



## TEXAS ENERGY & CLIMATE CAUCUS

### Houston Energy Tour: May 9-10, 2024

#### Key Takeaways & Policy Topics

PowerHouse Texas brought together bipartisan legislators, staff and academic experts in Houston to explore cutting-edge energy innovations and hear directly from community members about the energy, environmental and health challenges they're experiencing. Twenty six (26) people joined us on this first leg of the statewide [Texas Energy Tour](#).

#### Tour Recap:

As part of the welcome dinner, we learned about the Texas **hydrogen** economy from Brett Perlman with [Center for Houston's Future](#); Brian Weeks with [GTI Energy](#); John Hall and Dr. Margaret Cook with [HARC | Houston Advanced Research Center](#); and Lindsay Cooper with [Clean Air Task Force](#). We then heard presentations from Cam Spencer and Trae Camble with [Port Houston](#) about port electrification, clean fuels, and environmental stewardship before taking a boat tour of the **Houston Ship Channel**. [Air Alliance Houston](#) shared their [Community Air Monitoring Program findings](#) and the **impacts of air pollution** from transportation and industry on local residents' health, as well as their [policy recommendations](#). The tour wrapped up at [NET Power](#)'s testing facility in La Porte where the group was able to see their groundbreaking technology firsthand, which generates electricity from natural gas while **capturing carbon emissions** through their patented oxy-combustion process.

#### Key Takeaways and Policy Topics:

##### Hydrogen:

- Hydrogen (H<sub>2</sub>) use is expected to grow, and clean H<sub>2</sub> projects are accelerating in Texas and beyond. H<sub>2</sub> has an indirect warming effect and community groups are raising concerns over the potential impacts. H<sub>2</sub> is more water intensive to produce than other fuels. In a water-stressed state like Texas, it is important to plan for water needs and alternative supplies. A wide application of nature-based solutions to reduce impervious cover and overland flow is needed. Alternative water storage applications are needed, along with appropriate regulatory programs, and potentially a state level community benefits law, similar to the one Montana has.
- H<sub>2</sub> burns clean but producing H<sub>2</sub> still creates carbon dioxide emissions. It will be critical to monitor air pollution and help reduce its impacts especially on fence line neighborhoods.

##### Port of Houston:

- Port Houston owns, manages and operates 8 public wharves and terminals along the 52-mile Houston Ship Channel, including the two largest container terminals on the Gulf Coast and is the 5th largest port in the nation for containerized cargo. The Port's Real Estate division handles the leasing, acquisition and sale of Port-owned properties. Learn more in this [Port 101 video](#).
- Port Houston was the first port in the nation to power all public facilities with 100% asset-backed renewable electricity. The Port also put forth an aggressive goal to reach carbon neutrality by 2050. Since 2016, the Port has reduced its greenhouse gas emissions by more than 55%.

**Air Monitoring:**

- Texas now has 10 counties, including Harris County, violating the EPA particulate matter (PM) standards for the first time. Several counties with high PM do not have a speciation monitor to know what the PM is made of.
- The legislature should call on TCEQ to have a rigorous state implementation plan and set up speciation monitors in key counties that lack them, and additional monitors in the Houston region where sources of PM are varied and complex. It can also ensure that the Texas Air Quality Research Program includes scientific field campaigns to better understand the sources of PM. Understanding the composition of PM is crucial to developing strategies for controlling it. The Texas Air Quality Research Program should fund more research into PM, not just ozone.
- The legislature should close state loopholes to emit beyond the limit. They happen routinely, so setting limits means nothing. Companies disregard and avoid penalties for emissions for events described as “startups, shutdowns and malfunctions” – one of the loopholes which allows thousands of incidents each year to release dangerous emissions without penalty.

**Carbon Capture Technologies:**

- A plant like NET Power’s, which uses natural gas to make electricity with lower emissions, can come in at high-demand, peak times and add load to support other producers. The NET Power facility demonstrates that technologies are being developed to enable carbon capture from natural gas power generation. The technology is scaling up for more widespread commercial deployment in regions with natural gas availability and underlying geologic storage resources.
- Benefits include measurable reduction of large emission sources through permitted and monitored projects, while generating jobs and economic development throughout the state. Risks are primarily potential impacts to shallow groundwater, microseismicity, and leakage through legacy wellbores.
- The General Land Office owns ten miles of land offshore from Texas, compared to all other states which own five miles of offshore land. This presents a unique opportunity for Texas to access commercial offshore areas for carbon storage. Royalties from any activities in this area would benefit the Permanent School Fund and furthermore, help to reduce property taxes.
- Recently, a well has finished drilling offshore Jefferson County near Port Arthur, which is the first exploration well for carbon storage in Texas. There are six other leases on state waters for similar projects and a few dozen proposed projects onshore. Signing bonuses for existing six leases are \$150 million dollars (benefiting the Permanent School Fund) and royalties over 30 years are projected to be \$10 billion dollars. Three more leases are coming up soon.

This tour would not have been possible without the support of our partners and tour hosts. We'd also like to thank our [Energy Policy Advisory Council](#) Members Dr. Daniel Cohan, Dr. Tip Meckel and Dr. Margaret Cook for joining us and offering their expertise as a resource for legislators and staff!

Thank you to Clean Air Task Force Action for sponsoring our welcome dinner, and thank you to our funders for supporting our work: Jacob & Terese Hershey Foundation, The Meadows Foundation, ClimateWorks Foundation, U.S. Energy Foundation and The Cynthia and George Mitchell Foundation.