

UNLOCKING THE PROMISES OF DISTRIBUTED ENERGY RESOURCES

Strategic Alliance Partner



Smart business. Smart schools.™



Why Should CCAs Care about DER?

Why CCAs might move slowly toward expanding DER:

Other operational priorities, financing, project management capacity, policy uncertainty.

On the other hand...

- **Customer Engagement/Brand Recognition: Bulk Procurement**
- **Revenue Generation: Grid Services**
- **Cost Avoidance: Load Shaping**
- **Local Economic Development: Promote Jobs**
- **Reducing Market Risk: Portfolio Diversification**

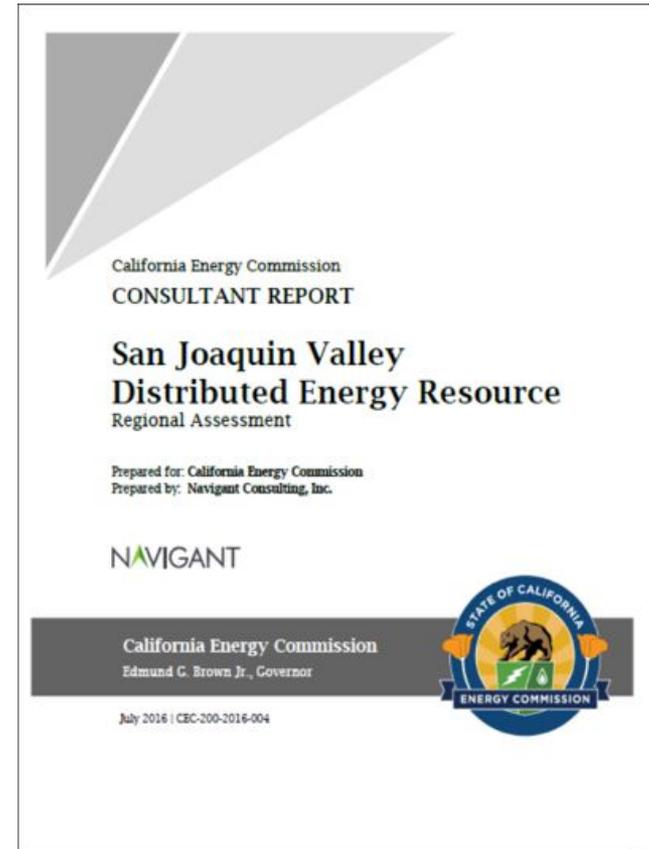
The (Not So) Hidden Cost of 50% RPS

- **The California Energy Commission has estimated that to reach the State's 50% renewable goal by 2030, will require at least \$5 Billion in transmission grid infrastructure upgrades.**
- **This may be a conservative figure; SoCal Edison expects to spend \$2-4 Billion/year for the "foreseeable future" to support California's RPS goals**
- **And these numbers only represent the cost of transmission upgrades; the distribution network will also require additional investment**
- **One much lower cost alternative to this \$5+ Billion price tag, is the implementation of local battery storage and solar with advanced inverters, and demand response measures, to provide DER/"non-wire" grid services.**

Avoiding T&D Costs

California Energy Commission Report, July 2016:

- **Sufficient amounts of firm DER in the right locations can serve as viable alternatives for meeting forecasted load growth and reliability needs in the San Joaquin Valley region.**
- **DER can potentially provide ratepayer benefits in comparison to traditional system infrastructure investments. In the San Joaquin Valley region, the primary benefit is transmission infrastructure deferrals with an estimated long-term ratepayer benefit over \$300 million.**



Grid Modernization: Who Pays



PG&E representatives talk to reporters at an upgraded electricity substation in Fresno in this 2008 file photo. A new high-voltage line across Fresno County, between substations near Coalinga and Madera, has been put on hold by the California Independent System Operator because of the rapid growth of solar power in the area. **ERIC PAUL ZAMORA** Fresno Bee file photo

“Where’s our share?”

- “There does not appear to be sufficient economic benefits to support the Gates-Gregg 230 kV transmission line project,” said Jeff Billinton, the ISO’s regional transmission manager for Northern California, “Due to currently forecasted increases in the development of distributed energy resources and a later peak energy demand in the greater Fresno area” to between 4 and 7 p.m. daily, “the reliability need for the project will be pushed out,” he added.
Fresno Bee, November, 2016
- **PG&E Gates Greggs Transmission Project \$115-145 Million deferred; savings to ratepayers**
- **TerraVerde has helped schools in the Greater Fresno Area develop over 35 MW of solar and 2.5 MW of Battery Storage over the past 5 years, about 40% of DER**
- **Clients who saw this article are asking....**

More Cost-Effective Wholesale Procurement

- **In the process of helping interested customers procure “behind the meter” solar, storage and energy conservation measures...**
- **And then aggregating these DER to generate grid support revenues...**
- **A CCA can make the strategic choice to incentivize the implementation of DER in locations that modify their overall load shape in ways that reduce wholesale procurement costs, benefitting all CCA ratepayers.**

MCE Clean Energy DER Pilot Program

- **California Energy Commission: Local Government Challenge Grant Awarded to MCE in partnership with TerraVerde/Pathion/Center for Climate Protection**
 - *Goal #1: Prove that CCAs are uniquely positioned as the ideal independent energy sector actors poised to remove the barriers currently preventing local Distributed Energy Resources (DER) from unlocking substantial unrealized GHG-reduction potential.*
 - *Goal #2: Design and validate an innovative and replicable program solution such that CCAs can accelerate achievement of state and local climate action goals through broad deployment of optimized DER portfolios at targeted building locations within a service territory using market mechanisms to fund project deployment.*
- **“MCE Clean Energy (MCE) proposes to develop, deploy, and disseminate a solution that leverages distributed energy resources (DER) as a targeted procurement resource, thus optimizing building efficiency and the deployment of DERs on a community-wide scale.”**

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