

DOCKETED

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Accessing Private Capital
Markets

Leveraging
CEC (and other State) Funding

Dr Anand Rangarajan
Cambridge Capital
June 24, 2020

A Joint Workshop
Sponsored By
California Energy Commission
And
California Public Utilities Commission

Financing EV Charging Infrastructure in California

2020 Integrated Energy Policy Report Update Proceeding



2019-2020 Investment Plan Update
 Clean Transportation Program
 Second Revised Lead Commissioner
 Report
 8/28/2019

What is the funding gap?

Money Chasing Projects

ESG Investors Looking
 for
 Green Investments

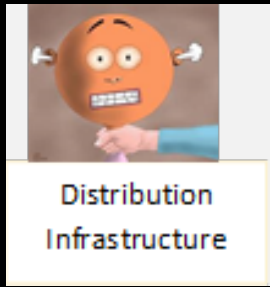
Impediments/Opportunities?



Target	240,000	10,000
Funding Gap	78,000	3,600
Demand* ~ 4,000 MW	~ 3,500	~ 500
Investment* ~ \$4,000 million	~ \$ 3,500	~ \$ 500

* 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



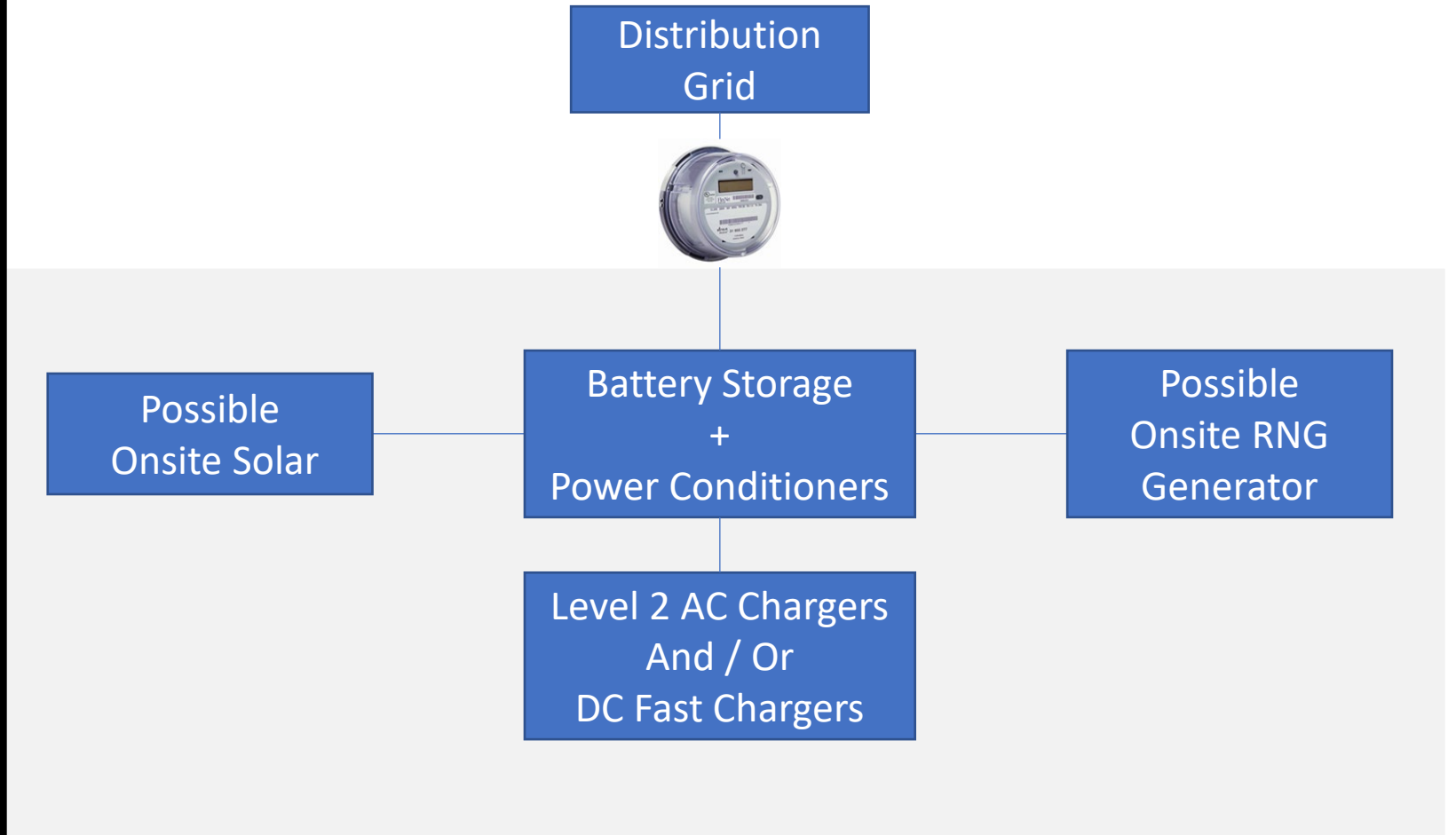
Impediments - Private Infrastructure Financing

- 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

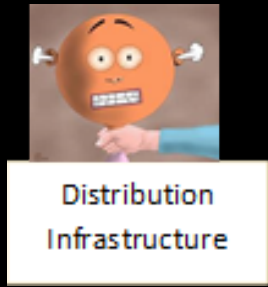
“Non-wire” Solution
for
Interconnection Upgrades

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

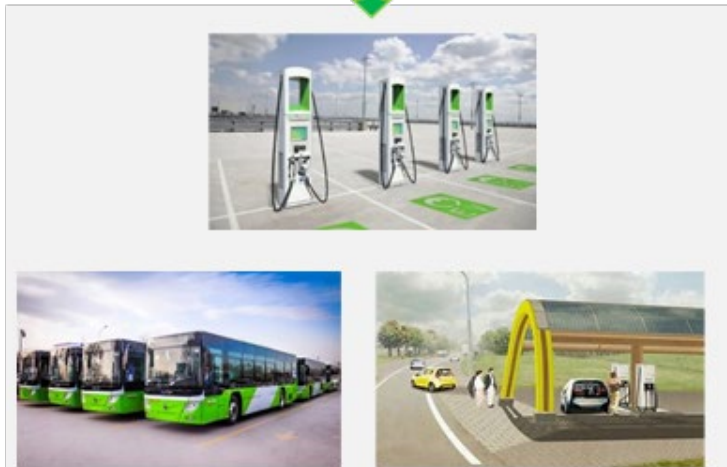
- No Rate payer impact
- Shorter development cycle
- Capex confidence
- Normal permitting
- Behind the meter upgrades

Funding via

- Infrastructure asset owners
- Infrastructure as service
- Early stage capital providers
- CA Infrastructure banks

Opportunity - Private Infrastructure financing

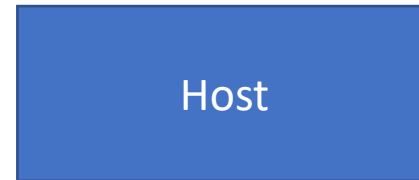
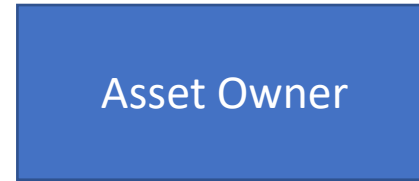
- Measurable pre-construction risk
- No/minimal impact from utility
- Standardized Transactions
- Cashflows – independent of charger uptake
- Potential Tax leverage
- Monetize LCFS
- Equipment performance guarantees



Transaction

Business Model Based
on
Distributed Solar Business

at
Commercial & Industrial
(C&I) Facilities



Asset Owner Revenue
Host payments
Tax Credits
LCFS

Hosts
State Agencies
Municipal Governments
Fleet Owners
Ag Enterprises
C&I facilities

Host Revenue
Charging fees
Site Lease Payments

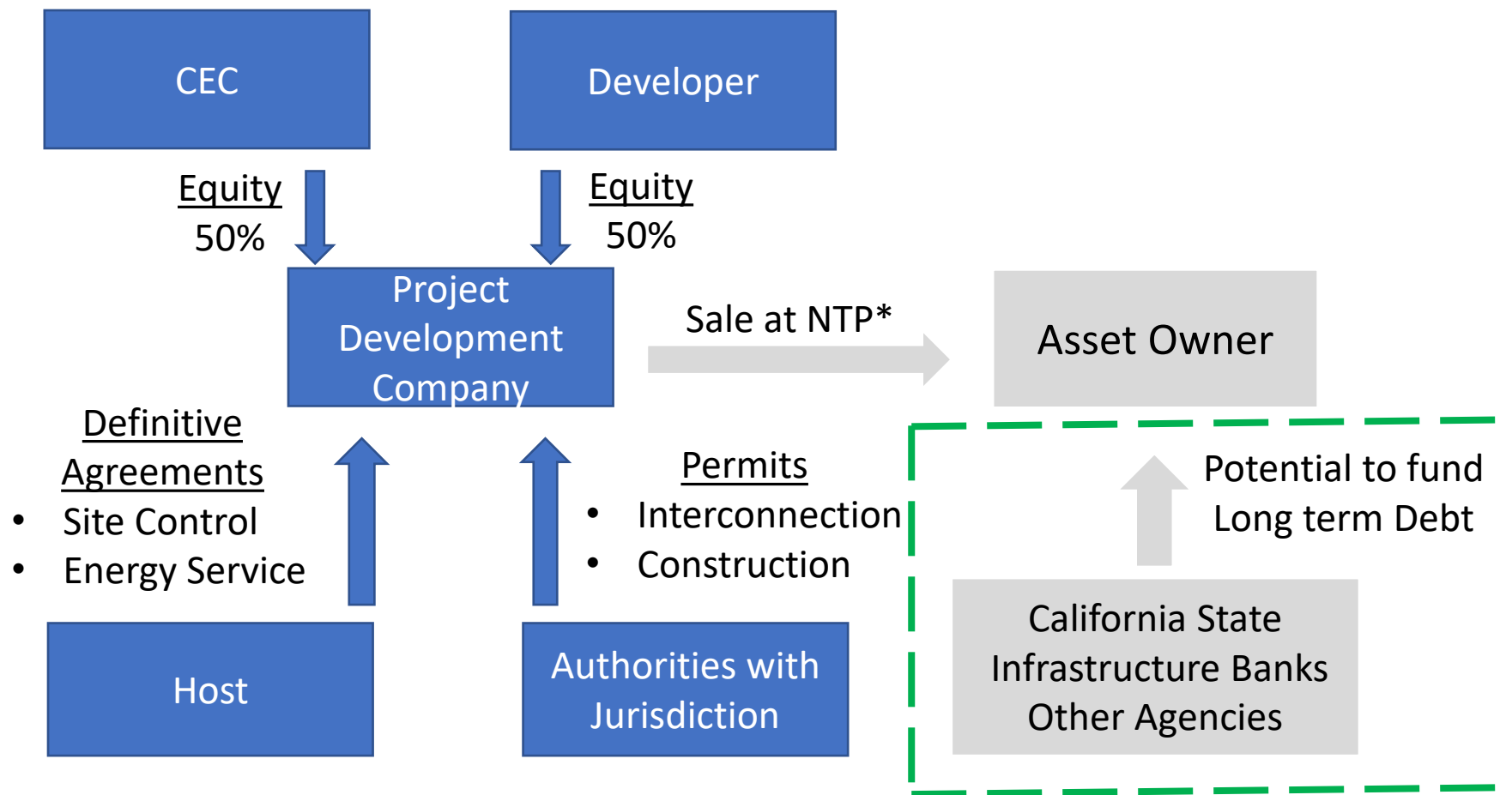


Typical Values

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 Data base
- **Investment/Information Memo**
Priorities, plans
- **Road Shows**
Communicate needs, priorities – outreach to financial markets
- **Pilot Project**
Test out concepts