



**SANTA CRUZ METROPOLITAN TRANSIT DISTRICT (METRO)
BOARD OF DIRECTORS MEETING MINUTES*
AUGUST 25, 2023 – 9:00 AM**

A regular meeting of the Board of Directors of the Santa Cruz Metropolitan Transit District (METRO) convened on Friday, August 25, 2023, as a hybrid meeting.

The Board Meeting Agenda Packet can be found online at www.SCMTD.com. *Minutes are “summary” minutes, not verbatim minutes. Audio recordings of Board meeting open sessions are available to the public upon request.

This document was created with accessibility in mind. With the exception of certain third party and other attachments, it passes the Adobe Acrobat XI Accessibility Full Check. If you have any questions about the accessibility of this document, please email your inquiry to accessibility@scmttd.com.

1 CALLED TO ORDER at 9:00 AM by Board Chair Kalantari-Johnson.

2 ROLL CALL:

The following Directors were **present**, representing a quorum:

Director Kristen Brown	City of Capitola
Director Rebecca Downing	County of Santa Cruz
Direct Jimmy Dutra	City of Watsonville
Director Shebreh Kalantari-Johnson	City of Santa Cruz
Director Manu Koenig	County of Santa Cruz
Director Donna Lind	City of Scotts Valley
Director Bruce McPherson	County of Santa Cruz
Director Scott Newsome	City of Santa Cruz
Director Larry Pageler	County of Santa Cruz
Director Quiroz-Carter	City of Watsonville
Director Mike Rotkin	County of Santa Cruz
Ex-Officio Director Dan Henderson	UC Santa Cruz
Ex-Officio Director Alta Northcutt	Cabrillo College
Michael Tree	CEO/General Manager
Julie Sherman	General Counsel

3 ANNOUNCEMENTS

Today’s meeting is being broadcast by Community Television of Santa Cruz County.

Hector Guzman, Language Line Services, provided Spanish language interpretation services.

4 BOARD OF DIRECTORS COMMENTS

Hearing none, Board Chair Kalantari-Johnson moved to the next agenda item.

- 5 ORAL AND WRITTEN COMMUNICATIONS TO THE BOARD OF DIRECTORS**
Brian Peoples, Trail Now, expressed concern about Guy Preston’s retirement from the SCCRTC (Santa Cruz County Regional Transportation Commission) and speculated on Mr. Preston’s reasons for retiring. Mr. Peoples addressed the METRO representatives that sit on the SCCRTC Board and requested they build the interim coastal trail.

Director Rotkin commented that Mr. Peoples has every right to express his personal views but should not put words in the mouth of Mr. Preston.

Hearing nothing further, Board Chair Kalantari-Johnson moved to the next agenda item.

6 LABOR ORGANIZATION COMMUNICATIONS

Hearing none, Board Chair Kalantari-Johnson moved to the next agenda item.

7 ADDITIONAL DOCUMENTATION TO SUPPORT EXISTING AGENDA ITEMS

Board Chair Kalantari-Johnson noted an additional written communication had been received and was distributed to Board Members on August 24, 2023. Staff will respond to the inquiry and it will be added to the online agenda packet.

Hearing nothing further, Board Chair Kalantari-Johnson moved to the next agenda item.

CONSENT AGENDA

- 8.1 ACCEPT AND FILE: PRELIMINARY APPROVED CHECK JOURNAL DETAIL FOR THE MONTHS OF JUNE AND JUNE 2023
Chuck Farmer, CFO
- 8.2 ACCEPT AND FILE MINUTES OF:
A. JUNE 23, 2023 BOARD OF DIRECTORS REGULAR MEETING
B. AUGUST 11, 2023 BOARD OF DIRECTORS SPECIAL MEETING
Michael Tree, CEO/General Manager
- 8.3 ACCEPT AND FILE: THE YEAR TO DATE MONTHLY FINANCIAL REPORT AS OF JUNE 30, 2023
Chuck Farmer, CFO
- 8.4 ACCEPT AND FILE: THE YEAR TO DATE KEY PERFORMANCE INDICATORS (KPI) REPORT FOR QUARTER FOUR AS OF JUNE 30, 2023
Chuck Farmer, CFO
- 8.5 ACCEPT AND FILE: QUARTERLY STATUS REPORT OF GRANT APPLICATIONS, ACTIVE AND PENDING GRANTS FOR THE FOURTH QUARTER OF FY23
Wondimu Mengistu, Capital Planning and Grants Program Manager
- 8.6 ACCEPT AND FILE: THE METRO PARACRUZ OPERATIONS STATUS REPORT FOR APRIL, MAY AND JUNE 2023
Daniel Zaragoza, Operations Manager, Paratransit Division
- 8.7 ACCEPT AND FILE: THE METRO SYSTEM RIDERSHIP REPORTS FOR THE FOURTH QUARTER OF FY23
John Urgo, Planning and Development Director

- 8.8 APPROVE: FY24 RENEWAL OF PROPERTY INSURANCE COVERAGE WITH ZURICH AMERICAN INSURANCE COMPANY AND EMPLOYMENT PRACTICES LIABILITY COVERAGE WITH LEXINGTON INSURANCE CO.
Chuck Farmer, CFO
- 8.9 APPROVE: METRO ADVISORY COMMITTEE (MAC) VACANCIES
Michael Tree, CEO/General Manager
- 8.10 APPROVE: CONSIDERATION OF DESIGNATING THE CHIEF OPERATIONS OFFICER TO THE CALIFORNIA TRANSIT INDEMNITY POOL (CALTIP) BOARD AS THE DESIGNATED ALTERNATE REPRESENTATIVE
Michael Tree, CEO/General Manager
- 8.11 APPROVE: CONSIDER A RESOLUTION DESIGNATING THE CEO AS THE AUTHORIZED AGENT TO SUBMIT A PROJECT LIST AND EXECUTE AGREEMENTS TO RECEIVE CALIFORNIA STATE OF GOOD REPAIR FUNDS
Wondimu Mengistu, Capital Planning and Grants Program Manager
- 8.12 APPROVE: CONSIDER APPROVAL OF THE MANAGEMENT WAGE SCALES
Dawn Crummié, HR Director

Director McPherson made a reference to Item 8.4A.9 stating UCSC ridership decreased but it appears to have increased according to the chart. He requested staff to review and correct if necessary.

There were no public comments.

Item 8.6 was pulled for further discussion.

ACTION: MOTION TO APPROVE THE CONSENT AGENDA AS PRESENTED (WITH THE EXCEPTION OF ITEM 8.6)

MOTION: DIRECTOR ROTKIN

SECOND: DIRECTOR LIND

MOTION PASSED WITH 8 AYES (Directors Brown, Downing, Kalantari-Johnson, Koenig, Lind, McPherson, Pageler and Rotkin). Directors Dutra, Newsome and Quiroz-Carter were absent.

Item 8.6 discussion ensued.

Director Rotkin noted that METRO's goal is to have a 90% "in ready" window for paratransit services and usually exceeds that by being in the high 90's. In reviewing the staff report, it shows we have an increase in paratransit riders for Q4 ending June 30, 2023, compared to the same time frame in 2022. It also shows that the monthly operational numbers of riders on paratransit is going down for Q4 and asked why that is the case. Other Directors noted this as well.

Margo Ross, Chief Operations Officer, introduced Daniel Zaragoza, Operations Manager: ParaCruz Division. Mr. Zaragoza responded that ridership historically goes down when Cabrillo College has spring break or the semester ends. Director Rotkin requested additional details be sent to the Board.

There were no public comments.

ACTION: MOTION TO APPROVE ITEM 8.6 AS PRESENTED WITH FOLLOW UP FROM STAFF

MOTION: DIRECTOR ROTKIN

SECOND: DIRECTOR PAGELER

MOTION PASSED WITH 8 AYES (Directors Brown, Downing, Kalantari-Johnson, Koenig, Lind, McPherson, Pageler and Rotkin). Directors Dutra, Newsome and Quiroz-Carter were absent.

REGULAR AGENDA

9 PRESENTATION OF EMPLOYEE LONGEVITY AWARDS: (10 YEARS) WESLEY GUILD

Board Chair Kalantari-Johnson acknowledged Mr. Guild for his years of service.

10 RETIREE RESOLUTION OF APPRECIATION FOR: PEG FLECHTNER, HARLAN GLATT, ANDREW KEARNEY, PAUL LENNON, AND MARISELA MENDOZA

Board Chair Kalantari-Johnson thanked the retirees for their years of service.

ACTION: MOTION TO APPROVE THE RETIREE RESOLUTIONS OF APPRECIATION FOR PEG FLECHTNER, HARLAN GLATT, ANDREW KEARNEY, PAUL LENNON, AND MARISELA MENDOZA

MOTION: DIRECTOR ROTKIN

SECOND: DIRECTOR PAGELER

MOTION PASSED WITH 8 AYES (Directors Brown, Downing, Kalantari-Johnson, Koenig, Lind, McPherson, Pageler, and Rotkin). Directors Dutra, Newsome and Quiroz-Carter were absent.

11 ORAL REPORT ON HYDROGEN TECHNOLOGY IN THE MARKET PLACE FOR PUBLIC TRANSIT AND THE ALLIANCE FOR RENEWABLE CLEAN HYDROGEN ENERGY SYSTEMS (ARCHES)

Wondimu Mengistu, Capital Planning & Grants Program Manager, spoke to why METRO is looking to hydrogen technology for its operations. He then introduced Jaimie Levin, Director of West Coast Operations, Center for Transportation and the Environment (CTE) and Scott Brandt, Associate Vice President for Research and Innovation at UC Office of the President and Interim COO of ARCHES.

Mr. Levin spoke to his presentation (attached) and provided background on the development progress of the hydrogen technology and where it aligns with METRO's efforts in taking a leadership role in this area. He explained what fuel cell technology is and how it works, the advantages of using this technology as well as infrastructure challenges and costs.

Mr. Brandt spoke to his presentation (attached) and covered ARCHES' mission, key differentiators, principles, and goals. He reviewed the hydrogen flow from feedstock, production, infrastructure, and demand. He touched on community benefits, workforce development, and the goal of making it cost effective.

Board Chair Kalantari-Johnson thanked both Mr. Levin and Mr. Brandt for their work in this area and the informative presentation to the METRO Board of Directors.

Discussion topics by Board Members included:

- Hindenburg disaster and dispelling the myth that hydrogen caused that airship accident
- Safety protocols
- Time frame of 2030-2032 as the operational target of \$5/gallon at the pump
- Process of biohydrogen
- Practicality of exploring natural sources of hydrogen in California
- Potential for reduced maintenance costs and the tracking of labor costs
- Biogenics as a resource and the challenges it encompasses

Mr. Levin and Mr. Brandt addressed all concerns.

Public comment was as follows:

Beverly Des Chaux, President of the Electric Vehicle Association of the Central Coast, urged the Board to not invest in hydrogen buses but rather invest in electric buses.

Brandon Freeman, Senior Vice Chairperson of SMART, Local 0023, admitted he was hesitant about hydrogen at first but changed his mind when considering METRO's ability to respond in disaster situations. The biggest issue is to be able to charge battery-electric buses in a timely manner to assist with evacuations. When we were in the evacuation zone during the fires, we lost access to the yard, thus losing access to charging the buses. In emergency circumstances, METRO is often called upon to help with evacuations. As a Bus Operator, we need our buses to be reliable and easily refueled so we can get back on the road. A battery-electric bus does not meet that need.

Board Chair Kalantari-Johnson thanked the public for comments and hearing nothing further, moved to the next agenda item.

12 CEO ORAL REPORT

Michael Tree, CEO/General Manager, spoke to the following:

- Award of the Lo-No Grant from the Federal government in the amount of \$20.4 million for hydrogen buses. We had a quick celebratory event in Watsonville to fit in with Congressman Panetta and Congresswoman Lofgren's schedules.
- This last week the California Transportation Commission fully allocated the \$38 million METRO was awarded in the TIRCP grant cycle.
- Upcoming contract for 57 hydrogen buses. Wondimu has put together a portfolio of funding for those 57 buses and CEO Tree highlighted that out of the \$89 million needed to purchase those hydrogen buses, 1.1% came from local sources; everything else was from Federal and State funding sources.
- Working on a partnership with Central Coast Community Energy and hope to bring an agreement to the Board in October.
- Creating a new website and hope to unveil it in the spring of 2024.
- Completed our FTA triennial audit and received the results this past week. Only two minor items were found. We will bring the results to the Board in September.
- Jarrett Walker and Associates will bring both short- and long-term changes envisioned for the bus system to the Board in September.
- Mr. Tree explained that he helped in answering the phones at Customer Service after 5:00 PM and played a message received from customer Frances Payne. She gave acknowledgement to Bus Operator, #687. "He was so respectful and had excellent driving skills. He handled an unforeseen problem with ease and handled an unexpected detour that came up with finesse. He had coolness and sensitivity to all the passengers. He stayed focused and brought us safely to the Metro Center and I just was really impressed with him. He's an asset."

Board Chair Kalantari-Johnson thanked CEO Tree for sharing the recording. It demonstrates everything that goes into having that person make that call; everyone's contributions to allow that driver to be an asset to our METRO and our community.

Director Brown asked if that driver has been identified and acknowledged? CEO Tree said it is Miguel Maldonado. We'll bring him to the next Board

meeting for you to meet.

Director Rotkin added how great it is to work for a transit agency where the CEO/General Manager answers the phone after 5:00 PM. I just want to recognize Michael for the great job he is doing for us.

13 ANNOUNCEMENT OF NEXT MEETING:

Board Chair Kalantari-Johnson announced the next regular Board meeting will be held on Friday, September 22, 2023, at 9:00 AM at the Santa Cruz City Council Chambers, 809 Center Street, Santa Cruz.

14 ADJOURNMENT

Board Chair Kalantari-Johnson adjourned the meeting at 10:40 AM.

Respectfully submitted,

Donna Bauer
Executive Assistant

Fuel Cell Buses and H2 Fueling Stations – Commercialization Status

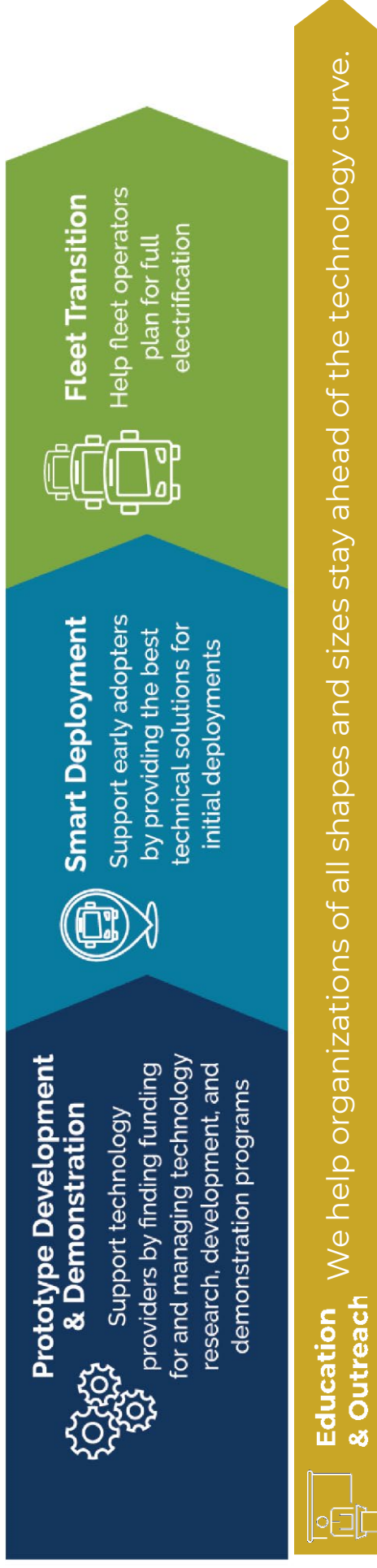


Santa Cruz METRO – August 25, 2023

Jaimie Levin, Director of West Coast Operations
Center for Transportation & the Environment



About CTE



- **Who We Are: 501(3)(c) non-profit engineering and planning firm**
- **Our Focus: Zero-Emission Transportation Technologies**
- **Our Mission: Improve the health of our communities and the planet**
- **Portfolio - >\$1.2 billion; 115 Active Projects totaling over \$365 million**
- **National Presence**
Atlanta, Berkeley, Los Angeles, Minneapolis/St. Paul

100 CTE Members



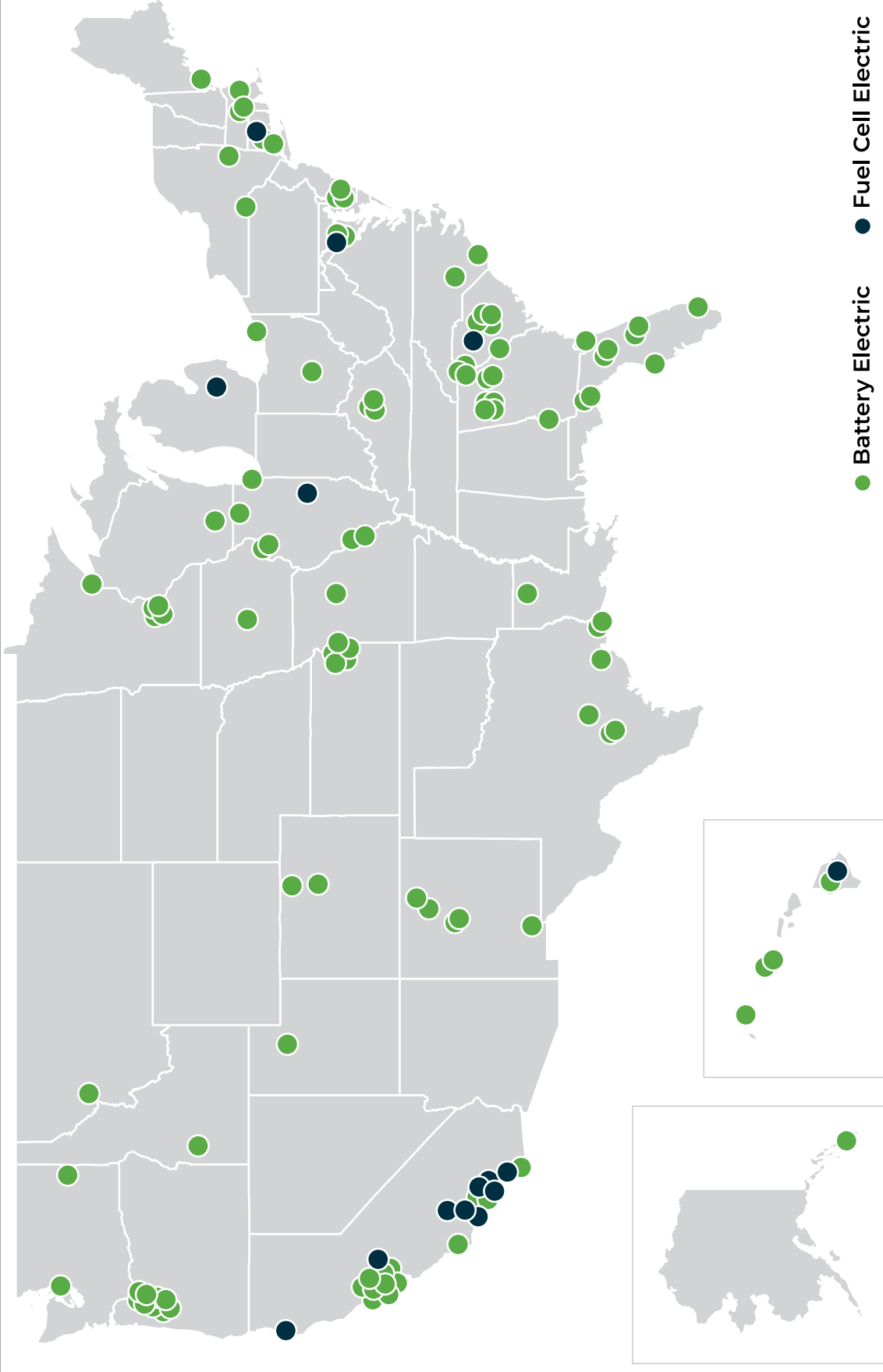
Leadership Circle Members



Members



CTE Projects



Hydrogen Fuel Cell Projects

CTE has supported 40+ hydrogen based projects over the past 30 years

- **AC Transit FCEB Support (13 FCEBs)**
- AC Transit and OCTA FCEB (\$45 million – 20 buses)
- Shell Oil Light-Duty H2 Fueling Station
- Champaign-Urbana FCEB deployment, electrolysis hydrogen refueling station and full facility modifications for indoor parking and maintenance
- **SamTrans FCEB Deployment (10 FCEBs)**
- Winnipeg Hydrogen Fueling Station – Electrolyzer
- **Foothill Transit Fueling Station**
- North County Transit District Fueling Station
- Fuel Cell Electric Class 8 Drayage Truck (Kenworth)
- Fuel Cell UPS Class 6 Delivery Van (2 deployments)
- Transit Fuel Cell Electric Top Loader – POLA (Hyster-Yale)
- NorCal Zero Class 8 Trucks and Infrastructure (Hyundai)



Champaign-Urbana FCEB deployment, electrolysis hydrogen refueling station and full facility modifications for indoor parking and maintenance



2018

2018



2019

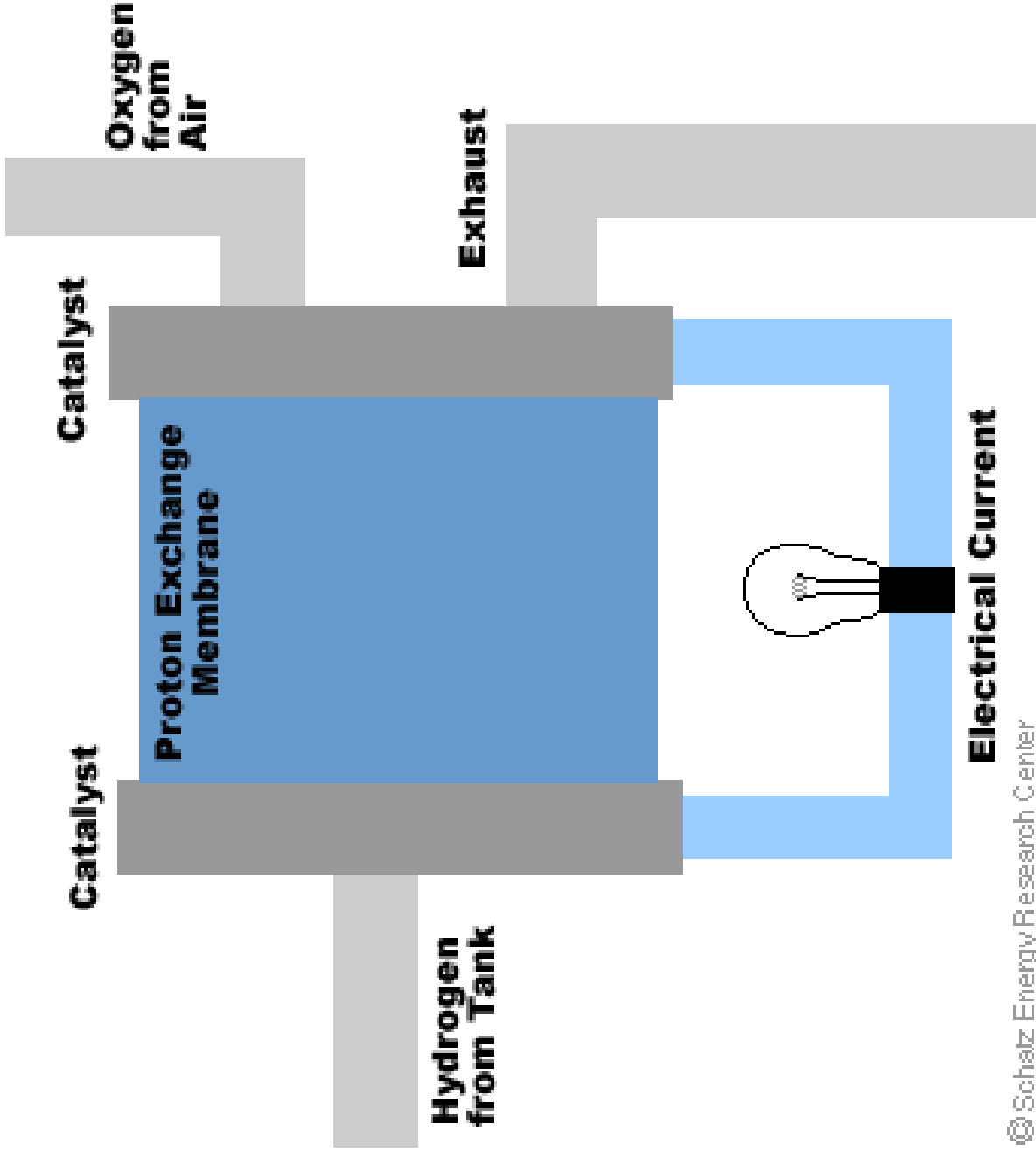
2023



Class 8 Fuel Cell Trucks – NorCAL ZERO



What's A Fuel Cell?



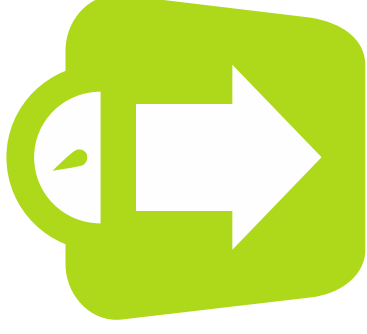
- An electrical generator
- **NOT** a battery
- A chemical reaction between hydrogen and oxygen
- **NO** combustion
- Emits only water vapor and heat
- 85 kW to 180 kW of power

FCEB Advantages



**300-350
miles**

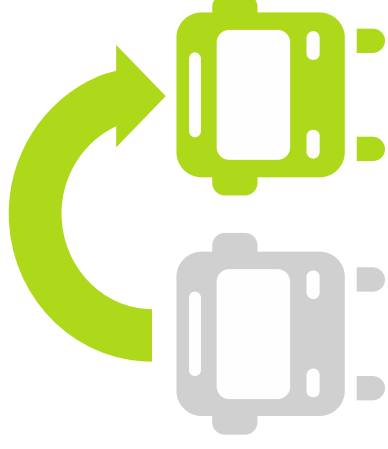
**Proven
range**



**Significant
reduction in
vehicle weight**
(carry more
passengers)



**Rapid refueling
speeds**
(6 to 10 minutes)



**1:1
replacement of
conventional
vehicles**

Infrastructure Challenges



PARSE

P **Price** and delivery of H₂ on parity with conventional fuels.
Also equipment maintenance cost reduction.

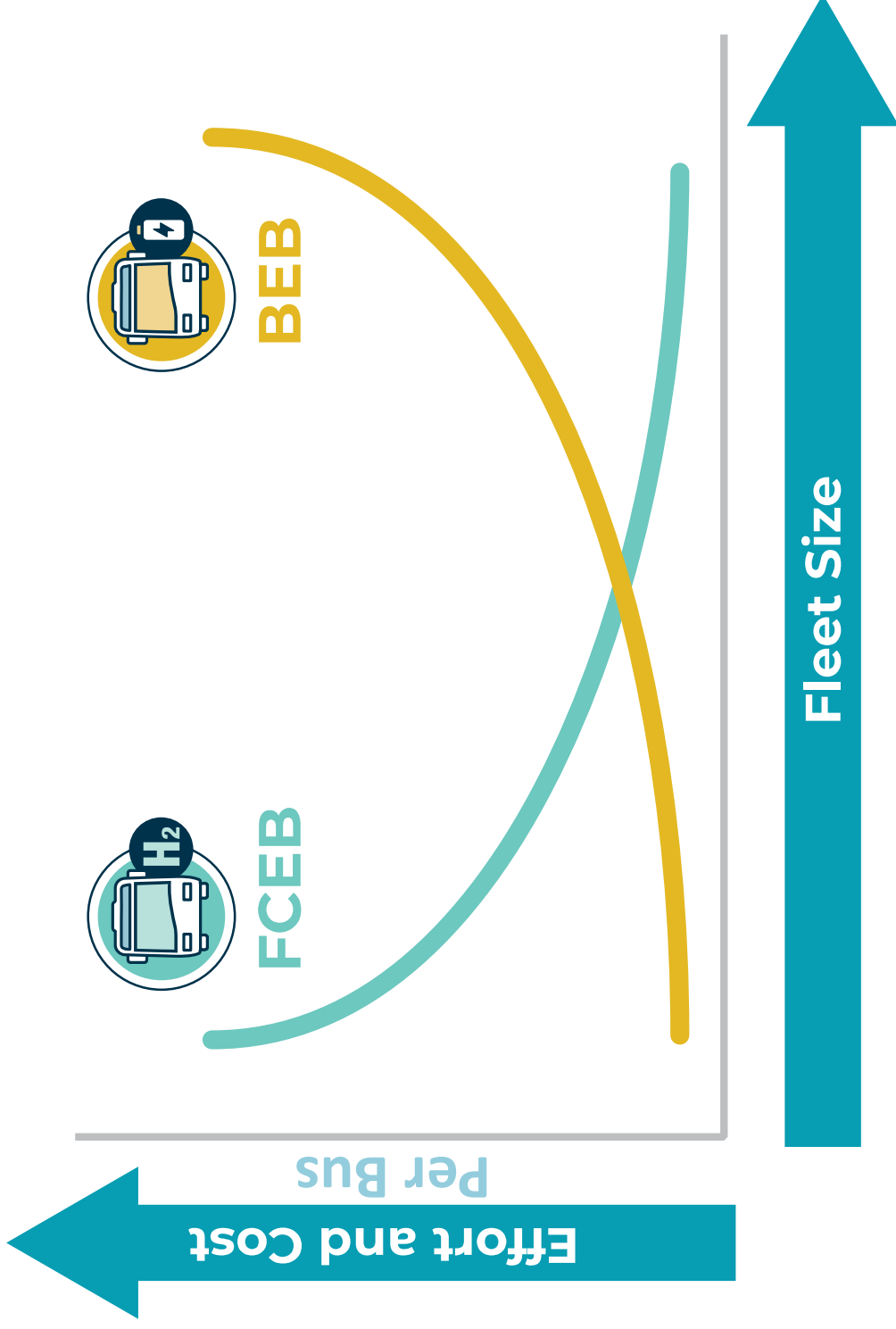
A **Area** of fueling footprint to refuel 50, 100, or 200 buses.

R **Renewables** for hydrogen production; **Resiliency** - Natural Disasters;
Also **Redundancy** to ensure near 100% service reliability.

S **Speed** of refueling in the normal 8- to 10-hour night window; Also
Scalability for future expansion.

E **Entry-Level Startup and Equity** (CapEX) needed to build at an
affordable price, utilizing baseline components for future scale up.

ZEB Infrastructure Costs



- FCEB: High initial cost for H₂ fueling stations can be leveraged over many buses in larger fleets
- BEB: More equipment and infrastructure is needed to support larger fleets

Vehicle Options



Variables

- Fuel Cell Power Rating
- Battery Energy Storage
- H2 Storage
(Mass – 37.5/51/67 kg)
(Gas or Liquid – 350/700 bar or liquid)

Vehicle Modes

Rail

- Stadler Flirt

Coach (3 Axle @ 45')

- New Flyer/MCI
- Van Hool - TBD
- Prevost (Volvo) - TBD

Bus

- New Flyer (40' and 60')
- Eldorado (40')
- Gillig (40') - TBD

Fuel Cell Options



Coach

- New Flyer/MCI: Ballard (200 to 250 kW)
- Van Hool: TBD
- Prevost: TBD

Bus

- New Flyer: Ballard (100 kW)
- ELDorado National: BAE/Plug (125 kW)
- Gillig: TBD

Fuel Cell Suppliers

1. Ballard
2. Cummins
3. GM
4. Hyundai
5. Hyzon
6. Nimbus Power Systems
7. Nuvera
8. Plug Power
9. Toyota

Fuel Suppliers and Station Providers



Fuel Suppliers

1. Air Liquide (Las Vegas)
2. Air Products (Sacramento/Los Angeles)
3. Linde (Ontario, CA)
4. Plug Power (Fresno)
5. **ARCHES Fuel Supply**

Station Providers

1. Air Products
2. Air Liquide
3. Chevron
4. Clean Energy
5. FirstElement Fuel
6. HTEC
7. Linde
8. Messer
9. Nikkiso
10. Plug Power
11. Trillium

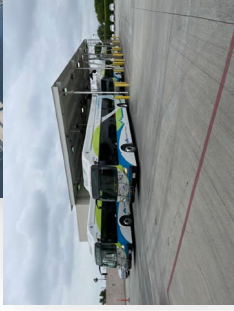
Heavy-Duty Fueling Stations



OCTA



Foothill Transit



AC Transit



SunLine



CUMTID

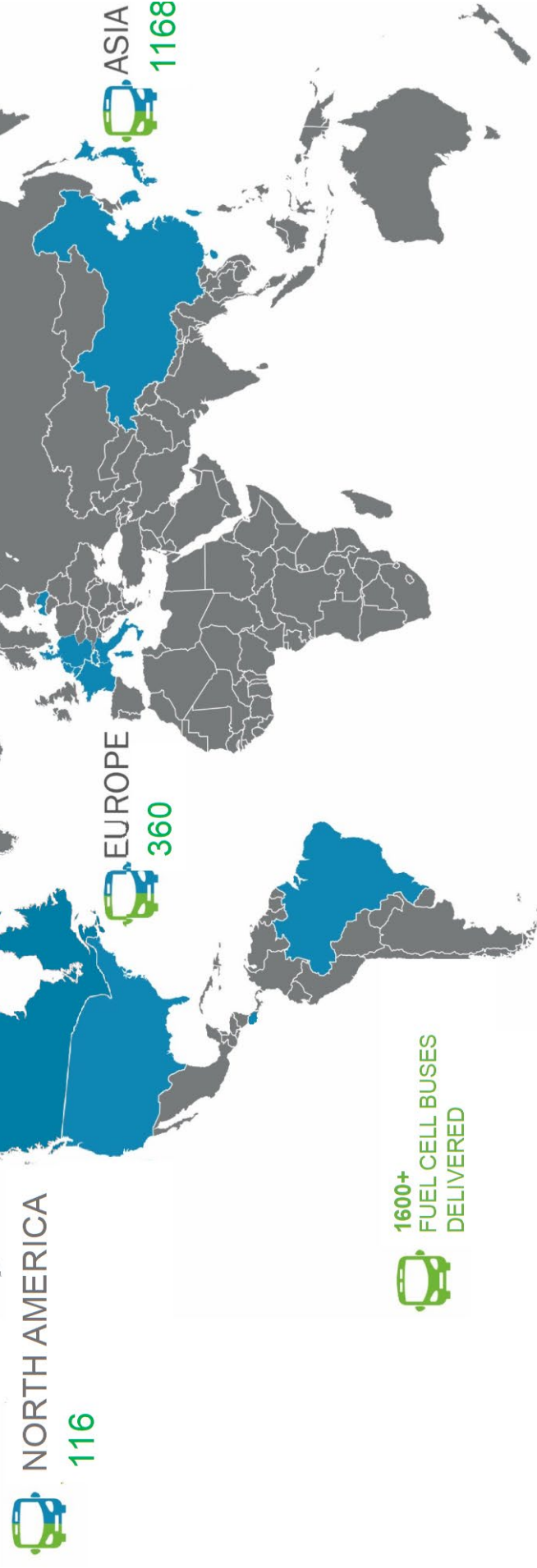


SARTA

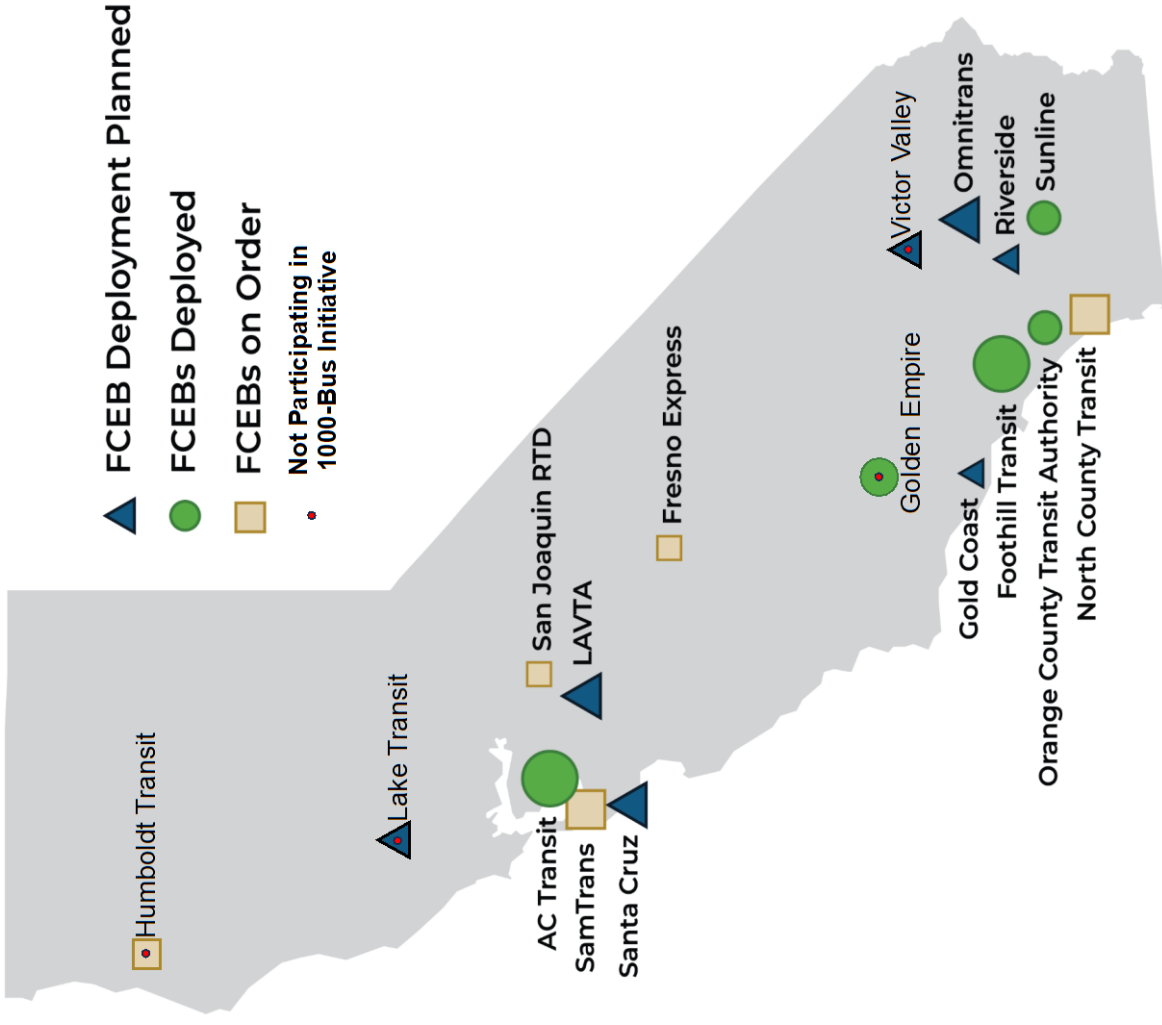
Fuel Cell Buses Worldwide



Fuel Cell Buses Worldwide powered by Ballard



ARCHES – 1,000-Bus Initiative (13 Agencies)



Questions?

Jaimie Levin
Director of West Coast Operations
Center for Transportation and the Environment



Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) – California H2Hub

Presentation for SC Metro Board Meeting

Confidential

August 2023



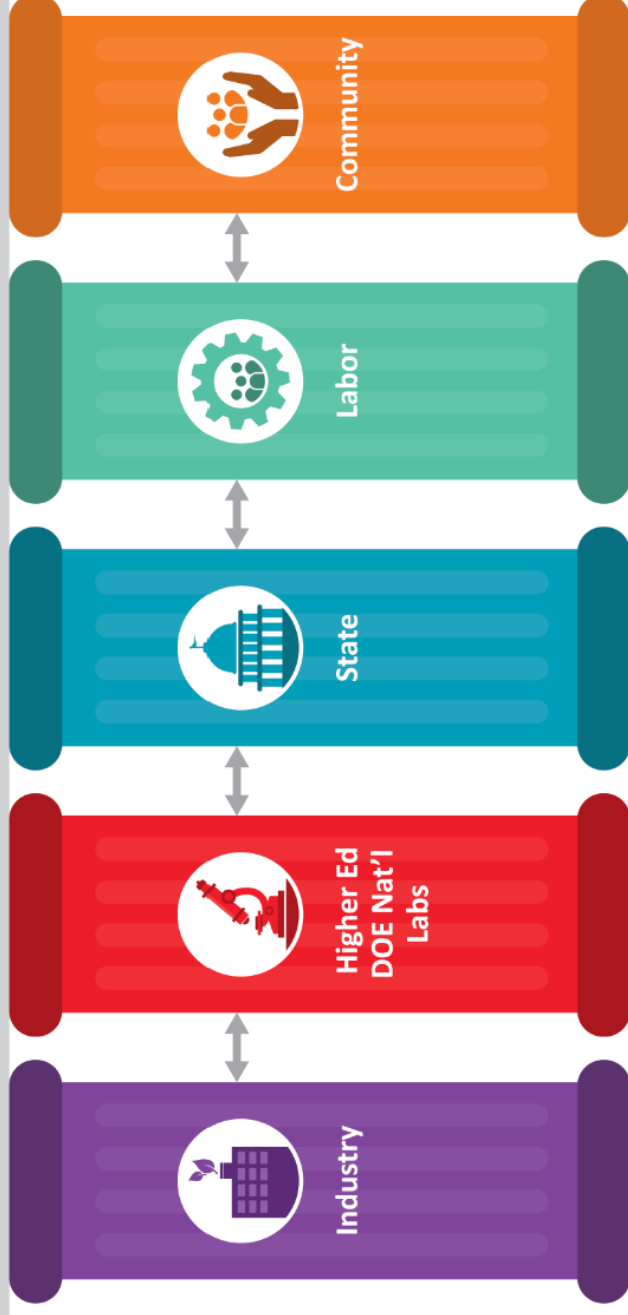
ARCHES Mission

- **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

ARCHES

ARCHES Key Differentiators

- Infrastructure Availability
- Industry Readiness
- Offtake Resilience
- Market Catalyst
- Community Connectivity
- Delivery Certainty



ARCHES Principles

- Statewide
- Green/Clean
- Stakeholder & Community Engaged
- Equity & Justice Centered
- Aligned with State Interests
- Solution-Oriented
- Objective & Unbiased
- Multi-dimensional
- Connected
- Delivery Certainty

ARCHES Principles

- ✓ **Statewide**
Leveraging California's size and diverse geography and economy to produce, transport, store, and use H₂ at scale with multiple clusters of each, providing an ideal H₂ test-bed for the nation
- ✓ **Clean/Green**
California has long led the nation and the world in environmental innovation and policy and will do so again with clean, green H₂
- ✓ **Stakeholder and Community Engaged**
Built-in and ensured at all stages of the process
- ✓ **Equity and Justice Centered**
Prioritized in all decisions with a focus on California's impacted, disadvantaged, low-income, and tribal communities
- ✓ **Aligned with State Interests**
To move California toward a robust H₂ economy and marketplace, and a cleaner, greener future.
- ✓ **Solution-Oriented**
Focused on implementation and innovation to achieve DOE's Hydrogen Shot goals and market liftoff
- ✓ **Objective and Unbiased**
Representing and ensuring the interests of all parties
- ✓ **Multi-dimensional**
Considering all aspects of a successful H₂ economy
- ✓ **Connected**
Within California and other H₂ Hubs
- ✓ **Delivery Certainty**
Execute projects on time, in scope, within budget



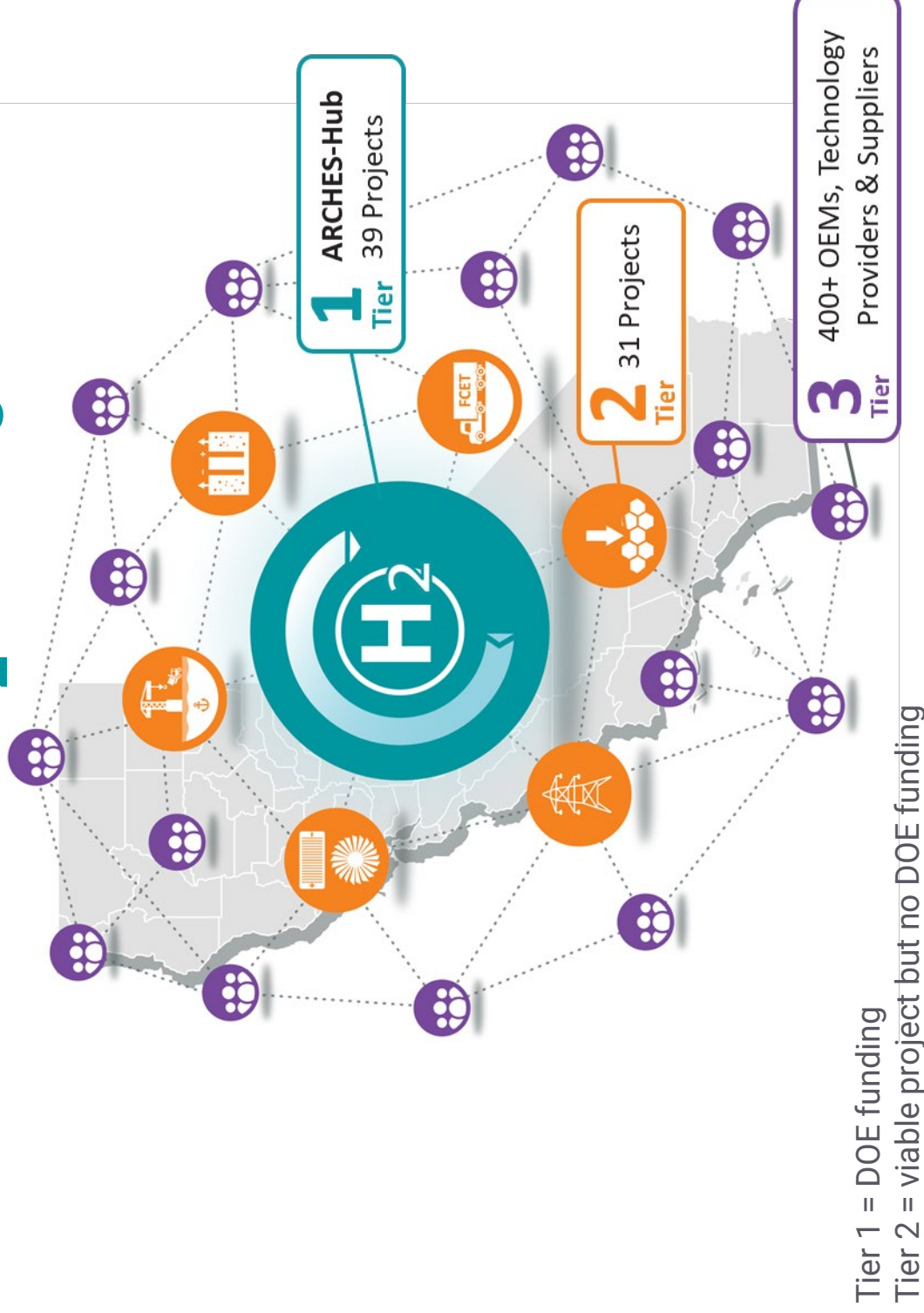
ARCHES Goals

- Establish an exemplary **renewable, clean H₂ Hub** in California region by 2030
- Kickstart **commercial viability** of H₂
 - ❑ Focus on hard-to-decarbonize sectors: **Ports, Power, HD Transportation**
 - ❑ Initiate expansion to: **Heavy Industry, Aviation, Maritime, Agriculture, and others**
- Ramp production/offtake of renewable, clean H₂ from **30 tonnes per day (TPD)** to **500+ TPD** by 2030
- Produce **measurable benefits** for California communities, with **robust monitoring**, and **strong accountability**
- Develop a **H₂ workforce** for California, and a **H₂ workforce development model** for the nation
- **Meet CA and National carbon neutrality goals**

What Makes ARCHES Special

- Industry and infrastructure **readiness**
- Early and diverse **offtake**
- Fully integrated, deep, diverse **"one team"** entity:
 - ❖ State, Labor, Higher Ed/DOE Nat'l Lab, Environmental NGO
 - ❖ 39 projects from industry leaders
 - ❖ Large cross section of the community
 - ❖ All working together for nearly 2 years on ARCHES
- A robust strategy that **de-risks** the program and **maximizes delivery certainty**
- Transformative **community benefits** and **workforce development**

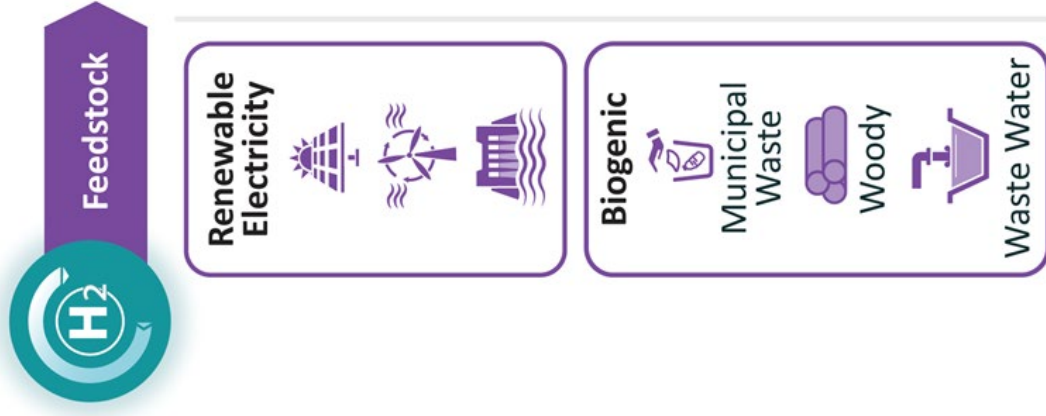
The Resilient H₂ Ecosystem for California



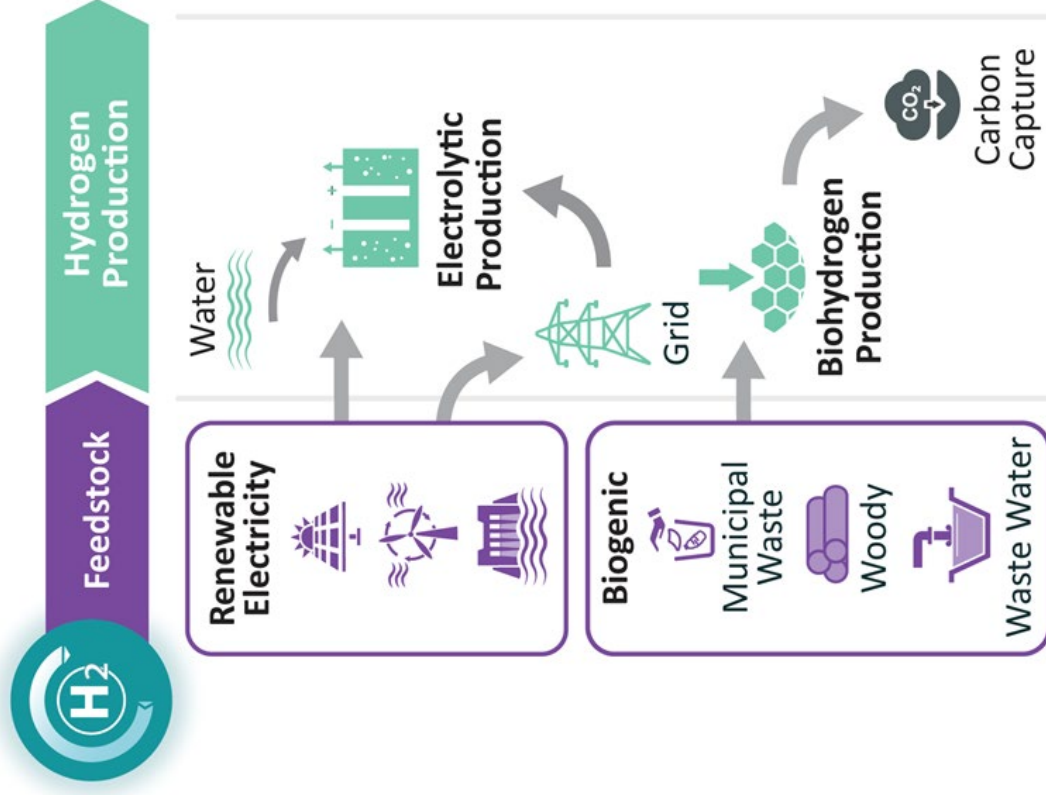
All partner projects will be subrecipients and have a signed partnership with ARCHES H2 LLC, except for FCET procurements.



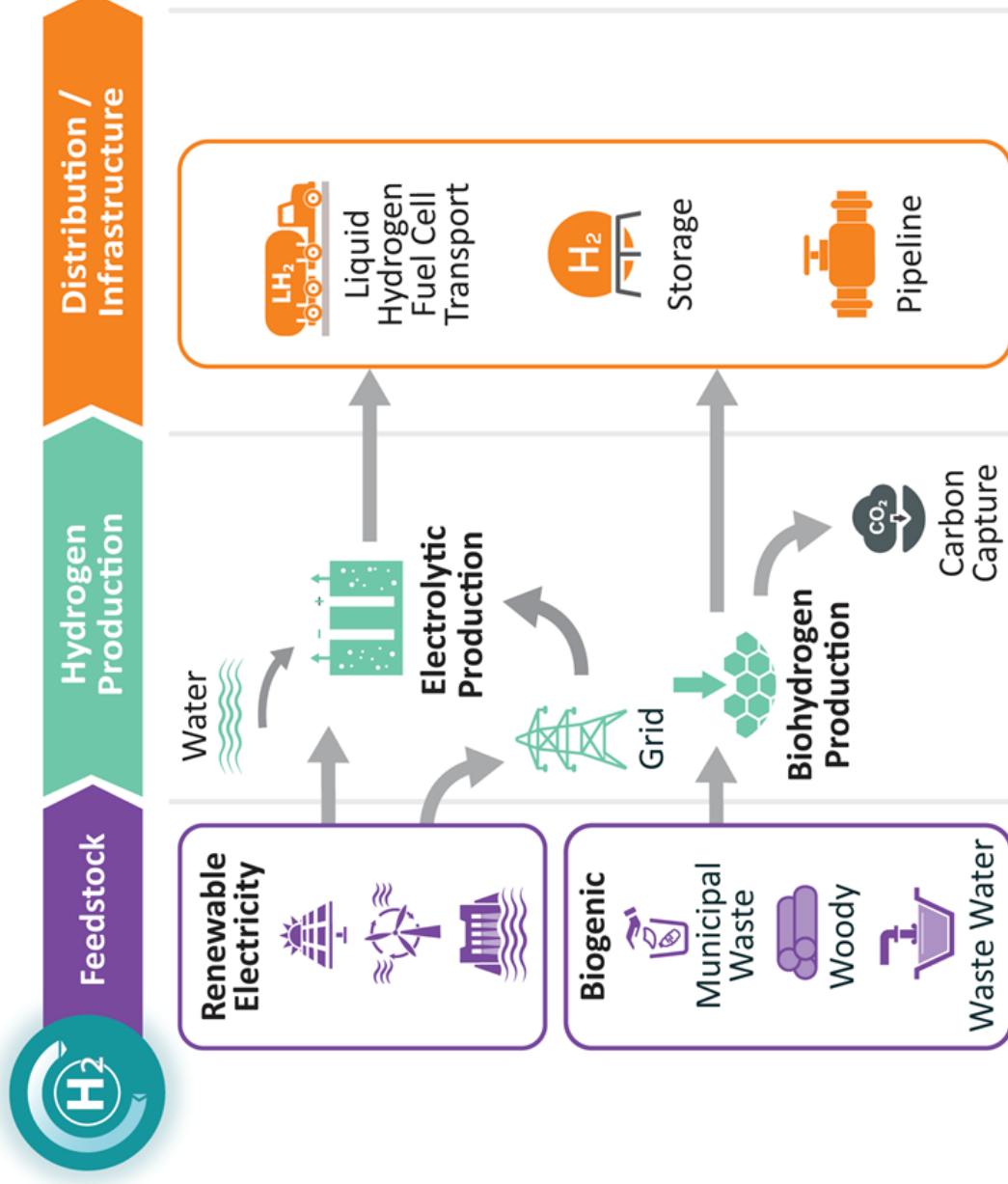
ARCHES Hydrogen Flow



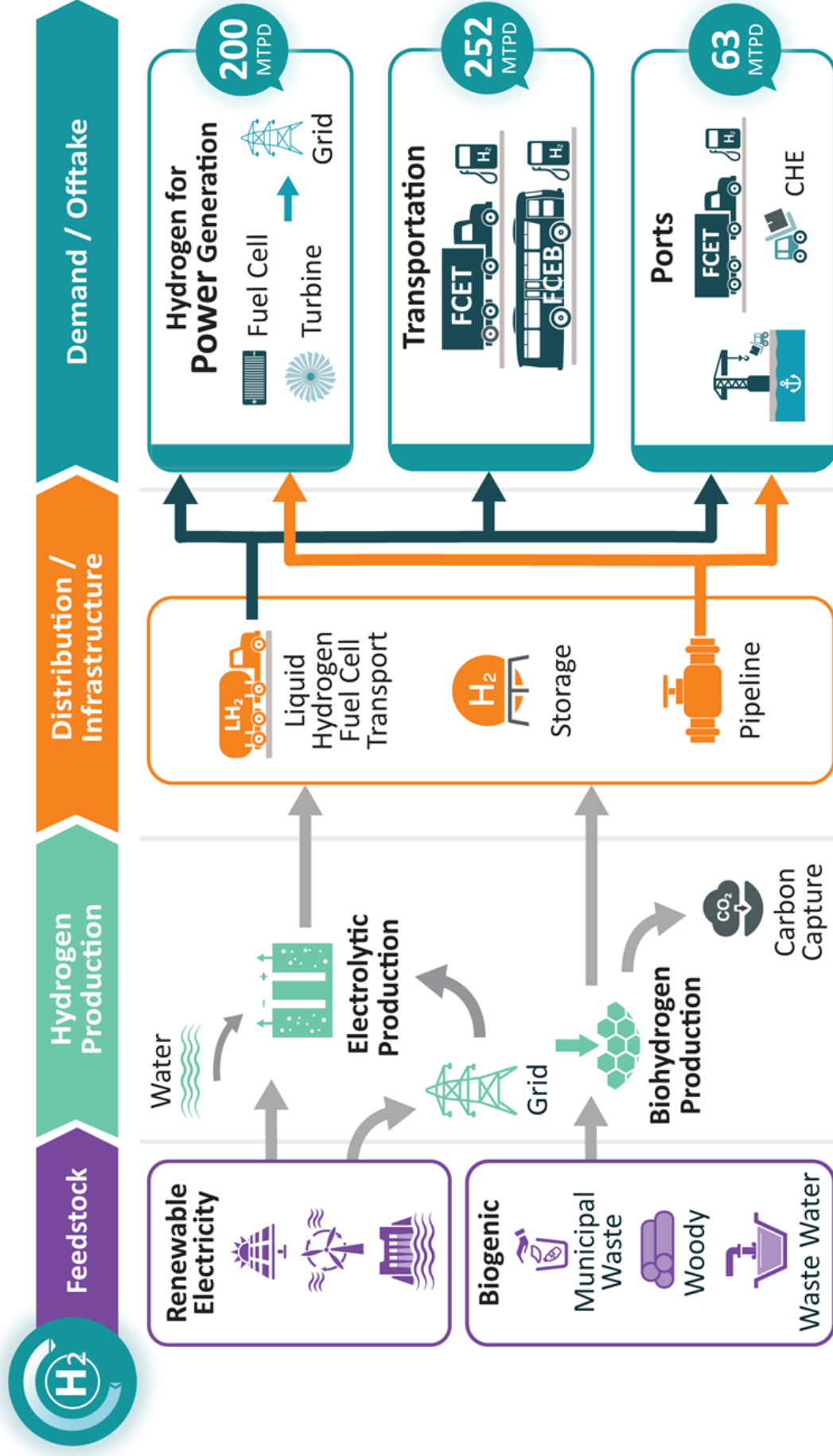
ARCHES Hydrogen Flow



ARCHES Hydrogen Flow



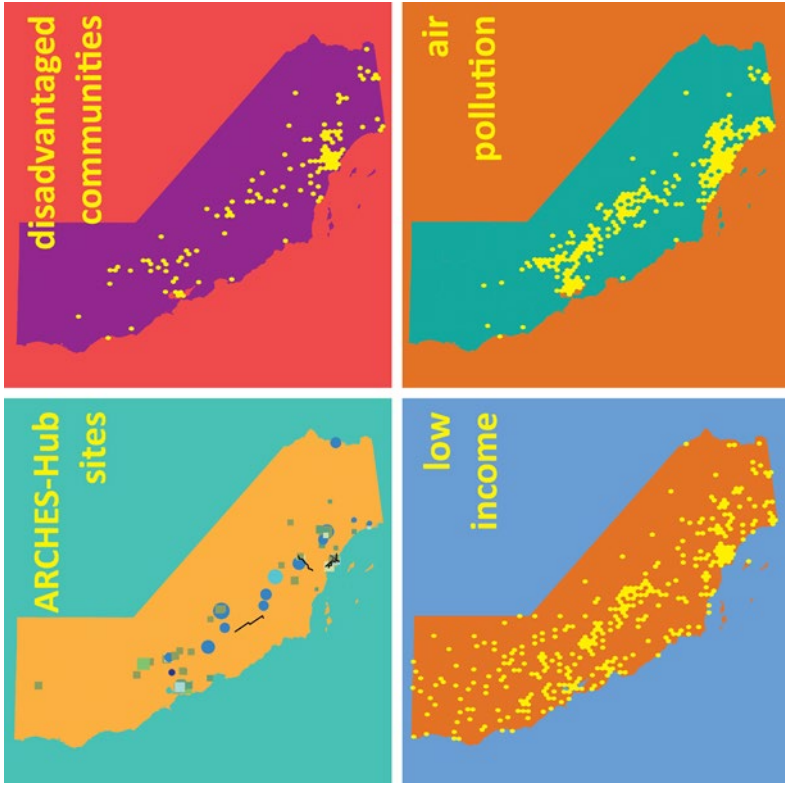
ARCHES Hydrogen Flow



Disadvantaged Communities Will Benefit

COMMUNITY

- ▲ **\$2.95 billion** Economic value of increased health* and associated health costs savings per year
- ▲ **222,400** Number of jobs created per year
- ▼ **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



*EJ40 database and CalEnviroScreen

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

Workforce Development

- **Organized Labor partnership** at *all* levels – **ARCHES** design, project selection, governance, and execution
- **Robust workforce development plans** integrating labor, industry, and the nation's largest minority-serving higher ed systems, reaching into high schools and local communities via training centers and community organizations
- Multiple Organized Labor **technical training institutes**
- University of California STEM programs and courses
- Cal State-led curriculum and program development
- California Community College programs and certificates