Utilities Panel

Steve Christensen

- Xcel Energy
- Leads a small team focused on commercializing technology that enables carbon-free electricity

Kristen Cooper

- Duke Energy
- Lead engineer and hydrogen subject matter expert
- Supports Duke Energy's power generation net-zero transition strategy

Greg Huynh

- LADWP
- Intermountain Power Project's Operating Agent Manager
- Supporting transition of coal-fired projects into a hydrogen facility

Steve Christensen, Ph.D.

Xcel Energy, Corporate Development, Carbon Free Energy Technology Commercialization

Current Role

Identify, assess, and commercialize technologies that are strategic to our goal to be a net zero energy provider by 2050.

Xcel Energy operates one of the largest wind fleets in the U.S. and our renewable generation portfolio is growing.

Clean hydrogen from electrolysis offers a solution to help us decarbonize and improve the reliability of our system.

Experience

Current role – 15 months

Prior role – 13 years: Scientist at NREL focused on solar, hydrogen, and biomass upgrading.

Led projects in advancing and commercializing hydrogen storage technology.

Ph.D. & B.S. in Materials Science & Engineering

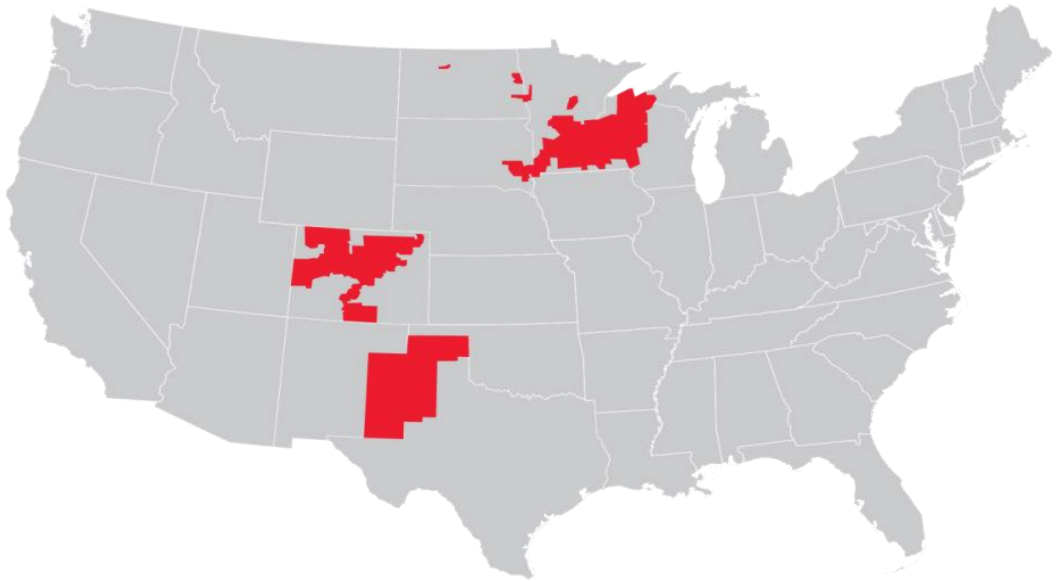
Xcel Energy Overview

Fully Regulated and Vertically Integrated Utility

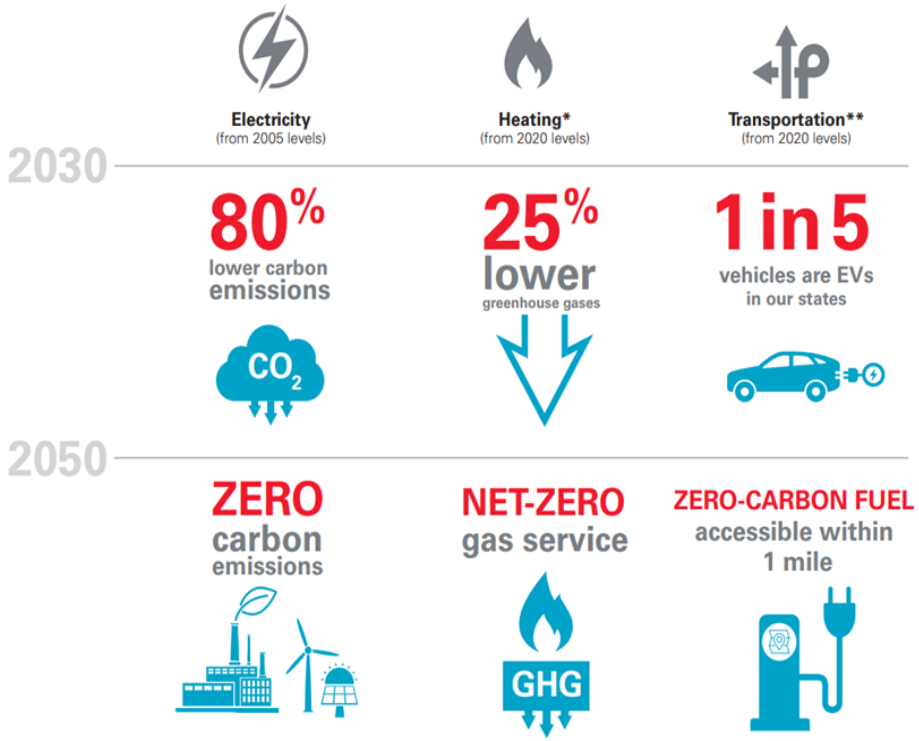
3.8 Million
Electric Customers

2.1 Million
Natural Gas Customers

Eight States
MN, CO, WI, SD, ND, MI, TX, NM



Comprehensive Sustainability Goals



We are exploring clean hydrogen to help reach these goals via power generation, natural gas system blending, and transportation.

Xcel Energy is participating in two DOE Hydrogen hubs: WISHH & Heartland Hub

Kristen Cooper PE, PMP

Lead Engineer

>Generation Technology

> Generation & Transmission Strategy

Hydrogen Production and Storage SME

H2 Orange Technoeconomic Study

Green Hydrogen Production & Storage System

Power Generation Design – HRSG & SC

Emissions Controls Equipment

Chemistry – Kentucky Wesleyan College

Chemical Engineering – University of Kentucky

IPP Renewed

Energy Transition for a Clean Energy Hub

IPA
Intermountain Power Agency
Energy for Today & Tomorrow

LA DWP
Los Angeles Department of Water & Power

IPP Renewed

Project Background and Vision

- Decommissioning Coal Plant 2 years earlier than originally planned
- Building New Green Hydrogen and Natural Gas Fueled Generation
  - 1st municipal led project that is purpose built to operate on green hydrogen
  - 30% blend of green hydrogen by volume starting 2025
  - Planned transitions from 30% to 100% green hydrogen operation by 2045
- Hydrogen Energy Conversion and Storage Project
  - Grid-scale long duration energy storage services for the 35 municipalities that the project serves

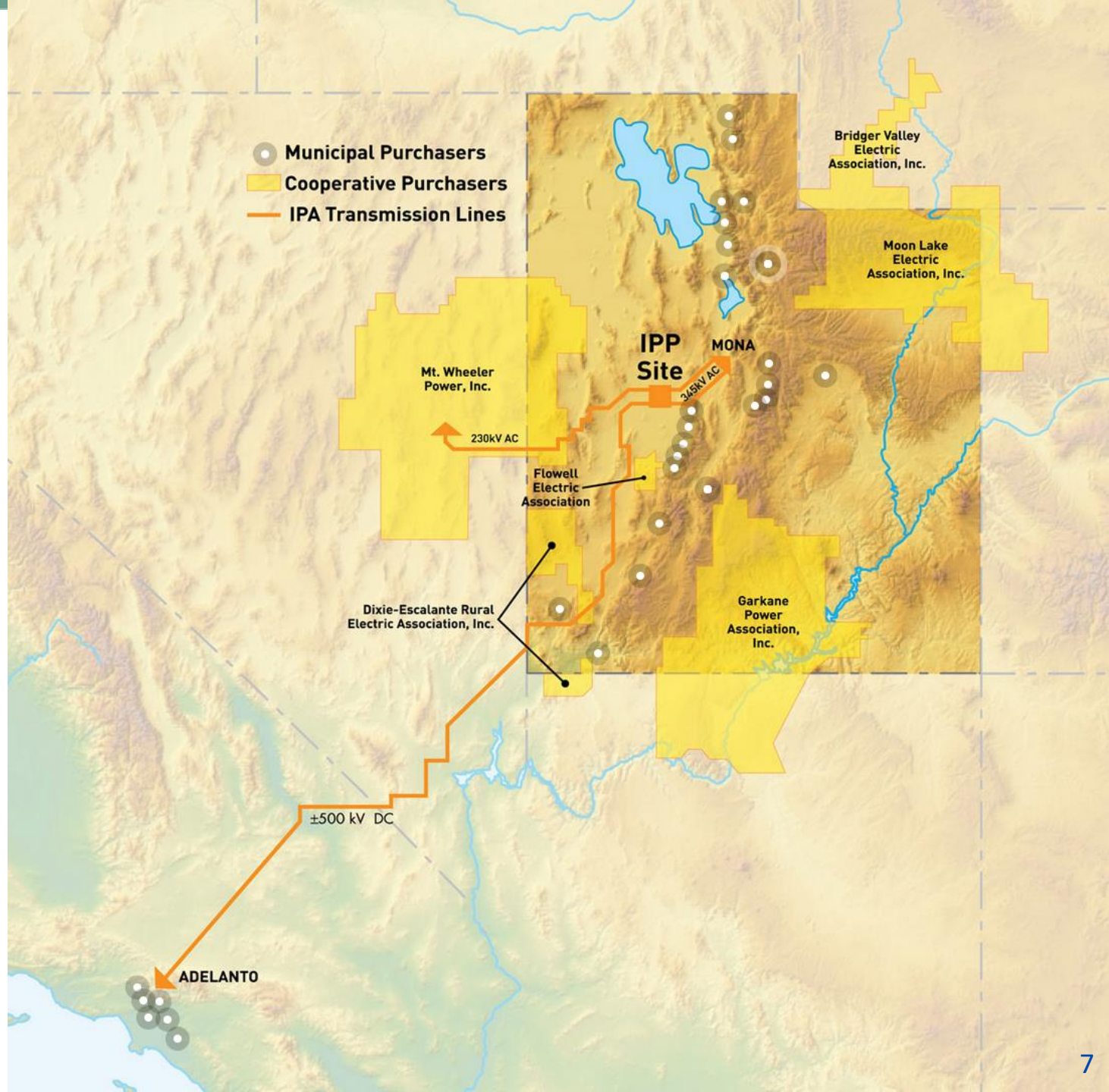
Stakeholders of IPP

23 Utah Municipals

6 Utah Coops

6 California Municipals

- Los Angeles
- Burbank
- Glendale
- Pasadena
- Riverside
- Anaheim

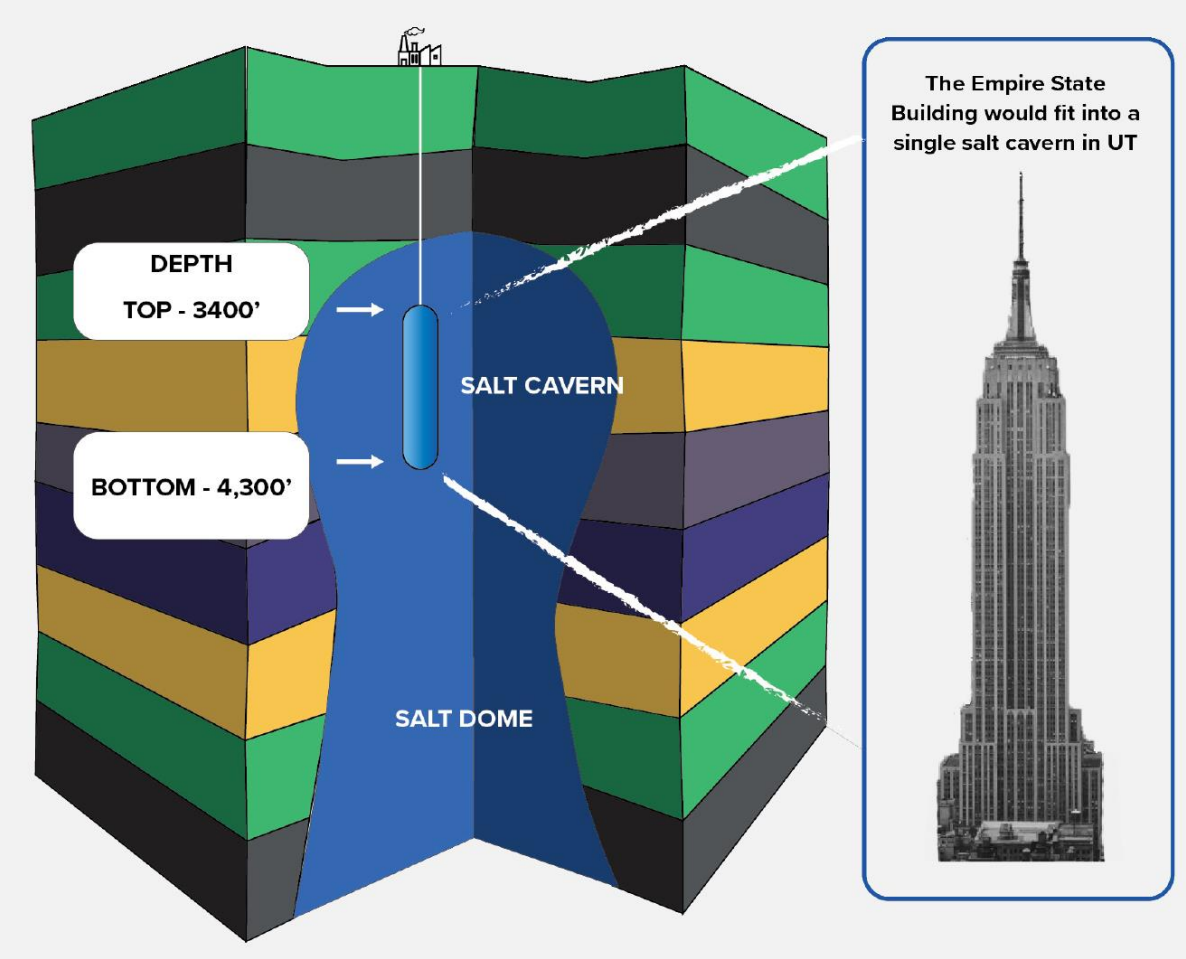


Intermountain Power Agency
Energy for Today & Tomorrow

Unlocking IPP's Energy Hub Potential

Salt Dome at Intermountain: A Unique Opportunity

- Underground salt domes beneath Intermountain
- Suitable for storing green hydrogen
- Created by solution mining
- 1 cavern = 5,500 tons H_2 storage
  - Equivalent to 1 million fuel cell cars
  - 84 times Eland Battery Energy Storage System
- Over 100 caverns possible near Intermountain
- Allows for seasonal shifting of energy storage



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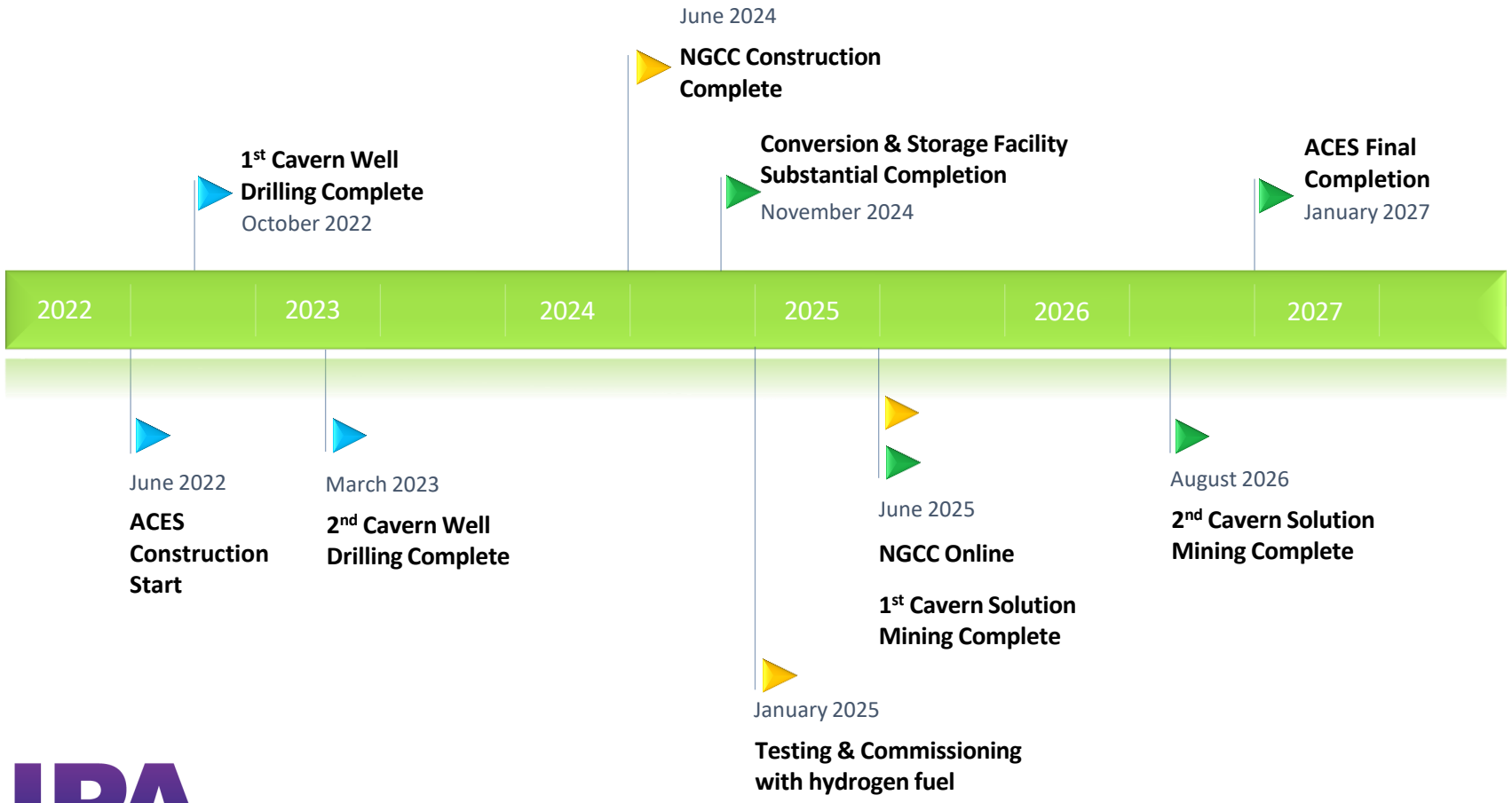
Hydrogen Timeline



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Additional Information

www.ipautah.com/ipp-renewed/