



SCG RENEWABLE ENERGY PROGRAMS

Wester Gas Measurement Short Course
2026



What is Renewable energy

» Energy derived from natural sources that are replenished at a higher rate than they are consumed.

- Solar
 - Photovoltaic , Solar thermal
- Wind
- Geothermal
- Hydropower
- Biomass
- Biogas

Why is it important

» Environmental Benefits

- Reduce Greenhouse Emissions
- Improves air quality
- Uses waste productively

» Economic Benefits

- Job Creation
- Local economic development

» Security

- Reduces dependence on imported fuels
- Distributed Generation improves reliability

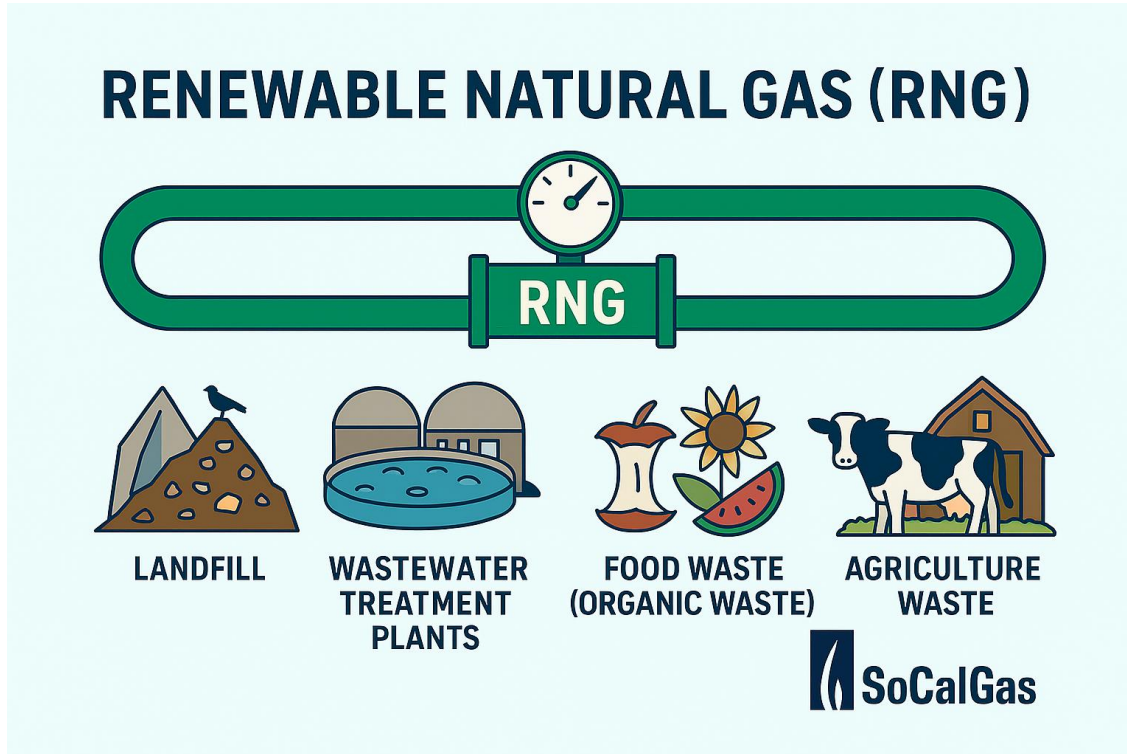
» Public health and Safety

- Fewer Health Impacts
- Lower Environmental Risk

» Sustainability and Viability

- Renewable by nature
- Supports circular economy

Renewable Natural Gas



- » Direct Methane Emission Reduction
 - Captures CH₄ that would otherwise be released to atmosphere
- » Carbon Negative
 - Methane emissions are avoided
 - Displaces fossil NG and diesel
- » Uses Existing Gas Infrastructure
- » Decarbonizes Hard-to-electrify Sectors
- » Transforms Waste into Energy
- » Proven Technology

Biogas Sites



Biogas Sites



Biogas Sites

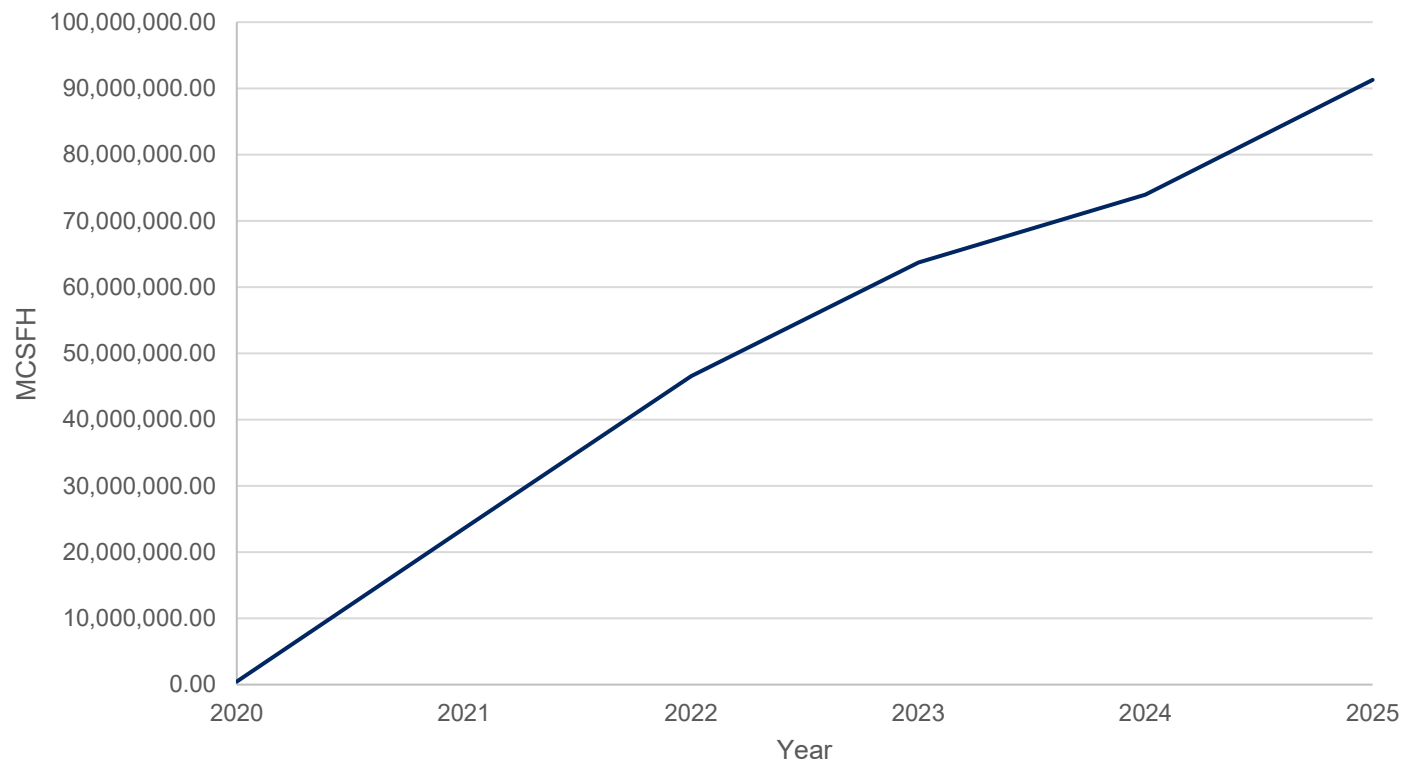


Biogas Sites



RNG Flow Statistics

RNG Flow Per Year



Years	Percent Change
20-21	5062
21-22	97
22-23	36
23-24	16
24-25	23



SoCalGas supports the Renewable Natural Gas (RNG) market in California by investing in infrastructure, facilitating interconnections for RNG producers, and advancing policies that enable decarbonization. Currently, we are receiving RNG from 11 production facilities - eight from dairy clusters, two from green and food waste facilities, and one from landfill.



We promote RNG adoption through research, pilot programs, and partnerships aimed at reducing greenhouse gas emissions and meeting California's climate goals.



Our target is to replace 20% of its traditional natural gas delivery with natural gas from renewable sources by 2030.



As of December 2025, RNG makes up about 6% of the gas we deliver to our core customers.



[H2] Innovation Experience Hydrogen Microgrid



Hydrogen-Powered Microgrid

- » A showcase clean renewable hydrogen microgrid
- » Shows how carbon-free gas made from renewable energy can be used in pure form or as a blend to fuel clean energy systems
- » Clean renewable hydrogen microgrids can deliver reliable and renewable energy around the clock to more than 100 homes, rain or shine, for as much as seven days

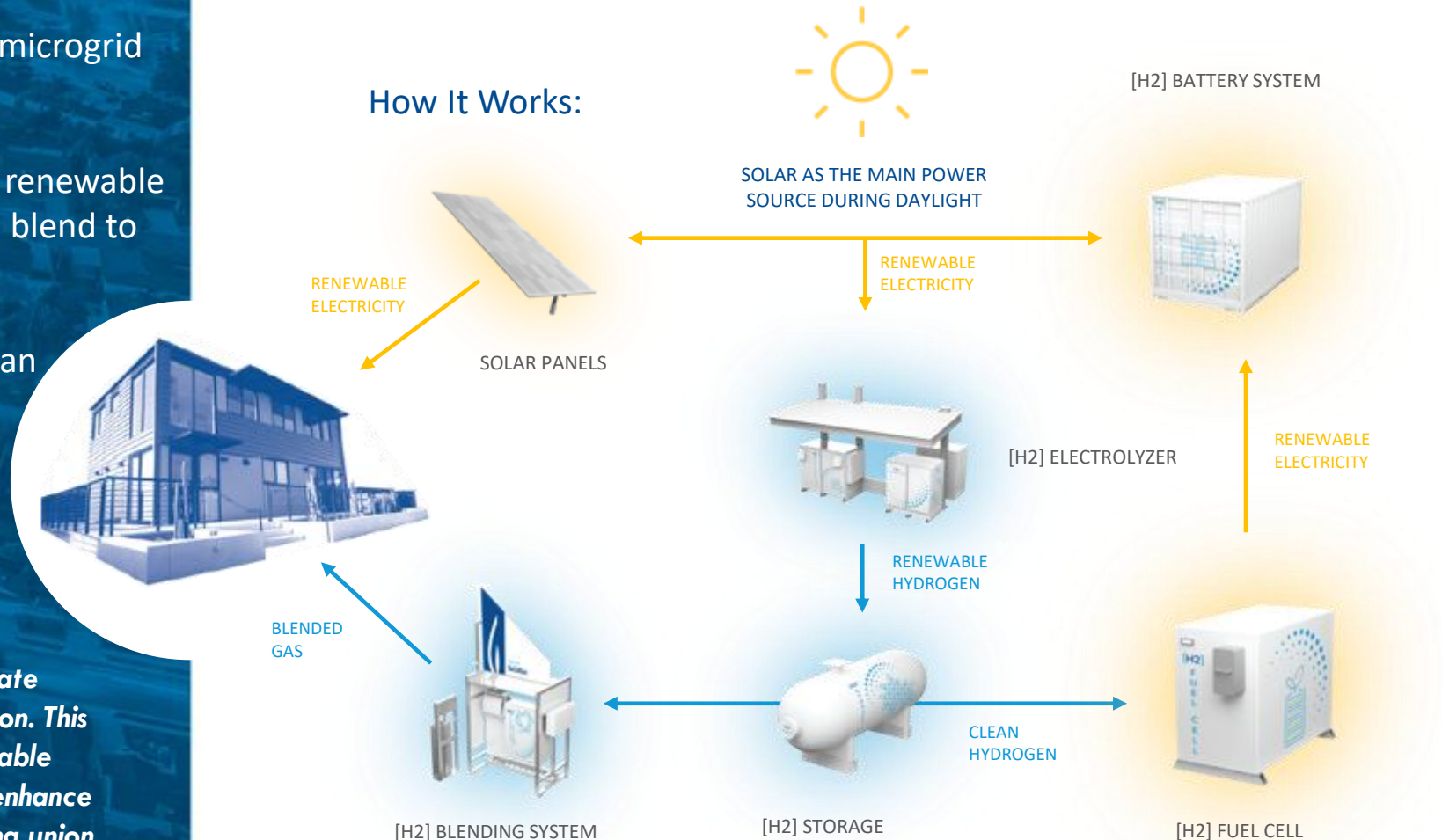
"Innovative projects like the [H2] IE demonstrate how California is leading the clean energy transition. This first-of-its-kind project shows how clean renewable hydrogen and microgrids can help power homes, enhance grid reliability, and preserve and grow good-paying union jobs in our state."



– Lieutenant Governor Eleni Kounalakis
SoCalGas

[H2] INNOVATION
EXPERIENCE

How It Works:



[H2] Innovation Experience: How it Works

- Blend of up to 20 vol% hydrogen to be used for:
 - Tankless Water Heater
 - Clothes Dryer
 - Gas Stove
 - Gas BBQ
 - Indoor Fireplace
 - Outdoor Fireplace
- No modifications required by the appliances
- No reduction of appliance functionality





California Blending Regulatory Proceedings

Proposed Demonstration Projects



Regulatory Background

Hydrogen Blending in Natural Gas Pipelines – CPUC Initiatives

- » **CPUC Oversight:** Evaluating standards for safely injecting clean renewable hydrogen into natural gas pipelines.
- » **Pilot Projects:** Directed proposing demonstration programs to test hydrogen injection into California's gas infrastructure.

Hydrogen Blending Application:

- On March 1, 2024, SoCalGas, SDGE, PG&E and Southwest Gas submitted amended proposals.
- Aim: Demonstrate hydrogen blending in California's gas infrastructure as a **safe, effective** method to:
 - Reduce greenhouse gas emissions.
 - Support California's climate goals by scaling hydrogen production and demand.

Proposed Blending Levels:

- **Orange Cove system:** 0.1%–5% hydrogen.
- **Isolated systems:** 5%–20% hydrogen.

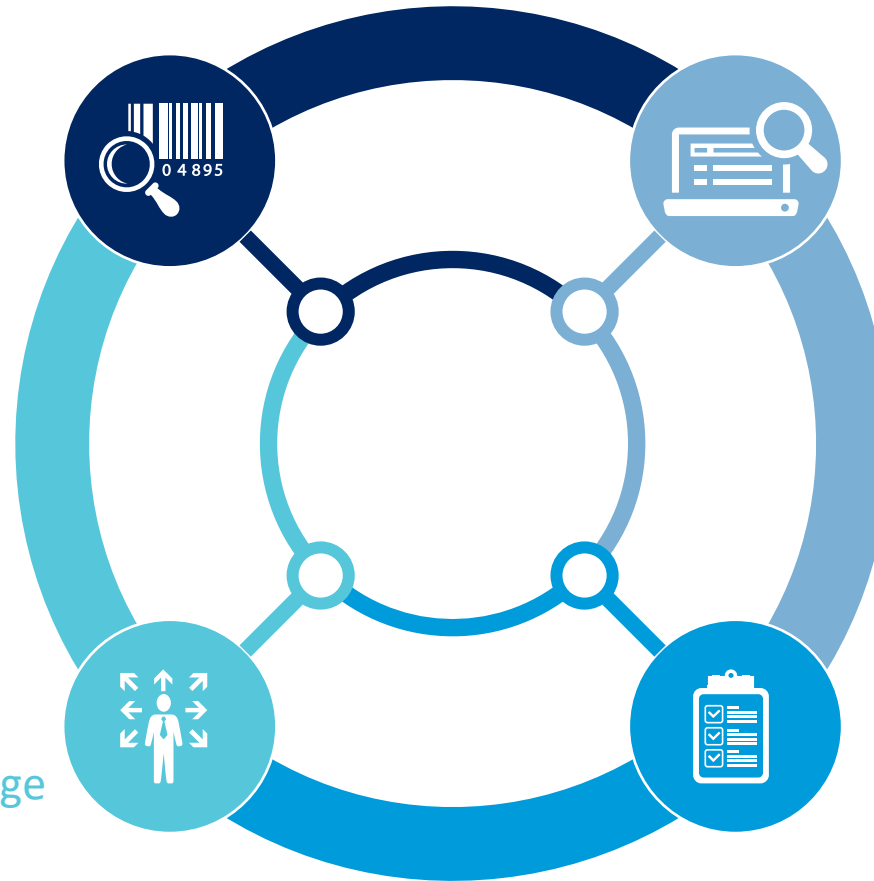
Demonstration Projects

Objectives

Validate research findings in real-world conditions

To determine an optimal hydrogen blending percentage

- Collect data to support establishment of a statewide Hydrogen Blending Injection Standard

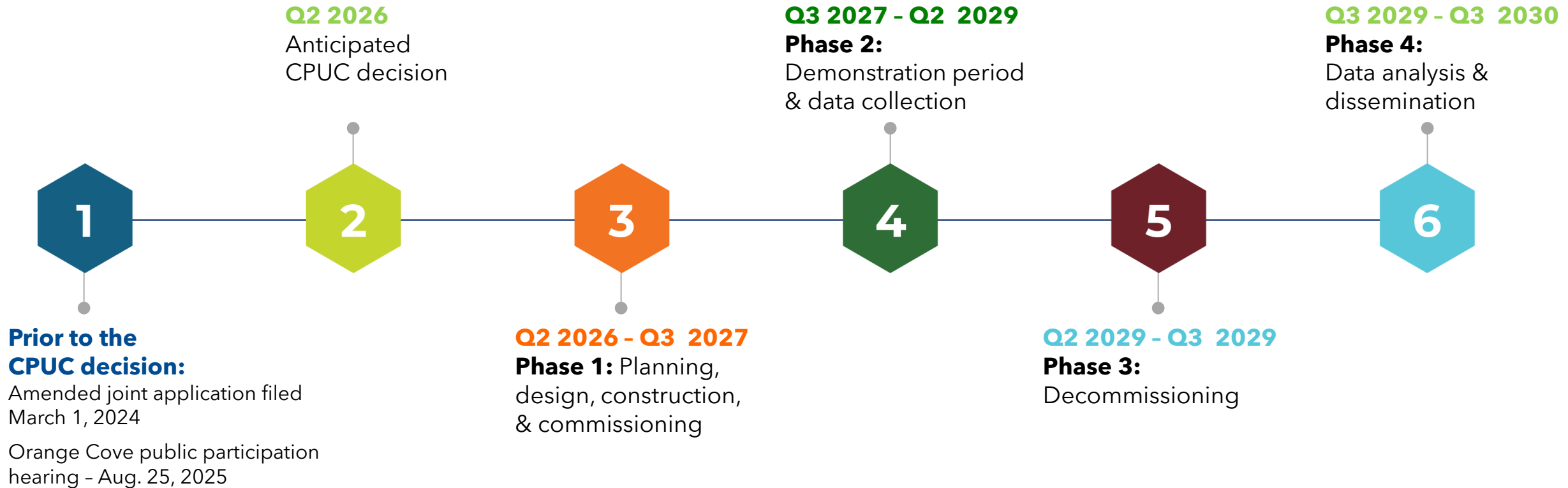


To identify operation and emergency response enhancements

- Emergency Response Procedures
- Training Procedures
- Operational Procedures
- Maintenance Procedures

Initiate hands-on workforce and customer experience with blends

Application / Project Timeline



The proposed timeline is subject to change depending on directives issued by the CPUC

HYDROGEN-NATURAL GAS LIVING LAB PROJECT

- > Explore hydrogen blending impacts on Pipeline Integrity, Measurement Accuracy, Regulatory Compliance, Safety and maintenance procedures to help further reduce emissions utilizing higher hydrogen blends
- > Demonstration lab was developed and designed in collaboration with NYSEARCH to assess high pressure and medium pressure systems carrying blends of natural gas and hydrogen, from 25-35% hydrogen (by volume)
- > The project will yield valuable data on new and existing steel and plastic pipeline components
- > Anticipated two-year project duration: Q2 2025 – Q2 2027

DATA

Collection of data from real-time evaluation for:

- Corrosion
- Pipe Degradation
- Seal Wear
- Compression Rod Packing

SYSTEM

A closed-loop pipeline system for high and medium pressure that includes a:

- Compressor
- Pressure Regulating Station
- Steel Pipeline Test Rack
- Plastic Pipeline Test Rack

OPERATION

- Located at SoCalGas Pico Rivera Facility
- Operate on a regular 8-hour workday
- Manually controlled