



*The Low Cost
Solution To
California's
Air Pollution*

Bay Planning Coalition Expert Briefing -- January 21st 2015

I-5 CLEAN FUELS, LLC (ICF)
A PROJECT OF THE PANOCHÉ WESTSIDE GROUP (PWG)



Executive Summary

I-5 Clean Fuels (ICF)

- LNG is cheaper and cleaner than diesel
- ICF will be the first large-scale, independent natural gas liquefaction facility in Northern California
- LNG will be used in high-horsepower trucks, rail, marine and agricultural equipment
- This is a \$300 Million energy infrastructure project with an estimated 25-year economic life



PROJECT LOCATION

- Site is owned by project developer
- Site is within 300 miles of existing distribution infrastructure serving ~35 million people
- Within 150 miles is the most efficient distribution zone





PROJECT PARAMETERS

- 1 Million gallons per day liquefaction facility
- Converting pipeline gas to LNG
- 3 million gallon storage capacity
- \$300 million total project cost (Phase 1: \$95million)
- Constructed in 4 phases to match market demand
- Commercial Operations of Phase 1 in Mid 2016



LNG is Simply Cleaner !

New clean-burning LNG trucks are much cleaner than existing diesel trucks, resulting in:

- A reduction of more than 20 percent in greenhouse gas emissions (CO₂, N₂O)
- A reduction of more than 80 percent in smog-forming pollution (NO_X and VOCs); and
- A reduction of more than 60 percent in particulate matter pollution.



Regional Environmental Benefits

At full capacity 1 million gallons/day of LNG from ICF would:

- Eliminate more than 500,000 tons of greenhouse gas emissions (CO₂, N₂O). Equivalent to removing approximately 100,000 cars from the road;
- Reduce smog-forming pollution (NO_x and VOCs) by approximately 8,000 tons per year; and
- Reduce carcinogenic diesel particulate matter pollution by approximately 100 tons per year.



Safety and Design Criteria

- LNG is just one of many fuels that is stored and transported as a liquid like gasoline, propane, and other flammable liquid fuels.
- The LNG industry has operated safely for the past 70 years and is a mature industry with an admirable record of public safety.
- 49 CFR 193 governs the siting, design, installation, construction, operation, maintenance, fire protection, and security of LNG facilities in the US, as well as setting standards for the qualification and training of LNG facility employees.
- NFPA 59A is the standard for the Production, Storage, and Handling of LNG. The US Department of Transportation (DOT) made conformance with NFPA 59A a legal requirement.



SUMMARY

- LNG use as a HHP fuel is a growing
- I-5 Clean Fuels will be:
 1. First in Northern California
 2. Within 150 miles of all Bay Area users
 3. Low cost producer in a commodity market