

## **Empower NJ's Comments 3.6.20**

### **Re: NJDEP's Monitoring & Reporting of Greenhouse Gases**

EmpowerNJ, a coalition of more than 90 environmental, community and faith groups, submits the following comments with respect to DEP's regulations concerning the monitoring and reporting of greenhouse gases (GHG's). Comprehensive and well-crafted regulations are essential if New Jersey is to meet its clean energy goals and reduce GHG's, which Executive Order 100 (EO100) defines to include short-lived climate pollutants such as black carbon, hydrofluorocarbons and methane. DEP's reporting rules must ensure that the State's inventory of GHGs be complete, consistent, transparent and accurate.

We understand that DEP's rulemaking on this and other climate change matters is complex and cannot be done without great thought and effort. We also recognize that there are many dedicated DEP professionals, who are committed to doing this right. Unfortunately, DEP's approach to promulgating these rules, set out at the February 21, 2020 stakeholder meeting, does not go far enough or fast enough especially considering that the science dictates we must take emergency action to cut GHG's by 45% by 2030. It is not only inadequate, vague and inconsistent with best practices, but also plainly violates the Global Warming Response Act (the "GWRA"), the 2019 New Jersey Energy Master Plan ("EMP") and EO100 in numerous respects. All of DEP's climate change rules must be adopted within the Governor's current term to avoid the political risk that they never get finalized. We address some of the proposed program's principal shortcomings, and the aspects that we support, below.

**1. The monitoring regulations must be in place by January 2021 as the law requires, if not before then.** The July 2019 amendment to the Global Warming Response Act, P.L. 2019, chapter 197, requires DEP to adopt regulations regarding the monitoring and reporting of Statewide greenhouse gases within 18 months of the passage of the Act. Thus, DEP's statutory deadline for completing the rules is January 2021, at the very end of the Governor's term. It is also worth noting that DEP had the authority to adopt these regulations since 2007, when the GWRA was first passed, and it could have, and should have, started this task at least 2 years ago at the beginning of this Administration.

DEP stated at the February 21, 2020 stakeholder meeting that it is not even planning on having its regulations in place until June 2021, at least 5 months beyond the statutory deadline. DEP's lack of urgency is unlawful and unacceptable. We are in a climate crisis where every day counts and time is our biggest enemy.

Numerous other states, such as California, Washington and Hawaii have long-established rules for reporting and monitoring GHGs. DEP does not have to reinvent the wheel to establish rules for New Jersey. The statutory January 2021 deadline is already longer than needed. DEP must comply with the GWRA and adopt final rules within this calendar year.

We understand DEP would like to have more information before finalizing this rule. While more information is always desirable, that is not a reason for delaying the rules; DEP has enough information, that there will always be more information to be had and rules can always be modified later. We are in a climate emergency., DEP can, should and must adopt rules within the statutory deadline.

Finally, and importantly, it is imperative that the rules be finalized within the Governor's first term. There is no guarantee that there will be a second term and the failure to finalize rules within the first term presents the risk that no rules will be adopted.

**2. DEP must monitor and report on all potential new fossil fuel projects when reporting on GHGs.** GHG inventory reports must, of course, include the impact of recently built frack gas infrastructure and projects in progress (e.g. Sewaren 7 frack gas plant, Rivervale South to Market and SRL pipelines, Lambertville East and Roseland compressor station expansions). But to be useful, such reports must also include estimates of emissions for currently proposed frack gas projects (e.g. PennEast and NESE pipelines, NJ Transit frack gas plant, Gibbstown LNG). Our previous submissions to the DEP have shown that if put in operation, these frack gas projects could increase GHGs by 32%, a figure which DEP agreed was very reasonable. The PennEast pipeline alone could increase GHGs by as much as 20% annually. DEP (and the public) must be able to know how proposed projects would affect the ability of the State to meet our GWRA goals. DEP must identify, either as part of its inventory report or concurrent with it, GHG emissions from potential new sources.

**3. Methane must be monitored.** Methane has a global warming power 86 times that of CO2 over a 20 year period. Goal 5.4.4 of the Energy Master Plan states that “[e]liminating methane leaks from New Jersey’s gas pipeline system is crucial to meeting the 80 x 50 in GHG’s.” The EMP further states that “methane emissions from natural gas transmission and distribution line leaks account for approximately 30% of the statewide methane emissions” and that actual methane leaks are 60% higher than what EPA has been estimating. Id.

DEP is legally required to measure and monitor methane emissions along with CO2. DEP’s position that it will delay the process of monitoring and fully reporting on methane emissions violates the law and flies in the face of the State’s energy policy and common sense. As the EMP specifically states, the GWRA **directs** DEP to monitor these emissions. Id. DEP must determine the volume of methane emissions from leaks and the combustion process. The most accurate means of gathering that information is through atmospheric real-time testing. The state’s Amnet system can be expanded to measure emissions of methane. DEP must also ensure that in known areas of potential methane leaks such as compressor stations and gas metering facilities, those leaks are monitored and reported. Unless real-time atmospheric/air sampling, using current best practices, is done across the state, methane emissions will not be verifiable. Information disclosing GHG emissions, and the methodology for measuring them is essential to the process of achieving clean air and reducing harmful GHG emissions that undermine New Jersey’s climate goals.

**4. Black carbon must be monitored now.** DEP is also required by law and Executive Order 100 to monitor and measure super-pollutants such as black carbon (soot), which is a million times more potent as a GHG than CO<sub>2</sub> over its lifetime. Inexplicably and unlawfully, DEP is delaying even monitoring and reporting on black carbon, hydrocarbons and perfluorocarbons. DEP must adopt monitoring rules and those rules must include a monitoring network for black carbon hot spots such as California's rules require.

**5. GHG estimates must be based on rigorous protocols and best practices.** While starting with the industry results reported to the federal government is reasonable, they are incomplete and sometimes unreliable. For example, as noted above, methane emissions from oil and gas production have been underreported by the Environmental Protection Agency (EPA). An article in the February 19, 2020 edition of Nature, discussing measurement of methane emissions, reports that scientists have likely overestimated natural geological sources of GHGs, making human source emissions much higher than previously estimated. Human caused emissions have been underestimated by between 25 to 40 percent of recent estimates.

Fossil fuel producers and users have a vested interest in employing formulas that underestimate emissions. Hawaii has addressed the quantitative uncertainty of estimates for statewide emissions by using the IPC Approach 2 uncertainty estimation methodology, which is considered the more robust approach of the two approaches provided by IPCC. See Hawaii Greenhouse Gas Emission Report for 2016, published December 2019. DEP must adopt rigorous best practice protocols for estimating GHGs. When estimates are used, the process for producing these estimates must also be clearly explained.

GHG values must be based on both frequent air sampling at many locations (especially EJ communities) and point source emission expectations. BPU and DEP processes including actual air sampling (including actual GHG emissions from monitored sources) must be reviewed and improved as needed to ensure accurate and credible reports.

**6. Terrestrial Carbon Sequestration should be removed from total GHG computations.** The DEP value of terrestrial carbon sequestration is very suspect. In 2009 it was estimated to be 7.6MMT and in 2018 it was estimated as 8.1MMT despite years of development and construction which has cleared many acres of trees in NJ. In addition, NJDEP has been logging our public forests for a number of years which, while releasing increasing amounts of carbon is also reducing future sequestration. Overall, New Jersey has 350,000 acres of forest managed by the state. The NJDEP Fish and Wildlife plan is to log 10% of this area, which would increase GHGs by 472,500 metric tons and decrease future sequestration by a roughly equivalent amount each year. This logging program is only one piece of the total land use issue. Every year many acres of trees are lost to normal development. Thus the validity of the 8.1MMT/year value for land sequestration is very suspect and the methodology and associated

measurements and estimates that go into this value must be revisited and demonstrated to be valid.

Since this value is difficult to estimate it should be removed from total GHG estimates that are based on more accurate data and the NJDEP should set targets in the GWRA that reflect these more accurate GHG estimates. A separate effort should be made to measure and find ways to increase terrestrial carbon sequestration.

**7. All significant GHG sources must be measured while pursuing efforts to constantly improve accuracy.** Inventory, reporting, and monitoring must not only include emissions from the transportation and electricity sectors but also commercial and industrial, residential, agricultural, and manufacturing sectors. DEP's inventory (<https://www.nj.gov/dep/ages/oce-ghgei.html>) must be clarified to ensure no GHG sources are omitted and all are accurately counted. While it is reasonable to start by measuring the largest sources of GHGs, DEP must continually examine sources such as natural and human caused fires, biomass and state approved logging, which collectively produce significant GHG emissions, but are not being monitored or estimated today.

While there are many sources of GHG estimations that are too small to measure individually, the collective impact from these small sources must be measured or at least estimated with assumptions that are reasonable and transparent.

**8. A 20 year time frame must be used.** DEP's GHG measuring and reporting process must utilize the 20 year timeframe for methane, black carbon, HFC's, and all other short-lived climate pollutants as required by the new law Gov. Murphy just signed last month. **Cite the law.** Otherwise, GHGs will be undercounted. For example, the GHG data showing recent reductions from converting from coal to gas do not count all GHGs because they use the GWP100 factor and therefore show less GHGs from gas than are really occurring.

In line with the strategy to go after the largest sources of GHG first, NJDEP must also consider creating regulations to prioritize reductions in the same way. Since methane has a global warming power of 86 over a 20 year period compared to the CO2 global warming power of 1, every molecule of methane prevented from entering the atmosphere is 86 times more effective in reducing the impact of climate change than that of a CO2 molecule.

**9. GHG reports must be produced at least semi-annually** Given the rapid decreases needed in GHGs to make NJ's targets, DEP must semi-annually report GHG emissions to determine if plans are working and not have to wait a full year or more before taking action on the "latest" numbers.

**10. Penalties must be assessed for providing inaccurate data.** By necessity, the DEP must rely in substantial part on the data provided by fossil fuel providers and users. The regulations must provide for penalty and fines for inaccurate or incomplete reporting. Washington State's rules provide for this and so should ours. **WAC 173-441-090**

**11. DEP must be transparent.** *Transparency* is of paramount importance in order to produce credible results. The bases for all reports and estimates (including calculations, formulas and algorithms) must be made publicly available. Results that vary widely from period to period, such as the ones described immediately below, must be explained. When estimates are used, the process for producing these estimates must be clearly explained. GHG values must be based on both frequent air sampling at many locations (especially EJ communities) and point source emission expectations. When estimates are used, the process for producing these estimates must be clearly explained

**12. DEP must use current and accurate data.** There have been numerous instances where the DEP and BPU have put out materially conflicting data without explanation. For example, 2016 emissions from transportation were reported in the 2019 draft EMP as 47MMT and the IEP report showed them as 43MMT and the number for 2018 shown in the GHG stakeholder meeting was 40.6MMT. Similarly, emissions reported for electric generation from these same sources varied from 20.7MMT to 17MMT to 18.1MMT over the same time points.

(This is physically impossible as the new Sewaren 7 plant went online in mid 2018 and its air quality permit said it will emit over 5MMT of CO<sub>2</sub>e GHGs per year). Also, vehicle emissions in 2016 (2019 draft EMP) were 47MMT and were then shown as 43MMT in the IEP. These differences need to be explained. Also, the IEP did not provide a date for its GHG numbers. It just said they were current. GHG reports must show the dates for all measurements and estimates. BPU and DEP processes including actual air sampling (including actual GHG emissions from monitored sources) must be reviewed and improved as needed to ensure accurate and credible publications.

**13. DEP must require polluters, not the public, to pay for GHG monitoring and reporting.** DEP must ensure the entire cost of monitoring and emissions reduction programs are paid for by utility shareholders, rather than ratepayer or taxpayers. Setting up a taxpayer funded system to monitor methane leaks from gas infrastructure could lead to a ratepayer funded "hardening" of gas infrastructure to prevent leaks, delaying the transition to clean renewable energy. The process of counting emissions could lead to other costly and unnecessary public investment in infrastructure that seeks to reduce emissions from existing sources, rather than phase them out. This would starve clean our state from the ratepayer investments we need to transition rapidly to 100% clean renewable energy.