

# REINVENTING INFRASTRUCTURE

9:45-10:45AM

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ENGINEERING

CONFERENCE 2022

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# REINVENTING INFRASTRUCTURE

Moderator



**ELHAMI NASR**

Professor, CSULB Department of Civil  
Engineering and Construction  
Engineering Management

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# REINVENTING INFRASTRUCTURE

Speakers



**GINA OROZCO**

VP Gas Engineering and  
System Integrity,  
Southern California Gas Co.



**MARY TEICHERT**

President,  
Teichert Inc.

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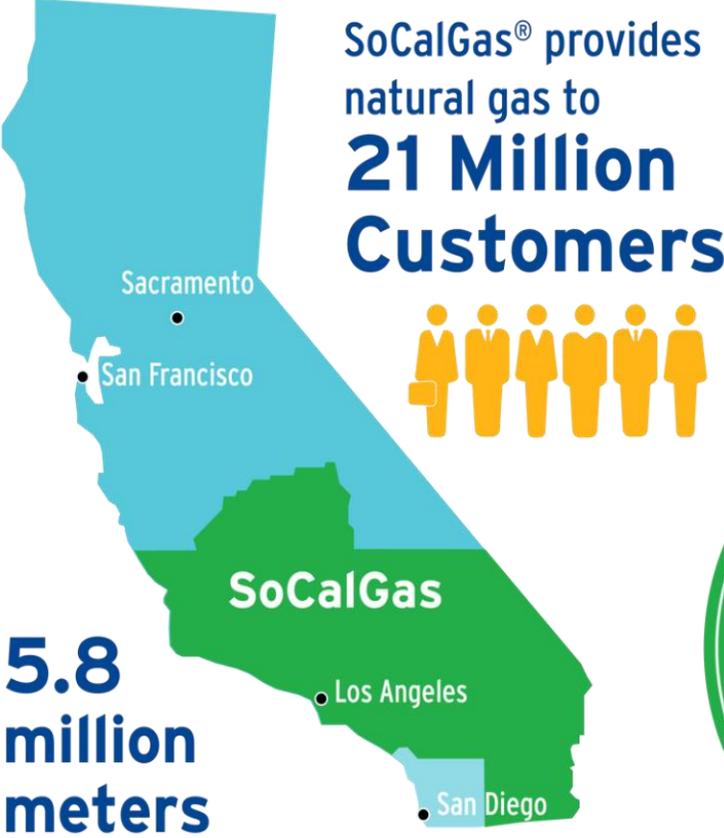
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# 2022 BEACH WOMEN ENGINEERING CONFERENCE

## Reinventing Infrastructure

Gina Orozco  
VP – Gas Engineering & System Integrity  
Southern California Gas Company  
San Diego Gas & Electric

# SoCalGas



**1 Trillion**  
cubic feet (Tcf)  
of natural gas  
delivered  
annually

**5%**  
of US gas  
deliveries

**135 Billion**  
cubic feet (Bcf)  
of natural gas  
storage  
capacity

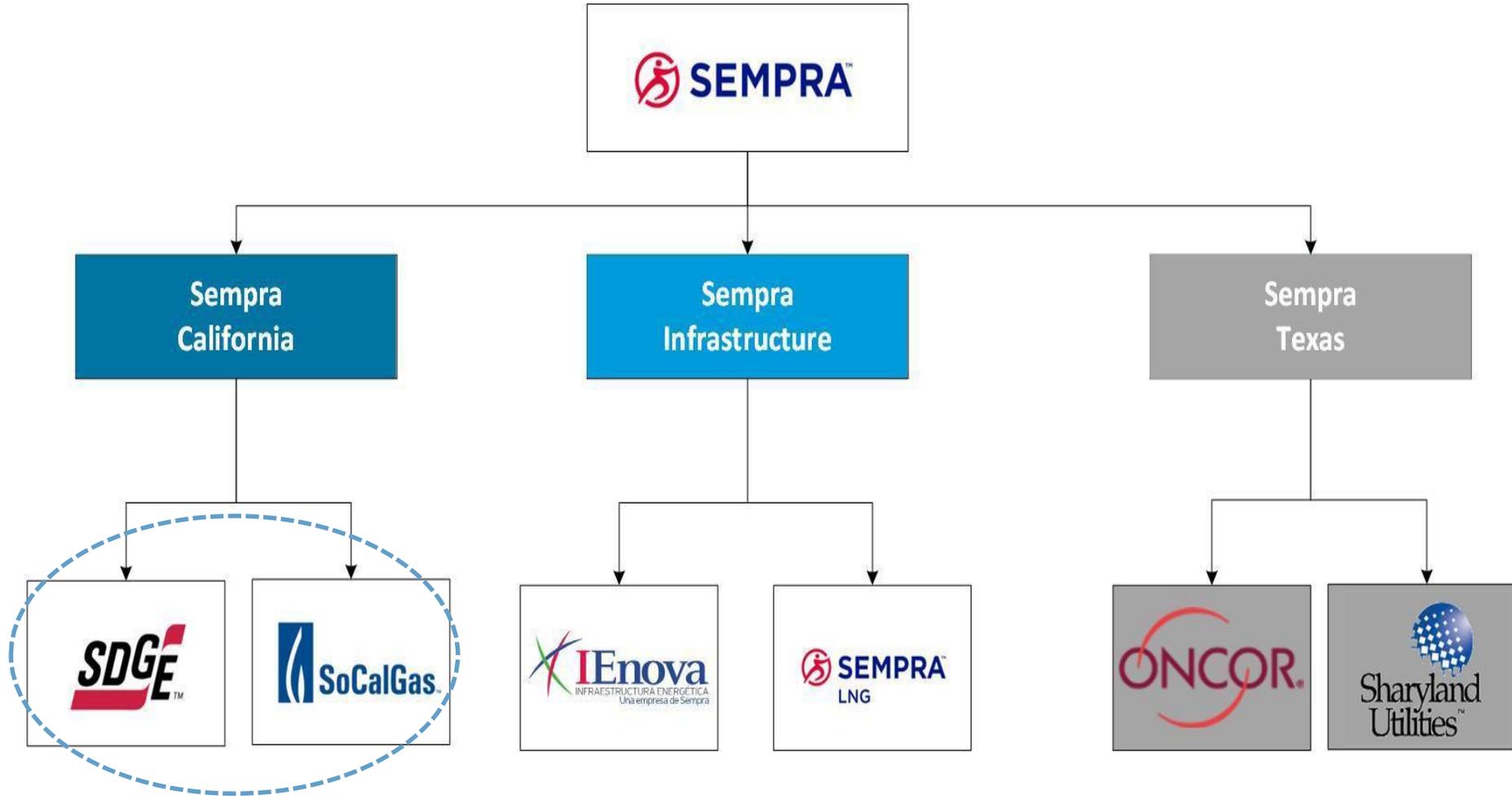
**3%**  
of US storage  
capacity

Serving  
customers  
for over  
**140**  
Years

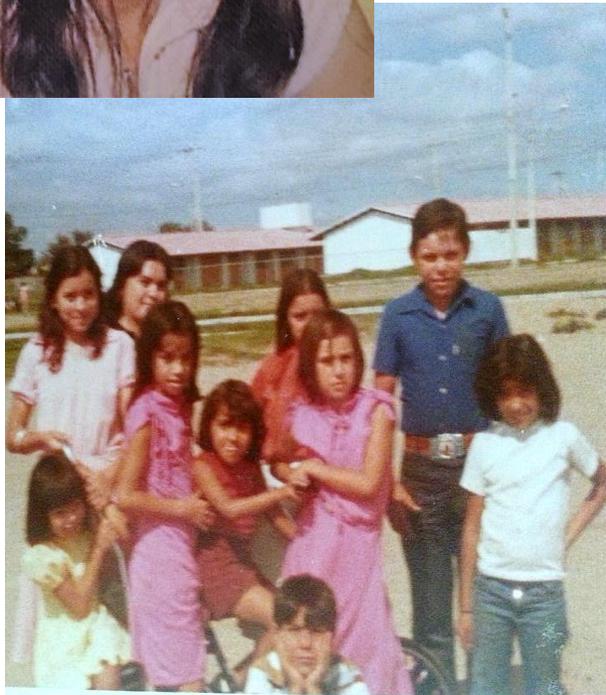
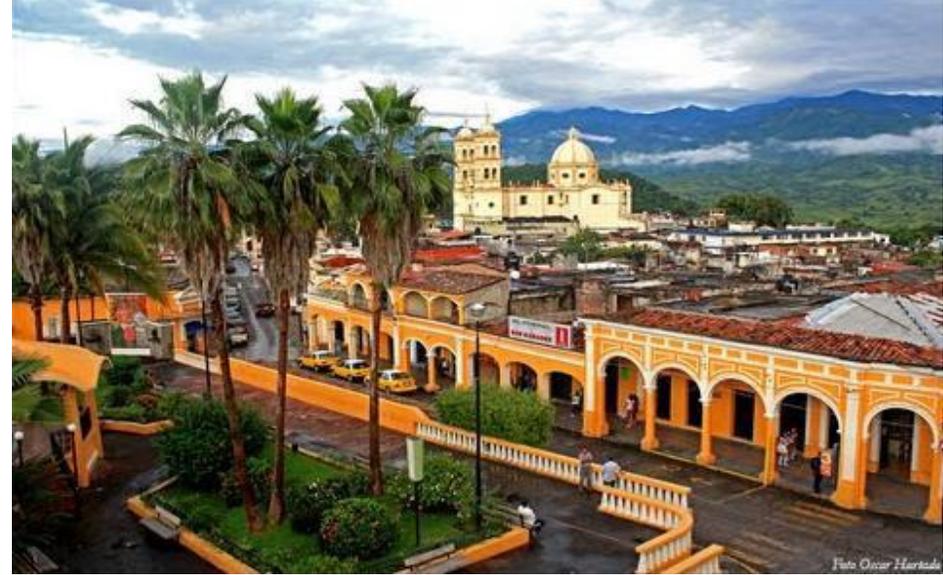
Nearly  
**100,000**  
Miles  
of distributions  
mains and  
service lines

Over  
**3,500**  
Miles  
of natural gas  
transmission  
lines

# Sempra Corporate Structure



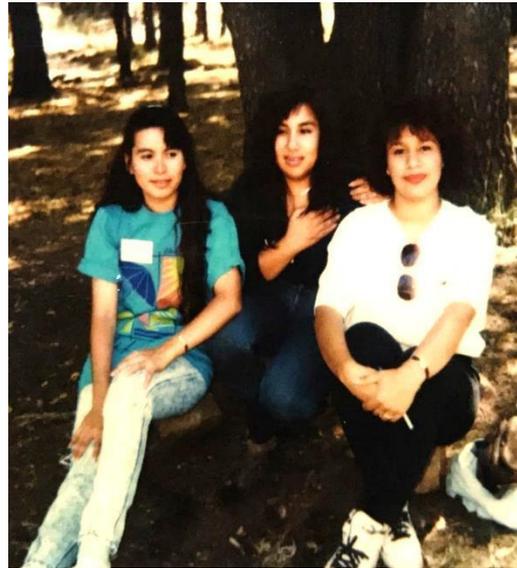
# Growing Up



# Becoming an Engineer



**CAL STATE**  
CALIFORNIA STATE UNIVERSITY, LOS ANGELES



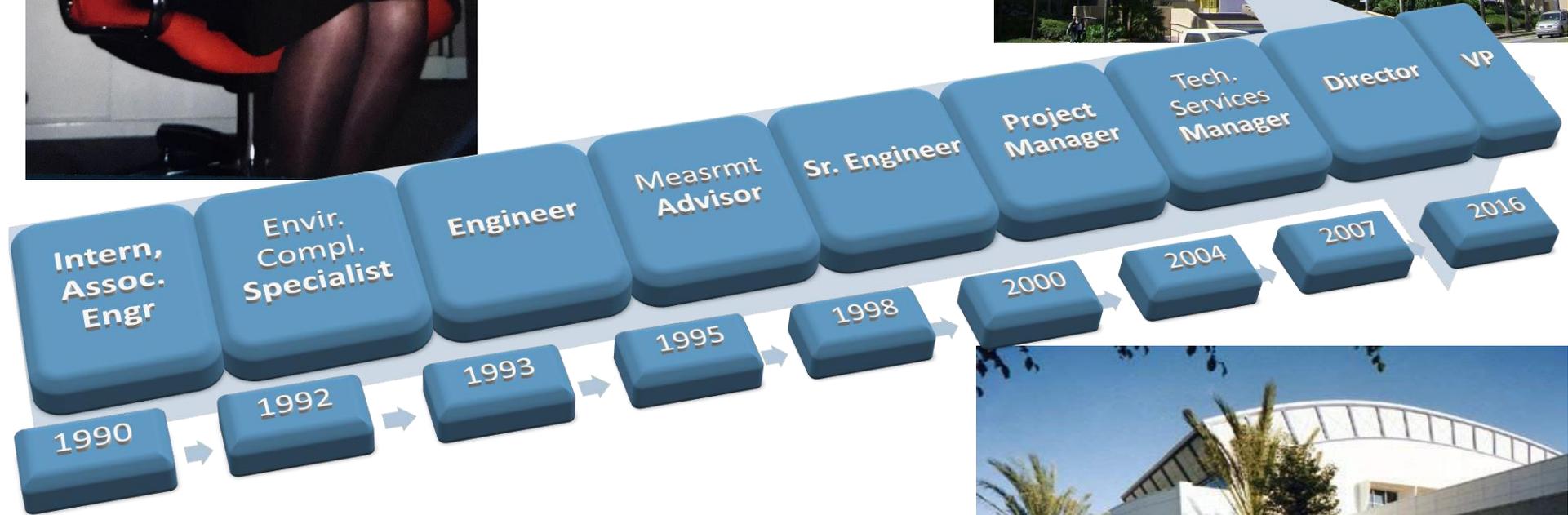
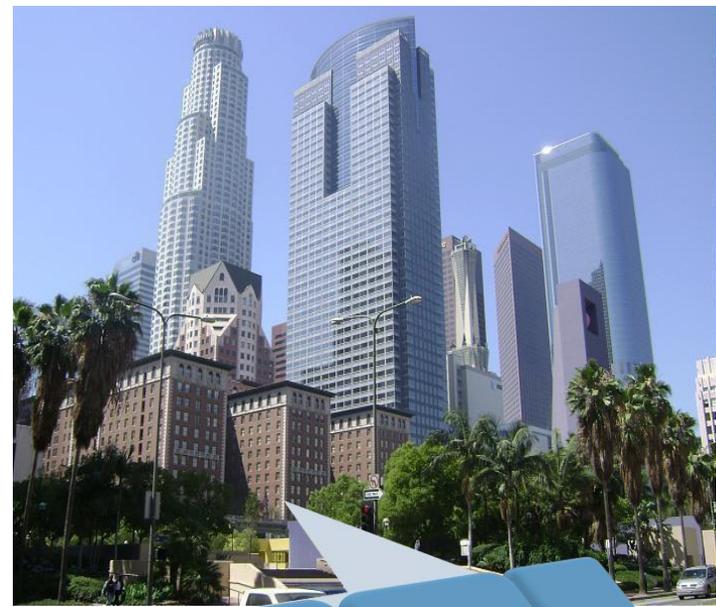
**Claremont**  
GRADUATE UNIVERSITY





# My Career

- ❖ Engineering
- ❖ Region Operations
- ❖ International
  - Mexico
  - South America
- ❖ Human Resources

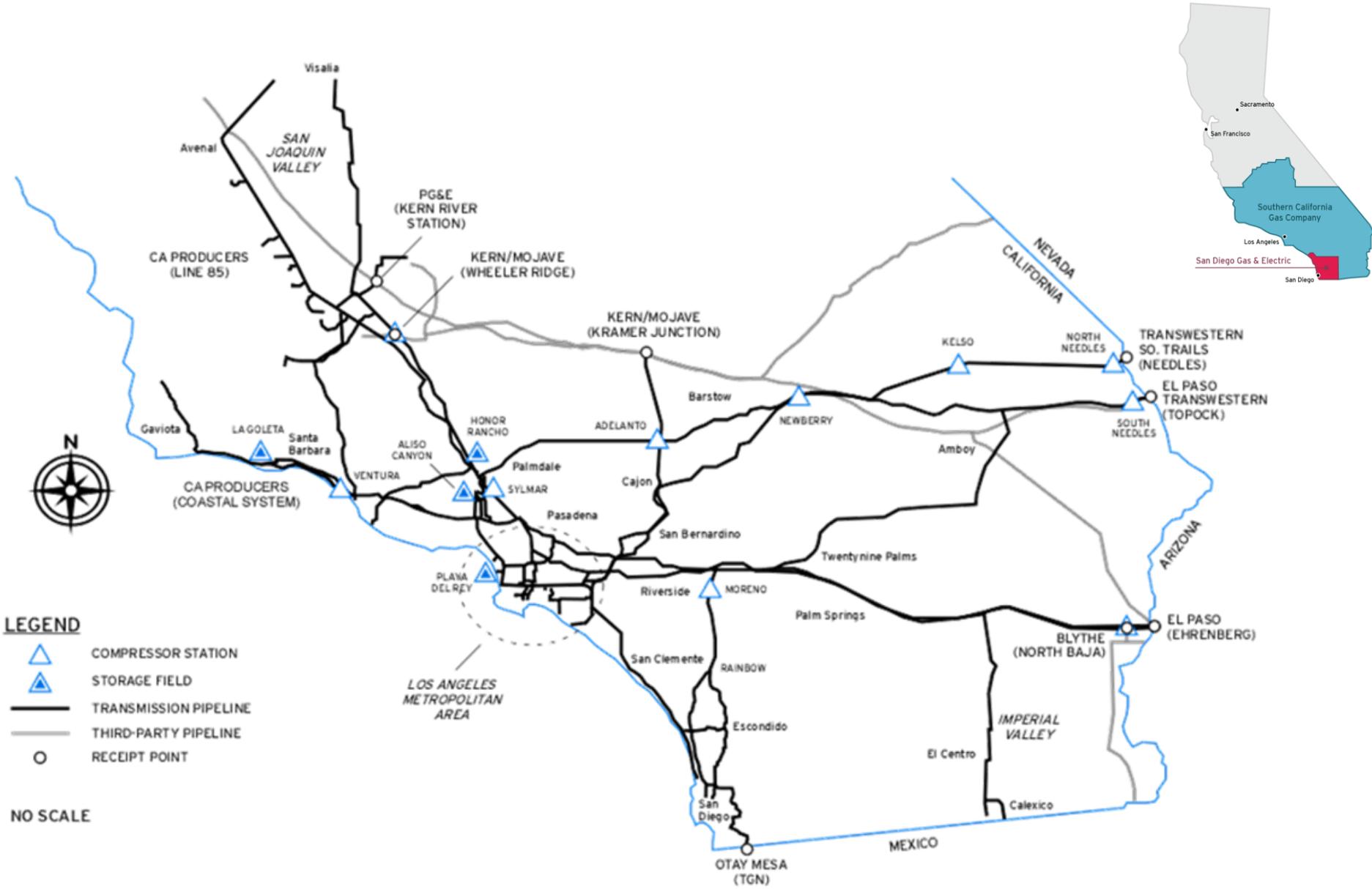




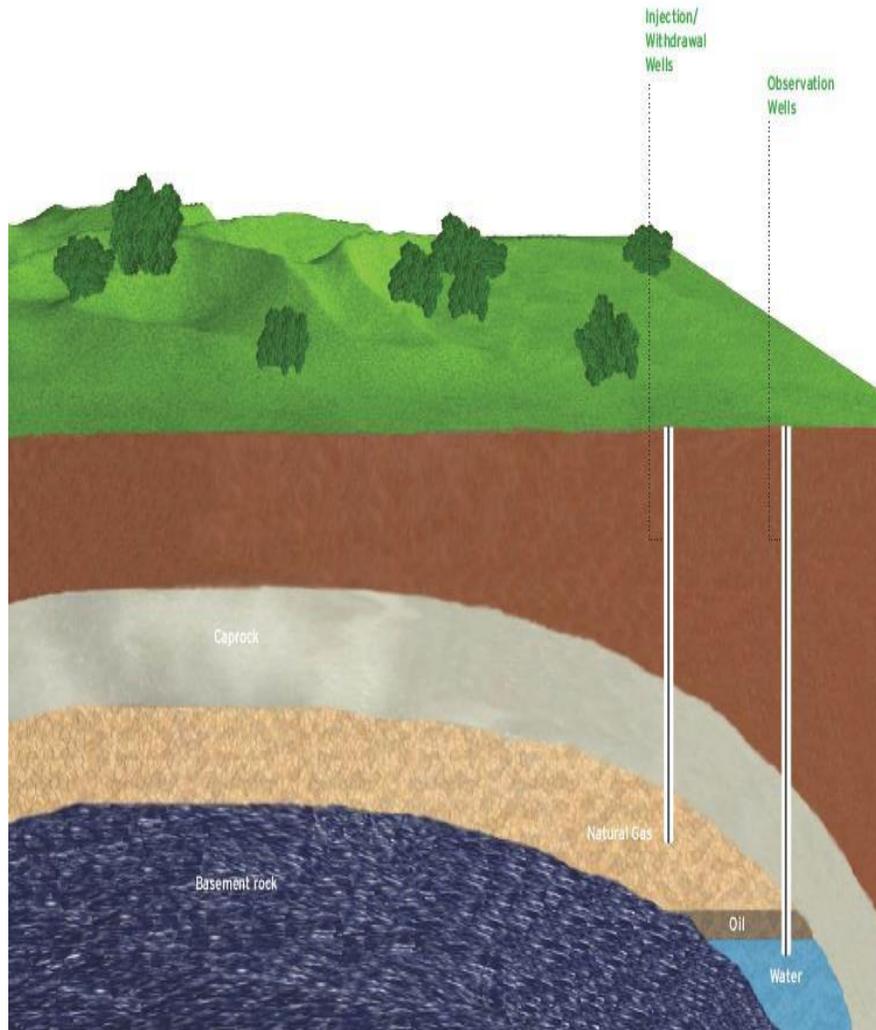
At  
Work



# SoCalGas and SDG&E Gas Systems



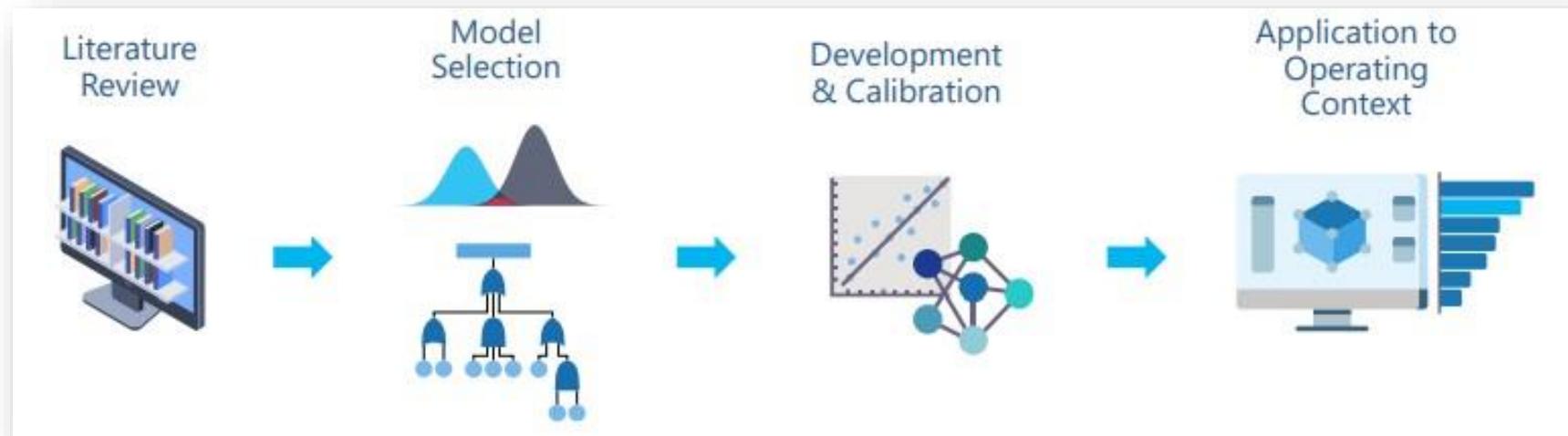
# Transmission and Storage Facilities



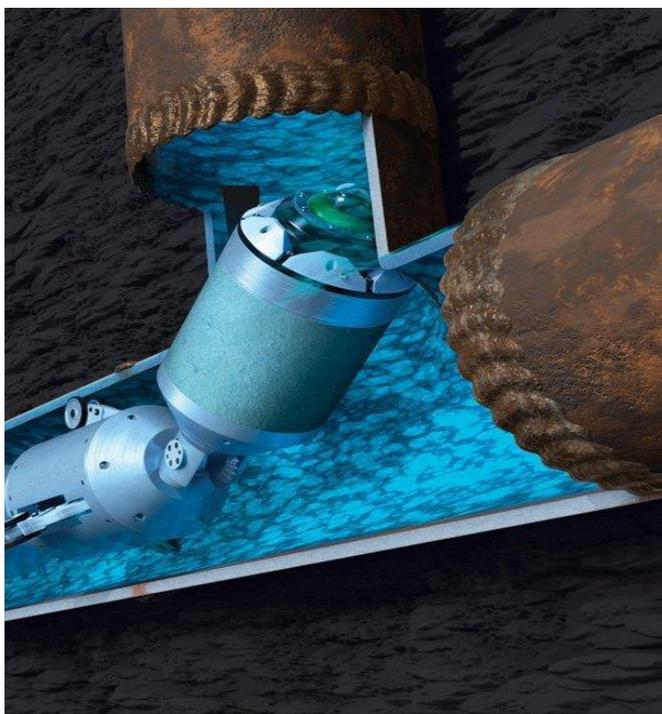
# Geo-Hazard Program Monitoring



## Quantitative Risk Assessment



# Transmission Lines Internal Assessments



Robotic Pigs Increase Assessment Capabilities

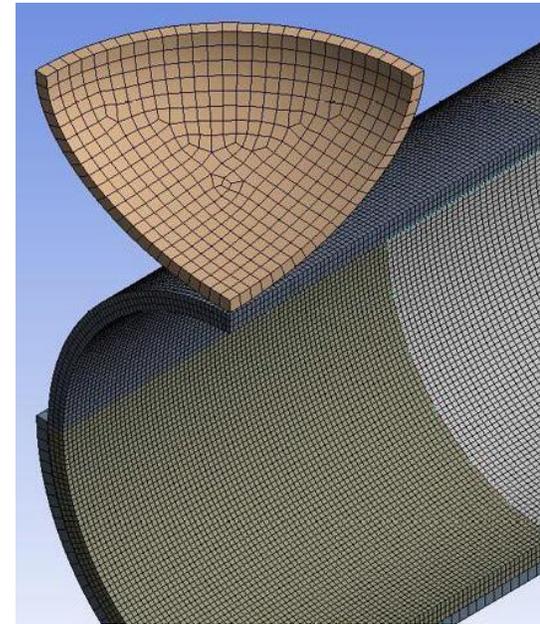
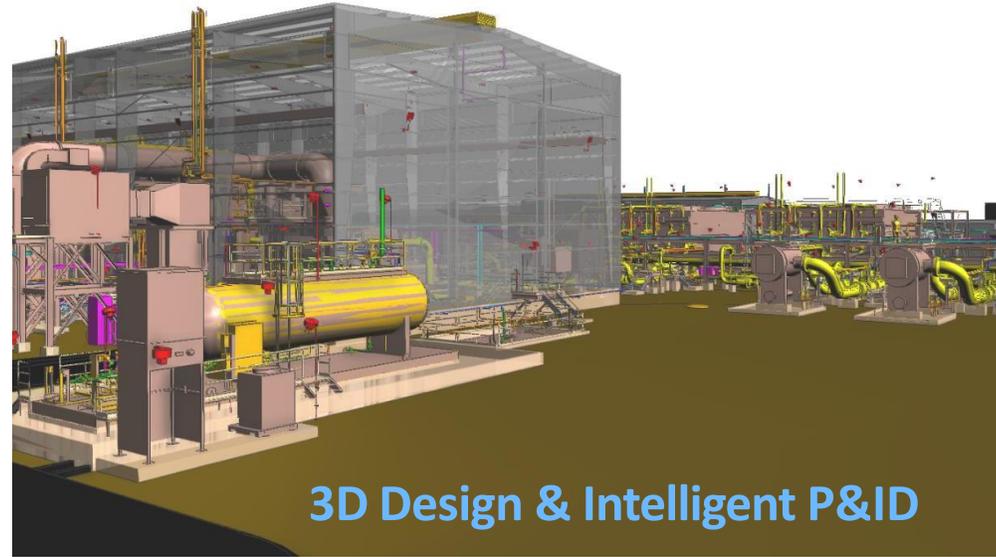


# Leak Detection Technologies

- Aerial Leak Surveys and Patrols
- Unmanned Aerial Technology
- Methane sensor networks
- Advanced methane detection
- UAV integrated laser methane system for difficult-to-access locations



# Technology at Work



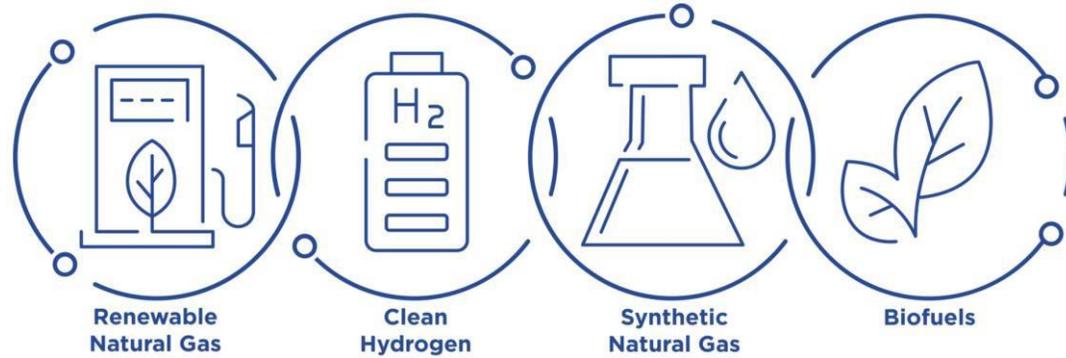
Remote Capabilities

**“The best way to predict the future is to create it.”**

- Peter Drucker

# Clean Fuels

Fuels that have a net-zero carbon footprint, for both their combustion and production



NGV & H<sub>2</sub> - fuel stations for heavy duty vehicles



RNG captures methane from agriculture and waste



# Illustrative Vision of a Potential Clean Fuels Network in Southern California



1. Pipelines containing a blend of fossil natural gas offset by CCUS; biogas; hydrogen up to safe blending standards

# Angeles Link – H<sub>2</sub> Delivery



- Start with 100% renewable electricity
- Utilize renewable electricity that is on the grid, new build or being curtailed to provide power to electrolyzer.
- Use it to make green hydrogen with electrolyzers
- Electrolysis splits water into hydrogen and oxygen -- with virtually zero greenhouse gas and criteria pollutant emissions.
- Deliver it into LA Basin by pipeline
- We will use our expertise in pipeline infrastructure to safely

# Family and Community





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ENGINEERING CONFERENCE**  
Reinventing Infrastructure

Mary Teichert  
President, Teichert Inc.





**Teichert Inc.**

- WE BUILD INFRASTRUCTURE
- As our communities grow, Teichert and our family of operations will be there when it all happens, just as we have been since 1887.



# We have operations across California and Western Nevada

## Bay Area

- **Construction**
- **Energy & Utilities**

## Central Valley

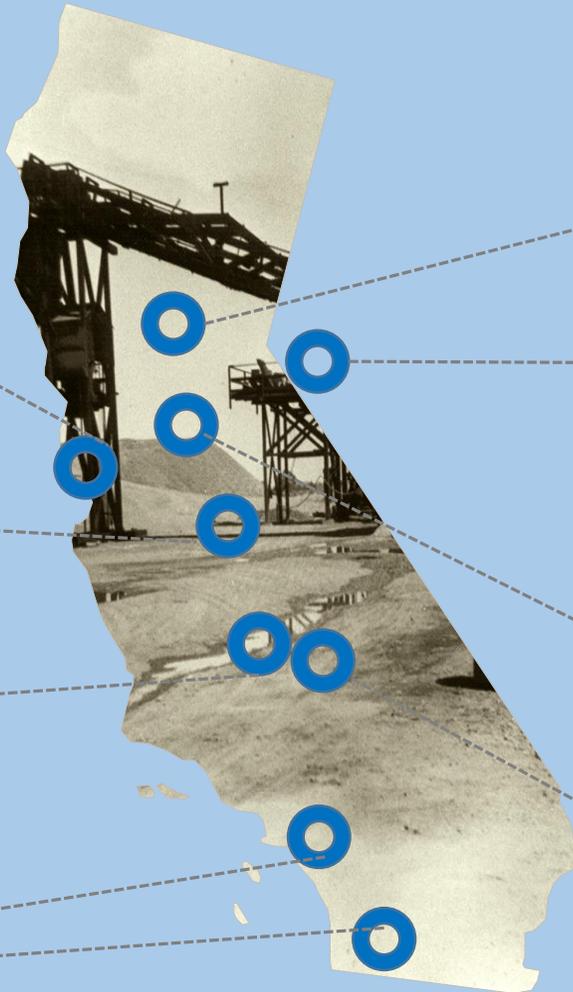
- **Rock Products**
- **Construction**
- **Energy & Utilities**

## Fresno

- **Construction**

## Southern California

- **Energy & Utilities**



## Chico

- **Concrete Products**

## Reno

- **Rock Products**
- **Concrete Products**

## Capital Region

- **Rock Products**
- **Construction**
- **Energy & Utilities**

## Kaweah

- **Rock Products**



“How” we do business was as important as “what” we do

# Building Trust Tradition





Mary Teichert,  
President



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