Southwest Carbon Capture and Storage (SWCCS) Hub

CUSP 2024 Annual Meeting

September 2024

SWCCS Hub Project Advisors:

Guidehouse

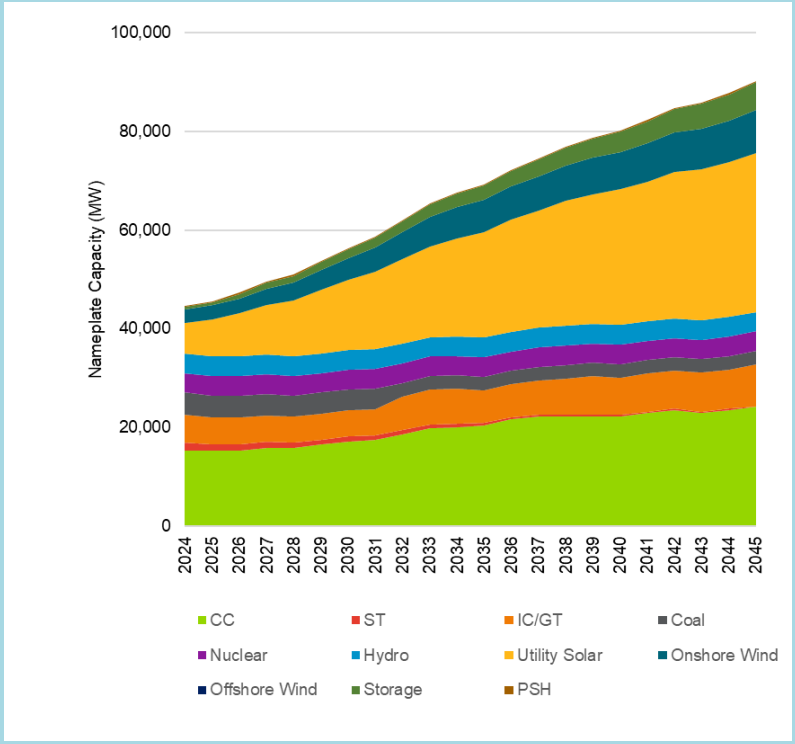
hbw RESOURCES

Holland & Knight

wsp

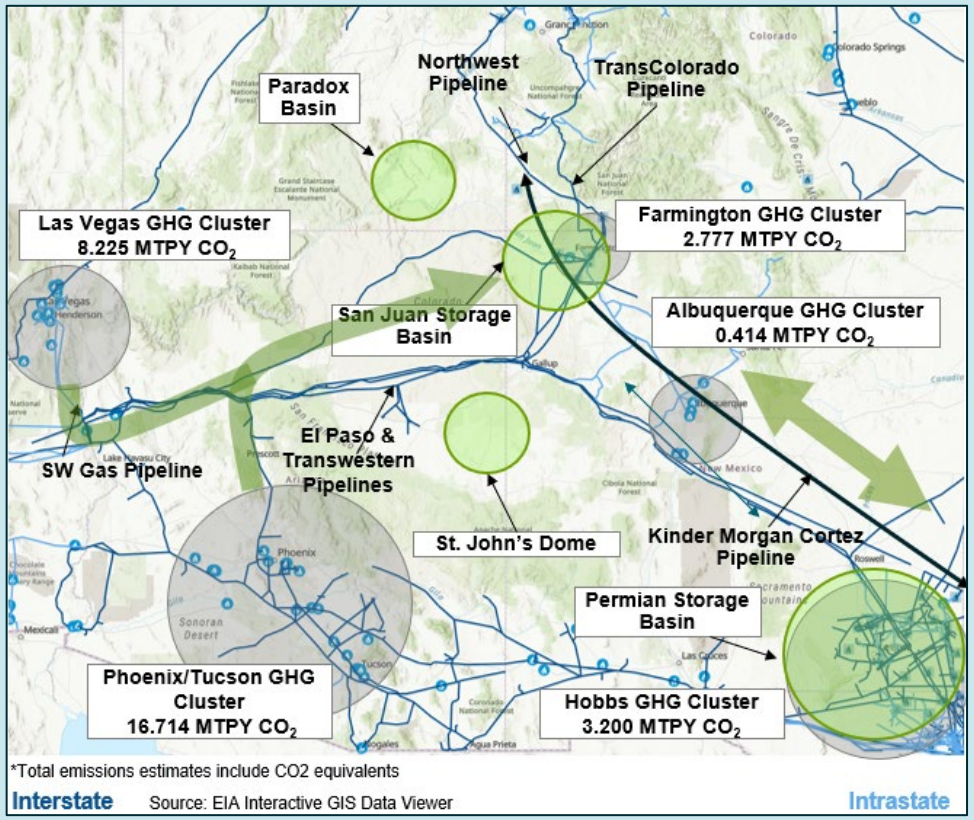
SWCCS Hub Vision

Enabling economic development and **regional decarbonization** through an at-scale carbon capture and storage deployment, as part of an "all of the above" approach, to achieve net-zero climate goals



Cumulative Generation Resource Build – Desert SW

Source: Guidehouse projections based on regional ISPs/IRPs (SRP, AZPS, NEVP, TEPC, WALC, PNM, and EPE) updated April 2023



- Ample regional CO_2 storage capacity
- Collocate along existing pipeline corridors to minimize impact and streamline permitting
- Focus on GHG emission clusters
- IRA/BIL financially support the transition to a cleaner economy
- 45Q refundable tax credit would provide $20 billion over 12 years for 20 million metric tons per year (MTPY) CO_2 CCS project

SWCCS Hub Ecosystem Stakeholders

Demonstrating the value and addressing the concerns of stakeholders across the ecosystem to essential to the Hub's success

Emitters (utilities, IPPs, large industrial): Including thermal plant operators and carbon-intensive large industrial facilities

Demand Drivers: Companies looking to locate energy-intensive business in the southwest region, and looking for reliable low-carbon power

Infrastructure Developers (transport, storage): Key parties developing carbon capture infrastructure in the region

CCS Technology Providers: Parties with technology solutions that can be utilized in the development of the SWCCS Hub

Capital Partners: Including commercial banks, institutional investors, infrastructure funds, among others

Academic Institutions: Universities and other academic institutions involved in evaluating carbon capture technologies and business cases in the region

Governmental Entities: Including regulators, policymakers, and other entities driving the development of rules and incentives for CCS in the region

Advocacy Organization: Aiming to align policy and regulatory strategies to promote market development for carbon capture projects in the region

Tribal Nations Eligible for Federal Funding

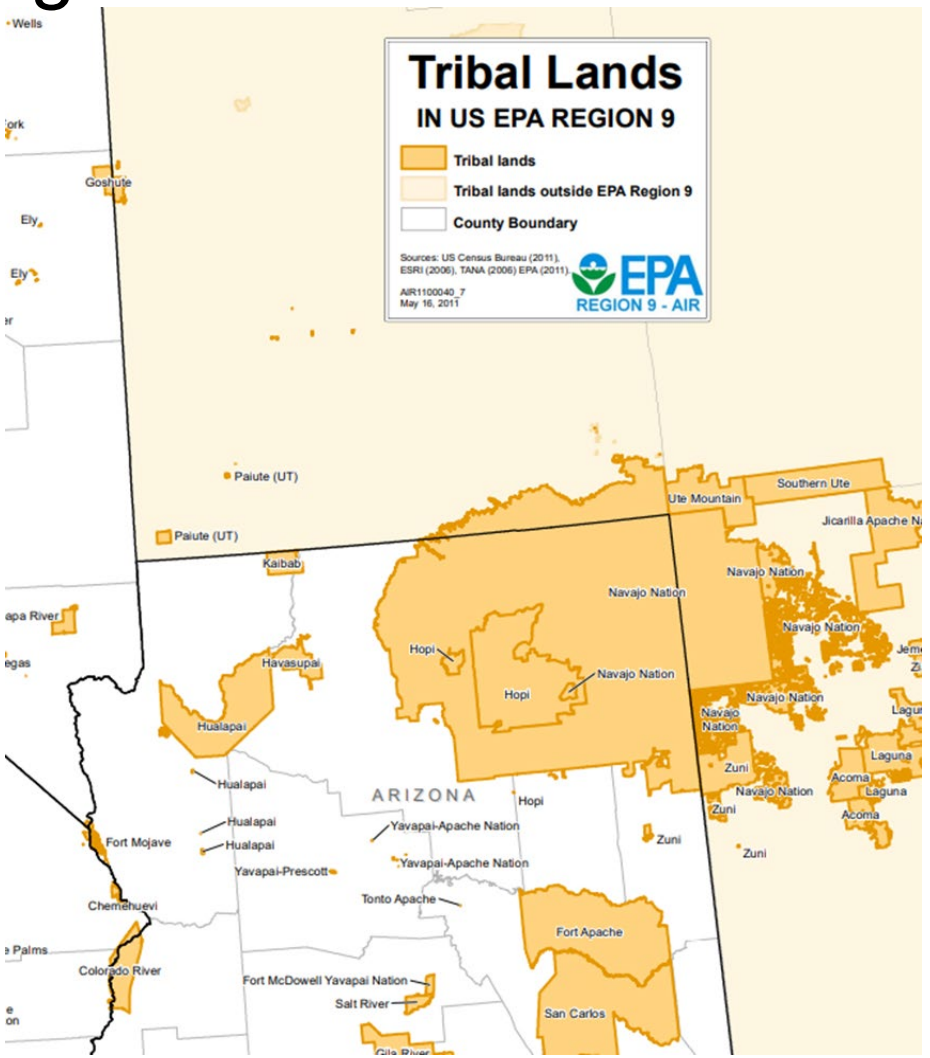
At least $700 million specifically set aside for tribal nations in the IRA. Tribes eligible for direct pay under 45Q credit

Land located within boundaries of an Indian reservation, pueblo, or rancheria; land owned by an Indian tribe; or land located in a census tract in which the majority of residents are natives or members of a federally recognized Tribe or village.

IRA – Tribal Energy Loan Guarantee Program

- $75 million through 2026 from DOE towards investments in energy-related projects to eligible Indian tribes
- Increases total loan authority from $2 billion to $20 billion
- Non-exclusive list of eligible uses:
  - Electricity generation
  - Transmission/distribution facilities
  - Renewable/conventional energy sources
  - Generation facilities
  - Energy storage
  - Energy resource extraction
  - Refining/processing facilities
  - Energy transportation facilities, including pipelines
  - District heating/cooling
  - Distributed energy projects

Sources: US Code, White House



* This map is an incomplete tribal representation; its currently in the process of being updated.

Source: EPA

SWCCS Hub Development Timeline

The SWCCS Hub development project is moving into Phase 1 - Prefeasibility Assessment which will explore the technical and commercial viability of CCS and inform stakeholders of the regional economic impact in the Desert Southwest

Complete	Current Phase			
16 months	**18 months**	**1-2 years**	**18 months**	**3-4 years**
Phase 0: Vision Development	**Phase 1: Prefeasibility Assessment**	**Phase 2: Preliminary Development**	**Phase 3: Definitive Development**	**Phase 4: Construction**
• Developed the vision for the SWCCS • Identified the key regional stakeholders • Established key criteria required to advance to Phase I	• Evaluate the fundamental change in demand and the required mix of generation assets to meet demand • Test various future state pathways and the role of low-carbon technologies • Develop policy, regulatory, and stakeholder strategies • Define the business model and economic framework for CCS	• Execute advanced market commitment (AMC) to sequester, transport, and store CO2 as needed for permitting and financing of these facilities • Class VI permits for storage wells, pipeline, and capture plant; preliminary front-end engineering design (Pre-FEED) of carbon capture ecosystem (capture, transport, and storage) • Engage with policymakers, regulators, and stakeholders • Develop a financing strategy	• Develop carbon capture ecosystem, final engineering detailed design (FEED), procurement of long lead items, and construction • Seek construction financing • Secure land rights, construction contracts • Construction financing complete; issue Notice to Proceed to the construction contractor	• Field construction activities • Commence compliance with 45Q guidelines • Project commissioning • Site restoration and project closeout • Commercial operation

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Thank You

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