



California Energy Commission

Scenarios for NEM in support of 2017 IEPR

Demand Analysis Working Group
Sacramento

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Changes to NEM

NEM 1.0	NEM 2.0
Full retail credit for exports	Full retail credit but need to be on a TOU schedule
NBC on the “net” usage	NBC charged on actual delivery from utility
1 MW limit on NEM eligible technology	No limit on system size
Exempt from standby charges/interconnection/upgrade	Exempt from standby charges Small interconnection charge but systems 1 MW+ may have to pay for upgrades
NSC based on wholesale prices	NSC based on wholesale prices
	No fixed/demand charges for residential customers unless rate reform proceeding sets such charges



Treatment of NEM – 2015 IEPR

- Low demand scenario: assumed full retail credit
- High demand scenario: exports compensated at \$0.10/kWh and fixed charge of \$3/kW
- Mid demand scenario: Average of additions in Low and High demand cases.



Changes to NEM...continued

- Shifting peak period
 - Optional residential TOU rates had peak periods between 12pm-6pm
 - New proposals looking to shift peak periods later in afternoon: 4pm-8pm or 5pm-9pm.
- Propose to look at TOU impacts on residential sector
- Assume new TOU rates/periods for commercial buildings without modifying load shape due to constraints on data availability



Changes to NEM...continued

- Lessons from other states:
 - Hawaii
 - Customer self-supply: no export and no compensation for export
 - Customer grid-supply: Export rate set by PUC.
 - Arizona
 - Export rate of \$0.129/kWh with rate options including demand charge and TOU components. Export rate can change in future. New customers with PV must take a rate with demand or TOU component.
 - New York
 - REV Phase 1 rates: Value of distributed energy resources (VDER)
 - Phase 1 NEM: Similar to NEM but compensation limited to 20 years. Must interconnect within 90 days of order.
 - Value Stack: credit based on hourly injections with following components:
 - » Energy, capacity, environmental, demand reduction



Options for 2017 IEPR

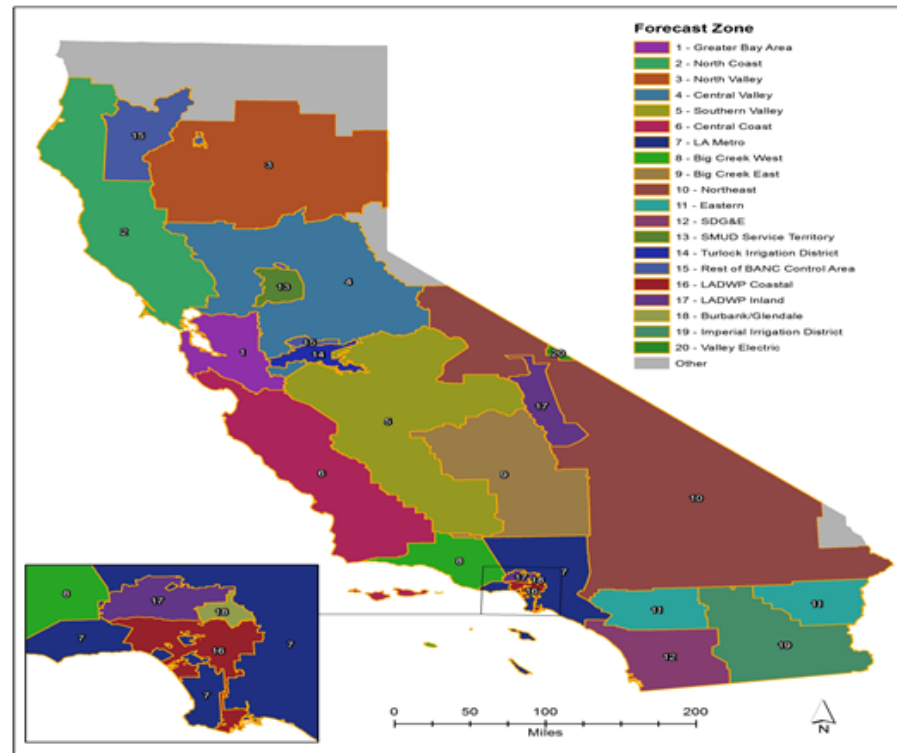
- Option A: Assume retail crediting as long as TOU rates/periods incorporated starting with 2019 forecast year
- Option B: Flat \$0.10/kWh for all exports plus \$3/kW charge (same as 2015 IEPR High Case)
- Option C: Wholesale compensation for all exports



Options for 2017 IEPR...continued

- Option D: Any Volunteers?

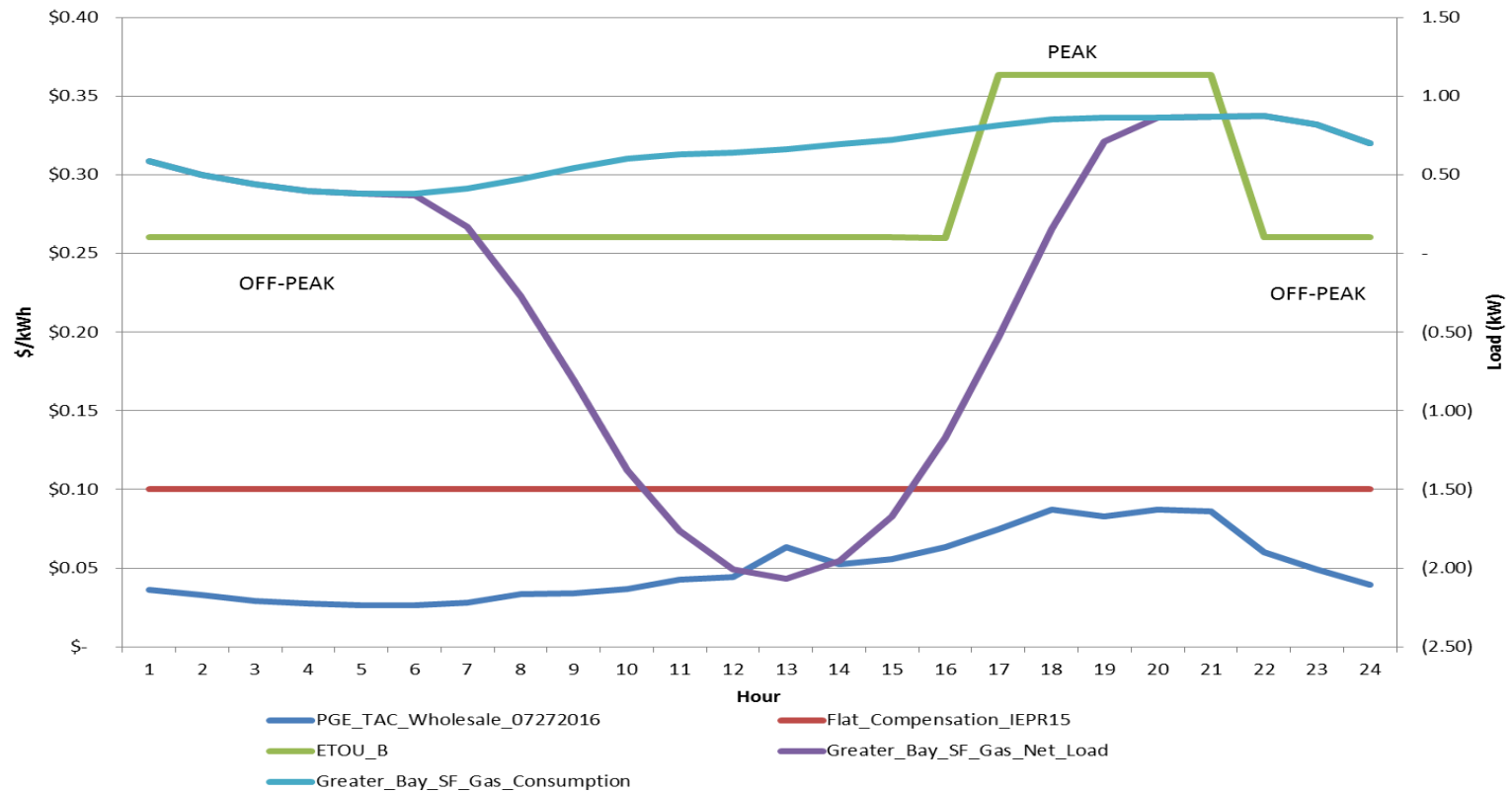
Difficult to incorporate locational and other benefits given layout of CEC forecast zones





Options for 2017 IEPR...continued

PGE Greater Bay (CEC Zone 1) Single Family Consumption and Net Load (7/27)
Average Usage Profile with Gas Space Heating with
Alternative NEM Options





Options for 2017 IEPR...continued

- POU...?
 - Incorporating SMUD
 - Given time constraints - using CEC annual average residential rates



Other Issues

- **DRP – IEPR coordination**
 - Workshop at CPUC on 2/10
 - DRP group to finalize framework for DER growth scenarios by Q3 2017
 - 2019 NEM “revisit” to rely on DRP for incorporating location benefits of DER
 - How should CEC incorporate DRP findings in IEPR demand forecast?