



SoCalGas Hydrogen

CH₄ Connections

Jin Zhang, Ph.D., P.E.

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Who are we?



**Proud History of Delivering Energy to
Southern California**

OVER 150 YEARS

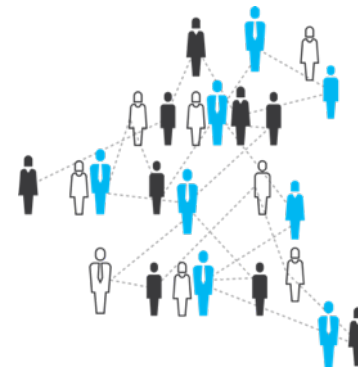
of institutional knowledge and expertise



Service territory covers about

24,000
SQUARE MILES

of diverse terrain throughout Central
and Southern California, from Visalia to
the Mexican border



Largest natural gas distribution utility in
country¹, powering Southern California with
increasingly clean, safe and reliable energy
delivered to more than

21+ MILLION
CUSTOMERS

¹ based on number of customers and revenue



SoCalGas Aspire 2045



ASPIRE 2045
Sustainability and
Climate Commitment
to Net Zero

SoCalGas
A Sempra Energy utility

The graphic features a large blue arrow pointing right. Inside the arrow, there is a beach scene with waves on the left and a family of four (two adults and two children) walking on a grassy hill with their arms raised on the right. Overlaid on the arrow are various icons: a globe with 'CLEAN 2045' and '[H2]' text, a lightbulb, a molecular structure, and the words 'SAFE' and 'INNOVATIVE'.

SoCalGas' bold sustainability strategy to aim to achieve net-zero greenhouse gas (GHG) emissions in our operations and delivery of energy by 2045

Joint IOU H2 Blending Demonstration Projects

Utility	Pilot Location	Material	Blend %	End Use	Notes
SoCalGas	UC Irvine	Mixed (Steel & Plastic), Distribution	5-20%	Campus Buildings TBD	Isolated pipeline system, Coastal climate
SoCalGas	TBD	TBD, Distribution	0.1-5%	TBD	Blend into an “open portion” of SoCalGas distribution system
SDG&E	UC San Diego	Polyethylene plastic (PE), Distribution	5-20%	UCSD Fuel Cell System	Isolated pipeline system, Coastal Climate
Southwest Gas	Truckee, CA	Polyethylene plastic (PE), Distribution	5-20%	Select end users in Truckee	Isolated pipeline system, High elevation and extreme cold conditions
PG&E	Lodi, CA	Steel, Transmission	5-30%	Power Plant and Fueling Station	Isolated transmission level blending, hydrogen and NG fueling, various test scenarios

Background



- **Objective of the Angeles Link Project (Project) is to develop a clean renewable hydrogen energy transport system to serve the hard-to-electrify sectors in the Los Angeles Basin.**
- **Memorandum account Application filed with California Public Utilities Commission (CPUC) in February 2022.**
- **CPUC approved memorandum account in December 2022 authorizing SoCalGas to record Phase One feasibility studies to a cap of \$26 million**

Leak Detection

What questions do we have?

- Hydrogen/hydrogen blending impacts on leak detection technologies and methodologies
- Technology adaption and development as we introduce hydrogen into our system

What have we been working on?

- Testing existing leak detection technologies' compatibility with hydrogen
- Identifying current policies and procedures that need to be modified
- Collaborating with research organizations, national labs, DOE to help develop solutions

What are we looking for?

- Maintain safety, integrity and reliability of our system
- Address hydrogen leak impacts on environment

Thank You!



Glad to be of service.®

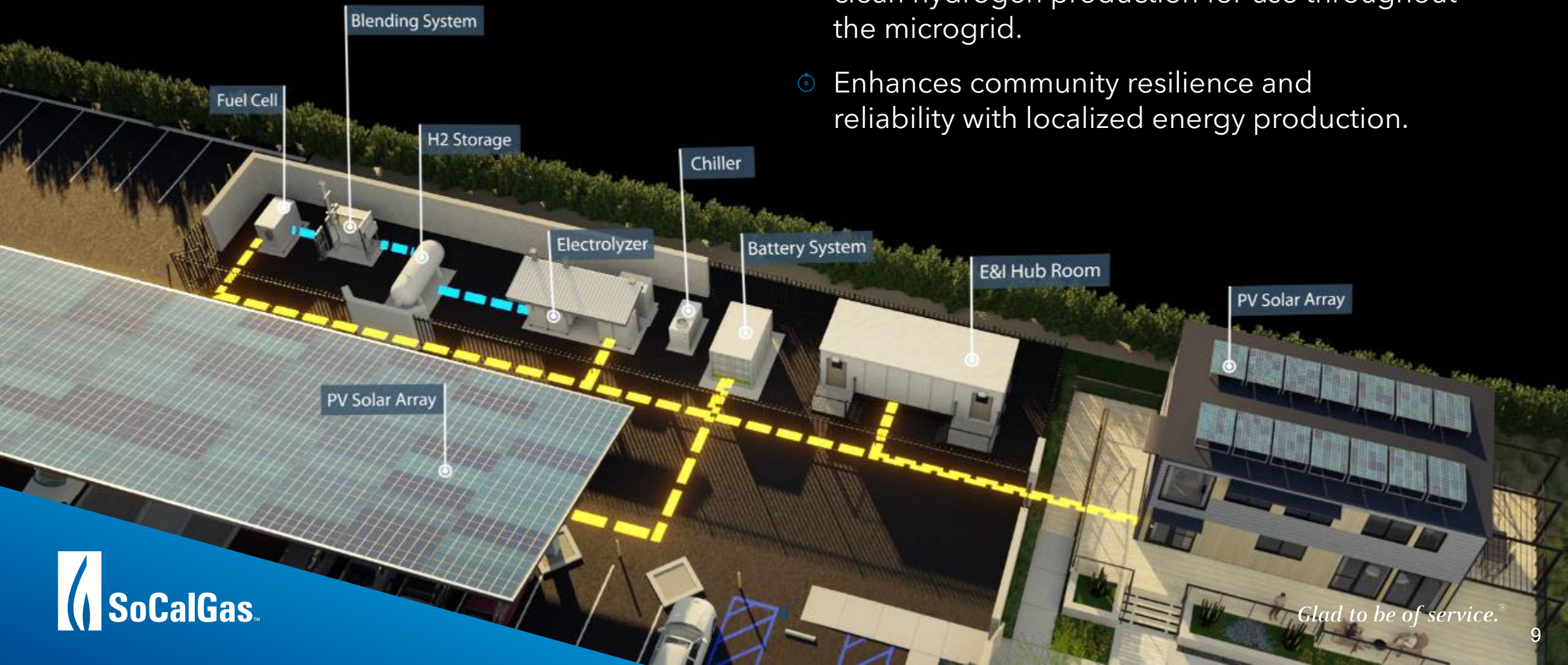
[H2] Innovation Experience Project

- » **WHAT?** State-of-the-art hydrogen demo project that will showcase the role hydrogen will play in attaining California's goal of achieving carbon neutrality
- » **WHY?** Investigate the role of hydrogen and hydrogen blends in the diverse energy mix and demonstrate a safe and efficient integration into our existing natural gas distribution system
- » **HOW?** Developing an on-site energy facility that includes a microgrid solution enabled by hydrogen and blended gas technology



How [H2] Innovation Experience Works

- Leverages renewable solar for electricity and clean hydrogen production for use throughout the microgrid.
- Enhances community resilience and reliability with localized energy production.



What Do We Need to Consider with Hydrogen or Hydrogen Blending?

Change of gas mixture properties

Material compatibility

Technology adaption and development

Codes and standards

Operation and maintenance procedures

Policies and regulations

Public perception of hydrogen