIRONMENTAL PROTECTION
Street Address 25 MARKET ST PO BOX 112	City State Zip Telephone Number TRENTON NJ 08625 609-984-3900

Give Date and Summary of Judgment, Order, or Decision Being Appealed and Attach a Copy:
On December 14, 2021, NJDEP denied Petitioners' petition to adopt rules that set a 50% greenhouse reduction target by 2030 from 2005 levels and implement how that reduction is to be achieved.

Have all the issues as to all the parties in this action, before the trial court or agency, been disposed? (There may not be any claims against any party in the trial court or agency, either in this or a consolidated action, which have not been disposed. These claims may include counterclaims, cross-claims, third-party claims, and applications for counsel fees.) Yes No

If outstanding claims remain open, has the order been properly certified as final pursuant to R. 4:42-2? Yes No N/A

A) If the order has been properly certified, attach copies of the order and the complaint and any other relevant pleadings to the order being appealed. Attach a brief explanation as to why the order qualified for certification pursuant to R. 4:42-2.

B) If the order has not been certified or has been improperly certified, leave to appeal must be sought. (See R. 2:2-4; 2:5-6.) Please note that an improperly certified order is not binding on the Appellate Division.

If claims remain open and/or the order has not been properly certified, you may want to consider filing a motion for leave to appeal or submitting an explanation as to why you believe the matter

(*) truncated due to space limit. Please find full information in the additional pages of the form.

is final and appealable as of right.

Were any claims dismissed without prejudice? Yes No

If so, explain and indicate any agreement between the parties concerning future disposition of those claims.

Is the validity of a statute, regulation, executive order, franchise or constitutional provision of this State being questioned? (R. 2:5-1(g)) Yes No

Give a Brief Statement of the Facts and Procedural History:
On July 21, Petitioners filed a petition with the NJDEP asking, among other things, that DEP adopt rules setting a 50% greenhouse gas reduction target by 2030 from 2005 levels and implement how that reduction is to be achieved. On December 14, 2021, DEP denied the petition in its entirety.

To the extent possible, list the proposed issues to be raised on the appeal as they will be described in appropriate point headings pursuant to R. 2:5-2(a)(6). (Appellant or cross-appellant only.):

- The Setting of Interim Greenhouse Gas Reduction Benchmarks is Mandatory under the Global Warming Response Act, Not Discretionary as DEP Ruled.**
- Alternatively, it was an Abuse of Discretion for DEP Not to Establish Interim GHG Reduction Benchmarks.**
- DEP's Decision Conflicted with State Policy and Was Arbitrary and Capricious.**

If you are appealing from a judgment entered by a trial judge sitting without a jury or from an order of the trial court, complete the following:

- Did the trial judge issue oral findings or an opinion? If so, on what date? _____ Yes No
- Did the trial judge issue written findings or an opinion? If so, on what date? _____ Yes No
- Will the trial judge be filing a statement or an opinion pursuant to R. 2:5-1(b)? Yes No Unknown

Caution: Before you indicate that there were neither findings nor an opinion, you should inquire of the trial judge to determine whether findings or an opinion was placed on the record out of counsel's presence or whether the judge will be filing a statement or opinion pursuant to R. 2:5-1(b).

Date of Your Inquiry:

- Is there any appeal now pending or about to be brought before this court which:
 - Arises from substantially the same case or controversy as this appeal? Yes No
 - Involves an issue that is substantially the same, similar or related to an issue in this appeal? Yes No

If the answer to the question above is Yes, state:

Case Title	Trial Court Docket#	Party Name
- Was there any prior appeal involving this case or controversy? Yes No

If the answer to question above is Yes, state:

Case Name and Type (direct, 1st PCR, other, etc.)	Appellate Division Docket Number

Civil appeals are screened for submission to the Civil Appeals Settlement Program (CASP) to determine their potential for settlement or, in the alternative, a simplification of the issues and any other matters that may aid in the disposition or handling of the appeal. Please consider these when responding to the following question. A negative response will not necessarily rule out the scheduling of a preargument conference.

State whether you think this case may benefit from a CASP conference. Yes No

Explain your answer:
DEP has no interest. After proposing a meeting with Petitioners, it then refused to schedule one. Petitioners would only voluntarily agree to a conference if it did not delay the resolution of this appeal.

(*) truncated due to space limit. Please find full information in the additional pages of the form.
 Revised: 04/02/2016, CN 10501 (Appellate Civil CIS)

Whether or not an opinion is approved for publication in the official court report books, the Judiciary posts all Appellate Division opinions on the Internet.

I certify that confidential personal identifiers have been redacted from documents now submitted to the court, and will be redacted from all documents submitted in the future in accordance with Rule 1:38-7(b).

**EMPOWERNJ, BLUEWAVENJ, CLEAN WATER
ACTIONNJ, DELAWARE RIVERKEEPER
NETWORK, DON'T GAS THE MEADOWLANDS
COALITION, FOOD & WATER WATCH**

Name of Appellant or Respondent

01/20/2022

Date

003981983

Bar #

JOHN H REICHMAN, Esq.


Name of Counsel of Record
(or your name if not represented by counsel)

s/ JOHN H REICHMAN, Esq.

Signature of Counsel of Record
(or your signature if not represented by counsel)

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	<p>New Jersey Judiciary Superior Court - Appellate Division CIVIL Case Information Statement</p>
<p>Additional appellants continued below</p>	
<p>Additional respondents continued below</p>	
<p>Additional parties continued below</p>	
<p>Appellant's attorney email address continued below</p>	
<p>Respondent's attorney email address continued below</p>	
<p>Additional Party's attorney email address continued below</p>	

NJ DEPARTMENT OF ENVIRONMENTAL PROTECTION

PETITION TO ADOPT RULES SETTING 2030
GREENHOUSE GAS EMISSION REDUCTION
TARGETS AND RESTRICTING NEW OR EXPANDED
FOSSIL FUEL INFRASTRUCTURE PROJECTS.

Petitioners EmpowerNJ, BlueWaveNJ, Clean Water Action NJ, Delaware Riverkeeper Network, Don't Gas the Meadowlands Coalition, Environment New Jersey, Food & Water Watch, and New Jersey Sierra Club hereby petition the New Jersey Department of Environmental Protection ("DEP"), pursuant to N.J.S.A. 52:14B-4(f) and N.J.A.C. 7:1D-1.1, to adopt rules that set a 50% GHG reduction target by 2030 from 2005 levels, implement how that reduction is to be achieved and restrict the issuance of operating permits for new fossil fuel infrastructure projects. This petition is also supported by 58 organizations listed in Appendix A.

PETITION SUMMARY

1. 2030 is the new 2050 when it comes to the climate crisis. The incontrovertible scientific consensus is that there must be a 45% reduction in greenhouse gas emissions ("GHGs") by 2030 to limit global warming to 1.5 °C in order to avoid climate catastrophe. The devastation caused by climate change is accelerating and becoming more immediate. Not a day goes by without headlines reporting record breaking heat waves, droughts, unprecedented flooding, raging wildfires, stronger and more frequent hurricanes. The list could go on and on.

2. Governments are finally starting to respond to this ongoing catastrophe by recognizing that time is everything in the battle against climate change. On April 22, 2021, President Biden announced a new GHG reduction target for the United States, a 50-52% reduction in GHGs from 2005 by 2030. States are adopting similar targets. Nothing sums up both the immediacy of the climate crisis and the actions that are starting to be taken than the events in Europe last week where the European Union announced that it would reduce GHGs by 55% by 2030 and the following day there was climate-caused flooding in Germany, Belgium and the Netherlands on a scale that had never been seen before.

3. New Jersey, however, is not keeping pace. New Jersey’s Global Warming Response Act (“GWRA”) requires DEP to set interim benchmarks needed to meet New Jersey’s target of reducing GHGs by 80% by 2050. As a member of the United States Climate Alliance (the “Climate Alliance”), a group of 24 states and two territories, New Jersey also committed itself to:

Implement policies that advance the goals of the Paris Agreement to keep temperature increases below 1.5 degrees Celsius, by committing to reduce collective net GHG emissions at least 50-52 percent below 2005 levels by 2030.

4. DEP, however, is not taking the actions needed to comply with the GWRA, by codifying the State’s commitment to reducing GHGs by 50% by 2030. Indeed, New Jersey is an outlier in the Climate Alliance. The vast majority of member States already have set 2030 targets, and many have set 2025 targets.

5. DEP should also promulgate rules denying permits for any new fossil fuel project unless it certifies that i) the 2030 GHG reduction target, interim benchmarks and the 2050 clean energy standards can be met if the facility is constructed and operates; ii) there are no renewable energy alternatives to provide the energy the project would produce; and iii) New Jersey’s energy requirements cannot be met by any other means, including through energy efficiency measures. There are currently numerous new fossil fuel infrastructure projects in various stages of planning and development in the State. There is simply no place for any of them, or any other new fossil fuel projects, if we are to meet our commitment to reducing GHGs by 2030, or meet the 2050 GWRA clean energy standards.

6. This is anything but a radical proposal. In May 2021, the International Energy Agency, known for its cautious response to the climate crisis, issued a report calling for an immediate end to investments in new fossil fuel infrastructure, including the immediate cessation of permits for coal plants or new oil and gas field developments and coal mines. On June 28, 2021, Public Service Enterprise Group (“PSE&G”), which runs the State’s largest utility company, announced its goal of achieving net-zero climate emissions by 2030, 20 years ahead of its previous goal. Indeed, it can no longer be rationally argued that natural gas is a bridge fuel to clean energy. Natural gas is primarily methane, which, on a 20-year time scale, is 86 times more powerful than carbon dioxide in heating the atmosphere; renewable energy is now generally cheaper than natural gas for newly built facilities, a gap that is continuing to widen; and any new fossil fuel facilities will become stranded assets well before the end of their useful life if we are

to achieve 100% clean energy economy-wide by 2050 as mandated by the 2019 NJ Energy Master Plan.

7. Restricting permits for new fossil fuel infrastructure would protect ratepayers and reflects current market conditions. 84% of new U.S. energy production in 2021 is expected to come from renewable energy sources because wind and solar are now less expensive than coal or natural gas. And this is before even considering the significant health and environmental costs of fossil fuel production, which are unjustly and disproportionately borne by communities of color and low-income communities. DEP must set 2030 GHG reduction targets and adopt rules implementing those targets, including restricting the construction of new fossil fuel infrastructure.

I. PETITIONERS' INTEREST IN THE PETITION

8. Petitioner EmpowerNJ is a coalition of 123 environment, community, religious and grassroots groups located in New Jersey. EmpowerNJ's mission, which is endorsed by its coalition partners, is to seek the reduction of GHG emissions and other pollutants. EmpowerNJ has been an active participant in DEP's NJPACT (Protecting Against Climate Threats) rule-making and other DEP proceedings.

9. Each of the petitioners actively seeks the reduction of GHGs and other pollutants and recognizes that climate change constitutes an existential threat to New Jersey, the country and the world. Indeed, every New Jersey citizen has an interest in the relief that Petitioners are seeking in this proceeding.

II. DEP'S AUTHORITY TO TAKE THE REQUESTED ACTION

10. The Air Pollution Control Act and the Global Warming Response Act, N.J.S.A. 26:2C-37, do not merely allow for the rules Petitioners are seeking, but mandate it.

11. The GWRA mandates GHG reductions of 80% below 2006 levels by 2050 and requires the DEP to adopt rules and regulations necessary to achieve the 2050 limit and establish **interim benchmarks**. *Id.*, 26:2C-41(d), providing in relevant part:

26:2C-41. Establishment of a greenhouse gas emissions monitoring and reporting program; rules and regulations; scope of oversight.

No later than 18 months after the department prepares and transmits the report (this long-delayed report was [released in Oct. 2020](#)) as required pursuant to subsection c.

of section 6 of [P.L.2007, c. 112](#) reaffirmed and strengthened by [P.L.2019, c. 197, \(C.26:2C-42\)](#), the department shall adopt, pursuant to the “Administrative Procedure Act,” P.L.1968, c. 410 ([C.52:14B-1 et seq.](#)), rules and regulations establishing interim benchmarks necessary to achieve the 2050 limit, and measures necessary to achieve the 2050 limit and the established interim benchmarks.

26:2C-42. Evaluation of policies and measures; recommendations and report; adoption of an energy master plan.

e. Nothing in [P.L.2007, c. 112 \(C.26:2C-37 et al.\)](#) shall impose any limit on the existing authority of the department, the Board of Public Utilities, or any other State department or agency to limit or regulate greenhouse gas emissions pursuant to law.

In his signing statement in support of the 2019 GWRA amendments, Governor Murphy said:

I am directing the Department of Environmental Protection to use its existing legal authority, in addition to the authority provided by this bill, to administratively address the reduction of short-lived climate pollutants such as black carbon, which will provide short-term air quality benefits while also reducing climate warming pollutants.

12. The Air Pollution Control Act, also empowers DEP to promulgate rules “preventing, controlling and prohibiting air pollution throughout the State.” Under N.J.S.A. 26:2C-8, “Air Pollution” is defined as any “air contaminants in such quantities and duration as are, or tend to be, injurious to human health and welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or property throughout the State...” [Id.](#), 26C: 2-2. [In 2005](#), DEP classified carbon dioxide (CO₂) as an air contaminant. The DEP has “broad authority to issue health-based regulations under N.J.S.A. 26:2C-8.” [In re Adoption of Amendments and New Regulations at N.J.A.C. 7:27-27.1](#), 392 N.J. Super 117, 134 (App. Div. 2007). The 2007 GWRA, reaffirmed by amendment in 2019, defines GHG as “carbon dioxide, methane, 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 the problem of global warming.” GHGs, including black carbon and soot, are clearly “air pollution” subject to State regulation. See [Massachusetts v EPA](#), 549 U.S. 497, 532 (2007) (“Because greenhouse gases fall well within the Clean Air Act’s capacious definition of ‘air pollutant,’ we hold that EPA has the statutory authority to regulate the emissions of such gases...”). Indeed, [Massachusetts v. EPA](#) strongly supports the proposition that the failure to regulate GHGs would be arbitrary, capricious and unlawful. [Id.](#) at 535 (EPA’s failure to provide a reasoned explanation for its refusal to decide whether

GHG's cause or contribute to climate change was arbitrary, capricious, or otherwise not in accordance with law).

13. New Jersey is one of a few states in the country with delegated authority to enforce the Clean Water Act and Clean Air Act. This includes the ability to create and implement regulations that go beyond the minimum federal standards to protect air and water quality. Using this delegated authority, DEP is empowered to regulate GHGs emitted by interstate fossil fuel projects and has previously used this authority to reject water quality permits for FERC approved interstate fossil fuel projects such as the Williams Transco NESE pipeline.

III. THE SUBSTANCE OF THE PROPOSED REQUEST

14. To comply with the GWRA and meet the commitment the State made as a member of the Climate Alliance, DEP should adopt rules that set a 50% collective GHG reduction target by 2030 from 2005 levels and implement how that reduction is to be achieved. Those rules should include, but not be limited to, restricting the issuance of operating permits for new fossil fuel infrastructure projects, and stopping public forest logging programs, which directly increase GHG emissions and decrease future carbon sequestration capacity.

The table below compares the GHG reductions needed to meet either the Climate Alliance commitment and/or the IPCC goal with the projections made in New Jersey's 2020 Global Warming Response Act 80x50 Report, *New Jersey GHG Emissions Pathway to 2050*. These GHG numbers, which are taken from DEP reports, are understated because they are based on a 100-year time frame for short-lived but powerful climate pollutants such as methane and black carbon, instead of the 20-year timeframe required by New Jersey law, and are also net as they include carbon sequestration reductions of CO₂ from absorption of CO₂ by plants and trees, which is about 5 to 8 MMT per year over the timeframes shown.

2030 Targets (All Emissions in Units of MMT CO₂e)						
Program	Base Year	Base Year GHG Emissions	2030 Target % Reduction From Base Year	Remaining Volume of Emissions in 2030	Volume of Emissions Reduced from Base Year by 2030	Comparison of Percent Reduction from 2006
GWRA	2006	120.6	not specified	81.0	39.6	-33%
IPCC	2010	112.5	45%	61.9	50.6	-49%
US Climate Alliance	2005	136.3	50%	68.2	68.2	-43%

DEP's projections show New Jersey is not on track to meet either the Climate Alliance commitment or the IPCC goal. The DEP estimates are further suspect because they do not account for any of the new fossil fuel projects built and proposed around the State.

15. DEP should also assess the climate-related financial risks associated with any new or expanded fossil fuel infrastructure projects and any other GHG emitting projects and not grant any permit for such a facility or project unless it certifies through a public process that i) the 2030 GHG reduction targets and GWRA's 2050 clean energy target can be met if the facility is constructed and operates; ii) there are no economically and technologically feasible renewable energy alternatives to providing the energy the project would produce; and iii) New Jersey's energy requirements cannot be met by any other means, including through energy efficiency and conservation measures. As part of this certification process, DEP would be required to solicit proposals for renewable energy, efficiency and conservation alternatives, allow for public input and provide detailed data and reasons to demonstrate that these standards have been met. This rule would apply to the expansion of existing fossil fuel facilities, but not to their repair or maintenance.

IV. THE REASONS FOR THE PROPOSED RELIEF

A. The Accelerating Climate Change Crisis

16. We have known about climate change for decades, but that change is occurring at a far faster rate than anyone had previously predicted. With each passing day, the crisis becomes more acute, the need for immediate action becomes greater, and the economic cost and human toll from inadequate action increases.

17. On June 7, 2021, the National Oceanic and Atmospheric Administration announced that the amount of carbon dioxide in Earth's atmosphere reached 419 parts per million in May 2021, its highest level in more than four million years, providing proof that the climate change problem continues to worsen and that governments must urgently act to reduce GHG emissions. <https://www.ucsusa.org/resources/underwater>.

18. The November 2018 National Climate Assessment underscores the urgent case for an immediate moratorium on all new fossil fuel development. The Assessment states, "future risks for climate change depend primarily on decisions made today." We are dooming future generations by not acting now. The report details how global warming poses a profound threat

to Americans' well-being and cites new research estimating that climate change could cause hundreds of billions of dollars in annual damage and, in the worst case scenario, a loss of more than 10% of US GDP by the end of the century. <https://nca2018.globalchange.gov/>.

19. The recent Intergovernmental Panel on Climate Change report by the world's climate experts highlights the urgent need for immediate actions to sharply reduce fossil fuel use and concludes that absent aggressive action, many effects once expected several decades in the future will arrive by 2040 and that global net human-caused emissions of GHGs need to fall by 45 percent from 2010 levels by 2030 to avoid catastrophic climate change. <https://www.ipcc.ch/sr15/>.

20. New Jersey recognizes this existential threat to the planet and the State. New Jersey is a member of the Climate Alliance. As a member of that Alliance, Governor Murphy committed the State to **“Implement policies that advance the goals of the Paris Agreement to keep temperature increases below 1.5 degrees Celsius, by committing to reduce collective net GHG emissions at least 50-52 percent below 2005 levels by 2030.”** <http://www.usclimatealliance.org>.

B. New Jersey is Ground Zero for Climate Change

21. New Jersey (and Florida) are ground zero for climate change in the United States as is evident from the devastating and still ongoing impact from Superstorm Sandy. A June 18, 2018 Union of Concerned Scientists report stated, “Of the roughly 14,000 commercial properties at risk on U.S. coasts within the next 30 years, more than one-third are in Florida and New Jersey.” *Underwater, Rising Seas, Chronic Floods and the Implications for US Coastal Real Estate* <https://www.ucsusa.org/resources/underwater>

22. DEP's 2020 *Scientific Report on Climate Change* lays out how devastating climate change has been and will be for New Jersey unless GHG emissions are curtailed, swiftly and dramatically. New Jersey will experience significant direct and secondary changes in its environment including increases in temperature, variability in precipitation, frequency and intensity of storms, sea-level rise, ocean acidification and the associated impacts to ecological systems, natural resources, built environments, human health and the economy. <https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf>.

23. The key findings of the Report are:

- Historically unprecedented warming is projected for the 21st century, resulting in longer and more frequent heat waves that impact larger geographic areas.
- Annual precipitation is expected to increase from 7% to 11% by 2050 and occur in more intense rain events that could result in an increase in localized flooding.
- By 2050, there is a 50% chance that sea-level rise will meet or exceed 1.4 feet and a 17% chance it will meet or exceed 2.1 feet, resulting in increased coastal flooding during sunny days and storm events, impacting infrastructure, residents and businesses. Sea level will further increase by 2100 -- by as much as 6 feet or more. [A NOAA report released this month](#) found sunny day flooding in New Jersey has doubled over the past 20 years and is predicted to double again in 10 years if mitigation efforts don't improve.
- Periods between rain events may be longer, causing more frequent drought conditions, increasing the potential for reduced water supply availability, reductions in agricultural capacity that lead to shortages in food production and increased prices, and economic loss from impacts to livestock, and reductions in hydroelectric power production.
- Unabated CO₂ emissions would reduce ocean pH, creating a more acidic ocean that could impact important marine and estuarine life and New Jersey's thriving fishing industry.
- Increases in temperature expected as a result of climate change could intensify air pollution as well as respiratory and cardiovascular health concerns. Such impacts are of particular concern for already overburdened environmental justice communities and in urban areas due to the heat island effect.
- New Jersey's agricultural yields could suffer as water supplies are stressed from an expanded growing season, while some crops may not thrive in warmer temperatures.
- Wildfire seasons could lengthen or become more intense as a result of hot, dry periods resulting from increased temperatures, potentially increasing the risk to New Jersey communities.

- The frequency and intensity of harmful algal blooms may increase, disrupting swimming and fishing in New Jersey’s lakes, and posing risks to drinking water reservoirs.

24. The impacts of climate change will fall most heavily on our most vulnerable citizens. In May 2020, the New Jersey Climate Change Research Center identified poverty and other factors as heightening the vulnerability of communities of color, immigrants and seniors, especially those living in flood plains, to the effects of climate change. New Jersey has the largest number of affordable-housing units exposed to sea-level rise among all coastal states and can expect that number to surge as waters climb in the next 30 years, according to a recent Princeton-based research group report. <https://www.njspotlight.com/2020/12/affordable-housing-sea-level-rise-flooding-poverty-climate-change-nj/>

C. The Health and Other Environmental Costs of Fossil Fuel Emissions

25. The devastation caused by climate change is accelerating. As the EPA has reported, there is no small town, city or rural community that is unaffected by the climate crisis and Americans are seeing and feeling the impacts up close, with increasing regularity. Wildfires are bigger, and starting earlier in the year; hurricanes are stronger; heat waves are more frequent; seas are warmer; flooding is five times more likely in many areas of the United States since the 1960s. The air is getting hotter. <https://www.nytimes.com/2021/05/12/climate/climate-change-epa.html>. As was just demonstrated in the Pacific Northwest, this climate change is literally killing us. <https://www.worldweatherattribution.org/western-north-american-extreme-heat-virtually-impossible-without-human-caused-climate-change/>. A recent report detailed that there has been a 37% increase in heat related deaths as a result of global warming. <https://www.nytimes.com/2021/05/31/climate/heat-deaths-climate-change.html>

26. New fossil fuel projects would come with a direct, heavy and unacceptable cost to our lungs. The burning of fossil fuels generates fine particulate matter, PM 2.5. EPA considers PM 2.5 to be a great risk to human health and one of the most dangerous environmental pollutants. <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>.

27. Scientists have known for years about the deadly impacts of fossil fuel combustion, but a new peer-reviewed April 2021 study authored by a team from Harvard University, the University of Birmingham, and the University of Leicester, published in *Environmental*

Research, puts the global death toll at more than twice that of previous estimates. Exposure to PM 2.5, from burning fossil fuels, was responsible for about 8.7 million deaths globally in 2018, roughly the same number of people living in New York City. To put this into further perspective, fossil fuel pollution is not only fueling the climate crisis, but also killing more people each year than HIV, tuberculosis, and malaria combined. The report also found that 10.2 million premature deaths worldwide resulted from PM 2.5 exposure and that the U.S. had the highest estimated rate of deaths among children under the age of five from lower respiratory infections. <https://www.nrdc.org/stories/fossil-fuel-air-pollution-kills-one-five-people>; Vohra, K., Vodonos, A., Schwartz, J., Marais, E.A., Sulprizio, M.P., Mickley, L.J., *Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem*, *Environmental Research*, <https://doi.org/10.1016/j.envres.2021.110754>.

28. Another study reported in the Proceedings of the National Academy of Sciences found that black and brown communities carry a disproportionate burden from air pollution, particularly fine particulate matter. Black and Hispanic populations bear a “pollution burden” by being exposed to 56% to 63% more PM 2.5 pollution than non-Hispanic whites. The report dubs this “pollution inequity.” Christopher W. Tessum, Joshua S. Apte, Andrew L. Goodkind, Nicholas Z. Muller, Kimberley A. Mullins, David A. Paoletta, Stephen Polasky, Nathaniel P. Springer, Sumil K. Thakrar, Julian D. Marshall, and Jason D. Hill. *Inequity in consumption of goods and services adds to racial–ethnic disparities in air pollution exposure*. *Proceedings of the National Academy of Sciences*, March 11, 2019; DOI: [10.1073/pnas.1818859116](https://doi.org/10.1073/pnas.1818859116).

29. Particulates from burning fossil fuels also react with sunlight to create ground-level ozone, informally known as smog. Ground level ozone causes respiratory diseases and premature death. Smog can irritate the eyes and throat and also damages the lungs, especially those of children, senior citizens, and people who work or exercise outdoors. It is even worse for people who have asthma or allergies; these extra pollutants can intensify their symptoms and trigger asthma attacks. The tiniest airborne particles in soot, whether gaseous or solid, are especially dangerous because they can penetrate the lungs and bloodstream and worsen bronchitis, lead to heart attacks, and even hasten death. A 2020 report from Harvard’s T. H. Chan School of Public Health showed COVID-19 mortality rates in areas with more soot pollution were higher than in areas with even slightly less, showing a correlation between the virus’s deadliness and long-term

exposure to fine particulate matter. <https://www.nrdc.org/stories/air-pollution-everything-you-need-know>

30. The American Lung Association’s 2020 “[State of the Air](#)” report found that New Jersey’s “major metro areas continued to rank among the worst in the nation for ozone smog.” <https://www.lung.org/media/press-releases/state-of-the-air-new-jersey>.

D. The Natural Gas Fantasy

31. It can no longer be seriously argued, as fossil fuel companies contend, that natural gas is a bridge fuel to clean energy. It is as bad as coal in terms of full life-cycle greenhouse gas emissions and, as detailed below, renewable energy costs are now cheaper for new facilities. Any new gas facilities will become stranded assets well before the end of their useful life if we are serious about meeting our clean energy targets.

32. Natural gas consists primarily of methane. Methane is 86 times more potent than CO₂ in warming the atmosphere over a 20-year timeline and 104 times more powerful over a 10-year period, the critical periods of time for reducing GHG emissions. In 2019, the GWRA amendments with regard to methane stated:

The Legislature further finds and declares 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.

In early 2020, Governor Murphy signed P.L.2019, c.319 that requires the State to use a 20-year time horizon and most recent IPCC Assessment Report when calculating global warming potential to measure the global warming impact of greenhouse gases. This mandate has yet to be implemented.

33. Methane leaks occur at all stages of the gas process (extraction/production, gathering, processing, transmission, storage, local distribution and consumption). Methane leakage along the gas supply chain more than doubles the lifecycle emissions of gas compared to counting emissions only from gas combustion. The 2019 NJ Energy Master Plan states,

“methane emissions from natural gas transmission and distribution line leaks account for roughly 30% of the statewide methane emissions” and that actual methane leaks are 60% higher.

34. The vast majority of natural gas consumed in New Jersey comes from fracking. Fracking emits uncontrollable amounts of methane as the gas erupts to the surface with flowback and requires venting after well completion. One of the largest sources of fugitive methane is wells that have been closed but continue to vent.

35. Each new interstate transmission pipeline from the Marcellus and Utica shale formations and other fracked gas sources will spur new gas production. An analysis by the Delaware Riverkeeper Network showed that the PennEast pipeline would likely result in the drilling of at least 3,000 new fracked gas wells in Pennsylvania.

36. The science is clear that the use of natural gas is as bad as coal, if not worse, with respect to causing global warming. A Cornell University study, comparing GHG potency, showed that fracked gas is worse than either coal or oil.

<https://news.cornell.edu/stories/2011/04/fracking-leaks-may-make-gas-dirtier-coal>.

E. New Fossil Fuel Infrastructure is Uneconomical and will Lead to Stranded Assets

37. Report after report demonstrates that renewable energy is now less expensive than fossil fuels. It is not only an environmental imperative to stop building fossil fuel facilities; it makes economic sense.

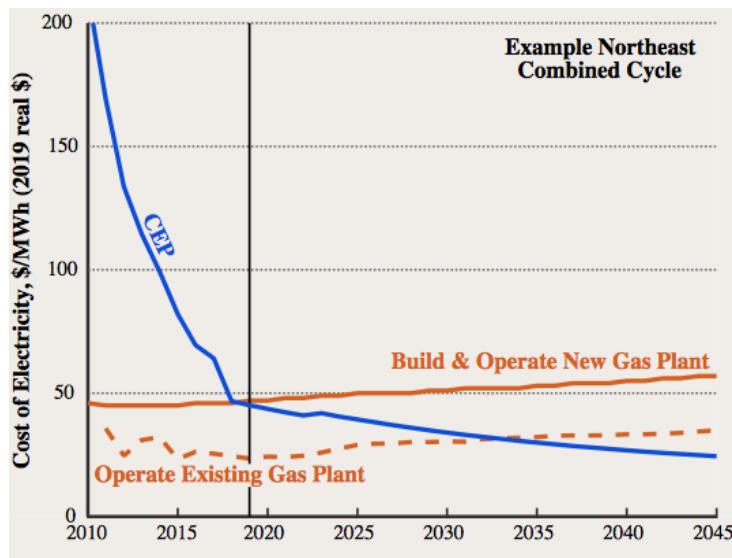
38. The Rocky Mountain Institute (RMI) is a well-regarded non-partisan, non-profit organization that works to transform global energy systems across the real economy. The Murphy Administration has retained RMI to prepare models in connection with the development of the 2019 Energy Master Plan and its current NJPACT proceeding. DEP should also follow RMI’s guidance with respect to the need and economics of transforming our energy sector away from natural gas and towards renewable energy sources.

39. In a September 9, 2019 report, *A Bridge Backward? The Risky Economics of New Natural Gas Infrastructure in the United States*, RMI analyzed “the economics of new natural gas-fired power plants and interstate gas pipelines in the context of the rapidly falling costs of clean energy resources” and found “that the natural gas bridge is likely already behind us, and that continued investment in announced gas projects risks creating tens of billions of dollars in stranded costs by the mid-2030s, when new gas plants and pipelines will rapidly become

uneconomic as clean energy costs continue to fall.” <https://rmi.org/a-bridge-backward-the-risky-economics-of-new-natural-gas-infrastructure-in-the-united-states/>.

40. The report contained the following findings:

- Clean energy portfolios (CEPs) can provide the same energy, capacity, and flexibility as new gas plants, often at significantly lower costs.
- 2019 represents a tipping point in the relative costs of CEPs and gas-fired power plants. Since 2010, CEP costs have fallen by 80 percent and are now at the point where they undercut the costs to build and run a new gas-fired power plant. Furthermore, by the mid-2030s, as the costs of clean energy technologies continue to fall, the costs to build a new CEP are likely to undercut (even) just the costs to operate a gas-fired power plant (see chart below).



- 90% of new gas-fired capacity proposed for construction in the next five years could be cost-effectively avoided with CEPs. Prioritizing clean energy investment in these cases would unlock \$29 billion in net customer savings and avoid 100 million tons of CO₂ emissions each year—equivalent to 5 percent of current US electricity-sector emissions.
- By 2035, over 90% of proposed combined-cycle gas plants, if built, would be uneconomic to run compared to the cost of building a new clean energy portfolio. Investors in these projects will likely face a significant risk of stranded

investments, with tens of billions of dollars in book value remaining on assets without a clear source of future revenues given competition from clean energy.

- Because less natural gas will be produced, there will be a corresponding decline in the need for gas pipelines. Volume on new gas pipelines will fall between 20–60%. This decline in volume will lead to rising costs for delivered gas borne, in most cases, by captive utility customers.

41. New fossil fuel projects generally have expected 30-to-40-year lifetimes and are only economical if they operate that long. But they will not operate that long if our clean energy goals are to be met. Building new fossil fuel projects would result in one of two outcomes: stranded assets for which ratepayers remain liable or the inability to meet our clean energy goals. The damages to the environment, residents' health, premature death rates, property damage and associated financial burdens from new fossil fuel projects will last long after these facilities are closed. As the RMI report concludes, there is a “significant risk that continued natural gas infrastructure investment will turn into a bridge to bankruptcy for investors and stranded investments that captive customers will have to pay for.”

42. Consistent with the RMI report, an April 2021 report from the Goldman School of Public Policy, University of California, Berkeley uses the latest renewable energy and battery cost data to demonstrate the technical and economic feasibility of achieving 80 percent clean (carbon-free) electricity in the United States by 2030. The report finds achieving an 80 percent clean electricity grid by 2030 is technologically feasible, would not raise customer costs or compromise reliability, and would deliver major benefits including \$1.5 trillion in clean energy capital investments and \$100 billion in transmission capital investments, while avoiding over \$1.7 trillion in health and environmental costs and 93,000 premature deaths.

<https://energyinnovation.org/wp-content/uploads/2021/04/2030-Report-FINAL.pdf>

43. Recognizing the massive economic risks associated with climate change, President Biden signed an executive order on May 20, 2021 directing federal government agencies to assess the risks climate change brings to both public and private financial assets in the U.S. This will provide the data needed to convince the public and decision-makers that the costs of climate change will far exceed the costs of actions to reduce its impact.

<https://www.rollingstone.com/politics/politics-news/biden-executive-order-financial-impact-climate-change-1173078/>

44. New Jersey and the DEP must conduct the same assessments and follow the science and the lead of the Biden Administration. The few cost issues the State has addressed have only been framed in terms of risks to geographically constrained assets, such as Shore properties. The far larger economic risks must be considered whenever the DEP acts, but particularly when deciding whether to issue operating permits for new fossil fuel infrastructure projects.

F. Green Energy Projects will Create More Jobs

45. Green energy projects will create more jobs than fossil fuel projects, as numerous studies have shown.

46. The Stanford based TheSolutionsProject.org study has shown that a transition to 100% renewable energy in New Jersey for all purposes (electricity, transportation, heating/cooling and industry needs) would create 58,600 operations jobs and 86,000 construction jobs. At the same time this would prevent 1,528 annual deaths from air pollution.

<http://thesolutionsproject.org/infographic/#nj>

47. A study by Synapse Energy Economics, sponsored by the Labor Network for Sustainability, shows the nationwide commitment to reducing GHGs by 80% by 2050 would produce more than 550,000 jobs on average per year. It includes new jobs in energy efficiency programs, renewable energy production, and auto manufacturing (making electric cars).

<http://climatejobs.labor4sustainability.org/>

48. A recent report by the ACEEE (American Council for an Energy Efficient Economy) shows that the energy efficiency sub-segment alone employed 2.25 million Americans in 2017—more than the combined total of jobs to produce coal, oil, gas, and electricity (including renewables).

http://empowernewjersey.com/wp-content/uploads/2019/02/EmpowerNJ_Report_190211_Color.pdf

G. The Market Already Recognizes that Renewables Must Replace Fossil Fuels

49. The market has already recognized that new fossil fuel projects make no environmental or economic sense. “84% of all new electric capacity planned to come onto the electric grid this year is clean energy,” because it’s both cheaper and cleaner. [Remarks by President Biden on 1/27 Before Signing Executive Actions on Tackling Climate Change, Creating Jobs, and Restoring Scientific Integrity.](#)

50. According to the [U.S. Energy Information Administration](#), the new electric capacity slated to come online in 2021, measured in total gigawatts, will be 39% solar, 31% wind, 11% from batteries, and 3% nuclear. U.S. Energy Information Administration, [Renewables account for most new U.S. electricity generating capacity in 2021](#).

51. The 2021 numbers are no outlier. Renewable energy sources accounted for over 70% (14,734 MW) of the 20,803 MW of new utility-scale electrical generating capacity added in the first 11 months of 2020. In 2017, renewables accounted for 55% of the 21 GW of U.S. capacity additions, the fourth consecutive year in which renewables made up more than half of those additions. <https://www.eia.gov/todayinenergy/detail.php?id=36092>. Over the past ten years, renewables have averaged over 57% of new utility-scale electric capacity renewable energy sources (which include biomass, geothermal, hydropower, solar and wind).

<https://www.solarpowerworldonline.com>.

52. Thirteen publicly traded utilities announced support for a measure that would eliminate 80% of fossil fuel emissions from the energy sector by 2030. <https://www.reuters.com/business/sustainable-business/exclusive-white-house-pushing-80-clean-us-power-grid-by-2030-2021-04-26/>

53. On June 28, 2021, Public Service Enterprise Group (“PSE&G”), which runs the State’s largest utility company, announced its goal of achieving net-zero climate emissions by 2030, 20 years ahead of its previous goal. <https://www.njspotlight.com/2021/06/pseg-biggest-nj-energy-company-pseg-new-ambitious-net-zero-clean-energy-target-2030/>

H. The IEA Report

54. The International Energy Agency is composed of 30 countries including the United States and virtually all western democracies. The IEA historically has been criticized for its cautious response to the climate crisis.

55. In May 2021, the IEA issued a report, *Net Zero by 2050, A Roadmap for the Global Energy Sector*, which calls for an immediate end to investments in new fossil fuel infrastructure, including the immediate cessation of permits for coal plants or new oil and gas field development and coal mines. <https://www.iea.org/reports/net-zero-by-2050>

56. The IEA Report recognizes that good intentions and rhetoric are not enough to meet the climate emergency. As the foreword to the report states, “the gap between rhetoric and

action needs to close if we are to have a fighting chance of reaching net zero by 2050 and limiting the rise in global temperatures to 1.5 degrees C.”

57. The Report’s summary states that the climate crisis calls for nothing less than a complete transformation of how we produce, transport and consume energy” and pledges of clean energy are not “underpinned by near-term policies and measures.” (p. 13). The report goes on to state that the “path to net zero emissions is narrow; staying on it requires immediate and massive deployment of all available clean and efficient energy technologies” and that “[a]ll the technologies needed to achieve the necessary deep cuts in global emissions by 2030 already exist, and the policies that can drive their deployment are already proven” (p. 14).

I. Actions by Other State and Local Governments

58. On April 22, 2021, President Biden announced a new target for the United States to achieve a 50-52% reduction in GHGs from 2005 by 2030. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating>.

59. Almost all the other states in the Climate Alliance have taken significant steps in this direction by setting aggressive, but realistic targets for reducing GHGs not just by 2030, but 2025; New Jersey is the outlier and has not. Setting near term targets is especially critical as without such it will be much harder, if not impossible, to achieve long term goals and GHG reductions will almost always be back-loaded, neither of which we can afford here. Here are examples of what other states have done:

- Colorado: Reduce GHGs 50% by 2030 from 2005 levels and 26% by 2025.
- Massachusetts: Reduce GHGs 50% below 1990 levels by 2030.
- Nevada: Reduce GHGs 45% by 2030 from 2005 levels and 28% by 2025 with 50% of electricity from renewable resources by 2030 and 100% carbon-free (zero carbon dioxide emissions) resources by 2050.
- Louisiana: Reduce GHGs 45% to 50% by 2030 and 26-28% below 2005 levels by 2025.
- Oregon: Reduce GHGs 45% below 1990 levels by 2035.
- New Mexico: Reduce GHGs 45% below 2005 levels by 2030; 100% carbon-free electricity by 2045, with at least 80% from renewable energy by 2040.

- Washington: Reduce GHGs 45% by 2030 from 2005 levels; utilities must be 100% carbon-neutral by 2030 with 80% of their power must come from “non emitting electric generation and electricity from renewable resources.”
- Maine: Reduce GHGs 45% below 1990 levels by 2030.
- Rhode Island: Reduce GHGs 45% below 1990 levels by 2035.
- Connecticut: Reduce GHGs 45% below 2001 levels by 2030.
- California: Reduce GHGs 40% below 1990 levels by 2030; 100% carbon-free electricity by 2045, with 50% from renewables by 2026; 60% from renewables by 2030, and 100% carbon-free energy by 2045.
- New York: Reduce GHGs by 40% from 1990 levels by 2030.
- Maryland: Reduce GHGs 40% below 2006 levels by 2030.
- Vermont: Reduce GHGs 40% below 1990 levels by 2030 and 26% below 2005 levels by 2025.
- North Carolina: Reduce GHGs 40% below 2005 levels by 2025.
- Minnesota: Reduce GHGs 30% below 2005 levels by 2025.
- Michigan: Reduce GHGs 26-28% below 2005 levels by 2025.
- Pennsylvania: Reduce GHGs 26% below 2005 levels by 2025.
- New Hampshire: Reduce GHGs 20% below 1990 levels by 2025.
- Hawaii: 100% renewable energy by 2045.

Source: <https://www.c2es.org/document/greenhouse-gas-emissions-targets/>

60. Internationally, a Dutch court recently entered an order requiring Royal Dutch Shell to reduce the CO₂ emissions of the Shell group 45% from 2019 levels by 2030.

<https://www.jdsupra.com/legalnews/royal-dutch-shell-ordered-to-reduce-its-5436630/#:~:text=In%20a%20significant%20judgment%20that,2030%2C%20compared%20to%202019%20levels>

J. Proposed New Fossil Fuel Projects in New Jersey

61. There is no scenario in which the State’s clean energy goal can be met if new sources of GHGs are developed. As the saying goes, when you are in a hole, stop digging.

62. Despite this undeniable reality, New Jersey has continued to allow the construction of new fossil fuel facilities with many more on the drawing board. In the last three years, the following projects have been built:

- Garden State Expansion Project (Bordentown, Chesterfield)
- Gateway Expansion Project (aka Roseland Compressor Station) (Roseland and Paterson)
- Rivervale South to Market (Bergen, Hudson Counties and Meadowlands)
- Lambertville East Expansion (Lambertville)
- Sewaren 7 PSE&G gas-fired power plant (Woodbridge)

63. In 2018, the EmpowerNJ coalition presented a report to the DEP showing that there were more than a dozen new fossil fuel projects planned for the State that would increase GHG emissions by 30%. DEP did not take issue with these numbers.

http://empowernewjersey.com/wp-content/uploads/2019/02/EmpowerNJ_Report_190211_Color.pdf

64. A number of the 2018 projects were completed and the momentum of others such as NESE has been slowed. However, numerous new fossil fuel projects are now in various stages of planning and development throughout the State, most notably a proposed LNG export facility in Gibbstown, NJ. While, the Biden Administration, many states, industry and much of the market are quickly pivoting from fossil fuels toward renewables, New Jersey is still allowing developers to proceed with new fossil fuel projects. The following major fossil fuel projects are currently in the works.

Pipeline and compressor projects:

- PennEast Pipeline. On June 29, 2021, the US Supreme Court reversed a Third Circuit ruling and allowed fossil fuel developers to seize state land for this massive pipeline.
- Northeast Supply Enhancement (aka NESE) (Somerset and Middlesex Counties and the Raritan Bay). While New York and New Jersey denied permits for this project last year, Williams/Transco is actively seeking to revive the project and is asking for a two-year extension of their federal approval.
- Southern Reliability Link (Pinelands). This project remains under construction despite massive leaks and cost overruns.

- South Jersey Gas pipeline. Even though its original purpose no longer exists, SJG is exploring other options.
- Expansion of the Tennessee Gas Pipeline, including expanded/new compressor stations in Wantage and New Milford. (Considered to be 2 projects)
- Regional Energy Access Pipeline with 3 compressor stations

Gas-fired power plant projects:

- Phoenix Energy Center (aka Highlands Power Plant) (Holland Township)
- Keasbey Energy Center (Woodbridge)
- NJ Transit Meadowlands Power Plant (Kearney). Despite agreeing to rethink the project to build a 140 MW gas-fired power plant and use renewable energy, it is unclear how much renewable energy technology will be used in this project.
- PVSC power plant (Newark). Passaic Valley Sewerage Commission plans to build an 84 MW gas power plant for operating power when commercial power is not available.

Liquified Natural Gas

- In December 2020, the NJ, PA, DE and Federal members of the Delaware River Basin Commission voted to approve a liquid natural gas (LNG) export port at Gibbstown, NJ. There are outstanding permits/approvals needed from New Jersey et al. before the project can move ahead.

65. As detailed in EmpowerNJ’s 2019 report, we do not need new fossil fuel projects to meet New Jersey’s energy needs and many of those listed here are not even intended to meet New Jersey’s energy demands. http://empowernewjersey.com/wp-content/uploads/2019/02/EmpowerNJ_Report_190211_Color.pdf

66. For example, the NESE pipeline would deliver gas to the Rockaways Transfer Point in New York for use by customers in Brooklyn, Queens, Staten Island and Long Island. The Gibbstown LNG Export Terminal is a private enterprise that will only sell LNG that is shipped overseas. And, as detailed above, any new energy needs could be more economically provided from clean energy sources.

K. The NJPACT Rule-Making Proceeding

67. In addition to the power DEP has to regulate and reduce GHG emissions and other air pollutants, the GWRA requires DEP to adopt rules by January 2022 that address climate change impacts, and establish interim benchmarks (milestones) necessary to reduce GHGs by 80% by 2050 along with the measures necessary to achieve those interim benchmarks.

68. DEP is currently considering addressing climate change impacts in its NJPACT rulemaking proceeding. DEP's schedule called for rules to be proposed by January 2021. Those rules are now seven months late. When the final rules will be promulgated is unknown but it appears highly unlikely that DEP will meet its January 2022 deadline.

69. But even putting aside DEP's on-going delay in complying with the GWRA and addressing the existential issue of our time, DEP is not even seeking to codify interim benchmarks as part of the ongoing NJPACT proceeding, despite being required to do so under the GWRA. Indeed, DEP has acknowledged that it has no intention, much less any plans, to reduce GHGs by 50% or even 45% by 2030, the minimum reduction identified by IPCC to avoid climate catastrophe, despite having the statutory authority to do so, the State's commitment as a member of the Climate Alliance and the clear and compelling need for immediate action.

70. Further, DEP Commissioner Shawn LaTourette has publicly stated that a moratorium on new fossil fuel projects was "unrealistic because we still depend on fossil fuels." (January 22, 2021 webinar). What is "unrealistic" is to believe we can meet our mandated GHG reduction goals without considering the impact of new fossil fuel facilities. Our continued, short term reliance on existing fossil fuel facilities does not mean we should be building new ones. Further, DEP's position fails to reflect the monumental changes taking place in the energy marketplace and the scientific consensus that natural gas is not a bridge to clean energy, but a road to climate disaster.

CONCLUSION

To adequately address the climate crisis, the DEP should comply with its obligations under the GWRA and implement the commitment the State made as a member of the Climate Alliance by setting a target of a 50% reduction in GHGs by 2030 from 2005 levels and adopting

rules to meet this target. Those rules must include restricting the issuance of operating permits for new fossil fuel infrastructure projects.

Dated: July 21, 2021

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Food & Water Watch
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Trenton NJ 08618

Appendix A

This petition is also supported by the following organizations:

350NJ-Rockland	NJ 11th For Change
Action Together New Jersey	NJ Citizen Action
Atlantic Climate Justice Alliance	NJ Forest Watch
Bergen County Green Party	NJ Skylands Sunrise Movement Hub
Central Jersey Coalition Against Endless War	NJ Student Sustainability Coalition
Central Jersey Environmental Defenders	NJ Walk and Bike Coalition
Clean Ocean Action	NJ Working Families Alliance
Climate Reality	NJ-08 For Progress
ClimateMama	North Jersey Sierra Group
Coalition Against Pilgrim Pipeline - NJ	Northern New Jersey NOW
Coalition to Ban Unsafe Oil Trains	Occupy Bergen County
DivestNJ Coalition	Our Revolution Ocean County, NJ
Eco-Poetry.org	Our Revolution Trenton Mercer
Env'l Justice team, Unitarian Society of Ridgewood	Raritan Headwaters Association
Ethical Culture Society of Bergen County	Resistance Cafe
Franciscan Response to Fossil Fuel	SOMA Action
Green Party of Monmouth County NJ	Summit Area Indivisible
Green Party of NJ	Sunrise Hunterdon
GreenFaith	Sunrise Morris County
Indivisible Cranbury	Sunrise Movement Union County
Indivisible Highland Park New Jersey	Sunrise Stockton University
Indivisible NJ5	Surfrider Foundation South Jersey
JOLT USA	Surfrider Foundation, Jersey Shore Chapter
League of Women Voters of New Jersey	Sustainable West Milford
Long Valley Indivisible	The Climate Mobilization, North Jersey Chapter
Make the Road NJ	The Wei LLC
Middletown for Clean Energy	Waterspirit
New Jersey People's Party	We The People NJ-07
New Jersey Tenants Organization	Westfield 20/20



NEW JERSEY'S GLOBAL WARMING RESPONSE ACT 80x50 REPORT

EVALUATING OUR PROGRESS
AND IDENTIFYING PATHWAYS TO
REDUCE EMISSIONS 80% BY 2050





October 15, 2020

Dear Legislative Leaders and Fellow New Jerseyans,

Climate change is the defining issue of our time. Global atmospheric warming, caused largely by human activities, is leading to significant changes in climate patterns here in New Jersey, across the United States, and around the world. Due to our geography and population, New Jersey is uniquely vulnerable to climate change and is already experiencing its impacts, including rising sea-levels, increasing temperatures, chronic flooding, and more frequent and intense storms. Unfortunately, these impacts will worsen in the years ahead. The questions now before policymakers and the public are about the measures necessary to reduce the severity of these impacts.

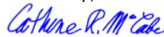
The report released today by the Department of Environmental Protection (DEP) is another component of Governor Phil Murphy's comprehensive approach to meeting this critical moment by recommending a suite of legislative, regulatory and policy initiatives that will reduce the emissions of climate pollutants. Make no mistake: the changes New Jersey must make in the next thirty years are significant. But we know well the risks of inaction. Earlier this year, DEP released the [New Jersey Scientific Report on Climate Change](#) which, as just one example, explained the risk to New Jersey's coastal communities from sea-level rise, warning that under even a moderate emissions scenario, sea-levels could rise by as much as 5.1 feet by the year 2100 and 8.3 feet by the year 2150, eroding large land areas of the state, risking near total loss of our barrier islands, and devastating our tourism industry and larger economy.

Recognizing the need for climate action, New Jersey's legislature passed the Global Warming Response Act (GWRA) in 2007 and updated the law in 2019. Under this law, the DEP is responsible for assessing the state's greenhouse gas emissions and, in collaboration with other state agencies, presenting recommendations for reducing emissions by 20% below 2006 levels by 2020 and 80% by 2050—known as the 80x50 goal. Today, DEP delivers the 80x50 Report with newfound urgency and a call-to-action for legislators, policymakers, businesses and all New Jerseyans.

Fortunately, as a result of market and other forces that motivated power plants to transition from coal to natural gas over the last fifteen years, New Jersey has already successfully reduced emissions by 20% below 2006 levels. Meeting the considerably more challenging 80x50 goal, however, will require a further, seismic shift in how New Jersey does business. Over the next 30 years, New Jersey must implement an economy-wide transformation that steadily phases out the use of fossil fuels, expedites the deployment of renewable energy resources, electrifies new and existing buildings, and facilitates a swift and steady transition from gasoline-powered to electric vehicles, among other initiatives outlined in the 80x50 Report. We acknowledge that each of these initiatives are significant in themselves, but only an all-of-the-above approach adopted by all levels of government, economic sectors, communities and individuals will enable New Jersey to meet the 80x50 goal. If we do not make this transformation and instead remain on a business-as-usual course, New Jersey will lose the benefit of the progress we have already made, and our emissions will be *greater* than they are today.

Just as New Jersey is uniquely vulnerable to risks from climate change, so too is our great state uniquely positioned to turn this challenge into tremendous opportunity for our people, businesses and institutions. How we pursue climate action is indeed one more component of making New Jersey stronger and fairer for all people. By leveraging the talent and skill of our incomparable workforce, our trademark innovation, and our undeniable grit, New Jersey will meet this moment. Together, we will reduce the risks from climate change while making the meaningful and lasting changes that will protect the people and places we love, grow our economy, and preserve our natural treasures for generations to come. Let's get to work.



Sincerely,

Catherine R. McCabe, Commissioner
New Jersey Department of Environmental Protection

ACKNOWLEDGMENTS

This report is issued with special thanks to Governor Phil Murphy and Department of Environmental Protection Commissioner Catherine R. McCabe for their vision and leadership, and with thanks to Board of Public Utilities President Joseph L. Fiordaliso, Lt. Governor and Department of Community Affairs Commissioner Sheila Oliver, Economic Development Authority CEO Tim Sullivan, Department of Labor Commissioner Robert Asaro-Angelo, State Treasurer Elizabeth Maher Muoio, Transportation Commissioner Diane Gutierrez-Scaccetti, NJ TRANSIT Executive Director Kevin Corbett, Motor Vehicle Commission Chair and Chief Administrator B. Sue Fulton and Secretary of Agriculture Douglas H. Fisher for each of their contributions and dedication of their respective staffs in the pursuit of this important work.

This report—and its role in contributing to the protection of our state, country and world from the adverse impacts of climate change—would not have been possible without the hard work and commitment of many people across the Executive Branch of New Jersey State Government.

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EXECUTIVE SUMMARY

A CALL TO ACTION

Over the past three decades, the scientific community's understanding of the trends and underlying causes of climate change has evolved to the point where there is no credible doubt that significant and rapid warming of the earth's climate is occurring. Climate change is primarily caused by human activities, and it poses a severe threat to the environment, human health and welfare, security, and the economy—in New Jersey, across the United States, and around the world. New Jersey is especially vulnerable to the adverse effects of climate change due to its coastal location and population density. Minimizing these risks requires immediate, decisive, long-term commitments across all levels of government and sectors of the economy to facilitate the steep reductions of greenhouse gas (GHG) emissions that are necessary to protect New Jersey's economic, social, and environmental vitality.

Without steep and permanent reductions in global GHG emissions within the next several years, New Jersey's people and their property will experience significant adverse effects of climate change, including rising sea-levels, increases in temperature and precipitation causing periods of both intense storms and drought, and chronic inundation from flooding. These changes in climate will cause or exacerbate stress on the state's public health, ecological, social and economic systems. For example, leading climate scientists have projected that New Jersey is likely to experience sea-level rise by as much as 1.1 feet by the year 2030 and 2.1 feet by the year 2050 regardless of future reductions (Kopp, 2019), which will contribute to flooding across many areas of the state, and particularly along the coastline that hosts our vibrant tourism industry. While future emissions reductions cannot avoid these nearer-term impacts hastened by our past emissions, deeper and continuous GHG reductions will protect and improve the state's longer-term outlook by helping to avoid more drastic adverse impacts. Without steep reductions moving forward, for example, New Jersey's sea-levels could rise by as much as 5.1 feet by the year 2100 and 8.3 feet by the year 2150 under even a moderate emissions scenario (Kopp, 2019), with the potential to erode large land areas of the state. The risks to the continued success of New Jersey's economy, public health, and environment cannot be understated and the need for concerted action could not be clearer.

Recognizing the need for coordinated action in the public and private sectors, the New Jersey Global Warming Response Act (P.L. 2007 c.112; P.L. 2018 c.197) (GWRA) directed the New Jersey Department of Environmental Protection (DEP), in collaboration with other state agencies, to develop plans and make recommendations for reducing emissions of climate pollutants, represented throughout this report as carbon dioxide equivalent emissions or CO₂e, to 80% below their 2006 levels by the year 2050 (known as the "80x50" goal).¹ Building upon New Jersey's 2019 Energy Master Plan (2019 EMP) and Governor Phil Murphy's vision for 100% clean energy by 2050, this report analyzes New Jersey's emissions reductions to date, evaluates plans presently in place for further reducing emissions, and presents a set of strategies across seven emission sectors for policymakers to consider in formulating legislation, regulations, policy and programs to ensure that New Jersey achieves the 80x50 goal.

In 2006, net emissions totaled 120.6 MMT CO₂e, setting the 80x50 net emission goal at 24.1 MMT CO₂e by 2050. New Jersey has made significant progress in reducing GHGs, in large part through a rapid transition from coal-powered energy generation to cleaner burning natural gas, with 2018 emissions estimated to be 97.0 MMT CO₂e—a 20% reduction below 2006 levels. Achieving the 80x50 goal, however, will require New Jersey to replace most current applications of fossil fuels with renewable energy alternatives within the next 30 years. Since the beginning of the Murphy Administration, the state has deployed policies and programs aimed at facilitating a transition to a clean energy economy, which are still in their early stages but will promote substantial emissions reductions. These efforts, however, cannot on their own achieve the 80x50 goal. On a "Business-as-Usual" course, which includes implementation of Murphy Administration initiatives as of 2019,² our 2050 GHG emissions would be *higher* than they are today estimated

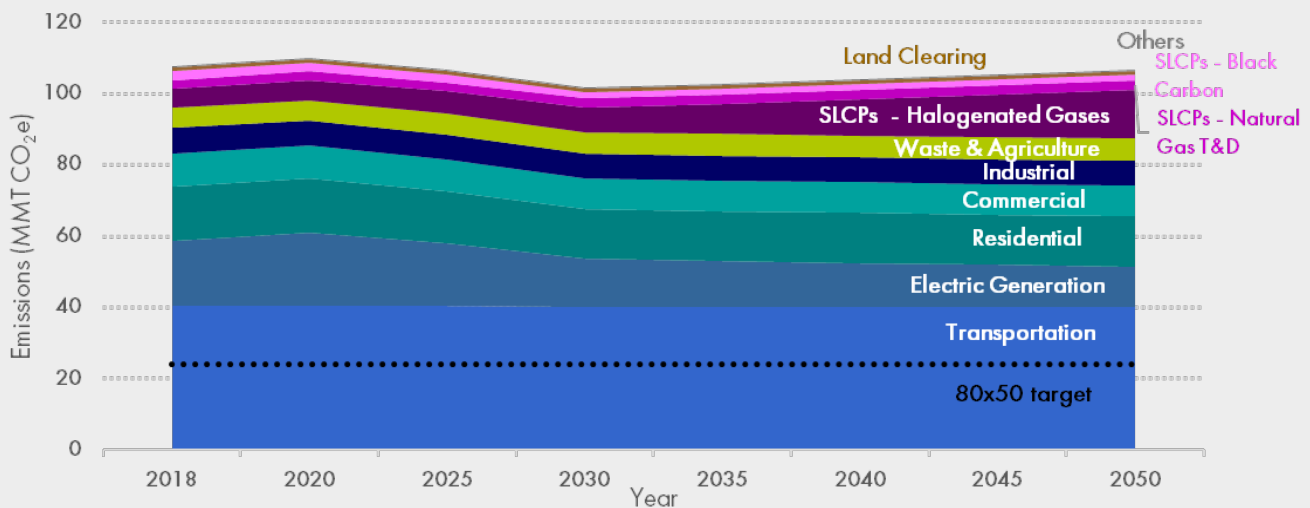
¹ CO₂e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of carbon dioxide (CO₂) which would have the equivalent global warming impact, based on their relative global warming potential (GWP).

² Business-as-usual scenario includes current rate of electric vehicles adoption (8,000 annually) through 2050, 3.5 GW of offshore wind by 2030, in-state solar PV capacity growth at the observed rate of 152 MW/year, 2 GW of storage by 2030, 50% Renewable Portfolio Standard by 2030, energy efficiency improvements through 2030 and assuming growth in waste, natural gas transmission and distribution and halogenated gases.

to at best be 106.7 MMT CO₂e or 12% below 2006 levels, undermining progress to-date and missing the 80x50 goal (Figure ES.1).

Figure ES.1. New Jersey GHG and Black Carbon Emissions Business-as-Usual Projection for 2050 (MMT CO₂e).

Emissions will not decrease substantially unless alternative technologies are widely deployed, and renewable energy resources are greatly expanded.



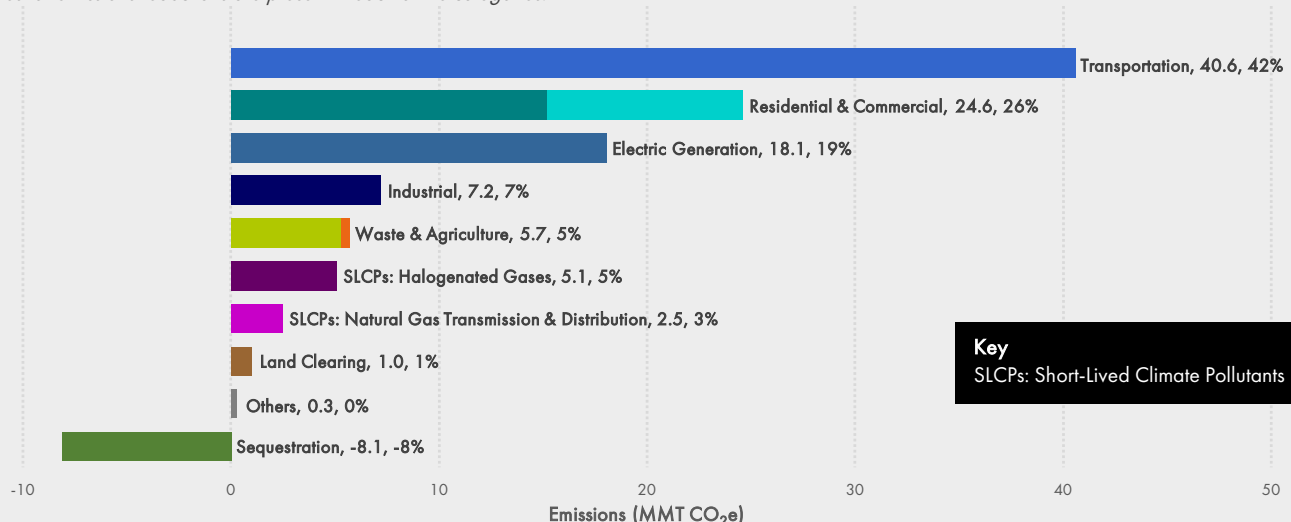
The goal of this report is to communicate the ability and limitations of existing policies and programs in reaching the 80x50 goal and to provide options that will assist policymakers in crafting new initiatives to bridge the emissions reductions gap. This report therefore summarizes the emission reduction potential of existing programs and identifies several strategies which, in combination, would enable New Jersey to achieve its 80x50 goal.

NEW JERSEY'S CURRENT GHG EMISSIONS

The transportation sector represents the largest source of GHG emissions in New Jersey (42%), followed by the combined residential and commercial sectors (26%), and electric generation (19%). The industrial (7%), waste and agriculture (5%), halogenated gases (5%) and natural gas transmission and distribution (3%) sectors contribute most of the remaining emissions. New Jersey's 2018 GHG Inventory Report delineates the relative contributions of each of these sectors (Figure ES.2). Black carbon was not included in the 2018 GHG Inventory report as it is not a GHG. In 2018, black carbon accounted for an additional 2.7 MMT CO₂e (3%) of climate pollutant emissions.

Figure ES.2. New Jersey GHG Emissions Inventory for 2018 (MMT CO₂e and Percentage).

Opportunities for emissions reductions are present in each of the categories.



NEW JERSEY'S PATH TO 80% REDUCTION BY 2050

Meeting the 80x50 goal will require very substantial reductions in GHG emissions in the transportation, residential and commercial, and electric generation sectors, given the predominant contributions of those sectors to New Jersey's total emissions. The modeling performed in developing the 2019 EMP shows that the least cost scenario can meet the 80x50 goal, as well as Governor Murphy's goal of 100% clean energy by 2050, through the rapid adoption of three key strategies: (1) replacing internal combustion vehicles with electric vehicles, (2) converting space and water heating in the residential and commercial buildings to electric heat, and (3) replacing fossil fuels in the electric generation sector with renewable energy sources. Presently, wind and solar photovoltaic (PV) technologies are available at competitive prices, which can reduce electric generation sector emissions and help meet the increased electricity demand due to growing use of electric vehicles and high-efficiency heat pumps used for space heating and cooling. While the industrial, waste and agriculture, and short-lived climate pollutants sectors contribute a comparatively smaller amount of New Jersey's overall GHG emissions, it is also important to stabilize emissions in these sectors and reduce them to the greatest extent possible.

It is necessary for New Jersey to implement both a unified energy policy as set forth in the 2019 EMP and sector-specific policies to achieve the level of GHG reductions called for by the GWRA and envisioned in this report. For example, implementing the 2019 EMP and leveraging clean energy funding sources, including auction proceeds from the Regional Greenhouse Gas Initiative (RGGI), is one backbone mechanism that can be utilized to facilitate emissions reductions in several sectors discussed below while supporting investments in New Jersey companies who deploy clean energy technology, bolstering our economy and creating good jobs for New Jersey residents.

If New Jersey implements the pathways proposed in this report, which incorporates the strategies of the 2019 EMP, GHG emissions can be reduced to 29.8 MMT CO₂e by 2050. This level of reductions, combined with a projected 10.8 MMT additional reduction from carbon sequestration, would bring net emissions in 2050 to 19 MMT CO₂e, achieving the 80x50 goal (Figure ES.3).

The following discussion summarizes each sector's current state of climate pollutant emissions and sets forth sector-specific strategies for reducing emissions.

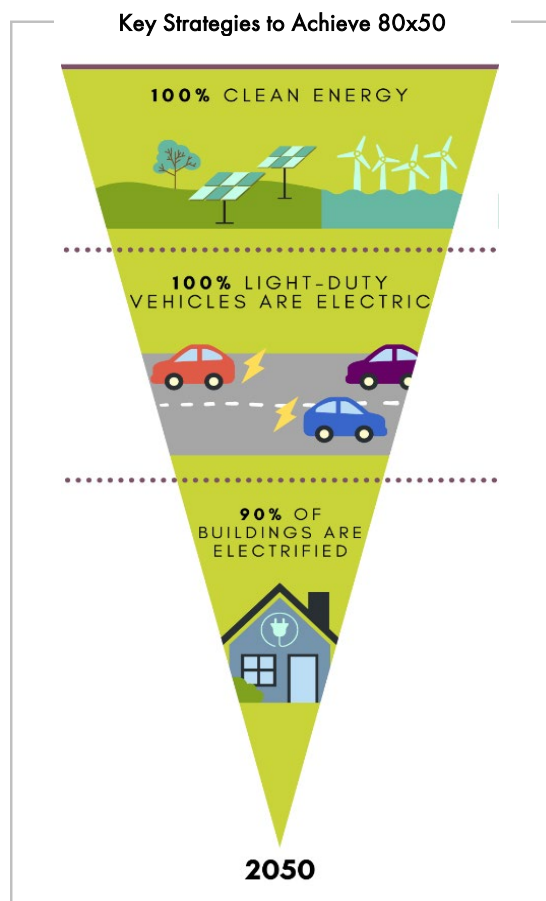
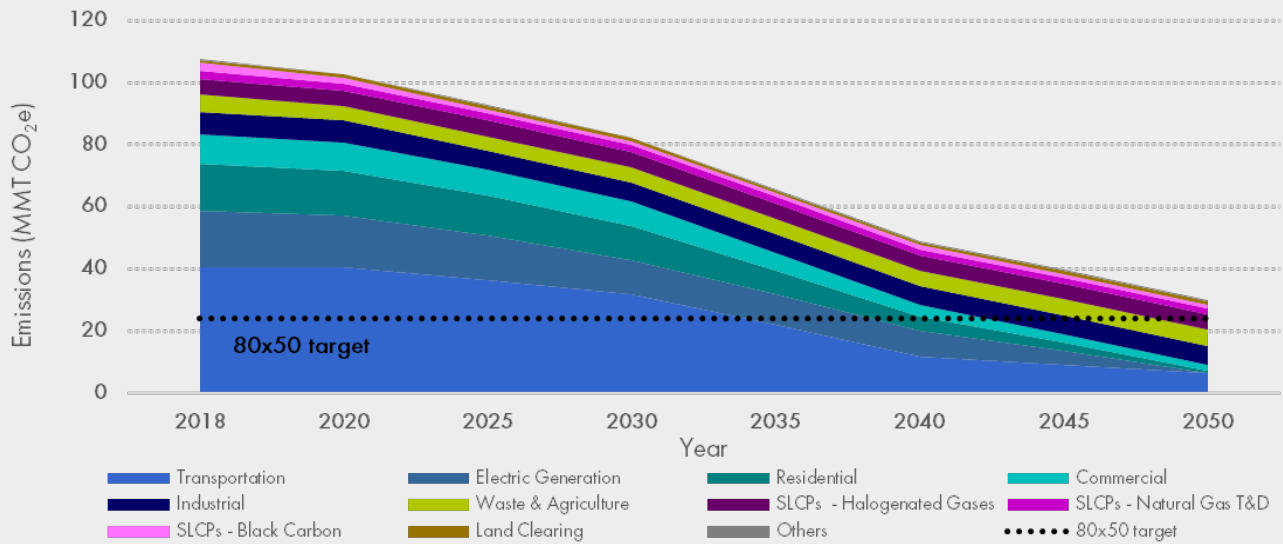


Figure ES.3. New Jersey GHG Emissions Pathway to 2050 (MMT CO₂e).

The 2019 EMP least cost pathway combined with non-energy sector strategies, and carbon sequestration (not shown) have the potential to reduce net emissions below the 80x50 target prior to 2050.



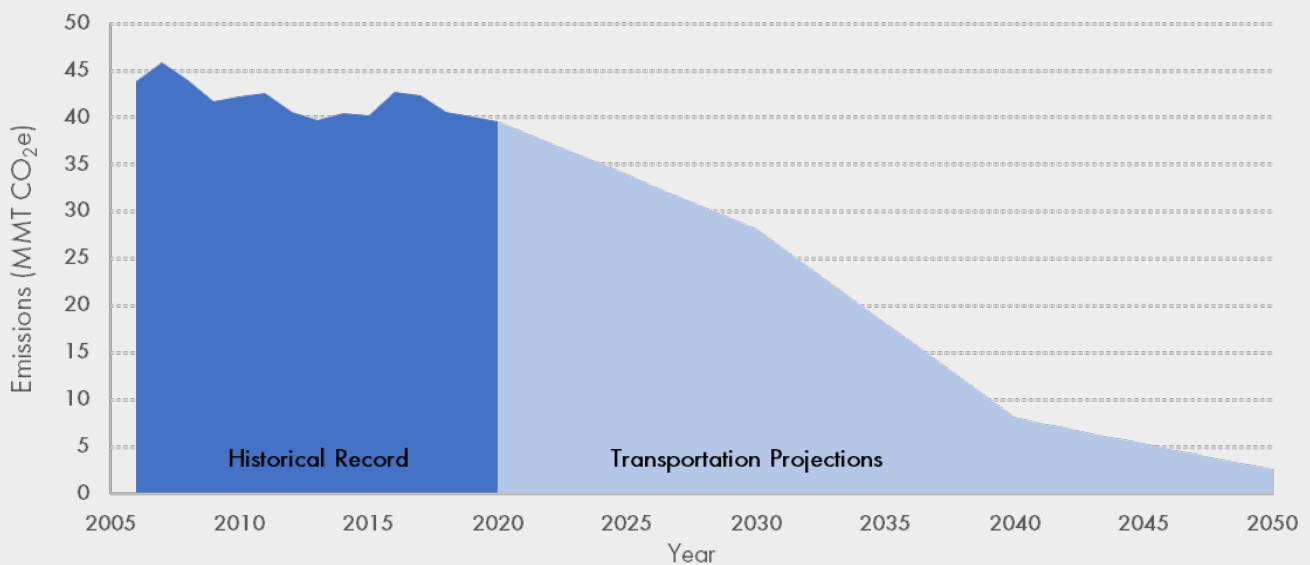
TRANSPORTATION

The transportation sector is the largest source of New Jersey’s GHG emissions. To achieve the 80x50 emissions reduction goal, significant electric vehicle adoption rates outlined in the 2019 EMP must be realized. DEP estimates that the 2019 EMP adoption rates will reduce transportation emissions by 87%, to 5.4 MMT CO₂e by 2050.

Currently, gasoline-fueled vehicles account for over 70% of the transportation sector’s emissions. The 2019 EMP’s least cost scenario modeling calculated that 88% of new light-duty vehicle sales (passenger cars, SUVs and light-duty trucks) will need to be electric or hydrogen-powered by 2030, rising to 100% by 2035, in order to achieve the 80x50 goal (Figure ES.4).

Figure ES.4. Transportation Sector Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).

Adopting electric vehicles can eliminate most emissions from the transportation sector.



Currently, New Jerseyans purchase more than 500,000 fossil fuel powered passenger vehicles annually and existing policies and programs are not sufficient by themselves to achieve the levels of market penetration necessary to transform the transportation sector. The 330,000 light-duty electric vehicles on the road by 2025 that New Jersey set as its goal in the 2018 Multistate Memorandum of Understanding are expected to reduce the state's GHG emissions by 1.4 MMT CO₂e by 2025. The 2019 Electric Vehicle Law (EV Law) (P.L. 2019, c.362) goal of 2 million light-duty electric vehicles by 2035 will achieve an additional reduction of 7.3 MMT CO₂e. While the EV Law provides incentives to jumpstart these efforts, the 2019 EMP indicates that electric vehicle adoption rates must dramatically increase from today's rate of 8,000 annual electric vehicle purchases to more than 111,000 annually, with significant continual increases until 2035, when all new light-duty vehicle sales will need to be electric in order to achieve the goal. As called for in the 2019 EMP, additional policies and initiatives are needed to achieve these objectives.

Continued orders-of-magnitude increases in electric vehicle adoption rates are critical for New Jersey to eliminate the 28 MMT CO₂e emitted annually by light duty vehicles (cars, SUVs and light-duty trucks). While the 2019 EV Law has begun to carve a path for electric vehicle adoption, significant increases in subsidies and disincentives to reduce the consumption of gasoline will ultimately be necessary. Additional strategies for reducing the 7.4 MMT CO₂e emitted annually from medium- and heavy-duty diesel vehicles must also be implemented. It will be necessary to support a combination of technologies—including electric batteries, hydrogen fuel and renewable biofuels—that best address the end use and purpose of medium- and heavy-duty vehicles. One such example is the strategies currently being developed by the New Jersey Economic Development Authority (EDA) for facilitating new investments in medium- and heavy-duty vehicle electrification using the state's proceeds from RGGI.

In order to promote and support the increased adoption of electric vehicles, it is urgent that New Jersey pursue a significant and visible buildout of public electric vehicle charging stations. Electric vehicle chargers must become as commonplace as gasoline refueling stations to enable widescale acceptance and adoption of electric vehicles. The 2019 EV Law requirement for the installation of 200 public fast charging stations (employing 400 chargers) over the next five years is a significant step towards that goal. The law also calls for 1,000 public Level Two chargers in the state by 2025 and sets targets for chargers in multifamily and overnight lodging establishments.

Several electric vehicle infrastructure initiatives are already underway or in planning stages including efforts to streamline the local approval process, prioritizing funding for Direct Current Fast Chargers, as well as the New Jersey Board of Public Utilities (BPU) Board Order for a charging ecosystem which outlines the role of utilities and advancing public private partnerships. To build on this momentum, state agencies, local governments, utilities and private companies must work together to identify public electrification density needs and implement a long-term infrastructure development program to build-out a statewide electric vehicle charging network. In addition to other resources that policymakers could make available, existing funding sources such as the Clean Energy Fund and RGGI auction proceeds can continue to be allocated to advance these goals. Importantly, deeper investment in this effort will also create hundreds of new jobs, resulting in growth in New Jersey's clean energy economy, and the reduction of co-pollutants that can disproportionately impact public health in low-income and minority environmental justice communities.

In addition to a significant effort to electrify vehicles, other innovative solutions must be explored to reduce GHG emissions from the transportation sector. The recent experience of many New Jerseyans during the COVID-19 pandemic has served as a proof of concept for the long-theorized ability of institutions and businesses to integrate remote work programs while maintaining productivity. This paradigm has provided an opportunity to realize significant short term, emission reductions in the transportation sector. To the extent that it supports a healthy economy, more permanent remote work solutions should be explored.

In sum, to reduce the transportation sector's overwhelming contribution to New Jersey's GHG emissions and meet our the 80x50 goal, New Jersey must:

1. Implement legislative, regulatory and programmatic reforms to facilitate a rapid and complete transition away from fossil-powered vehicles, ensuring average adoption rates of at least 111,000 new electric vehicles annually through 2025 with continued increasing adoption rates until all new sales of light-duty cars, SUVs, and trucks are electric by 2035.

2. Implement a long-term infrastructure development program dedicated to constructing a statewide electric vehicle charging network.
3. Transition to complete electrification of the state government vehicle fleet and incentivize county and local governments to lead by example by electrifying their vehicle fleets.
4. Identify regulatory, funding and financing mechanisms to convert medium- and heavy-duty vehicles to electric, renewable biodiesel and hydrogen fuel sources.

In addition to electrification, complementary policies should be pursued to reduce emissions from the transportation sector as quickly as possible, including:

1. Increase ridership on mass transit.
2. Expand transit-oriented development such as Transit Villages and Rural Town Centers.
3. Incentivize work-from-home programs and flexible work weeks, in order to reduce single-occupancy vehicle trips.
4. Collaborate with other states through regional partnerships and strategies to further reduce emissions from fossil-fueled vehicles.

These complementary policies can achieve near-term, cost-effective emissions reductions while electric transportation infrastructure is built out and technologies mature.

RESIDENTIAL AND COMMERCIAL

Residential and commercial buildings account for the second largest share (26%) of the state’s GHG emissions, accounting for 24.6 MMT CO₂e in 2018. In order to achieve the 80x50 goal, emissions from the residential and commercial building sectors must be reduced by 89% to 2.7 MMT CO₂e by 2050. Space and water heating account for the majority of emissions from these sectors, with 87% of residential buildings and 82% of commercial buildings relying predominantly on natural gas. The least cost scenario modeling performed for the 2019 EMP calculated that 90% of buildings must be converted to 100% clean energy systems to meet the 2050 emission goals (see Figures ES.5 and ES.6).

Figure ES.5. Residential Sector Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).

Converting space heating and hot water applications to electricity, using electric appliances, and improving energy efficiency will bring substantial reductions to the residential sector’s emissions.

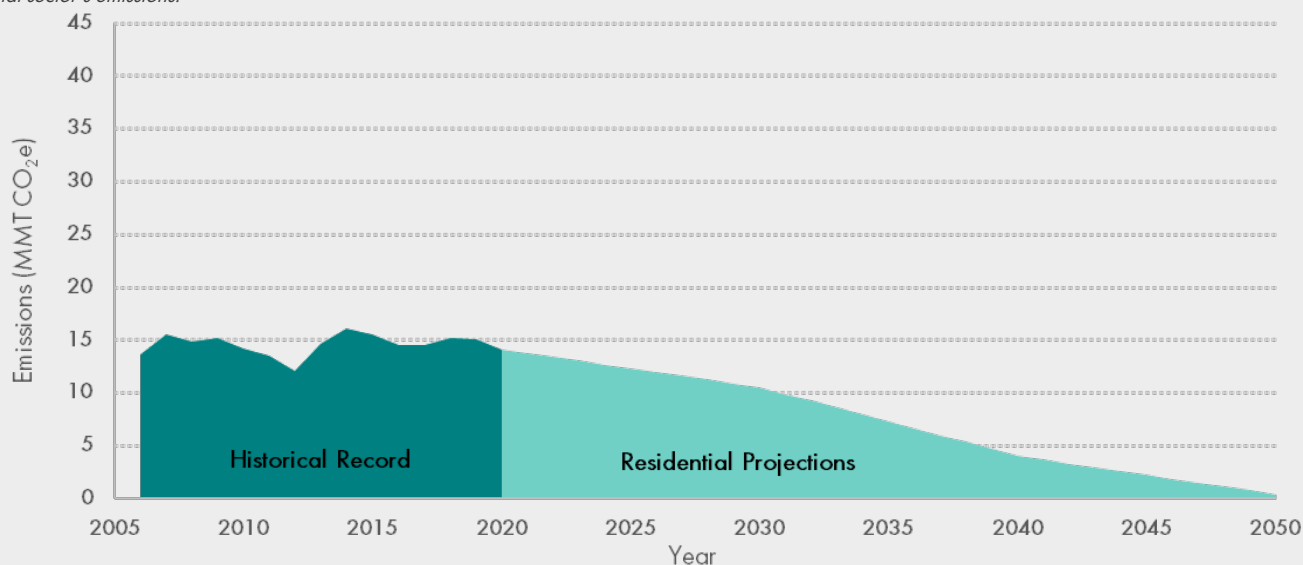
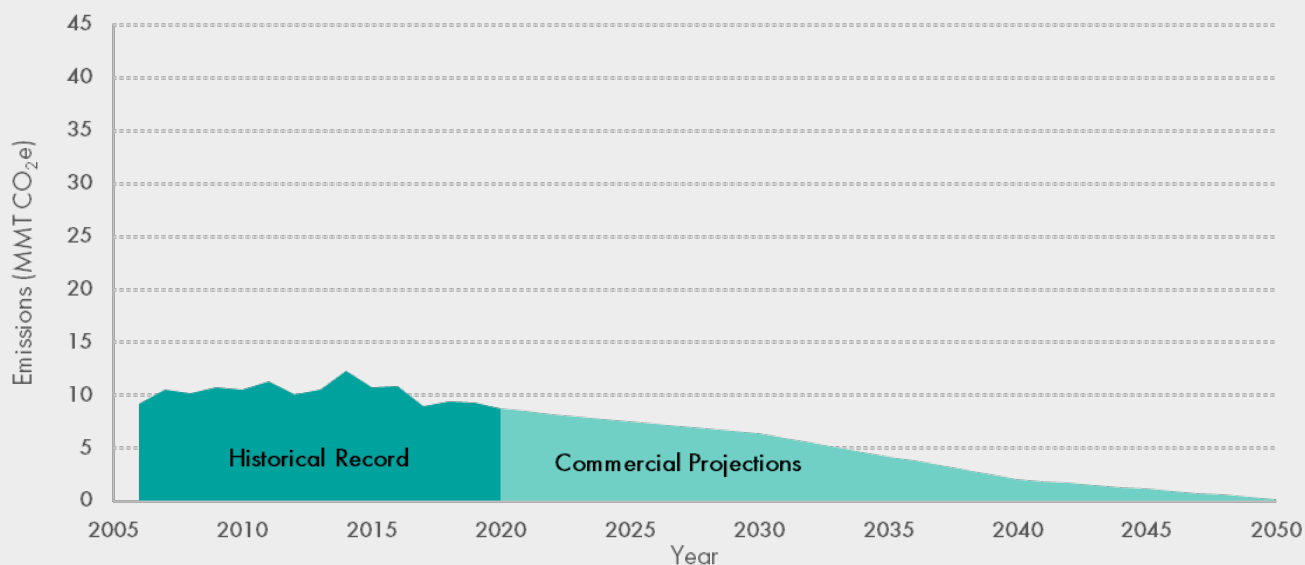


Figure ES.6. Commercial Sector Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).

Applying similar strategies as the residential sector will bring substantial reductions to the commercial sector's emissions.



Achieving the steep reductions of emissions from residential and commercial buildings necessary to meet the 80x50 goal is among New Jersey's most complex challenges, particularly in light of the age of the state's building inventory and its existing fossil fuel-based infrastructure. The 2019 EMP recognizes this complexity, proposing that pilot projects first be used to demonstrate the viability of new technologies, in order to build consumer confidence. Full scale conversion must begin by 2030. To achieve the level of reductions needed, policies requiring net-zero emissions for new construction must be paired with aggressive requirements for electrification of older residential and commercial buildings as soon as practicable. The latter plan should begin with conversion of buildings that currently rely on propane and heating oil (approximately 10% of New Jersey residences). To support a steady conversion of the building inventory, legislation or BPU directives could be pursued to meet the building conversion rates in the 2019 EMP of 22% conversion by 2030, 64% by 2040 and 90% by 2050.

Four primary strategies to reduce GHG emissions in this sector are needed:

1. Develop a Buildings Electrification Roadmap, which provides strategies and concrete timelines for achieving widespread electrification.
2. Prioritize near-term conversion of buildings relying on propane and heating oil, starting no later than 2021.
3. In coordination with the New Jersey Department of Community Affairs (DCA), consider legislation governing all new construction and upgrades to facilitate the transition to a decarbonized building sector.
4. Mandate energy audits in state buildings and encourage/incentivize energy audits in county and municipal buildings.
5. Adopt new construction net zero carbon goals for commercial and residential buildings.

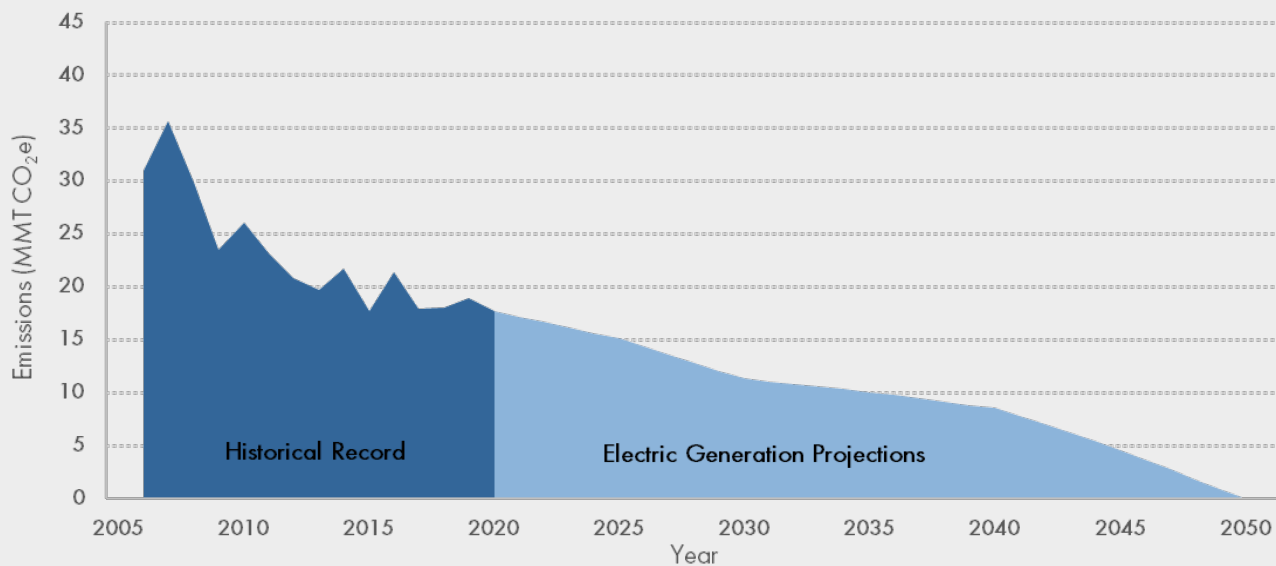
An additional, complementary policy to reduce GHG emissions from the building sector includes the installation of solar thermal technology to increase efficiency in water heating.

ELECTRIC GENERATION

While historically higher emissions from the electric generation sector have been significantly reduced since enactment of the GWRA (largely due to replacement of coal generation with natural gas), this sector remains the third largest contributor to the state's total CO₂e emissions (19%), accounting for 18.1 MMT CO₂e in 2018 (see Figure ES.7). The majority of these emissions are from natural gas fired electric generating units (83%), with coal fired units contributing 11%, and waste-to-energy facilities contributing 6% of the total emissions from this sector.

Figure ES.7. Electric Generation Sector Historical GHG Emissions & Pathway to 2050 (MMT CO₂e).

Deployment of renewable electric generation in tandem with electrification of other sectors will ensure emission reductions are realized against the backdrop of increased electric demand.



To meet both the 80x50 goal and Governor Murphy's goal of 100% net-zero electric generation, emissions from electric generation must be fully decarbonized, dropping to 0 MMT CO₂e by 2050, as described in the 2019 EMP. The EMP projects that renewable power supply must increase from a present-day level of 3.3 GW (Gigawatts) to almost 16 GW by 2030, through an additional 12.4 GW of renewable energy. It is anticipated this will come from development of 3.5 GW of offshore wind and the balance will be supplied from 8.9 GW of in-state solar and renewable energy resources from the PJM region. By 2050 total state renewable energy capacity must reach approximately 60.5 GW, comprised of 32 GW of solar, nearly 11 GW of offshore wind, and almost 18 GW of firm capacity (e.g., low-carbon or carbon neutral fuels) to meet reliability requirements. New Jersey must also adapt and manage its electric grid through the deployment of distributed energy resources, battery storage and other strategies to accommodate the growing demand from the sectors undergoing electrification.

An additional mechanism for limiting CO₂ emissions is the adoption of a Clean Energy Standard, as explained in the 2019 EMP. Given DEP's existing legal authority to regulate the emission of CO₂ as an air pollutant, DEP is currently in the process of evaluating the potential adoption of CO₂ emissions limits for fossil electric generating units, as well as certain segments of the commercial sector. Regulatory options include carbon emission standards or carbon intensity standards (CO₂ per MWh), where emission limits decrease over time.

In sum, in order to meet its 80x50 GHG reduction goals, New Jersey must act swiftly to reduce emissions from the electric power generation sector through a number of actions, including:

1. Pursue the rapid development of renewable electric generation.
2. Implement regulatory limitations on CO₂ emissions.

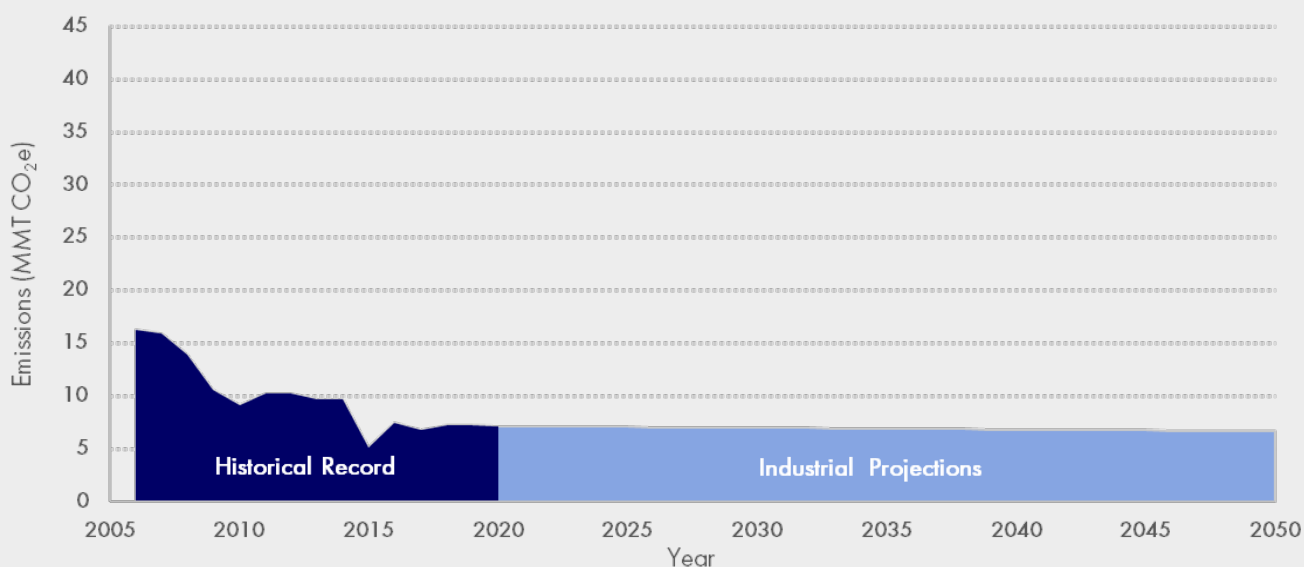
3. Limit reliance upon and development of new fossil fuel-powered electric generating units and transition existing natural gas infrastructure for deployment of alternative low-carbon or carbon neutral fuels.
4. Adapt the electric grid to accommodate distributed energy resources such as solar PV and battery storage, and to support the increasing demand from energy sectors undergoing electrification.
5. Carefully manage loads and improve efficiency to reduce demand and optimize energy use.
6. Retain existing carbon-free resources, including the state’s three nuclear power plants.

INDUSTRIAL

Despite its smaller emissions profile as compared to other sectors, New Jersey’s industrial sector is still a significant source of GHG emissions. In 2018, New Jersey industries emitted 7.2 MMT CO₂e, accounting for 7% of the state’s GHG emissions. Industry can reduce emissions through increased energy efficiency and electrification strategies, as outlined in the 2019 EMP for all energy users. DEP estimated reductions based on energy efficiency of non-process emissions consistent with the Clean Energy Act. These estimates project a 7% reduction of emissions from this sector, to 6.7 MMT CO₂e by 2050 (Figure ES.8).

Figure ES.8. Industrial Sector Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).

Modest industrial emission reductions are projected due to energy efficiency improvements.



Reductions can be achieved through expanded adoption of energy efficiency and renewable energy measures, as well as conversion to electrified alternatives. In 2019, a BPU study found that process and non-process measures related to motor systems, interior lighting, process heating, and space heating represented opportunities for energy efficiency (Optimal Energy, 2019).

Effective emissions reduction strategies for the industrial sector include:

1. Facility-wide energy audits, benchmarking and commitments to energy efficiency upgrades and practices.
2. Investigate opportunities to reduce industrial CO₂ emissions through regulations.

Complementary policies should also be pursued to facilitate near term emission reductions while supporting economic growth, including:

1. Expand distributed renewable energy. DEP estimates suggest that 29,800 acres of rooftop and non-impervious land area is available at industrial facilities to host approximately 10 GW of solar capacity—enough to power up to 1 million homes. These emissions reductions would be accounted for in the electric generation sector.
2. Upgrade diesel vehicle and equipment fleet to reduce onsite emissions of fine particulate and black carbon.

WASTE AND AGRICULTURE

The waste and agriculture sectors together make up 5% of the state’s GHG emissions, totaling 5.7 MMT CO₂e in 2018. Waste management generated 5.3 MMT CO₂e, while agricultural activities contribute a modest 0.4 MMT CO₂e. Emissions from the waste sector primarily consist of methane and CO₂ emissions from the decomposition of organic matter from landfills and wastewater treatment facilities. Without near term policy action, emissions from waste and wastewater are projected to increase at a rate of 0.43% annually, to 6.0 MMT CO₂e in 2030, and up to 6.5 MMT CO₂e by 2050.

To fulfill the 80x50 mandate, emissions from these sectors must be reduced by 15% (0.9 MMT CO₂e) to 4.9 MMT CO₂e by 2050, based on projections developed by the DEP. While small emissions reductions can be gained by implementing effective agricultural land management practices, the bulk of emissions reductions from this sector can be realized by enhanced waste management practices through development of a circular economy of waste handling. This process incorporates food waste separation at the source, introducing that waste as a feedstock for renewable biogas production, to produce net zero electricity. Collectively these strategies can reduce 2050 waste emissions by 1.6 MMT CO₂e (Figure ES.9).

Figure ES.9. Waste Sector Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).

Emissions from waste management decline through food waste reduction and recovery.

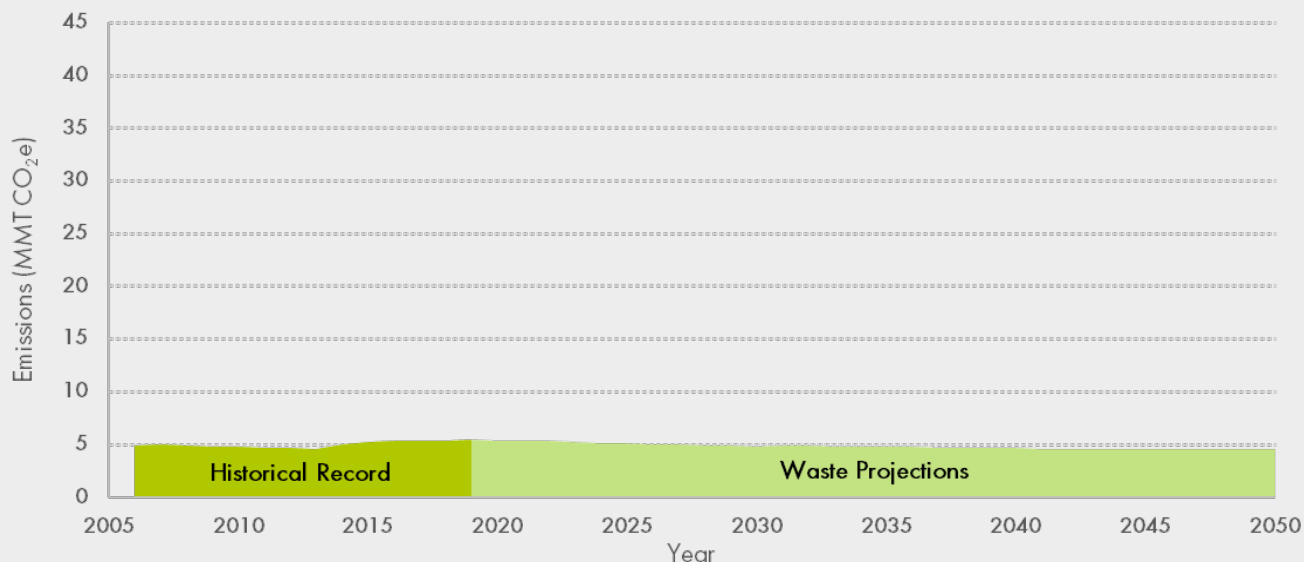
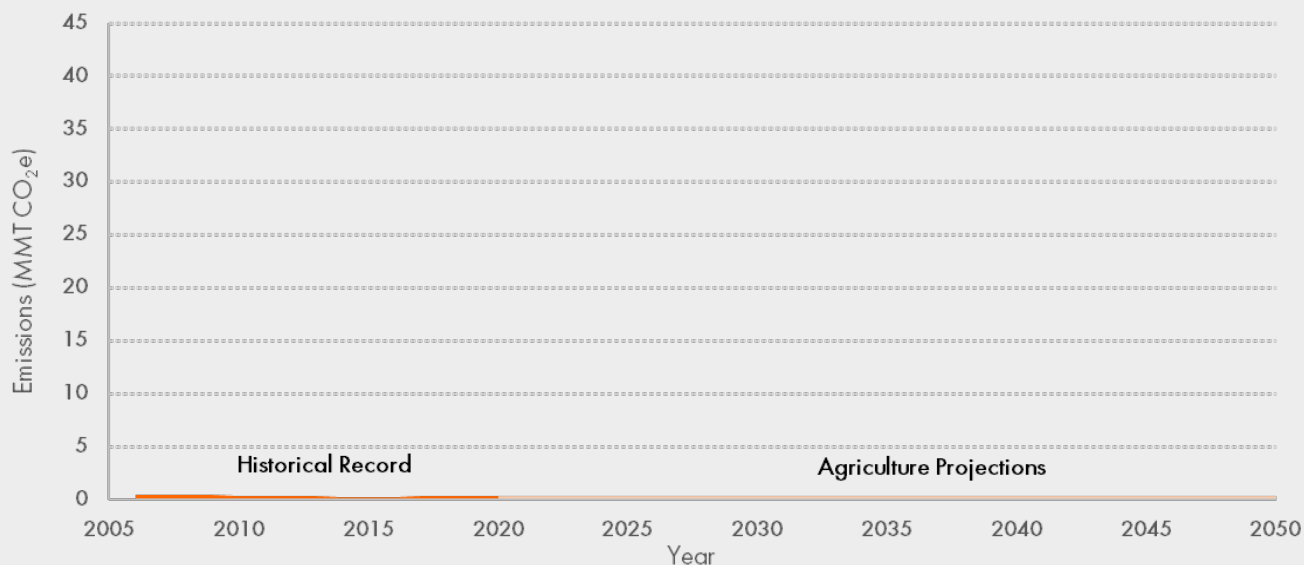


Figure ES.10. Agricultural Sector Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).*Emission benefits may be realized through improved land management.*

To reduce and prevent future growth of emissions from the waste and agriculture sectors:

1. Adopt regulations to implement requirements of the Food Waste Recycling and Waste-to-Energy Production Act (P.L.2020, c.24.).
2. Promote the development of food waste processing facilities and the development of markets and best practices for sectors of the economy generating food waste.
3. Promote and support energy recovery efforts from wastewater treatment operations. Expand on successful demonstration projects that introduce food organic wastes into the wastewater treatment process, which enhances energy content of digester gas that is then utilized for onsite energy and process heat.
4. Expand education and outreach efforts about climate friendly agricultural practices, which enhance soils and reduce the production of GHGs.

SHORT-LIVED CLIMATE POLLUTANTS

Short-lived climate pollutants (SLCPs) are a category of gaseous and particulate materials that remain in the atmosphere and effect climate for a short period of time (weeks to years) compared to CO₂ but have potent climate impacts. When released into the atmosphere, SLCPs have extremely high global warming effects, even when released in relatively small amounts. The short-lived climate pollutants discussed in this report are the largest contributors to GHG emissions and include two gaseous pollutant subcategories (methane and halogenated gases) and one particulate subcategory (black carbon). Methane from waste, agriculture and natural gas pipelines along with halogenated gases combine to a total of 13.3 MMT CO₂e or 12.7% of the state's total climate pollutant emissions in 2018. Black carbon emissions contributed another 2.7 MMT CO₂e or 2.5%.

SLCPs consist of methane gas from transmission and distribution of fossil fuels, halogenated gases (mostly HFCs) from refrigeration and heating/cooling equipment, and black carbon from biomass and fossil fuel burning. Under the "Business-as-Usual" scenario, emissions growth due to increased use of these products is predicted for the two gaseous subcategories (methane from natural gas transmission and distribution and HFCs) unless action is taken to reduce emissions.

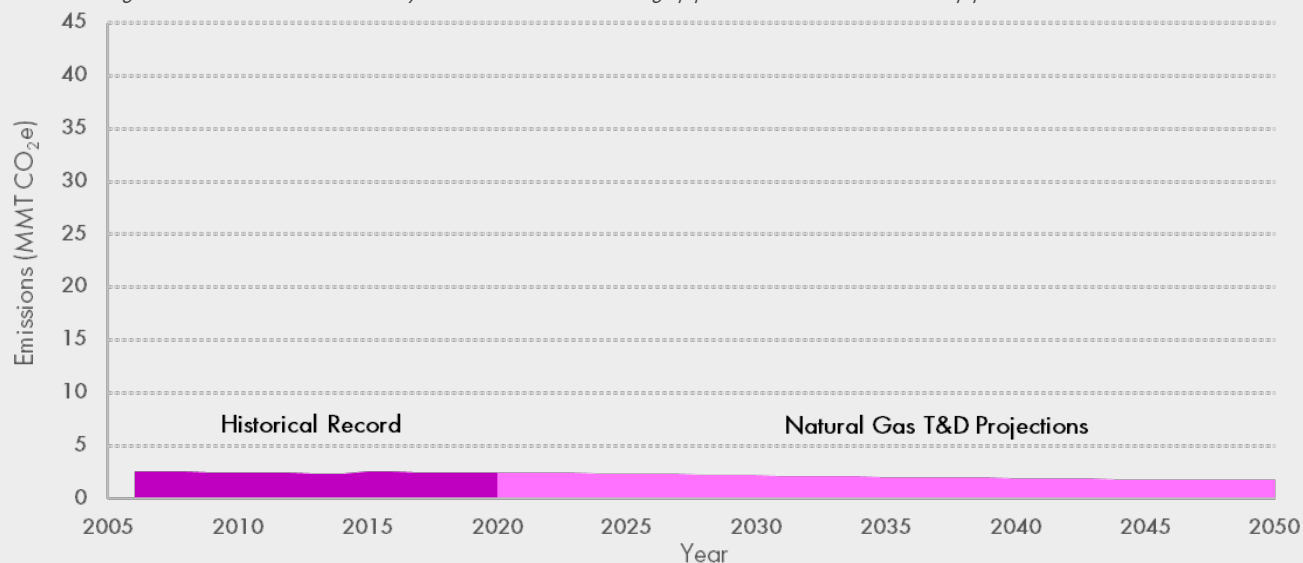
Black carbon emissions are projected to decline as a result of New Jersey’s successful efforts to reduce fine particulate emissions (PM2.5) from various diesel vehicle types. However, additional targeted strategies to reduce black carbon emissions from the transportation sector are appropriate, especially in low-income and minority communities located along traffic corridors, nearby ports and other sources of black carbon emissions.

While New Jersey has made progress in reducing SLCP emissions, more actions are needed within each emission subsector.

Methane reductions can be achieved by requiring advanced leak detection in natural gas distribution systems and upgrading such infrastructure as appropriate as New Jersey transitions away from its dependency on natural gas. DEP projects that a 0.6 MMT CO₂e reduction in methane emissions can occur by 2050 (Figure ES.11).

Figure ES.11. Natural Gas T&D Historical GHG Emissions & Projected Pathway to 2050 (MMT CO₂e).

Emissions from natural gas transmission and distribution systems can be lowered through pipeline modernization and non-pipeline solutions.

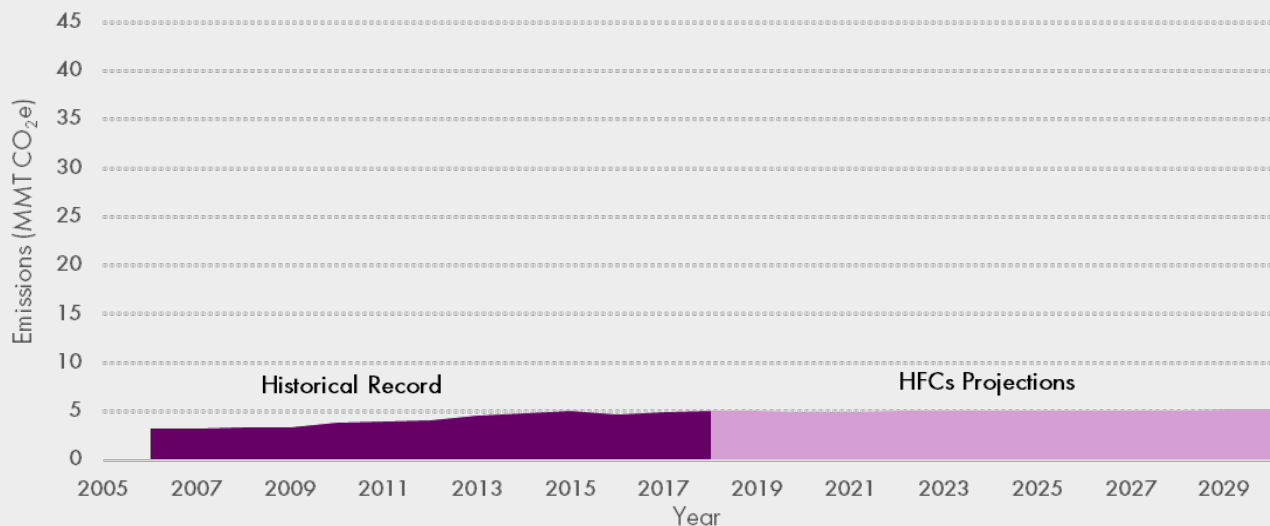


Emissions from HFC’s will remain a challenge as New Jersey works to electrify residential and commercial buildings, as equipment that utilizes these gases for electric powered heating and cooling increases.

Without new strategies to control halogenated gases, DEP projects that HFC emissions could reach 13.7 MMT CO₂e by 2050. However, due to recent legislative action and industry efforts to identify and implement lower global warming potential product replacements, DEP projects 8.6 MMT CO₂e of HFC emissions can be avoided by 2050 through the adoption of a Refrigeration Management Program and the implementation of the HFC Law (P.L. 2019, c.507) (Figure ES.12).

Figure ES.12. Halogenated Gases Historical Emissions & Projected Pathway to 2030 (MMT CO₂e).

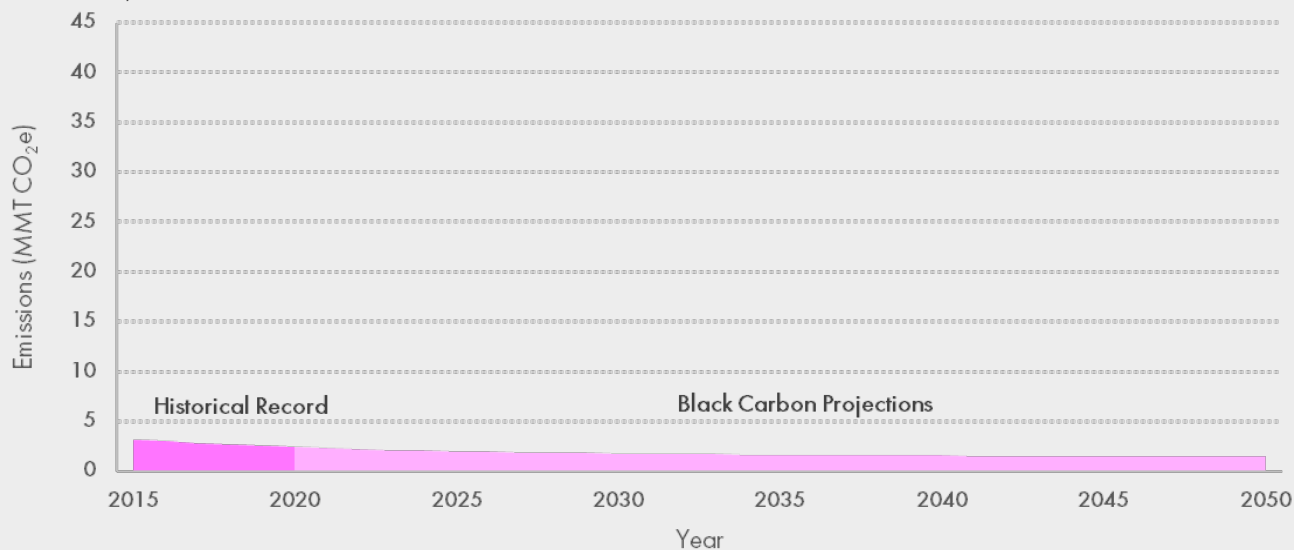
HFCs are the fastest growing source of GHGs emissions in the state, strategies to eliminate releases and finding low global warming potential substitutes will hold emissions in check through 2030.



New Jersey will continue to reduce black carbon emissions as cleaner combustion engines enter the market and as the state transitions away from fossil fuels. During this transition, New Jersey should also pursue the regulation of captive non-road sources of black carbon; for example, construction equipment and other on-site vehicles that support operations, which would address localized concerns of PM_{2.5} and black carbon. Undertaking these transitions, DEP projects that black carbon emissions would total 0.75 MMT CO₂e by 2050 (Figure ES.13).

Figure ES.13. Black Carbon Historical Data & Projected Pathway to 2050 (MMT CO₂e).

Black carbon emissions will continue to decline due to as a result of cleaner burning diesel engine deployment and vehicle electrification. Some other sources such as wildfires are difficult to predict and were assumed constant.



In sum, to reduce short-lived climate pollutants, New Jersey should:

1. Reduce methane emissions from natural gas distribution systems through an aggressive transition away from the use of fossil fuels in the transportation, buildings, electric generation and industrial sectors.

2. Implement regulations that phase-out the use of high global warming potential halogenated products, while requiring enhanced leak detection and end of life recycling.
3. Implement programs and policies that prioritize utility efforts to upgrade or, where practical, retire leaking natural gas distribution infrastructure and expand the use of leak detection capabilities to identify, prioritize and replace leaking equipment to reduce methane leaks.
4. Pursue regulations that require expedited replacement or retirement of the most polluting off-road diesel equipment to reduce fine particulate (and black carbon) emissions.

CARBON SEQUESTRATION

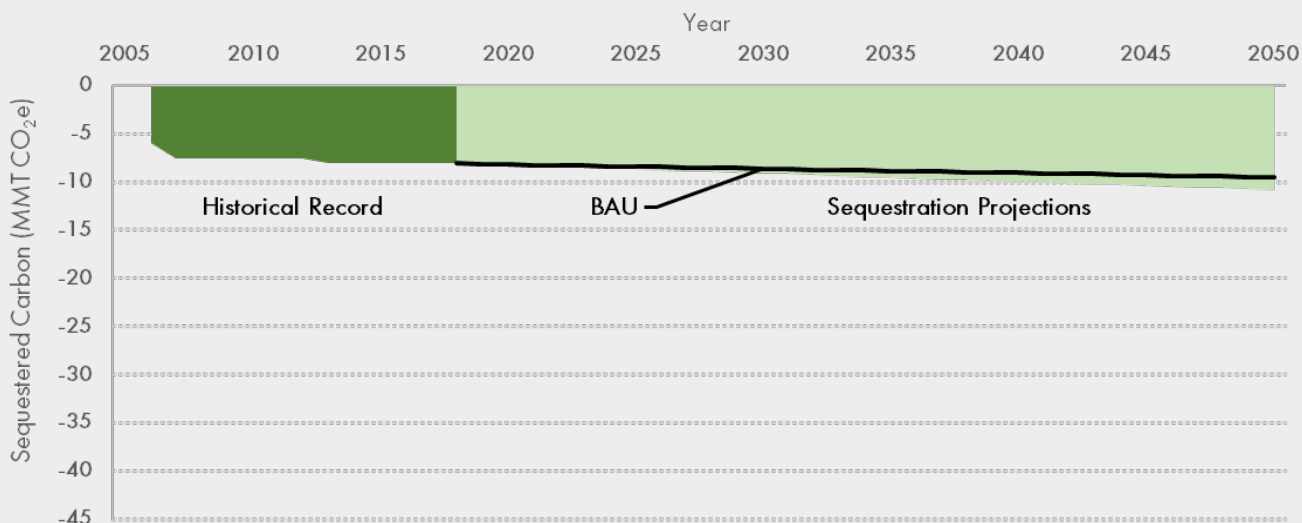
Natural carbon sinks are an important component of New Jersey’s GHG inventory and management system. Removal of carbon from the atmosphere and storing it in natural sinks, a process referred to as carbon sequestration, can help to offset existing emissions. New Jersey’s land sector sequestered the equivalent of 8.1 MMT CO₂e (8% of New Jersey’s net emissions) in 2018. During the nearly 30-year period from 1986 to 2015, DEP land cover data shows a loss of over 360,000 acres to development consisting mostly of agricultural lands, wetlands, forests and woodlands. Continued development of these natural resources will reduce the state’s existing carbon sinks.

Carbon sequestration can be enhanced through improved land management practices, including managing forest health, promoting reforestation, restocking woodlands, growing cover crops, and introducing tidal flows back into salt marsh systems. New Jersey must also protect its existing carbon pools by taking action to avoid the loss of natural lands, preserve marsh migration pathways, and defend existing carbon sinks from the dangers of wildlife, disease, pests and inundation.

Collectively, DEP projects that strategies to conserve and protect the state’s natural carbon sinks could increase carbon sequestration up to 33% to 10.8 MMT CO₂e by 2050 (Figure ES.14). This optimistic projection, however, would require the use of all currently available open space for sequestration, requiring a major transition in New Jersey’s current land use laws and practices. To better inform sequestration and related land use planning, a statewide carbon sequestration plan is needed to establish a 2030 and 2050 target for carbon sequestration and identify priority actions for achieving this goal. Program and policy changes, such as the creation of a privately held woodlands and forest conservation program and expansion of urban and community forestry programs could be primary components of a sequestration plan. These efforts could also be enhanced through legislative initiatives to minimize forest loss during land development by making forest identification and protection an integral part of the site planning process.

Figure ES.14: Historical Sequestration Data & Projected Pathway to 2050 (MMT CO₂e).

Natural sinks remove climate pollutants from the air, lowering the state’s net emissions. Protecting and maintaining these sinks is vital to achieving the 80x50 goal.



The following strategies would protect and enhance New Jersey’s natural ability to sequester carbon, furthering the state’s progress in meeting the 80x50 goal:

1. Develop a statewide carbon sequestration plan that establishes a 2030 and 2050 target for both blue carbon and terrestrial carbon sequestration.
2. Develop and adopt minimum forest cover objectives for land development, including requirements for forest stand delineations and implementation of forest conservation plans.
3. Develop a conservation program for privately held woodlands and forests.
4. Expand the Urban and Community Forestry program by increasing accreditation for all municipalities and boards of education.
5. Provide additional incentives and technical tools to assist communities in forestry management and climate friendly agricultural practices.
6. Monitor sequestration results of current pilot blue carbon projects and utilize data to inform future project selection criteria.

CONCLUSION

New Jersey can meet its goal of reducing GHG emissions to 80% below 2006 levels by 2050—protecting our people, economy, and environment from the worsening impacts of climate change to which our state is uniquely vulnerable. Reaching our 80x50 goal requires planning and collaboration across all economic sectors, levels of government, political boundaries, and administrations, all fixed on a carbon neutral future. Achieving this goal depends upon a swift and decisive transition away from our reliance on fossil fuels, accomplished through adaptive policies that also ensure reliability and remain responsive to the scope and pace of efforts to electrify the transportation and building sectors while expanding renewable energy sources. However, only by working in concert across time and economic sectors can we implement the long-term, structural changes to how we generate and use energy, build our homes and businesses, operate our industries, develop and preserve our land, grow our food, manage our waste, and transport our people and products.

The following chapters assess New Jersey’s GHG reduction progress by emissions sector and provides recommendations for how we can continue this important work together in the years to come. While these recommendations are not intended to be exhaustive, they represent the latest thinking of the New Jersey Department of Environmental Protection, whose people and programs remain committed to reducing and responding to climate change as a core component of the Department’s mission of protecting public health and the environment.

WORKS CITED

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P.L. 2007 c.112; P.L. 2018 c.197. (2018). *Global Warming Response Act*. Retrieved from <https://lis.njleg.state.nj.us/nxt/gateway.dll?f=templates&fn=default.htm&vid=Publish:10.1048/Enu>

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EXECUTIVE ORDER NO. 274

WHEREAS, global atmospheric warming, caused largely by the burning of fossil fuels, constitutes one of the greatest long-term threats currently facing humanity and is leading to significant changes in climate patterns here in New Jersey, across the United States, and around the world, resulting in rising sea levels, increased flooding, more frequent and severe extreme weather events, and numerous other adverse environmental impacts; and

WHEREAS, New Jersey's communities and economy are uniquely vulnerable to the devastating impacts of climate change, with potentially disastrous consequences for public health and safety, as well as for the social and economic vitality of the State; and

WHEREAS, minority and low-income communities are disproportionately affected by climate change, including by the health effects of higher temperatures and increased air pollution, and by the displacement of coastal and low-lying neighborhoods from sea level rise and flooding; and

WHEREAS, reducing the severity of adverse climate change impacts requires steep and immediate reductions in greenhouse gas emissions on an economy-wide basis; and

WHEREAS, traditional methods of energy production that rely on the burning of fossil fuels release harmful emissions of greenhouse gases, which in turn contribute to global climate change; and

WHEREAS, it is the policy of this State that, as a key part of its efforts to curtail the serious impacts of global climate change caused by greenhouse gas emissions, New Jersey must pursue a just and smooth transition away from its reliance on fossil fuels as a primary energy source and build a stronger and fairer economy that relies primarily upon clean and renewable energy sources; and

WHEREAS, on July 6, 2007, the State enacted the Global Warming Response Act ("GWRA"), N.J.S.A. 26:2C-37, and updated it in 2019, establishing a statewide goal of reducing greenhouse gas emissions to 80 percent below 2006 levels by 2050; and

WHEREAS, in one of my earliest actions as Governor, I signed Executive Order No. 7 (2018) authorizing the State to rejoin the Regional Greenhouse Gas Initiative, a cooperative program to cap and reduce carbon dioxide emissions from power plants in the participating states, and to begin limiting carbon dioxide emissions from New Jersey's power sector, while simultaneously allowing New Jersey to make transformational investments in clean energy to further reduce greenhouse gas emissions; and

WHEREAS, Executive Order Nos. 8 (2018) and 92 (2019) emphasized the vital importance of offshore wind energy to aid in the State's just and smooth transition to a clean energy economy, setting a goal of procuring 7,500 megawatts of the State's energy from offshore wind by 2035, which will further reduce greenhouse gas emissions; and

WHEREAS, in Executive Order No. 23 (2018), in recognition of the disproportionate exposure of New Jersey's low-income communities and communities of color to unacceptably high levels of environmental pollution, I directed all Executive Branch departments and agencies to consider environmental justice in implementing their responsibilities; and

WHEREAS, pursuant to Executive Order No. 28 (2018), on January 27, 2020, the New Jersey Board of Public Utilities issued an update to New Jersey's Energy Master Plan ("EMP") that provided a comprehensive, forward-thinking blueprint for a just and smooth transition from reliance on fossil fuels that contribute to climate

change to 100 percent clean energy sources on or before January 1, 2050, with the EMP next scheduled to be updated in 2022; and

WHEREAS, in Executive Order No. 100 (2020), I directed the Department of Environmental Protection ("DEP") to adopt regulations to protect against climate threats, including establishing a greenhouse gas monitoring and reporting program and establishing criteria to reduce emissions of carbon dioxide and other climate pollutants; and

WHEREAS, on September 18, 2020, I signed a landmark environmental justice law, N.J.S.A. 13:1D-157 to -161, which recognizes the disproportionate exposure to pollution faced by New Jersey's low-income communities and communities of color and requires DEP to adopt regulations to deny or condition permits for certain facilities that would cause or contribute to adverse cumulative environmental and public health stressors in such communities; and

WHEREAS, pursuant to Executive Order No. 89 (2019), on October 12, 2021, the Interagency Council on Climate Resilience issued the first Statewide Climate Change Resilience Strategy, laying out a vision for building a stronger, fairer, more resilient New Jersey that proactively addresses the expected effects of climate change in the State; and

WHEREAS, in Executive Order No. 221 (2021), I established the Governor's Office of Climate Action and the Green Economy ("OCAGE") to coordinate policymaking across the Executive Branch with respect to climate change, and created the New Jersey Council on the Green Economy to support the transition to an equitable clean energy economy and the creation of innovative and sustainable job opportunities; and

WHEREAS, New Jersey's first Scientific Report on Climate Change, issued by DEP on June 30, 2020 pursuant to Executive Order No. 89 (2019), described impacts of climate change that are presently occurring in New Jersey as a result of increased atmospheric levels of greenhouse gases, including increasingly mild winters and related ecosystem harms, more intense rainfalls, and more severe flooding, as well as anticipated impacts including sea level rise, increased air pollution, more severe droughts, and damage to agricultural and marine resources, all of which threaten public health, safety, and the State's infrastructure and economy; and

WHEREAS, DEP's October 15, 2020 Global Warming Response Act 80x50 Report ("80x50 Report"), prepared in accordance with the GWRA, N.J.S.A. 26:2C-41, found that, without steep and permanent reductions in greenhouse gas emissions in the next several years, New Jersey will experience significant adverse effects of climate change; and

WHEREAS, the 80x50 Report further found that very substantial emissions reductions in all areas of New Jersey's economy, and particularly in the transportation, residential, commercial, and electric generation sectors, will be needed to meet the goal of an 80 percent reduction in emissions by 2050; and

WHEREAS, the August 6, 2021 Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change, which the United Nations Secretary General called "a code red for humanity" and which describes the present effects of climate change on every inhabited region of the world, emphasizes the need for deep reductions in greenhouse gas emissions in the coming decades and underscores the need for immediate action; and

WHEREAS, emissions reductions in the next decade are critical to reducing the severity of adverse impacts of climate change; and

WHEREAS, it is vital that, here in New Jersey, we take decisive action in the immediate term to ensure that we remain on track to meet our longer-term emissions reduction goals and protect our people, economy, and environment from the worsening impacts of climate change; and

WHEREAS, effective action to achieve the necessary emissions reductions requires a coordinated whole-state approach that addresses all sectors of the economy, including transportation, electric generation, and residential and commercial building energy use, in an integrated manner; and

WHEREAS a concrete, near-term target for greenhouse gas emissions reductions will help focus our efforts and ensure that we take the critical actions that are needed today;

NOW, THEREFORE, I, PHILIP D. MURPHY, Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. It is the policy of the State to reduce greenhouse gas emissions to 50 percent below 2006 levels by the year 2030.

2. The OCAGE shall coordinate the efforts of Executive Branch departments and agencies to further develop and implement the objectives and strategies detailed in the EMP and 80x50 Report or otherwise established in order to accomplish the policy set forth in this Order.

3. For purposes of this Order, "Executive Branch departments and agencies" shall mean any of the principal departments in the Executive Branch of State government and any agency, authority, board, bureau, commission, division,

institution, office, or other instrumentality within or created by any such department, and any independent State authority, commission, instrumentality, or agency over which the Governor exercises executive authority, as determined by the Attorney General.

4. Nothing in this Order shall be construed to confer any legal rights upon entities whose activities are regulated by State entities, nothing shall be construed to create a private right of action on behalf of any such regulated entities, and nothing shall be used as a basis for legal challenges to rules, approvals, permits, licenses, or other action or inaction by a State entity. Nothing in this Order shall be construed to supersede any federal, State, or local law.

5. This Order shall take effect immediately.

GIVEN, under my hand and seal this
10th day of November,
Two Thousand and Twenty-one,
and of the Independence of
the United States, the Two
Hundred and Forty-Sixth.

[seal]

/s/ Philip D. Murphy
Governor

Attest:

/s/ Parimal Garg
Chief Counsel to the Governor