



EARLY COMMERCIALIZATION- REACHING THE GOAL LINE

ARB's Analyses and Perspectives on the Developing Hydrogen
Fueling Network

October 18, 2016

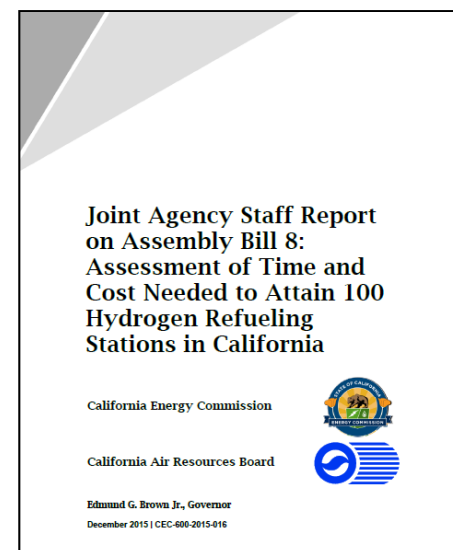
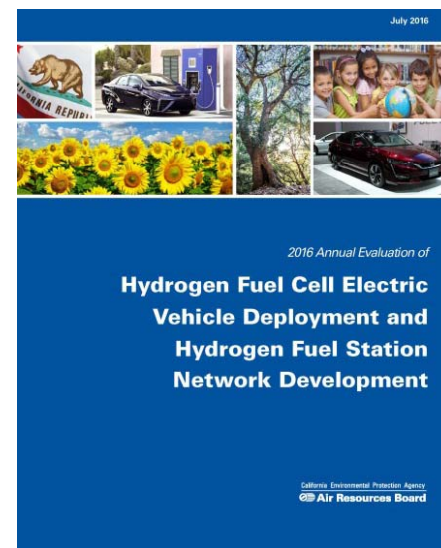
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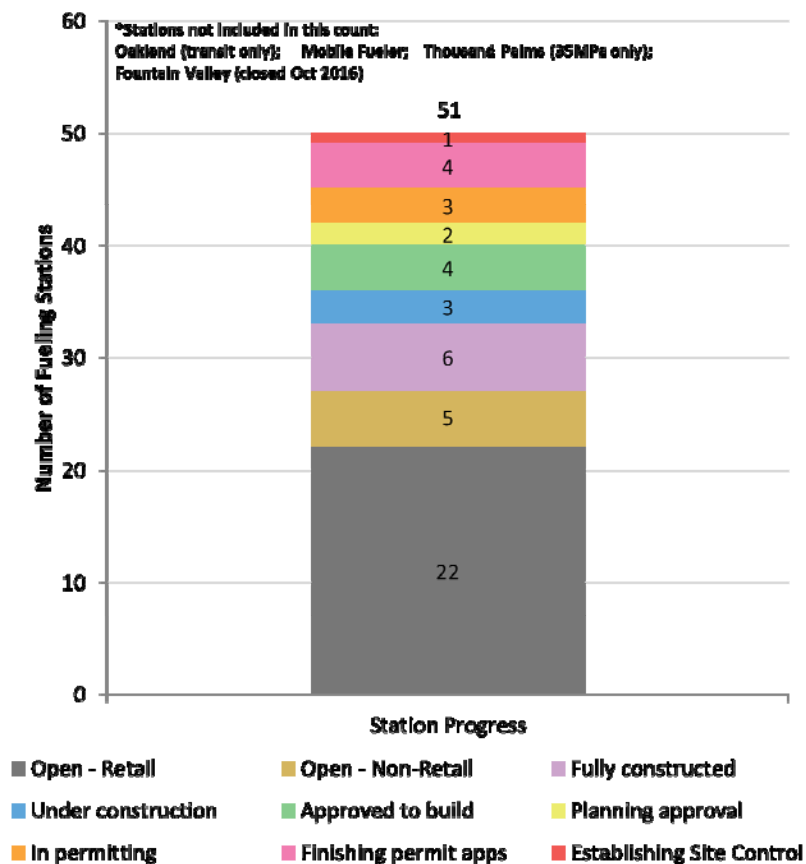
AB 8: ARB's Primary Roles

- ARB annually reports to CEC by June 30
 - Current and projected FCEV fleet and station progress
 - Assessment of coverage and capacity
 - Recommended station placement
 - Recommended funding level (up to \$20M)
 - Recommended station technical specifications
- ARB participates with CEC to report to public by December 31
 - Analysis of station and vehicle rollout progress (with comparison to past projections)
 - Analysis of cost and timing to 100 stations
 - Assessment of whether and when hydrogen fueling industry can be self-sustaining

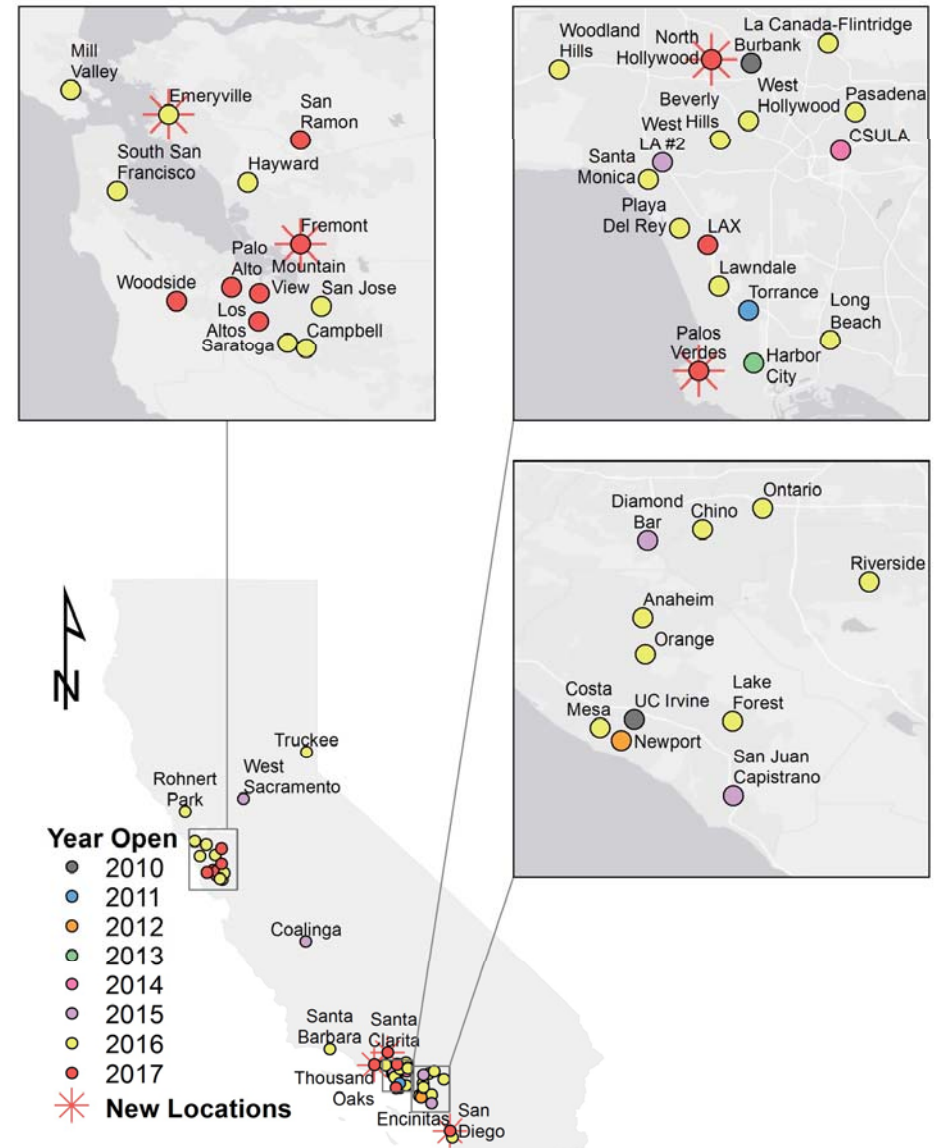


AB 8: Tracking Ongoing Station Development

As of October 13, 2016:



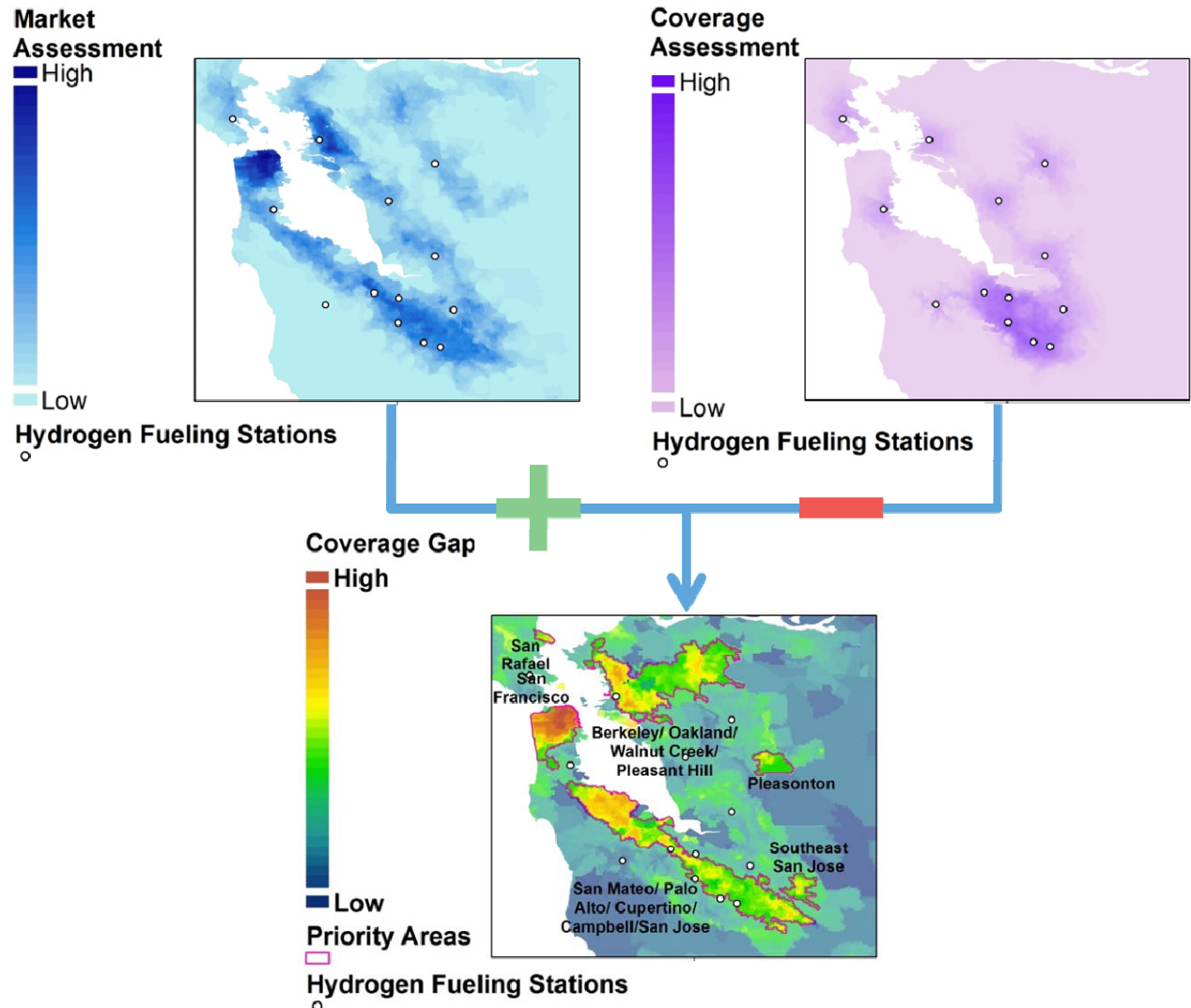
Source: CEC and GO-Biz



AB 8: Determining New Station Needs

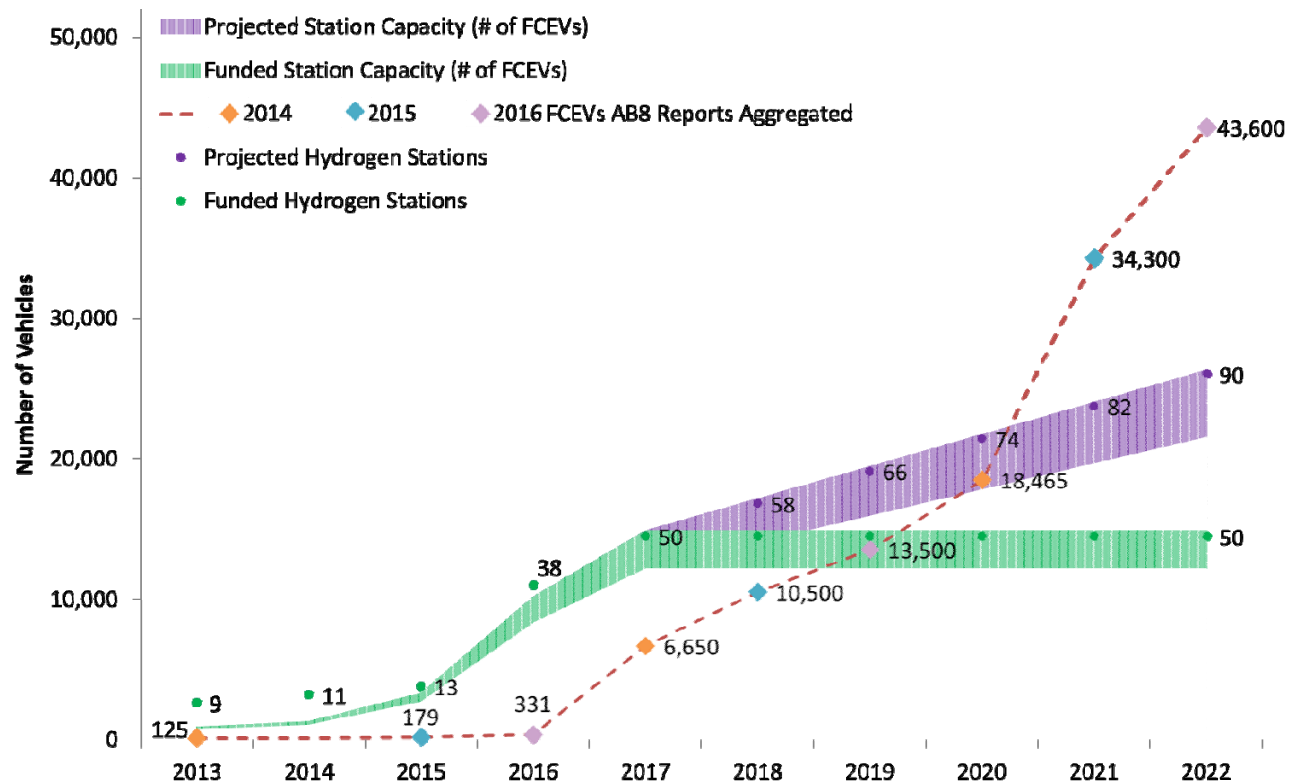
CHIT Tool Review

- CHIT is a planning tool intended to provide general direction indicating areas of needed infrastructure
- CHIT evaluates relative need for hydrogen infrastructure based on a gap analysis between a projected market and current infrastructure

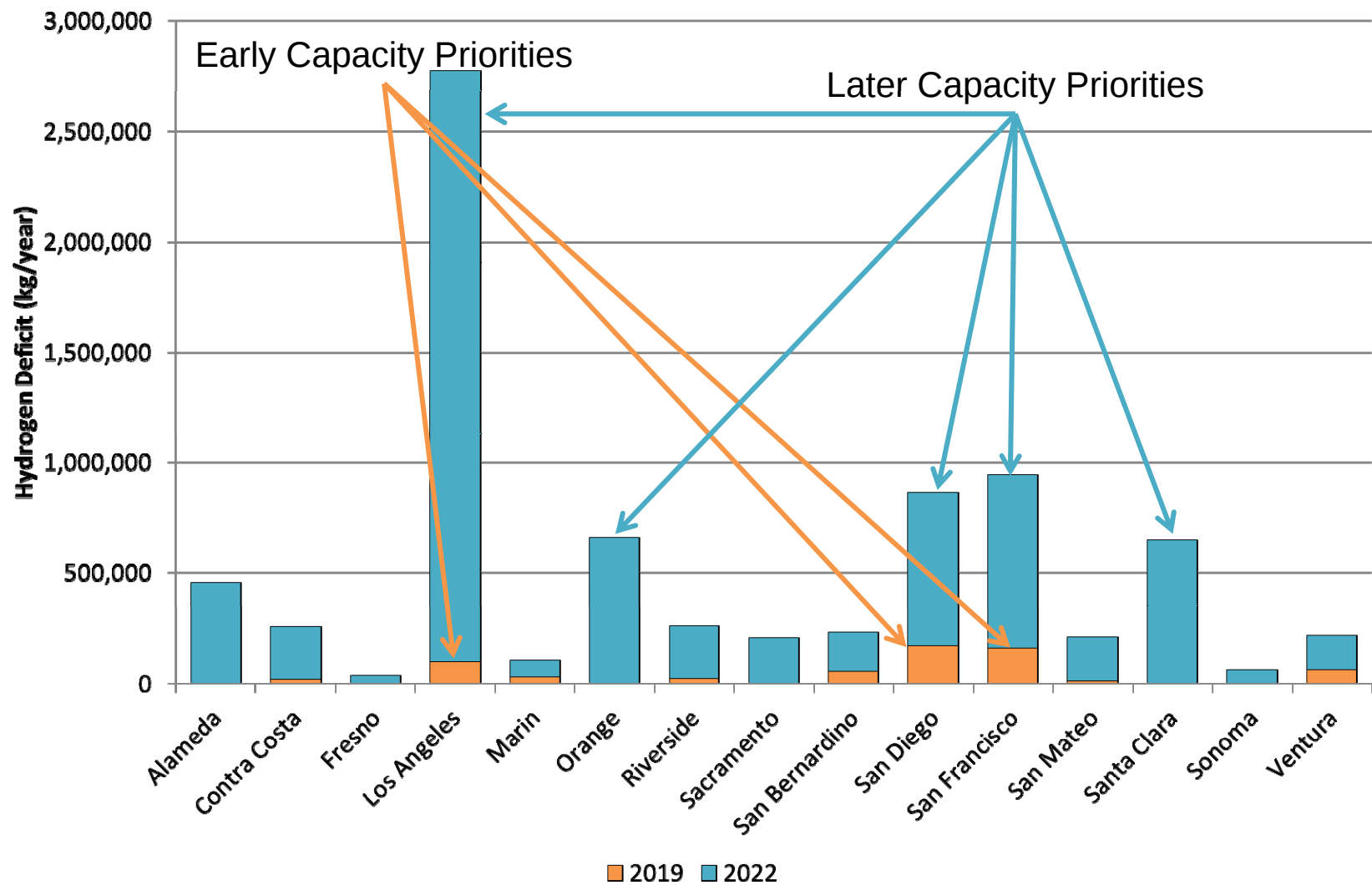


AB 8: Projecting Capacity Needs

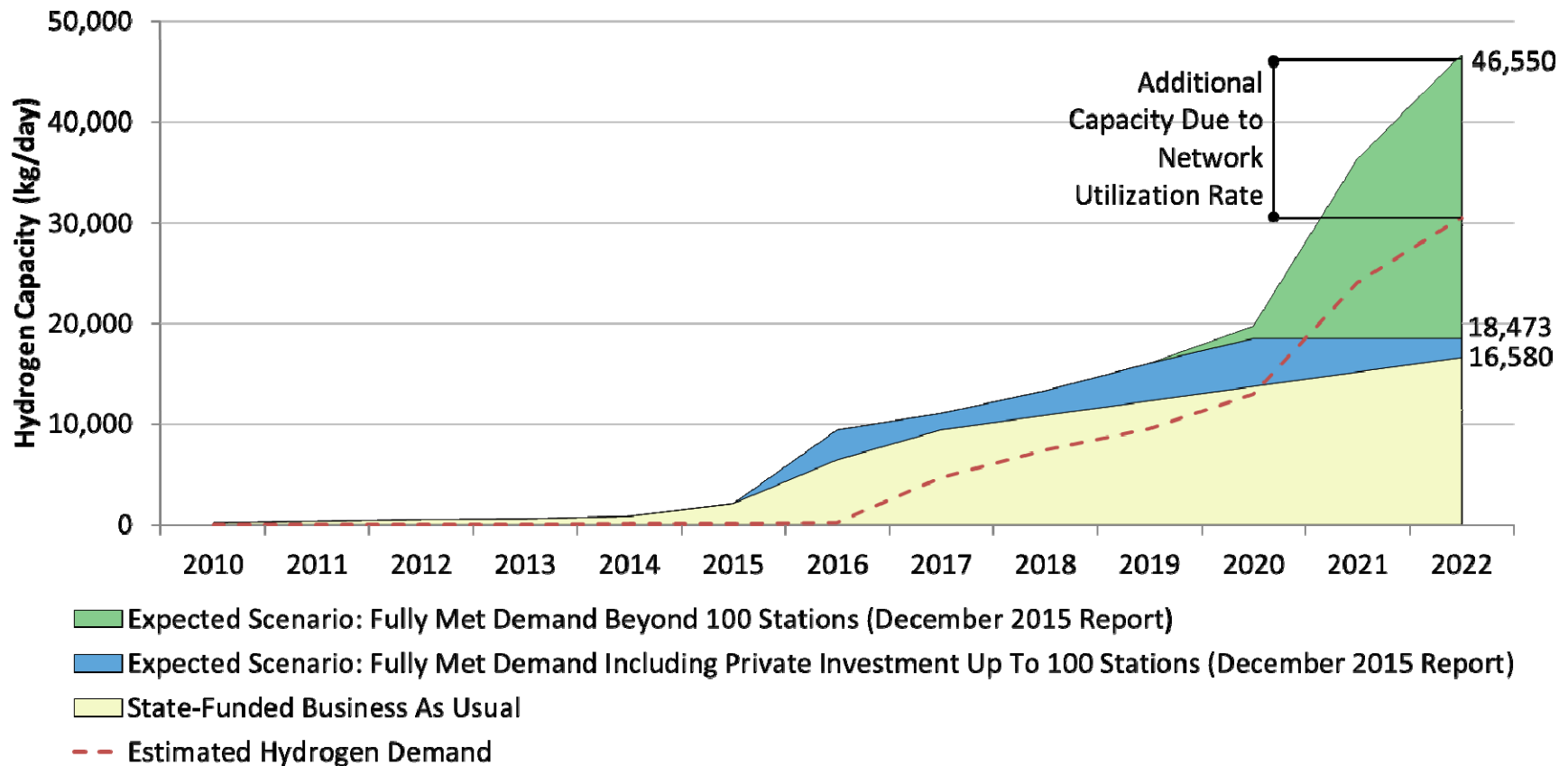
With a continuing projection of capacity shortfall around 2020, there is urgency to identify opportunities to maximize the fueling capacity leveraged by State investments.



AB 8: Prioritizing Timing of Investments



AB 8: Assessing Funding Impact and Needs

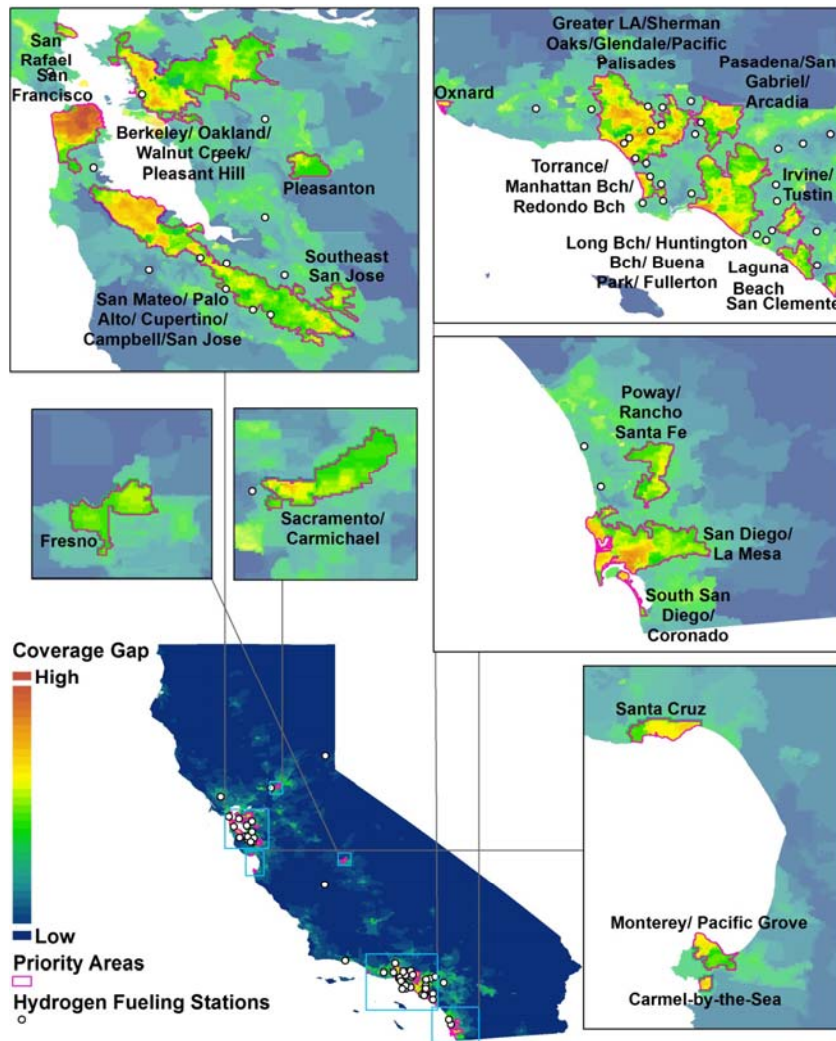


ARB's Perspectives

- Business-as-usual State funding alone will make it difficult for the first 100 stations to meet the demands of the FCEV fleet expected in the same period
 - 100 stations could be available by 2023
 - An average dispensing capacity of 180 kg/day will not allow network capacity to keep pace with projected demand
- Support of the early commercial market also requires focus on local “sub-networks” of stations for early adopters
 - Support high-market potential areas with equally high coverage and capacity
 - Focus on appropriate level of redundancy for local market
- At the same time, full support of commercialization requires maximizing FCEV utility by making travel to and around popular destinations possible (e.g. Truckee, Santa Barbara)
- Analysis and recommendations for network development must respond to changing landscape of ongoing station deployments
- Timelines for development likely need to accelerate before reaching 100 stations
 - HyStEP can be an important part of accelerating commissioning schedules

AB 8: Translating Analysis to Funding

CHIT Assessment Update for GFO-15-605



Helps ARB recommend WHERE new infrastructure is needed and HOW MUCH hydrogen capacity is locally needed

