

# Hydrogen Demonstration Project: [H2]Innovation Experience

## Project Objective

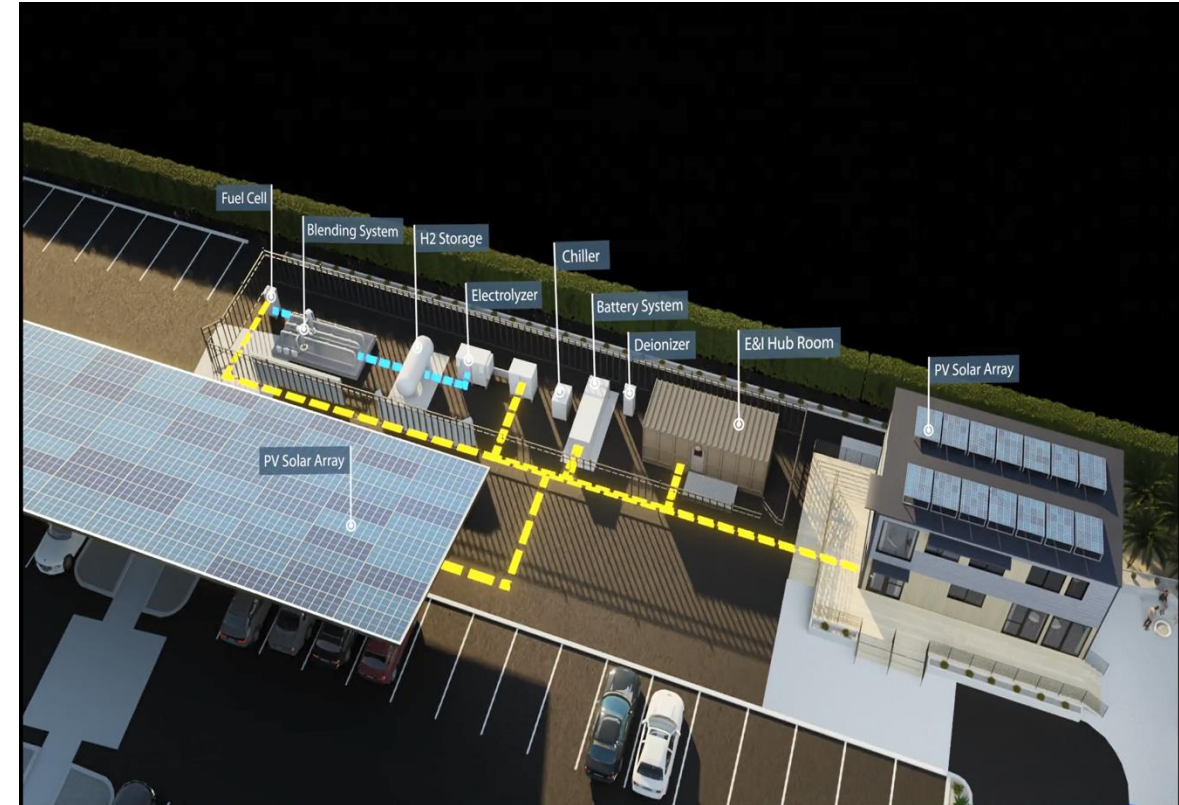
- Showcase hydrogen's seamless integration to renewables and its use for decarbonization of buildings and homes
- Demonstrate the hydrogen value chain from production of hydrogen with renewable electricity and electrolysis to its use in a fuel cell for power production and as a blend in the natural gas network as fuel for end-use appliances

## Project Description

1. Solar panels generate electricity
2. Portion of solar power is stored in batteries
3. Another portion powers an electrolyzer
4. Hydrogen is stored on-site
5. Hydrogen is blended at 20 % volume into a modular home
6. Hydrogen fuel cell to power the home ( back up generator)

## Project Status

- Microgrid Mechanical complete/Commissioning completed
- Landscaping construction completed
- Forecast complete Nov 2022



Recognized as one of the top innovated projects in the US for 2021 by Fast Company magazine

# Hydrogen Demonstration Project: H2-Hydrogen Home 3D Video



# [H2] Innovation Experience Construction Activities

- H2 Home Installation- Exterior Complete



# [H2] Innovation Experience Construction Activities

- H2 Home Microgrid



# [H2] Innovation Experience Construction Activities

- H2 Home Carport Solar Photovoltaic (PV) System



# [H2] Innovation Experience Construction Activities

- H2 Home Electrical and Instrumentation (E&I) Hub Room



# [H2] Innovation Experience Construction Activities

- H2 Home MCC panels



# [H2] Innovation Experience Construction Activities

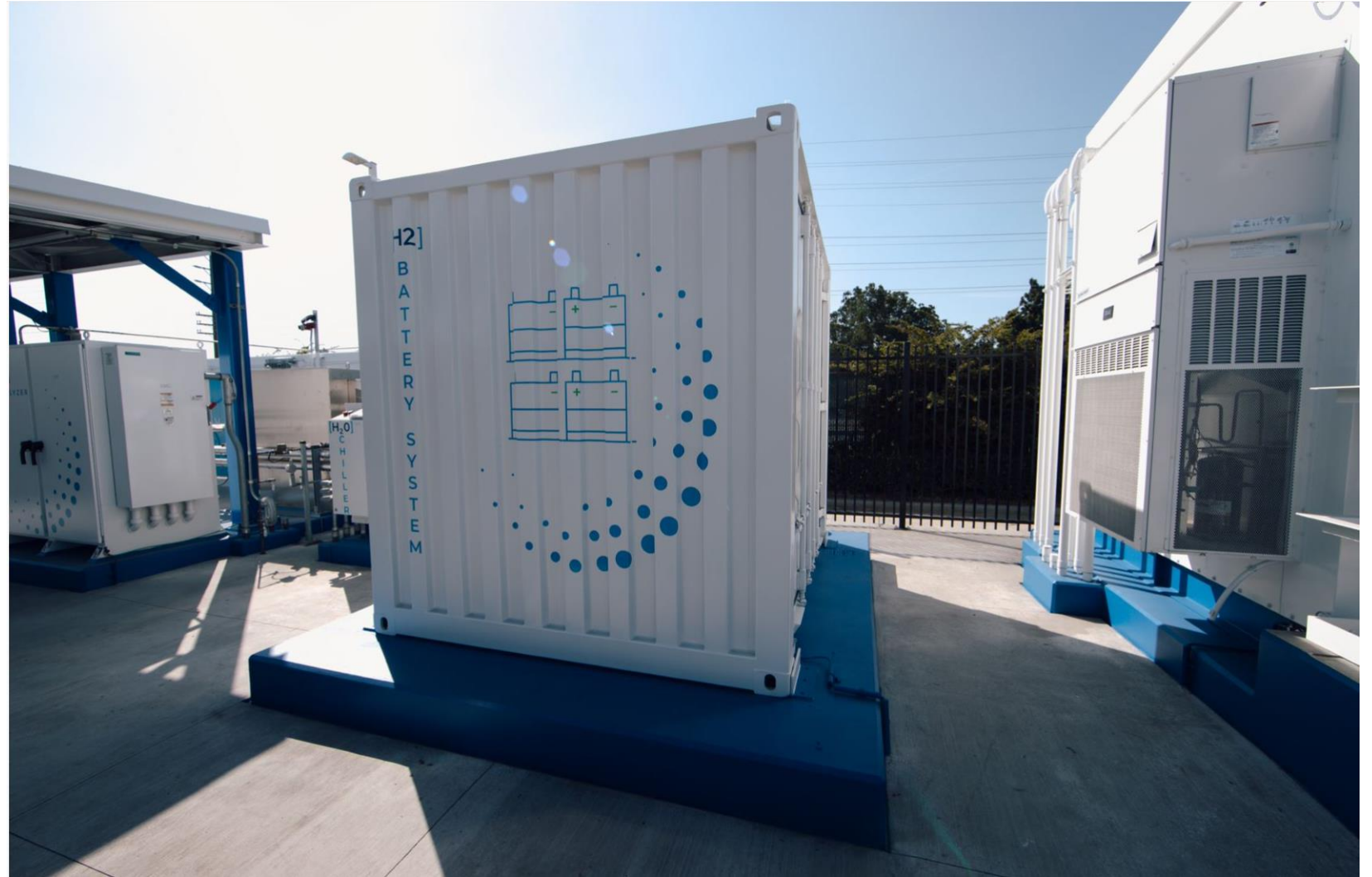
- H2 Home Microgrid Controller (MGC)





# [H2] Innovation Experience Construction Activities

- H2 Home Battery & Energy Storage System (BESS)



# [H2] Innovation Experience Construction Activities

- H2 Home- Electrolyzer



# [H2] Innovation Experience Construction Activities

- H2 Home Chiller



# [H2] Innovation Experience Construction Activities

- H2 Home Deionizer tank



# [H2] Innovation Experience Construction Activities

- H2 Home Hydrogen Storage Vessel



# [H2] Innovation Experience Construction Activities

- H2 Home Natural Gas Blending Skid



# [H2] Innovation Experience Construction Activities

- H2 Home Fuel Cell



# Hydrogen Demonstration Project: H2-Hydrogen Home Renderings





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# Hydrogen Demonstration Project: H2-Hydrogen Home

## Opening Ceremony Video

<https://vimeo.com/858066562/8a007be695?share=copy> [vimeo.com]

Questions?