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<td><strong>Docket Number:</strong></td>
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<td><strong>Project Title:</strong></td>
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A Joint Workshop
Sponsored By
California Energy Commission
And
California Public Utilities Commission

Financing EV Charging Infrastructure in California


Dr Anand Rangarajan
Cambridge Capital
June 24, 2020
What is the funding gap?

Money Chasing Projects

ESG Investors Looking for Green Investments

Impediments/Opportunities?

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<th>Target</th>
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<td>Funding Gap</td>
<td>78,000</td>
<td>3,600</td>
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<td>Demand*</td>
<td>~ 3,500</td>
<td>~ 500</td>
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<tr>
<td>~ 4,000 MW</td>
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<tr>
<td>Investment*</td>
<td>~ $ 3,500</td>
<td>~ $ 500</td>
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<td>~ $4,000 million</td>
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* Order of magnitude estimates
“Business as Usual”

Grid Constraint Removal
Make Ready via Poles/Wires

Traditional Issues
• Rate payer impact
• Long Planning Cycle
• Capex uncertainty
• Unpredictable timelines
• Front of meter upgrades

Traditional Funding via
• Grants
• IOU cost recovery
• Local Government Budgets
• On balance sheet

Impediments - Private Infrastructure Financing
• Interconnection – essential part of Infrastructure
• Interconnection uncertainty
• Early stage investment too risky
• Who owns upgraded interconnection assets?
• Money for making ready?
• Access to LCFS unclear
“Non-wire” Solution for Interconnection Upgrades

On-site, Behind the meter

Potentially supplied by one single developer
New Business Model

Constraint Removal - not needed
Non-wire Solution
Behind the meter

Issues de-risked
• No Rate payer impact
• Shorter development cycle
• Capex confidence
• Normal permitting
• Behind the meter upgrades

Funding via
• Infrastructure asset owners
• Infrastructure as service
• Early stage capital providers
• CA Infrastructure banks

Opportunity - Private Infrastructure financing
• Measurable pre-construction risk
• No/minimal impact from utility
• Standardized Transactions
• Cashflows – independent of charger uptake
• Potential Tax leverage
• Monetize LCFS
• Equipment performance guarantees
Transaction

Asset Owner Revenue
Host payments
Tax Credits
LCFS

Asset Owner

Lease
Rent to Own
Energy Service Agreement

Host

Host Revenue
Charging fees
Site Lease Payments

Transaction Business Model Based on Distributed Solar Business at Commercial & Industrial (C&I) Facilities

Hosts
State Agencies
Municipal Governments
Fleet Owners
Ag Enterprises
C&I facilities
**Typical Values**
CEC equity $2.50
Developer equity $2.50
Sale Price at NTP $10
Asset Value $100

**CEC funding leverage up to 40 X**

- CEC’s capital Pari Passu with developer equity
- CEC exit typically in 12 months
- 100% profit – reinvested

* NTP – Notice to Proceed; construction start
Recommendations

• Directory of Project/Investment Opportunities
  Dynamic Database

• Investment/Information Memo
  Priorities, plans

• Road Shows
  Communicate needs, priorities – outreach to financial markets

• Pilot Project
  Test out concepts