California Net Metering
1, 2 and 3

Jason Keyes
Keyes & Fox LLP
Washington Solar Summit
Oct. 19, 2018
California PUC Background

- Regulates 70% of load, but uncertainty re CCAs
- Net metering (NEM) 1.0 customers grandfathered for 20 years – tiered rates
- NEM 2.0 customers on time-of-use (TOU) rates, grandfathering on old TOU periods, mid-day peaks
- New NEM customers on new TOU periods peaking 4-9pm summer weekdays, batteries allowed
- NEM 3.0 coming in 2019
- Frustrating rulemakings (DRP, IDER, SGIP, Rule 21)
Promise and Limits of Solar

- **Renewable generation on-site**, but . . .
- After aggregate rated capacity is over 15% of circuit daytime peak, study required
- “Duck Curve” impact on daytime rates
- Can’t add to NEM 1.0 systems
- Modules and inverters have limited room for more cost reduction
- Soft costs are not going down significantly
Holy Grail: Residential Solar + Storage

• Move solar energy to 4-9pm
• Back-up power
• Incentives and tax breaks
• Cost reductions

But, ... 

• Interconnection and permitting delays and costs
• SGIP cycling and design requirements
• No NEM 1.0 rationale
• Arbitrage based on changing TOU
Microgrids

• Non-export for easier interconnection
• Hawaii in the lead – 850 installed
• Potential to disconnect part time
• Potential to never operate in parallel, so no utility interconnection
• Ebay: 5.2 kWh used car battery, $245/kWh
Over-the-Fence Rule

• Public Utilities Code 218(b) – “electrical corporation” does not include those generating for their own use and “use of or sale to not more than two” adjacent neighbors

• Excess from a home microgrid system could be sold to neighbors; charging neighbors’ EVs perhaps the easiest

• Three-home microgrid potential, sharing storage, solar and balance-of-system
Thanks!

Jason Keyes
Keyes & Fox LLP
jkeyes@keyesfox.com
206-919-4960