



SIERRA CLUB

LONE STAR CHAPTER

To: The Honorable Brian Birdwell, Chair
The Honorable Judith Zaffarini, Vice-Chair
Members, Senate Committee on Natural Resources and Economic Development
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Charge: *“Overcoming Federal Incompetence: Consider the impact to the Texas economy from federal interference including, but not limited to, restricting liquified natural gas exports, supply chain limitations, a net-zero carbon agenda, and other air emission provisions. Report on what impact these federal interferences will have on the Texas economy and workforce, and make recommendations to minimize the damage to Texas.”*

Protecting communities and the planet from pollution is not federal incompetence; Texas should implement federal rules in a way that benefits all Texans

The Sierra Club Lone Star Chapter is the state chapter of the Sierra Club, the nation’s oldest and largest conservation organization. With some 25,000 members in Texas and many more supporters, we care deeply about clean air, clean water, protection from pollution and actions that will help mitigate the gasses that cause climate change and also mitigating its impacts.

We disagree fundamentally with the characterization of the recent efforts by the Environmental Protection Agency, and other agencies of the Biden Administration to better protect communities and the planet from pollution as “incompetence;” instead, while not perfect, we believe the majority of the adopted and proposed rules will actually benefit Texas’s health, economy and resiliency. We have divided this written testimony into a description of the major efforts and rules, and how we believe Texas could best prepare to implement these rules in a way that maximizes both the health and welfare of Texans and our resources, and economic development. As the leading oil and gas state in the country, and the major center of oil and gas refining and the petrochemical industry, there is no state that can benefit more than Texas from

proper implementation of these rules. Done correctly, we can reduce emissions, provide better safeguards to communities, and transition toward cleaner ways of producing goods and making money, benefiting everyone.

Oil and Gas and the Methane Rule

In December of 2023, the Environmental Protection Agency (EPA) finalized critical Clean Air Act protections against methane and other harmful pollution from the oil and gas industry, a major win for the climate and public health in Texas. These safeguards—which include first-ever standards for existing equipment while also strengthening standards for new equipment—are the culmination of years of advocacy by Sierra Club and its allies. The Rules took some time to be published in the Federal Register and become effective this spring.

Methane is a potent greenhouse gas that has more than 80 times the climate-warming power of carbon dioxide over a 20-year period, driving approximately one-third of the planet's warming to date. Each year, the U.S. oil and gas sector emits 16 million metric tons of methane as well as other damaging pollutants that cause smog and soot and air toxins like benzene and formaldehyde, which cause cancer. No state produces more oil and gas than Texas, which released more than 564 billion cubic feet of methane in 2019 alone. A recent satellite analysis of the Permian Basin found that Texas emitted twice as much methane as the gas industry in New Mexico, which has state-level pollution regulations. Unfortunately, neither the Texas Railroad Commission, which regulates oil and gas production, nor the Texas Commission on Environmental Quality have enacted rules or standards to lower these emissions. Thus, the federal rules could have more impact on Texas than any other state, and Texas organizations like the Sierra Club are celebrating with cautious optimism.

According to EPA's analysis, the final standards are projected to avoid 58 million tons of methane emissions nationwide by 2038, as well as 16 million tons of volatile organic compounds and 590,000 tons of air toxins. These reductions will come from requirements for:

- Strengthened leak detection.
- Repair of all wells regardless of size or operation status and up until they are permanently plugged in.
- Installation of non-polluting pneumatic equipment.
- A phased-in prohibition on routine flaring of gas at new wells.
- Program to leverage third-party monitoring data to identify and stop large emission events.

During a robust comment period at the start of 2023, a broad coalition of supporters of the methane rule submitted over 400,000 comments – more than 16,000 of which came from Sierra Club members and volunteers – urging EPA to finalize and implement the strongest possible protections for health and welfare.

After the rules were published in the federal register in early 2024, both the TCEQ and Texas formally asked the Attorney General to intervene and seek to overturn their common-sense rules that protect the planet and frontline communities. Controlling methane and VOCs for example in the Eagle Ford and Permian Basin can directly lower smog levels that impact Texan's health and wellbeing. Now, Sierra Club and coalition partners will work to defend the rule against attacks from General Paxton and the oil and gas industry, as well as to ensure that the final standards are properly implemented and enforced to protect communities from the impacts of oil and gas pollution.

The rules are very flexible and give states two years to adopt a State Implementation Plan to implement the rule. Importantly, along with the rule itself, the federal government through the Department of Interior and the EPA through funding provided by the IIJA (Bipartisan Infrastructure Law) of 2021 and IRA of 2022, has made hundreds of millions of dollars to both the Railroad Commission and TCEQ for programs that help monitor methane emissions and plug oil and gas wells. Importantly, the state of Texas also has an incentive program known as TERP - the Texas Emissions Reduction Plan. TERP includes several programs that can be used to help industry reduce flaring and methane emissions both upstream and downstream.

The Sierra Club believes that as the top oil and gas producer, Texas should follow the lead of many other oil and gas producing states like New Mexico and work with stakeholders toward a fair State Implementation Plan for the methane rule. No state would benefit more than Texas from a fair implementation of the rule over the next two years. The rule does not shut industry down - instead it requires industry to clean up its act. Indeed, many major oil and gas producers like BP and Exxon-Mobil have stated they intend to meet the rule and the Texas Methane Coalition has already committed to end routine flaring by 2030.

Power sector: The four recent EPA rules

In April of 2024, the EPA announced the finalization of four new rules that impact the power sector. Importantly, despite rhetoric that these rules will force the shut down of older power plants, they are flexible and allow plants to choose whether to invest in new pollution control equipment or set a retirement date far into the future. Sierra Club is very supportive of all four rules; in fact, in some cases we thought they did not go far enough to reduce air and water pollution from older coal and gas plants. Three of the four rules deal with legacy pollution at older coal plants like mercury emissions, toxic wastewater and coal ash piles, while the fourth deals with how to lower the emissions that are causing our climate crisis from large coal and gas plants. Importantly, the so-called Power Plant 111 (d) rule does not impact smaller gas peaker plants which may be needed for short-term electric needs but only larger facilities.

Carbon 111(d) Rule

For the first time, EPA will require some new gas power plants as well as older coal plants to meet new emission standards related to carbon. Rather than incompetence, these standards are a key part of the Biden Administration's comprehensive strategy to address air pollution and

clean up the power sector. It builds upon efforts the administration has already taken to curb interstate transport of ozone pollution from coal- and gas-fired power plants and other industrial polluters, soot from coal-fired power plants and other industrial polluters, methane and other harmful compounds from oil and fracked gas development, tailpipe pollution from heavy-duty trucks, and much more.

When EPA first proposed the carbon pollution standards in spring 2023, the draft rule included carbon pollution standards for existing gas plants. EPA determined at the end of February 2024 to separate the existing gas component from the standards for new gas and existing coal. Thus, the rule that was adopted in April covers older coal plants and new gas plants. A separate rule on existing gas plants is being drafted, but is not expected until later in the year.

The rule that was adopted requires:

- For coal:
 - If an existing coal plant will continue to operate past 2039, it must install CCS capturing 90% of emissions by 2032.
 - If an existing coal plant will continue operating past 2032 but will retire by 2039, it will have to start co-firing 40% natural gas by volume starting in 2030.
 - Units can avoid either of the requirements described above by agreeing to retire by January 1, 2032.
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- For new gas plants:
 - New baseload gas plants (i.e., those operating above a 40% annual capacity factor) will be required to install CCS and capture 90% of their emissions starting in 2032. Before that, they will be required to install efficient combined-cycle generation technology.
 - New intermediate-load gas units (i.e., those operating between 20% and 40% annual capacity factors) will be required to install and operate efficient simple-cycle generation technology.
New peaking gas units (i.e., those operating up to a 20% capacity factor) will be required to fire typical natural gas, so no significant standards for these sources.

The EPA has not just the authority but it also has a legal obligation to issue standards that reduce carbon pollution from power plants. The Biden Administration is following the science, trusting experts, and taking necessary action to protect public health and the environment. No rule is a magic bullet, but strong carbon pollution standards for power plants will help deliver meaningful results. These safeguards, in concert with the IRA's investments in clean energy and other public health and environmental rules from the EPA, are part of a suite of tools that will reduce U.S. greenhouse gas emissions, improve public health, and accelerate the transition to clean energy.

EPA's climate pollution standards equip us with yet another tool to meet our goals to ensure a safe and habitable planet for the future, and this combination of administrative and legislative efforts will work together to deliver meaningful climate and public health action.

Effluent Limitation Guidelines for Coal Plants

Background

The Clean Water Act's ELG program requires EPA to set pollution limits for discharges from various industries. Prior to being finalized in 2015, the ELGs for the power plant industry had not been updated since 1982, despite the fact that coal plants are the largest toxic water polluters in the country. Coal plants are responsible for an estimated 30% of all toxic pollution dumped into surface waters. In 2017, the Trump EPA halted implementation of the 2015 rule, and then significantly weakened its protections in 2020. In 2021, at President Biden's direction, the EPA reviewed the Trump-era rule, and the agency has now finalized stronger discharge limits.

The new rule will require modern wastewater treatment at all remaining coal plants – protecting hundreds of communities from mercury, arsenic, and other toxic pollution that has been dumped into U.S. waterways for decades. EPA's effluent limitation guidelines (ELGs) will apply to every U.S. power plant that burns coal. In Texas, we have many communities facing high levels of toxic discharges and some regions where mercury has been found in fish, causing the Texas Parks and Wildlife Department to prohibit the eating of fish in certain areas. Importantly, coal plants will have several years to meet the new standards.

ELGs are implemented primarily through Clean Water Act "National Pollutant Discharge Elimination System," or "NPDES" permits, which in Texas are implemented by TCEQ and are called TPDES permits. These are supposed to be updated every five years. Many states such as Texas have delayed processing updated NPDES permits, which is unlawful and creates serious environmental and public health risks. State regulators like the TCEQ must put permit protections in place that incorporate the new EPA-approved ELGs into every new NPDES permit for a coal power plant.

The goal of the Clean Water Act was to eliminate water pollution by 1985. The EPA must minimize pollution, and eliminate it where possible, by requiring the use of Best Available Technology. Coal plants are responsible for an estimated 30% of all toxic pollution dumped into surface waters, making them one of the largest sources of toxic pollutants that end up in rivers, lakes, and other bodies of water. The wastewater they produce contains harmful chemicals like arsenic, mercury, and lead, which can contaminate our sources of drinking water and harm aquatic life even in small amounts.

By implementing more stringent wastewater treatment standards, we can safeguard our drinking water, rivers, lakes, streams, and most importantly, our health, from the harmful effects of these pollutants and ensure a healthier future for all communities. The EPA's ELG rule would

significantly strengthen limits on water pollution from coal-fired power plants. This is an ambitious step forward to protect communities from mercury, arsenic, and other toxic pollution that has been putting drinking water quality and public health at risk.

We would note that coal plants have several years to meet these updated standards and we call on the TCEQ to update the TPDES permits to incorporate these new standards as soon as practicable.

Mercury and Air Toxics (MATS)

The Mercury & Air Toxics Standard regulates toxic emissions from coal and oil-fired power plants. Since MATS was first announced in 2011, it drastically reduced mercury and other toxic air pollutants, which are linked to breathing illnesses, heart disease, cancer, and impacts to brain development in young children, among other health impacts. It is estimated that MATS has saved as many as 11,000 lives each year.

More progress was needed, however, as plants complying with EPA's standards rapidly demonstrated their ability to reduce pollution to far lower levels than those specified in the 2011 MATs rule. We've fought to further reduce power plant pollution through the installation of stronger pollution controls and more consistent monitoring and maintenance of their equipment.

EPA's own analysis underscores the public health benefits of air pollution regulations. Thanks to MATS, mercury pollution has decreased by more than 81 percent.

This rule is about public health, not about ending coal use. Power plants are some of the largest sources of mercury emissions and other toxic air pollutants such as arsenic, chromium, cobalt, nickel, hydrogen chloride, beryllium, and cadmium. Exposure to these hazardous air pollutants can cause skin and lung irritation, harm our central nervous system, cause nausea and vomiting, and even lead to cancer. Mercury, arsenic, and heavy metals from coal-fired power plants pose serious dangers to the pregnant women and young children of our communities, which makes strong Mercury and Air Toxics Standards even more important.

While they are called the "mercury and air toxics standards," the health benefits of the implemented standards will extend beyond reducing mercury, and will reduce particulate matter, sulfur dioxide, nitrogen oxides, and carbon dioxide, as well as hazardous air pollutants (HAP) such as hydrogen chloride and formaldehyde, and heavy metals such as nickel, lead, and chromium from coal- and oil-fired power plants.

EPA estimates the proposal will reduce millions of tons of harmful pollutants by 2035, improving public health in communities across the country. Under the proposed rule, utilities will comply by making improvements to pollution controls (electrostatic precipitators and fabric filters/baghouses) for particulate matter. Lignite coal plants (including those located in **Texas**) will be required by the EPA to reduce mercury emissions by 70 percent through improvements

in control technologies (ACI coupled with PM controls, scrubbers, etc.) to achieve the newly tightened standards. This proposal puts lignite coal plants on the same level as other coal plants in terms of complying with pollution reductions.

Again, it is only fair that the oldest and dirtiest coal plants meet these new standards, or alternatively choose to retire. For too long, the health and well-being of communities have been sacrificed so that older coal plants can operate without having to install the needed controls to prevent the emission of millions of pounds of toxins into our communities.

Coal Combustion Residuals (CCR)

When the EPA issued its first coal ash regulations in 2015, the CCR rule included two dangerous loopholes that allowed legacy impoundments (coal ash ponds at retired power plants) and inactive landfills (landfills where ash hadn't been dumped since before 2015) to operate without critical monitoring and cleanup requirements and to continue to contaminate groundwater and surface water. The rule also failed to address CCR that had been dumped outside of demarcated landfills and ponds or used as fill or even as walls for holding *other* coal ash around a facility.

These loopholes exempted these so-called "legacy" dumps from all monitoring, inspection, maintenance, closure, cleanup, and reporting requirements. In practice, it also effectively permitted coal plant operators to evade cleanup responsibilities for coal ash altogether at many sites with so-called "legacy landfills." Many utilities blame contamination detected from regulated ponds and landfills on unregulated dumpsites at their plant so that they do not have to stop the leaching of toxic materials from improperly stored coal ash.

At many of these legacy sites, EPA already determined that coal ash has contaminated groundwater, but there are no federal monitoring, closure or cleanup requirements. These dumpsites will continue to release hazardous pollutants unless properly closed and remediated.

On behalf of the Sierra Club and other environmental, civil rights, and community groups, Earthjustice sued the EPA twice challenging this loophole. **The finalized rule is a result of that legal action.**

The CCR rules is an important public health win, but it's also a win for FINALLY holding the coal industry and plant operators accountable for their legacy of polluting our groundwater and waterways. Despite being filled with some of the nastiest contaminants around, from carcinogens like arsenic, cadmium and chromium to neurotoxins such as lead and lithium, hundreds of toxic coal ash dump sites have been allowed to operate without critical safeguards for years.

According to industry's own monitoring data, 94% of coal ash ponds as well as most coal ash landfills in the United States are unlined; almost all regulated coal ash ponds and most landfills are leaking dangerous levels of toxic substances. As the EPA found in the proposed rule, *all* of

the legacy ponds, inactive landfills, and CCR dumps are unlined—meaning the coal ash covered by this rule is sitting in direct contact with soil, air, and very often groundwater. The EPA’s action will change that, and move us a step closer to a future in which our communities have clean water to drink and safe rivers and lakes to enjoy

LNG Pause: time to reassess our process as well

Earlier this year, the Biden Administration took a pause on issuing NEW DOE licenses for LNG export facilities. According to the Administration, the pause is intended to update the studies and data DOE uses when reviewing applications to export LNG to non-free trade agreement countries. It does not impact any LNG facilities that have already received their license, including those that have yet to be constructed. The Sierra Club as an organization has had grave concerns about the rushed licensing of dozens of LNG facilities over the last several years, and very much support the pause as we were concerned with what we viewed as a very imperfect review process that did not consider the full impacts of LNG export facilities on local communities, and our overall efforts to reduce the gasses that are creating our climate crisis and meet our obligations under the Paris Agreement. Thus, we support the pause, and have signed a letter from more than 100 organizations calling for a serious and updated review process for future LNG export facilities. **The letter** to Secretary Granholm and President Biden urges them to not only update the previous economic and environmental analyses that the Department of Energy (DOE) relies on for considering LNG export applications, but also to incorporate factors not currently analyzed like environmental justice.

The pause in LNG licenses is not a prohibition on new LNG facilities but instead a pause for the Administration to review its process, its data and the studies needed. The announcement in January was a culmination of more than a decade of work across communities along the Gulf Coast, and at the federal level, to oppose the buildout of gas exports. The DOE has never rejected a gas export application on the grounds of harm to the public interest despite clear and growing evidence that gas exports are inconsistent with **global climate targets**, destroy local communities and critical ecosystems, and **increase domestic energy costs**. Additionally, there are currently no restrictions on the destination for gas exports, which risks national security. This re-evaluation of public interest determination criteria, if done right, will stop the practice of rubber-stamping these projects.

Based on our analysis, we believe there are a total of 12 terminals in the US and 2 terminals in Mexico that are actively waiting for DOE approval and can be affected by the Biden Administration pause. Collectively, the 12 impacted projects in the US - which include two in Texas - the Corpus Christi LNG Midscale 8-9 and the Port Arthur LNG expansion - would have lifecycle emissions of over 900 MMT CO₂e/year or the equivalent of 234 coal plants. The two terminals in Mexico that are on pause if built would generate enough carbon dioxide emissions to match an additional 33 average-sized coal plants.

The Pause is A Pause Not A Prohibition

While the pause does impact two proposed plants in Texas -at least temporarily - it does not impact other projects in Texas that have already received their DOE license, including Corpus Christi Stage III, Rio Grande LNG, Delfin LNG (offshore) and Texas LNG. While it is not certain whether all these LNG facilities will be built, the pause does not apply to these facilities.

Sited primarily in communities of color, proposed LNG export facilities perpetuate environmental injustice and harm to Gulf Coast communities that are already overburdened by industrial pollution from the fossil fuel industry as well as the effects of extreme weather like hurricanes, which are driven by climate change.

Table 1 shows the list of canceled, paused, proposed and existing LNG export facilities in Texas, and an estimate of life-time annual carbon dioxide equivalent emissions, which are of concern to communities. There are a total of 15 facilities and 40 “trains”, but it is important to note that only two facilities - Freeport LNG Train 1 and 2 and Corpus Christi Trains 1-3 - are currently operating, while two others have been canceled. Only two of the proposed facilities are specifically impacted by the DOE pause on new licenses - the Port Arthur expansion and the Corpus Christi LNG Midscale 8-9. If all of the facilities were built and operated, it could produce enough additional greenhouse gas emissions to equal emissions from 234 coal plants. These estimates are from Sierra Club’s LNG Tracker which is available online.

Table 1. Texas LNG Facilities, Status and Emissions

Project	Project Capacity (Bcf/day)	Total Trains	FID Status	Expected Operation Date if any	Lifecycle GHG Emissions (MMT CO2/year)	Emission Equivalent: Coal Plants
Annova LNG Brownsville	0.90	6	Canceled	None	40	10
Corpus Christi LNG Phase 1	1.6	2	Operating	2018	71	18
Corpus Christi LNG Phase 2	0.80	1	Completed but delayed	TBD	36	9
Corpus Christi LNG Phase 3	1.58	7	Completed but delayed	Dec 2024	71	18

Corpus Christi LNG Midscale 8-9	0.45	2	DOE Pause	TBD	20	5
Freeport LNG	2.38	3	Completed	Operating	106	27
Freeport LNG expansion	0.74	1	Delayed	2028	33	8
Galveston Bay LNG	2.20	3	Canceled		98	25
Golden Pass LNG	2.57	3	Delayed	6/2025	115	29
Port Arthur LNG	1.86	2	Delayed	12/2027	83	21
Port Arthur LNG Expansion	1.86	2	Paused	12/2028	83	21
Power LNG (Galveston)	0,02	1	TBD		1	0
Rio Grande LNG Phase 1	2.24	3	Completed	07/2027	100	26
Rio Grand e LNG Phase 2	1.49	2	Delayed	11/2029	67	17
Texas LNG Brownsville	0.62	2	Delayed	03/2028	28	7
Totals	21.29	40			952	234

The Sierra Club and Frontline Communities are Demanding More Action than a Pause.. For Pause Sake

Frontline communities, individuals and organizations like the Sierra Club understand that many LNG facilities are already in operation and many other facilities have sought permits to operate in Texas, including those subject to the pause. But the current process of rubber stamping export facilities is not in the national interest and a much more robust process is needed that provides the public - including industry - the opportunity for input. Specifically, in the recent letter sent to the DOE, these communities are calling for:

- Incorporation of an environmental justice analysis into the public interest determination;

- When updating the DOE's economic studies, researchers must include analysis of the impacts on local economies.
- The economic factors that go into the public interest determination must take livelihoods and local economy into account.
- Fully accounting for greenhouse gas emissions and the historic contributions to our current climate crisis
- negative impacts on the health of our communities from LNG facilities should also be factored into the DOE studies
- Assessing the international impacts of increased greenhouse gas emissions from new and existing LNG export licenses, given recent global commitments at COP28 to "transition from fossil fuels," and United States' pledges to the UNFCCC's Paris Agreement.
- Incorporating the risk of explosions and leaks into the analysis. Risks are real and many communities like that in Freeport have experienced explosions firsthand.
- Opening a formal comment period in the process of updating your reports, and ensuring community voices get on the record.
- Creation of an Advisory Board or Task Force of frontline community members and empower that body to work with DOE to incorporate our experiences and knowledge into the public interest determination process, along with any new studies.
- Updating PHMSA LNG regulations, which has been postponed now for more than a year.

If you want to claim gas is “clean,” you must deal with methane leaks on the whole spectrum

Methane leaks along the entire LNG life cycle impacts communities from the Permian Basin and Eagle Ford Shale to Brownsville and Port Arthur. Every step of the way — from extraction by fracking, to transport by pipeline, to energy-intensive liquefaction — LNG projects release significant amounts of methane, a greenhouse gas that is more than 80 times more powerful than carbon dioxide over a 20-year period – representing a major contributor to climate change. No state releases more methane from oil and gas production than Texas. Methane pollution - and associated gasses - is also known to cause asthma, respiratory diseases, heart disease, preterm births, and cancer.

Much of the difference in opinion between the Sierra Club and many industry-led groups that favor expansion of LNG facilities revolves around the climate impact of gas exports. While pro-LNG groups focus only on emissions from the facility, or potential gains comparing LNG burned overseas for electricity versus electricity generated by existing coal, Sierra Club focuses on the full lifecycle of the LNG facilities. LNG facilities are not just the facilities themselves built along the Texas and Louisiana coasts, but involve gas production wells, processing plants, hundreds of miles of pipelines, the LNG facility, the ships to take the LNG and the infrastructure overseas to ultimately burn LNG for either electricity or vehicles. Sierra Club also considers the renewable energy development displaced by continued use of gas at home and abroad, not just an outdated comparison with coal.

Sierra Club believes that the oil and gas industry must make major efforts to reduce the leaks, flaring and venting of massive amounts of methane. This is why we were so supportive of the Methane Rule,, which will require major investments by oil and gas companies to lower their emissions. Methane emissions from the oil and gas industry in Texas have continued to rise as oil and gas have expanded, and information indicates that emissions in the Permian Basin have been twice the amount from New Mexico, which has state-level methane control regulations in place.

Under the new methane rule, states like Texas will have two years to develop a State Implementation Plan to reduce their methane emissions from the oil and gas industry. Cleaning up the oil and gas industry upstream will improve the opportunity to make gas a cleaner energy source than it is today. Unfortunately, rather than embrace this change, the State of Texas, through the Attorney General’s Office, acting on behalf of the TCEQ and the Railroad Commission of Texas, is choosing to fight the new regulation rather than implement it in a way that reduce emissions, reduce health costs, and ultimately keep the product in pipes and for end uses, rather than in our atmosphere.

Oil and Gas Production and Exports are Higher than they have ever been

Despite some political rhetoric about the Biden Administration shutting down oil and gas in Texas, the fact is that oil and gas production in Texas has never been higher. Recently the Railroad Commission of Texas published its annual data which found that for both oil and gas, 2023 was a record year. In particular, the RRC found that oil production hit a record **1.92 billion barrels** in 2023, which was 51 million barrels more than the previous record; while Operators produced **12.01 trillion cubic feet** of gas in 2023, beating the previous record by more than 13%. In fact, for gas, the last three years represent the top 3 production years in the history of Texas, with all three years topping 10.5 trillion cubic feet of gas.

Indeed, part of this production is feeding the LNG frenzy that has occurred in just a few short years. As of early 2024, the United States was the No. 1 exporter of LNG in the world. This is with nine facilities currently operating in the U.S. Yet the fossil fuel industry is in the process of building or planning to build or expand more than 35 export facilities – mostly in the Gulf Coast – that would lock in devastating levels of pollution for a generation. We can not address the climate crisis while locking in decades of additional growth in LNG facilities and the pause is a needed break from this unfettered growth. The proposed LNG buildout would lock in this pollution – and its consequences – for an entire generation and far exceeds global gas demand now or projections into the future.

Frontline Communities have suffered for years from accidents, emissions and loss of important space

Many of the communities where LNG corporations want to build are already suffering low access to health care and residents experience disproportionate poor health. Workers and neighbors do not need more pollution to exacerbate existing health issues.

In communities with existing LNG facilities, in fact, communities have already suffered. As an example, in June 2022, a 450-foot-high explosion at the Freeport LNG Liquefaction Facility terrified the local community and caused the facility to shut down for over six months. The explosion's aftermath led to excess carbon monoxide, nitrous oxides, and other particulate matter emissions. The Pipeline and Hazardous Materials Safety Administration (PHMSA) blamed the incident on inadequate operating and testing procedures made by human error.

Residents expressed their disappointment at the explosion's aftermath and questioned the current regulations in place over the facility in a public meeting at the beginning of February 2023. There have been no changes to the regulations that govern gas export projects in over 40 years. In December 2023, Freeport LNG settled with the EPA over safety failures for the June 2022 Texas blast. The settlement included a civil penalty of \$163,054 for breaking chemical accident prevention rules under the Clean Air Act.

In February 2023, FERC granted permission for the plant to restart partially. U.S. regulators are currently evaluating the facility's request to resume entire commercial operations despite concern from local residents. The Sierra Club challenged the extension, arguing that Freeport LNG failed to abide by its own timeline. Ultimately, the FERC approved Freeport LNG's request to return its plant to full operation in the fall of 2023.

In Corpus Christi, Corpus Christi Liquefaction, a subsidiary of Cheniere Energy, operates the Corpus Christi LNG terminal, which holds three liquefaction trains capable of processing 15 million metric tons of LNG annually. The facility emits an estimated 71 MMT of CO₂e per year.

Since the facility started operating in 2018, it has exceeded its permitted limits for emissions of pollutants hundreds of times. Rather than penalizing Cheniere, the TCEQ has increased the plant's pollution limits. The facility can now emit double the limit set in the original permit.

In addition, to build LNG terminals, companies often have to bulldoze wetlands to make room for the concrete, asphalt, and steel that makes up the facility. In Brownsville, one of the last untouched natural areas of the Texas coastline, essential wetlands are already being destroyed to make way for Rio Grande LNG. These wetlands have provided habitat for important coastal wildlife and some endangered species for generations. They also provide important protective functions against hurricanes. Destroying wetlands is bad for wildlife and the climate change resiliency of these communities.

In the Port Arthur area, LNG proposals by several entities could devastate the very wetlands that serve as important birding and tourist attractions, while also destroying the very habitats that help protect the area from flooding during hurricanes or high wind events. In essence, LNG export facilities and the gas they transport will exacerbate climate change, leading to stronger

hurricanes, while they destroy the very wetlands needed to protect us from those climate extremes.

Our water is stressed and LNG requires more water

The construction of LNG facilities uses immense quantities of water. The sourcing of fracked gas to make LNG also uses an extreme amount of water, as does the normal day-to-day operations of an export terminal. With Texas facing immense pressure on its water supplies and real scarcity concerns throughout Texas, planning for additional LNG facilities and export terminals creates a threat to the need for water for other water uses - from agriculture to domestic use to inflow - and the environment. Any expansion of LNG facilities in Texas by its nature must involve the water planning process. Sierra Club is very concerned that this immense water use will undermine the real needs of communities for water to grow in a more sustainable manner. Given water needs, it is not the highest priority to provide freshwater for LNG facilities and terminals that are intended to export a Texas product, not for our own use.

Our Grid is stressed and LNG facilities create more need for transmission, raising bills

All of you are well aware that the ERCOT grid has been stressed. From Winter Storm Uri, to a series of record demands in the last few years in winter and summer, to high congestion costs as we have failed to build out transmission, Texans are worried about the reliability of our grid. LNG facilities require massive amounts of electricity but also in many cases require new transmission, which in ERCOT is a socialized cost paid by all. In recent years, AEP Texas, the major utility in South Texas, has made a number of proposals through the ERCOT and PUCT process that will build out transmission lines in areas of Corpus Christi and the Lower Rio Grande Valley. Part of the reason for this build out are new LNG facilities. ERCOT customers both small and large will pay for these transmission upgrades. Again, the Sierra Club recognizes and supports the buildout of many transmission lines, but building out transmission for export facilities and then socializing those costs has a real impact on our communities.

Conclusions on LNG

The Sierra Club supports the pause on LNG permitting the Biden Administration has put in place and has called on the DOE to take specific steps to assure robust public input into the review process. We do not believe the present DOE licensing process, which has in many cases served to rubberstamp projects, has been in the public or Texas's interests. We support the demands of frontline communities to have the local impacts to economies and habitats, risk for pollution and explosions, cumulative impacts and life-cycle climate change impacts to be more fully considered. In short, DOE should take the time needed and do a thorough analysis and transparent and participatory public process. We also want to make clear that existing LNG export facilities have already negatively impacted local communities.

In terms of the state of Texas, we call on our leaders to stop fighting every proposed effort or EPA rule that is intended to better protect our communities from pollution. In particular, rather than fighting the pause, Texas should work on our transmission grid planning, water planning

and flood control planning to be prepared for the industrialization that has already come to our coast. We must balance the need for these resources for industry with the need to assure adequate water, flood control - which includes habitat - and electricity for our communities.

In addition, for years, our communities have been demanding a more responsive TCEQ on writing more restrictive permits, enforcing permit limits and considering public input in the permitting process. It is worth noting that community members went to court to the US Court of Appeals over the the TCEQ's proposed permit for the Sempra facility in Port Arthur, and that permit was thrown out by the courts because it was found that TCEQ did not properly follow the Clean Air Act, which requires best available control technology. In Corpus Christi, the Chaniere facility routinely busted through its 2018 issued permit levels, causing the TCEQ to work with the facility on a new permit which almost doubled those amounts. Simply put during operations the facility could not meet the permit limits in the original permit and rather than enforce those limits TCEQ instead granted an amended permit. The recent experience in Corpus Christi where TCEQ chose to simply double Cheniere's permit limits rather than enforce its existing permit is a prime example. In addition, Texas has, we believe, ignored the need to consider and assess cumulative impacts on major air quality permits as required by federal law. We call on specific attention by TCEQ to the permitting of LNG export facilities, and more frequent inspections of these facilities. The recent explosion in Freeport LNG is an example of how close we can come to a disaster, and better monitoring and enforcement is sorely needed.

Communities want to see expanded air quality monitoring as well, particularly fenceline monitoring. To the extent that additional LNG facilities are built in Texas, areas that are located near neighborhoods that could suffer from direct pollution or any accident should be avoided, as should wetlands important for local economies, tourism, wildlife and flood mitigation.

Still, building additional LNG facilities and terminals is not in Texas's interests and we would be better off transitioning to other forms of energy that can be produced right here in Texas, including geothermal, solar, wind, battery storage and even off-shore wind. The U.S. recently joined nations from around the world in approving new climate goals which promise to "transition away" from fossil fuels. The expansion of the LNG exports, which will lock the planet into decades more reliance on methane gas, is incompatible with this goal.

If Texas is to invest further in LNG facilities which appears likely even if the projects that are paused do not move forward, then we must assure the facilities are as clean as possible, do not threaten frontline communities and mitigate their environmental and health impacts.

Therefore we recommend:

- For all permits, Texas agencies should be required to publish all relevant documents on their websites so the public is assured access to these documents and can participate in permitting processes.
- TCEQ should be required to provide a public comment opportunity and opportunity to request a contested case hearing for all actions once a draft permit or action becomes

available. This opportunity should be in addition to opportunities to comment and request contested case hearings once an application is available.

- There should be robust public participation opportunities and the opportunity for judicial review of all determinations under the Coastal Management Plan.
- TCEQ should be required to ensure that it is not allowing developers to avoid more stringent major source permitting requirements under the Clean Air Act (as explained in detail in this (as explained in detail in this article <https://www.texastribune.org/2024/01/05/texas-pollution-companies-permits-tceq-epa/>))
- TCEQ must require the use best available control technology, including efforts to lower direct GHG emissions and the use of Selective Catalytic Reduction technology, such as that sought by community members opposing the Port Arthur LNG (Semptra) plant currently under construction. As a reminder, the Fifth Circuit Court of Appeals struck down TCEQ's proposed permit, which lacked the requirement to install this technology. Communities are very concerned about high levels of Nitrogen Oxides, sulfur dioxide and especially Volatile Organic Compounds that can have a direct impact on residential and community health.
- As we believe is required by federal law, TCEQ must consider the cumulative impacts of nearby facilities when permitting major source facilities such as LNG export facilities. While we believe this is already the law, TCEQ has not been considering cumulative impacts when permitting facilities and that must change, including through legislative direction or statutory clarification.
- LNG facilities require high water use, high energy use, and as the table indicates, can directly impact wetlands important for habitats and flood control. Before allowing more LNG facilities to operate, Texas must assure that these impacts are considered in our flood planning, water planning (through the TWDB) and electric planning (through ERCOT and Entergy Texas processes). If we do not carefully consider the costs to these systems, Texas ratepayers and taxpayers may end up footing the bill and the consequences of these mammoth export facilities.
- Rather than opposing the methane rule, Texas must adopt a State Implementation Plan to meet the 2023 methane rule within the next two years which requires substantial efforts by industry to reduce methane emissions over the coming years. The plan should incorporate both regulations and incentives, such as those available through the Texas Emissions Reduction Plan for both upstream and downstream emissions.
- Texas should assure robust inspections and enforcement of existing LNG facilities to assure that facilities are meeting their emission limits and operating facilities in a safe manner. The explosion at the Freeport LNG facility and continual emission events at other LNG facilities is a reminder that these entities can be dangerous to nearby communities. The legislature should consider specific parameters and funding around inspection and monitoring of LNG facilities along the coast.
- Texas should avoid placing LNG facilities in overburdened neighborhoods and should not destroy the very wetlands that help protect coastal communities during hurricanes, floods and storms. TCEQ, RRC and TPWD must coordinate closely to push back against

proposals that would damage the very natural resources the state must protect, especially those resources that help keep Texans safe.

EPA's Air Toxics Rules Good News for Texans Living Near Chemical Plants... If the TCEQ and the American Chemistry Council Don't Sabotage Them

On April 9th, the U.S. Environmental Protection Agency (EPA) finally adopted new Clean Air Act standards for chemical plants to lower toxic air pollution in fenceline communities by 6,200 tons. No state has more major chemical plants impacted by the rule than Texas. Under the final rule, released a year after an initial proposal, EPA is updating critical Clean Air Act standards that will reduce toxic emissions from more than 200 of the nation's most hazardous chemical plants. All told, 82 large Texas chemical and petrochemical plants will have to install fenceline air monitoring systems (similar to fenceline benzene monitoring at oil refineries). About two-thirds of the plants are found either in Texas or Louisiana. The rule is intended to prevent cancer in surrounding low-income and minority communities, which have been sacrifice zones with high cancer rates for decades.

Plants emitting ethylene oxide, chloroprene, vinyl chloride, 1,3-butadiene, benzene, and other carcinogenic chemicals will have to make reductions in toxic emissions from their chemical process units, safety vents, equipment fugitives, emergency flares, storage tanks, and other sources.

This progress resulted after decades of organizing and specifically from a legal action taken several years ago where groups, including the Sierra Club, sued EPA over its failure to review the need of new air toxics rules in the last 20 years. It is a significant step forward to protect the right to clean air in Environmental Justice (EJ) communities.

Under the federal Clean Air Act, EPA action on hazardous air pollutants (HAPs) was slow, and initially only a few carcinogens – such as benzene and vinyl chloride – were covered in the early 1980s under the National Emission Standards for Hazardous Air Pollutants (**NESHAP**), which are stationary source standards for hazardous air pollutants. In 1990, due to EPA's failures to adopt standards for more HAPs, the Congress changed that NESHAPS gap by amending the CAA and establishing Title III Air Toxics with 189 chemicals. However, despite the requirement that EPA develop standards for these additional toxic pollutants, EPA's slowness, lack of funding, and legal actions by industry to slow down and stop this type of progress has meant the promise of protecting communities from these toxics has not been realized. Frontline community groups, along with national groups like the Sierra Club, Earthjustice and other organizations have been suing the EPA since the early 1990s to fully implement the 1990 CAA Amendments.

The rules adopted recently are part of a consent decree reached by Sierra Club and other partners to cover these particular HON (Hazardous Organic NESHAPS) rules. The HON rule covers more than 100 air toxic chemicals for 227 chemical and petrochemical plants in the U.S. Of those 227 plants, 82 are located in 30+ Texas communities, most of them along the Gulf Coast.

Table. Communities that will benefit from the new HON NESHAP rule

Area	Example of Communities	Number of Plants Covered by New Rule by Area
Houston and surrounding area	Baytown, Deer Park, Houston, Pasadena, LaPorte, Channelview, Crosby, Texas City	40
Freeport area	Freeport, Sweeny, Alvin	7
Beaumont area	Beaumont, Port Arthur, Port Neches, Nederland	11
Orange County	Orange	4
Corpus Christi area	Corpus Christi, Ingleside, Bishop, Gregory	9
Victoria area	Victoria, Point Comfort, Port Lavaca, Seadrift	5
Other areas	Big Spring, Borger, Longview, Lufkin, Three Rivers	6
Total Number of Plants Impacted by EPA rule in Texas		82

Many communities in Texas will benefit from new air toxics reductions and, of course, these air toxics are also ozone-precursors, meaning they eventually contribute to ground-level ozone, commonly known as “smog.” Many of these chemical and petrochemical plants are sited in the area of Houston that already exceeds safe levels of ozone.

These chemical and petrochemical plants include hundreds of thousands of pieces of equipment in HON liquid service such as benzene. Though there are some Leak Detection and Repair (LDAR) programs in place, stronger LDAR efforts are needed to cover the vast numbers of liquid pumps, valves, flanges, compressors, and other pieces of equipment.

Emergency flare systems are directly affected by the new EPA rules, with plants needing to reduce HON chemical flaring events due to process unit problems as well as upsets, and working to ensure more efficient incineration of HON air toxics to water and carbon dioxide. Otherwise, unburned air toxics are released and de novo air toxics are formed such as PAHs,

(polycyclic aromatic hydrocarbons) containing PM2.5 soot particles which are highly carcinogenic.

To ensure the results of fence-line monitoring are available to communities, EPA will make the monitoring data publicly available on its [WebFIRE](#) webpage. The fence-line monitoring provisions in the final rule are modeled on similar Clean Air Act requirements for petroleum refineries first established in 2015, which have been historically successful in identifying and reducing benzene emissions.

So Everything Is Fixed Right?

No, not yet. Ethylene oxide has emerged from cancer studies in the last ten years as posing grave concerns in fence-line communities, because the EPA's toxicologists discovered that it's a more potent human cancer-causing agent than other carcinogens listed above. Indeed, ethylene oxide is similar in cancer toxicity to the super carcinogenic dioxins and dibenzofurans that the contaminated herbicide Agent Orange used in the Vietnam War.

However, the Texas Commission on Environmental Quality (TCEQ) could throw a monkey wrench into the EPA's ethylene oxide standard. TCEQ's toxicologists have been working on an alternative, weaker standard the agency seeks to apply at 60 chemical and petrochemical plants in 26 Texas communities, which would sabotage the EPA standard. TCEQ is working through an expert panel at the National Academy of Sciences to weaken the EPA's Immune Reconstitution Inflammatory Syndrome (IRIS) risk factor for ethylene oxide and replace it with a far weaker TCEQ toxicology standard many times less protective than EPA's IRIS risk standard. Recently, I testified to the expert committee at the National Academies of Sciences, Engineering and Medicine about its review of TCEQ's Ethylene Oxide Development Support Document (2020).

In January 2024 at a TCEQ public meeting in Laredo on Midwest Sterilization's commercial sterilizer, a TCEQ toxicologist stated that the agency has the authority to use TCEQ's weaker ethylene oxide standard rather than EPA's at commercial sterilizer factories in Texas. A serious concern is that TCEQ may also apply its own standard to the 60 chemical and petrochemical plants, allowing more ethylene oxide to be released into those EJ and fence-line communities.

TCEQ failed to release the ethylene oxide information used to propose its draft Development Support Document (DSD) in June 2019. In fact, Sierra Club and allies have gone to court and have won several court victories related to releasing information related to TCEQ's weaker ethylene oxide standard. TCEQ has asked the Texas Supreme Court to reconsider our legal victory to release more than 6,000 pages of information related to TCEQ's development of their own standard, but we are expecting the Texas Supreme Court to reaffirm that this is indeed public information.

By contrast, the EPA conducted a first-of-its-kind, comprehensive community risk assessment, which can be found [here](#). For communities within about 6 miles of a chemical plant, the new EPA rule would reduce cancer risk by "96 percent in those communities overall, with the biggest reductions occurring in the areas where risks are highest." In addition to TCEQ asking for a

review of the ethylene oxide standard through the National Academy of Science, a number of other entities including TCEQ (through Texas Attorney General Ken Paxton's office), various other conservative states, as well as industrial groups like the American Chemistry Council and Huntsman Petrochemical have now gone to the D.C. Court of Appeals, essentially saying the U.S. EPA has gone too far in this new rule. Does it surprise anyone that our environmental regulator and state officials are legally on the same side as Huntsman Petrochemical and other large corporations?

And what is the Sierra Club doing? We are joining with other environmental and community organizations in filing a motion to intervene in support of the EPA final rule and standards. Joining the Sierra Club in our motion are Rise St. James, Louisiana Bucket Brigade, Louisiana Environmental Action Network, Texas Environmental Justice Advocacy Services, Air Alliance Houston, Blue Ridge Environmental Defense League, Inc., Environmental Justice Health Alliance for Chemical Policy Reform, Environmental Integrity Project, and Union of Concerned Scientists.

PM 2.5: EPA Strengthens Soot Standard, Saving Thousands of Lives and Billions of Dollars; Ten Texas Counties Likely Out of Compliance

On February 7th, the EPA released updated National Ambient Air Quality Standards for particulate matter (PM2.5), taking a positive and long-awaited step toward addressing a dangerous and deadly air pollutant responsible for over 100,000 deaths in the United States every year.

EPA's final air quality standards for PM2.5, also known as soot, lower the annual standards from 12 mcg/m³ to 9 mcg/m³, and will prevent up to 4,500 premature deaths and 290,000 lost workdays per year while bringing as much as \$46 billion in net health benefits in 2032, when the standards are in full effect.

The final standards do not strengthen the 24-hour standard, which is critical for protecting against dangerous short-term spikes in air pollution and provides the basis for the air quality index that millions use to determine the quality of the air they breathe on any given day.

EPA will now determine areas of the country that do not meet the new standard, and will release determinations within two years. States that do not meet the new standards will then have 18 months to develop and submit plans to comply.

While EPA will determine whether certain areas comply in the future, current data indicates that some 100 different areas through the U.S. do not meet the new standard, with 10 counties in Texas - including Dallas, Harris, El Paso, Travis, Hidalgo and Cameron counties likely in violation of the new standard.

Evidence shows exposure to soot pollution increases the risk of asthma, heart attacks, stroke, cancer, and premature death. 63 million people in the United States experience unhealthy

spikes in daily soot pollution, and communities of color are disproportionately exposed to higher-than-average levels of this dangerous pollutant.

This commonsense strengthening of the annual PM 2.5 standard is long overdue and will eventually help protect families throughout Texas, but especially in Houston, the Austin area, El Paso, and the Rio Grande Valley. While we hope that the EPA will eventually also address and strengthen the 24-hour standard, the annual standard will force the state and local governments in these areas to cut down on pollution from ports and trains, industrial pollution, coal plants, asphalt batch plants, agricultural burning, and old diesel trucks among other sectors.

While these new standards will require action by industry and government alike, fortunately, there are large federal funding opportunities through the Federal Inflation Reduction Act and Bipartisan Infrastructure Law to help local government, private industry, and individuals to invest in pollution control equipment and cleaner technologies. From investing in cleaner forms of energy like solar and storage, energy efficiency programs, and funding to electrify cars, buses, and heavy duty trucks, Texas can be a leader on a cleaner future, especially for frontline communities facing heavy particulate matter pollution.

Conclusions

The Sierra Club does not believe that the Biden Administration has been incompetent in proposing and adopting new rules on methane, power plants, chemical safety and new soot standards. Instead we believe when fully implemented these will make Texas a cleaner and safer place to live and work. We believe the rules are flexible. As an example, the state has two years to implement the methane rules and nonattainment areas for the new soot (PM 2.5) standards will not be determined for several years, with more time to develop a state implementation plan. Similarly, the power plant rules provide older coal plants with options to either meet the new rules by implementing new pollution control equipment that better protects communities or retire, but there is no immediate requirement. Because these new rules will decrease health costs, reduce deaths and lost employment time, and also reduce the burden on other industries, they will benefit the state economically.

Rather than fighting these new rules, Texas should take advantage of federal funding to reduce pollution and where needed implement carbon sequestration, the Texas Emissions Reduction Plan, and begin to put together State Implementation Plans to meet the methane rule, the PM 2.5 standards and also beef up our air permitting and wastewater discharge standard permits to meet the new power plant rules. Important, due to recent legislation, recently TERP expanded funding available for the oil and gas sector to reduce emissions through the New Technology Implementation Grant, a program which provides grants to offset the incremental cost of the implementation of existing technologies that reduce the emission of pollutants from facilities and other stationary sources in Texas.

Sierra Club also supports the pause on new LNG DOE permits, but the pause only impacts two facilities in Texas. Rather than fighting the pause, Texas should increase enforcement and monitoring of existing and planned LNG facilities. We are extremely concerned about the impacts of LNG facilities on climate change, local habitat and wetlands, and frontline communities. We have seen firsthand how TCEQ air permits have shortchanged community health. Again, rather than fighting the Biden Administration, we should be increasing community safety and protections for our communities.