

A. Overview of the ARCHES Community Benefits Plan

ARCHES was created to facilitate California's transition to renewable, clean hydrogen (H₂) energy while ensuring environmental and energy justice and equity, quality of life for our citizens and communities, and good green high-road careers for our workers. ARCHES is the result of an unprecedented collaboration between state government, higher education, labor and an environmental NGO based upon a shared belief in the benefits that hydrogen brings to California and its communities, including cleaner air, lower GHG emissions, greater energy security, and greater economic and workforce prosperity.

ARCHES Projected Benefits:

- \$2.95B/yr health cost savings
- 6,900 tonnes less NO_x/yr
- 326 tonnes less PM₁₀ and PM_{2.5}/yr
- 222,400 new jobs
- 13,292 fewer days of work lost/yr
- 2,097 fewer hospitalization/yr
- 48 fewer premature deaths/yr

Recognizing past inequities and the ongoing harms that fossil fuels have inflicted upon many of our communities, ARCHES is committed to ensuring a just and equitable transition to renewable hydrogen energy in California.

That requires maximizing the benefits to those in our disadvantaged communities (DACs), especially in and around ARCHES project sites. To that end, ARCHES engaged broadly from the outset with organized labor and

community organizations to understand their concerns and address them in the planning to maximize benefits and avoid problems downstream. The inputs from those groups have influenced every aspect of ARCHES, from its community-oriented principles and deeply representative governance structure, which includes labor, communities, cities and local governments, tribal nations, and environmental/EJ groups, to its community-oriented project selection criteria and extensive Community Benefits (CB) Plan.

ARCHES will achieve these goals by: 1) creating cleaner communities by focusing on key hard-to-abate sectors in impacted communities, 2) ensuring stakeholder engagement at all levels, equipping and empowering residents to determine the best ways to benefit their communities, 3) working collaboratively with labor to ensure a well-trained, diverse, local H₂ workforce with good, green careers. This plan is supported by \$150M for community benefits plus \$229M for workforce development and community education. All CB programming implementation will be overseen by a dedicated staff including a Chief Community Engagement Officer and employees for community engagement and education and outreach. In addition, a CB Monitoring Team, an independent third-party entity, will ensure compliance with stated CB plans and agreements and report directly to the ARCHES board.

ARCHES Community Benefits Plan Highlights:

- ARCHES is an unprecedented public-private partnership between labor, UC, state government, community and industry stakeholders
- Tribal, community, environmental, and NGO representation on the board (board seats)
- Project Labor Agreements required for every project
- Community benefits plan for every project, required to be 1% of each project's total cost - a value of \$150M for CB and \$229M for workforce/education
- Workforce development plans are highly inclusive and cover many opportunities for students and workers
- Independent Community Benefits Monitoring Team that reports directly to the Board for accountability, with clear enforcement mechanisms
- As a hub, with over 300 active partners (civic, public/private utility, industry, transportation, aviation, maritime), and broad participation in workgroups, ARCHES is creating a network to include all voices across the state and nation

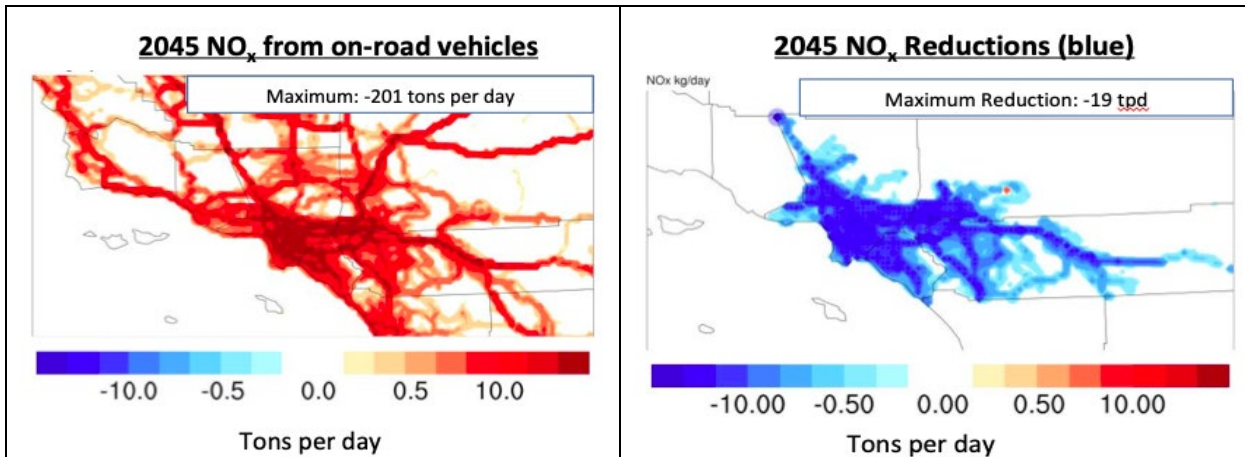


Figure 1: Projections of unmitigated vs. mitigated scenarios for NO_x in the LA region. The transportation sector is by far the largest source of NO_x and a major contributor of PM emissions. In 2045 projections, total NO_x emissions from transportation exceeds total NO_x emissions from powerplants. Emission reductions from H2 use in transportation are far greater than total emissions from power plants. Human health impacts of exposure to ozone and PM_{2.5} include shortened life span, development of asthma, bronchitis, cancer, strokes, weakened immune response, and impaired lung and brain development in children.¹

A.1 Description of Major CBP Components and Roles

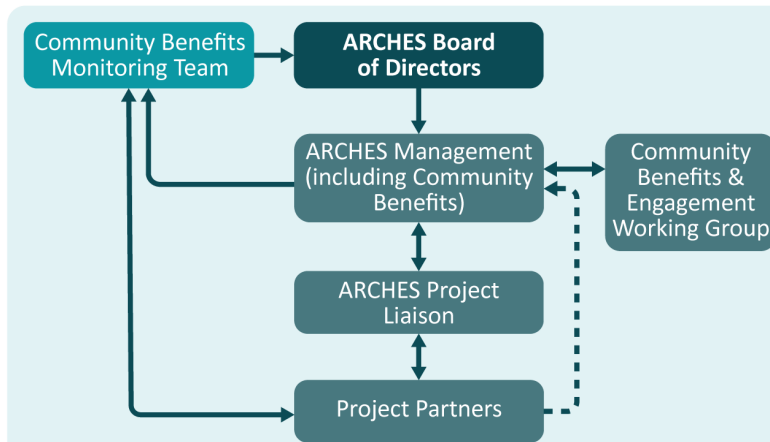


Figure 2: CBP Major Roles and Interactions

Project industry partners collaborate with local stakeholders to develop a community benefits plan and regularly report on progress to the Community Benefits Monitoring Team (CBMT). Communities interact with ARCHES through project liaisons and with the CBMT. CBMT reports to the ARCHES Board. ARCHES Board informs Management of key improvements and projects needing attention. ARCHES management works with project liaisons to receive regular updates on all project aspects. ARCHES Management facilitates the CB&EWG including CB stakeholders.

Chief Community-Engagement Officer (CCO - Joy Langford): Oversight of the Community Benefits (CB) teams and collaboration with the CBMT. Supported by 3 ARCHES staff and 3 contractors.

Community Engagement Team: Two individuals and one tribal nations appointee will serve as a paid resource to assist with local events and expertise, includes **DEIA expertise**.

Benefit Assessment Team: Two individuals with expertise in aiding CBA/CBP negotiations will collaborate with local project liaisons to collect regular project partner assessment (scorecards).

Workforce Development Support: One individual will support work discussed in the workgroup

Labor Engagement Support: One individual for workforce development/strategic roadmap.

¹ Mantegna, G. and Mac Kinnon, M. Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California, 2021.

CB Workgroups Manager: One individual will provide oversight of CB working groups.

Workforce Development Workgroup: Members span labor, training and educational institutions (UC, CSU, CC structure), workforce, training, career transition, URMs.

Community Engagement Workgroup: A unique public group (no required NDA) that has been operating for a year and includes national, state, and community organizations and individuals.

Community Benefits Monitoring Team (CBMT): An independent group, paid by ARCHES, and reporting to the Board and CEO. The CBMT is composed of a representative body of involved Community Benefit (EJ, labor, tribal, faith-based organizations, neighborhoods, environmental, etc.) stakeholders who can, as a third party, objectively monitor CB program implementation for ARCHES projects. Membership preference will be under-represented minority (URM) residents of impacted DACs. The CBMT will have the task of monitoring, tracking and reporting project CB program progress to the **ARCHES Board of Directors** (refer to Technical Vol. Mgmt. Plan), and recommending remedies or penalties for non-compliance. The CBMT will also collaborate with relevant ARCHES and project staff to develop a CB program for each project.

Project CB Liaisons: We anticipate having two CB liaisons per project: One elected by and representing the local community near a project site, and another at the project partner.

Community Engagement Advisor: John Harriel will serve as an engagement advisor specializing in URMs, young adults, youth, mentorship, and difficult-to-reach populations. *Note at the ARCHES management level (see the Technical Vol.) there is also a funded DEIA Advisor.*

A.2 Crosscutting Activities

ARCHES Orientation with Partner Industries: Early in the project timeline (Phase I), partners will attend an orientation session with ARCHES, which will prepare them to engage locally and acknowledge requirements for the technical and CB activities. It will also brief them on compliance expectations, standards for data collection and analysis, and also introduce them to the ARCHES culture, roles, resources, and support available to them. The orientation agenda includes: (a) engagement best practices, (b) CB goals and J40 requirements, (c) DEIA requirements and best practices, (e) labor and hiring priorities (d) reporting requirements across all areas, (f) standards and requirements for data collection, reporting of data, and access to data, (g) intro to the CBMT and how it operates—including how the CBMT uses scoring criteria to monitor and report compliance and consequences for non-compliance.

Annual Symposium: The Annual Symposium is designed to be a keystone event including all interested parties from community members to partners and stakeholders, with the ARCHES team. Symposium events contain activities for both technical and community benefits, with numerous sessions aligned with schedule goals and reporting requirements. The Symposium includes a combination of open house, informational sessions, group discussions, and working meetings. Budgetary reviews and annual compliance reviews (including spending compliance) will be conducted, along with the release of compliance reports and monetary penalties.

A.3 ARCHES Resources for Partners and Communities (Engagement, DEIA, J40):

Funding and Flow of Resources: 1% of the total project budget for all ARCHES projects will be allocated to CB programs and community support, a direct funding mechanism for CB programs will flow to neighborhoods in the vicinity of ARCHES projects. Other resources provided as products or services include:

ARCHES CCO, ARCHES consultants and staff, and a range of experts including engagement and DEIA experts, and a roster of subject matter experts for communities and project partners.

Web portal and shared folders: A dedicated website for CB partners will serve as a resource for information, expert advice and direct engagement with ARCHES and ARCHES projects leads. There will also be a public site with accessible information, talks, FAQs, videos, events, etc.

ARCHES Playbook: A Resource Guide for communities close to projects will be created as a resource for project information, standards for survey and data collection, requirements and compliance, project development phases, and access to expert resources for relevant advice on health, environmental and economic impacts. The guide will also have a list of resources for job training, access to low-cost assistance, and other relevant project-specific rubrics.

B. Community Engagement *(Labor engagement appears in section C)*

ARCHES is adopting bottom-up approaches that are based on successful examples, supported by data-driven and evidence-based practices. This approach will seek to understand, adapt, and incorporate the systems of local influences and complexity. We will engage community members directly, pay for their time, and ensure the inclusion of all voices. Our efforts directly engage (1) local community groups and individuals, (2) local leaders and organizations, and (3) EJ and advocacy groups that provide critical support to these communities. ARCHES can leverage the University of California's (UC) established centers dedicated to EJ and community, including existing community relationships and trust. These include the UC Center for Climate Justice (systemwide), and labor and community centers at UC Davis, UC Berkeley, UCLA (Luskin), UC Santa Barbara, and UC Santa Cruz, and J40 and DEIA experts at LBNL. ARCHES will also leverage existing partner interactions including those established by organized labor and existing localities (e.g., Port of Long Beach, City of Lancaster, City of LA).

B.1 Community Assessments *(Labor assessments appear in section C)*

Community Social Characterization Assessment

Disadvantaged communities span the state, and there are multiple DAC designations in all of ARCHES proposed sites. We identify disadvantaged communities using two methods: the Disadvantaged Communities Reporter², and CalEnviroScreen Version 4.0³.

ARCHES Project sites are located in various CA counties: Alameda, Contra Costa, Fresno, Kern, Los Angeles, Madera, Merced, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Mateo, Santa Cruz, Siskiyou, Stanislaus, Tulare, Ventura, and Yolo and along major transportation corridors.

In the LA Region, fossil fuel-dominated industries have impacted residents' health, diminished local economic viability, quality of life, and trust. Here, DAC residents are primarily people of color with high poverty and unemployment. Refineries, trucks, rail yards, freeways, and the Los Angeles and Long Beach ports are the major sources of emissions including carcinogenic diesel fumes⁴. In the Bakersfield Region and Kern County, the unemployment rate is almost twice that of the state, and over 18% of working-age residents have incomes below the federal poverty level. Impoverished areas lack services, including a shortage of primary health care providers.

² Disadvantaged Communities Reporter, <https://energyjustice.egs.anl.gov/> (Accessed 13 Mar 2023)

³ CalEnviroScreen, <https://oehha.ca.gov/calenviroscreen> (Accessed 14 Mar 2023)

⁴ <https://www.iarc.who.int/news-events/iarc-diesel-engine-exhaust-carcinogenic/> (Accessed 5 Feb 2023)

The region has poor air and water quality, hazardous waste facilities, and sources of toxic pollution concentrated in DACs⁵. In the San Joaquin Valley, vehicle emissions comprise about half of measured airborne PM2.5. Residents live next to freeways and stationary pollution sources, and are affected by environmental hazards, air pollution and climate impacts⁶. An ARCHES partner power facility is located in Mendota, the fourth poorest city in the state of California, where 40% of residents live below the poverty line, and the unemployment rate exceeds 16%. And in Barstow, another ARCHES site, 35% of residents live below the poverty line⁷. The ARCHES project based in Rincon represents a partnership with the Rincon Tribe and reservation to develop a microgrid supporting clean drinking water (wastewater treatment) in addition to being an exemplar for tribal collaboration.

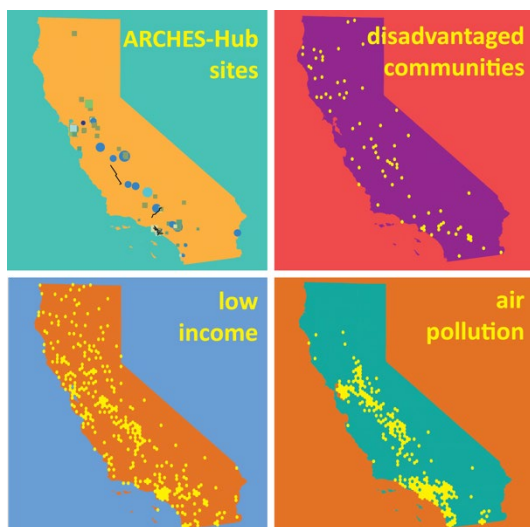


Figure 3: ARCHES Hub sites, demographics, and air pollution

Income and income inequality in California, disproportionately impacting residents of DACs: The gap between high- and low-income families in California is among the largest in the nation—exceeding all but three other states. Families at the top of the income distribution earned 11 times more than families at the bottom (\$291,000 vs. \$26,000 for the 90th and 10th percentiles, respectively). For every \$1 that white families earn, Black families earn \$0.60 and Latino families earn \$0.52⁸.

Air quality and related health problems are widespread but worse due to disparities: In a recent report on air pollution particulates, 23 of the 25 most polluted places to live in the nation are in California⁹ including the ports and many of California’s biggest metros. Risks of breathing polluted air include asthma,

birth defects, developmental problems, and various lung cancers. A 2021 study estimates that exposure to particle pollution led to more than 3,000 deaths and nearly 5,500 new childhood asthma cases across the California Bay Area, while exposure to nitrogen dioxide generated from vehicles killed more than 2,500 people¹⁰.

Highest pollution levels disproportionately impacting DACs and URM: A number of studies that show people of color in the United States are more likely to be exposed to pollution than white Americans¹¹. Residents in heavily impacted California port communities like Wilmington, West

⁵ <https://regionalchange.ucdavis.edu/report/kern-county-geography-inequity-and-opportunities-action> (Accessed 15 Feb 2023).

⁶ <https://ww2.arb.ca.gov/news/clean-air-plan-san-joaquin-valley-first-meet-all-federal-standards-fine-particle-pollution> (Accessed 10 Feb 2023)

⁷ <https://www.census.gov/quickfacts/> (Accessed on 2 Mar 2023)

⁸ <https://www.ppic.org/publication/income-inequality-in-california/> (Accessed 5 Mar 2023)

⁹ <https://www.lung.org/research/sota/key-findings/most-polluted-places> (Accessed 4 Feb 2023).

¹⁰ <https://ehp.niehs.nih.gov/doi/10.1289/EHP7679> (Accessed 29 Mar 2023)

¹¹ <https://academic.oup.com/socpro/advance-article-abstract/doi/10.1093/socpro/spac005/6540708?login=false> (Accessed 23 Jan 2023)

Long Beach, and Carson in southwestern Los Angeles County are exposed to smog-forming gasses, toxic fumes, and noxious odors¹².

Energy resiliency and energy cost concerns: The state's power grid needs investments and change to achieve a clean-energy future, especially amid rising temperatures, drought and wildfire. Energy costs are also a higher burden for low-income minority households and renters. The communities on the frontlines of climate change, largely low-income people of color, are hit first and worst by climate crises such as extreme heat and wildfires¹³. Research on government aid shows infrastructure investments after natural disasters that do not address equity actually increase racial disparities including the racial wealth gap¹⁴. Further, minority and low-income people experience hotter temperatures during deadly heat waves because their neighborhoods lack tree cover and parks, and/or are near freeways or industrial facilities¹⁵.

Public opinions and EJ concerns reported in the media: Six in ten Californians say air pollution is a

very serious (21%) or somewhat serious (42%) threat to their health (more when polling URM only) and that of their immediate family. Black and Latino communities feel the impact of climate change firsthand, but overall, say the economy and job access demand more urgent attention when asked about their top issue priorities. To better engage, policymakers, advocates, and communicators must localize and frame messaging to reflect community priorities¹⁶. Other DAC residents are concerned that the cost of utility bills may increase with new green energy. EJ groups target concerns on leaks/safety, the perceived higher cost of renewable hydrogen, and whether options prolong fossil fuel dependency (ARCHES surveys). These and numerous other opinions have been collected for ARCHES outreach.

Engagement and Information Collection Efforts to Date: During the formation of ARCHES, we invited local community and EJ leaders to participate in a series of hybrid multi-stakeholder workshops and began hosting weekly (now biweekly) group and one-on-one meetings. ARCHES

ARCHES Early Engagement Activities:

- Numerous leadership meetings with ARCHES founding organizations and potential partners
- CA Senate Select Committee on Hydrogen
- City Council meetings, e.g., with Oakland, Long Beach, Carson: resolutions discussed and approved to join ARCHES
- Workshops on ARCHES at several UC Campuses
- Meetings with various coalitions and clusters of EJ groups specifically addressing concerns
- Interviews with over two dozen community-based orgs, EJ, CB, and DEI experts
- Meetings with numerous organizations, e.g., Move LA, Harbor CB Foundation, Green Hydrogen Coalition
- Open community forums on ARCHES with EJ groups, community advocates and members, every 2 weeks since Fall 2022
- Targeted workshops dedicated to business collaborations
- Workshops with segments dedicated to working with industry, partners, and community advocates and EJ groups.
- ARCHES Launch: 2-day meeting and workshop sessions on 10/6/22

¹² <https://calmatters.org/environment/2022/02/environmental-justice-photo-essay-la-county-port-communities/> (Accessed 20 Jan 2023)

¹³ <https://www.frontiersin.org/articles/10.3389/fpubh.2019.00357/full> (Accessed 28 Mar 2023)

¹⁴ <https://www.sciencedaily.com/releases/2018/08/180820164234.htm> (Accessed 27 Mar 2023)

¹⁵ Joint investigation by NPR and the University of Maryland's Howard Center (Accessed 22 Mar 2023)

<https://www.npr.org/2019/09/03/754044732/as-rising-heat-bakes-u-s-cities-the-poor-often-feel-it-most>

¹⁶ <https://www.weact.org/publications/poll-of-black-and-latino-x-communities-on-climate-change-and-the-clean-energy-transition/> (Accessed 27 Mar 2023)

has already incorporated this input into its governance, project structure (requirements, committees, commitments, control) and selection criteria.

Community Initial Stakeholder Analysis

ARCHES has over 40 letters of specific commitments for community benefits support, over 20 letters from community benefits organizations, and over 20 letters from supporting labor organizations, including many on the local regional and national levels, such as local unions as well as the AFL-CIO and the National Association of Building Trades. ARCHES is committed to creating an open, honest and transparent exchange of information and knowledge. Numerous community-based and environmental NGOs have committed to assisting ARCHES as trusted messengers by local communities to educate the public and provide resources for community engagement. The ARCHES Team wanted to ensure that all our outreach partners have specific expertise to reach a broad set of socio-economic backgrounds including tribal communities. Some of the most notable organizations willing and able to support ARCHES community education and outreach activities are: Climate Resolve, Green Hydrogen Coalition, Clean Air Task Force, Renewables 100, Breathe SoCal, Rincon Band of Luiseño Indians, among others.

B.2 Community Engagement Aims and Approach (*Labor Engagement is Section C*)

Approach: ARCHES engagement activities, as with other community benefits activities, will occur at both the overarching ARCHES level, at the project partner industry level, with community representatives and liaisons, and within the communities of focus.

1. Prepare to engage and assess gaps in readiness. An expert in **DEIA** will be hired by ARCHES to assess readiness and deliver an **engagement orientation early in the project** for ARCHES and personnel from partner industries who will be involved in community engagement. ARCHES requires partners to hire and use local resources whenever it is possible to enact engagement activities; be transparent and truthful about actions, motives, power, and anticipated outcomes; and share decision-making and control.

2. Create local engagement plans, methods, and requirements. With the diversity and number of sites, an in-depth stakeholder analysis must be conducted for each of approximately two dozen locations. Each will have a **separate customized engagement plan** that is aligned to a set of standards and guidelines that include best practices. Suggested outreach methods include bilingual webinars, social media, listening sessions, attending community/neighborhood meetings and community-specific informational meetings, tables in festivals, empowerment events, coordinating with local church leaders, and educational opportunities of local interest.

3. Resolve local barriers to participation. To increase participation, ARCHES and partner efforts will link project issues to priority issues important to DAC residents. Our ARCHES experts will also ensure accessibility for meetings and data collection to include diversity of language, abilities, culture, working hours, needs for childcare, and mobility restrictions.

4. Guide tribal engagement approaches. Many aspects of tribal engagement require specific approaches, due to their distinct legal, administrative, and cultural status. ARCHES Tribal Board Member Bo Mazzetti, Chairman of the California Tribal Chairpersons Association, will make recommendations for effective Tribal Nation-to-Nation engagement methods and negotiations, building on lessons from the ARCHES Rincon project.

5. Concurrent with targeted efforts, employ broad informational methods using PR, media, and broadly-focused strategic plans, communications, education, and outreach targeting the public

and EJ groups. Our primary focus is authentic engagement with DACs and communities of focus, however we will augment this effort by using educational outreach and curated media plans and placements in media outlets.

6. Conduct inclusive, multi-faceted engagement. ARCHES and partners will establish regular meetings to engage those who live, work or own businesses in the community, public health organizations and local health departments, schools, city/county officials and councils, land use planning agencies, transportation agencies, academic researchers, labor organizations, and community members on a breadth of topics to overcome barriers and identify benefits.

7. Establish community roles for cooperation, transparency, control, and accountability. Stakeholder meetings will lead to the formation of a local community team with DAC representation. ARCHES experts will offer consulting and guidelines on effective local team structure. Both partner industries and communities each appoint or elect a project CB liaison.

8. Collaborate with local community and partners to develop appropriate statements and agreements. ARCHES will assist partners to negotiate with communities and submit a community-approved Two-Way Engagement Statement. Other formal agreements, such as the possibility of negotiating a legally-enforceable Community Benefits Agreement (CBA), will be decided by the local community. The locally elected Community Benefits Monitoring Team will facilitate conversations on the type of agreements the community wishes to pursue, additional monitoring criteria, and guide J40 compliance scoring and reporting criteria for benefits.

9. Conduct evaluation on the effectiveness of community engagement. ARCHES will use a variety of tactics to design for rigor and consistency in the structure of feedback collection that permits ongoing evaluation, potential cross-project or broad-region comparisons, and change over time. Methods will include post-event questionnaires, calls for public comments, feedback from stakeholders and board members, and evaluations to check diversity and DAC-related targets across activities from outreach, to meeting attendance and feedback returned.

Engagement Timeline and Milestones: The timeline for engagement will vary based on the individual readiness of partner industries, but for each will commence as early as possible beginning with their Engagement Orientation (part of a larger ARCHES Partner Orientation).

⇒ **Refer to sections F.3.2 and F.3.3 for the Implementation Plan, Schedule, and Milestones**

C. Labor Engagement

With DOE hub funding, ARCHES' full investment and buildout is forecast to generate robust growth of high-road careers and livable wages. By 2030, the ARCHES hydrogen hub is associated with the growth of anywhere from 222,400 to 660,000 new jobs across over a dozen broad occupational groups. Positions span operations, architectural, and engineering managers; health and safety professionals; and social and community service workers. Career opportunities as power plant operators, mechanics, installers and repairers, and supervisors are also anticipated, as are a rise in occupations such as water treatment operators, inspectors, truck drivers, sales representatives, clerks, laborers, and movers. The majority of positions are entry-level, requiring no experience or less than five years' experience. Nearly half of the anticipated new jobs do not require educational credentials (42%) or require a high school diploma or GED (7%), and also necessitate employer investment in short- to medium-term on-the-job training. Across all forecasted positions, the expected hourly wage in 2030 is expected to average \$41 to \$70, an annual salary (2023) of \$85,554 to \$145,600.

C.1 Major Activities and Partners

1. Expand stakeholders to reach DACs and URM: ARCHES uses engagement outreach, local meetings, local assessments, and consulting apprenticeship outreach coordinators and apprenticeship coordinators. Further, many unions (partners) are currently conducting extensive outreach that exceeds “top of mind.” *See stakeholders discussion in Section C.5.*

2. Scale workforce with necessary skills and training: California unions have outstanding and extensive outreach systems and mechanisms in place, which have been developed over decades. There is typically a surplus of qualified applicants, and Union apprenticeship training centers are designed to scale the workforce quickly. Facilities, labs, instructors, human resources, apprenticeship coordinators, and classrooms are in place to meet demands of fast-growing markets. Organized labor regularly participates in career fairs, events at schools and community colleges and attends meetings of community organizations.

3. Require equitable and local subcontracting from DAC- or URM-owned businesses: This is an ARCHES requirement, a part of the RFP process, and typically accomplished through proposal scoring. ARCHES and its partners including unions require project hiring priorities (prioritizing local DAC, URM) to be met.

4. Provide expertise on upcoming skills needed for future economy and workforce (and ensure visibility of this): OEM’s, Project Developers, Unions, codes and standards professionals need to meet periodically to discuss market needs. Union training centers have both labor and management Apprenticeship Committees that meet regularly and discuss training needs. Unions have consistently introduced new training to meet market advances (solar, electric vehicles, lighting controls, etc.)

5. Ensure compliance with DEIA and required labor agreements: This is built into Project Labor Agreements as a compliance function. PLAs are required of all ARCHES projects.

6. Ensure discoverability and use of URM- and local-focused hiring agencies and databases: In addition to the outreach conducted by unions and labor partners, ARCHES will use its web portal as a focal point on numerous URM-focused agencies, opportunities, and community leaders. We also partner with the Building Trades and Apprenticeship Coordinators/Recruiting Coordinators from individual trades who work extensively with third-party community groups focused on disadvantaged youth and adult groups, community colleges, career transition, women’s groups, and second chance turnaround for formerly incarcerated individuals.

C.2 ARCHES Labor Team Members

ARCHES Team members include Board Member Chris Hannan, President, State Building and Construction Trades Council of California, who will coordinate with organized labor, the state building trades, the national building trades, AFL-CIO, and others, and James Willson, Manager, LA National Electrical Contractor’s Association, who will be on the Labor Engagement team working with other unionized construction contractor associations at the local, state, and national levels.

C.3 Current Status of Labor Engagement Activities

We have included organized labor throughout every step of this process, from the first ARCHES meeting to developing this ARCHES-Hub DOE proposal. ARCHES has held public education and outreach sessions in Southern California, Central California and Northern California, which included community labor, and sessions have addressed public safety concerns. Labor has

facilitated meetings with environmental justice and community-based organizations to discuss environmental impacts, safety concerns, and high-road careers. ARCHES meets weekly to analyze engagement process, progress, and gaps.

C.4 Labor Engagement, Stakeholders, and Social Characterization

All private sector members of ARCHES have committed to working with unions under a PLA (project labor agreement) on any projects receiving ARCHES funding. This commitment stems from ARCHES' foundational partnership with organized labor, and its inclusion in all ARCHES activities, governance and decision making. This partnership is unique and has received the support of all major CA unions, on the local and State levels as well as the resounding endorsement of the President of the National AFL-CIO Liz Schuler. Over 20 letters from supporting labor organizations are attached. Our labor-focused partnership recognizes the need for an inclusive, well trained and representative workforce. Indeed, Labor has committed with supporting ARCHES with in-kind contributions of \$25M/year for 10 years (\$200M during the requested 8-year ARCHES DOE funding timeframe) in H2-specific outreach, training support, and workforce-development programs. Our labor partners will focus on training and providing career pathways to all communities within the vicinity of ARCHES projects as well as throughout the State. ARCHES is partnering with the Building Trades, which offers pre-apprenticeship training to women in nontraditional employment roles. The Building Trades, Apprenticeship Coordinators and Outreach Coordinators all work to ensure representation of all stakeholders. Local hire targets are contained within PLAs, and ARCHES will strengthen labor representation in DACs and support union efforts to advance minority workforce into positions of leadership. Organized labor has developed partnerships with community groups, public entities and the private sector for decades and has in place extensive mechanisms for workers that cover outreach, partnership with community groups, classroom training, on the job training, mentorship and more. ARCHES has created an opportunity for labor to expand its partnerships in academia, national scientific research labs and the private sector.

Statements and Agreements: ARCHES projects require the utilization of a skilled and trained union workforce, and a requirement that all workers and for all projects be covered by Project Labor Agreements. Workers will receive full protections under union, PLA, and CBAs, including mechanisms for dispute resolutions, jurisdictional procedures, enforcement and arbitration measures, protections for wage equity, clear advancement criteria, and DEIA accommodations and compliance. Project labor agreements will have local and targeted hire goals.

Labor Engagement Schedule for Execution with Milestones: Labor engagement with community is ongoing. Project developers will coordinate with management (labor's counterpart) to make contractors aware of upcoming projects, job walks, bidding instructions, etc. The process is project-driven, in which management hires labor for these projects. However, ARCHES has involvement in monitoring changes to the training curriculum, and in curricular content and will play a major role in creating a strategic workforce development roadmap for California. The Apprenticeship Committee regularly meets to prepare and plan workforce, and ARCHES will coordinate with this process. ARCHES will also launch a specific Workforce Development Working Group to coordinate with industry and ARCHES project developers, and ensure that project

workforce and training requirements are clearly communicated and met. This Working Group will meet every two weeks.

D. Investing in the American Workforce

New and upskilled positions span a range of skills and will use local hiring resources and partners to reach low- and middle-income skilled workers, and training and career transitions leading to hiring (see Section C Introduction for job classifications). ARCHES will also use third parties for PLAs, and specify the distribution of community and economic benefits, including job quality, access to jobs and business opportunities for local residents, and mitigating community harms, thus reducing or eliminating these types of risks. The State of California has a robust system of training that will be leveraged through ARCHES. This includes working with ARCHES to align high school, community college, and university training to serve the hydrogen market, co-investing in worker retraining through California’s Employment Training Panel, and collaborating with Workforce Development Boards across the state to increase access to apprenticeship programs.

ARCHES Labor Plan Highlights:

- All ARCHES projects under PLA and the benefits and protections that confers
- Good, family-sustaining wages and full benefits (\$60-\$70/hr), also paid during training
- Due to the wages and benefits, and excellent outreach, there is a solid supply for the workforce pipeline
- Training is robust and broad (career not job), which greatly aids upskilling to meet demands for new skills
- There are clearly defined career pathways with portability of skills (uniformly recognized training)
- Numerous mechanisms in place to ensure DEIA, local and DAC hiring priorities
- Bridges to very hard-to-reach populations have been built through strategic partnerships

D.1 Quality Jobs and Competitive Wages

ARCHES projects will create hundreds of thousands of high-quality, family sustaining, well-paying, career-oriented union jobs, and leverage relevant union agreements to supply workers for construction, tradespeople, and operations and maintenance. On all construction work, project labor agreements with prevailing wages and Davis-Bacon wages will ensure family-supporting wages and benefits including healthcare and retirement. Skilled union tradespeople earn above-average incomes (\$60-70/hr in California) markedly better than their non-union counterparts, including superior health and retirement benefits. In all cases, the classification of employees is tracked by hours worked and classroom courses completed, and the process is very transparent. All workers in the same classification earn the same wage rate. Labor and management have collectively bargained processes for any classification and pay issues.

D.2 Workforce Development

ARCHES will ensure that training programs, career development support and career opportunities are available for those in California’s disadvantaged communities. Through UC and the Governor’s Office of Business and Economic Development, ARCHES has a longstanding partnership and thus opportunities to engage through California’s Workforce Development Board for labor on High Road Training Partnerships, High Road Construction Careers, and Building Trades, and Apprenticeship Readiness Programs.

Workforce supply and training: ARCHES will draw from California’s Building Trades Unions, which currently have nearly 500,000 skilled and trained craftsmen and women with approximately 70,000 being registered apprentices. This workforce can support a state-wide hydrogen network

that can be scaled to meet California and the nation's needs. Apprentices belonging to over 150 unions receive their training on the job learning from skilled journey-people and in 125 joint apprenticeship training committees. These programs (e.g., IBEW, Local 11, NECA of LA) have high graduation rates, create high-road careers with benefits, and produce a skilled and trained workforce. ARCHES will customize career transfer programs, community college programs, STEM bridge programs, as well as partnerships with MSIs and HSIs (incl. 5 UC campuses), and Tribal Colleges, in close partnership with California's Labor Agency. In addition, AC Transit is planning a FCEB University including training curriculum and lessons learned across the more mature projects, which will be replicated throughout the ecosystem to provide training for others. *ARCHES will ensure that training programs, career development support, and new career opportunities are available to those in California's DACs.*

Future jobs skills and strategic planning for hydrogen workforce transition: Current and future jobs span engineering, management, tradespersons and technicians, logistics, safety, and quality control. A skills augmentation analysis will be undertaken collaboratively by industry, ARCHES, research experts, and training providers. College programs, modified curricular pathways, training, and competency targets will be created to meet certification or accreditation. Engineers are expected to be well-prepared for a transition into the hydrogen workforce. Some technicians and tradespersons face a more significant but anticipated gap in the transition to the hydrogen industry. ARCHES will lead a strategic workforce development roadmap, and collaborate with other hydrogen hubs, industry partners, and DOE to create a national roadmap of existing and upcoming skills, with estimates of demand, training gaps, prioritizations, concerns, and risks such as safety. Upgrade training is already offered and typically the time off for the training is paid for. Further, unions help place people into new jobs when the previous job ends. Because the training is comprehensive and career-oriented, skilled tradespeople can move between different contractors. These existing mechanisms will be leveraged and augmented to ensure continuous employment and pay during skills or role transitions.

Resiliency and risk mitigation for qualified workforce supply: Hundreds of thousands of California's skilled and trained union members live throughout the state, providing a workforce to meet the needs and challenges to build out a scalable state-wide hydrogen network. Joint apprenticeship committees are partnerships and are co-managed between labor and contractors ensuring that training meets the needs of current demand such as this green hydrogen hub. The training centers of these joint labor-management apprenticeship programs are also located throughout the state and are available to apprentices and journey-level members for additional training to better match new technologies. Given the high demand incentives of good pay, pre-determined targets for wage increases, benefits, training, career opportunities, union representation, etc. we anticipate no shortage of applicants for these careers. Further, many pathways for career advancement for all workers, including those from URMs and DACs. Once started, there is a clear path from apprentice to a journey-person to foreman to general foreman to superintendent, or on to other career pathways like estimating, construction management, project management, specializations, working for the union, becoming a contractor, etc.

Workers are also trained with a broad range of flexible skills rather than a narrow set restricted to a current role. Apprenticeship training covers all sectors of the industry. For example, an

electrician is prepared to work in new construction, solar, wind, electric vehicle infrastructure, etc. There is ongoing training to receive certifications to perform specific jobs that are beyond the scope of an apprenticeship program and these jobs typically include a pay increase. The incentives and breadth of training have created demand and skills for transitions and upskilling. Under PLAs there is a no strike/work-stoppage or lock-out agreement.

Unions and workforce development: Workforce development efforts will be led in part through union apprenticeship programs. Much of the work required for a hydrogen hub will be performed by union construction tradespeople. There is no more proven model of workforce development than joint labor management apprenticeship programs. The process starts with outreach to develop a diversified workforce that represents the diversity of California. Apprenticeship programs in the construction trades, which are funded jointly by labor and management, have been in place for decades and are proven to produce high graduation rates, create high-road careers with benefits and develop a skilled and trained workforce. For example, the International Brotherhood of Electrical Workers (IBEW) Local 11 and the National Electrical Contractors Association of Greater Los Angeles together provide a 5-year apprenticeship program for inside wirepersons, where they invest approximately \$30,000 per student. Apprentices earn money while in school, receive full family medical and dental insurance, and pay nothing for their education—not even for books or work boots. Upon graduation, they earn six-figure salaries with excellent benefits, can work anywhere in the United States, and have a broad array of career paths with opportunities for advancement. Millions of dollars have been invested in developing the labs where students receive hands-on training. It is not a model that other organizations can easily replicate, and we will transition to hydrogen-specific curricula in the training institutes for those in the sector and general awareness.

Workforce development transparency and accountability: Several mechanisms are in place to ensure fair and just employment and pay. Pay increases and advancement requirements are standardized and transparent for workers, trainees, and apprentices (requirements, hours of training, exams, course completion, pay tiers, etc.) A joint labor management apprenticeship committee resolves issues related to meeting requirements for advancement, with published state and federal apprenticeship standards and written codes of conduct. Continuing education or upgrade training is offered to all Journeypersons equally who have graduated their apprenticeship program or met necessary prerequisites.

Workforce development milestones, metrics, and evaluation: Metrics already exist to track several aspects of the workforce, including: work hours (on the job training) and classes completed for workforce development; pay stubs and successfully passed exams; total headcount of construction workers; graduation rates; workers on the bench (between jobs); gender distribution; tenure (hours completed); absenteeism; hours of on-the-job training experience for advancement; and test scores in training courses and breakdown of these. Workforce strategic planning will conduct an assessment and identify additional tracking methods that are needed, such as tracking to meet local hire, DAC, and URM hiring practices. These additional tracking methods may occur via state, ARCHES or project/local level, but will be compiled and made available for reporting, and meeting community and J40 compliance.

D.3 DEIA in Labor and Workforce Development

ARCHES and partners will create conditions amenable to a diverse workforce. In the State of California, the joint labor-management apprenticeship programs of the Building Trades, and apprentices of color equal the diversity found in California's world-recognized UC, Cal State and Community College higher education systems. The use of project labor agreements will set higher apprenticeship goals driving a demand for a diverse workforce.

ARCHES and partners will actively reach out to and **facilitate entry for a diverse workforce**. California's Workforce Development Board has partnered with labor on statewide High Road Training Partnerships and High Road Construction Careers. The State provides funding and support for programs leading to high-road Union careers. In the Building Trades, Apprenticeship Readiness Programs utilize North America's Building Trades Unions' Multi-core craft Core Curriculum (taught in areas to attract a workforce comprised of DACs and URM), which is recognized nationally by the United States Department of Labor. In Los Angeles and Orange Counties, 93% of graduates who have become members of 35 unions are people of color.

Hiring and training priority will be given to (a) local members of DACs, (b) underrepresented minorities (URMs) including tribes, (c) career transfers for veterans, and (d) achieving diversity in the workforce. ARCHES partners include state building trades, the AFL-CIO, union workers and union contractor associations across the state. Other existing partnerships include organizations for URM, women, rehabilitation and re-entry programs, retraining programs, apprenticeships, and veterans' skills transitions. Examples of these include WINTER, Homeboy Industries, Helmets to Hardhats, The Anti-Recidivism Coalition, and 2nd Call. Many construction trades have established sophisticated outreach mechanisms and already are meeting requirements for DACs and URM according to project labor agreements.

ARCHES also ensures systems and processes are in place to **make sure they succeed once hired** into a construction trade program. Apprenticeship Coordinators serve as mentors to apprentices, which can help DACs and URM through the program. Moreover, some trades have minority caucuses to prepare URM to both enter apprenticeship programs and succeed once in the program. Additionally, some union contractors use mentors to help apprentices succeed in the program, sometimes continuing as they advance to becoming foremen.

There are many **pathways for career advancement** for all workers. ARCHES will build on high school awareness and STEM programs to guide students to enter the workforce training pipeline. Trades have extensive outreach programs that include speaking at high schools, participating in job fairs, working with community-based organizations and providing pre-apprenticeship opportunities and programs including the multi-core craft curriculum (MC3). Beyond high school, there are numerous options such as community college training programs, registered apprenticeships, and career and degree transition (bridge programs), and uplift or retraining programs, and sector-based approaches to workforce development. Several programs conduct outreach to Tribal, HSI, other MSIs for workforce direct entry, or for research and education partnerships. The construction trades partner with community colleges, which can provide an excellent preparation to enter an apprenticeship program. The MC3 is offered at certain community colleges.

California state law **requires DEIA training for all employers**. All contractors complete DEIA training. Union training centers have classes that focus on DEIA. Some trades have classes and

minority-focused mentoring for career advancement. Clear processes also support DEIA: when apprentices meet requirements, they receive pay increases (a fair and transparent structure). Upskill training is offered, and often the time off for the training is paid. Unions help place people into new jobs when the previous job ends. Because the training is comprehensive (career rather than task-focused), skilled tradespeople can move from a job working for one contractor to another job with a different contractor. Some training is offered online, making accomplishing upskilling more feasible.

D.4 Workers Rights and Unions

All partners joining ARCHES have committed to working with unions and with PLAs on any projects receiving ARCHES funding. In particular, ARCHES and its partners affirm we will:

- Protect workers' free and fair chance to form or join unions and exercise collective voice.
- Adhere to safety and health plans, and to unions' collective bargaining agreements.
- Work with unions across the hydrogen eco-system to ensure success and accountability
- Employ professional contractors who work with skilled tradespeople
- Use joint labor-management programs that have a dedicated safety professional
- Include apprenticeship committees with detailed and flexible standards and curriculum
- Include health plans (a fundamental part of organized labor).
- Follow collectively bargained procedures (e.g., for grievances, payroll certification).
- Further mitigate the potential for community harms by following codes and standards and high-quality contractors and workers.

D.5 Reporting Requirements and Compliance

The compliance process is embedded in the union labor management agreement, with multiple layers of accountability, and performed by a 3rd party. Work is conducted under collective bargaining agreements. Labor historically has strong processes in place to make sure the work environment is consistent with the labor agreement. Signatory contractors are regularly audited to make pension payments and benefits and compliant with the collectively bargained agreement. Retirement and health plans have to meet ERISA guidelines and are regularly monitored. On-going audits for contractors ensure compliance per CBA and law.

D.6 Labor Evaluation

Labor evaluation includes several established metrics such as workforce hours created, attributes and performance of outreach partners and programs, local hire achievements, achievement of other project labor agreement goals such as veterans, apprenticeship graduation rates, upgrade training completed, and the development of a workforce roadmap.

D.9 Resource summary

ARCHES partners will benefit from a newly-announced state-of-the-art training campus for port workers, expected to open by 2029. In addition, Labor training institutes provide venues, training events, and programs in kind, and ARCHES will fund training modules with new curriculum. Construction unions and contractors have dedicated training centers with staff, instructors, apprenticeship committees, and apprenticeship coordinators. Contractors have dedicated expertise and provide task-specific training. Contractors have partnerships with equipment manufacturers who often provide additional training on their technologies. OEMs and distributors donate equipment to apprenticeship training centers.

⇒ Refer to sections F.3.2 and F.3.3 for the Implementation Plan, Schedule, and Milestones

E. Advancing Diversity, Equity, Inclusion, and Accessibility

ARCHES will harness the strengths of the State of California, including those of its diverse people who offer innovation, accomplishment, and economic success. It will nurture merit, talent, and achievement equitably and will support diversity and equal opportunity in its Board, staff, and project providers. *ARCHES will require that all projects (including H2 industry projects) advance diversity, equity, inclusion, and accessibility.* ARCHES will also (a) remove barriers to equitable recruitment, retention, and advancement of historically excluded and underrepresented workers, (b) assign experienced and diverse DEIA leads, (c) assign priority to minority vendor/contractor selection, (d) establish diversity targets and (e) use partner requirements, KPIs, and data to identify inequities in hiring, recognition, advancement, or pay.

ARCHES has incorporated a set of principles and practices to ensure a supportive, inclusive environment that produces comprehensive, enforceable CB plans as well as concrete program pathways that lead to good jobs and training opportunities for all. To ensure success, ARCHES has partnered with and has specific commitments from community organizations specializing in placing women to work in traditionally underrepresented areas. Our partners include WINTER, or hands-on work with ex-gang members and previously incarcerated people such as John Harriel of Big John Kares, or actively involving veterans and minorities such as Helmets to Hardhats, Second Call, The Atlas Project, Fierce Courage, or the Environmental Justice League. Please see attached letters.

E.1 Roadmap of DEIA Strategies Integrated Throughout the ARCHES Proposal (Table 1)

Strategy or requirement		Applicable plan area
1	Project formation and selection vetting criteria as a means of ensuring DEIA commitments, culture, and results. Preference given to companies with a solid track record of DEIA.	Project selection
2	Communications, FAQs, and all public-facing materials will meet plain language best practices and be published using accessibility practices including multiple languages. Any PR and media publications in non-ARCHES outlets will be compiled and served on the ARCHES website using accessibility practices for visibility and compliance. Every plan should be written in a style and at a reading level for a motivated lay audience, with technical information in appendices. Visual identity of outreach materials should reflect culture and demographics of target audience.	Broad outreach
3	Broad outreach and communications campaigns will follow guidelines to target and interest diverse audiences according to the Strategic Communications Plan we will develop (including target audience metrics).	Broad outreach
4	ARCHES will conduct baseline and annual scoring based on several criteria including DEIA. Scoring will be used to assess gaps, assign resources, and to track progress.	ARCHES
5	DEIA in-person ARCHES orientation sessions required before Phase 1 “go” for all Partner industries key staff working with Community Engagement. Orientation includes sessions on Tribal processes and requirements.	ARCHES orientation and information
6	DEIA orientation on data collection and reporting requirements, as well as signed acknowledgment from Partners required before Phase 1 “go” for all Partner industries.	ARCHES orientation and information
7	Required for Partner industry to have a staffed role dedicated to DEIA	Partner industry

8	Required for Partner industry to meet DEIA requirements to ensure inclusion and accessibility of engagement activities in DACs	Partner industry
9	Required for Partner industry to collect DEIA data as specified in ARCHES orientation and submitted to ARCHES.	Partner industry
10	Required for managers and supervisors at all Partner industries sites to have in-person DEIA training on site at project start or upon hire. Must include anti-bias, unconscious bias, harassment, reporting processes, and anti-retaliation policy.	Partner industry
11	Community engagement participants composition outreach and meeting composition targets match the actual DAC composition and J40 targets.	Community engagement
12	Required for Partner Industry to meet DEIA requirements to ensure inclusion and accessibility of engagement activities in DACs	Community engagement
13	Local outreach and meetings must meet accessibility requirements for time of day, transit route access, after hours availability, language, disability, interpreter, others.	Community engagement
14	Community members, representatives, or voting parties are provided with background education and training on the content presented in plans. If content pertains to supporting material on a voting matter, content will be provided in advance and partners or ARCHES will respond to follow up questions or requests for clarification or additional accessibility requests.	Community benefits
15	Identify local barriers to work during CB outreach and negotiations (childcare, transportation, cost of housing too high near workplace, etc.) and include these in negotiations. ARCHES community benefits guidebook will include strategies on these.	Community benefits
16	Labor workforce, engagement and recruiting efforts report outreach and participant demographics every 6 months.	Labor engagement
17	Required for Partner industry to give vendor hiring priority to local and minority owned businesses. Required for Partner industry to create and maintain, and supply to ARCHES, a list of relevant DAC/URM owned businesses or vendors	Labor – hiring
18	ARCHES requires reporting on DEIA metrics. These protections are encoded in the required PLAs for every project.	Labor – accessibility
19	ARCHES requires annual in-person training, including the most current in-person unconscious bias training for managers and supervisors. ARCHES also requires reporting data tracking advancement of URM	Labor - advancement
20	Use workforce training partners targeting minority, DAC member, underrepresented, and disadvantaged groups (e.g., women, veterans, formerly incarcerated, others). Advertise opportunities to participate in these groups (ARCHES website, local community employer, in the community)	Labor - training
21	For education partnerships, priority is given to qualifying program partners from MSIs. Partnerships established with MSIs.	Labor - training partnerships
22	Provide DEIA composition of ARCHES and partner organizations, CB Monitor Teams, at various tiers of seniority or management.	ARCHES org, Partners org
23	DEIA expert required to serve in ARCHES management and consult across project as requested	ARCHES org
24	Transparency of DEIA for communities by permitting access to community-related DEIA data.	ARCHES reporting
25	Annual full assessments for compliance include DEIA. Non-compliance for DEIA requirements result in monetary penalties (funds going to communities), inclusion in report, and inclusion in scorecard.	ARCHES assessment and reporting

E.3 Evaluation, Reporting, and Compliance

Metrics (ARCHES, Partner, community levels) will be collected and presented in an ARCHES DEIA report section. Metrics requirements will be reviewed annually for improvement. The CBMT will review projects for compliance with CBAs and evaluate the project scorecard. It will also report

to the ARCHES Board every quarter and then have the ability to recommend that the CBA functions of failing projects be transferred to ARCHES along with the associated project budgets for CBA compliance.

⇒ **Refer to sections F.3.2 and F.3.3 for the Implementation Plan, Schedule, and Milestones**

Table 2: DEIA Reporting Metrics: Metrics maintained by the ARCHES DEIA expert.

<ul style="list-style-type: none"> ● Diversity of the hiring panel ● Diversity of the applicant pool ● Diversity of workers and management, by seniority tier (diversity in leadership roles) ● Employee surveys on experience and satisfaction ● Participation in DEIA-focused mentoring programs ● Accessibility evaluation for physical access to work spaces, comfort in spaces including restrooms, maternal and paternal leave, disability accommodations, culturally-based time off ● Retention and advancement demographics 	<ul style="list-style-type: none"> ● Pay equity ● Compliance with California hiring practices ● Compliance with ARCHES local hire, URM, and DAC hiring priorities ● Diversity in partners and vendors used ● Compliance with ARCHES priorities in vendors and contractors local, URM, and DAC owned ● Budget allocation and roles staffed that are dedicated to DEIA ● Presence, composition of mentorship programs, and participant feedback and outcomes
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F. Justice40 Initiative

ARCHES prioritizes the deep decarbonization and localized pollution reductions while meaningfully engaging and benefiting the local communities. ARCHES will require robust evaluation and elimination, or mitigation of all potential community impacts from hydrogen production, transport, storage, and utilization. These activities will be conducted in close coordination with communities to ensure that currently overburdened communities are not disproportionately burdened, and will actually benefit from hub-related projects.

Balance of Responsibility and Control for Community Benefits Activities:

<p>COMMUNITIES: Community members guide local decision-making, exercise local control over the project, facilitate community benefits decisions, enforce J40 compliance and accountability of partner industries, and communicate with the CMBT to establish or modify reporting requirements. Community members are eligible to serve on the CBMT, form a local community benefits voting committee, and elect a community member to serve as a project liaison. Community members participate in the Annual Symposium. All local community benefits project roles are paid for their time. Community members benefit either through projects run directly by ARCHES or ARCHES project partners, or through community partner organizations that are supported through funding or partnership with either ARCHES or ARCHES project partners. Community members can actively engage with community partner organizations or community projects.</p>
<p>PARTNERS: Attend ARCHES Orientation, participate in Annual Symposium, conduct local stakeholder assessment and discovery, must comply with requirements, must pay monetary penalties to communities for non-compliance, with assistance from ARCHES, negotiate J40-compliant benefits with communities. Must staff a local DEIA expert and appoint a local community benefits Project Liaison. Fund community benefits and local mechanisms supporting J40 compliance with 1% of project budget. Project partners can either work to provide community members with benefits directly, by running projects that they manage and which benefit the local community, or by partnering with community organizations, provided transparency requirements are met.</p>
<p>ARCHES: <u>Resources:</u> Leverages beneficial partnerships at all levels, provides Playbook, experts, rosters of additional expertise, FAQs, training and orientations, runs the Annual Symposium, offers support staff, best practices, collections of information and evidence, web portal for transparency, shared drives of accessible reports. <u>Accountability:</u> Organizes CBMT, conducts assessments, maintains approved requirements and checkpoints, and enforces compliance. Can fund partner organizations or resources that are useful across communities and</p>

projects, and can directly fund some benefits directly in partner communities. ARCHES also provides oversight on spending. ARCHES conducts a baseline assessment of partners and of local communities' readiness and capacity to engage and establish J40-compliant community benefits, prior to distributing financial resources.

F.2 Justice40 Assessments

Communities of Focus: A broad assessment of California's impacted communities appears in Engagement Section B.1. Due to the large number of sites involved in ARCHES, detailed local assessments will be conducted by project partners with resources and training provided by ARCHES. Identification of common needs by ARCHES during proposal development while useful does not replace the outcomes of specific local assessments, negotiations, and the locally-defined needs of ARCHES frontline communities. Communities retain control over the identification of their own needs. During our early engagement and assessments, we were able to collect and incorporate some early community feedback and concerns into ARCHES process:

Public concerns incorporated into ARCHES project selection or requirements:

- Greater transparency in selection of project partners
- Only include projects committing to reductions of pollutants
- Prioritize projects that do not extend the use of fossil fuels and fossil fuel infrastructure
- Give communities local decision-making power over projects
- Leverage partnerships with local organizations to make implementation more effective and efficient
- Don't pre-determine local community benefits; let communities speak for themselves
- Potential harms and safety risks, and mitigation plans are fully assessed across all project aspects and phases and disclosed to communities prior to new work commencing
- Projects will not increase any economic burdens in impacted communities

Planned assessments to identify information gaps: ARCHES and partners will assess gaps in partner knowledge of communities, preparedness to deliver benefits, and existing resources (the Scorecard to conduct baseline preparedness from the Engagement Orientation) for each partner-associated community. We will examine public opinion using large, coordinated baseline (and ongoing) public opinion surveys. The Scorecard will be used for ongoing assessment and a transparent access point for communities and partners. ARCHES will also consult with Tribes (part of the ARCHES board) to develop metrics across all stages.

Mitigation of Negative Impacts: Environmental impact assessments including risks, seismic risks, social and cultural impacts, and more will be conducted. All required report outcomes for each project, risks identification, and mitigation plans will be shared with communities, along with plain-language summaries of project activities and anticipated impacts (environmental, health, disturbances, social, cultural, land use, traffic, etc.). Following the release of project information, there will be an open comment period, and comments will be addressed prior to a project receiving authorization to proceed.

Table 3: Potential negative impacts resulting from all project activities:

Analyses of potential impacts will be updated and refined as part of Phase I activities.

Sector	Major Activity, and Impact	Affected Phase	Likelihood: Expected, Unlikely	Affected regions
Prod, Transit	Increased refueling traffic (lower energy density than diesel)	Ongoing	Likely after capacity ramp up	Local at station, transit diffuse
Prod	Construction noise and congestion	Construction	Likely	Local at site
Prod	Chemical factory presence: Visible plant. Possibility to impact property values if new (not conversion)	Ongoing	Unlikely as zones away from large populations	Diffuse but near plant site
Prod	Liquefaction or compression: noise and vibration	Ongoing	Unlikely if operating correctly	Local near stations only
Prod	Water consumption, temperature or contaminant pollution	Ongoing	Unlikely	Near production plants
Prod	Excess oxygen produced and vented (TBD-some locations possible future oxygen offtake to increase waste treatment)	Ongoing	Likely	Local near electrolyzer vents
Stor, Prod, Port	Visible facility, plant, tank or storage unit: Visible facility. Possibility to impact property values if new (not conversion)	Ongoing	Likely but impact only if zones close to population	Local near site
BioM	Biomass transport	Ongoing	Likely	HCycle, Mote sites to plants
BioM	Biomass odor production	Ongoing	Unlikely due to tech choice	Diffuse
BioM	Excess oxygen vented. No exposure to O2 at high or dangerous concentrations to humans or animals	Ongoing	Likely to occur, unlikely to be negative	Local near site
BioM, Infra	Underground CO2 storage, possibility of earthquake damage to storage facility or pipeline	Rare	Unlikely especially after seismic analysis	Local
Infra	Pipeline construction, occurring in various rights of way	Construction	Likely	Local at the trench
Infra	Presence of pipeline, depending on depth and location choice	Ongoing	Unlikely due to options	Local at the pipeline
Infra	Pipeline use and possibility of damage, release of contents	Rare	Unlikely	Local at the pipeline
Transport	Increased truck traffic (trucks), possible load/trip reduction	Ongoing	Likely, still outperform battery	Diffuse
Transport	Refueling is more complicated and newer technology and so can stick or be very cold, especially with liquid H2	Ongoing	Likely to unlikely as training, tech progresses	Local at station
Transport	Quietness of the trucks and buses could be a concern	Ongoing	Unlikely	Diffuse
Transport	Concern about transport in tunnels (Here FCET is worse unlike in every other case where diesel is worse.)	Rare	Unlikely since it involves the case of accidents	Focused
Port	Tank leakages (fast dispersal of leakages, tanks are monitored)	Ongoing	Unlikely	Local at the ports
Port	Refueling and operation of CHE practices, stations and mobile refuelers increased distances and time compared to diesel	Ongoing	Overall unlikely and mitigated by staged roll out	Local at the ports
Port	Construction of infrastructure, stations, traffic, noise, etc.	Construction	Likely for any project	Local at the construction sites
All	Leakage and burns colorless	Ongoing	Leak unlikely	Diffuse
All	Changes in practice, e.g., unfamiliar safety protocols	Ongoing	Unlikely with cert. training	Diffuse

Locally Negotiated Benefits Achieving Positive Impacts: In addition to the numerous positive impacts resulting at the hubs-level, locally negotiated benefits will result in a variety of positive impacts such as reduction of energy burdens, improved local capacity, improvements to local infrastructure, and greenspace or economic revival projects. Partners, with ARCHES training and support, will conduct in-depth social and stakeholder assessments, engage with local DACs, and negotiate J40-compliant community benefits beyond the benefits offered at the hub level. ARCHES will develop a number of supporting resources to aid Partners. Communities can negotiate additional metrics, reporting requirements, and transparency mechanisms.

F.3 Community Benefits and Justice40 Implementation Plan

ARCHES is following an inclusive process to identify partners and benefits based on DAC- and community-determined needs. ARCHES commitments are enforced between the partner organizations and the communities through negotiations, compliance requirements, compliance penalties, and the option by communities to enact a CBA or CBP.

1. Partners conduct in-depth local assessments, discovery of local stakeholders, and participants for community benefits activities. Partner industries will receive training, expertise, and resources to aid local assessments and engagement while complying with ARCHES and community requirements. (Likewise, community members and representatives have access to ARCHES-provided expertise and resources to enable effective engagement.)

2. ARCHES provides resources and expertise to aid communities and partner industries.

Refer to Section A.3 and the Implementation Plan in F.3.2 for resources ARCHES will supply.

3: Communities create local control and roles. ARCHES will include communities, organized labor, and city/local government representatives on its governing board, which are nominated by local (including DAC) Advisory Committees. ARCHES has already involved community, organized labor, and city/local government representatives in determining the vetting criteria for project approval, in addition to feedback from EJ groups. Vetting criteria are augmented by community members and become the scoring criteria used to assess project industry partner compliance by the CBMT. Projects must have Board approval before receiving funding. Projects require a supermajority vote for approval over a negative Advisory Committee recommendation.

4. Establish benefits and offer resources supporting justice, health, and equitable prosperity. ARCHES will ensure that quality jobs and benefits, training programs, career development, equitable advancement and subcontracting opportunities are prioritized for DAC members. In addition to the numerous health benefits inherent to clean energy, ARCHES and partners will help identify local barriers to health and quality of life, such as legacy and ongoing pollution, natural carbon sinks and air quality buffers, transportation, affordable childcare, food deserts, etc. for inclusion in the CBA. Partners will also receive guidance and training on how numerous other benefits in response to community-determined needs can be supported.

CBAs: If communities decide to pursue a CBA, ARCHES offers resources such as experts on content areas, rigor standards, enforcement of harm mitigation, benefits delivery, accountability measures, and numerous other desirable outcomes.

5. Maximize impact and delivery of benefits with transparency, accountability, metrics, and data. ARCHES requires the submission of metrics capable of demonstrating that at least 40% of

project benefits flow to California’s DACs. Benefits, delivery of benefits, and methods to track and enforce delivery (including feedback) will be detailed in a signed CBP or CBA.

F.3.1 CBP Criteria Progress and Compliance Tracker

The progress tracking criteria include modified initial vetting criteria for project selection, additional criteria useful for tracking progress and assessing gaps for resources distribution, and compliance for improvement or penalties. Criteria will be initially scored and require a formal commitment to meet applicable criteria prior to Phase I go/no go. A baseline scoring assessment will be conducted early to identify needs and resource allocation. Scoring criteria can be modified to improve rigor by the CBMT, and through community input.

Table 4: Progress Tracking Criteria (Partners Scorecard):

1	Does not increase or actively reduces criteria pollutants: e.g., NOx, PM2.5 (meets metric)
2	Reduces diesel and other fossil fuel consumption (meets metric)
3	Creates careers locally and/or regionally
4	Demonstrates commitment to J40 (establishes requirements and meets metrics)
5	If beyond first CBP reporting period, demonstrates compliance with relevant J40 requirements
6	Does not increase (or reduces) the energy cost burden
7	Does not increase toxic or criteria pollutant emissions during life (meets metric)
8	Reduces health issues
9	Provides other health benefits
10	Makes local infrastructure improvements and offers community services
11	Demonstrates support of local communities (DACs, Tribal, URM)
12	Demonstrates diversity in their own management, supervisory roles, and promotion trends
13	Focused on inclusion, diversity, equity, accountability in workplace
14	Shows meaningful and sustained engagement of local stakeholders
15	Shows meaningful and sustained engagement of DAC and URM stakeholders
16	Offers strong workforce development and organized labor interactions
17	Agrees to potential CBA, MOUs, PLAs with community
18	Demonstrates commitment to organized labor
19	Utilizes minority businesses, etc. for supply chain
20	Prioritizes local hiring and retraining, and has partnerships to do so
21	Prioritizes hiring URM, disadvantaged, and from DACs, and has partnerships to do so
22	Creates roles for local control of project decision

F.3.2 Implementation Plan Actions (Table 5)

A. Actions: Community engagement (local)	Timing & Freq.
1. Hold orientation with ARCHES and partners on CBP-related (a) DAC, Tribal, and DEIA engagement, (b) CBMT orientation and reporting requirements, (c) future CBP cross-project and cross-hubs data collection alignment, (d) project data collection standards (to enable future comparisons and analyses) and (e) ARCHES resources available to partners, (f) Partner signed compliance statements on budget/CB commitments and ARCHES requirements, hiring incentives, required DEIA role, DEIA required on-site training, CBMT scorecard, compliance penalties, impact disclosures, CB negotiations expected outcomes.	4/year
2. Provide network of engagement contacts, experts, and resources, and guidance on engagement with DACs (as service, also as resource in Playbook/guide)	4/year
3. Assess the readiness of each partner industry to engage and negotiate community benefits	6/year

4. Conduct aligned (all projects) community-of-focus baseline public opinion survey	baseline, ev. 2 yrs
5. Hold meetings with DAC leaders and community members	12/year
6. Monitor/assist in local negotiations if requested. Ensure compliance w. J40 in agreements	upon request
7. Assess the effectiveness of ongoing local engagement between partners and communities and recommend improvements as appropriate	4/year
8. Community meetings to inform and vote on project issues. Ensure compliance: compensated local roles with control are created.	4/year, or per sched
9. Assess the effectiveness of local meetings and compliance with the assignment of targets and metrics, and transparency requirements.	2/year
A. Reporting Requirements: Partner stakeholder assessments, gaps analysis, partner scorecard baseline and ongoing, public opinion surveys baseline and ongoing, engagement community feedback, progress on local committee and liaison elections, targets for local meetings (frequency, roles filled, local negotiations and informational sessions progress, partner budget spending type and amount)	
B. Actions: Community engagement (broad)	Yr & Freq.
1. The annual symposium will include a plenary session for individuals who fund EJ groups - to discuss best practices in community benefits and also specifically discuss ARCHES community benefits frameworks and highlights	1/year
2. Hold meetings with EJ Groups	2/year
3. Collect feedback from EJ Groups, respond, and weigh feedback for value to add to project	2/year
B. Reporting Requirements: Feedback from public and EJ groups across several project engagement goals, # meetings target, annual public opinion survey, record of public opinion Q&A session from annual symposium, annual ARCHES-provided resources assessment, Outreach, PR and media impacts data	
C. Actions: Labor and Workforce Development	Yr & Freq.
1. Develop web resource to be a single focal-point for H2-related labor resources, opportunities and hiring databases, skills, careers, apprenticeships, training programs.	ongoing
2. Assist in promoting local educational and career/hiring opportunities.	ongoing
3. Work with local communities and partner industries to set and comply with DAC and local hiring targets and reporting.	2/year
4. Create annual reporting template and require annual reporting from partners	1/year
5. Work with communities, stakeholders, and partners on incentives/benefits for hiring and promoting local and from DACs, targets for URM in leadership positions	on a per proj. schedule
6. Work with national industry experts and researchers to develop H2 workforce guidelines	2/year
7. Develop a National H2 Industry Workforce Development Roadmap including skills roadmap	2/year
C. Reporting Requirements: feedback on resources effectiveness, DEIA labor review, hiring priorities, hiring, training, recruitment, pay, demographics, target groups, curricular meetings, curricular reviews, roadmap progress, training feedback, Partner industry labor requirements, and the many compliance processes that are embedded in the union labor management agreement.	
D. Actions: DEIA (refer to DEIA roadmap for a more detailed list)	Yr & Freq.
1. DEIA expert delivers part of ARCHES and partner orientation at project start	per schedule
2. In-person DEIA training on-site at partner industry for all supervisory and hiring roles	per schedule
3. DEIA ARCHES expert reviews and signs off on all major ARCHES tasks, including public information, major resources, and meetings	ongoing
4. DEIA scorecard deficiencies require partner to submit improvement plan + ARCHES review	2/year
5. Highlight success story, ensure inclusion in governance and in project implementation	4/year

D. Reporting Requirements: DEIA partner requirements met (DEIA role, training, targets), DEIA ARCHES feedback, scorecard DEIA criteria, community and worker feedback	
E. Actions: CBP Negotiations	Yr & Freq.
1. Disclose potential positive benefits and negative impacts in a manner that is easily discoverable, understandable, and accessible	at start, annually
2. Disseminate the ARCHES Community Benefits Playbook, and provide a mechanism for answering questions	at meetings, push/deliver
3. Assist in locating special topics speakers or experts - local or via webcast if requested	ongoing
4. Disseminate relevant plain lang. information before working meetings or voting sessions	ea. meeting
5. Hold inclusive and accessible public meetings prior to negotiating formal agreements	by proj. schedule
6. Hold business meetings with voted community representatives to negotiate community benefits plans and J40 compliance	by proj. schedule
7. Include tribal communities in all discussions about projects adjacent or near to tribal lands	by proj. schedule
8. Require projects to provide J40-related CB targets, assess projects via J40-related metrics	1/year
9. Signed agreement of work to be done, metrics, budget commitments, negative and positive impacts disclosures, timeline (may or may not be legally binding as community dictates)	1/year
E. Reporting Requirements: Negative and positive impacts full disclosures, J40 compliance assessment and checklist of negotiated agreement, CB negotiations progress, partner budget spending type and amount, copy of signed CB agreements and budgets, environ. monitoring plan and targets, CBMT compliance check	
F. Actions: Transparency	Yr & Freq.
1. Copies of local public decisions and survey results submitted to ARCHES	within 90 days
2. Communities can request and receive a 3 rd party representative experienced in the topical focus of the meeting (e.g., formal agreements) to attend meetings	as requested
3. Air quality, environ. data in accessible and plain lang. format on ARCHES website	2/year
4. Posting of broadly useful items, e.g., FAQs, plain language progress reports, webcast of special topics speakers (EJ, racial justice, environmental issues, etc.) from public/open local meetings to the ARCHES website	as it becomes available
5. Continuing already established meeting series for community and EJ groups	12/year
6. Develop and set schedule and requirements for mechanisms permitting lateral awareness of status, composition, and success of CBP projects across all ARCHES projects, and for “in-reach” communications across projects	annual, deliver (ongoing)
7. All meetings require an in-advance posted agenda, meeting minutes, and post-event surveys (see alignment criteria for cross-project and across time analyses/comparisons)	per meeting
F. Reporting Requirements: Compliance/noncompliance full ARCHES audit, signed acknowledgement of compliance/non-compliance and penalty assessment, annual environmental and impacts data release (info push vs. continuous), annual budget efficiency and compliance review, annual cross-hubs meeting report, tribal relationship brief released by ARCHES tribal board member	
G. Actions: Cross Hubs Coordination and Strategic Planning	Yr & Freq.
1. Set goals and collaborate to develop national H2 priorities and targets. See also Aim 2.3 Actions for national workforce roadmap	2/year
2. Establish frameworks and formats to enable cross-regional comparisons, reporting, analyses	1/year
3. Leverage, revise, and build upon the California State Roadmap for H2	1/year
G. Reporting Requirements: Annual cross-hub meeting report, cross-hubs and CA strategic plans milestones update	

F.3.3 Timeline and Milestones

