

# Appalachian Regional Clean Hydrogen Hub (ARCH2)

Community Briefing  
October 24, 2023



# Why ARCH2

## RESOURCES

- Largest natural gas-producing formation in the United States (EIA, 2022)
- Natural gas spot prices consistently discounted to Henry Hub
- Renewable electricity sources for H<sub>2</sub> production
- Subsurface CO<sub>2</sub> and H<sub>2</sub> storage



## COMMUNITIES

- Long history of energy production vital to US economic growth
- Disadvantaged by energy transition from coal
- Designated ENERGY COMMUNITY by IWG



## LOCATION

- Close to major demand centers in all directions key for interhub connectivity
- Includes eight of the top 25 priority communities as designated by the Interagency Working Group (IWG) on Coal and Power Plant Communities and Economic Revitalization



APPALACHIA

## Project Development Partners

- Decades of expertise in the region
- Strong financial commitment to ARCH2
- Leadership in ESG and Climate initiatives

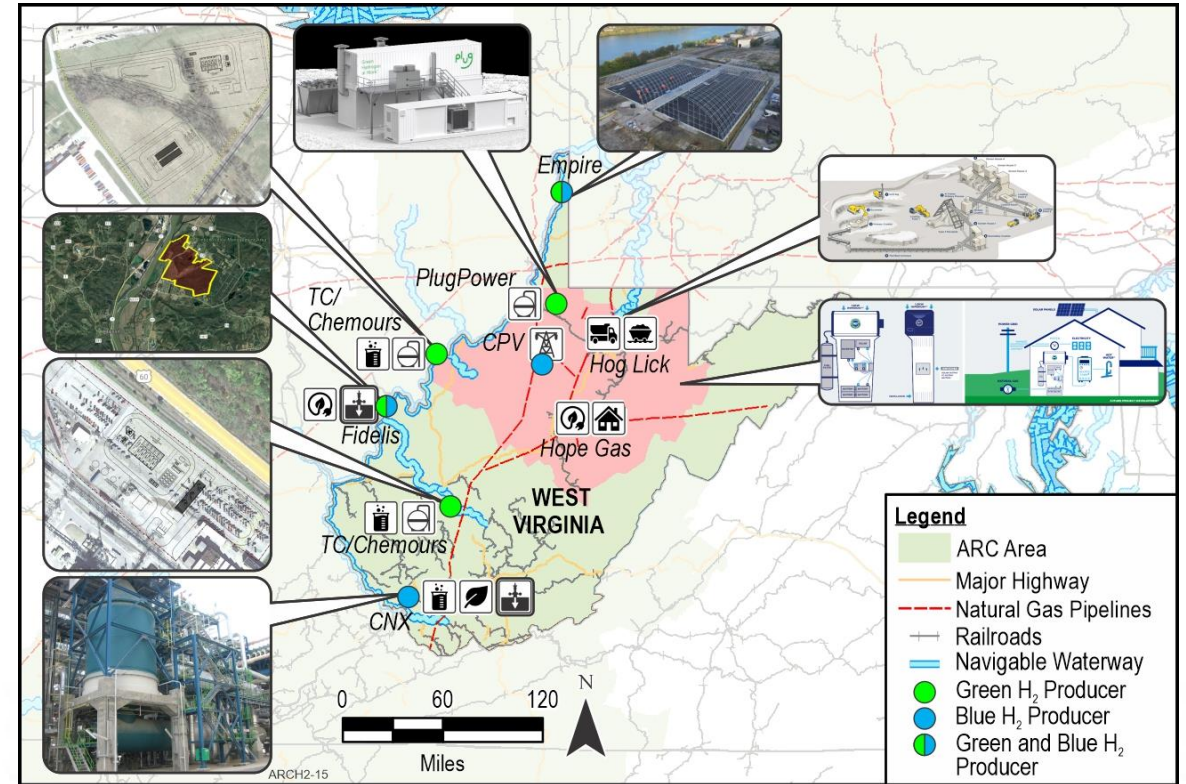


Re-energizing Appalachia  
Economically • Socially • Environmentally



# ARCH2 Project Summaries

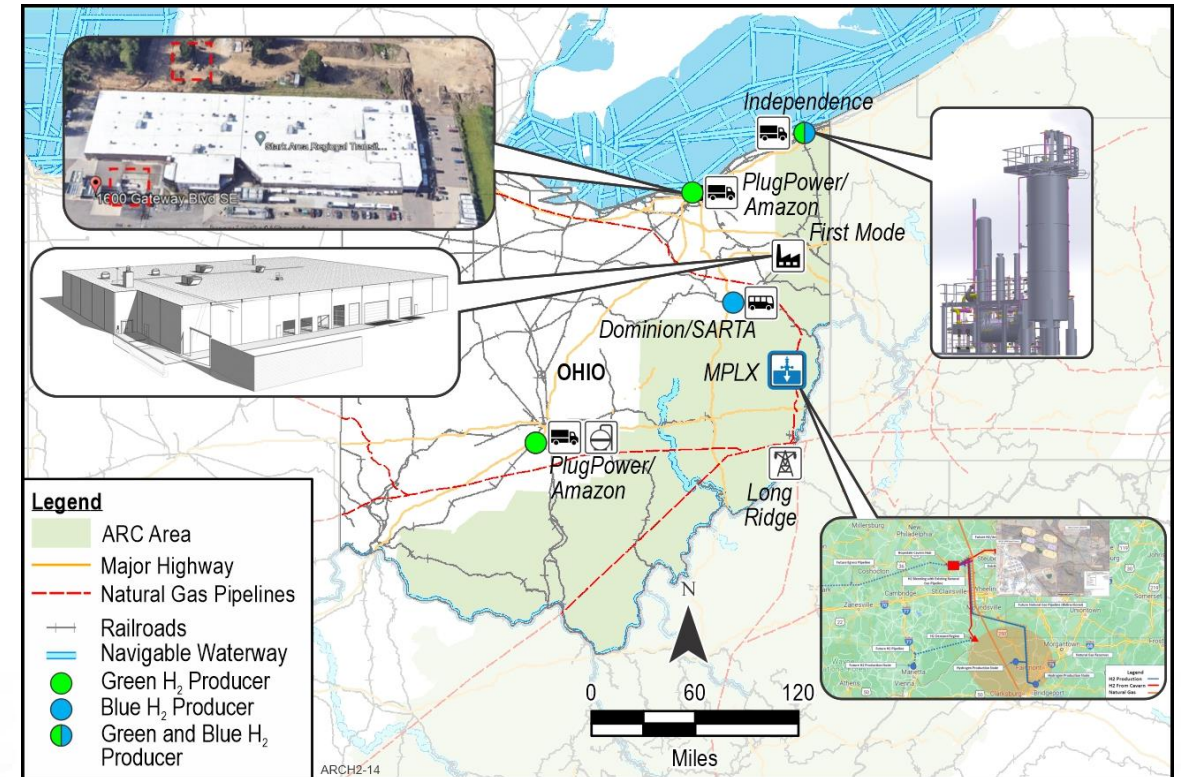
- **CNX/ TransGas:** Low-CI ammonia production
- **TC Energy/ Chemours:** Electrolysis-based H<sub>2</sub> production in two chemical facilities
- **Fidelis / Mountaineer GigaSystem:** NG + biomass to produce Low CI H<sub>2</sub> for datacenters, other off-takers.
- **HLA:** H<sub>2</sub> off-taker: H<sub>2</sub> use as fuel for off-site aggregate delivery trucks and on-site haul trucks/equipment.
- **Hope Gas/ WATT Fuel Cell Corp / EQT:** Produce clean H<sub>2</sub> from NG for blending in Hope local distribution system and residential fuel cells.
- **Empire Diversified Energy:** Anaerobically digested food waste based H<sub>2</sub> production for industrial and transportation fuel.
- **Plug Power/ Amazon:** Green H<sub>2</sub> production facility in northern WV.



**Note:** Proposed project locations based on preliminary siting are subject to change during the detailed planning phase (phase 1).

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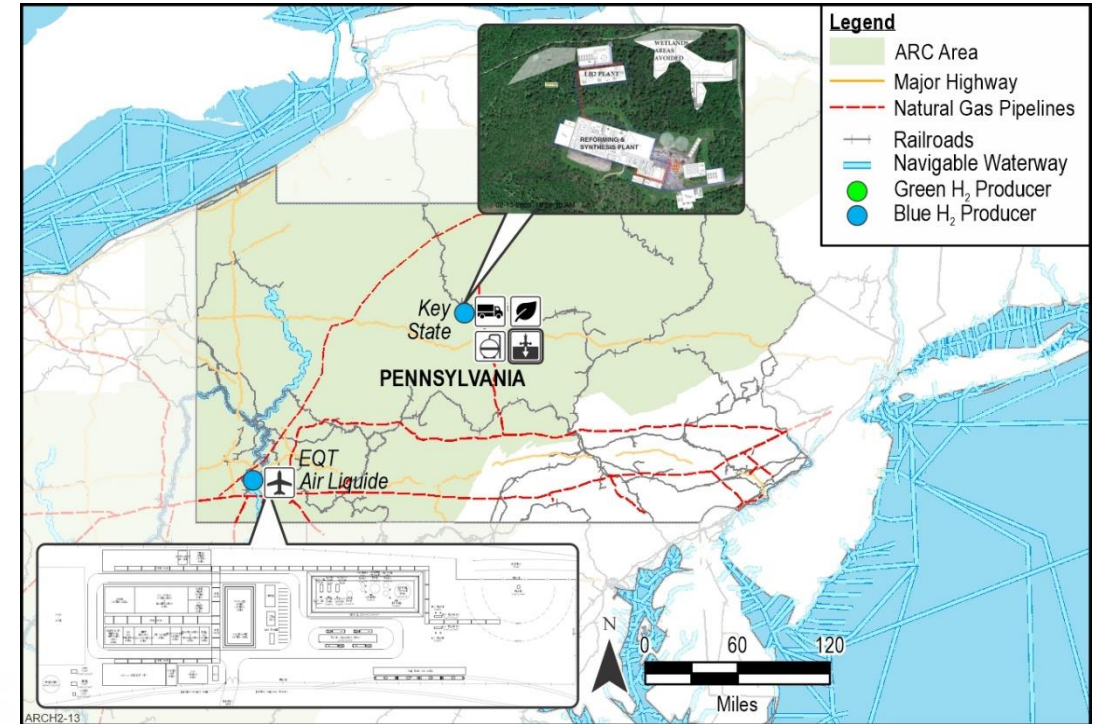
- **MPLX:** H<sub>2</sub> storage facility development with connective infrastructure to support ARCH2 producers, storage, and end-users
- **Dominion Energy Ohio:** H<sub>2</sub> production with CO<sub>2</sub> capture to supply H<sub>2</sub> to regional transit (e.g., SARTA)
- **Plug Power/ Amazon:** One distribution center with H<sub>2</sub> fueling MHE; fueling station FCEV delivery trucks.
- **First Mode:** H<sub>2</sub> end-user: Manufacturing facility for retrofitting mining trucks with H<sub>2</sub> fuel cell power system.
- **Independence Hydrogen:** H<sub>2</sub> production facility using industrial off-gas as feedstock in Ashtabula, Ohio to provide clean hydrogen for material handling equipment at distribution centers.



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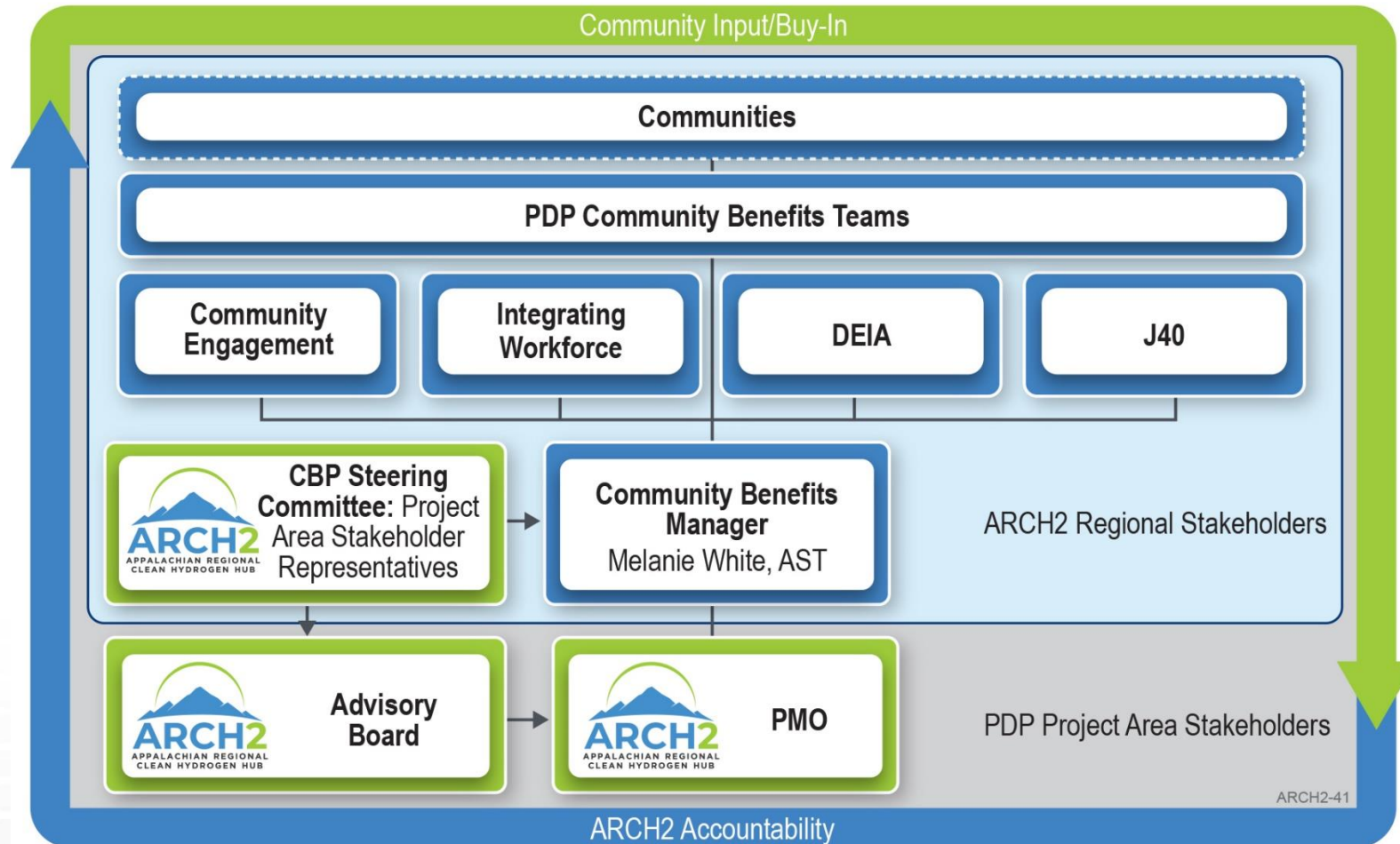
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- **EQT-GTL:** Low-carbon NG and renewable natural gas (RNG) (as required) to produce low-carbon aviation fuel.
- **Air Liquide** - Liquefied H<sub>2</sub> facility in southwest PA to serve as an offtake for EQT's excess hydrogen to be used in the mobility sector.
- **KeyState:** H<sub>2</sub> production plus other products (NH<sub>3</sub>, urea/diesel exhaust fluid (DEF))



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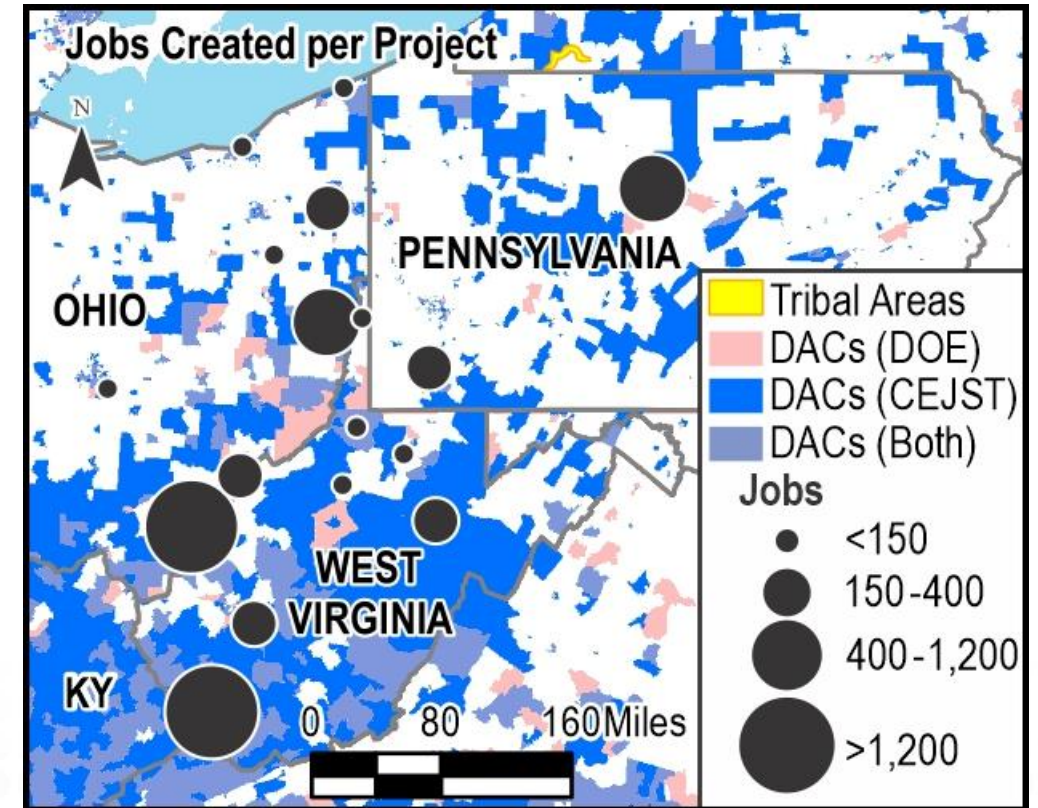
# ARCH2 Communities First Approach



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# ARCH2 Jobs Impact

- ARCH2 will foster a just energy transition in a region disproportionately impacted by the loss of extractive industry jobs
  - Environmental benefits
  - Economic benefits
  - Jobs creation
  - Workforce development
- At its peak ARCH2 is expected to create more than 21,000 jobs
  - More than 18,000 in construction jobs
  - More than 3,000 permanent jobs.





# ARCH2 Regional Outreach

## Labor / Trades / Workforce Development



> 10 unions, trades organizations, and employment agencies

## Business Development / Industry Organizations



THE MIDWEST HYDROGEN CENTER OF EXCELLENCE  
A Key Initiative of the Renewable Hydrogen Fuel Cell Collaborative

> 40 service providers

## Community / Environment / Non-Profits



> 15 environmental, special interest groups, and faith-based organizations

## Academia



> 15 universities, community colleges, and trade schools

## Government



> 25 federal, state, local, and tribal

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