Overview

• Status of hydrogen in Sacramento
• Community needs for future hydrogen stations
• Funding opportunities
• Public station RFP
• Conclusion
Status of Hydrogen

- Three light duty stations open for public access
  - West Sacramento
  - Arden-Arcade
  - Foothill Farms
- Only light duty cars commercially available for purchase
- Potential for demonstration of Toyota/Kenworth tractor-trailer and deployment of Nikola trucks
Community Need for FCEV

- Need for light duty stations in disadvantaged communities to support transportation equity projects like car share and clean car replacement programs
- Heavy duty stations to extend the range of planned fuel cell trucks and support local trucking fleets
- Co-location of both at a single facility to leverage more benefits
- Stations need to be planned and built before vehicle deployment
Existing Light Duty Hydrogen Stations:
West Sacramento - River Road
Arden-Arcade - Watt & Fair Oaks
Foothill Farms - Auburn and Greenback

Potential Hydrogen Areas:
Light Duty Gaps in South Sacramento and South Natomas Communities
Heavy Duty Fleets in Power Inn Area, McClellan Park, and West Sacramento
Regional Fleet Support along Interstate 5, Interstate 80, and Highway 99

Sources: Esri, HERE, DeLorme, USGS, Intermap, Increment P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community
Light Duty DAC

- Electric vehicles are difficult to deploy in low income and disadvantaged communities:
  - Hard to install EVSE at apartments and rentals
  - Complicated living arrangements and street parking
  - Public fast chargers limited or nonexistent in DAC
- Advanced mobility like car share and ride hailing services need fast fuel times for maximum uptime
- Hydrogen may help meet these needs
Heavy Duty Vehicles

• Emerging market for heavy duty fuel cell vehicles with high interest from Sacramento fleets

• High initial capital cost makes it difficult for a fleet to commit to private hydrogen fueling

• Public Hydrogen Truck Stop
  • 24/7 fueling with access to Interstates 5 & 80
  • Owner-operators cannot charge HDEV at home
  • Needed redundancy for regional fleets with depot fueling
Funding Opportunities

• CEC funding is rolling out slowly over the next few years
• LCFS credit for hydrogen infrastructure
• Federal investment tax credit expiring
• Most of the funding targeted for traditional demographics and to support fleets in South Coast and San Joaquin Valley
• Opportunity to use Community Air Protection funds under the Carl Moyer Guidelines for hydrogen infrastructure
Public Hydrogen RFP

- Sac Metro Air District investigating using local funds to support the following community priorities:
  - Public Access Light Duty Hydrogen Stations in Disadvantaged Communities
  - Public Hydrogen Truck Stop in Sacramento Region
- Guidelines require a competitive RFP for public access infrastructure with up to 70% funding
- Less stringent than other funding to encourage participation
Light Duty Option

• Public Access Light Duty Hydrogen Stations in Disadvantaged Communities – 24/7 credit card access at gas stations
• Identical to existing stations, except located in DAC
• Preference for our Florin-South Sacramento Community to support AB 617 community air protection efforts
• Open to other communities including upgrade or relocation of existing stations with potential support for 2-3 stations
• Community support required for application
Heavy Duty Option

- Public Hydrogen Truck Stop
- Fast fueling (~10 kg/min) with HD protocols
- STAA truck (18-wheeler) access on major truck routes
- Can use an existing truck stop, relocation of an existing truck stop, or part of a new facility
- 1-2 stations based on cost estimates, potential mixed use
- Preference for DAC, but accepting applications for Sacramento County and Yolo-Solano Air District with community support
Basic Requirements

• Applications must include a specific location with a detailed description of the fueling infrastructure and costs
• Must have approval from the land owner
• Meets all the requirements of the Carl Moyer Guidelines including Chapter 10
• Projects must be operational by April 2022
• Applications must be approved by the community to meet community priorities including letters of support
Florin-South Sacramento
Disadvantaged or Low-Income Community

Legend
- AB617 / AB134 Selected community

Priority Populations
- AB 1550 Low income communities
- AB 1550 Low income communities 1/2 mile from DAC
- SB 535 DAC and Low income communities
- SB 535 DAC
Funding Budget

• Budget based on demand, but sufficient funding for 1-3 light duty stations and one small-scale heavy duty station
• Potential for additional funding so larger concepts are encouraged to apply, but may be funded over several years
• On-site renewable generation (no credits) can get more funding
• Applicants are highly encouraged to leverage other funding sources, but they will need to meet our deadlines
• Projects are subject to community and Board approval
Hydrogen Vehicle Funding

• Main motivation for hydrogen infrastructure is planning for future zero emission vehicle funding
• Planned Funding:
  • Proposition 1B & Community Air Protection
  • Clean Cars 4 All
  • Our Community Car Share
• Future vehicle funding
Zero Emission Vision

- Sacramento is a key location for the deployment of zero emission vehicles across all sectors
- Matching local production with vehicles and infrastructure
- Hydrogen will play a key role in zero emission mobility in the Sacramento region in strategic sectors
- Sac Metro Air District is willing to fund the early deployment of advanced hydrogen infrastructure to help this vision
- Key investments will lead to meeting community goals, economic development, and innovation
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Open Discussion