



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

HYBRID TECHNOLOGY COMMITTEE MEETING

Mayor Carlos Rodriguez, Committee Chair
Supervisor Curt Hagman
Mayor Patricia Lock Dawson
Councilmember Larry McCallon
Supervisor Janet Nguyen
Board Member Veronica Padilla-Campos

April 17, 2026 ♦ 12:00 p.m.

TELECONFERENCE LOCATIONS

Riverside City Hall
3900 Main Street
7th Floor Conference Room
Riverside, CA 92522

Huntington Beach Central Library
Balboa Room
7111 Talbert Avenue
Huntington Beach, CA 92648

A meeting of the South Coast Air Quality Management District Technology Committee will be held at 12:00 p.m. on Friday, April 17, 2026 through a hybrid format of in-person attendance in the Dr. William A. Burke Auditorium at the South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, and remote attendance via videoconferencing and by telephone. Please follow the instructions below to join the meeting remotely.

Please refer to South Coast AQMD's website for information regarding the format of the meeting, updates if the meeting is changed to a full remote via webcast format, and details on how to participate:

<http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>

ELECTRONIC PARTICIPATION INFORMATION (Instructions provided at bottom of the agenda)

Join Zoom Meeting - from PC or Laptop

<https://aqmd.zoomgov.com/j/1605167850>

Zoom Webinar ID: 160 516 7850 (applies to all)

Teleconference Dial In

+1 669 254 5252

One Tap Mobile

+1 669 254 5252, 160 516 7850#

**Audience will be allowed to provide public comment in person
or through Zoom connection or telephone.**

PUBLIC COMMENT WILL STILL BE TAKEN

Cleaning the air we breathe...

AGENDA

Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54954.3(a)). If you wish to speak, raise your hand on Zoom or press Star 9 if participating by telephone. All agendas for regular meetings are posted at South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, at least 72 hours in advance of the regular meeting. Speakers may be limited to three (3) minutes total for all items on the agenda.

Please note that under the California Public Records Act (Gov't. Code § 7920.000 et seq.) your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email) become part of the public record and can be released to the public on request or posted on the South Coast AQMD website.

CALL TO ORDER

ROLL CALL

ACTION ITEMS: (1-3)

- 1. Execute Contract to Deploy Zero-Emission Ship Assist Tugboats**
(Motion Requested)

In December 2023, the Board recognized an award of \$76,250,003 from the California State Transportation Agency (CalSTA) under the 2022 Port and Freight Infrastructure Program to demonstrate a short-line hydrogen fuel cell locomotive and deploy direct current fast chargers and hydrogen refueling dispensers for heavy duty trucks. The Board also established the CalSTA Special Revenue Fund (89) to receive the funds and execute a contract with Wabtec Corporation (Wabtec). Since then, Wabtec withdrew from the project and South Coast AQMD staff subsequently received a proposal from Arc Boat Company Inc. (Arc) to deploy four zero-emission (ZE) battery electric ship assist tugboats at the San Pedro Bay Ports. CalSTA approved the scope change for the tugboats in February 2026. This action is to execute a contract with Arc for up to \$33,688,480 from the CalSTA Special Revenue Fund (89) to deploy four ZE tugboats, upon the receipt of CalSTA's final award document.

Sam Cao, Ph.D.
Program Supervisor

- 2. Adopt Resolution and Recognize Funds for the Climate Heat Impact Response Program and Reimburse the General Fund for Administrative Costs**
(Motion Requested)

In January 2026, South Coast AQMD submitted an application to CARB for the FY 2025-26 Climate Heat Impact Response Program (CHIRP) to request funds in the amount of \$6,225,395. CHIRP provides funding for projects eligible under the Carl Moyer or Community Air Protection Incentives Guidelines. This action is to adopt a resolution and recognize

Alyssa Yan
Program Supervisor

\$6,225,395 for CHIRP into the Carl Moyer Program Fund (32) and to reimburse the General Fund from the Carl Moyer Program Fund (32) for CHIRP administrative costs in an amount not to exceed \$778,174.

3. Transfer and Appropriate Funds for Development of Grant Management System for Warehouse Actions and Investments to Reduce Emissions Mitigation Program (*Motion Requested*)

Ian MacMillan
Assistant Deputy
Executive Officer

Staff is developing the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Mitigation Program to provide incentive funding using mitigation fees collected under Rule 2305 – Warehouse Indirect Source Rule. The development of a Grant Management System for this program is necessary to receive and process applications for proposed funding projects upon Program Announcement approval by the Board. This action is to transfer and appropriate up to \$275,000 from the administrative portion of the WAIRE Mitigation Special Revenue Fund (86) into Information Management’s FY 2025-2026 and/or FY 2026-27 Budget, Services and Supplies and/or Capital Outlays Major Objects for development of WAIRE Mitigation Program Grant Management System.

INFORMATIONAL ITEM:

4. PCC Hydrogen Inc. will provide a presentation on cost-effective hydrogen production for use in transportation and power generation from ethanol

Timothy Fogarty, CEO
PCC Hydrogen, Inc.

5. Other Business

Any member of the Committee, or its staff, on his or her own initiative or in response to questions posed by the public, may ask a question for clarification, may make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter, or may take action to direct staff to place a matter of business on a future agenda. (Gov’t. Code Section 54954.2)

6. Public Comment Period

At the end of the regular meeting agenda, an opportunity is provided for the public to speak on any subject within the Committee's authority that is not on the agenda. Speakers may be limited to three (3) minutes each.

7. Next Meeting Date

Friday, May 15, 2026 at 12:00 p.m.

ADJOURNMENT

Document Availability

All documents (i) constituting non-exempt public records, (ii) relating to an item on an agenda for a regular meeting, and (iii) having been distributed to at least a majority of the Committee after the agenda is posted, are available by contacting Penny Shaw Cedillo at 909.396.3179, or send the request to pcedillo@aqmd.gov.

Americans with Disabilities Act and Language Accessibility

Disability and language-related accommodations can be requested to allow participation in the Technology Committee meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't Code Section 54954.2(a)). In addition, other documents may be requested in alternative formats and languages. Any disability or language-related accommodation must be requested as soon as practicable. Requests will be accommodated unless providing the accommodation would result in a fundamental alteration or undue burden to South Coast AQMD. Please contact Penny Shaw Cedillo at 909.396.3179 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to pcedillo@aqmd.gov.

INSTRUCTIONS FOR ELECTRONIC PARTICIPATION

Instructions for Participating in a Virtual Meeting as an Attendee

As an attendee, you will have the opportunity to virtually raise your hand and provide public comment.

Before joining the call, please silence your other communication devices such as your cell or desk phone. This will prevent any feedback or interruptions during the meeting.

Please note: During the meeting, all participants will be placed on Mute by the host. You will not be able to mute or unmute your lines manually.

After each agenda item, the Chair will announce public comment.

Speakers may be limited to a total of 3 minutes for the entirety of the consent calendar plus board calendar, and three minutes or less for each of the other agenda items.

A countdown timer will be displayed on the screen for each public comment.

If interpretation is needed, more time will be allotted.

Once you raise your hand to provide public comment, your name will be added to the speaker list. Your name will be called when it is your turn to comment. The host will then unmute your line.

Directions for Video ZOOM on a DESKTOP/LAPTOP:

- If you would like to make a public comment, please click on the **“Raise Hand”** button on the bottom of the screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

Directions for Video Zoom on a SMARTPHONE:

- If you would like to make a public comment, please click on the **“Raise Hand”** button on the bottom of your screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

Directions for TELEPHONE line only:

- If you would like to make public comment, please **dial *9** on your keypad to signal that you would like to comment.

BOARD MEETING DATE: May 8, 2026

AGENDA NO.

PROPOSAL: Execute Contract to Deploy Zero-Emission Ship Assist Tugboats

SYNOPSIS: In December 2023, the Board recognized an award of \$76,250,003 from the California State Transportation Agency (CalSTA) under the 2022 Port and Freight Infrastructure Program to demonstrate a short-line hydrogen fuel cell locomotive and deploy direct current fast chargers and hydrogen refueling dispensers for heavy duty trucks. The Board also established the CalSTA Special Revenue Fund (89) to receive the funds and execute a contract with Wabtec Corporation (Wabtec). Since then, Wabtec withdrew from the project and South Coast AQMD staff subsequently received a proposal from Arc Boat Company Inc. (Arc) to deploy four zero-emission (ZE) battery electric ship assist tugboats at the San Pedro Bay Ports. CalSTA approved the scope change for the tugboats in February 2026. This action is to execute a contract with Arc for up to \$33,688,480 from the CalSTA Special Revenue Fund (89) to deploy four ZE tugboats, upon the receipt of CalSTA's final award document.

COMMITTEE: Technology, April 17, 2026; Recommended for Approval

RECOMMENDED ACTION:

Authorize the Chair to execute a contract with Arc Boat Company Inc. for up to \$33,688,480 from the CalSTA Special Revenue Fund (89) to deploy four zero-emission battery-electric ship assist tugboats.

Wayne Natri
Executive Officer

Background

In December 2023, the Board recognized an award of \$76,250,003 from the California State Transportation Agency (CalSTA) under the 2022 Port and Freight Infrastructure Program and approved execution of contracts with Wabtec Corporation (Wabtec) to demonstrate a short-line hydrogen fuel cell locomotive and with Prologis to install chargers and hydrogen fueling dispensers. In early 2025, Wabtec withdrew from the project due to a business decision. Subsequently, staff received a proposal from Arc Boat Company Inc (Arc) to deploy four zero-emission (ZE), battery-electric ship-assist tugboats to operate in the San Pedro Bay Ports. In February 2026, CalSTA approved the proposed scope modification, pending final award documentation.

The 2022 AQMP showed the need to rapidly transition to ZE technologies, including the modernization of commercial harbor craft, to reduce NOx and PM2.5 emissions and help achieve federal ozone standards. Tugboats are among the largest emitters in the commercial harbor craft category. Reducing emissions from the marine sector requires the development and deployment of advanced, cleaner propulsion technologies. Also, to comply with California's Commercial Harbor Craft Regulation, the marine industry is seeking feasible emission reduction technologies.

Tugboats typically operate on short routes and spend long periods idling but rely on high-horsepower diesel engines for ship-assist work, which makes this class of harbor craft more difficult to electrify. Electric propulsion systems can provide instantaneous torque and deliver efficient power suitable for tugboat operations; however, they require large onboard battery capacity and high-power charging infrastructure. To reduce costs and weight, the battery packs for these tugboats were sized smaller and rely on high-power, more frequent charging sessions. In October 2025, the Governing Board approved a contract under the U.S. EPA Targeted Airshed Grant to Arc for the design and installation of a 4.8-megawatt marine vessel rapid charging system, with battery megapacks at Berth 60 (AltaSea) at the Port of Los Angeles. In April 2026, the Board awarded Arc additional funding under the Carl Moyer Program to deploy additional chargers at the same location.

Proposal

Arc proposes to deploy four ZE, electric ship-assist tugboats to replace the previously approved fuel cell locomotive demonstration project. Each proposed vessel is designed to deliver up to 7,000 horsepower and up to 100 metric tons of bollard pull. The vessels will measure approximately 80 feet in length with a 40-foot beam and will be optimized for harbor-restricted ship-assist operations while maintaining U.S. Coast Guard (USCG) regulatory compliance. Each tugboat will feature a fully electric propulsion system powered by a 5.8-megawatt-hour lithium-ion battery pack and equipped with azimuth thrusters to maximize maneuverability. To meet USCG emergency requirements, each vessel will include one removable 400-kilowatt Tier 4 Final-compliant diesel generator housed in a containerized system. The generator will be activated only during

emergency situations, providing operational redundancy while eliminating routine diesel consumption. Under normal operating conditions, the vessels will function as true ZE platforms.

Arc has initiated construction of two vessels using private capital, with the first vessel anticipated to be operational by the end of 2026. Arc has selected Snow & Company, located in Seattle, Washington, as the shipbuilder based on its in-house naval architecture capabilities, accelerated design processes, and established reputation for constructing high-quality vessels. The shipyard maintains a team of senior welders with an average of more than 25 years of industry experience. The vessels will be operated by Curtin Maritime Corp., a Long Beach-based marine services company providing marine transportation, harbor services, and shipyard operations. Curtin Maritime has executed a charter agreement to ensure immediate deployment of the tugboats upon delivery, with a purchase option structured to guarantee operational deployment regardless of the timing of exercise.

The publicly accessible charging infrastructure will be installed at AltaSea at the Port of Los Angeles, under separate EPA and Carl Moyer awards, to support the Arc boats and other ZE vessels operating at the Ports of Los Angeles and Long Beach. Arc has coordinated with the Los Angeles Department of Water and Power and other relevant utilities with jurisdiction over the AltaSea site to confirm feasibility, timeline, and costs associated with the electrical infrastructure required for megawatt-scale vessel charging. The charging hub is designed to accommodate Arc's full vessel deployment while providing additional capacity for future expansion, thereby minimizing potential infrastructure constraints as ZE vessel adoption increases at the port.

Sole Source Justification

Section VIII.B. 2 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified. The request for a sole source award for the Arc involves cost sharing by multiple sponsors and their unique experience and capabilities. The proposed project will include in-kind contributions and cost-share as listed under Resource Impacts and CalSTA.

Benefits to South Coast AQMD

The South Coast Air Basin is classified as an "extreme" nonattainment area for ozone under the federal Clean Air Act. Successful deployment of ZE tug boats helps reduce NOx emissions and PM2.5 emissions at the ports and helps the region reduce ozone and PM2.5 air pollution to meet the National Ambient Air Quality Standards. The four ZE tugboats will reduce 340 tons of NOx and 6.2 tons of PM2.5 emissions annually.

Resource Impacts

The contract with Arc will not exceed \$33,688,480 from the CalSTA Special Revenue Fund (89). The proposed project cost-share is shown in the table below:

Funding Source	Funding Amount	Percent
CalSTA	\$33,688,480	43
Arc	\$45,267,880	57
Total	\$78,956,360	100

EXECUTE CONTRACT TO DEPLOY ZERO-EMISSION SHIP ASSIST TUGBOATS

SAM CAO

BACKGROUND

- In December 2023, Board recognized \$76 million award from CalSTA's Port and Freight Infrastructure Program (PFIP) for two projects:
 - Wabtec – Liquid hydrogen fuel cell locomotive; and
 - Prologis – Charging and hydrogen infrastructure supporting zero-emission trucks
- Wabtec decided not to pursue the project
- Arc Boat Company Inc. (Arc) submitted a project proposal that can implemented in place of the Wabtec project
 - Support PFIP goal of improve goods movements through CA ports



PROPOSAL – ZERO EMISSION TUGBOATS

- Arc project will deploy four zero-emission, battery electric ship assist/escort tugboats
 - Up to 7,000 hp, up to 100 MT of bollard pull, and up to 5.8 MWh of battery with one 400kw emergency diesel genset
 - Curtin Maritime to operate the ZE tug fleet
- Tugboats will be coupled with previously awarded marine vessel rapid charging system
- CalSTA approved the scope change



PROPOSED PROJECT COST

Funding Source	ZE Tugboats
CalSTA award	\$33,688,480
Arc	\$45,267,880
Total	\$78,956,360

SUMMARY OF RECOMMENDED ACTION

Authorize the Chair to execute a contract with Arc for the deployment of zero-emission ship assist tugboats for up to \$33,688,480

BOARD MEETING DATE: May 1, 2026

AGENDA NO. X

PROPOSAL: Adopt Resolution and Recognize Funds for Climate Heat Impact Response Program and Reimburse the General Fund for Administrative Costs

SYNOPSIS: In January 2026, South Coast AQMD submitted an application to CARB for the FY 2025-26 Climate Heat Impact Response Program (CHIRP) to request funds in the amount of \$6,225,395. CHIRP provides funding for projects eligible under the Carl Moyer or Community Air Protection Incentives Guidelines. This action is to adopt a resolution and recognize \$6,225,395 for CHIRP into the Carl Moyer Program Fund (32) and to reimburse the General Fund from the Carl Moyer Program Fund (32) for CHIRP administrative costs in an amount not to exceed \$778,174.

COMMITTEE: Technology, April 17, 2026; Recommended for Approval

RECOMMENDED ACTIONS:

1. Adopt the attached Resolution, accept terms and conditions, and recognize, upon receipt, the CHIRP funds up to \$6,225,395 from CARB into the Carl Moyer Program Fund (32); and
2. Reimburse the General Fund from the Carl Moyer Program Fund (32) for administrative costs related to CHIRP implementation in an amount not to exceed \$778,174.

Wayne Nastri
Executive Officer

Background

In January 2026, South Coast AQMD submitted an application to CARB for the FY 2025-26 CHIRP, requesting funds totaling \$6,225,395, including 12.5 percent administrative funds. The incentives will be used to fund projects eligible for Carl Moyer or Community Air Protection (CAP) Programs and will prioritize projects in the disadvantaged and low-income communities. The CHIRP program was created following 2021 energy emergency proclamations issued during extreme heat events in California. These proclamations allowed certain generators and power sources to operate beyond their normal emissions limits during grid shortages. CHIRP provides funding to mitigate the additional emissions from these emergency actions. A solicitation will be released in late 2026 to solicit projects targeting the replacement or retrofit of emergency standby stationary diesel-fueled backup generators following Carl Moyer or CAP incentive project guidelines. The program will prioritize the replacement or retrofit of uncontrollable, Tier 1 and Tier 2 diesel internal combustion generators with the cleanest available technologies, with priority given to zero-emission and near zero-emission solutions where feasible. Additionally, the program will assist in funding replacements or retrofits of generators that are permitted and fall under South Coast AQMD Rules 1470 and 1110.4.

Proposal

Staff recommends adopting the resolution to accept terms and conditions and, upon receipt, to recognize the CHIRP funds up to \$6,225,395 from CARB into the Carl Moyer Program Fund (32) and to reimburse the General Fund from the Carl Moyer Program Fund (32) for administrative costs in an amount not to exceed \$778,174.

Benefits to South Coast AQMD

CHIRP provides incentives to replace or retrofit high-emitting diesel-fueled backup generators or equipment with zero- or low-emissions equipment, thereby reducing emissions and offsetting the operation of emergency backup generators during extreme heat events. The implementation of these projects will prioritize overburdened communities.

Resource Impacts

There are no resource impacts under this program. The total funding for CHIRP projects will not exceed \$5,447,221 in project funds, with administrative costs not to exceed \$778,174.

Attachment

Resolution for FY 2025-26 CHIRP Funds

RESOLUTION NO. 26-

A Resolution of the South Coast Air Quality Management District Board Recognizing Funds and Accepting the Terms and Conditions of the FY 2025-2026 Climate Heat Impact Response Program (CHIRP)

WHEREAS, under Health & Safety Code §40400 et seq., the South Coast Air Quality Management District (South Coast AQMD) is the local agency with the primary responsibility for the development, implementation, monitoring and enforcement of air pollution control strategies, clean fuels programs and motor vehicle use reduction measures; and

WHEREAS, the South Coast AQMD is authorized by Health & Safety Code §§40402, 40440, and 40448.5 to implement programs to reduce transportation emissions, including programs to encourage the use of alternative fuels and zero and low emission vehicles; to develop and implement other strategies and measures to reduce air contaminants and achieve the state and federal air quality standards; and

WHEREAS, the Governing Board has adopted several programs to reduce emissions from on-road and off-road vehicles, as well as emissions from other equipment, including infrastructure projects;

WHEREAS, the Governing Board directs staff to prioritize funding of zero emission vehicles and equipment whenever feasible, including charging/fueling infrastructure, in disadvantaged and low-income communities; and

WHEREAS, in July 2021, Governor Newsom signed into law Assembly Bill (AB) 205, which directs the California Air Resources Board (CARB) to develop a State-Funded mitigation plan and establish the source of funding for the Climate Heat Impact Response Program (CHIRP) to mitigate the emission increases associated with emergency response from backup generators and power plants.

WHEREAS, in January 2026, South Coast AQMD received notification to submit the application for the 2022 CHIRP funds.

WHEREAS, on January 15, 2026, South Coast AQMD submitted the application for up to \$6,225,395.

WHEREAS, CARB requires applicants to submit a resolution of its Governing Board before the Air District Board participates in the CHIRP program.

THEREFORE, BE IT RESOLVED that the Governing Board, in regular session assembled on May 1, 2026 does hereby authorize the Executive Officer to accept the terms and conditions of the FY 2025-26 CHIRP grant award and upon receipt, recognizes up to \$6,225,395 from CARB to administer and implement CHIRP.

BE IT FURTHER RESOLVED that the Executive Officer is authorized and directed to take all steps necessary to carry out this Resolution.

Date

Faye Thomas, Clerk of the Boards

Adopt Resolution and Recognize Funds for Climate Heat Impact Response Program and Reimburse the General Fund for Administrative Costs

ALYSSA YAN

Background

Climate Heat Impact Response Program (CHIRP)

- Created to mitigate increased emissions that happen due to extreme heat events
- Mitigation dollars allocated to South Coast AQMD and other local Air Districts
- Funds will focus on replacement or retrofit of permitted high polluting Emergency Generators with cleaner alternatives



Hospitals



Schools and Universities



Executive, Legislative
Other General Support

Background

Funding will be prioritized based on the following requirements:

- Support overburdened communities
- Upgrade from diesel uncontrolled, Tier 1 or Tier 2 engines
- Currently complies with federal, state and local requirements (Rule 1110.4 and Rule 1470)
- Have a valid permit to operate in South Coast AQMD
- Replacement with zero-emission technologies (where feasible)
- Anticipated program announcement release in late-2026



Solar Panels



Battery Energy Storage System
High-capacity backup to keep electricity flowing



Microturbine Generators
Varying fuel types



Linear Generators
Varying fuel types



Solid Oxide Fuel Cell Stacks
Varying fuel types



Internal Combustion Generators
Diesel



Large Spark Ignition Generators
Gasoline

Summary of Recommended Actions

1. Adopt the attached Resolution, accept terms and conditions, and recognize, upon receipt, the Climate Heat Impact Response Program funds up to \$6,225,395 from CARB into the Carl Moyer Program Fund (32)
2. Reimburse the General Fund from the Carl Moyer Program Fund (32) for administrative costs related to CHIRP implementation in an amount not to exceed \$778,174

BOARD MEETING DATE: May 1, 2026

AGENDA NO.

PROPOSAL: Transfer and Appropriate Funds for Development of Grant Management System for Warehouse Actions and Investments to Reduce Emissions Mitigation Program

SYNOPSIS: Staff is developing the Warehouse Actions and Investments to Reduce Emissions (WAIRE) Mitigation Program to provide incentive funding using mitigation fees collected under Rule 2305 – Warehouse Indirect Source Rule. The development of a Grant Management System for this program is necessary to receive and process applications for proposed funding projects upon Program Announcement approval by the Board. This action is to transfer and appropriate up to \$275,000 from the administrative portion of the WAIRE Mitigation Special Revenue Fund (86) into Information Management’s FY 2025-2026 and/or FY 2026-27 Budget, Services and Supplies and/or Capital Outlays Major Objects for development of WAIRE Mitigation Program Grant Management System.

COMMITTEE: Technology, April 17, 2026; Recommended for Approval

RECOMMENDED ACTION:

Transfer and appropriate up to \$275,000 from the administrative portion of the WAIRE Mitigation Special Revenue Fund (86) into Information Management’s FY 2025-26 and/or 2026-27 Budget, Services and Supplies and/or Capital Outlays Major Objects for the development of WAIRE Mitigation Program Grant Management System.

Wayne Natri
Executive Officer

Background

Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) was adopted on May 7, 2021 and applies to approximately 4,000 large warehouses in the South Coast AQMD jurisdiction, with the purpose of reducing NOx and Diesel PM emissions associated with warehouse activities. The rule requires applicable warehouses to offset air quality impacts associated with its activities by selecting from a menu of compliance measures. Alternatively, they can instead pay a mitigation fee. As of February 28, 2026, approximately \$71.4 million has been collected in mitigation fees and is held in the WAIRE Mitigation Special Revenue Fund (86) with funds anticipated to support the deployment of zero-emission vehicles and infrastructure.

Proposal

Staff is currently developing the first year of the WAIRE Mitigation Program to provide incentive funding using mitigation fees collected under Rule 2305 for projects that reduce NOx and Diesel PM emissions in areas where warehouses that paid mitigation fees are located. Funding distribution by county is approximately 28% for Los Angeles County, 5% for Orange County, 22% for Riverside County, and 46% for San Bernardino County. A Grant Management System (GMS) is necessary to effectively manage the full project lifecycle, including application intake, review, processing, contracting, invoicing, inspections, and annual reporting upon Program Announcement approval by the Board.

Staff recommends the transfer of up to \$275,000 from the administrative portion of the WAIRE Mitigation Special Revenue Fund (86) into Information Management’s FY 2025-26 and/or 2026-27 Budget, Services and Supplies and/or Capital Outlays Major Objects for the development of WAIRE Mitigation Program Grant Management System.

Benefits to South Coast AQMD

The use of a centralized in-house GMS and database to manage WAIRE Mitigation Program projects will better suit the operational needs of the South Coast AQMD due to the unique requirements for application review and project tracking. The GMS will facilitate the submittal process for participants, the evaluation and approval processes for staff, and project management tracking for both participants and staff. In addition, a GMS offers seamless integration with the District’s OnBase systems; particularly with invoicing and contract modules.

Resource Impacts

Sufficient funding is available from the administrative portion of the WAIRE Mitigation Special Revenue Fund (86) in the amount up to \$275,000 for the development of the WAIRE Mitigation Program GMS.

Transfer and Appropriate Funds for Development of Grant Management System for Warehouse Actions and Investments to Reduce Emissions Mitigation Program

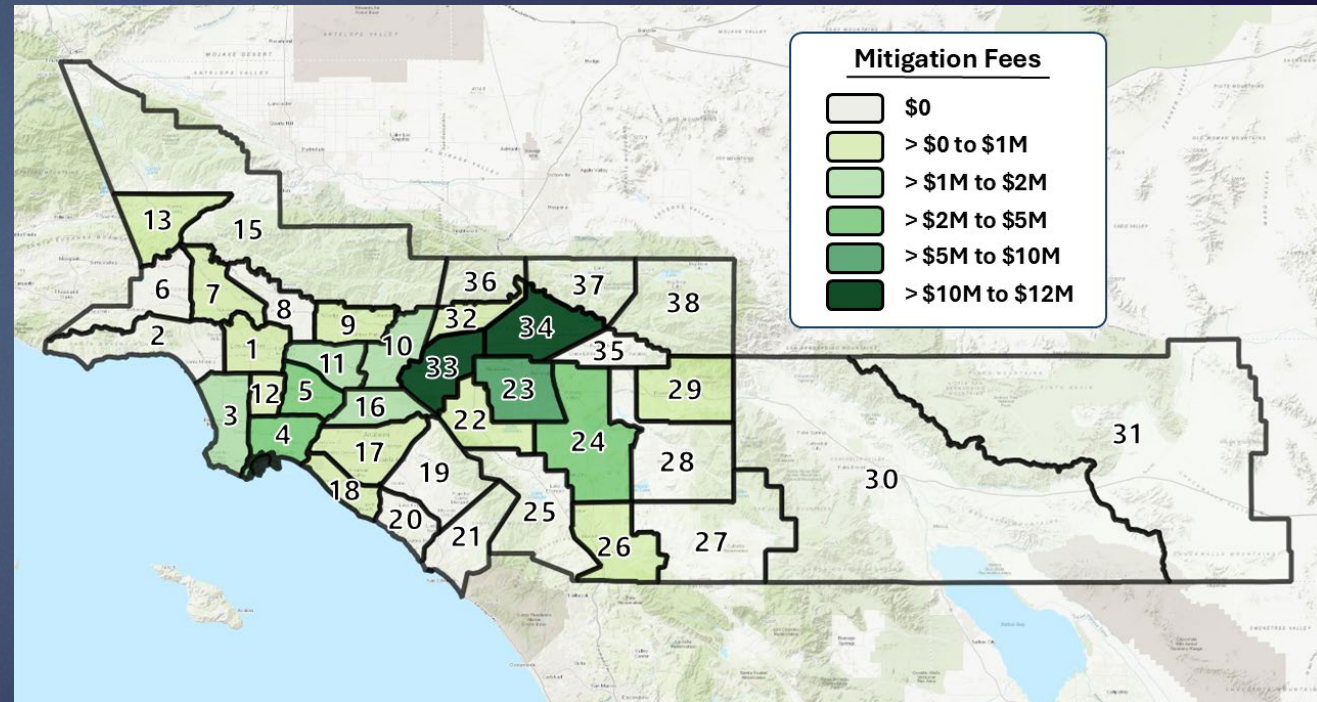
Ian MacMillan

Background

- ▶ South Coast AQMD Rule 2305 (WAIRE Program) applies to large warehouses and requires NO_x and PM emission reductions through multiple compliance options, including a mitigation fee payment
 - ▶ ~\$71M has been collected in mitigation fees as of February
- ▶ Staff currently developing the first year of WAIRE Mitigation Program to provide incentive funding using mitigation fees for eligible emission reduction projects related to warehousing
 - ▶ Focused on funding zero-emission (ZE) trucks and infrastructure
- ▶ Grant Management System (GMS) is needed to facilitate applications for the WAIRE Mitigation Program

Funding Amounts by Source Receptor Area (SRA)

- ▶ Funds available by county (distinct from total fees collected)*:
 - ▶ San Bernardino – \$32.5M (7 SRAs)
 - ▶ Los Angeles – \$19.8M (14 SRAs)
 - ▶ Riverside – \$15.4M (10 SRAs)
 - ▶ Orange – \$3.7M (6 SRAs)
- ▶ Projects must maintain connection to funding source and reduce emissions at warehouses and surrounding communities



*Based on \$71.4M in mitigation fees collected as of February 28, 2026

Public Process

February 27th Webinar

- Presented initial design concepts for 270 attendees
- Received public feedback for additional program design considerations
- Staff continues to receive public feedback on program design

Upcoming Development Milestones

August 2026:

Present Program Announcement to the Governing Board and begin accepting applications

January-March 2027:

Establish and execute contracts for qualified projects

Grant Management System (GMS) for WAIRE Mitigation Program

- ▶ Public release of GMS to facilitate the launch of an open funding solicitation period in August 2026
- ▶ \$275,000 needed to develop GMS for the WAIRE Mitigation Program, supporting the online application launch and processing



Recommended Action

- ▶ Transfer and appropriate up to \$275,000 for the development of WAIRE Mitigation Program GMS from the administrative portion of the WAIRE Mitigation Special Revenue Fund (86) into Information Management's FY 2025-26 and/or 2026-27 Budget, Services and Supplies and/or Capital Outlays Major Objects



**PCC
Hydrogen**

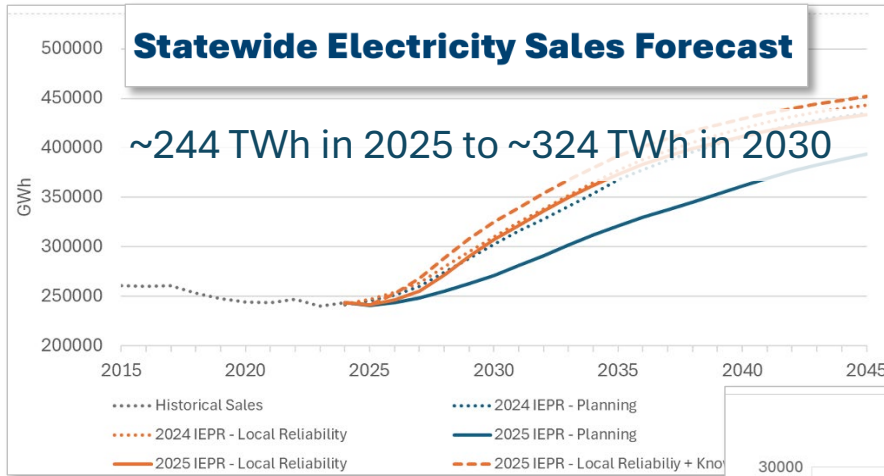
April 17th, 2026

**Accelerating Clean Hydrogen Deployment with
Differentiated, Scalable, and Cost-Effective
Production**

*Providing a near-term solution to electricity grid
supply issues and ZEV mandates.*

- Problem ●
- H2 via Ethanol
- Process
- Low Cost
- End Uses
- Site Flexibility
- Scalability
- Safety & Workforce
- Summary

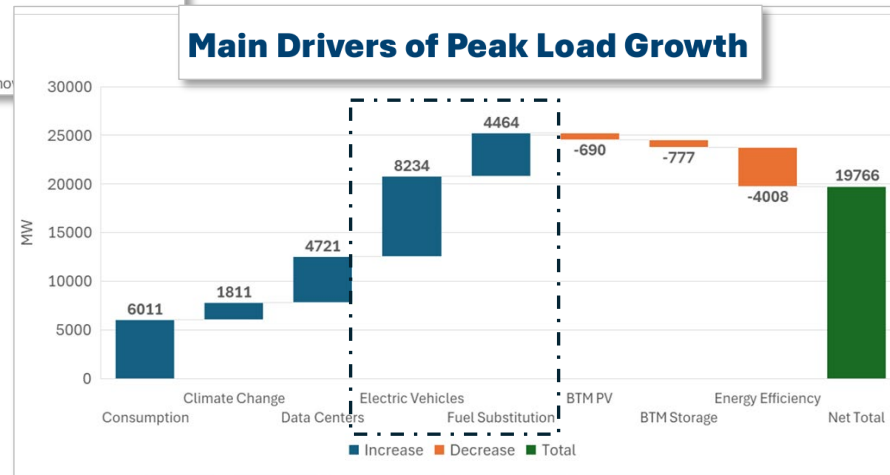
- rapid load growth,
- high electricity prices (incl. H₂ prices)
- project backlogs, and
- local distribution constraints



~33% ↑

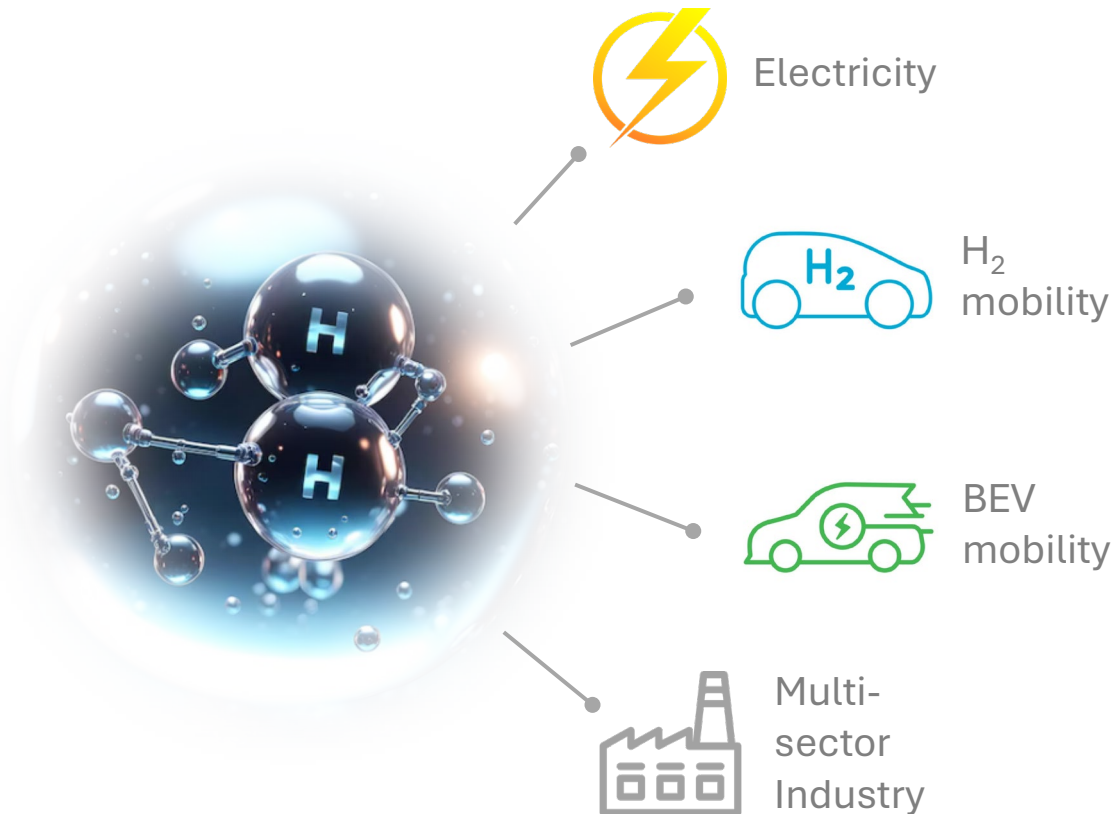
~62% ↑

- Electric Vehicles,
- Fuel Substitution (gas-fired building end uses with electric equipment)



- Problem ●
- H2 via Ethanol
- Process
- Low Cost
- End Uses
- Site Flexibility
- Scalability
- Safety & Workforce
- Summary

Clean H₂ can be the fast solution to many of these challenges



Critical Barriers to Adoption

PRICE



California pump price of H₂ > \$30/kg H₂

(equivalent to paying over \$12/gal gasoline)

AVAILABILITY & STORAGE



Liquefying 1 ton/H₂ for transportation uses 30% of the energy in H₂

(equivalent to ~300 gal of diesel)

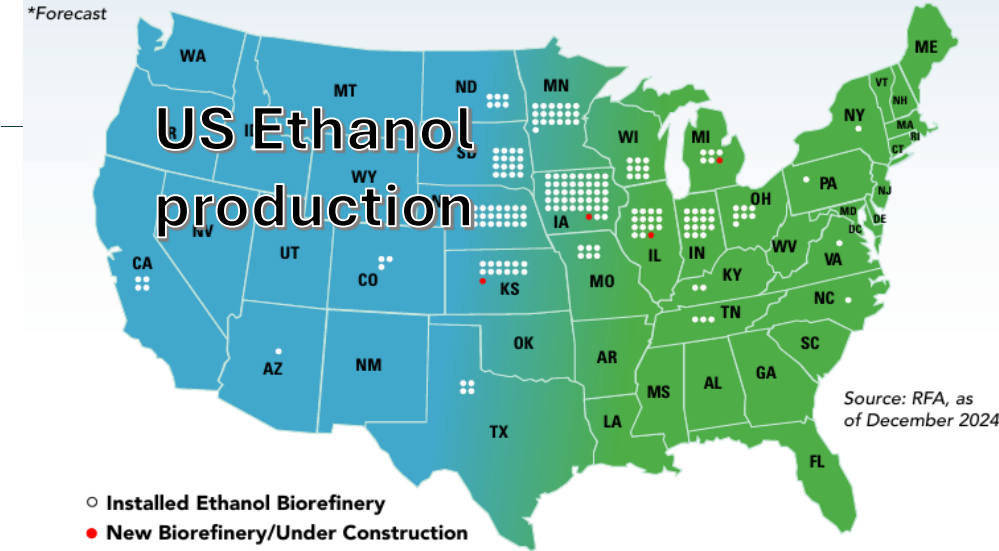
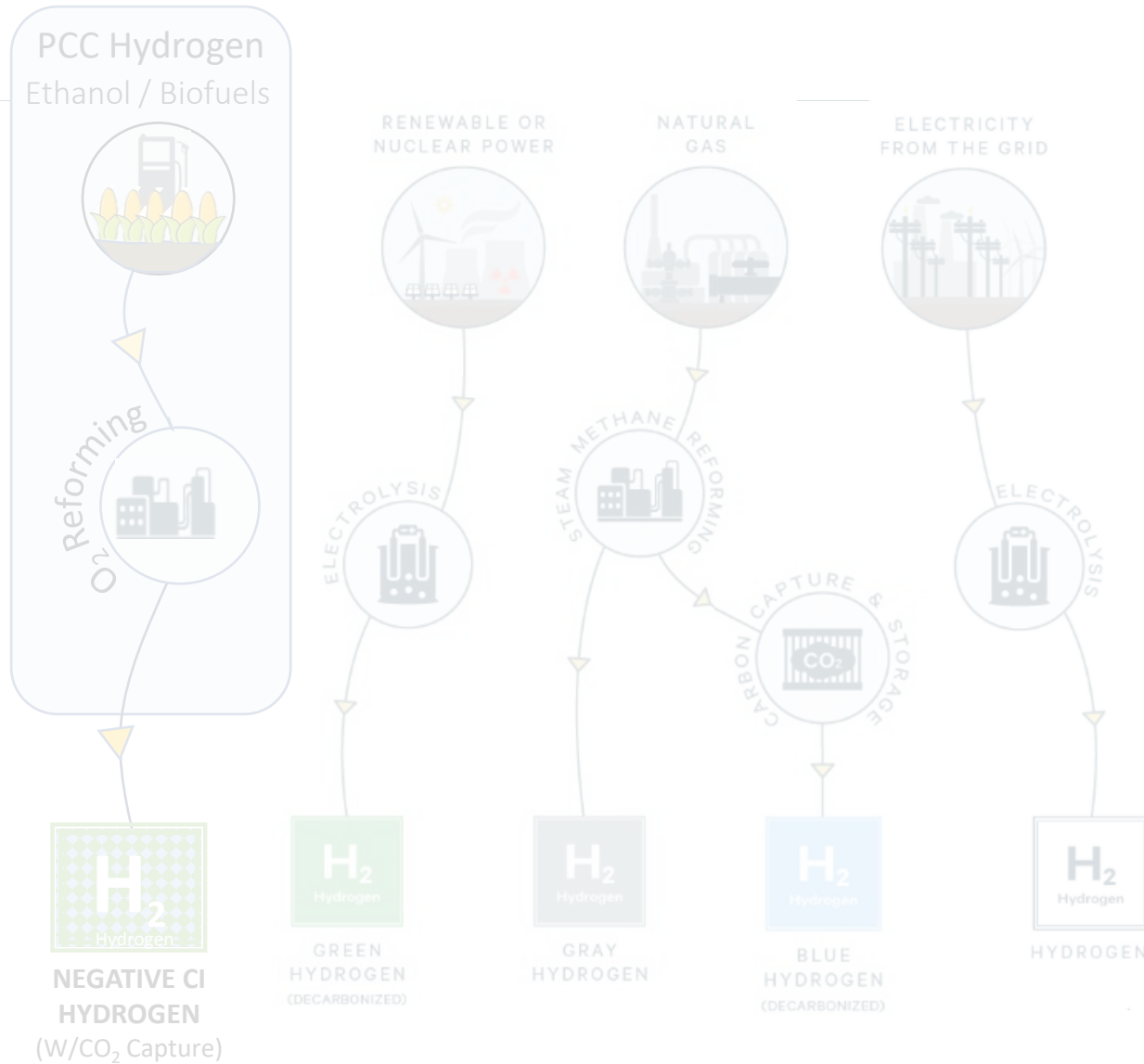
CARBON INDEX



Today in the U.S., ~95% of H₂ is produced from natural gas.

Enabling Hydrogen Availability with Ethanol

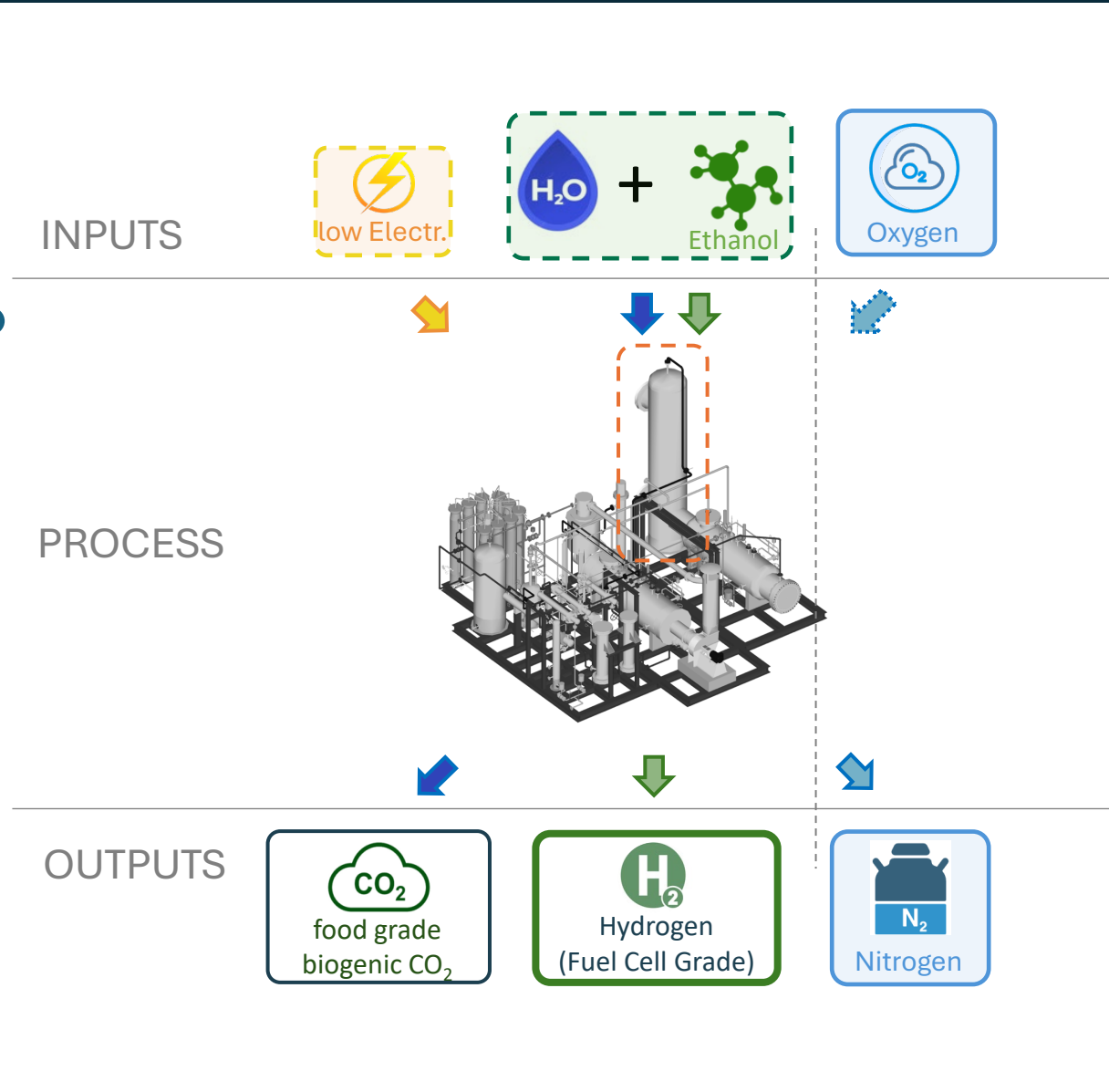
Problem
 H2 via Ethanol
 Process
 Low Cost
 End Uses
 Site Flexibility
 Scalability
 Safety & Workforce
 Summary



- Energy security / Local sourcing
- Existing regulated, well understood fuel (CA E15)
- Support farmers (~45% of corn goes to ethanol)
- Safe (store and transport ethanol and not H₂)
- Biogenic fuel
- 16.1B gallon annual U.S. production
- Logistically friendly fuel
- 2.5x more H₂ in ethanol than in liquid H₂

The Process – Compact & Distributed

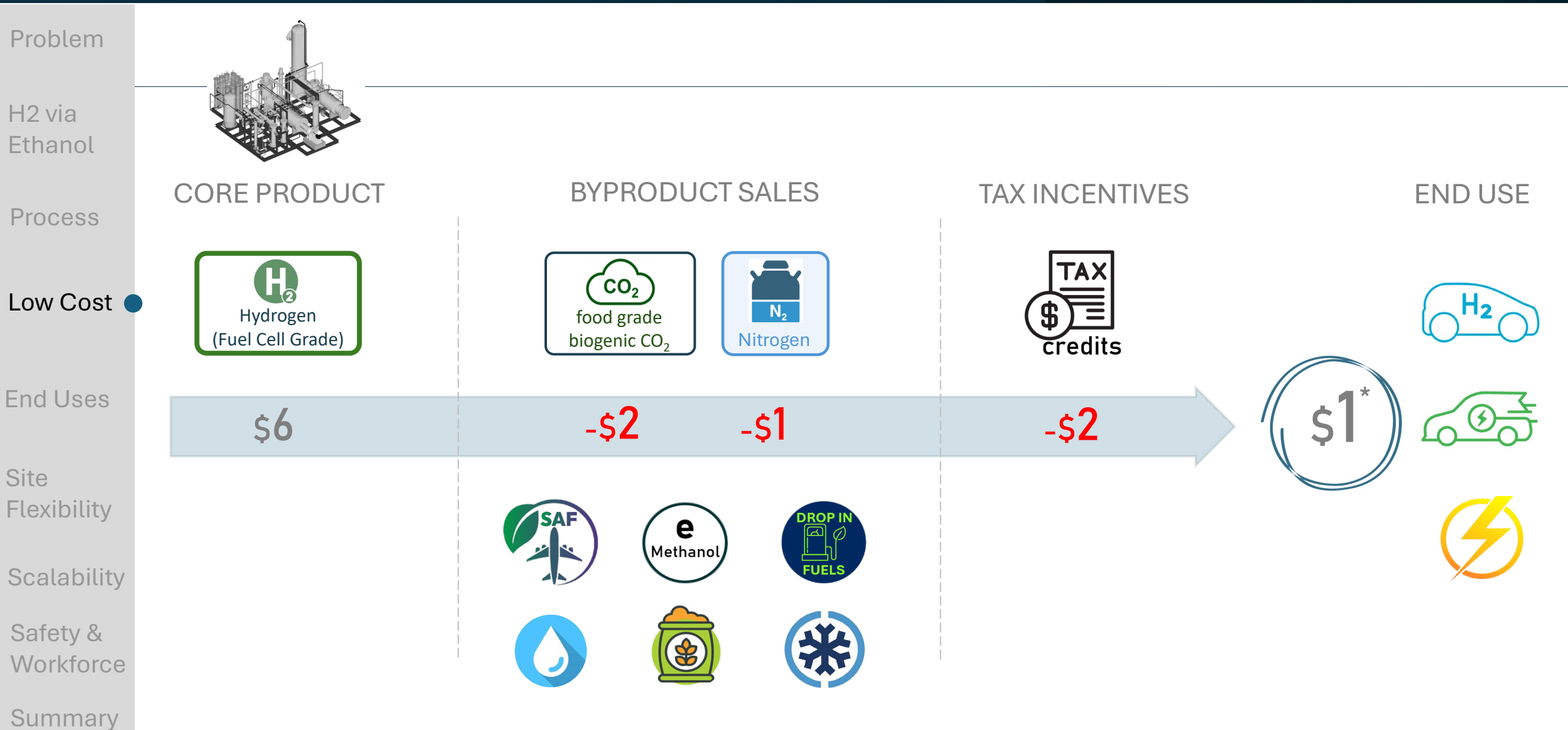
- Problem
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4 parking spaces
in 2 rows



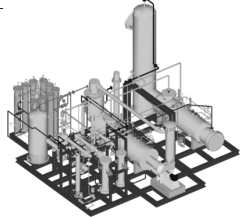

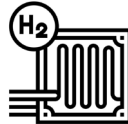



Efficiency	73%
Emissions	Zero NO _x Zero PM Low or Negative CO ₂
H ₂ Production	300kg to 20t H ₂ per day (per reactor)

Low-Cost Hydrogen Solution - Production Cost (\$/kg H₂)

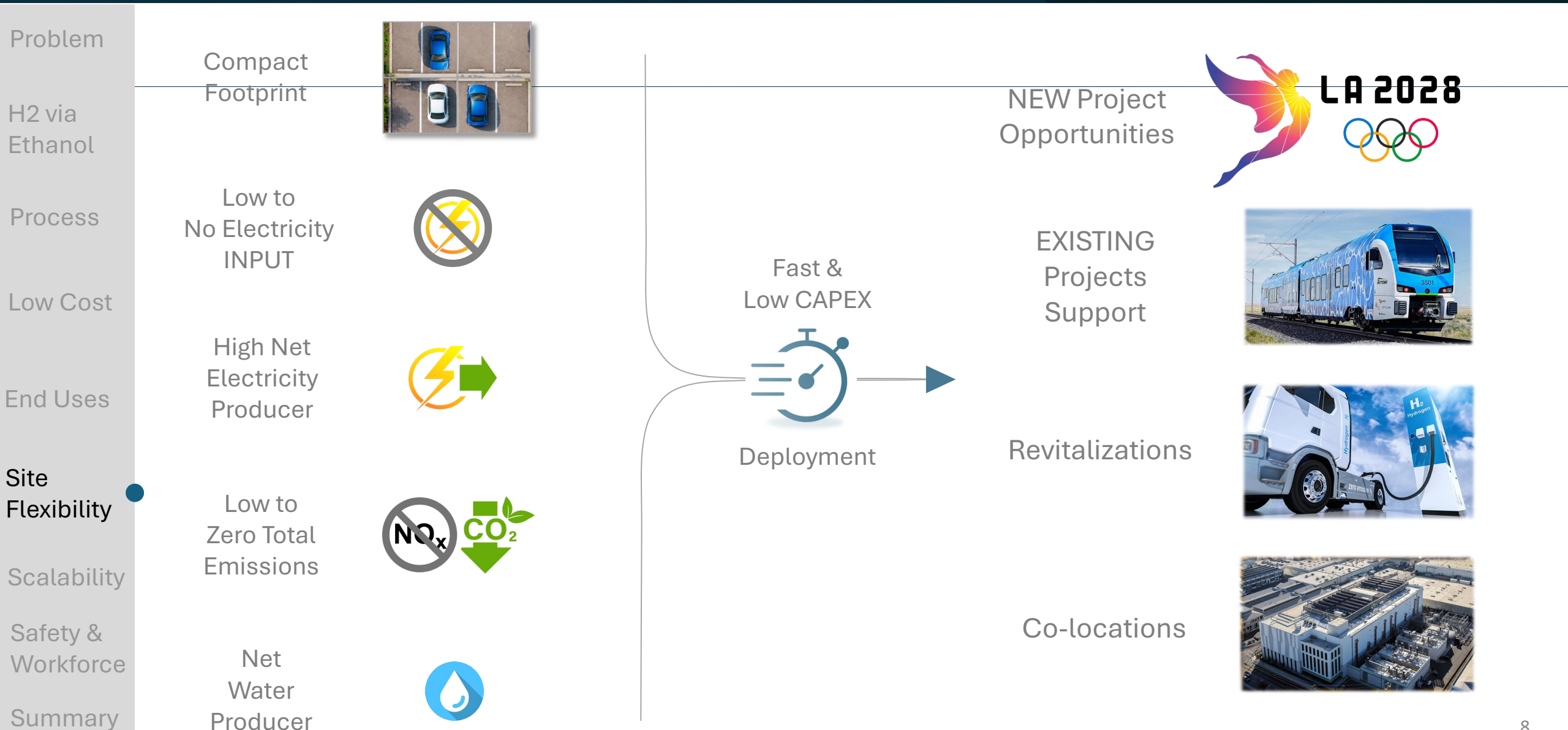


* All values on this slide are indicative and depend on rel. ecosystem

Facilitating Fuel Cell Mobility AND Power Generation

Problem		Hydrogen Mobility 	Power Generation / BEV 	
H2 via Ethanol Process	INPUTS 	2,000 gal/ethanol	1.2 MWh / d	NET WATER PRODUCER
Low Cost	OUTPUTS 	1 ton H ₂ / d	1 ton H ₂ / d	
End Uses	FUEL CELL POWER 	70 mi/kg	18 MWh / d	
Site Flexibility	END USE	 250 FCEVs / d	 42 BEV trucks / d  large warehouse	
Scalability				
Safety & Workforce Summary	VALUE PROPOSITION	Energy Utilization ~35 MPG >2x	Avoided Grid Electricity 16.8 MWh / d >93%	

Plants Easily Sited to Meet California Needs Where They Exist



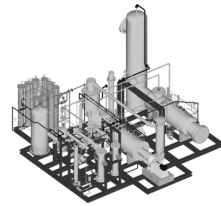
Plant Size Flexibility To Meet Local Demand, Large and Small

Problem
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“Not ONE Size Fits ALL”

Depending on influences like

- Location
- Use Cases
- Demand over time



Output Scale

- <1t H₂ / d
- 3 - 10t H₂ / d
- >10t H₂ / d



Peripheral Set Up



Permitting in <6 month

Full commercial integration with customer plant

H₂ cost savings of >60% for customer

H₂ power gen for plant power and BEV charging

H₂ fueling in H35 and H70

Network of **8** facilities
in SoCal in **5** years

Employing over **100**
high paying jobs

Supporting multi-sector
ecosystem growth

Generating ~**9,000**t H₂ / y

Supporting ZEV transition of
>**17,000** drayage trucks

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Safety is ..

- .. continuous education of ..
- .. current and future workforce ..
- .. translated into disciplined operations, and ..
- .. reinforced by appropriate technology

Workforce Development & Safety

- **Ethanol storage reduces reliance on high-pressure or cryogenic hydrogen storage**
- Hydrogen experts engaged early
- Local permitting and safety input already started
- Workforce development built into deployment strategy
- Local consultants integrated
- Engineered safeguards paired with operating discipline

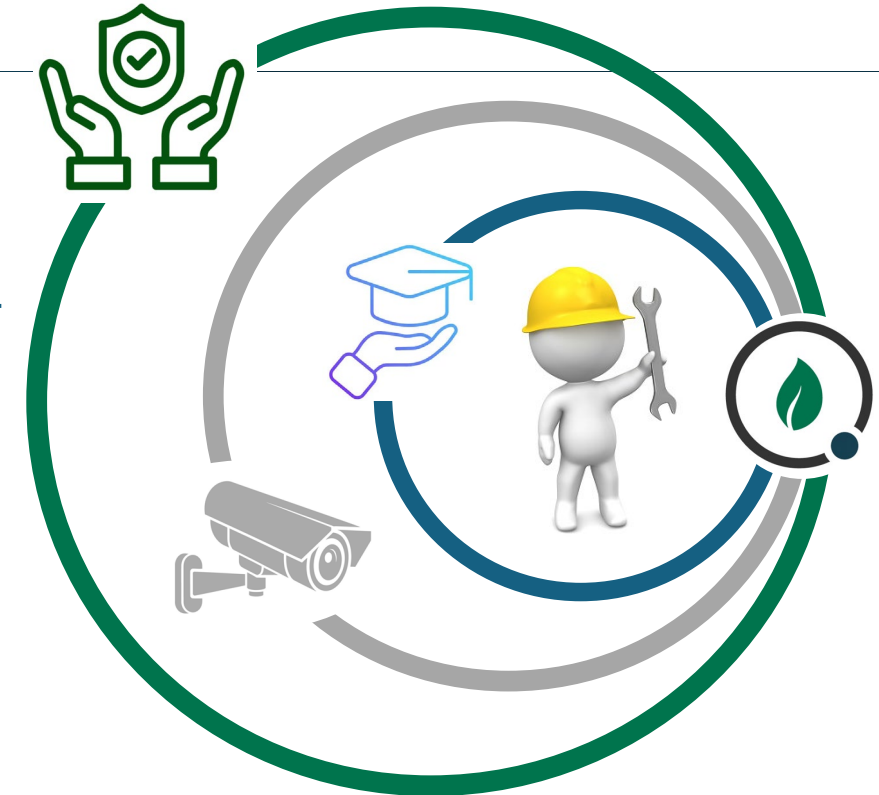
15 – 20 direct mortgage-paying jobs per plant

Long-term, skilled industrial employment

Tiered careers across multiple plants and functions

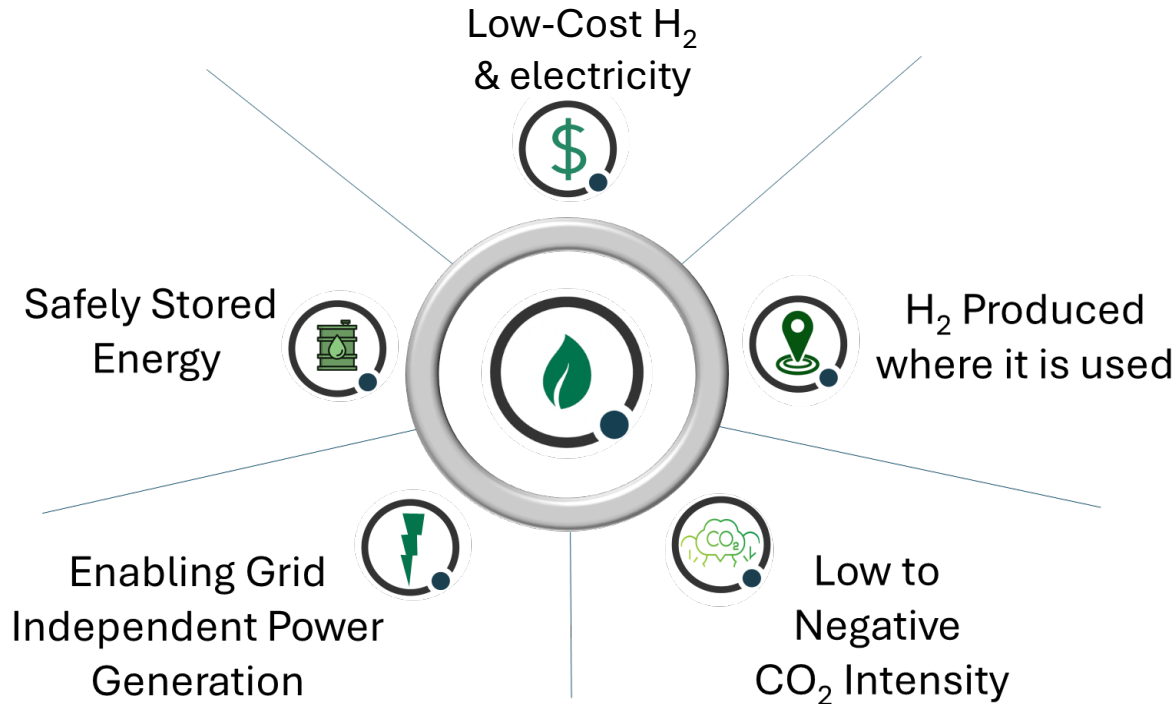
Anchor functions that attract adjacent industries

Multi-sector job creation beyond PCCH2 itself



- Problem
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- Summary ●

We are ready to work with you and can provide



This will enable Technical Committee support

- Launch new sites
- Engage with your local work force
- Support your regional ZEV roll-out
- Demonstrate a commercially compelling green H₂ solution

We request your...

- Support for a demonstration project in the IE – California
- Access to strategic sites in your municipalities or within your responsibilities
- Engagement with local leaders to explore implementation
- A partnership to build the foundation for the broader rollout of Safe, Distributed, Commercially Viable Clean Hydrogen

The background features decorative green leaf patterns. A large, detailed leaf with visible veins is on the right side, partially overlapping a white curved shape. In the top-left corner, there is a smaller, solid green curved shape. The text 'Thank you' is centered on the left side of the page.

Thank you