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## Achieving California's ZEV Transition: Hydrogen Station & Fuel Cell Vehicle Targets

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- James Kast, Toyota
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### **CaFCP Members**





































































































































## California H2 stations in 2020, 2025



BY **2020** 

Funded Light Duty

hydrogen stations by **2020**. Funded by Assembly Bill 8 (2013).

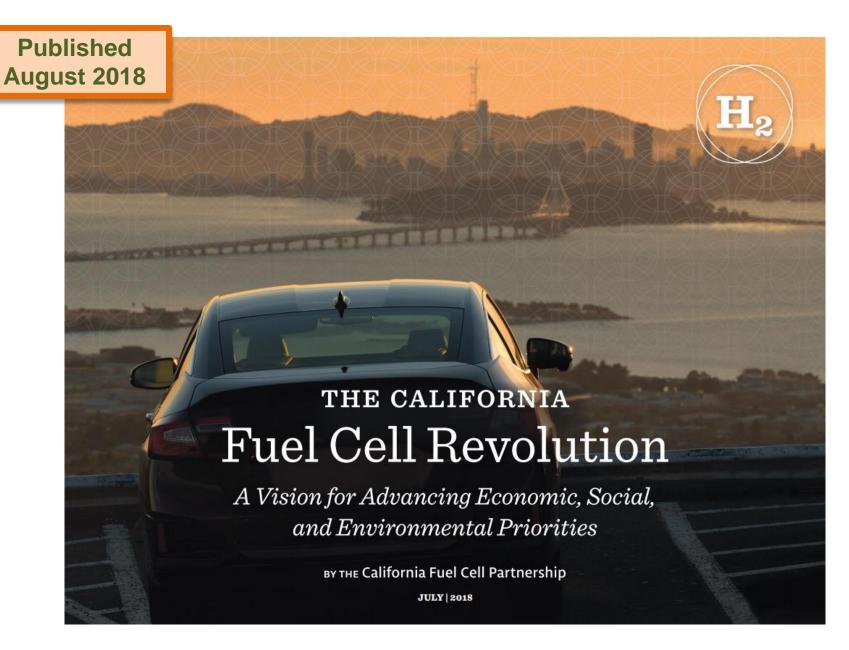
200

BY **2025** 

Planned Light Duty

hydrogen stations by **2025**, pursuant to the Governor's 2018 ZEV infrastructure Proposal.



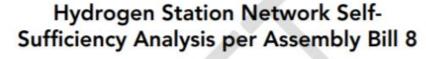






# (draft) Self-sufficiency study





November 2020





Self-Sufficiency Achieved by:

2030

With State Support up to:



#### Self-Sufficiency ensured by:

- Early network
- Larger netwo
- Larger hydro
- High FCEV d
- Focus on red

### State support

- Accelerating
- Slow capital
- Slow operational cost reductions
- Focus on global market cost reductions

Opportunities exist to deliver cost savings to the consumer through State action



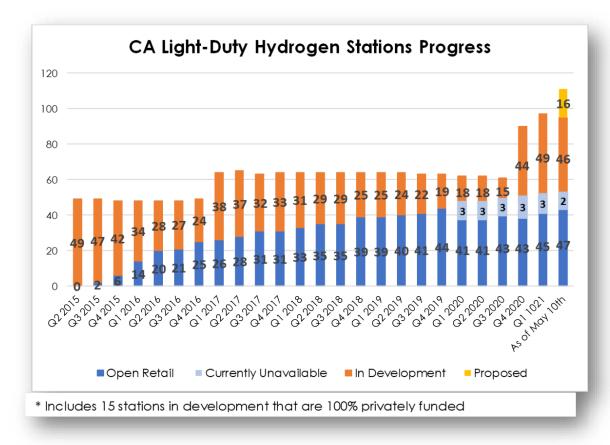


Numbers as of August 1, 2021	Total
FCEVs—Fuel cell cars sold and leased in US*	11,016
FCEBs—Fuel cell buses in operation in California	48
Fuel cell buses in development in California	38
Hydrogen stations available in California**	48
Retail hydrogen stations in <i>construction</i> in California***	10
Retail hydrogen stations in <i>permitting</i> in California***	30
Retail hydrogen stations <i>proposed</i> in California***	15
Retail hydrogen stations <i>funded</i> , but not in development in California***	72
Total retail hydrogen stations in development in California***	127
Retail truck hydrogen stations in construction in California	4
Retail truck hydrogen stations <i>funded</i> , but not in development in California****	5



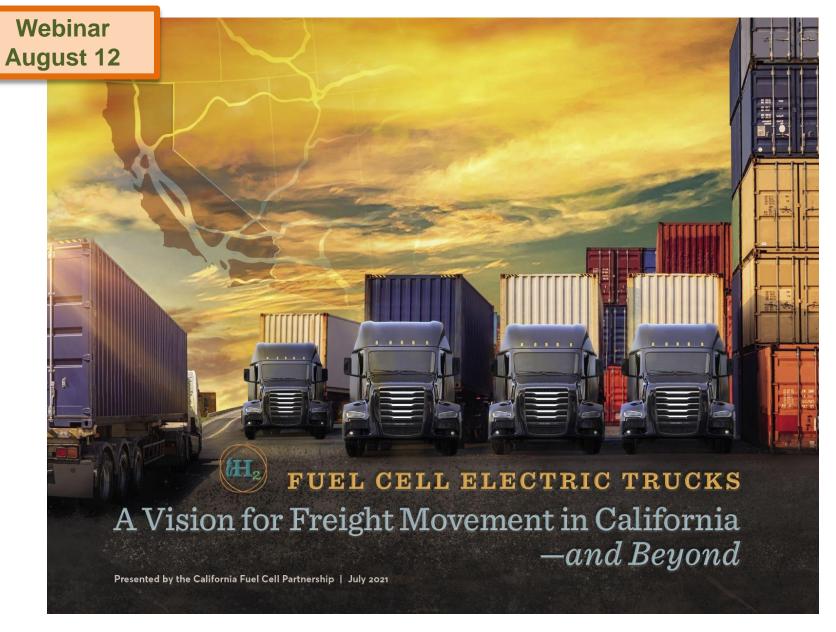


- California Energy Commission hydrogen station funding (GFO 19-602)
- 114 stations funded over several years
  - 30 stations funded in first batch
- Breakdown of all stations funded
  - Shell 51
  - First Element 49
  - Iwatani 14
- Iwatani will also build six additional stations not funded by this GFO.



Source: Governor's Office of Business and Economic Development





CaFCP envisions 70,000 heavy-duty fuel cell electric trucks supported by 200 hydrogen stations in-state by 2035.

