



September 14, 2026

Louisiana Department of Environmental Quality
Via email to beth.altazon@la.gov, deq.publicnotices@la.gov

**Comments on Hyundai-POSCO Proposed Title V Permit and PSD Permit Application,
Agency Interest No. 248885**

These comments detail why LDEQ cannot issue Hyundai a final permit on the current record. LDEQ must at a minimum revise and reissue the draft Hyundai permit to: (1) complete public trust analyses mandated by the Louisiana Constitution and *Save Ourselves*, including environmental justice and alternative site analyses; (2) redo deficient BACT determinations using top-down methodology and analyzing electrified components, green hydrogen blending, and stricter dust controls; (3) establish enforceable emission limits with monitoring methods clear to the public; (4) conduct proper air dispersion modeling with correct meteorological data, representative monitors, and a cumulative PM_{2.5} analysis; and (5) allow meaningful public review of all revised analyses and conditions before any final permit decision.

These comments refer to Sierra Club's four expert reports that were filed with LDEQ on September 9, 2026.¹ In addition, Sierra Club specifically adopts other public comments submitted into the record on August 20, 2026, including the modeling files and results.² Sierra Club reserves the right to rely on any other public comment in the record in any future action.

INTRODUCTION AND SUMMARY OF COMMENTS

LDEQ proposes to issue an air permit for a new integrated steel plant that will be co-located with several new major industrial pollution sources in the "Riverplex MegaPark" in Ascension

¹ Sierra Club Expert Reports, Documents ID: 15344900 (Sep. 9, 2026), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>. Sierra Club's Expert Reports filing includes four reports and associated exhibits. Dr. Elizabeth Boatman, Analysis of July 2026 "Proposed PSD Permit" (Aug. 2026) (PDF 3-20); E. Boatman, Electrified Alternatives and GHG BACT Analysis (May 2026) (PDF 1504-1536), with exhibits 1 – 35 (PDF 1387-1503; 1538-1694); E. Boatman, PM BACT Review (May 2026) (PDF 410-425), with exhibits II.1 – II.23 (PDF 426-1385); Katie McClintock, BACT Report (May 2026) (PDF 21-31), with exhibits II.A – II.B (PDF 32-409).

² Comments to LDEQ submitted Aug. 20, 2026, Document ID: 15331653, <https://edms.deq.louisiana.gov/app/doc/view?doc=15331653>.

Parish,³ which already experiences toxic pollution levels exceeding 96% of the rest of the country.⁴ This major greenfield facility will significantly impact public health, and transform the area's landscape and character. The proposed project emissions include massive potential toxic emissions of over 1,760 pounds per year of lead, 366 pounds of mercury, and over 824 tons per year (tpy) of nitrogen oxides (NOx), 335 tpy of sulfur dioxide (SO₂), 208 tpy of PM₁₀ and 195 tpy of PM_{2.5}, 123 tpy of volatile organic compounds (VOCs), 6,205 tpy of carbon monoxide (CO), and 1.6 million tons of greenhouse gas emissions.⁵ Despite the project's magnitude and environmental justice implications, LDEQ has allowed only 45 days for the public to evaluate over 2100 pages of complex permitting materials.

These comments demonstrate that LDEQ's proposed permit fails to meet mandatory legal requirements in five critical areas:

- **LDEQ Has Not Satisfied Its Constitutional Obligations as Public Trustee.** The Louisiana Constitution mandates LDEQ to act as a public trustee, ensuring that environmental costs and benefits are fully balanced against economic and social factors before issuing a final permit. LDEQ is required by law to conduct its own public trust analysis that includes an environmental justice analysis yet the draft permitting materials contain none. Though Hyundai submitted its own environmental assessment, that analysis is deficient, and in an amended application, Hyundai removed its environmental justice analysis. Before issuing a revised proposed permit, LDEQ must conduct a robust public trust analysis that addresses whether the proposed facility's pollution will disproportionately impact communities already overburdened with pollution, and explains how that consideration supports its conclusions. LDEQ public trust analysis must:
 - Identify affected communities and existing health burdens in Cancer Alley;
 - Evaluate Hyundai-specific emissions (including revised cumulative PM_{2.5} and ozone modeling and modeling submitted by other public commenters demonstrating NAAQs exceedances), consider cumulative impacts from nearby existing and planned projects (CF Industries Blue Point and NEMO Ironworks);
 - Assess mitigation measures and stricter permit limits, including electrified components, toxic dust controls, and hydrogen blending;
 - Rigorously evaluate alternative sites and project configurations; conduct a cost-benefit analysis accounting for public subsidies and local hiring commitments;
 - Address mercury emissions, wetland bioaccumulation risks, and long-term water demand, including saltwater intrusion threats.

³ *Explore Our RiverPlex MegaPark*, RiverPlex MegaPark, <https://riverplexmegapark.com/explore-our-mega-site/> (accessed Aug. 2026).

⁴ LDEQ, Draft Air Quality Permit, AI 248885, Document ID: 15309280, (Jul. 31, 2026) at PDF 1604 (Original Application) [hereinafter "Draft Permit"], <https://edms.deq.louisiana.gov/edmsv2/quick-search-results>. <https://edms.deq.louisiana.gov/app/doc/view?doc=15036873>.

⁵ Draft Permit, Air Briefing Sheet at PDF 10-11. As noted below in these comments, the facility's NOx emissions may be underestimated due to a typographical error, and the GHG emissions may be significantly underestimated due to the unverified assumptions about carbon capture.

- **LDEQ's BACT Determinations and Title V Requirements Are Fundamentally Flawed.** LDEQ's Best Available Control Technology (BACT) analyses and determinations are deficient across all pollutants and emission units. Key failures include:
 - Failing to identify all control options, including electrified components, green hydrogen blending, and toxic dust enclosures;
 - Dismissing top controls without adequate documentation or discussion;
 - Failing to evaluate unit-specific controls and efficiencies for toxic dust, greenhouse gases, and NOx from the electric arc furnace;
 - Setting no enforceable heat-input-based GHG limits or BACT limits for key units such as the process gas heater;
 - Omitting fundamental information required for a proper BACT review;
 - Omitting sufficient monitoring provisions and failing to clearly identify enforceable emission rate limits.

LDEQ must redo the BACT analyses using the proper top-down method, select the best available controls, establish enforceable emission limits with sufficient monitoring and reporting provisions, and resubmit proposed permit for public comment.

- **Green Hydrogen and Electrification Is Feasible and Must Be Evaluated.** Electrification and green hydrogen are technically and economically feasible at the proposed facility, and LDEQ's failure to evaluate these controls violates both BACT requirements and Louisiana's public trust doctrine. These comments demonstrate that a phased hybrid approach — combining onsite solar and storage, grid-connected clean generation, hydrogen storage, and flexible electrolyzer operations — would allow Hyundai to incrementally scale hydrogen production while reducing or avoiding transmission upgrade costs. LDEQ and Hyundai must evaluate electrification and incremental hydrogen blending as viable control options and, at a minimum, commit to phased enforceable steps to electrification in the air permit to reduce pollution and climate impacts as well as support Hyundai's long-term zero-emission goals. LDEQ cannot reject green hydrogen on feasibility grounds without a complete analysis that accounts for an incremental blending approach.
- **LDEQ Has Not Shown The Proposed Facility Will Not Cause an Exceedance of Ambient Air Quality Standards.** Hyundai and LDEQ's air dispersion modeling is fatally flawed and fails to satisfy the Clean Air Act's requirements that new sources not cause or contribute to exceedances of air quality standards. Deficiencies include:
 - Relying on meteorological data from New Orleans rather than the more representative Baton Rouge station;
 - Allowing Hyundai to avoid cumulative PM2.5 modeling by applying an outdated significant impact level and ignoring that monitors show a substantial portion of the local PM2.5 NAAQs is already consumed;
 - Using an unrepresentative ozone monitor without explanation when the correct monitor shows the project would cause an exceedance of the ozone standards.

LDEQ must rerun all modeling with correct meteorological data, conduct a full cumulative PM2.5 analysis using a complete source inventory, address the serious issues raised in modeling submitted by other commenters showing PM2.5 NAAQs exceedances,

conduct ozone modeling with a representative monitor, and allow public comment on the corrected analyses before the permit may proceed.

I. LDEQ Has Not Satisfied Its Constitutional Obligations as Public Trustee

The Louisiana Constitution mandates LDEQ to act as a public trustee, ensuring that environmental costs and benefits are fully balanced against economic and social factors before issuing a final permit for a new facility that will be allowed to emit health-harming and climate pollution for generations to come. LDEQ is required by law to conduct its own public trust analysis yet the draft permitting materials contain none. LDEQ's failure to conduct its own public trust analysis is contrary to established law.

Additionally, even if LDEQ could wholesale adopt Hyundai's analysis, that analysis falls far short of satisfying state constitutional obligations in multiple areas. Most glaringly, in Cancer Alley – one of the most heavily polluted areas of the country – Hyundai's analysis does not include the legally required environmental justice analysis. Before issuing Hyundai a permit, LDEQ must conduct a robust public trust analysis and allow for at least 30 days for public comment on that analysis. As detailed in the following sections, LDEQ's analysis must include:

- An environmental justice analysis of affected communities, existing burdens, project-specific emissions, foreseeable nearby projects, and feasible mitigation;
- An alternatives analysis of lower-burden sites and cleaner project configurations;
- A socioeconomic analysis of enforceable local benefits, public subsidies, tax arrangements, and health-related costs;
- A rigorous, site-specific analysis of the roughly 405 pounds of mercury the facility would emit each year;
- An assessment of the facility's long-term water demand and the risk of accelerating regional saltwater intrusion, as detailed below.

A. Louisiana Law Imposes a Mandatory, Non-Delegable Public Trust Duty on LDEQ

Louisiana Constitution article IX, section 1 establishes Louisiana's public trust doctrine. It mandates that "[t]he natural resources of the state, including air and water," be "protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people," and directs the legislature to enact laws implementing that policy. In furtherance of that mandate, the legislature established LDEQ as the State's primary environmental agency and vested it with authority over Louisiana's air quality and other environmental resources.⁶

Before LDEQ grants approval for an action affecting the environment, including an air permit, it must determine that adverse environmental effects have been minimized or avoided as much as possible consistent with the public welfare. That obligation requires LDEQ to conduct a rigorous balancing process in which environmental costs and benefits receive "full and careful

⁶ La. Const. art. IX, § 1.

consideration along with economic, social and other factors.”⁷ LDEQ must consider less-damaging alternatives,⁸ including whether alternate projects, alternate sites, or mitigation measures would protect the environment more effectively than the proposed project without unduly curtailing non-environmental benefits.⁹ The agency must make basic findings supported by the evidence, make ultimate findings that flow from those basic findings, and articulate a rational connection between the facts found and the decision reached.¹⁰

Louisiana courts have translated the *Save Ourselves* decision into the IT Questions, which require LDEQ's written findings and reasons for decision to address: (1) whether the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible; (2) whether the cost-benefit analysis demonstrates that the project's social and economic benefits outweigh its environmental-impact costs; and (3) whether alternative projects, alternative sites, or mitigating measures would offer more protection to the environment without unduly curtailing non-environmental benefits.¹¹

Hyundai cannot answer the IT questions for LDEQ. LDEQ must exercise its own judgment as public trustee and explain how the record supports its conclusions.¹²

Environmental justice is part of the mandatory public trust inquiry. In *Rise St. James*, the First Circuit held that LDEQ's public trust analysis must meaningfully account for environmental justice concerns.¹³ LDEQ must give full and careful consideration to whether additional pollution from the Hyundai facility will fall disproportionately on communities already burdened by industrial pollution and must explain how that consideration affects the agency's public trust findings.

B. The Draft Permitting Materials Do Not Contain a Public Trust Analysis Louisiana Law Requires.

The draft permitting materials demonstrate that LDEQ has not performed a separate constitutional inquiry required of it as Louisiana's public trustee. The July 31 public notice only provides a bare conclusion: “The EAS submitted by the applicant addresses avoidance of potential and real environmental effects, balancing of social and economic benefits against environmental-impact costs, and alternative sites, projects, and mitigative measures.”¹⁴ Nowhere in the draft permitting materials does LDEQ independently answer the IT Questions, weigh

⁷ *Save Ourselves, Inc. v. Louisiana Environmental Control Commission*, 452 So. 2d 1152, 1157 (La. 1984) (“*Save Ourselves*”).

⁸ See also *In re Browning-Ferris Indus. Petit Bois Landfill*, 1993-2050 (La. App. 1 Cir. 6/23/95), 657 So. 2d 633, 639.

⁹ *In re Rubicon, Inc.*, 95-0108 (La. App. 1 Cir. 2/14/96), 670 So. 2d 475, 482.

¹⁰ *Save Ourselves*, 452 So. 2d at 1157-59.

¹¹ *In re Shintech, Inc.*, 2000-1984 (La. App. 1st Cir. 2/15/02), 814 So. 2d 20, 25, writ denied, 815 So. 2d 845; *In re Rubicon, Inc.*, 670 So. 2d 475, 482-83.

¹² *In re Shintech, Inc.*, 814 So. 2d at 25.

¹³ *Rise St. James v. Louisiana Department of Environmental Quality*, 2023-0578 (La. App. 1 Cir. 1/19/24), 383 So. 3d 956, 962 (“*Rise St. James*”).

¹⁴ Draft Permit, Public Notice and Briefing Sheet, at PDF 1.

environmental costs against social and economic benefits, or consider whether less-damaging sites, project designs, and mitigation measures are available, as required by *Rise St. James*.

C. LDEQ Must Conduct an Environmental Justice Analysis for the Proposed Hyundai Steel Plant

Before issuing a final permit, LDEQ is required to conduct an environmental justice analysis for the proposed Hyundai facility.¹⁵ LDEQ conducted no such analysis in the draft permitting materials.

Hyundai's initial application included a brief and insufficient environmental justice analysis that summarized proximity screening for schools, hospitals, churches, and residences, and relied on EJScreen's Environmental Justice Index and Supplemental Environmental Justice Index rankings within a limited radius.¹⁶ Although that analysis was deficient, it did disclose that the communities surrounding the proposed facility already bear significant air pollution, including ranking in the 96th percentile for toxic releases to air.¹⁷ This disclosure emphasizes the importance of an environmental justice analysis for the proposed facility. Hyundai's May 27, 2026 application update states that it removed the environmental justice analysis altogether and does not provide any explanation.¹⁸

The record shows that the proposed Hyundai facility would add substantial pollution to communities already facing significant industrial burdens. Ascension Parish contains a dense concentration of industrial facilities, and studies and emissions data demonstrate elevated air-toxics and cancer-risk concerns in the region. Because the surrounding communities include a substantial Black or African American population and communities already affected by industrial pollution, Louisiana's public trust doctrine and Louisiana caselaw require more than a narrow screening exercise. LDEQ must assess whether the Hyundai permit would impose disproportionate impacts before issuing any final permit. As described in detail below, LDEQ must prepare a legally sufficient environmental justice analysis and explain why Hyundai removed its environmental justice analysis.

1. Background on Cancer Alley

The area along the Mississippi River between New Orleans and Baton Rouge has long been known as "Cancer Alley," where many communities are predominantly African American and many residents attribute elevated cancer and other illness to toxic industrial air emissions.¹⁹ Louisiana contains roughly one-sixth of the nation's petroleum refining capacity and is the

¹⁵ *Rise St. James*, 383 So. 3d at 962.

¹⁶ Draft Permit, Initial Draft Permit, at PDF 1603.

¹⁷ Draft Permit, Initial Draft Permit, at PDF 1604; *see* U.S. Environmental Protection Agency (EPA), EJScreen Technical Documentation (2024), 19-20, <https://www.epa.gov/system/files/documents/2024-07/ejscreen-tech-doc-version-2-3.pdf>, (*attached as* Exhibit PC.1).

¹⁸ Draft Permit, Public Notice and Briefing Sheet at PDF 1.

¹⁹ Public Health on Call, *Louisiana's 'Cancer Alley' Is More Deadly Than Previously Imagined* (Aug. 4, 2025), Public Health, <https://publichealth.jhu.edu/2025/the-shocking-hazards-of-louisianas-cancer-alley>, (*attached as* Exhibit PC.2).

second-largest chemicals-exporting state in the United States.²⁰ The Baton Rouge-New Orleans industrial corridor contains a disproportionate share of industrial facilities reporting releases to EPA's Toxic Release Inventory.²¹

Ascension Parish is part of this broader industrial corridor and is itself home to numerous major manufacturers that produce chemicals, plastics, fertilizers, and other products.²² Studies and emissions data likewise document elevated cancer risk from hazardous air pollutants in these communities.²³

2. LDEQ's Clean Air Act Analysis Does Not Fulfill Public Trust Requirement

The public trust doctrine imposes a substantive and procedural balancing obligation: LDEQ must give full and careful consideration to environmental costs, public-health risks, social and economic benefits, alternatives, and mitigation. LDEQ's analyses and conclusions about BACT and NAAQS attainment in the draft permitting materials under the Clean Air Act and Louisiana are not a sufficient analysis under *Save Ourselves*.

A BACT assessment of whether a particular control technology is technically feasible and whether its energy, environmental, or economic impacts justify eliminating it does not answer whether the project's overall social and economic benefits outweigh its environmental costs, whether the burdens and benefits are distributed fairly, or whether a different site or project configuration would better protect the environment without unduly curtailing non-environmental benefits.

Courts and EPA have recognized that compliance with regulatory limits does not automatically establish that impacts are insignificant or nondiscriminatory.²⁴ NAAQS attainment does not mean there is no health risk to people living, working, worshiping, or attending school near industrial facilities, and it does not address whether environmental justice communities experience disproportionate burdens. Nor does a modeled NAAQS demonstration, by itself, evaluate cumulative vulnerability, existing health burdens, localized exposure pathways, episodic

²⁰ E.S. Robinson, A. Yassine, et al., *Total cancer risk estimates from measured concentrations of volatile organic compounds in industrialized southeastern Louisiana*, Proc. Natl. Acad. Sci. U.S.A. 122 (41) e2504770122, <https://doi.org/10.1073/pnas.2504770122> (2025), (attached as Exhibit PC.3).

²¹ *Id.*

²² *Id.*

²³ *Id.*

²⁴ See *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 91–92 (4th Cir. 2020) (By relying on state and national air quality standards, “the Board failed to grapple with the likelihood that those living closest to the Compressor Station . . . will be affected more than those living in other parts of the same county. . . [T]he Board’s failure to consider the disproportionate impact on those closest to the Compressor Station resulted in a flawed analysis.”); *LaFleur v. Whitman*, 300 F.3d 256, 270 (2d Cir. 2002) (“Congress has recognized that there are potentially adverse [e]ffects from air pollution at levels below the NAAQS”) (emphasis in original); *N. Carolina ex rel. Cooper v. TVA*, 593 F. Supp. 2d 812, 821–22 (4th Cir. 2009) (finding that “PM2.5 exposure has significant negative impacts on human health, even when the exposure occurs at levels at or below the NAAQS.”), *rev’d on other grounds*, 615 F.3d 291 (4th Cir. 2010); Particulate Matter NAAQS, 89 Fed. Reg. 16202, 16229 (March 6, 2024) (PM2.5 studies “do not identify a threshold below which mortality effects do not occur.”)

releases, multi-pollutant exposures, or whether feasible mitigation could further reduce harm.²⁵ Along with the courts, the EPA has also recognized that criteria air pollutants may cause harm to human health at levels *below* the NAAQS and may have disproportionate adverse effects on those living closest to the pollution source.²⁶ Indeed, the Clean Air Act states that one purpose of the Prevention of Significant Deterioration program is “to protect public health and welfare from any actual or potential adverse effect which . . . may reasonably be anticipate[d] to occur from air pollution or from exposures to pollutants in other media . . . *notwithstanding attainment and maintenance of all national ambient air quality standards.*”²⁷

3. The EJ Analysis Must Describe the additional adverse impacts imposed by the Hyundai project.

The environmental justice analysis for the proposed facility should begin by describing the specific impacts associated with the proposed Hyundai project. The draft permit would authorize a new major industrial source with substantial annual emissions of criteria pollutants and related precursors. The public notice identifies a major new source with annual emissions of approximately 208.23 tons of PM10, 195.56 tons of PM2.5, 335.65 tons of SO2, 824.02 tons of NOx, 6,205.44 tons of CO, 123.32 tons of VOCs, 1,643,256 tons of CO2e, and 31.243 tons of toxic air pollutants,²⁸ though these comments describe how some emissions might be underestimated. LDEQ must identify and assess the pollutants and pathways of exposure that matter for nearby communities, including direct emissions of criteria pollutants and hazardous air pollutants, fugitive dust and particulate matter from material handling and storage, and impacts associated with water use, wastewater, stormwater, waste handling, and other project components identified by the application and amendments, draft permit, and technical comments.

As described later in these comments, and in previous comments to LDEQ,²⁹ Hyundai has not demonstrated that its impacts will not cause exceedances of the ambient air quality standards. Its modeling is based on improper meteorological data, improperly relies on an outdated significant impact level (SIL) to avoid cumulative PM2.5 modeling, and improperly relies on an unrepresentative monitor in its ozone modeling. Other commenters have performed modeling and other analyses that indicate the proposed facility would cause exceedances of both the

²⁵ David R. Brown, et al., Human exposure to unconventional natural gas development: A public health demonstration of periodic high exposure to chemical mixtures in ambient air, *Journal of Environmental Science and Health*, at 461 (Mar. 3, 2015), <https://doi.org/10.1080/10934529.2015.992663>, (attached as Exhibit PC.4).

²⁶ EPA, External Civil Rights Compliance Office, Toolkit, at 12–13 (Jan. 18, 2017), (<https://perma.cc/J7TW-VXH4>) (“The fact that the area is designated as in attainment with the NAAQS and that the recent permitting record shows that emissions from the facility would not cause a violation of the NAAQS would be insufficient by themselves to find that no adverse impacts are occurring for purposes of Title VI [of the Civil Rights Act of 1964] and other federal civil rights laws.”), (attached as Exhibit PC.5); Particulate Matter NAAQS, 89 Fed. Reg. at 16229.

²⁷ 42 U.S.C. § 7470(1) (emphasis added).

²⁸ Draft Permit, Public Notice and Briefing Sheet at PDF 1.

²⁹ Comments to LDEQ submitted Aug. 20, 2026, at PDF 7-42 & 80, Document ID: 15331653, <https://edms.deq.louisiana.gov/app/doc/view?doc=15331653>. Sierra Club adopts all comments contained in that section.

PM2.5 and ozone NAAQs.³⁰ LDEQ's public trust duty requires that it take a close look at that modeling and analysis and conduct its own legally defensible cumulative modeling of impacts. The EJ Analysis must assess existing environmental and health burdens in the affected communities.

The proposed Hyundai facility would add substantial harmful air emissions to communities that are already severely burdened by industrial air pollution. LDEQ cannot determine whether the impacts of the proposed facility have been minimized, whether the benefits outweigh the environmental costs, or whether additional mitigation is required without first understanding the burdens that already exist.

Using the same EJScreen screening tool Hyundai invoked in its December 2025 Application, a five-kilometer radius surrounding the Hyundai project location shows that more than 41 percent of the community is Black or African American, 9 percent is Hispanic or Latino, and that the surrounding community is already burdened by significant pollution.³¹ LDEQ should disclose and analyze the relevant EJScreen and EJAM indicators and percentiles for the affected area, including demographic indicators, air toxics cancer risk, respiratory hazard, particulate matter, ozone, traffic proximity, hazardous-waste proximity, proximity to Risk Management Plan facilities, wastewater discharges, and other relevant environmental-burden metrics. LDEQ should also explain why it chose each radius or geographic unit and should evaluate any community that may experience project emissions or related traffic, dust, water, or emergency-response burdens.

The existing-burdens analysis should identify and discuss specific studies, data sources, and nearby sources rather than merely referring generally to "available data." LDEQ should review and summarize at minimum EPA's Toxic Release Inventory, LDEQ air-permit and enforcement records, monitoring data, and peer-reviewed research on the Baton Rouge-New Orleans industrial corridor. Relevant studies include *Uneven Magnitude of Disparities in Cancer Risks from Air Toxics*,³² which examined race- and income-based disparities in Cancer Alley air-toxics cancer risks; *Air Pollution Is Linked to Higher Cancer Rates Among Black or Impoverished Communities in Louisiana*,³³ which analyzed relationships among toxic air pollution, race, poverty, and cancer incidence across Louisiana; and *Ethylene Oxide in Southeastern Louisiana's Petrochemical Corridor: High Spatial Resolution Mobile Monitoring During HAP-MAP*,³⁴ which used mobile monitoring to assess hazardous air pollutant exposure in southeastern Louisiana's petrochemical corridor.

³⁰ *Id.*

³¹ EJAM, EJScreen Community Report, June 2026, <https://ejamapi-84652557241.us-central1.run.app/report?lon=-91.01419&lat=30.170598&buffer=3.10686>, (attached as Exhibit PC.6).

³² W. James, C. Jia, S. Kedia, *Uneven magnitude of disparities in cancer risks from air toxics*, Int J Environ Res Public Health, (2012), <https://pubmed.ncbi.nlm.nih.gov/23208297/>, (attached as Exhibit PC.7).

³³ K.A. Terrell and G. St. Julien, *Air pollution is linked to higher cancer rates among black or impoverished communities in Louisiana* (2022), Environ. Res. Lett. 17 014033, <https://iopscience.iop.org/article/10.1088/1748-9326/ac4360>, (attached as Exhibit PC.8).

³⁴ E.S. Robinson, et al., *Ethylene Oxide in Southeastern Louisiana's Petrochemical Corridor: High Spatial Resolution Mobile Monitoring during HAP-MAP*, Environmental Science & Technology (2024), <https://repository.library.noaa.gov/view/noaa/68504>, (attached as Exhibit PC.9).

Specific existing sources warrant discussion. LDEQ should identify and analyze emissions from CF Industries' Donaldsonville Nitrogen Complex, BASF's Geismar Chemical Complex, and other major Geismar and Donaldsonville facilities because those sources form the baseline against which nearby residents would experience Hyundai's additional emissions. LDEQ should not merely list those facilities; it should identify their permitted and actual emissions, enforcement history, monitoring data, and cumulative contribution to air toxics, criteria pollutants, odors, accident risk, and other burdens relevant to the surrounding communities.

4. LDEQ must separately consider reasonably foreseeable planned projects near the Hyundai site.

LDEQ should also consider reasonably foreseeable planned projects in and near the RiverPlex MegaPark because those projects are likely to add to the burdens faced by the same communities. This analysis is distinct from the existing-burdens baseline: existing facilities show the current conditions, while planned projects show whether LDEQ is authorizing Hyundai in the context of additional reasonably foreseeable industrialization. Public materials describe RiverPlex MegaPark as a roughly 17,000-acre industrial megasite on the west bank of the Mississippi River in Ascension Parish, with industrial infrastructure and proximity to existing operations. LDEQ should consider the available applications, draft permits, final permits, emissions information, economic-development materials, or other public records that disclose expected emissions, operations, location, or pollution-control measures for these projects, identify any information gaps, and require additional information before making final public trust findings.

At minimum, LDEQ should evaluate the planned CF Industries Blue Point Complex, the related Linde air-separation unit, and NEMO Industries' proposed pig-iron facility. Because several of these projects have active LDEQ air-permit records or detailed public project announcements, LDEQ should address these planned projects in its analysis and should explain how their emissions and discharges, together with existing industrial sources, impact the mitigation and permit-limit analysis for Hyundai.

LDEQ has issued the Initial Part 70 Air Operating Permit and Prevention of Significant Deterioration permit for CF Industries Blue Point LLC's Low Carbon Ammonia Plant.³⁵ The facility would be located at LA Highway 405 and Noel Road in Modeste, Ascension Parish. CF Blue Point requested authorization to construct and operate a low-carbon ammonia manufacturing facility with a production capacity of 4,400 tons per day.³⁶ The CF Blue Point permit lists the facility's permitted annual emissions as 13.65 tons per year of PM₁₀, 9.23 tons per year of PM_{2.5}, 0.78 tons per year of SO₂, 292 tons per year of NO_x, 585 tons per year of CO, and 38 tons per year of VOC.³⁷ LDEQ should therefore address the CF Blue Point emissions because this is another major proposed source of NO_x, CO and other pollutants near the same

³⁵ LDEQ, Prevision of Significant Deterioration (PSD) Permit, CF Industries Blue Point LLC - Low Carbon Ammonia Plant, (July 9, 2026), AI 149544, Document ID: 15284620, Permit No. PSD-LA-859, <https://edms.deq.louisiana.gov/app/doc/view?doc=15284620>; Title V Part 70 Operating Permit, (July 9, 2026), Document ID: 15284619, Permit No. 0180-00237-V0, <https://edms.deq.louisiana.gov/app/doc/view?doc=15284619>.

³⁶ *Id.*

³⁷ *Id.*

affected communities as the proposed Hyundai facility.³⁸ LDEQ should not merely note that each individual project may meet its own permit limits; it should explain whether the combined reasonably foreseeable emissions from Hyundai, CF Blue Point, and any related supporting units would impose disproportionate pollution burdens on nearby communities.

The nearby proposed Linde ASU and NEMO Ironworks I project add further foreseeable industrialization pollution burdens, but the public materials do not clearly disclose LDEQ permit status or emissions values for those projects.³⁹ LDEQ should close those information gaps and evaluate these projects separately from existing baseline burdens. Without that analysis, LDEQ cannot determine whether Hyundai's additional impacts have been avoided or minimized to the maximum extent possible, whether the project's benefits outweigh its environmental costs, or whether additional permit limits and mitigation are necessary to protect nearby environmental justice communities.

D. LDEQ Must Rigorously and Fairly Conduct an Alternatives and Mitigation Analysis.

As set forth above, the third IT Question requires LDEQ to consider whether alternate projects, alternate sites, or mitigation measures would offer more protection to the environment without unduly curtailing non-environmental benefits.⁴⁰ LDEQ must support that determination with basic findings supported by the evidence, ultimate findings that flow from those basic findings, and a rational connection.⁴¹

1. LDEQ cannot treat the Ascension Parish site as a foregone conclusion.

The alternative sites analysis is central to LDEQ's review of the proposed Hyundai facility. Because the facility is proposed to be located near communities already overburdened by industrial pollution, LDEQ must account for those cumulative environmental and public-health impacts in the alternative site balancing process required by *Save Ourselves*.⁴² LDEQ therefore must do more than accept an applicant's preferred site; it must show that it considered reasonable

³⁸ LDEQ, Prevision of Significant Deterioration (PSD) Permit, CF Industries Blue Point LLC - Low Carbon Ammonia Plant, at p. 3 (July 9, 2026), AI 149544, Document ID: 15284620, Permit No. PSD-LA-859, <https://edms.deq.louisiana.gov/app/doc/view?doc=15284620>

³⁹ Louisiana Economic Development, "Linde Announces New Investment to Support Blue Ammonia Plant at RiverPlex MegaPark" (Jun. 23, 2025), <https://www.opportunitylouisiana.gov/news/linde-announces-new-investment-to-support-blue-ammonia-plant-at-riverplex-megapark>, (*attached as* Exhibit PC.10); NEMO Industries, "NEMO Industries Announces Plans to Develop \$3 Billion NEMO Ironworks I, Phase One of the World's Most Efficient Pig Iron Facility, in Ascension Parish, Louisiana," Business Wire (Oct. 23, 2025), <https://www.businesswire.com/news/home/20251023606352/en/NEMO-Industries-Announces-Plans-to-Develop-%243-Billion-NEMO-Ironworks-I-Phase-One-of-the-Worlds-Most-Efficient-Pig-Iron-Facility-in-Ascension-Parish-Louisiana>, (*attached as* Exhibit PC.11).

⁴⁰ *In re Rubicon, Inc.*, 95-0108 (La. App. 1 Cir. 2/14/96), 670 So. 2d 475, 482.

⁴¹ *Save Ourselves*, 452 So. 2d at 1157, 1159.

⁴² *See Save Ourselves*, 452 So. 2d at 1157 (requiring a "balancing process in which environmental costs and benefits must be given full and careful consideration along with economic, social and other factors" before LDEQ makes a permit decision).

alternatives in good faith and selected a site that minimizes or avoids potential and real adverse environmental effects as much as possible.

Public records and official announcements raise serious questions about whether Hyundai and the State selected the Modeste site in Ascension Parish before Hyundai submitted its air-permit application and before LDEQ completed any meaningful environmental justice or alternative site review. In March 2025, Governor Jeff Landry and Louisiana Economic Development announced Hyundai's \$5.8 billion investment for a "first-of-its-kind" facility at the RiverPlex MegaPark.⁴³ That announcement was followed by public reports describing a site-specific package that included a \$1-per-year lease of state-owned land and substantial state-funded infrastructure. By the time LDEQ received the Hyundai application at the end of 2025, the record suggests that the Ascension Parish site had already become the location around which the state's economic-development commitments were structured.⁴⁴

The State's early-2026 celebration of the Hyundai project as the "Platinum Deal of the Year" reinforces that concern.⁴⁵ LDEQ's obligation to conduct a transparent, evidence-based alternatives analysis is especially important in light of these facts, which raise substantial questions about whether LDEQ can give full and fair consideration to alternative sites. Under the public trust doctrine, an alternative-site analysis cannot function as a procedural checklist completed after the applicant and state officials have effectively committed to a location. If the Hyundai Ascension Parish site was selected, funded, and publicly promoted before evaluating alternatives—particularly alternatives that EJSscreen data suggests may carry lower cumulative environmental burdens—LDEQ must explain why the selected site still represents the least-damaging feasible option, and the record must independently show that the site minimizes environmental harm in light of feasible alternatives.

2. Hyundai's alternate-sites analysis does not support a meaningful comparison.

LDEQ must undertake a thorough balancing process that minimizes environmental costs consistent with public welfare. The record does not show that Hyundai's selection of the Ascension Parish location followed a comprehensive comparison with meaningfully distinct alternatives. Nor does the record explain why the project's asserted site needs—such as river access, rail access, highway access, parcel size, workforce availability, electrical capacity, gas supply, and proximity to customers or suppliers—could not be satisfied, or satisfied with reasonable mitigation, at a site with lower cumulative environmental burdens.

⁴³ Louisiana Economic Development, "Louisiana Wins Again," Governor Jeff Landry & LED Secure \$5.8 Billion Hyundai Steel Mill (Mar. 24, 2025), <https://www.opportunitylouisiana.gov/news/louisiana-wins-again-governor-jeff-landry-led-secure-5-8-billion-hyundai-steel-plant>, (attached as Exhibit PC.12).

⁴⁴ WBRZ Staff, *Lawsuit alleges Louisiana's deal with incoming Hyundai Steel plant broke state law*, WBRZ (Apr. 2, 2026), <https://www.wbrz.com/news/lawsuit-alleges-louisiana-s-deal-with-incoming-hyundai-steel-plant-broke-state-law-186249/>, (attached as Exhibit PC.13).

⁴⁵ Misty Taillon, Hyundai Steel Project in Ascension Parish Wins Business Facilities 2025 'Deal of the Year' Platinum Award, Ascension Parish Economic Development Corp. (Jan. 5, 2026), <https://ascensionedc.com/hyundai-steel-project-in-ascension-parish-wins-business-facilities-2025-deal-of-the-year-platinum-award/#:~:text=Ascension%20Economic%20Development%20Corporation%20proudly,given%20by%20Business%20Facilities%20magazine>, (attached as Exhibit PC.14).

The record indicates that Hyundai initially identified five alternative properties and considered eight site-selection factors.⁴⁶ Hyundai narrowed its proposed sites by considering deepwater access, site acreage, locations outside of the Coastal Zone, zoning, and public lands, environmentally sensitive or protected areas, congested residential or commercial areas, and the presence of environmental justice factors when identifying alternative site locations for the proposed Steel Mill.⁴⁷ But the application does not identify which factors were essential, explain how each factor was weighted, or show why a lower-impact site could not meet the project's legitimate operational requirements. Accepting Hyundai's conclusory comparison cannot satisfy LDEQ's public trust duty, especially where state economic-development commitments appear to have focused on the Ascension Parish property before the alternatives review was complete.

Hyundai's application considers alternative locations that are too similar to permit a meaningful public trust comparison. Three alternatives are in already overburdened St. James Parish, and two are in Caddo Parish.⁴⁸ The five-mile EJScreen analyses for the St. James Parish alternatives show materially similar cumulative-burden concerns: elevated air-toxics indicators, particulate-matter indicators, proximity-to-facility indicators, and higher minority and low-income populations.⁴⁹ Those similarities matter because LDEQ must determine whether an alternative site would reduce actual environmental and public-health harms, not merely whether it would shift the same harms to a nearby industrial corridor.

The Shreveport/Caddo Parish alternatives appear to present a more meaningful alternative because they have lower air-toxics cancer risk, lower respiratory hazard indicators, and fewer cumulative industrial-burden indicators than the Ascension/St. James cluster.⁵⁰ However it is not clear why Hyundai rejected those alternatives. If Hyundai rejected those alternatives for operational reasons, the application should identify those reasons with specificity. For example, if factors like deepwater access, river frontage, rail configuration, grid capacity, gas supply, or parcel assemblage are necessary, and some sites have those factors and others do not, Hyundai should support its claims with record evidence and explain whether infrastructure improvements or mitigation could make a lower-burden site feasible. LDEQ cannot satisfy *Save Ourselves* by accepting unsupported assertions that the preferred site is "best" without evidence-based analysis that tests those assertions against less harmful alternatives.

⁴⁶ Draft Permit, Initial Draft Permit at PDF 1599-1600.

⁴⁷ Draft Permit, Initial Draft Permit at PDF 1599.

⁴⁸ Draft Permit, Initial Draft Permit at PDF 1599-1603.

⁴⁹ *Id.*

⁵⁰ EJScreen Community Report, Summary of Analysis (Jul. 16, 2026), <https://ejamapi-84652557241.us-central1.run.app/report?lon=-93.634527&lat=32.370724&buffer=5>, (*attached as Exhibit PC.15*); EJScreen Community Report, Summary of Analysis (Jul. 16, 2026), <https://ejamapi-84652557241.us-central1.run.app/report?lon=-90.699348&lat=29.976052&buffer=5>, (*attached as Exhibit PC.16*); EJScreen Community Report, Summary of Analysis (Jul. 16, 2026), <https://ejamapi-84652557241.us-central1.run.app/report?lon=-90.8323&lat=29.986&buffer=5>, (*attached as Exhibit PC.17*); EJScreen Community Report, Summary of Analysis (Jul. 16, 2026), <https://ejamapi-84652557241.us-central1.run.app/report?lon=-90.79366&lat=30.026072&buffer=5>, (*attached as Exhibit PC.18*).

E. LDEQ must evaluate cleaner project configurations and mitigation measures.

Under *Save Ourselves* and the IT Questions, LDEQ must consider whether alternatives and mitigating measures would offer more protection to the environment without unduly curtailing non-environmental benefits. LDEQ's duty to evaluate alternatives and mitigation measures under the public trust duty goes beyond merely satisfying Clean Air Act requirements. Severe existing burdens around the proposed project site, and modeling showing that the project would cause exceedances of PM2.5 and ozone NAAQs, make the need for careful mitigation analysis even more urgent.

As outlined in detail in other sections of these comments, LDEQ must consider electrification of project components, stringent toxic dust controls, and evaluate blending in green hydrogen, which are all technically and economically feasible alternatives that would significantly reduce emissions. LDEQ must also evaluate more stringent permit limits. LDEQ's failure to evaluate these mitigation measures in its public trust analysis violates the requirement to determine whether mitigating measures would offer more protection to the environment.

LDEQ's public trust duty requires that it take a close look at that modeling and analysis and conduct its own legally defensible cumulative modeling of impacts. As described later in these comments, and in previous comments to LDEQ,⁵¹ Hyundai has not demonstrated that its impacts will not cause exceedances of the ambient air quality standards. Its modeling is based on improper meteorological data, improperly relies on an outdated significant impact level (SIL) to avoid cumulative PM2.5 modeling, and improperly relies on an unrepresentative monitor in its ozone modeling. Other commenters have performed modeling and other analyses that indicate the proposed facility would cause exceedances of both the PM2.5 and ozone NAAQs.⁵²

As discussed in an earlier section, even if modeling showed compliance with the NAAQs, that does not demonstrate that the direct and cumulative effects of the facility's air pollution on human health will be insignificant, or that such disproportionate impacts (especially to environmental justice communities) are not cause for concern. Here, Hyundai's and LDEQ's modeling does not even make a defensible NAAQs compliance demonstration, and public comments indicate the facility would cause NAAQs exceedances. If LDEQ proceeds to permit this facility despite modeling that shows Hyundai will contribute to unhealthy PM2.5 and ozone levels in this overburdened area, LDEQ must require significant mitigation, including electrification, toxic dust covers and other mitigation of PM2.5 and ozone precursor emissions.

F. LDEQ Must Conduct a Proper Cost Benefit Analysis, Consider Hyundai's Public Subsidies and Tax Breaks and Not Credit Job Benefits Without Enforceable Local Commitments.

Under Louisiana's public trust doctrine, LDEQ must give "full and careful consideration"⁵³ to each factor, weigh the project's adverse environmental effects, the costs those effects impose on the *local* public, the claimed social and economic benefits, and less harmful alternatives before

⁵¹ Comments to LDEQ submitted Aug. 20, 2026, at PDF 7-42 & 80, Document ID: 15331653, <https://edms.deq.louisiana.gov/app/doc/view?doc=15331653>. Sierra Club adopts all comments contained in that section.

⁵² *Id.*

⁵³ *Save Ourselves, Inc.*, 452 So. 2d at 1157.

issuing the permit.⁵⁴ The second IT Question – whether “a cost-benefit analysis of the environmental impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former”⁵⁵ – plainly requires a cost-benefit analysis, not a mere recitation of projected investment and employment that is contained in Hyundai’s EA. LDEQ has not shown that the Hyundai steel project will provide real, enforceable economic benefits to the local communities that will bear the project’s environmental burdens.

LDEQ’s public trust duty requires a concrete, record-based answer to the central economic question: will the people who bear the environmental costs receive the economic benefits? LDEQ may not treat broad promises of jobs, investment, or future tax revenue as automatic public benefits. Before LDEQ credits Hyundai’s unsupported job and tax claims, it must require Hyundai to provide enforceable commitments and project-specific evidence. Without this information, LDEQ cannot lawfully conclude that the project’s claimed social and economic benefits outweigh its environmental costs. The permit record would instead show a project that asks local residents to bear concentrated pollution and infrastructure burdens while Hyundai receives public subsidies and profit. LDEQ should deny the permit, or at minimum withhold approval unless Hyundai makes binding commitments that directly address these local economic harms and allow LDEQ to complete a lawful public trust analysis.⁵⁶

1. LDEQ must include local economic considerations in the public trust analysis.

Louisiana law requires LDEQ to give full and careful consideration to environmental costs and benefits alongside economic, social, and other factors.⁵⁷ The same cost-benefit balancing test governs this analysis.⁵⁸ LDEQ must exercise its own judgment as public trustee and explain how the record supports its conclusions, not simply adopt Hyundai’s claims in a single sentence. If the benefits do not flow to the communities that will experience the pollution, traffic, industrial disruption, and health risks, LDEQ cannot count those benefits as a sufficient offset to the project’s local environmental costs.

2. Hyundai’s job promises do not prove local economic benefits.

State officials have described the Hyundai project as a nearly \$6 billion steel mill on approximately 1,700 acres in Donaldsonville, anchoring the RiverPlex MegaPark on the West Bank of the Mississippi River. Louisiana Economic Development states that Hyundai expects to create more than 1,300 direct jobs with an average salary of \$95,000, and estimates about 4,100

⁵⁴ La. Const. art. IX, § 1; La. R.S. 30:2018(B); *Save Ourselves*, 452 So. 2d at 1157-58.

⁵⁵ *In re Shintech, Inc.*, 2000-1984 (La. App. 1st Cir. 2/15/02), 814 So. 2d 20, 25, writ denied, 815 So. 2d 845; *In re Rubicon, Inc.*, 95-0108 (La. App. 1st Cir. 2/14/96), 670 So. 2d 475, 483.

⁵⁶ Sierra Club also adopts the Comments to LDEQ submitted Aug. 20, 2026, “Removal of the Climate and Environmental Justice Analyses” at PDF 71-74, Document ID: 15331653, <https://edms.deq.louisiana.gov/app/doc/view?doc=15331653>.

⁵⁷ *Save Ourselves*, 452 So. 2d at 1157.

⁵⁸ *In re Shintech, Inc.*, 814 So. 2d at 25; *In re Rubicon, Inc.*, 670 So. 2d at 482-83.

indirect jobs in the Capital Region.⁵⁹ Those numbers do not answer the key local question: who will actually get those jobs? The permit record and public announcements do not guarantee that Ascension Parish residents, West Bank residents, or residents of nearby historically Black communities will receive the permanent, well-paid positions. In its cost-benefit analysis, LDEQ must evaluate who will receive those jobs, where those workers will live, if any barriers will prevent nearby residents from obtaining the better-paid positions, and whether Hyundai has made binding commitments to hire and train residents from the communities closest to the facility.

The record should not assume that nearby residents will receive the promised economic benefits. A 2025 study led by Tulane Environmental Law Clinic researchers found that people of color remain consistently underrepresented in the highest-paying petrochemical jobs and overrepresented in the lowest-paying jobs in Louisiana.⁶⁰ The study also found that disparities persist at the local level in Louisiana, including in parishes that provide large tax subsidies for job creation.⁶¹ That evidence directly undermines the familiar claim that heavy industrial projects automatically create shared local prosperity. Another recent study of Louisiana industrial jobs reinforces those findings, concluding that “Black workers are underrepresented in both construction and manufacturing,” and “[t]he industrial workforce is predominantly male and disproportionately White...”⁶² These studies show why LDEQ must require Hyundai to provide enforceable local hiring commitments, workforce training commitments, transparent job reporting by parish and zip code, and penalties for noncompliance before crediting job creation as a public benefit.

3. Public subsidies and tax abatements reduce the claimed public benefit.

LDEQ’s cost-benefit analysis should also consider how Hyundai’s public subsidies and tax arrangements reduce, delay, or eliminate the tax benefits that officials claim will flow to the community. Litigation challenging Hyundai’s subsidies alleges Louisiana agreed to spend up to \$100 million to buy land for Hyundai, up to another \$100 million to reimburse Hyundai for construction and infrastructure costs, and additional public money for an overpass, Louisiana Highway 1 modifications, and a rail extension.⁶³ The lawsuit also alleges a payment-in-lieu-of-

⁵⁹ Louisiana Economic Development, “Louisiana Wins Again,” Governor Jeff Landry & LED Secure \$5.8 Billion Hyundai Steel Mill, (Mar. 24, 2025), <https://www.opportunitylouisiana.gov/news/louisiana-wins-again-governor-jeff-landry-led-secure-5-8-billion-hyundai-steel-plant>, (attached as Exhibit PC.12).

⁶⁰ Tom Pelton, *After surviving brush with death, pastor fights to save his community from industrial 'MegaPark'*, Oil & Gas Watch (Apr. 20, 2026), <https://news.oilandgaswatch.org/post/after-surviving-brush-with-death-pastor-fights-to-save-his-community-from-industrial-megapark>, (attached as Exhibit PC.19).

⁶¹ Kimberly Terrell et al., *Pervasive racial and ethnic disparities in the U.S. petrochemical workforce*, Ecological Economics (2025), <https://www.sciencedirect.com/science/article/pii/S0921800925001065?via%3Dihub>, (attached as Exhibit PC.20).

⁶² University of Louisiana Lafayette, *Analysis of Industrial Job Uptake in Louisiana*, (Jan. 2026), https://blancocenter.louisiana.edu/sites/blancocenter/files/Blanco_Industrial_Uptake_CATF_executivesummary_Final.pdf, (attached as Exhibit PC.21).

⁶³ Petition for Declaratory and Injunctive Relief, *Rural Roots La. et al. v. State of Louisiana, et al.*, No. (La. 19th Jud. Dist. Ct. Apr. 2, 2026),

taxes arrangement under which Hyundai would save an estimated \$1.2 billion over 32 years and make smaller lease payments totaling \$553 million instead of paying property taxes.⁶⁴

These alleged subsidies affect the cost-benefit balance: to the extent the public provides land, infrastructure, tax abatements, and reduced tax payments, it absorbs the project's costs while Hyundai receives the profits. LDEQ cannot treat future tax revenue as an unqualified economic benefit.

4. Hyundai-Posco will benefit from the projects' profits, but the project's environmental harms will fall locally

The proposed permitting materials confirm that the facility would bring substantial emissions and environmental harms to Ascension Parish. These environmental burdens have economic consequences. More pollution, traffic, and industrial activity would reduce quality of life, strain local infrastructure, increase public health impacts including increased doctor visits, missed work and school days, hospitalizations and premature death,⁶⁵ and make nearby homes harder to sell or less desirable to occupy. LDEQ must consider these local burdens and how they will impact nearby residents who will breathe the air, experience the traffic and industrialization, and rely on local roads, schools, emergency responders, and health systems to absorb the project's impacts.

LDEQ must compare in the same public trust balancing test those local harms with the claimed local economic benefits. As explained above, the analysis should only include job benefits if Hyundai commits to enforceable local hiring requirements. LDEQ should only consider local tax benefits if it also takes into account the public subsidies and tax breaks Hyundai is being given from public coffers.

G. LDEQ Must Consider Toxic Mercury Emissions, Public-Health Threats, and Bioaccumulation Risks in Local Wetlands.

The proposed permit would authorize approximately 405 pounds per year of mercury and mercury compounds.⁶⁶ Because even low levels of mercury pose irreversible and serious public health impacts, LDEQ must investigate the public trust question whether avoidable mercury pollution has been minimized and whether the resulting risks to people and natural resources have been fully and carefully considered.⁶⁷

https://ccrjustice.org/sites/default/files/images/RRL_LBB_v_LED_CEA_04022026_Rd.pdf, (attached as Exhibit PC.22); see also *Lawsuit alleges Louisiana's deal with incoming Hyundai Steel plant broke state law*, WBRZ (Apr. 3, 2026), <https://www.wbrz.com/news/lawsuit-alleges-louisiana-s-deal-with-incoming-hyundai-steel-plant-broke-state-law-186249/>, (attached as Exhibit PC.13).

⁶⁴ Petition for Declaratory and Injunctive Relief, *Rural Roots La. et al. v. State of Louisiana, et al.*, (attached as Exhibit PC.22).

⁶⁵ U.S. EPA. (2011). *The Benefits and Costs of the Clean Air Act from 1990 to 2020: Second Prospective Study*. U.S. EPA Office of Air and Radiation, <https://www.epa.gov/clean-air-act-overview/clean-air-act-and-economy>, (attached as Exhibit PC.23).

⁶⁶ Draft Permit at PDF 11 (Mercury (and compounds) 0.183 tons per year).

⁶⁷ Draft Permit at PDF 759; La. Admin. Code tit. 33, § III-5112.

Mercury is a potent neurotoxin with no known beneficial biological function, and even low-level exposures can pose long-term health risks.⁶⁸ Deposited mercury can be transformed in aquatic systems into methylmercury, the highly toxic form that bioaccumulates and biomagnifies through aquatic food webs.⁶⁹ Mercury vapor, once inhaled, is readily absorbed into the bloodstream and can cross the blood-brain barrier, leading to tremors, impaired cognitive skills, and emotional instability.⁷⁰ Prenatal exposure to even low levels of methylmercury poses a critical risk to fetuses and infants, potentially resulting in permanent neurological deficits, lower IQ, and developmental delays.⁷¹

These risks are especially significant because the proposed Hyundai facility would be located adjacent to the Mississippi River and within Ascension Parish, where approximately 43 percent of parish land - about 84,000 acres - is designated wetland.⁷² Once emitted, mercury may deposit into surrounding wetlands and waterbodies, where microbial processes can convert it into methylmercury.⁷³ That compound then bioaccumulates through the food web, reaching toxic concentrations in predatory fish and the species that consume them, including piscivorous birds and mammals, which may suffer reduced reproductive success and behavioral changes.⁷⁴ The concern is not theoretical: Louisiana has issued fish-consumption advisories for mercury in multiple waterways, including Blind River in Ascension Parish and nearby parishes.⁷⁵

LDEQ has a constitutional mandate to protect air and water resources for present and future generations. At a minimum, LDEQ should require Hyundai to provide speciated mercury-emissions estimates; localized deposition modeling; an analysis of wetlands and waterbodies likely to receive deposition; a comparison with existing mercury fish-consumption advisories and fish-tissue monitoring data; and an evaluation of feasible mercury-reduction measures, including scrap-screening practices, material substitution, process changes, and add-on controls.

⁶⁸ Charkiewicz AE, Omeljaniuk WJ, Garley M, Nikliński J., *Mercury Exposure and Health Effects: What Do We Really Know?* Int J Mol Sci. 2025 Mar 5;26(5):2326. doi: 10.3390/ijms26052326. PMID: 40076945; PMCID: PMC11899758, <https://pmc.ncbi.nlm.nih.gov/articles/PMC11899758/pdf/ijms-26-02326.pdf>, (attached as Exhibit PC.24).

⁶⁹ U.S. Geological Survey (USGS), *Mercury Contamination of Aquatic Environments*, (Sep. 2, 2026), <https://www.usgs.gov/water-science-school/science/mercury-contamination-aquatic-environments>, (attached as Exhibit PC.25).

⁷⁰ Genchi, G., Sinicropi, M. S., Carocci, A., Lauria, G., & Catalano, A., *Mercury exposure and heart diseases*, International Journal of Environmental Research and Public Health, 14(1), 74, (2017), <https://doi.org/10.3390/ijerph14010074>, (attached as Exhibit PC.26).

⁷¹ National Research Council, *Toxicological Effects of Methylmercury*, Washington, DC: National Academies Press, (2000), <https://pubmed.ncbi.nlm.nih.gov/25077280/>, (attached as Exhibit PC.27).

⁷² Ascension Parish Planning Commission, Ascension Parish Master Land Use Plan at 50, (May 2019), https://www.ascensionparish.net/wp-content/uploads/2024/05/AP-Master-Land-Use-Plan_Adopted_Web.pdf, (attached as Exhibit PC.28).

⁷³ National Park Service, *Mercury and Toxics in Nature - Air* (Oct. 23, 2024), <https://www.nps.gov/subjects/air/nature-toxics.htm>, (attached as Exhibit PC.29).

⁷⁴ *Id.*

⁷⁵ Louisiana Department of Health, *Mercury and fish advisories issued for 11 waterways* (Apr. 17, 2024), <https://www.ldh.la.gov/news/7306> (attached as Exhibit PC.30); LDEQ, Louisiana Health/Fish Consumption Advisories (updated Jun. 13, 2025), https://www.deq.louisiana.gov/assets/docs/Water/Fish_Swim_Advisories/AdvisoryListFinal6.13.25.pdf, (attached as Exhibit PC.31).

Without that information, LDEQ cannot determine whether the project minimizes avoidable mercury pollution or protects the public's use of Louisiana's air, waters, wetlands, and fisheries.⁷⁶

H. LDEQ Must Consider the Facility's Substantial Long-Term Water Demand, Regional Aquifer Stress, and Accelerating Saltwater Intrusion.

As part of LDEQ's public trust analysis, the Department must consider the facility's substantial long-term water demand, its effect on regional groundwater resources, and the accelerating threat of saltwater intrusion. Ascension Parish relies heavily on the Gonzales-New Orleans and Norco aquifers for public and industrial water supply. These aquifers are part of the Southern Hills regional aquifer system, which is already under significant stress.

Heavy industrial pumping in the region can create a "cone of depression" that pulls saltwater from the south across the Baton Rouge fault into freshwater sands.⁷⁷ The Gonzales-New Orleans aquifer already contains freshwater overlying saltwater in central Ascension Parish.⁷⁸ Additional withdrawals for an industrial facility of this scale are likely to accelerate the upward and northward migration of the saltwater wedge, increasing the risk of permanent contamination of local drinking-water supplies. Saltwater intrusion can significantly increase chloride and sodium levels, as recent saltwater-intrusion events farther south along the Mississippi River illustrate.⁷⁹ Elevated sodium levels in drinking water pose a health risk "associated with hypertension, and pregnant women are especially vulnerable."⁸⁰

While exact figures for the facility's cumulative daily or annual water usage have not been explicitly spotlighted in public materials, standard industrial requirements for Direct Reduced Iron (DRI) and Electric Arc Furnace (EAF) facilities of this magnitude provide a reliable framework for estimation. For an ultra-low carbon steel mill scaled to produce 2.7 million metric tons of steel annually, typical process cooling, dust suppression, and steam generation needs generally between 1.1 and 2.4 billion gallons of water per year.⁸¹ This translates to a consistent

⁷⁶ See LDEQ, Water Quality Monitoring Strategy, Revision 10 (Mar. 20, 2025) (describing fish-tissue sampling and mercury-advisory monitoring), https://www.deq.louisiana.gov/assets/docs/Water/WQ_Monitoring_Strategy_r10_Final_3-20-2025.pdf (attached as Exhibit PC.32).

⁷⁷ USGS, *Chloride concentrations in groundwater from the western part of the Southern Hills regional aquifer system, Louisiana, 2021–22*, (2024), <https://pubs.usgs.gov/publication/sir20245057/full>, (attached as Exhibit PC.33).

⁷⁸ USGS, *Water resources of Ascension Parish*, (Fact Sheet 2009-3063), (2009), https://pubs.usgs.gov/fs/2009/3063/pdf/Ascension_FS.pdf, (attached as Exhibit PC.34).

⁷⁹ Emilee Speck, *Salt water continues advancing on Mississippi River as Orleans Parish explores drinking water options*, FOX Weather (Sept. 28, 2023), <https://www.foxweather.com/weather-news/salt-water-intrusion-mississippi-river-orleans-parish-drinking-water-options>, (attached as Exhibit PC.35).

⁸⁰ *Id.*

⁸¹ World Steel Association, *Water Management in the Steel Industry*, (2020), <https://worldsteel.org/wp-content/uploads/Water-management-in-the-steel-industry.pdf> (Fact Sheet data mapping average EAF/DRI water consumption. EAF routes utilize a global average intake of approximately 28.1 m³ per metric ton of steel, with a net evaporative consumption/loss range of 1.6 m³ to 3.3 m³ per metric ton), (attached as Exhibit PC.36).

operational draw of roughly 3 to 6.5 million gallons per day,⁸² which would likely rely on a combination of surface water withdrawals from the adjacent Mississippi River and regional groundwater networks. The baseline consumption could escalate significantly if Hyundai transitions to green hydrogen.⁸³

LDEQ does not have sufficient information to assess the facility's water demands, and meet its public trust duties. Additional information necessary for LDEQ's public trust review includes: (1) the facility's projected daily, monthly, and annual groundwater withdrawals; (2) any proposed well locations, depths, and screened aquifers; (3) a hydrogeologic model evaluating whether project withdrawals would steepen hydraulic gradients toward production wells or accelerate chloride migration; (4) feasible alternatives that would reduce groundwater demand, including surface-water supply, water recycling, phased withdrawals, or enforceable withdrawal caps; and (5) monitoring, reporting, and mitigation conditions triggered by rising chloride or sodium concentrations.

LDEQ should also require the applicant to explain whether the project is subject to review, permitting, or coordination with the Capital Area Groundwater Conservation Commission or any other groundwater-management authority, and how the project would remain consistent with regional efforts to halt saltwater encroachment while maintaining sustainable use of the Southern Hills regional aquifer system.

The Hyundai project may also be inconsistent with the 2023 Louisiana Coastal Master Plan. The 2023 Coastal Master Plan, developed by the Louisiana Coastal Protection and Restoration Authority (CPRA), is the state's blueprint for a sustainable coast.⁸⁴ LDEQ must ensure that the facility's water use is consistent with the Plan's core objectives.

The 2023 Master Plan emphasizes protecting coastal ecosystems and natural resources threatened by land loss, flood risk, and future environmental change; maintaining freshwater resources and limiting inland salinity movement are central to that objective.⁸⁵ Industrial groundwater overdrafting that may induce saltwater intrusion counteracts the state's multibillion-dollar investments in freshwater diversions and is a driver of land loss and environmental degradation.⁸⁶ Allowing a new, large industrial user to deplete these shared resources would undermine the Plan's emphasis on regional-scale benefits to coastal ecosystems and communities. The 2023 Mississippi River saltwater-intrusion emergency demonstrates the

⁸² *Id.* Volumetric conversion calculations based on a 2.7 million metric ton annual facility capacity (2,700,000 metric tons x 1.6 m³ to 3.3 m³ = 4.32 million m³ to 8.91 million m³ net consumption annually; converted at 1 m³ approx. 264.172 gallons).

⁸³ See generally International Renewable Energy Agency (IRENA), *Green Hydrogen Supply: A Guide to Policy Making* (2021), https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/May/IRENA_Green_Hydrogen_Supply_2021.pdf, (attached as Exhibit PC.37).

⁸⁴ Coastal Protection and Restoration Authority (CPRA), *Louisiana's Comprehensive Master Plan for a Sustainable Coast*, (2023), <https://coastal.la.gov/our-plan/2023-coastal-master-plan/>, (attached as Exhibit PC.38).

⁸⁵ *Id.*

⁸⁶ Nolte, A., Bender, S., Hartmann, J. *et al*, *Coastal groundwater-level trends reveal global susceptibility to seawater intrusion*, *Nature Water*, 4, 673–682 (2026), <https://doi.org/10.1038/s44221-026-00619-8> (attached as Exhibit PC.39).

region's increasing vulnerability to salinity-related water-supply disruptions. Approving a facility that further stresses these aquifers ignores the lessons of recent climate-driven water crises. LDEQ cannot fulfill its duty as a public trustee by approving a project that threatens Ascension Parish's water supply.

I. LDEQ Must Complete and Allow Public Comment On Its Public Trust Analysis Before Issuing the Final Permits.

The proposed permit record shows LDEQ did not conduct an independent public trust decision. For the reasons detailed in the foregoing sections, LDEQ cannot make the findings Louisiana's public trust doctrine requires on the present record. LDEQ should therefore withhold final approval unless and until it prepares and discloses an independent written public trust analysis that addresses the environmental justice, alternatives and site-comparison, socioeconomic-balancing, mercury-deposition, and water-supply and saltwater-intrusion deficiencies identified above, and it should provide a meaningful opportunity for public comment on any new or materially revised analysis before making a final permit decision.

II. LDEQ's BACT Determinations and Title V Requirements are Fundamentally Flawed.

A. The Clean Air Act Imposes Mandatory BACT Requirements

The core goals of the Clean Air Act's Prevention of Significant Deterioration (PSD) preconstruction permitting program are to ensure that new sources of air pollution incorporate state-of-the-art pollution controls and do not contribute to air pollution in excess of health-based air quality standards.⁸⁷ The preconstruction process is critical for these massive sources of air pollution that operate for decades because there is little opportunity under the Clean Air Act to revisit the allowed emissions levels. The PSD permit sets the limits that will govern the plant's emissions of air pollutants to a rate consistent with the use of the best available methods, systems, and techniques of pollution control (this emission limit is called the "Best Available Control Technology" (BACT)). BACT is considered "[o]ne of the most critical elements of the PSD permitting process."⁸⁸

BACT is defined as

“...an emissions limitation, including a visible emission standard, based on the maximum degree of reduction for each pollutant subject to regulation under this Section that would be emitted from any proposed major stationary source or major modification that the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods,

⁸⁷ See *Nat'l Parks Conservation Ass'n v. Tenn. Valley Auth.*, 480 F.3d 410, 412 (6th Cir. 2007); 42 U.S.C. §§ 7470-7492.

⁸⁸ *In re Knauf Fiber Glass*, 8 E.A.D. 121, 131 (E.A.B. 1999), 1999 WL 64235, at *8; hereinafter (“Knauf I”).

systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.”⁸⁹

To ensure that a BACT determination is “reasonably moored” to the Clean Air Act’s statutory requirement that BACT represent the maximum achievable reduction, EPA established the top-down process described in the 1990 New Source Review (NSR) Manual.⁹⁰ As the U.S. Environmental Appeals Board (EAB)⁹¹ explained:

The NSR Manual’s “top-down” method is simply stated: assemble all available control technologies, rank them in order of control effectiveness, and select the best. So fixed is the focus on identifying the “top,” or most stringent alternative, that the analysis presumptively ends there and the top option selected — “unless” technical considerations lead to the conclusion that the top option is not “achievable” in that specific case, or energy, environmental, or economic impacts justify a conclusion that use of the top option is inappropriate.⁹²

Documentation in the record is essential to a proper BACT analysis. Each step of the BACT analysis, and especially a decision to reject an effective pollution reduction option in favor of a less effective option when establishing a BACT limit “must be adequately explained and justified.”⁹³

⁸⁹ LAC 33:III.509.B. (definition of “best available control technology”), 40 C.F.R. § 52.21(b)(12).

⁹⁰ *Alaska Dept. of Env'tl. Conservation v. EPA*, 540 U.S. 461, 476 (2004); *Sierra Club v. La. Dep't of Env't Quality*, 100 F.4th 555, 570 (2024).

⁹¹ The EAB is EPA’s supreme adjudicative body. *See* Changes to Regulations to Reflect the Role of the New Environmental Appeals Board in Agency Adjudications, 57 Fed. Reg. 5320 (Feb. 13, 1992). EAB decisions represent the position of the EPA Administrator with respect to the matters brought before it. *See Tenn. Valley Auth. v. EPA*, 278 F.3d 1184, 1198–99 (11th Cir. 2002) (finding EAB decision to be “final agency action”). State courts often look to decisions from the Environmental Appeals Board (EAB) for guidance, affording the EPA’s highest decision making authority significant deference. *See, e.g., United States v. S. Indiana Gas & Elec. Co.*, 245 F. Supp. 2d 994, 1009-10 (S.D. Ind. 2003). Louisiana must interpret the Clean Air Act such that the state’s program is no weaker than the federal program, as it has been interpreted by EPA. *See* 42 U.S.C. § 7416; *Alaska Dept. Env'tl. Conservation*, 540 U.S. 461 (2004) (upholding EPA’s interpretations of BACT over state objections).

⁹² *In re: Northern Michigan University Ripley Heating Plant*, PSD Appeal No. 08-02, slip op. at 13 (E.A.B. 2009),

[https://yosemite.epa.gov/OA/EAB_WEB_Docket.nsf/\(Filings\)/06DBEC31EBFD8C3E852575620052318B/\\$File/Northern%20Mich%20Univ.pdf](https://yosemite.epa.gov/OA/EAB_WEB_Docket.nsf/(Filings)/06DBEC31EBFD8C3E852575620052318B/$File/Northern%20Mich%20Univ.pdf).

⁹³ *Knauf I*, 8 E.A.D. at 131; EPA, New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting, October 1990, at B.26-B.29, [hereinafter “NSR Manual”], <https://www.epa.gov/sites/default/files/2015-07/documents/1990wman.pdf>, Sierra Club Expert Reports, Katie McClintock GHG BACT Report, Exhibit II.A, <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900> (PDF 134-137); *In re General Motors, Inc.*, 10 E.A.D. 360, 379 (EAB 2002); *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 206-07 (E.A.B. 2002); *In re Masonite Corp.*, 5 E.A.D. 551, 546-69 (EAB 1994).

1. The 5-Step Top-Down BACT Process

For each pollutant from each emissions unit,⁹⁴ the first step in the BACT process is to identify “all potentially available control options.”⁹⁵ As the EAB has emphasized, “available is used in its broadest sense under the first step and refers to control options with a practical *potential* for application to the emission unit under evaluation.”⁹⁶ A control option is considered “available” if “there are sufficient data indicating (but not necessarily proving)” the technology “will lead to a demonstrable reduction in emissions of regulated pollutants or will otherwise represent BACT.”⁹⁷ This step must include “inherently lower-polluting processes,” “technologies employed outside of the United States,” “controls applied to similar source categories and gas streams and innovative control technologies.”⁹⁸ BACT’s forward-looking emphasis is the “most important” mechanism promoting the Clean Air Act’s “philosophy of encouragement of technology development.”⁹⁹ The BACT standard is intended to require the use of “the latest technological developments [in pollution control] as a requirement in granting the permit,” so as to “lead to rapid adoption of improvements in technology as new sources are built,” rather than “the stagnation that occurs when everyone works against a single national standard for new sources.”¹⁰⁰

Step two of the BACT process involves evaluating the technical feasibility of the available options and eliminating those that are not feasible.¹⁰¹ Technically infeasible options are eliminated only if “clearly documented...based on physical, chemical and engineering principles.”¹⁰²

In Step 4, starting with the most stringent technology, the economic, environmental, and energy impacts, “both beneficial and adverse,” are evaluated and quantified if possible.¹⁰³ Only if this analysis documents that the first ranked technology is inappropriate, that technology is eliminated and the next most effective alternative evaluated.¹⁰⁴ Based on this process, the most effective, achievable technology is proposed as BACT. As the Supreme Court has recognized, the definition of BACT contains the “strong, normative terms ‘maximum’ and ‘achievable.’”¹⁰⁵ LDEQ must articulate a sound basis with supporting documentation to select anything other than the most stringent emissions limit achievable.¹⁰⁶

⁹⁴ NSR Manual, Sierra Club Expert Reports, Katie McClintock GHG BACT Report, Exhibit II.A, <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900> at B.4 (PDF 112).

⁹⁵ *In re Miss. Lime Co.*, PSD Appeal No. 11-01, slip op. at 11 (E.A.B. Aug. 9, 2011).

⁹⁶ *Knauf I*, 8 E.A.D. at 130 (emphasis in original).

⁹⁷ *In re Spokane Regional Waste-to-Energy Applicant*, 2 E.A.D. 809, slip op. at 22 (Adm’r Jun. 9, 1989).

⁹⁸ NSR Manual B.5-B.9 (PDF 113-117).

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ NSR Manual at B.7 (PDF 115); *In re Indeck-Elwood, LLC*, PSD Appeal No. 03-04, 13 E.A.D., slip op. at 11 (E.A.B. Sept. 27, 2006).

¹⁰² NSR Manual, Table B-1 (PDF 114).

¹⁰³ NSR Manual at B.9 (PDF 117).

¹⁰⁴ *Id.*

¹⁰⁵ *Alaska Dept. of Env’tl Conservation*, 540 U.S. at 484-87; *In re Indeck-Elwood*, 2006 WL 3073109 at *6.

¹⁰⁶ *Alaska Dept. of Env’tl Conservation*, 540 U.S. at 497.

The next step in the BACT process is to rank the available and feasible control technologies for each pollutant in order of effectiveness.¹⁰⁷ That is, for each pollutant, the most effective control option is ranked first, and relatively less effective options follow with the least effective option ranked last. The evaluation should address control effectiveness (percent pollutant removed); expected emission rate (tons per year); expected emission reduction (tons per year); energy impacts (Btu, kWh); environmental impacts (other media and the emissions of toxic and hazardous air emissions); and economic impacts (total cost effectiveness, incremental cost effectiveness).¹⁰⁸

The fourth step in the BACT process is to evaluate the collateral economic, environmental and energy impacts of the various control technologies.¹⁰⁹ This step typically focuses on evaluating both the average and incremental cost-effectiveness of a pollution control option in terms of the dollars per ton of pollution emission reduced.¹¹⁰ The point of this review is to either confirm the most stringent control technology as BACT, considering economic, environmental, or energy concerns, or to specifically justify the selection of a less stringent technology based on consideration of these factors.¹¹¹

2. BACT limits must be both legally and practically enforceable.

At the end of the BACT analysis, the agency must “establish an enforceable emission limit for each subject emission unit at the source and for each pollutant subject to review that is emitted from the source.”¹¹² BACT limits must be both legally and practically enforceable (i.e., enforceable as a practical matter).¹¹³ As EPA has explained, in order to be enforceable as a practical matter, the permit must, among other things, “clearly specify how emissions will be measured or determined for purposes of demonstrating compliance.”¹¹⁴ To that end, “limitations must be supported by monitoring, recordkeeping, and reporting requirements sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action.”¹¹⁵ The New Source Review Manual, upheld in numerous EAB cases, requires that BACT emission limits must be met on a continual basis at all levels of operation. The Manual states:

BACT emission limits or conditions must be met on a continual basis at all levels of operation (e.g., limits written in pounds/MMbtu or percent reduction achieved), demonstrate protection of short term ambient standards (limits written in pounds/hour) and be enforceable as a practical matter (contain appropriate averaging times, compliance verification procedures and recordkeeping requirements).¹¹⁶

¹⁰⁷ *In re Miss. Lime Co.*, slip op. at 12.

¹⁰⁸ NSR Manual, Table B-1 (PDF 114).

¹⁰⁹ NSR Manual, B.26 (PDF 134); *Indeck-Elwood*, slip op. at 12.

¹¹⁰ *In re Miss. Lime Co.*, slip op. at 12.

¹¹¹ *Id.*

¹¹² NSR Manual, B.56 (PDF 164).

¹¹³ See *In the Matter of Yuhuang Chemical Inc. Methanol Plant*, Order on Petition No. VI-2015-03 at 14 (August 31, 2016).

¹¹⁴ *Id.*

¹¹⁵ *Id.* (emphasis added).

¹¹⁶ NSR Manual, B.56 (PDF 164).

To be practically enforceable, a permit must contain adequate monitoring procedures to assure compliance with emissions limits.¹¹⁷ Practical enforceability means the source must be able to show continuous compliance with each limitation requirement,¹¹⁸ and the permit must include adequate testing, monitoring, and recordkeeping requirements.¹¹⁹

Blanket limits, such as tons per year limits, are not practically enforceable because they are “virtually impossible to verify or enforce.”¹²⁰ “Compliance with any limitation must be able to be established at any given time...restrictions [must be] written in such a manner that an inspector could verify instantly whether the source is or was complying with the permit condition.”¹²¹ To be enforceable, permits must “specify a reasonable averaging time consistent with established referenced methods...”¹²² Additionally, emissions limits should be expressed in two ways, “with one value serving as an emissions cap (e.g., lb/hr) and the other ensuring continuous compliance at any operating capacity (e.g. lbs/MMBTU).”¹²³

3. Title V Requirements

Major sources of air pollution like the proposed Hyundai facility must obtain a permit that meets Clean Air Act Title V requirements (i.e., a “Title V permit”), in addition to a PSD permit.¹²⁴ While a PSD permit focuses on meeting the Clean Air Act requirements to start construction of a major emissions source, a Title V permit governs all of the specifics of how the source is allowed to operate once it is built and operating. The purpose of the Title V permit is to facilitate compliance and enforcement by “enabl[ing] the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements.”¹²⁵ Title V permits conditions such as testing, monitoring, reporting, and recordkeeping that are sufficient to “assure compliance” with all applicable Clean

¹¹⁷ *In re Peabody*, 12 E.A.D. 22 (E.A.B. 2005) WL 428833, at *12 (upholding EPA’s refusal to accept the mine’s proposed limits because Peabody “ha[d] not sufficiently demonstrated that it met the central criteria for establishing such limits – technical accuracy and a reliable method of determining compliance.” For example, Peabody had not “proposed monitoring sufficient to establish a practically enforceable PTE limit.”); NSR Manual, at A.5 (PDF 57), B.56 (PDF 164); *United States v. Louisiana-Pac. Corp.*, 682 F. Supp. 1122, 1132-33 (D. Colo. 1987). EPA objected to the Title V permit for the Big Stone coal plant for this very reason. The permit “fail[ed] to indicate how the permittee must demonstrate that it is maintaining emissions at a level below the major source thresholds...” Letter from U.S. EPA to Steven M. Pirner, P.E. Sec’y, S.D. Dep’t of Env’t and Natural Res. (Jan. 22, 2009), at 11.

¹¹⁸ Terrell E. Hunt & John S. Seitz, U.S. EPA, Guidance on Limiting Potential to Emit in New Source Permitting (Jun. 13, 1989), at 3-5, hereinafter (“Guidance to Limiting PTE in NSR”), <https://www.epa.gov/sites/default/files/2015-07/documents/lmitpotl.pdf>, (attached as Exhibit PC.40); NSR Manual, at A.5 (PDF 57).

¹¹⁹ NSR Manual, at A.5 (PDF 57).

¹²⁰ *United States v. Louisiana-Pac. Corp.*, 682 F. Supp. at 1133; Guidance to Limiting PTE in NSR at 3-5; Memo from John S. Seitz, Office of Air Quality Planning and Standards to Air Management Division Directors et al. (Apr. 8, 1987); NSR Manual, at c.4.

¹²¹ NSR Manual, at c.3 (PDF 351).

¹²² *Id.* at B.56 (PDF 164).

¹²³ *Id.* at H.5 (PDF 318); see also *id.* at I.2 (PDF 325).

¹²⁴ See 42 U.S.C §§ 7661a, 7661c.

¹²⁵ EPA Operating Permit Program, Final Rule, 57 Fed. Reg. 32,250, 32,251 (July 21, 1992).

Air Act requirements, including emission limits set in PSD permits.¹²⁶ Louisiana may impose requirements more stringent than the federal minimum, but it may not issue a Title V permit whose monitoring falls below the level that assures compliance.¹²⁷

B. LDEQ's BACT Determinations and Proposed Permits are Fundamentally Flawed.

LDEQ's BACT analyses fail to meet Clean Air Act requirements in multiple fundamental respects that permeate every pollutant and emission unit, and render the BACT determinations legally insufficient. In addition to these comments, Sierra Club adopts BACT comments previously submitted to DEQ.¹²⁸

1. LDEQ's BACT Analyses Are All Fundamentally Flawed, Incomplete and Must Be Redone

The attached expert report of Clean Air Act permitting expert Katie McClintock¹²⁹ describes deficiencies that permeate all of the application's BACT analysis from start to finish.¹³⁰ LDEQ did not cure these deficiencies in its BACT determinations and proposed permits.

a. Failure to Establish Uncontrolled Baseline Emissions

LDEQ's and Hyundai's permitting materials fail to provide the fundamental information required for a BACT review by omitting an uncontrolled baseline emissions rate. Establishing a pre-control emission rate is a mandatory starting point for any BACT analysis.¹³¹ Without this baseline, it is impossible for LDEQ to accurately evaluate the effectiveness of proposed controls or verify claimed emission decreases.

b. Failure to Identify All Available Control Options at Step 1

LDEQ and Hyundai fail to properly identify all the potential control options at step 1 of the BACT analysis. LDEQ did not: 1) list all available control options in the RBLC; 2) provide options outside of the RBLC including technology transfer and controls at foreign facilities; 3) list both standalone and combinations of technologies. These comments and attached expert reports describe numerous examples of LDEQ's failures including failure to consider electrified components, toxic dust control measures, and improperly evaluating SCR only as an aggregated

¹²⁶ 42 U.S.C. § 7661c(a), (c); 40 C.F.R. §§ 70.6(a)(1), (c)(1); LAC 33:III.507.H; *see also* 40 C.F.R. § 70.2 (defining "applicable requirements"). Louisiana's approved Title V program is codified in LAC 33:III.507. *See* 60 Fed. Reg. 47,296 (Sept. 12, 1995).

¹²⁷ 40 C.F.R. § 70.1.

¹²⁸ Comments to LDEQ, AI 248885, Document ID: 15331653, "Permit Terms and the Determinations Supporting Them" at PDF 43-57, (Aug. 20, 2026), <https://edms.deq.louisiana.gov/app/doc/view?doc=15331653>.

¹²⁹ Kate McClintock, CAA Regulatory and Technical Consultant, May 2026, Resume (*attached as* Exhibit PC.41).

¹³⁰ Sierra Club Expert Reports, Katie McClintock, BACT Report (May 2026) at PDF 21-31, <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

¹³¹ NSR Manual at B.36 (PDF 144) et seq.

control with low-NOx burners. LDEQ must evaluate Low-Burners (LNB) used in tandem with SCR, as BACT requires.¹³²

c. Improper Dismissal of Controls Without Explanation or Documentation

Under the "top-down" BACT process, the most stringent control option must be selected unless the applicant provides robust documentation demonstrating that it is technically infeasible, not cost-effective, or results in adverse collateral impacts. A bare, unsupported claim in the application – for example that Hyundai's technology is different - is an insufficient reason to dismiss an available control. These comments detail many examples where LDEQ or Hyundai dismissed a control without any discussion or documentation, like Hyundai's conclusory dismissal of green hydrogen and LDEQ's failure to evaluate green hydrogen or full or partial enclosures for material storage piles.

d. Failure to Evaluate Control Efficiencies Unit-by-Unit

All of LDEQ's step 3 analyses are deficient. LDEQ failed to evaluate specific control efficiencies for each unit and failed to evaluate a range of control efficiencies for control options like SCR that can achieve a range of emission reductions. LDEQ must determine the reductions for each unit and each technology specifically, as required by BACT.¹³³ These comments provide numerous examples of how LDEQ failed to evaluate controls unit by unit including for fugitive PM and for GHG BACT.

LDEQ should redo the BACT analyses and resubmit the proposed permit for public review and comment. Specific comments on LDEQ's BACT analyses follow.

2. Toxic Dust Control Measures

Dr. Elizabeth Boatman's¹³⁴ reports, which are separately filed and fully incorporated into our comments,¹³⁵ detail how LDEQ's BACT analyses and determinations for fugitive PM are fundamentally flawed. LDEQ proposed permits fail to select the best available methods for controlling toxic dust, which can blow off uncovered trucks and storage piles, and have severe health impacts on workers and the neighboring community.

For decades, toxic dust from trucks and storage piles has plagued communities around steel plants, forcing residents to turn to the courts for relief. In Pennsylvania, Mon Valley neighbors have had to scrub mill dust from their windows daily;¹³⁶ in Ohio, a local business owner had to

¹³² NSR Manual at B.10 (PDF 118).

¹³³ See NSR Manual B.23 – B.25 (PDF 131-133).

¹³⁴ See Boatman, Elizabeth, PhD, PE, May 2026, Resume, 5 Lakes Energy (*attached as Exhibit PC.42*).

¹³⁵ Sierra Club Expert Reports, Dr. Elizabeth Boatman, Analysis of July 2026 "Proposed PSD Permit" (Aug. 2026) (PDF 3-20); E. Boatman, PM BACT Report (May 2026) (PDF 410-425), Documents ID: 15344900 (Sep. 9, 2026), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

¹³⁶ Cioppa, Jordan, People living near Edgar Thomas Works receive settlement check in lawsuit against U.S. Steel, WTAE ABC News, Aug. 2025, <https://www.wtae.com/article/edgar-thomson-works-receive-settlement-check-lawsuit-us-steel/65609558>, (*attached as Exhibit PC.43*).

use thousands of bottles of cleaner just to dissolve the concrete-like lime dust coating his property.¹³⁷

This dust is not just affecting communities' quality of life, it is causing severe human health impacts. Fine particulate matter (PM_{2.5}) enters the bloodstream, and can cause asthma and lung cancer. Slag and cement dust contain manganese, hexavalent chromium, and silica—toxins known to damage the nervous system, especially in children,¹³⁸ and cause irreversible lung scarring.¹³⁹

LDEQ must ensure that Hyundai's dust control measures are consistent with BACT and its public trust obligations to minimize harm and help avoid the problems that many existing facilities face. But the proposed permits fail to consider or select many of the best controls, and in some cases, wholly ignore sources of fugitive PM emissions. Dr. Boatman provides ample evidence that the best controls for dust are not reflected in LDEQ's analyses and proposed permits. Standard industry practices like enclosures and covers—the same ones implemented at new mills and enforced upon old mills after environmental violations—demand that Hyundai incorporate the best dust control methods into its proposed steel plant. Without these, the wind will inevitably carry toxic dust into the lungs of Hyundai's workers and neighbors, causing severe health impacts.

Dr. Boatman's reports details many problems including the following:¹⁴⁰

- LDEQ's analyses and proposed permits provide no discussion or controls for any processing, handling, or storage activities related to EAF slag, even though these activities will occur on-site at the level of 38,000 tons per month on an outdoor storage spanning an area measuring roughly 140 times the size of an American football field, and carry significant potential to produce health-harming slag dust.
- LDEQ fails to consider partial or full enclosures as specific control measures, even though Hyundai identified them as possible controls, and they are very effective.
- The proposed permits fail to document the existence of a steel scrap stockpile and does propose any controls or limits.
- LDEQ's BACT analysis for fugitive PM is wholly insufficient. LDEQ uses an improper one-size-fits-all batch approach to considering feasibility and efficacy of PM controls on different fugitive emission sources, even though some controls are only relevant to certain sources. The analysis fails to present an appropriate parsing of relevant controls

¹³⁷ Pilcher, James, Steel fallout creates complaints in one Tri-State city, Local 12, Sept. 2025, <https://local12.com/news/investigates/steel-fallout-creates-complaints-middletown-cleveland-cliffs-persistent-pollution-damaging-residue-waste-airborne-issue-cincinnati>, (*attached as* Exhibit PC.44).

¹³⁸ EPA, Electric Arc Furnace (EAF) Slag, (accessed May 2026), <https://www.epa.gov/smm/electric-arc-furnace-eaf-slag>, (*attached as* Exhibit II.3 (PDF 514) in Boatman PM BACT Report).

¹³⁹ The National Institute for Occupational Safety and Health (NIOSH), CDC, Engineering Controls Database, (accessed May 2026), <https://www.cdc.gov/niosh/engcontrols/ecd/detail2.html>, (*attached as* Exhibit PC.45).

¹⁴⁰ Dr. Elizabeth Boatman, Analysis of July 2026 "Proposed PSD Permit" (Aug. 2026) (PDF 3-20); E. Boatman, PM BACT Report (May 2026) (PDF 410-425), Documents ID: 15344900 (Sep. 9, 2026), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

by emission sources, activities, and points. It also fails to provide any discussion of why any controls were considered technically infeasible.

- LDEQ fails to consider many available and common-sense PM control measures that would better control fugitive dust.

Dr. Boatman makes the following recommendations:

- LDEQ should consider and adopt the best available PM controls outlined in her reports.
- The future draft Fugitive Dust Control Plan and any final proposed limits on PM must be made available for public review and comment before the plant begins operations. The Plan also must be included in the PSD and Title V permits.

LDEQ is legally bound by the Clean Air Act and the Louisiana Public Trust to evaluate the best available controls using a proper BACT method, and clearly document the reasons for eliminating any controls. LDEQ and Hyundai also have a moral imperative to ensure that the proposed facility does not become a health disaster for the workers and families living nearby. LDEQ must redo the PM BACT analysis, select the best controls and establish enforceable emission limits with sufficient monitoring and reporting provisions, and resubmit a proposed permit for public comment.

3. Brief PSD and Title V Comments

a. LDEQ Must Redo the NO_x BACT Analysis for the EAF

The attached expert report of Katie McClintock describes many errors in Hyundai's application regarding NO_x BACT for the EAF and recommends that BACT should be .24 lb/ton.¹⁴¹ LDEQ's BACT analysis did not cure these errors, and presents additional problems. Although Hyundai's May 27 amended application shows low-NO_x burners is a control option,¹⁴² in LDEQ's Proposed Permit, Step 3 of the BACT analysis does not list low-NO_x Burners at all as a control.¹⁴³ LDEQ's permitting materials do not consider or discuss what low-NO_x burners can achieve on this unit. The BACT analysis is deficient on this basis alone.

Additionally, LDEQ's selection of the BACT emission limit is deficient because it does not provide any analysis of what the selected controls (oxyfuel and good combustion practices) have achieved at other units, and what can be achieved at the Hyundai facility. As discussed in McClintock's report, Hyundai improperly dismisses the limit of 0.24 lb/ton in the RBLC because it was part of a Lowest Achievable Emission Rate (LAER) determination. However, LAER determinations must be considered for BACT and typically represent the top control option.³⁶ Unless Hyundai provides evidence showing why the limit is not cost-effective or technically feasible, it should be selected as BACT. LDEQ must correct these errors and undertake a proper BACT analysis for NO_x emissions from the EAF.

¹⁴¹ Katie McClintock, BACT Report (May 2026) (PDF 21-31) at 7-8, <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

¹⁴² Draft Permit, May 27 Addendum, at PDF 781.

¹⁴³ Draft Permit, Public Notice and Briefing Sheet at PDF 31.

b. PSD Permit Condition 6

Condition 6 of the PSD permit should add a requirement to observe the effect of the corrective measures and record if such measures were ineffective. The recordkeeping should extend to a requirement to see if corrective measures worked. Without this, the monitoring is not sufficient to guarantee compliance.

c. The Ladle Dryers and Preheaters NOx BACT Limit and Potential Emissions Needs Explanation or Correction

LDEQ must correct or explain the NOx BACT limits and estimated emissions for the ladle dryers and preheaters. The NOx BACT limit established in the Title V permit for Ladle Dryers and Preheaters (collectively, FUG0003 [SMP.FUG1] and FUG0009 [CCM.FUG3]) may be based on a typographical error, and LDEQ may have intended it to be 0.053 lb/MMBtu, not 0.0052 lb/MMBtu. HPLS's "Initial title V and PSD Permit Application" records the applicant's selection of "Ultra Low-NOx Burners" with a BACT limit of "0.053 lb/MMBtu" as the proposed control technology and limit for "Melting Plant Heaters and Dryers" (i.e., ladle preheaters and dryers) in Table 3-12a.¹⁴⁴ HPLS similarly identifies a series of RBLC entries for low-NOx burners on ladle preheaters and dryers ranging from 0.08-0.097 lb/MMBtu for emission limits¹⁴⁵ with other gas-burning equipment types (like boilers) fitted with ultra low-NOx burners having entries of 0.04 lb/MMBtu as their NOx emission limit.¹⁴⁶ LDEQ's NOx BACT analysis identifies a NOx emission limit of 0.0053 lb/MMBtu for the ladle preheaters and dryers,¹⁴⁷ that is then identified as a limit of 0.0052 lb/MMBtu for a combination of good process operation and ultra low-NOx burners (GPO + ULNB) in the BACT selection table.¹⁴⁸ LDEQ must either correct these numbers or explain the changes for FUG0003 and FUG0009 set in the Title V Permit Initial document.

d. The Title V Permit Must Clearly Require Compliance Certification

The proposed Title V permit conditions do not clearly include compliance certification. According to 40 C.F.R. § 70.6(c)(1), and LAC 33:III.507(H), the permit must require compliance certifications at least annually, and provide details about the information that they must include. The Title V permit must clearly list out all the requirements, including the compliance certification.

e. The Terms of the PSD Permit Must Be Listed in the Title V Permit

The Proposed Title V Permit condition under "UNF 0001" Condition 226 [LAC 33:111.509] states "Comply with the requirements of PSD-LA-872. This permit includes provisions of the Prevention of Significant Deterioration (PSD) review from Permit PSD-LA-872." The Title V

¹⁴⁴ Draft Permit, Original Application, at PDF 379.

¹⁴⁵ Draft Permit, Initial Draft Permit, at PDF 1915.

¹⁴⁶ Draft Permit, Initial Draft Permit, at PDF 2021.

¹⁴⁷ Draft Permit, PSD Permit. at PDF 172.

¹⁴⁸ Draft Permit, Statement of Basis, at PDF 117.

permit, however, must clearly list out every requirement from the PSD permit, including all the conditions and BACT emission limits.¹⁴⁹

f. Good Process Operation Must Be Defined and Enforceable

LDEQ's proposed permit relies on so-called "good process operation" for BACT in multiple places. That term is currently vague and undefined. We adopt the comment submitted to LDEQ that such terms must be clearly defined and specific in the permits to be fully enforceable.¹⁵⁰ For example, clearly defined conditions could include tracking operating parameters for the unit like combustion temperature and air/fuel ratio and compare to a standard established in a referenced manual or in an operations and maintenance plan. Good Process operation must be accompanied by specific recordkeeping requirements for each unit.

g. Title V Draft Permit "Emission Rates" Table Should Clearly State Limits are Enforceable

The draft Title V permit includes a table of "Emission Rates for Criteria Pollutants and CO₂E"¹⁵¹ as well as for "TAP/HAP & Other Pollutants."¹⁵² Interpreting clues throughout the permitting materials leads to the assumption that LDEQ intends for those rates to be enforceable limits,¹⁵³ but the tables do not clearly state that, nor does the "Specific Requirements" section of the PSD or Title V permit.¹⁵⁴ The public is supposed to be able to review and understand a Title V permit. As EPA has explained, the public, not just regulators, must be able to "determine whether the limit has been exceeded, and, if so, to take appropriate enforcement action."¹⁵⁵ EPA has also explained that the enforceability of Title V permits must be "unambiguous" and must allow LDEQ, EPA, and the public to "take appropriate enforcement action"¹⁵⁶ if its terms are exceeded.¹⁵⁷ If LDEQ intends for these limits to be enforceable, it must clearly mark these tables as enforceable emissions limitations.

¹⁴⁹ 57 Fed. Reg. 32250, 32258 (July 21, 1992).

¹⁵⁰ Comments to LDEQ, AI 248885, Document ID: 15331653, at PDF 49-50.

¹⁵¹ *Id.* at PDF 56.

¹⁵² *Id.* at PDF 64.

¹⁵³ E.g., the permitting materials often reference "the facility-wide GHG emission limits".

¹⁵⁴ The PSD permit states explicitly in "Specific Conditions" 1 that the permittee must operate in conformance with "the BACT selections in Table 1" but does not specify that for Table IV "Maximum Allowable Emissions Rates."

¹⁵⁵ See *In the Matter of Yuhuang Chemical Inc. Methanol Plant*, Order on Petition No. VI-2015-03 at 14 (August 31, 2016). See also EPA Region 9, Title V Permit Review Guidelines, III-56, Sept. 9, 1999 (The "practical enforceability" requirement is necessary "to assure the public's and EPA's ability to enforce the Title V permit is maintained, and to clarify for the Title V source its obligations under the permit."), <https://www.epa.gov/sites/default/files/2015-08/documents/dixon.pdf>.

¹⁵⁶ *In the Matter of Tesoro Refining and Marketing Co. Martinez, California Facility* (March 15, 2005), https://www.epa.gov/sites/default/files/2015-08/documents/tesoro_decision2004.pdf, at 9.

¹⁵⁷ *In the Matter of Orange Recycling and Ethanol Production Facility*, Pencor-Masada Oxydol, LLC (Apr. 8, 2002), https://www.epa.gov/sites/default/files/2015-08/documents/masada-2_decision2001.pdf, at 7.

h. BACT Limits Must Be Expressed as A Heat Input Based Limit

The limits currently in these “Emission Rates for Criteria Pollutants and CO₂E” “TAP/HAP & Other Pollutants” tables include only time-based limits, which are not valid BACT limits. Time-based limits cannot satisfy BACT because do not require the control level to be maintained continuously. We adopt a comment submitted to LDEQ that all BACT limits in the permit should be set in heat input or production terms, such as lb/MMBtu or lb/ton.¹⁵⁸

Proper BACT limits must also include an appropriate averaging period to be practically enforceable,¹⁵⁹ yet the proposed permit fails to include an averaging period for many units. LDEQ must include appropriate averaging periods that assure compliance with proper BACT limits, such as a 30-day rolling average, and reissue the proposed permit for public comment. We adopt the comment submitted to LDEQ that “The proposed NO_x limits carry no compliance demonstration method and no averaging period.”¹⁶⁰ Also, for CEMs units, LDEQ should include averaging period is a minimum of 30-day rolling average for SO₂, NO_x, and CO for the EAF and EAF fugitives EQT 24, EQT 25, and FUG 004.

i. LDEQ Must Set Enforceable Heat-Input based BACT Limits for the Process Gas Heater for All Pollutants

The Process gas heater is required to use an SCR as BACT, requires stack testing and NO_x CEMs, but it does not have a lb/MMBtu BACT limit to compare against. The permit does not specify any restrictions on how much SCR is used. We adopt the comment previously submitted to LDEQ that “The largest combustion unit at the facility carries no heat-input-based BACT limit for any pollutant.”¹⁶¹ LDEQ must set an enforceable lb/MMBtu BACT limit for all pollutants and reissue a proposed permit for public comment.

j. The Draft Permits Fail to Include Monitoring Sufficient to Ensure Compliance with Its Emissions Limits

The draft PSD/Title V air permits fails to provide monitoring or recordkeeping sufficient to determine whether Hyundai will comply with its permitted emissions limits.¹⁶² LDEQ’s proposed permits do not include any compliance determination method for the following units: EQT 7, EQT 9 – PTS Heater, EQT 11 – DRP Flare, EQT 23 – RH Degasser, EQT 46-48 – APC Air heaters, EQT 53 – vertical galvanizing line combustion unit, EQT 54-55 – galvanizing line combustion units 1 & 2, EQT 59 Acid Recovery Unit, FUG 003, 006, 009 – melting plant heaters and dryers. LDEQ must include continuously enforceable compliance demonstration methods for every BACT emission limit, and make these provisions specific and clear on the face of the permit. As EPA has explained, the public, not just regulators, must be able to “determine

¹⁵⁸ Comments to LDEQ, AI 248885, Document ID: 15331653 at PDF 51-51; *see also* NSR Manual at H.5 (PDF 318), I.2 (PDF 325).

¹⁵⁹ 40 C.F.R. § 70.6(a)(3)(i)(B) & (c)(1); NSR Manual at 56 (PDF 164).

¹⁶⁰ Comments to LDEQ, AI 248885, Document ID: 15331653 at PDF 46-48.

¹⁶¹ Comments to LDEQ, AI 248885, Document ID: 15331653 at PDF 51-52, “The largest combustion unit at the facility carries no heat-input-based BACT limit for any pollutant.”

¹⁶² LAC 33:III.507.H.1.

whether the limit has been exceeded, and, if – so, to take appropriate enforcement action.”¹⁶³ LDEQ must include these compliance demonstration methods in a revised proposed permit that is reissued for public comment.

4. The Permit Must Contain Enforceable GHG BACT Conditions

a. The GHG Plantwide Limit is An Insufficient BACT Limit

As discussed in the McClintock report, Hyundai failed to evaluate GHG control options using the proper top-down approach, and proposed a plantwide limit that is inconsistent with BACT requirements.¹⁶⁴ LDEQ failed to require this mandatory information before proposing permit issuance, and it adopted Hyundai’s flawed plantwide GHG limit. We adopt the comment submitted to LDEQ on these issues as well.¹⁶⁵

As Hyundai acknowledges, “BACT must be determined for each new emission unit from which these pollutants [which included GHG] are emitted.”¹⁶⁶ LDEQ must require a formal top-down GHG BACT determination for each unit. This analysis must quantify potential reductions for each technology, provide detailed cost-effectiveness data, and justify selections based on economic and collateral impacts. Each properly-selected BACT emission limit must be legally and practically enforceable. LDEQ cannot issue a permit where the record lacks fundamental information necessary for BACT review, and where the only GHG limit is plantwide.

b. Carbon Capture and Sequestration

Dr. Elizabeth Boatman’s, *GHG BACT Analysis* (May 2026)¹⁶⁷ details several concerns with the application’s GHG BACT Analysis. Her report first points out that the application does not include any clear stated plans for carbon capture and either utilization or storage, yet its estimate of potential emissions relies on those components being in place. LDEQ’s proposed permit does not include any additional clarity, and proposes a plantwide GHG limit based on carbon removal.

The Proposed Permit includes the condition that the DRP recover “~80% recovery of CO₂ in process gas,”¹⁶⁸ and that the carbon capture and sequestration (CCS) system will be bypassed for only 500 hours per year.¹⁶⁹ As Dr. Boatman explains, without a clear utilization or sequestration off-take mechanism, the CO₂ “removed from the process” by the amine scrubber is not in fact a

¹⁶³ *Yuhuang* Order at 14. See also EPA Region 9, Title V Permit Review Guidelines, III-56, Sept. 9, 1999 (The “practical enforceability” requirement is necessary “to assure the public’s and EPA’s ability to enforce the Title V permit is maintained, and to clarify for the Title V source its obligations under the permit.”), <https://www.epa.gov/sites/default/files/2015-08/documents/dixon.pdf>.

¹⁶⁴ Sierra Club Expert Reports, Katie McClintock, BACT Review (May 2026) (PDF 21-31) at 9; <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>; NSR Manual at B. 4 (PDF 112).

¹⁶⁵ Comments to LDEQ, AI 248885, Document ID: 15331653 at PDF 58-60.

¹⁶⁶ Draft Permit, Initial Draft Permit at PDF 1493.

¹⁶⁷ Sierra Club Expert Reports, E. Boatman, Electrified Alternatives and GHG BACT Analysis (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

¹⁶⁸ PSD Permit, Table 1 “BACT selections,” which is specifically required through Condition 1 of the PSD permit.

¹⁶⁹ Draft Permit, PSD Permit at PDF 147.

carbon capture mechanism, but rather a separate CO₂ venting point.¹⁷⁰ This requirement of 80% removal can only be achieved if Hyundai actually captures and sequesters these emissions, yet the permitting materials do not contain any such conditions. If Hyundai does not actually capture and sequester the CO₂, those emissions would be vented to the atmosphere. Dr. Boatman estimates that would mean approximately 729,000 to over 1.2 million more tons per year of CO₂.¹⁷¹

Hyundai's plans for CCS are not clear from its application of LDEQ's permitting materials. The materials explain that DRP will include carbon capture and sequestration, and selected it as BACT, however, Hyundai has not included any description about its plans for storage, or the additional power needs for compressing, shipping, and injecting the CO₂. In public messaging, Hyundai has provided information about how it plans to store captured carbon in "a large scale carbon storage facility in the adjacent chemical corporations complex."¹⁷²

If Hyundai plans to rely on CCS to reduce approximately 1.2 million tons per year of GHG emissions, LDEQ must provide more information to the public and include additional enforceable conditions in the permit. LDEQ must include in a proposed permit a method to verify that the CO₂ is in fact being permanently sequestered. The public deserves to understand and have an opportunity to comment on how and where the CO₂ will be injected, surveys verifying the inspection and integrity of plugged and abandoned wells around the injection site, and an assessment of the potential for leaks. LDEQ should require a thorough examination of all the abandoned and capped wells around the proposed injection site, including an analysis of age, well integrity and cap integrity, track record and reliability of well records. The permitting record must also include the plan for a monitoring network.

LDEQ must also consider that the safety and efficacy of CCS is a major concern given the potential for carbon leakage through the large number of abandoned oil and gas wells in Louisiana.¹⁷³ Louisiana and neighboring Mississippi have a history of well blowouts and pipeline ruptures. For example, a 2020 pipeline rupture hospitalized 45 people in Santarta,

¹⁷⁰ Sierra Club Expert Reports, E. Boatman, Electrified Alternatives and GHG BACT Analysis (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>. at PDF 1534.

¹⁷¹ E. Boatman, Electrified Alternatives and GHG BACT Analysis (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>, at PDF 1525-1527.

¹⁷² Yang Beom-soo, *Hyundai Steel launches Louisiana plant to supply low-carbon auto steel to US market*, Chosen Biz (Dec. 7, 2025), <https://biz.chosun.com/en/en-industry/2025/12/06/JWUMNPSI4VFDDGLC6KLHY6EGOQ/>, (attached as Exhibit PC.81).

¹⁷³ S. Taku Ide et al., *CO₂ leakage through existing wells: current technology and regulations* (Jan. 2006), https://sequestration.mit.edu/pdf/GHGT8_Ide.pdf, (attached as Exhibit PC.46); LA Orphaned and Abandoned Wells, ArcGIS, https://experience.arcgis.com/experience/5efe2b10ca87493d9ae1705bde260e4f#data_s=id%3AdataSource_1-18e33a7ebb2-layer-3%3A2 (last visited Feb. 11, 2026).

MS,¹⁷⁴ and a 2011 well blowout south of Yazoo City, MS vented CO₂ for 37 days, suffocating deer and other animals.¹⁷⁵

LDEQ cannot rely on CCS to reduce Hyundai's GHG emissions without more information and enforceable conditions in the permit. Given all the public concerns and costs associated with CCS, however, Sierra Club urges LDEQ and Hyundai to fully consider and adopt alternative GHG reduction strategies including electrification and hydrogen-blending.

III. The Clean Air Act and the Louisiana Public Trust Doctrine Require Hyundai to Evaluate Electrified Components and Green Hydrogen

The Clean Air Act and the Public Trust Doctrine demand that new major sources of air pollution use the best available pollution controls and minimize impacts to the community as much as possible. These legal obligations require LDEQ to evaluate electrified components and green hydrogen, which have the potential to significantly reduce greenhouse gas and combustion pollution from the proposed facility. LDEQ must provide a robust BACT analysis evaluating electrified technologies at its proposed plant, including for package/utility boilers, ladle preheaters and dryers, and galvanizing line furnaces. Hyundai's updated application replaced nine fuel-combusting units with electrified technologies, demonstrating the feasibility of such changes at this early preconstruction stage.¹⁷⁶ LDEQ must also conduct a thorough analysis evaluating use of green hydrogen instead of natural gas for the DRP, including incremental blending-in. Hyundai designed the DRP to use hydrogen, and has made public commitments to transition to green hydrogen, and considered green hydrogen as a control option, but it improperly dismissed green hydrogen as a control option on feasibility grounds without any support or explanation in the record.

A. Summary of Dr. Elizabeth Boatman's Electrification and GHG Reports

1. Electrified Components Must Be Considered to Reduce and Mitigate Pollution

The attached two expert reports of green steel expert Dr. Elizabeth Boatman and accompanying exhibits demonstrate how LDEQ and Hyundai failed to consider many electrified component alternatives for the plant that are cleaner, cheaper, and safer than Hyundai's proposed fossil fuel-

¹⁷⁴ Wesley Mathews, U.S. Dep't of Transp., Pipeline and Hazardous Materials Safety Admin., Off. of Pipeline Safety - Accident Investigation Div., *Failure Investigation Report - Denbury Gulf Coast Pipelines, LLC – Pipeline Rupture/ Natural Force Damage* (May 26, 2022), <https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf>, (attached as Exhibit PC.47); Julia Simon, *The U.S. is expanding CO₂ pipelines. One poisoned town wants you to know its story*, NPR (Sept. 25, 2023), <https://www.npr.org/2023/05/21/1172679786/carbon-capture-carbon-dioxide-pipeline>, (attached as Exhibit PC.48).

¹⁷⁵ Mathews *supra* note 174; Jeff Amy, *Denbury pays big fine for 2011 oil well blowout*, Associated Press, The Business Press (July 25, 2013), <https://fortworthbusiness.com/energy/denbury-pays-big-fine-for-2011-oil-well-blowout/>, (attached as Exhibit PC.49).

¹⁷⁶ Sierra Club Expert Reports, Dr. Elizabeth Boatman, Analysis of July 2026 "Proposed PSD Permit" (Aug. 2026) (PDF 3-20), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

fired components.¹⁷⁷ Not only will electrified technologies eliminate greenhouse gas emissions and all combustion emissions from the fossil-fired components they replace, substantially reducing public health impacts, they also offer many advantages for Hyundai and plant workers. Electrified alternatives are more efficient and flexible, safer, often smaller, quieter, reduce indoor fugitive pollution that harms workers, produce better quality and uniform output, require less maintenance and infrastructure, have longer lifetimes, and cost less to install. Many electrified alternatives have existed in the marketplace for decades, are in use at other steel plants, and some components, like utility boilers, are “drop-in” technologies that do not require custom engineering.

A key advantage of electrification includes the potential for a significant reduction in operating costs, due to efficiency gains. Based on Dr. Boatman’s conservative estimates, Hyundai could save nearly \$2.1 million dollars a month in operating expenses by switching from gas to electricity. The actual operating cost savings could be even greater. In another example, according to Kanthal (a global, industry-leading electric heating company founded in 1931), electric ladle preheaters in place of natural gas-fired preheaters can cut a facility’s energy use for ladle preheating operations by up to 70%.¹⁷⁸

Dr. Boatman’s reports detail the specific electrified control technologies relevant to Hyundai’s BACT analyses, provide commercial examples of those technologies, and outline potential benefits and impacts. Dr. Boatman’s report provides numerous references and resources demonstrating commercially available components and examples of facilities utilizing them, which are attached as exhibits to these comments.

2. Green Hydrogen Must Be Considered to Reduce and Mitigate Pollution

Dr. Boatman’s comments also explain how Hyundai wrongfully dismissed green hydrogen as an infeasible control measure for the iron-making direct reduction process (DRP). She challenges Hyundai’s dismissal of hydrogen by highlighting three key points: 1) on-site hydrogen production is already proven at greenfield steel facilities; 2) no technical barriers prevent Hyundai from producing its own green hydrogen; and 3) Hyundai could adopt an incremental “blending” approach to overcome local supply gaps. LDEQ’s proposed permitting materials do not consider green hydrogen as a control option at all.

B. LDEQ’s Failure to Evaluate Electrified Components and Green Hydrogen Violates the Clean Air Act and the Public Trust Doctrine

LDEQ’s failure to consider the cleanest technologies to reduce harmful pollution violates its obligations under both the Clean Air Act and the Louisiana Public Trust doctrine. Hyundai’s failures to utilize these technologies are also inconsistent with its own corporate commitments to environmental excellence.

¹⁷⁷ Dr. Elizabeth Boatman, Analysis of July 2026 “Proposed PSD Permit” (Aug. 2026) (PDF 3-20); E. Boatman, Electrified Alternatives and GHG BACT Analysis (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

¹⁷⁸ Kanthal, “Ladle Preheating,” (accessed April 2026), <https://www.kanthal.com/en/industries/steel/ladle-preheating/>, (attached as Exhibit PC.50).

1. Legal Framework Mandating Evaluation of Lower-Emission Alternatives

The Clean Air Act requires the proposed Hyundai plant implement the Best Available Control Technology (BACT) to reduce or eliminate the air quality impacts of its emissions.¹⁷⁹ BACT is a broad concept, defined as “an emission limitation based on the maximum degree of reduction of each pollutant,” including “production processes and available methods, systems, and techniques.”¹⁸⁰ BACT was specifically designed to encourage “technology forcing,” driving new facilities to use progressively cleaner processes and “state-of-the-art” control technologies.¹⁸¹ A BACT analysis must consider an expansive scope of potential control technologies, including add-on technologies, lower emitting practices and designs, or combinations of both.¹⁸²

The Public Trust Doctrine requires Hyundai avoid the “potential and real adverse environmental effects” of the proposed facility... “to the maximum extent possible.”¹⁸³ The Louisiana Supreme Court has mandated that under the Public Trust, “environmental costs and benefits must be given full and careful consideration along with economic, social[,] and other factors.”¹⁸⁴ LDEQ cannot lawfully ignore alternatives that eliminate combustion emissions and have numerous other benefits under the Public Trust

2. LDEQ Failed to Consider Green Hydrogen and Electrified Components

LDEQ’s proposed permit violates Clean Air Act and Public Trust requirements by failing to consider commercially-available electrification technologies and green hydrogen in its BACT analysis. As described in Elizabeth Boatman’s technical reports, with electrified technologies, Hyundai could avoid significant amounts of GHG emissions and could also eliminate all combustion emissions at these components. Blending in green hydrogen would reduce additional GHG and combustion emissions. Reducing impacts as much as possible is critical since Hyundai is proposing to locate in a community that is already overburdened with pollution, and required by law.

Hyundai considered green hydrogen as a control option in its BACT analysis, but improperly dismissed it without any explanation or documentation. Hyundai’s application explains that the DRP has “the flexibility to use up to 90% pure H₂,”¹⁸⁵ includes green H₂ as a possible control technology,¹⁸⁶ and states its intention to utilize it in the future.¹⁸⁷ Hyundai, however, improperly eliminates green hydrogen based on its conclusory determination that it is infeasible.¹⁸⁸ Hyundai

¹⁷⁹ Draft Permit, Initial Draft Permit, at PDF 1574, PDF 1568, PDF 1493.

¹⁸⁰ 42 U.S.C. § 7479(3).

¹⁸¹ *In re Tenn. Valley Auth.*, 9 E.A.D. 357, 391 (E.A.B. 2000).

¹⁸² *In re Ariz. Pub. Serv. Co. Ocotillo Power*, 17 E.A.D. 323, 327-28 (E.A.B. 2016).

¹⁸³ *Save Ourselves, Inc.*, 452 So. 2d at 1157 (requiring agencies to determine “before granting approval of proposed action affecting the environment, [] that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare”); Draft Permit, Initial Draft Permit at PDF 1574.

¹⁸⁴ *Save Ourselves*, 452 So.2d at 1157 (emphasis added).

¹⁸⁵ Draft Permit, Initial Draft Permit, at PDF 1472.

¹⁸⁶ Draft Permit, Initial Draft Permit, at PDF 1559.

¹⁸⁷ Draft Permit, Initial Draft Permit, at PDF 1565.

¹⁸⁸ Sierra Club Expert Reports, E. Boatman, Electrified Alternatives and GHG BACT Analysis (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>, at PDF 1528.

provides no documentation or explanation to support its conclusion, and LDEQ does not even consider green hydrogen in its GHG BACT table. Dr. Boatman's report describes why blending in hydrogen is feasible,¹⁸⁹ and later in these comments we provide a detailed feasibility analysis that recommends using a phased hybrid approach to ramp up green hydrogen production at the proposed facility. LDEQ must consider green hydrogen in the GHG BACT analysis, and provide robust support in the record for any claim of infeasibility.

Neither Hyundai nor LDEQ considered electrified components in BACT analyses, though Hyundai has plans to use some electrified components. Hyundai's updated application replaced 9 fuel-combusting units with electrified technologies, demonstrating the feasibility of such equipment changes at this early preconstruction stage.¹⁹⁰ LDEQ must consider electrified components in the GHG BACT analysis, and provide robust support in the record for any claim of infeasibility.

LDEQ must evaluate the electrified technologies described in Dr. Boatman's reports and green hydrogen in its BACT analysis and select them as the most effective emission control absent "adequate explanation" for not doing so.¹⁹¹ Any cost-effectiveness evaluation must consider both capital and holistic operating costs (utilities, maintenance labor and parts, lifetime) of the electrified alternative technology.

3. Electrified Components / Green Hydrogen Do Not Redefine the Source

Any argument that green hydrogen or electrified technologies would redefine the source would not withstand legal scrutiny. A control technology can only be excluded from initial BACT consideration if it would "call into question the facility's existence" and result in a "fundamentally different" facility.¹⁹² Essentially, a control technology redefines the source only if it prevents an applicant from achieving the basic purpose of a proposed facility.¹⁹³

Electrified components and green hydrogen would not alter the mill's basic purpose to produce "ultra-low carbon" high-quality primary steel, and would not impact the plant's primary DRP and EAF components. On the contrary, lower-carbon and lower-polluting alternatives better align with Hyundai's stated mission to build an "ultra-low carbon steel production steel mill,"¹⁹⁴ "produc[e] an environmental sustainable, efficient, and reliable steel", "minimize and avoid adverse environmental impacts...to the maximum extent possible,"¹⁹⁵ as well as "advance sustainable energy solutions,"¹⁹⁶ and to "hold[] itself to environmental excellence."¹⁹⁷ Indeed,

¹⁸⁹ E. Boatman, *Electrified Alternatives and GHG BACT Analysis* (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>, at PDF 1527-1529.

¹⁹⁰ E. Boatman, *Analysis of July 2026 "Proposed PSD Permit"* (Aug. 2026) (PDF 3-20), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

¹⁹¹ *E.g.*, *In re General Motors, Inc.*, 10 E.A.D. 360 (E.A.B. 2002).

¹⁹² *Ariz. Pub. Serv. Co.*, 17 E.A.D. at 335; *In re N. Mich. Univ. Ripley Heating Plant*, 14 E.A.D. 283, 302 (E.A.B. 2009).

¹⁹³ *In re Desert Rock Energy Co.*, 14 E.A.D. 484, 530 (E.A.B. 2009); *Ariz. Pub. Serv. Co.*, 17 E.A.D. at 336.

¹⁹⁴ *Draft Permit*, Initial Draft Permit at PDF 1568.

¹⁹⁵ *Id.* at PDF 1574.

¹⁹⁶ *Id.* at PDF 1568.

¹⁹⁷ *Id.* at PDF 1574.

Hyundai's recent switch from nine fossil-fuel to electrified technologies demonstrates such changes would not alter the plant's basic purpose.

Hyundai has also made public commitments to use green hydrogen at the Louisiana facility.¹⁹⁸ The company has framed the proposed plant as an initial step in positioning Louisiana as a hydrogen leader.¹⁹⁹ It has presented plans to the state indicating its long-term goal to produce hydrogen from renewable energy.²⁰⁰

Hyundai's website declares its "proactive approach to adopting advanced steelmaking technologies" and its intention to transition to hydrogen-based steelmaking by 2050.²⁰¹ The website also states that "producing green hydrogen for steelmaking is a crucial foundation for achieving carbon neutrality," and that "it is actively promoting green hydrogen production."²⁰² Hyundai itself has a hydrogen business arm that aims to "accelerate the transition to a hydrogen society" and includes green hydrogen production, distribution and logistics, green steel, hydrogen storage and transportation.²⁰³ Hyundai also states it "plan[s] to expand renewable energy sourcing" to Hyundai Steel America.²⁰⁴

IV. Green Hydrogen and Full Electrification of the Hyundai Steel Facility is Feasible

As these comments and RMI's Technical Comment and analysis detail, full electrification of the proposed Hyundai steel facility is possible under a phased hybrid approach. Though there may be economic constraints at present to full zero-emission electrification of the proposed facility, that will change as policies, subsidies and demand for green steel grow. LDEQ and Hyundai must evaluate and commit to incremental steps in the air permit that reduce Hyundai's pollution and climate impacts, meet Clean Air Act and Public Trust requirements, and enable the transition to Hyundai's own long-term zero-emission goals. A hybrid approach combining onsite solar and storage, grid-connected clean generation, hydrogen storage, flexible electrolyzer operations, and targeted use of MISO's Expedited Project Review process or emerging large-load interconnection pathways, would allow Hyundai to ramp up hydrogen production over time

¹⁹⁸ The Center Square, "Hyundai details \$6B steel mill in Louisiana, commitment to 'hydrogen economy'", (Jun. 23, 2025), https://www.thecentersquare.com/louisiana/article_5fe5c653-7170-4258-932b-a1adda52eed.html, (*attached as Exhibit PC.51*); Hydrogen Fuel News, "Hydrogen Production Powers Hyundai Steel's \$6B Low-Carbon Louisiana Mill", (Dec. 12, 2025), [https://www.snec-h2.com/article/hydrogen-production-powers-hyundai-steel-s-\\$6b-low-carbon-louisiana-mill](https://www.snec-h2.com/article/hydrogen-production-powers-hyundai-steel-s-$6b-low-carbon-louisiana-mill), (*attached as Exhibit PC.52*).

¹⁹⁹ The Center Square, "Hyundai details \$6B steel mill in Louisiana, commitment to 'hydrogen economy'", (Jun. 23, 2025), https://www.thecentersquare.com/louisiana/article_5fe5c653-7170-4258-932b-a1adda52eed.html, (*attached as Exhibit PC.51*).

²⁰⁰ *Id.*

²⁰¹ Hyundai Steel, "Carbon Neutrality: Pathway to Green Steel", (accessed Aug. 31, 2026), <https://www.hyundai-steel.com/en/sustainability/carbon-neutral>, (*attached as Exhibit PC.53*).

²⁰² Hyundai, "HTWO Grid solution", (accessed Aug. 31, 2026), <https://www.hyundai.com/worldwide/en/company/innovation/hydrogen-value-chain>, (*attached as Exhibit PC.54*).

²⁰³ *Id.*

²⁰⁴ Hyundai Steel, "Carbon Neutrality: Pathway to Green Steel", (accessed Aug. 31, 2026), <https://www.hyundai-steel.com/en/sustainability/carbon-neutral>, (*attached as Exhibit PC.53*).

while reducing or potentially avoiding transmission upgrades. Hyundai should ensure the decisions that it is making during facility design and initial development include plans for hydrogen production and onsite solar and batteries.

There are two main avenues to materially reduce emissions at the proposed Hyundai plant compared to the current natural gas-based direct reduced iron (DRI) design. First, as Hyundai itself acknowledges, the facility can replace natural gas as the reducing gas with green hydrogen produced through electrolysis using clean energy. The facility can also use hydrogen for DRI process-gas heating. Second, green steel expert Dr. Elizabeth Boatman identified electrified alternatives for gas-fired ladle heating, slab reheating, and finishing processes.²⁰⁵ Electrolysis is electricity-intensive and would add a significant new load on top of the plant's electric arc furnace (EAF) operations. Electrified alternatives would also increase the plant's electricity demand. RMI takes these possible scenarios into account, and models four categories of demand for electricity from the steel plant: existing load (including EAF operations), demand from hydrogen production from electrolysis, demand from electrolysis and process-gas heating, and other demand from additional electrification.²⁰⁶

RMI estimates the approximate scale of electricity demand, clean energy generation and storage, electrolyzer capacity, and related infrastructure that could be associated with selected decarbonization pathways for the proposed facility. RMI estimates that full electrification, including process-gas heating, would require total electricity use of over 14 terawatt-hours (TWh) per year, with hydrogen production for DRI and process-gas heating accounting for approximately 9.8 TWh, or roughly two-thirds of total annual demand. RMI modeled portfolio for full electrification scenarios would require approximately 12.14 gigawatts (GW) of solar capacity and 3.5 GW of battery capacity to meet the capacity and energy needs of the existing facility, additional electrification, and hydrogen production for DRI and process-gas heating.²⁰⁷

A. Availability of generation and supply options

1. Behind-the-meter resource portfolio

A behind-the-meter portfolio that includes approximately 15 GW of new solar and storage to meet hydrogen production and additional electrification needs in addition to the plant's existing needs would require non-trivial amounts of land. Using tools from the National Laboratories, we identified approximately 125 square miles of potentially suitable land for solar and storage development west of the Mississippi River and within a reasonable distance of the steel plant.²⁰⁸ The figures below summarize the potential land that could be used for solar and storage development as well as its relative suitability.

²⁰⁵ E. Boatman, *Electrified Alternatives and GHG BACT Analysis* (May 2026), (PDF 1504-1536), <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

²⁰⁶ Rocky Mountain Institute (RMI), *RMI Technical Comment on Clean Energy and Decarbonization Pathways for the Proposed Hyundai Steel Facility in Louisiana* (Aug. 2026) (submitted to EDMS).

²⁰⁷ *Id.* at 1-2, 7.

²⁰⁸ Geospatial Energy Mapper (accessed Aug. 2026), <https://gem.anl.gov/tool/r/conus>.

Figure 1. Utility-Scale Solar Land Suitability Near the Hyundai Steel Plant

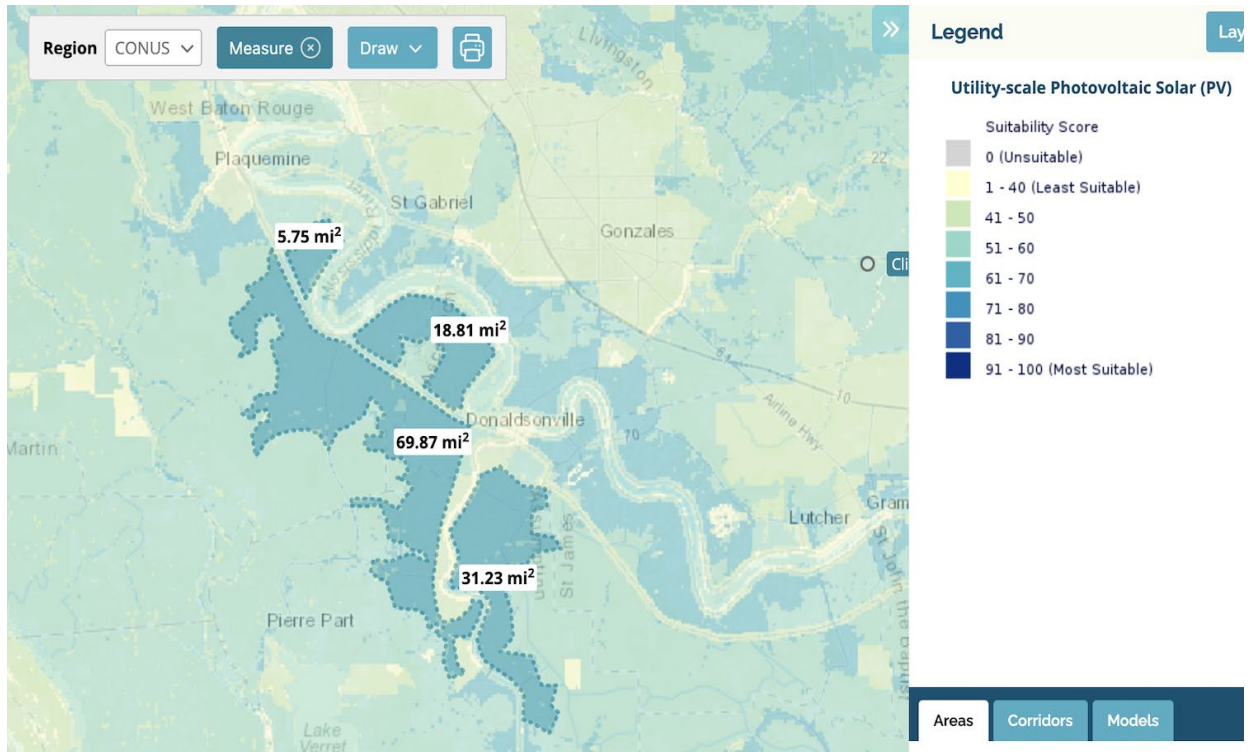
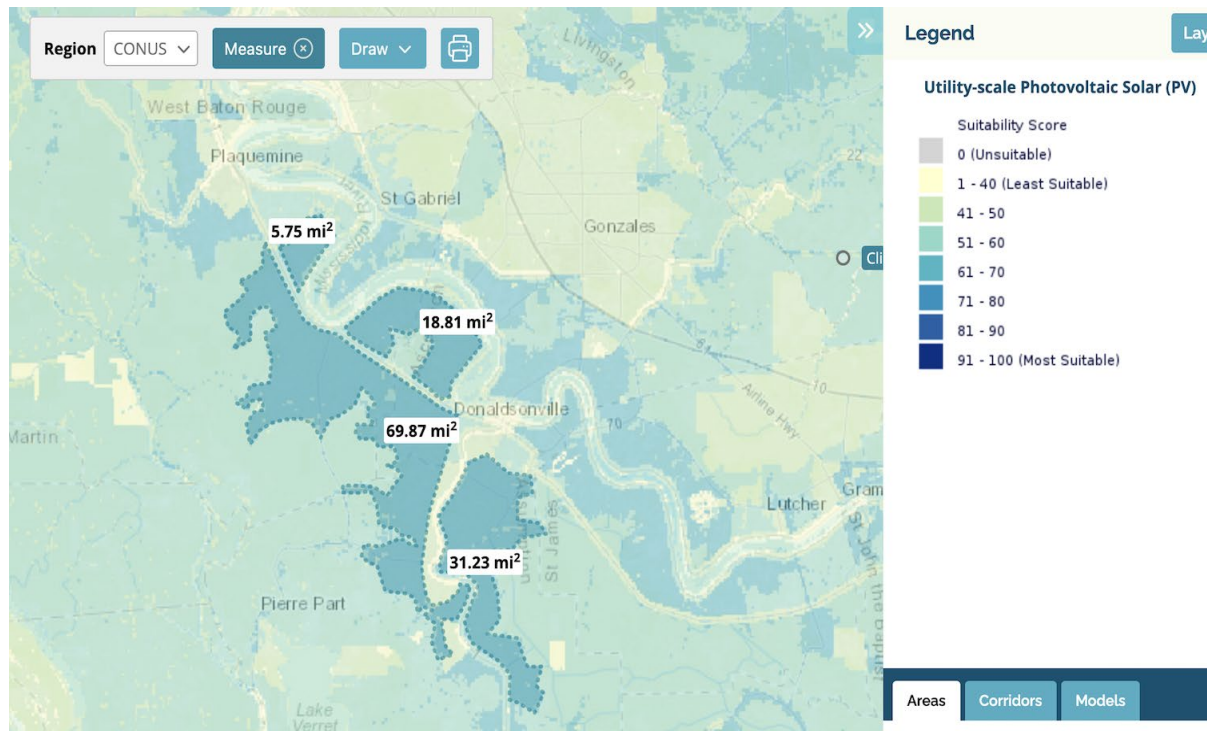


Figure 2. Utility-Scale Storage Land Suitability Score Near the Hyundai Steel Plant



Using the 125 square mile estimate, we then further refined the land estimate by removing the acres needed for the steel plant, residential land, roads, agricultural land and land needed for access or setbacks, parcels too small or fragmented to develop, and smaller wetlands. This left approximately 68 to 94 square miles under low and high scenarios that might be available for development. Based on data from the National Laboratories, utility-scale solar requires about 5 acres of land per megawatt (MW), and storage requires about 0.1 acre per MW.²⁰⁹ This means the 68 to 94 square mile estimate translates into approximately 8.5 to 12.0 GW of potential utility-scale solar generation under low and high scenarios and 434 to 600 GW of theoretical utility-scale storage capacity.

Based on the geospatial mapper, the horseshoe-shaped tract of land is the closest to the steel plant site and is approximately 18 square miles. Assuming this is the most likely land for Hyundai to develop solar and storage, 18 square miles translates to approximately 2.5 GW of utility-scale solar or 120 GW of theoretical storage capacity.

Storage would be critical to any onsite or behind-the-meter resource portfolio. Storage could help shift solar generation across hours, while hydrogen storage could allow electrolyzers to operate flexibly without interrupting the steelmaking process. We estimate that the planned steel plant site has roughly 1,500 to 2,000 acres. Given the estimated land requirements for storage (~0.1 acre per MW), it is likely that a substantial portion of the storage could be located at the steel

²⁰⁹ NREL, *Land-Use Requirements for Solar Power Plants in the United States*, at iv-v (Jun. 2013), <https://docs.nrel.gov/docs/fy13osti/56290.pdf> (attached as Exhibit PC.55); Indiana Office of Energy Development, *Battery Planning: Siting and Other Considerations*, at 1-2, <https://www.in.gov/oed/files/BESS-Handout-Siting-website.pdf> (attached as Exhibit PC.56).

plant site. The value of onsite storage would be highest if it allows the electrolyzer to reduce grid withdrawals during local peak or constrained transmission conditions. That flexibility could reduce the likelihood that full or partial electrification requires significant new transmission investments. The benefits of onsite storage are discussed further below.

2. Grid-connected portfolio

In this section we review active generation projects in MISO’s generator interconnection queue, specifically in Louisiana, to assess what resources could be developed in the near-term, defined here as the next five years. The active queue projects in Louisiana include substantial solar, wind, and storage projects. Specifically, it includes almost 2,800 MW of ERIS solar, 4,000 MW of NRIS solar, 135 MW of ERIS battery storage, 1,600 MW of NRIS battery storage, 500 MW of SIS battery storage, 1,025 MW of ERIS solar-plus-storage, and 702 MW of NRIS solar-plus-battery.²¹⁰ The table below summarizes the active projects in the interconnection queue in Louisiana.

Table 1. Active Generation Projects in MISO's Interconnection Queue in Louisiana

Fuel Type	ERIS ²¹¹ (MW)	NRIS ²¹² (MW)	SIS ²¹³ (MW)
Solar	2,772	4,037	0
Battery Storage	135	1,597	500
Solar + Battery	1,025	702	0
Wind	0	536	0

The queue totals indicate potential generation availability. Based on recent queue data from Lawrence Berkeley National Laboratory, roughly 25 percent of generation projects in interconnection queues ultimately reach commercial operation.²¹⁴ Applying that benchmark to

²¹⁰ MISO, *Interactive Queue* (accessed June 2026), https://www.misoenergy.org/planning/resource-utilization/GI_Queue/gi-interactive-queue/.

²¹¹ ERIS stands for Energy Resource Interconnection Service. It is the more limited, “energy-only” form of interconnection service. A project with ERIS can physically interconnect to the grid and inject energy when the system can accommodate it, but it does not receive firm deliverability rights to serve load during peak or constrained conditions.

²¹² NRIS stands for Network Resource Interconnection Service. It is the higher level of interconnection service that allows a generator to be treated like a deliverable network resource, often meaning it can qualify as a capacity resource. A project with NRIS is studied to determine whether its output can be delivered to load under applicable reliability and contingency conditions. That deliverability requirement can trigger more network upgrades, which makes NRIS more expensive and harder to obtain than ERIS.

²¹³ SIS stands for Surplus Interconnection Service. SIS allows a new resource to use the unused portion of an existing generator’s interconnection service at the same point of interconnection, so long as the combined output does not exceed the already-approved interconnection limit.

²¹⁴ Lawrence Berkeley National Laboratory, *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection* (accessed Aug. 2026), <https://emp.lbl.gov/queues>.

the active Louisiana queue suggests that approximately 1,700 MW of NRIS resources and almost 1,000 MW of ERIS resources could ultimately be energized within the next few years.

Expanding the review to the rest of MISO South indicates that additional resources may be available in Arkansas, Mississippi, and Texas. The table below summarizes active MISO South queue resources outside of Louisiana.

Table 2. Active Generation Projects in MISO South's Interconnection Queue, Excluding Louisiana

State	Fuel Type	ERIS (MW)	NRIS (MW)	SIS (MW)
TX	Photovoltaic	0	845	0
	Battery Storage	0	350	0
	Solar/Battery	150	386	0
	Wind Turbine	0	289	0
AR	Photovoltaic	4,023	4,957	0
	Battery Storage	0	640	880
	Solar/Battery	160	3,147	400
	Wind Turbine	568	1,668	0
MS	Photovoltaic	1,062	1,825	0
	Battery Storage	100	450	520
	Solar/Battery	100	920	0
	Wind Turbine	0	584	0

3. Hybrid portfolio

A hybrid portfolio that includes both behind-the-meter and grid-connected resources is likely the most practical approach for full plant electrification. A hybrid strategy could combine onsite or nearby solar and storage, and grid-connected generation, as well as onsite hydrogen storage and flexible electrolyzer operations. That structure would likely allow Hyundai to ramp up clean hydrogen use over time while reducing exposure to local transmission constraints.

A hybrid portfolio aligns with the local transmission context. Entergy states that the Amite South Transmission Project was developed to resolve current issues.²¹⁵ A flexible hybrid portfolio could reduce the extent to which electrolyzer operations add to the same constrained conditions that drove those upgrades.

²¹⁵ New Orleans City Business, *Regulators approve \$200M Entergy project despite ruling*, (Jun. 17, 2026), <https://neworleanscitybusiness.com/blog/2026/06/17/psc-approves-entergy-transmission-project/>, (attached as Exhibit PC.57).

A hybrid portfolio can separate annual hydrogen production from hourly grid demand. If hydrogen storage allows electrolyzers to reduce output during peak or constrained hours, the plant may be able to achieve high levels of clean hydrogen use with lower transmission impacts than an inflexible, around-the-clock electrolyzer load. Electrolyzers are highly controllable loads, particularly when coupled with sufficient hydrogen storage for meeting the ongoing needs of the steel plant, and some steel plant loads are also likely to have some flexibility in their scheduling. Many electrolyzer technologies are able to fully ramp down their electric load in seconds or less.²¹⁶

B. Heavy reliance on gas could pose both economic and reliability risks

Local generation is important in a constrained load pocket, but heavy reliance on a single fuel source can increase reliability and economic risks. For natural gas generation, those risks include both correlated generator outages during extreme weather and exposure to fuel price volatility.

Shortfalls in gas supply due to wellhead freeze-offs, along with generator equipment failures and pipeline equipment outages and constraints, have contributed to widespread correlated outages of gas generators during recent extreme cold weather events. Correlated outages of gas have occurred across many recent events, such as during Winter Storm Uri and Elliott, that resulted in loss of load. FERC and NERC reports and regional analyses have documented that forced outages and derates of gas generators were the primary cause of electric reliability problems during recent extreme cold weather events, including Winter Storm Elliott,²¹⁷ Winter Storm Uri,²¹⁸ the 2018 Bomb Cyclone,²¹⁹ the 2018 South Central Cold Snap,²²⁰ and the 2014 Polar Vortex.²²¹ Gas accounted for 63 percent of unplanned outages and derates during Winter Storm Elliott, and 55 percent during Winter Storm Uri and the 2014 Polar Vortex, while coal accounted for a large share of the remainder.²²² Correlated outages and derates of gas generators have also

²¹⁶ For example, see Hannes Lange et al., Technical evaluation of the flexibility of water electrolysis systems to increase energy flexibility: A review, *International Journal of Hydrogen Energy* 48 (2023) 15771-15783, <https://www.sciencedirect.com/science/article/pii/S0360319923000459> (attached as Exhibit PC.58).

²¹⁷ FERC & NERC, *December 2022 Winter Storm Elliott Grid Operations: Key Findings and Recommendations*, at 5 (Sept. 21, 2023), <https://www.ferc.gov/news-events/news/presentation-ferc-nerc-regional-entity-joint-inquiry-winter-storm-elliott> (attached as Exhibit PC.59).

²¹⁸ FERC & NERC, *The February 2021 Cold Weather Outages in Texas and the South Central United States*, at 16 (Nov. 2021), <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and> (attached as Exhibit PC.60).

²¹⁹ EIA, *January's cold weather affects electricity generation mix in Northeast, Mid-Atlantic* (Jan. 23, 2018), <https://www.eia.gov/todayinenergy/detail.php?id=34632> (attached as Exhibit PC.61).

²²⁰ FERC & NERC, *2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018*, at PDF 14 (July 2019), https://www.nerc.com/pa/rrm/ea/Documents/South_Central_Cold_Weather_Event_FERC-NERC-Report_20190718.pdf (attached as Exhibit PC.62).

²²¹ NERC, *Polar Vortex Review*, at iii, 13 (Sept. 2014), https://www.nerc.com/globalassets/our-work/reports/event-reports/polar_vortex_review_29_sept_2014_final.pdf (attached as Exhibit PC.63).

²²² *Id.* at 13; see also *supra* note 217, at 5 (Exhibit PC.59) and *supra* note 218, at 16 (Exhibit PC.60).

played a major role in reliability concerns during extreme heat, including the 2022²²³ and 2020²²⁴ heat waves in California.

Gas price volatility is also an increasing risk for Entergy and its customers as the utility expands its reliance on gas generation. Natural gas prices are volatile on a short-term basis because of weather-driven demand and supply disruptions, and they are uncertain over the longer term because of economic and geopolitical factors. Increased U.S. LNG exports are also increasingly linking domestic gas prices to global gas markets, which are affected by geopolitical volatility and uncertainty. For example, Russia's invasion of Ukraine and the closure of the Strait of Hormuz have caused global natural gas prices to increase dramatically, and to display greater volatility and uncertainty. While the recent increase in global gas prices has not yet resulted in higher domestic prices, the linkage between domestic and global natural gas prices is likely to increase as LNG exports consume a larger share of U.S. gas. The U.S. is expected to roughly double its LNG export capacity by 2029 after increasing from essentially zero to 15.4 billion cubic feet per day (Bcf/d) over the last decade,²²⁵ an amount that is comparable to nearly 17 percent of U.S. gas consumption in 2025.²²⁶

Ongoing consolidation in the gas supply and transportation industries may also contribute to higher and more volatile gas prices. Ernst & Young reports that oil and gas industry "[m]erger and acquisition expenditures increased 331% in 2024, from US\$47.9 billion in 2023, to US\$206.6 billion in 2024."²²⁷ Gas industry experts are predicting prices may significantly increase as gas demand for LNG exports and electricity generation grow while low-cost sources of supply have been tapped.²²⁸

Extreme cold weather events can also disrupt gas supplies by causing gas wellheads to freeze, just as gas demand peaks due to additional heating and power demands. Pipeline constraints during high-demand periods can also cause price spikes or even shortages. Winter Storms Uri, Elliott, and Fern caused dramatic spikes in natural gas prices in the Eastern U.S. due to wellhead freeze-offs. During Winter Storm Fern, natural gas production dropped by 10 billion cubic feet

²²³ Regenerate California, *California's Underperforming Gas Plants: How Extreme Heat Exposes California's Flawed Plan for Energy Reliability* (2023), https://ceja.org/file_download/inline/0f8c919d-648c-45d3-ac93-3a8c3097f32c (attached as Exhibit PC.64).

²²⁴ CAISO, *Root Cause Analysis: Mid-August 2020 Extreme Heat Wave* (Jan. 13, 2021), <http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf> (attached as Exhibit PC.65).

²²⁵ EIA, *North America's LNG export capacity could more than double by 2029* (Oct. 16, 2025), <https://www.eia.gov/todayinenergy/detail.php?id=66384> (attached as Exhibit PC.66).

²²⁶ EIA, *U.S. natural gas consumption set a monthly and yearly record in 2025* (Mar. 18, 2026), <https://www.eia.gov/todayinenergy/detail.php?id=67365#> (attached as Exhibit PC.67).

²²⁷ Ernst & Young, *US oil and gas reserves, production and ESG benchmarking study*, at 6 (2025), <https://www.ey.com/content/dam/ey-unified-site/ey-com/en-us/industries/oil-gas/documents/ey-us-oil-and-gas-reserves-production-esg-study-2025-final.pdf> (attached as Exhibit PC.68).

²²⁸ For example, see Wood Mackenzie, *Era of US\$2–4/mmbtu Henry Hub natural gas prices ending as demand and supply conditions shift toward US\$5/mmbtu (real) by 2035* (July 2, 2026), [https://www.woodmac.com/press-releases/wood-mackenzie-era-of-us\\$24mmbtu-henry-hub-natural-gas-prices-ending-as-demand-and-supply-conditions-shift-toward-us\\$5mmbtu-real-by-2035/](https://www.woodmac.com/press-releases/wood-mackenzie-era-of-us$24mmbtu-henry-hub-natural-gas-prices-ending-as-demand-and-supply-conditions-shift-toward-us$5mmbtu-real-by-2035/) (attached as Exhibit PC.69).

per day due to frozen gas wells.²²⁹ That was smaller than the well freeze-offs during Winter Storms Uri and Elliott, when gas production dropped by roughly 20 percent nationally, or about 20 billion cubic feet per day.²³⁰ While gas supply interruptions during Fern were not large enough to repeat the rolling blackouts that occurred during Uri and Elliott, ratepayers were not spared an economic hit. PJM noted that “[s]pot gas prices through this event reached historic levels throughout the eastern U.S. with many hubs trading well over \$100/mmbtu with prices in NY and New England approaching \$300/mmbtu.”²³¹

C. Entergy’s planned transmission upgrades

Entergy is planning and developing transmission upgrades across Louisiana that should improve transfer capability into South Louisiana load pockets, help maintain reliability, and support forecasted load growth. In the near term, the new 500 kV transmission line that is a part of the Amite South Reliability Project Phase 1 and the new RiverPlex substation may provide some opportunity for additional incremental transmission service to the steel plant. That could allow for some of the electrolyzer load to be interconnected. In the longer term, the broader regional upgrades, including Babel-Weber, the potential MISO-SPP Coordinated System Plan (CSP) portfolios, and MISO South Long Range Transmission Planning, may provide larger-scale transmission capacity additions.

D. Onsite batteries and hydrogen storage could support phased electrification

Deploying batteries at the proposed facility, along with flexible EAF operations and hydrogen electrolysis and storage, could help reduce the need for additional transmission upgrades.

Batteries offer more operational flexibility than thermal generators and can provide many of the same reliability services.²³² Unlike thermal generators, batteries can be dispatched almost instantaneously to any output level and do not have a minimum. Batteries can also absorb power during periods of low demand or high supply, including renewable output that would otherwise be curtailed. Thermal generators cannot absorb excess power and generally must be started and kept online to provide flexibility and ancillary services. Batteries can start within seconds to provide flexibility, voltage and reactive support, or other reliability services. They also offer a wider dispatch range because they can move between charging and discharging, while even flexible thermal generators have more limited operating ranges.

Batteries with grid-forming inverters can also provide enhanced capabilities to stabilize frequency, improve local short-circuit strength, and assist with grid restoration by providing blackstart service. Grid-forming inverters can set voltage and frequency signals and therefore can

²²⁹ PJM, *January Cold Weather Operations*, at 38 (Feb. 5, 2026), <https://www.pjm.com/-/media/DotCom/committees-groups/committees/oc/2026/20260205/20260205-item-03---cold-weather-update.pdf> (attached as Exhibit PC.70).

²³⁰ *Id.* at 40.

²³¹ *Id.* at 38.

²³² For example, see Michael Milligan, *Sources of grid reliability services*, *The Electricity Journal* 31 (2018) 1-7, at Table 1, <https://www.sciencedirect.com/science/article/pii/S104061901830215X> (attached as Exhibit PC.71).

contribute more to blackstart, frequency stability, and local short-circuit strength than grid-following inverters, which follow voltage and frequency signals set by other resources.²³³

Grid-forming batteries are already operating, mostly in smaller power systems where they are needed. For example, the 150 MW Hornsdale Power Reserve in South Australia has provided fast frequency response to stabilize the grid within seconds of major real-world grid disturbances.²³⁴ A 185 MW battery project in Hawaii has replaced grid services previously provided by a nearby coal plant, including blackstart, fast frequency response, and grid-forming services.²³⁵

Because batteries can respond quickly, regulate voltage and reactive power, and be deployed at specific grid locations, battery storage can be an effective alternative or complement to some transmission upgrades.²³⁶ This is particularly relevant for grid upgrades needed to maintain reliability under contingency conditions, where a battery can respond almost instantly to avoid overloads or stabilize grid conditions when a large generation or transmission asset goes offline. Batteries can almost instantly dispatch their output up or down to avoid causing thermal overloads on the transmission system, and batteries and their power electronics can maintain voltage stability, even without grid-forming capability.

Onsite hydrogen storage provides a different but complementary form of flexibility. If hydrogen storage allows electrolyzers to reduce production during peak or constrained grid conditions, the steel plant could continue using hydrogen in the DRI process while reducing its contribution to peak load or local transmission constraints. That flexibility is central to making a phased hybrid portfolio more practical, as outlined above.

E. Existing and emerging regulatory pathways may help accelerate a phased electrification approach

In MISO, new large loads benefit from specific planning and large load interconnection pathways designed to bring them online more quickly than traditional processes. These pathways could help support a timely phased approach to the full electrification of the steel plant.

If DRI electrification requires additional transmission upgrades before the normal MISO Transmission Expansion Plan (MTEP) process can identify and approve those upgrades, MISO's

²³³ Energy Systems Integration Group, High Share of Inverter-Based Generation Task Force, *Grid-Forming Technology in Energy Systems Integration*, at 10-11 (Mar. 2022), <https://www.esig.energy/wp-content/uploads/2022/03/ESIG-GFM-report-2022.pdf> (attached as Exhibit PC.72).

²³⁴ Giles Parkinson, 'Virtual machine': Hornsdale battery steps in to protect grid after Callide explosion, *Renew Economy* (May 27, 2021), <https://reneweconomy.com.au/cdn.ampproject.org/c/s/reneweconomy.com.au/virtual-machine-hornsdale-battery-steps-in-to-protect-grid-after-callide-explosion/amp/> (attached as Exhibit PC.73).

²³⁵ Kavya Balaraman, *Pioneering 565-MWh battery storage facility now online in Hawai'i, Plus Power says*, *Utility Dive* (Jan. 16, 2024), <https://www.utilitydive.com/news/plus-power-energy-storage-online-hawaii-HECO-rolling-blackouts/704561/> (attached as Exhibit PC.74).

²³⁶ See Brent Oberlin, *Storage as a Transmission Only Asset*, ISO New England, at 11-15 (May 31, 2022), https://www.iso-ne.com/static-assets/documents/2022/05/a7_storage_as_a_transmission_only_asset.pdf (attached as Exhibit PC.75); and William Brown et al., *Storage as Transmission Asset Market Study*, Quanta Technology (Jan. 2023), https://cdn.ymaws.com/ny-best.org/resource/resmgr/reports/SATA_White_Paper_Final_01092.pdf (attached as Exhibit PC.76).

Expedited Project Review (EPR) process may be a relevant pathway. For large loads that need projects to come online faster than the usual MTEP planning process, MISO relies on EPR to review urgent reliability-related transmission projects on an accelerated timeline. EPR requests have increased sharply in recent years, driven in significant part by large load additions seeking service faster than traditional transmission planning and development timelines. If Hyundai's hydrogen-related electrification creates incremental load that cannot be served reliably through existing or already-planned upgrades, EPR may provide a targeted mechanism to study and approve the additional upgrades needed to support phased electrolyzer interconnection.²³⁷

Additionally, in June 2026, FERC issued six Large Load Interconnection Show Cause Orders, one to each organized market, including MISO.²³⁸ These show cause orders are intended to create a more structured pathway for interconnecting new large loads, including new transmission service options for flexible large loads and accommodation of co-location agreements and behind-the-meter generation.²³⁹ For Hyundai, these reforms could matter if they plan a hybrid portfolio of behind-the-meter generation and grid-connected generation around flexible electrolyzer operations that is phased in over time. These new processes could improve the pathway for Hyundai to bring new transmission services or capacity online.

F. Conclusion: Electrification of the Hyundai steel facility is feasible and must be considered

The scale of new generation and load required to support full electrification at the proposed Hyundai steel plant would be significant, but not unprecedented in the context of large industrial development and regional transmission planning in South Louisiana. The plant's existing EAF load is already reflected in Entergy's current interconnection and transmission-upgrade plans. RMI's analysis shows that full electrification would require substantial new solar and storage resources. A phased hybrid strategy combining onsite solar and storage, grid-connected clean generation, hydrogen storage, and flexible electrolyzer operations, that also makes use of MISO's EPR process and new large load interconnection pathways proposed by FERC, would be the best approach to achieving full electrification. LDEQ cannot reject use of green hydrogen on feasibility grounds without a full analysis that considers all of the above, especially an incremental approach to blending in clean hydrogen.

²³⁷ See MISO, *MISO Transmission Expansion Plan (MTEP)* (accessed Aug. 2026), <https://www.misoenergy.org/planning/transmission-planning/mtep/#t=10&p=0&s=&sd=>; see also MISO, *Large Load Additions* (accessed Aug. 2026), <https://www.misoenergy.org/planning/large-loads---container-page/large-load-additions/>.

²³⁸ FERC, *FERC Launches Aggressive Targeted Action to Speed Large Load Integration* (Jun. 18, 2026), <https://www.ferc.gov/news-events/news/ferc-launches-aggressive-targeted-action-speed-large-load-integration> (attached as Exhibit PC.77).

²³⁹ FERC, *Commissioner Rosner's Remarks on the Large Load Show Cause Orders, E-7 to E-12* (Jun. 18, 2026), <https://www.ferc.gov/news-events/news/commissioner-rosners-remarks-large-load-show-cause-orders-e-7-e-12-june-18-2026> (attached as Exhibit PC.78).

V. Air Dispersion Modeling Flaws

The Clean Air Act conditions issuance of a PSD permit on a demonstration that the source “will not cause, or contribute to, air pollution in excess of *any*” NAAQS or PSD increment.²⁴⁰ Courts have recognized that this “rigid” statutory language, and the repeated use of expansive terms like “any,” foreclose de minimis exemptions.²⁴¹

The proposed permit did not make that demonstration. As described in other public comments to LDEQ,²⁴² Hyundai’s modeling is based on improper meteorological data, improperly relies on an outdated SIL to avoid cumulative PM2.5 modeling, improperly relies on an unrepresentative monitor in its ozone modeling, in addition to other fatal flaws. Public comments submitted to LDEQ also demonstrate that using the appropriate background conditions and monitors shows the facility would cause exceedances of the ozone and PM2.5 NAAQs. LDEQ must address the third-party modeling and modeling comments in the record, and make a robust and defensible demonstration that the proposed facility would not cause violations of health-based NAAQs or PSD increment. LDEQ also must allow for public comment on those revised analyses before allowing the proposed facility to proceed.

A. The Air Dispersion Modeling is Based on Improper Meteorological Data

Hyundai’s modeling relies on meteorological data from the New Orleans airport instead of Baton Rouge,²⁴³ which is significantly closer and more representative of the proposed project site.²⁴⁴ Baton Rouge and Ascension share the same inland climatic zone of the Mississippi River floodplain, while New Orleans is heavily influenced by Lake Pontchartrain, the Gulf of Mexico, and coastal wetlands. LDEQ must rerun every modeling demonstration with the proper meteorological data from Baton Rouge, and allow for public comment. If LDEQ declines to use Baton Rouge data for this project, it must explain why it determined New Orleans airport data is more representative, and also whether LDEQ’s choice of data is or is not consistent with other projects around Ascension, and why.

B. Hyundai and LDEQ’s SILs Analysis is Unsupported and Unlawful

Significant Impact Levels (SILs) cannot be used as a blanket exemption from the Act’s requirements to fully evaluate and mitigate harmful air pollution impacts.²⁴⁵ Here, LDEQ used

²⁴⁰ 42 U.S.C. § 7475(a)(3)(emphasis added); LAC 33:111.509.K.

²⁴¹ See *Public Citizen v. Young*, 831 F.2d at 1111-13 (quoting statutory language whose “natural—almost inescapable—reading” requires certain action and finding that language is rigid); see also *Consumer Electronics Ass’n v. FCC*, 347 F.3d 291, 298 (D.C. Cir. 2003) (“the Supreme Court has consistently instructed that statutes written in broad, sweeping language should be given broad, sweeping application.”); *Massachusetts v. EPA*, 549 U.S. 497, 528-29 (2007) (“repeated use of the word ‘any’” demonstrated that statutory language was “sweeping” in its protective reach).

²⁴² Comments to LDEQ, AI 248885, Document ID: 15331653 at 7-42. Sierra Club adopts all comments contained in that section.

²⁴³ Draft Permit, June 17 PSD and Toxics Air Modeling at PDF 1198.

²⁴⁴ Comments to LDEQ, AI 248885, Document ID: 15331653 at 1 & 11-14. Sierra Club adopts all comments contained in that section.

²⁴⁵ *Sierra Club v. EPA*, 705 F.3d 458, 465–66 (D.C. Cir. 2013).

the SIL as a blanket exemption and, worse, LDEQ utilized an outdated SIL EPA no longer recommends without any justification for doing so. LDEQ must use EPA's recommended SIL, and cannot rely on that SIL alone to demonstrate compliance with the Act's requirements.

In the permitting analysis, LDEQ improperly used a 0.2 $\mu\text{g}/\text{m}^3$ significant impact level (SIL) rather than EPA's recommended 0.13 $\mu\text{g}/\text{m}^3$ SIL to avoid cumulative review modeling for PM_{2.5}, even though the project's own modeled impact of 0.1748 $\mu\text{g}/\text{m}^3$ exceeds EPA's recommended SIL.

In 2024 EPA tightened the primary annual PM_{2.5} NAAQS, lowering it from 12.0 $\mu\text{g}/\text{m}^3$ to 9.0 $\mu\text{g}/\text{m}^3$.²⁴⁶ Also in 2024, in direct response to that tightened standard, EPA issued a supplemental guidance document lowering the recommended annual Class II PM_{2.5} SIL from 0.20 $\mu\text{g}/\text{m}^3$ to 0.13 $\mu\text{g}/\text{m}^3$.²⁴⁷ EPA explained that the earlier value no longer reflects an insignificant impact under the governing 9.0 $\mu\text{g}/\text{m}^3$ standard and that EPA no longer recommends using it.²⁴⁸ Any departure from EPA's recommended SIL requires independent and record-based justification.²⁴⁹

Hyundai's rationale for using the SIL is unsupported, and LDEQ did not offer any explanation. LDEQ must use EPA's current 0.13 $\mu\text{g}/\text{m}^3$ SIL, and as explained in the next section, cannot use the SIL analysis alone to meet the Act's requirements.

C. LDEQ Must Require Cumulative PM_{2.5} Modeling

Even using the EPA's recommended and technically supported SIL of 0.13 $\mu\text{g}/\text{m}^3$, the Clean Air Act and Louisiana law condition issuance of a PSD permit on a demonstration that the source "will not cause, or contribute to, air pollution in excess of any" NAAQS or PSD increment.²⁵⁰ Courts agree that this substantive statutory requirement is not satisfied merely because a modeled value falls below an agency screening threshold.²⁵¹ Indeed, EPA is clear that even contributions less than 0.13 $\mu\text{g}/\text{m}^3$ might still cause or contribute to a NAAQS violation, and that "a determination that a proposed source does not cause or contribute to a violation can only be made by a permitting authority on a permit-specific basis after consideration of the permit record."²⁵²

EPA has also made clear that use of the SILs "may not be appropriate" where, as here, "a substantial portion of any NAAQS or increment is known to be consumed."²⁵³ Here, a

²⁴⁶ Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, 89 Fed. Reg. 16,202, (Mar. 6, 2024).

²⁴⁷ EPA, Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program (Apr. 30, 2024) ("EPA Supplemental SIL Guidance"), https://www.epa.gov/system/files/documents/2024-08/silguidance_july_2024.pdf, (*attached as Exhibit PC.79*); EPA, Guidance on Significant Impact Levels for Ozone and Fine Particles in the PSD Permitting Program (Apr. 17, 2018) ("EPA 2018 SIL Guidance"), https://www.epa.gov/sites/default/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf, (*attached as Exhibit PC.80*).

²⁴⁸ See EPA Supplemental SIL Guidance at 1, 7.

²⁴⁹ See EPA 2018 SIL Guidance at 3; EPA Supplemental SIL Guidance at 4.

²⁵⁰ 42 U.S.C. § 7475(a)(3); LAC 33:111.509.K.

²⁵¹ *Sierra Club v. EPA*, 705 F.3d 458, 465–66 (D.C. Cir. 2013).

²⁵² EPA Supplemental SIL Guidance at 4.

²⁵³ 75 Fed. Reg. 64,864, 64,894 (Oct. 10, 2020); *see also* EPA 2018 SIL Guidance.

substantial amount of the PM_{2.5} NAAQs is already consumed (8.4 of 9.0 µg/m³ at the Geismer monitor), and other large pollution sources are being proposed for the same Riverplex area.²⁵⁴

Thus, regardless of which SIL LDEQ employs, and especially given the project's own modeled impact of 0.1748 µg/m³ and the existing background PM_{2.5} conditions, LDEQ must perform a cumulative annual PM_{2.5} NAAQs and increment analysis using a complete inventory of all significant existing and planned sources in the area.²⁵⁵

Finally, use of SILS is not appropriate where modeling in the record shows that the facility will cause exceedances. Other commenters to LDEQ conducted independent modeling that predicts the proposed facility would contribute significantly to annual PM_{2.5} NAAQs violations.²⁵⁶ LDEQ must address the serious issues raised in those comments.

D. The Project Would Contribute to a Violation of the Ozone NAAQS

LDEQ's ozone modeling erroneously relies on an unrepresentative monitor without any explanation.²⁵⁷ To properly demonstrate that the project will not cause an exceedance of air quality standards, LDEQ must use the closest and most representative ozone monitor to the project. LDEQ must use the Carville regional-scale monitor, which has a design value of 73 ppb. When the Carville station is correctly used, the project violates the 70 ppb ozone NAAQs by over 5 ppb. If LDEQ does not select this monitor, it must explain why it believes the monitor it selected is more appropriate. Sierra Club adopts the comments submitted to LDEQ on cumulative ozone modeling.²⁵⁸

VI. Hazardous Air Pollutant Comments and Toxic Air Pollutants

Sierra Club adopts comments previously submitted to LDEQ on Hazardous Air Pollutants and Major Source Status,²⁵⁹ and Toxic Air Pollutants.²⁶⁰ Katie McClintock's attached expert report outlines several similar comments, including that Hyundai's calculations are unverifiable because the application lacks necessary data, such as baseline uncontrolled emission and specific control efficiencies.²⁶¹

VII. Secondary Emissions and Offsite Support Facilities

Sierra Club adopts comments submitted to LDEQ on this topic.²⁶²

²⁵⁴ Comments to LDEQ, AI 248885, Document ID: 15331653 at 14-17.

²⁵⁵ Comments to LDEQ, AI 248885, Document ID: 15331653 at 14-17; 40 CFR §§ 51.166(k), 52.21(k); LAC 33:III.509.

²⁵⁶ Comments to LDEQ, AI 248885, Document ID: 15331653 at 2 & 17-26, 80.

²⁵⁷ Draft Permit, PSD Permit, PDF 179.

²⁵⁸ Comments to LDEQ, AI 248885, Document ID: 15331653 at 7-11.

²⁵⁹ *Id.* at 60-66.

²⁶⁰ *Id.* at 66-71.

²⁶¹ Katie McClintock, BACT Report (May 2026) (PDF 21-31) at PDF 25, <https://edms.deq.louisiana.gov/app/doc/view?doc=15344900>.

²⁶² Comments to LDEQ, AI 248885, Document ID: 15331653 at 76-79.

CONCLUSION

LDEQ must deny the proposed permits or withhold final approval until it completes all required analyses, corrects all identified deficiencies, and allows meaningful public comment on revised proposed permits.

Respectfully submitted,

Andrea Issod
Senior Attorney
Sierra Club Environmental Law Program
andrea.issod@sierraclub.org
(415) 977-5544

Rebecca McCreary
Staff Attorney
Sierra Club Environmental Law Program
rebecca.mccreary@sierraclub.org
(303) 449-5595