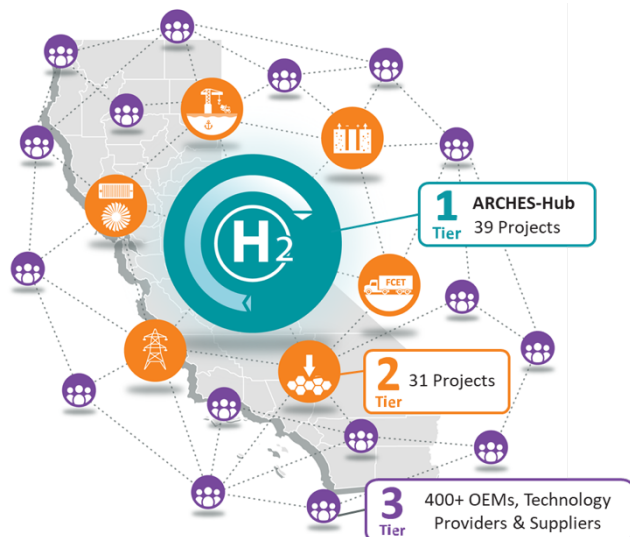
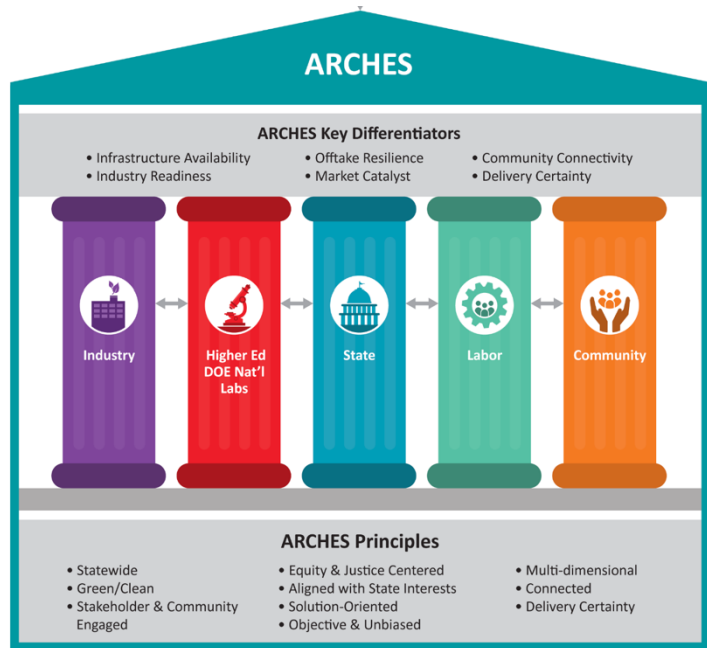




Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES)

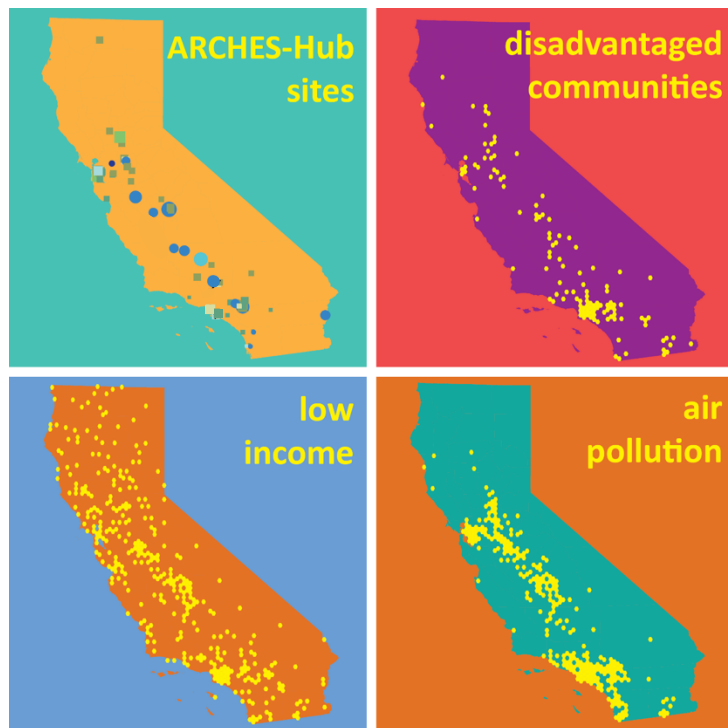
To realize a sustainable, clean hydrogen marketplace in the California region, the University of California System, the Governor’s Office of Business and Economic Development, The State Building and Construction Trades Council of California, and the Renewables 100 Policy Institute formed the [Alliance for Renewable Clean Hydrogen Energy System \(ARCHES\)](#). ARCHES is a public-private partnership formed to facilitate and oversee the design, development, and deployment of hydrogen infrastructure projects across multiple sectors. Projects will be performed by major public and private partners with deep experience in delivering hydrogen and/or utility-scale energy infrastructure projects. ARCHES’ overarching goal is to reach a total hydrogen capacity of 47,000 tons of clean renewable H₂ per day by 2045 with substantial reductions in greenhouse gas and pollutant emissions. ARCHES proactively works with California, local governments, industry, labor unions, and a broad, inclusive group of community leaders to realize the vision of a just transition and equitably deliver benefits to all corners of the economy.



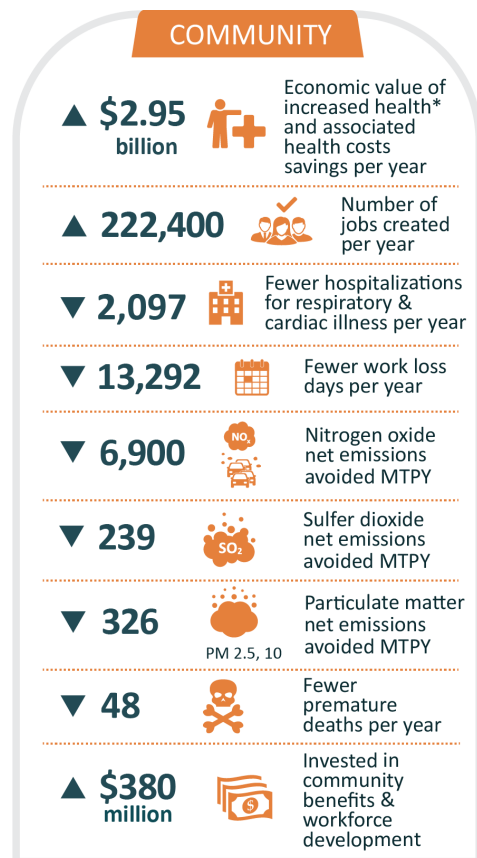
ARCHES has requested \$1.25B from the Department of Energy (DOE) as part of its [Regional Clean Hydrogen Hubs program](#) with a State, municipal, and industry cost share of \$11.3B and a project duration of eight years to build and operate the ARCHES Hydrogen Hub. Funding will be used to deploy an interconnected hydrogen network of production, distribution, and consumption projects in three key sectors: (1) Power, (2) Heavy-duty Transportation and Transit, and (3) Ports, with nascent efforts to kickstart hydrogen in the additional sectors of Aviation, Maritime, and Agriculture. ARCHES has proposed a network of 39 interconnected projects resulting in 515 metric tons of clean hydrogen production and usage per day by 2030 across these sectors.

Production of clean hydrogen in mainly the CA Central Valley will be based on renewable inputs with careful consideration of water stress. The required distribution infrastructure will include pipelines and trucking of hydrogen to project locations to complement on-site production. In the power sector, ARCHES is converting two power plants to run on hydrogen in the Northern and Southern California areas. ARCHES also targets heavy-duty (diesel) transportation corridors including I-5 and SR-99 highways that support much of the transport of goods from the Ports of Los Angeles, Long Beach, and Oakland, with refueling stations to support them. Within these ports, ARCHES will convert various drayage (diesel) trucks and cargo handling equipment (diesel loaders and cranes). ARCHES is also targeting transit agencies in communities throughout the state and their transition to fuel-cell electric buses. The selected projects will form a foundation upon which to scale, realize cost reduction, and continue to make significant impacts and benefits, especially for disadvantaged communities that are prevalent in the selected locations and regions, with the close participation of labor unions and community leaders.

ARCHES is committed to a just and equitable hydrogen energy transition with the integration of local communities in all aspects and phases of its operation, from project design to governance. ARCHES has an integrated community benefits plan with extensive meaningful community and labor partner engagement and project accountability. ARCHES project sites favor impacted communities, which will disproportionately benefit from the cleaner air and economic opportunity that its projects will provide. ARCHES will require that all funded projects advance DEIA and greater prosperity through quality jobs and careers, higher wages, and health benefits, especially in impacted communities. ARCHES will ensure that at least 40% of the hub project benefits flow to disadvantaged communities and has allocated ~\$370M for community benefits and workforce development and education. ARCHES estimates that its projects will create over 200,000 new green jobs per year and generate nearly \$3B per year in health care cost savings due to reductions in pollutant emissions.



*EJ40 database and CalEnviroScreen



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