



Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES)

Scott Brandt

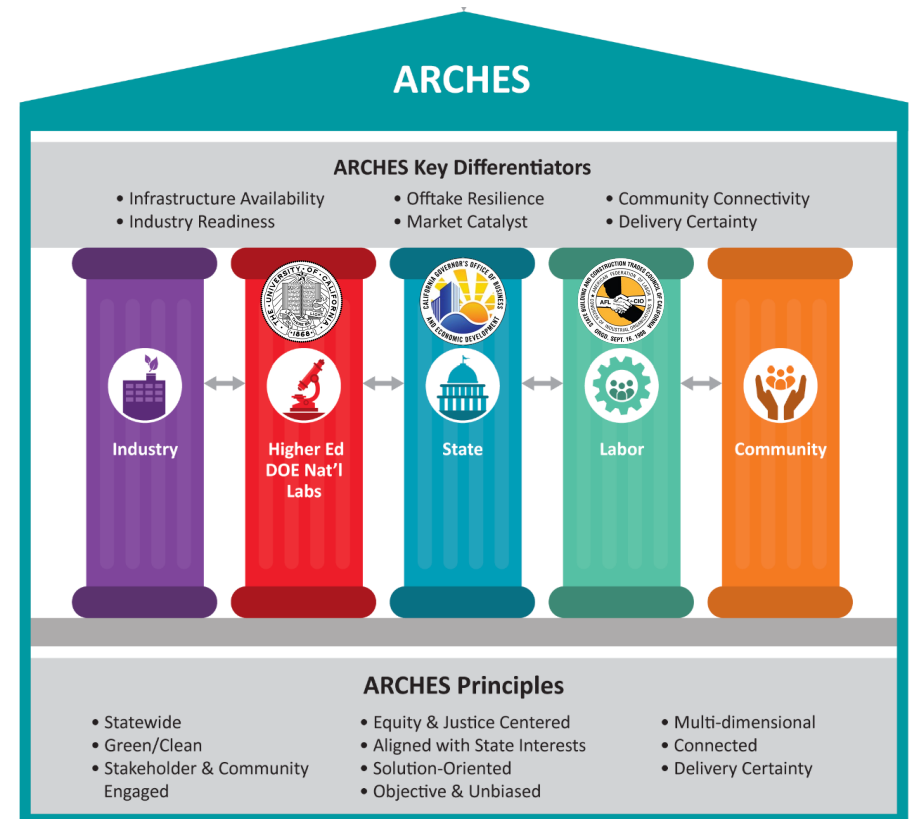
Pinole City Council Presentation

March 5, 2024



ARCHES Overview

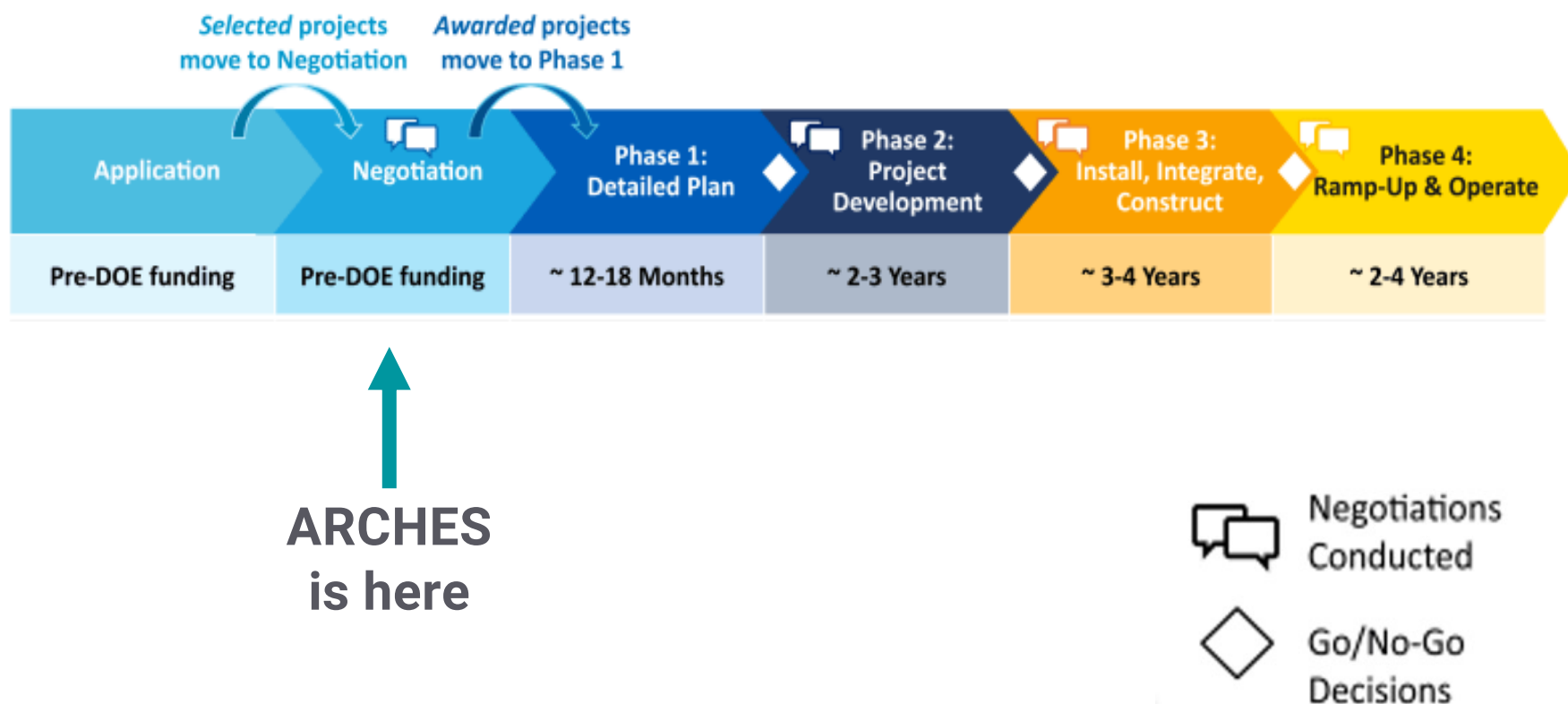
- **ARCHES** is a **public-private partnership** to create a **sustainable statewide renewable, clean hydrogen (H2) market and ecosystem** in California and beyond
- **ARCHES** utilizes **renewable resources** to produce hydrogen with the objective to **fully decarbonize the regional economy**
- **ARCHES** prioritizes
 - ☐ Environmental Justice
 - ☐ Equity
 - ☐ Economic Leadership
 - ☐ Workforce Development
 - ☐ Hydrogen Market Viability



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Where ARCHES is in the Process

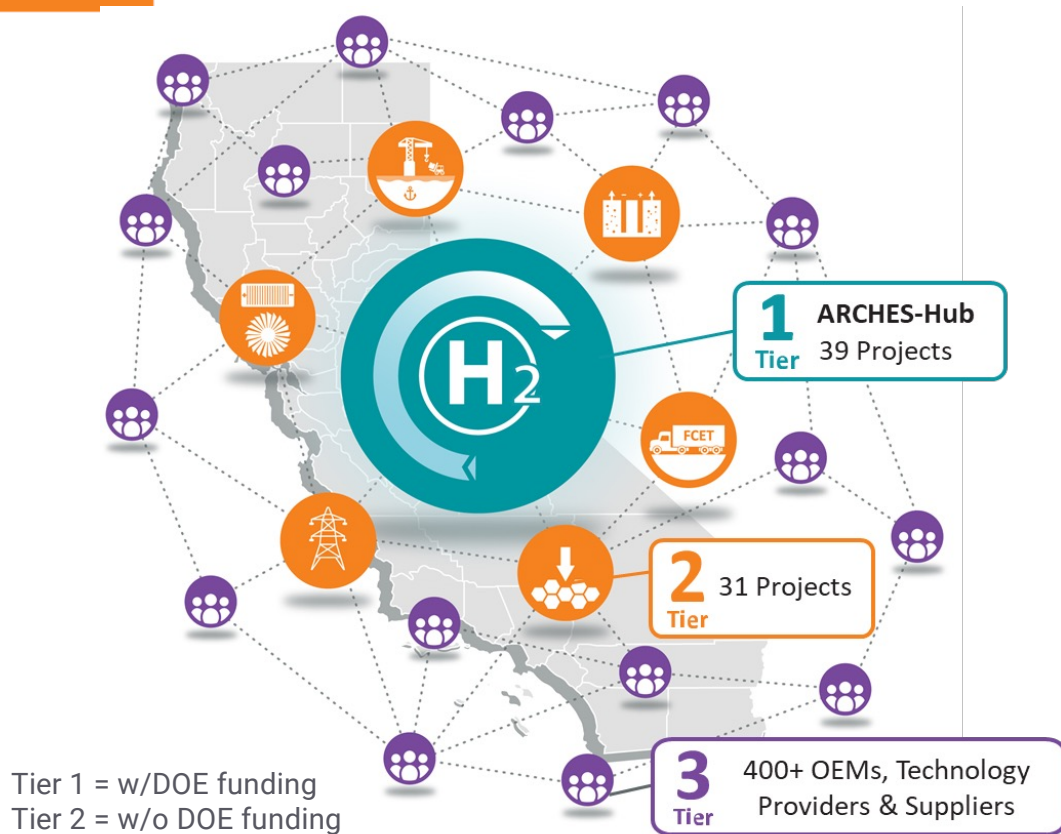


↑
ARCHES
is here

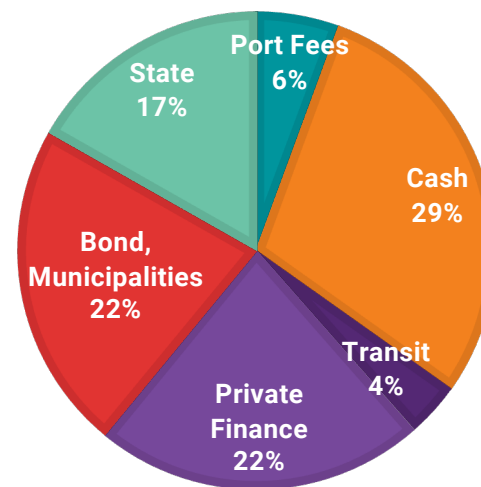
Graphic courtesy of the DOE



ARCHES Projects: A Resilient Hydrogen Ecosystem for California

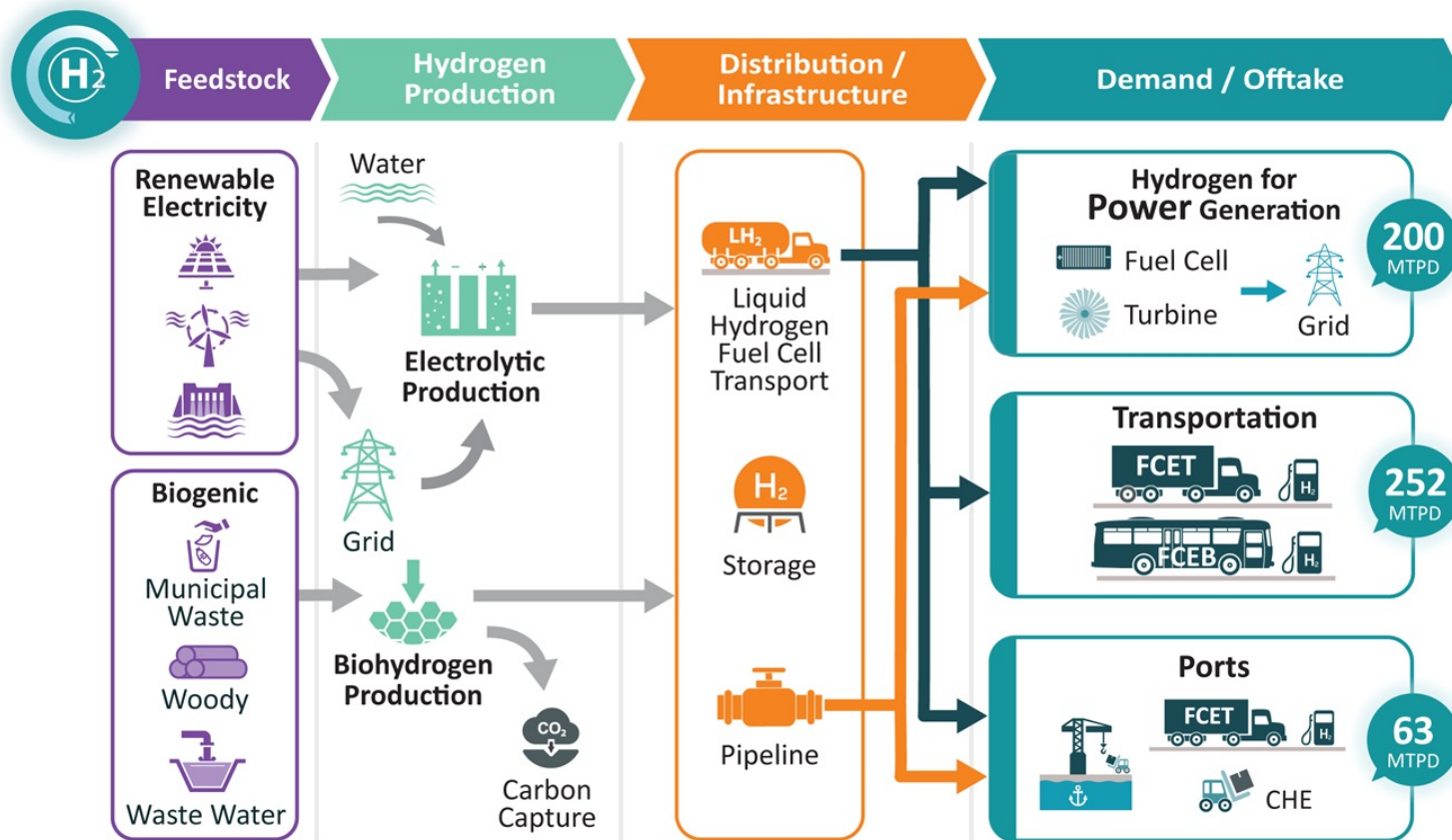


\$1.2B DOE funds unlocks \$11.7B in matching funds



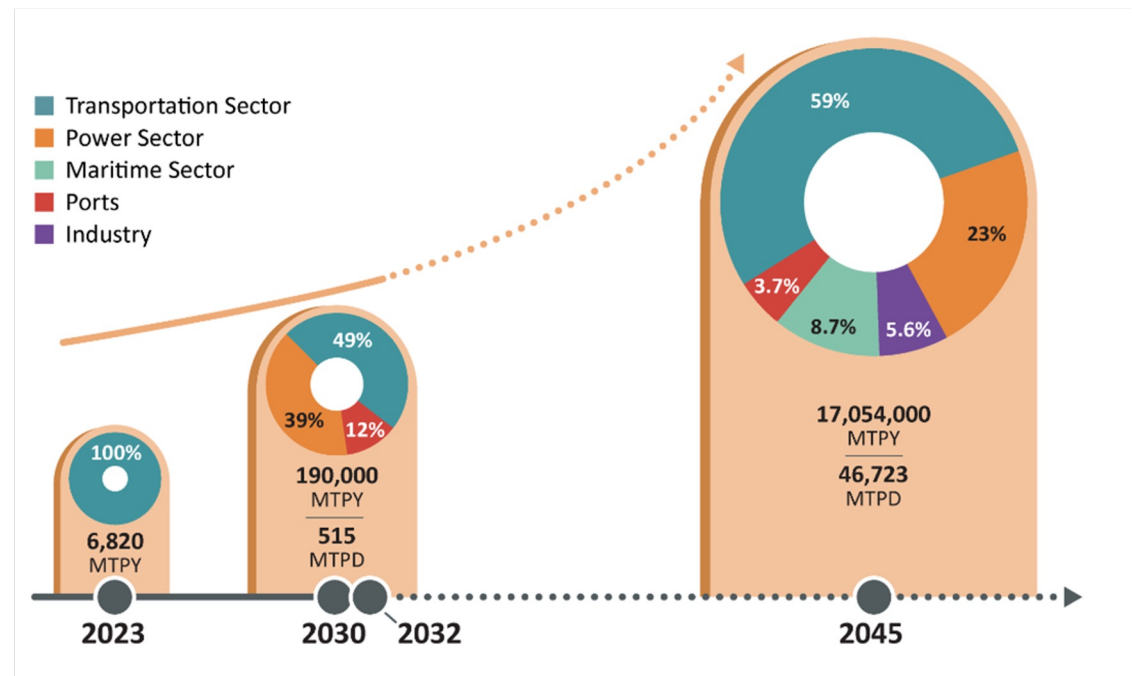
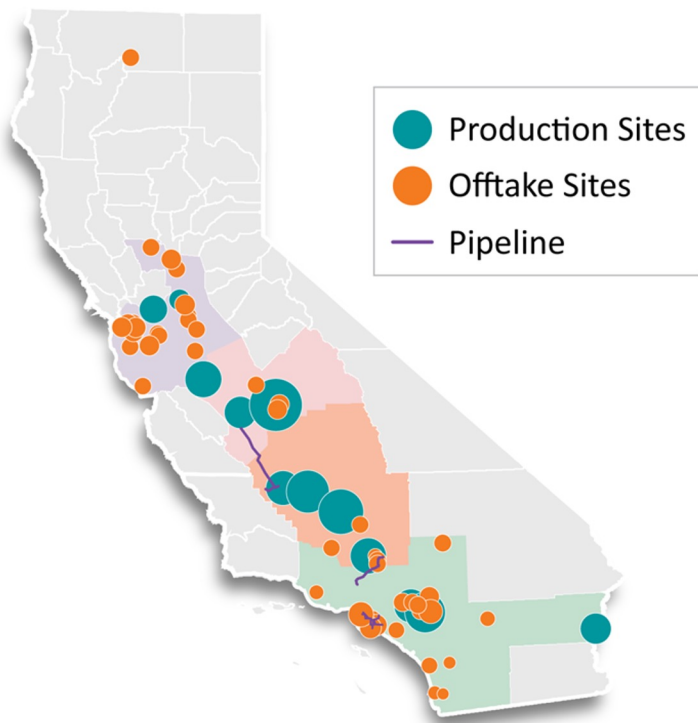


ARCHES Hydrogen Flow



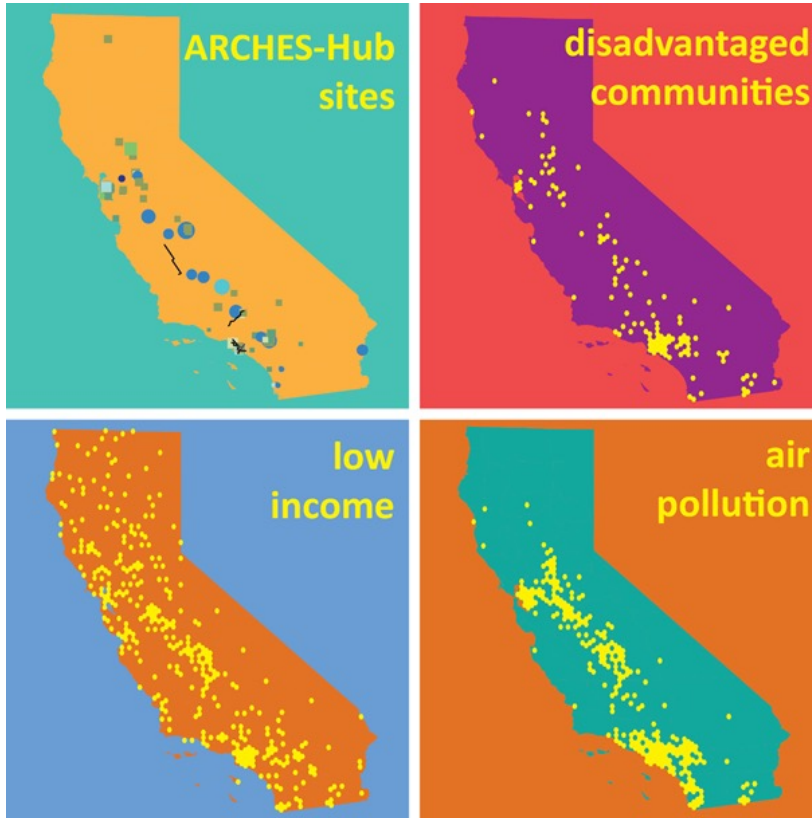


ARCHES Systems Approach Initiates Large Future Hydrogen Growth in California





ARCHES Benefits California Communities



*EJ40 database and CalEnviroScreen

COMMUNITY		
▲ \$2.95 billion		Economic value of increased health* and associated health costs savings per year
▲ 222,400		Number of jobs created
▼ 2,097		Fewer hospitalizations for respiratory & cardiac illness per year
▼ 13,292		Fewer work loss days per year
▼ 6,900		Nitrogen oxide net emissions avoided MTPY
▼ 239		Sulfur dioxide net emissions avoided MTPY
▼ 326		Particulate matter net emissions avoided MTPY
▼ 48		Fewer premature deaths per year
▲ \$380 million		Invested in community benefits & workforce development

* Reduced premature death, asthma, cancer risk, missed work days



Conclusion

ARCHES is a unique partnership between UC, the State, Labor, NGOs, Industry, and communities to create a California and regional hydrogen market and ecosystem that will serve the Nation, the State, and the University