

# NEM 3.0 Proposal

## Vote Solar

### Solar Energy Industries Association

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*Tom Beach, Principal*  
*Crossborder Energy*

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## Looking Forward

- On-site solar is a foundation for electrification
  - Synergies with other DERs, to supply low-cost, on-site clean energy
  - Constraints on 100% utility-scale renewables
  - Rate design should be a platform for all DERs.
- Expand access to solar to all Californians
  - Key solution to promote equity among all ratepayers
- Reasonable transition to solar-plus-storage (S+S)
- Preserve customers' right to self-generate
- Provide policy certainty & consumer protection
  - Lifecycle analysis
  - Known export compensation
  - Respect past commitments to NEM 1.0 and 2.0 customers

## Achieving Balance

- Examine cost-effectiveness from multiple perspectives
  1. System as a whole – TRC and Societal tests
  2. DER customers – Participant Cost Test (PCT)
  3. Non-participating customer rates – RIM test
- Impacts on nonparticipants – consider all equities:
  - Need for demand-side resources / lack of alternatives
  - Societal benefits not provided by supply-side resources
    - Land use
    - Local economic benefits
  - RIM Test is not used for other demand-side programs
    - “Hardly Any Winners Test” – Amory Lovins
  - Vote Solar and SEIA recognize the need to reduce non-participant rate impacts over time.



## NEM 3.0 General Market Tariff - Residential

- Use an IOU electrification rate
  - SCE customers also could use the default TOU rate.
- Export rate stepdown for five years: 2023 to 2027
  - Goal: ACC benefits = bill savings in 2027 (on a lifecycle basis)
  - Export rate would be a defined % of the retail rate
  - 20 years of certainty for the export rate %
  - Same stepdown for solar-only and S+S
- Net billing structure
- Effective January 1, 2023
  - Re-evaluate no sooner than 2030

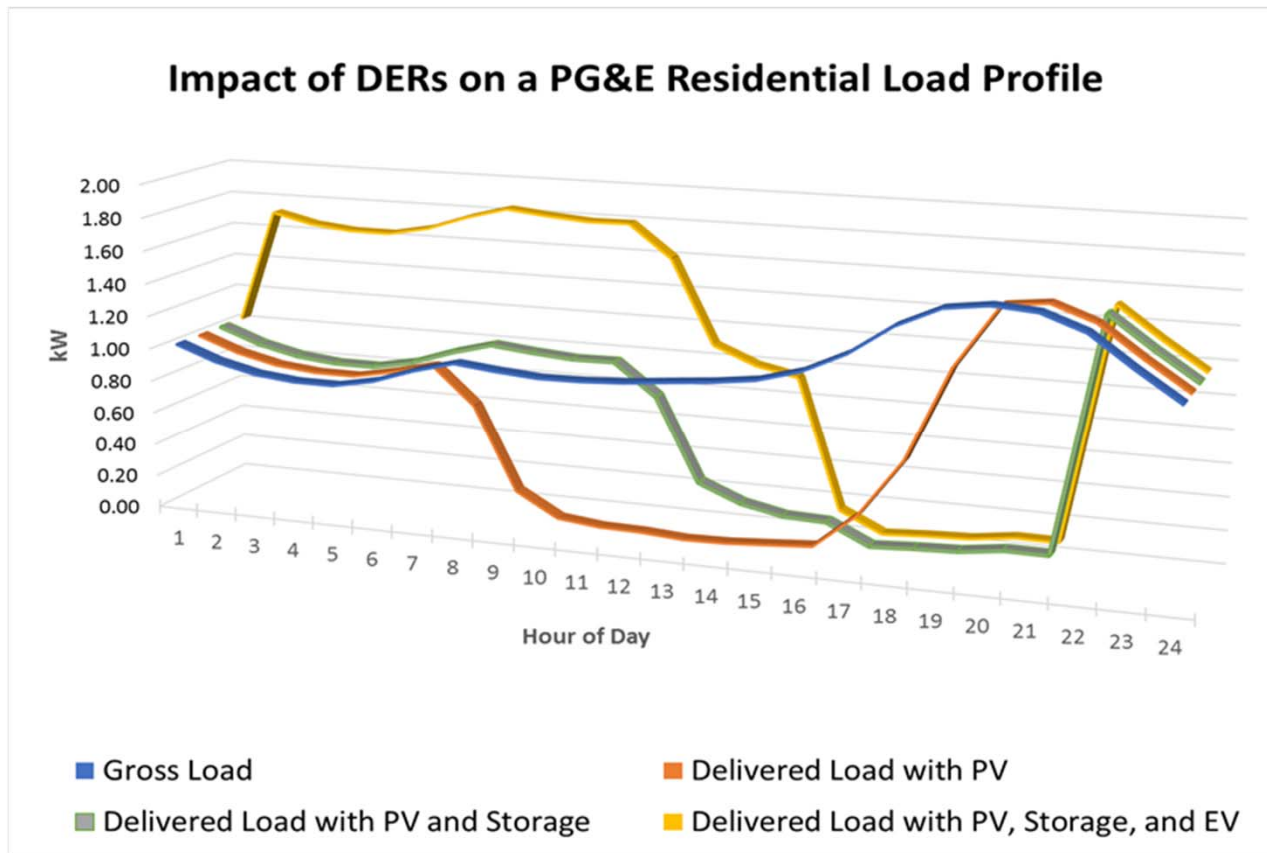


## Proposed qualifying IOU electrification rates

- **PG&E**
  - EV2A (approved in last GRC)
  - E-ELEC (under development in current GRC Phase 2)
- **SCE**
  - E-TOU-PRIME (approved in last GRC)
  - E-TOU-C (default rate with large POP differences)
- **SDG&E**
  - Untiered electrification rate with a fixed charge to be filed in September 2021
  - DR-SES (currently closed)
  - EV-TOU-5 (EVs only)

# Need a common rate platform for all DERs

- Solar will be just one of many DERs in an electrified world.



## Design of the Export Rate Stepdown

- Steps by residential solar capacity (MW)
  - Assume an average year of recent growth (2016-2020) per step
- Apply an Export % to the NEM 2.0 export rate
- Proposed Steps and Export %s

Step	Export Percentage		Cumulative MW at the End of Each Step			<i>Expected Year for Each Step</i>
	PG&E and SDG&E	SCE	PG&E	SCE	SDG&E	
1	Electrification rate	Electrification rate	375	260	145	2023
2	95%	95%	750	520	290	2024
3	85%	90%	1,125	780	435	2025
4	70%	85%	1,500	1,040	580	2026
5	50%	75%	1,875	1,300	625	2027



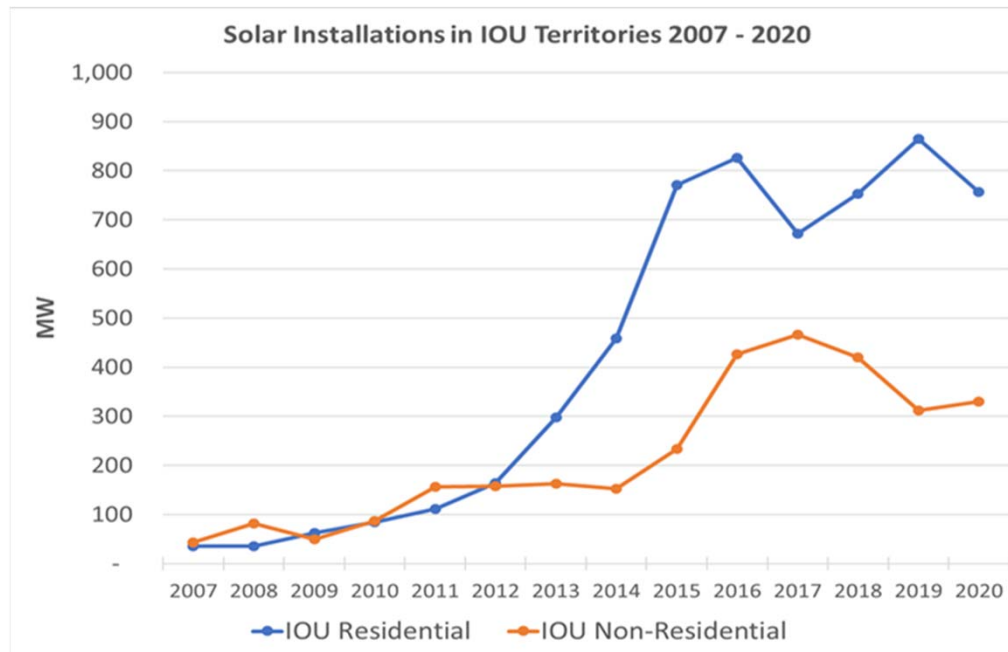
## Other Key Features

- We use the quantifiable resiliency benefits of S+S.
- Use 2020 ACC as the basis for net surplus compensation
- Allow up to 50% oversizing
  - Important if customers are to manage load growth
- Same legacy policy as NEM 1.0 and 2.0
  - Critical to encourage customer investments in solar and storage
- Monthly billing as the default
- Continuation of these elements from NEM 2.0:
  - Removal of certain NBCs from export rates, before export %
  - \$10 minimum bill
  - Netting intervals adopted in D. 16-01-044 and D. 19-04-019
- Continue to develop grid services from BTM resources



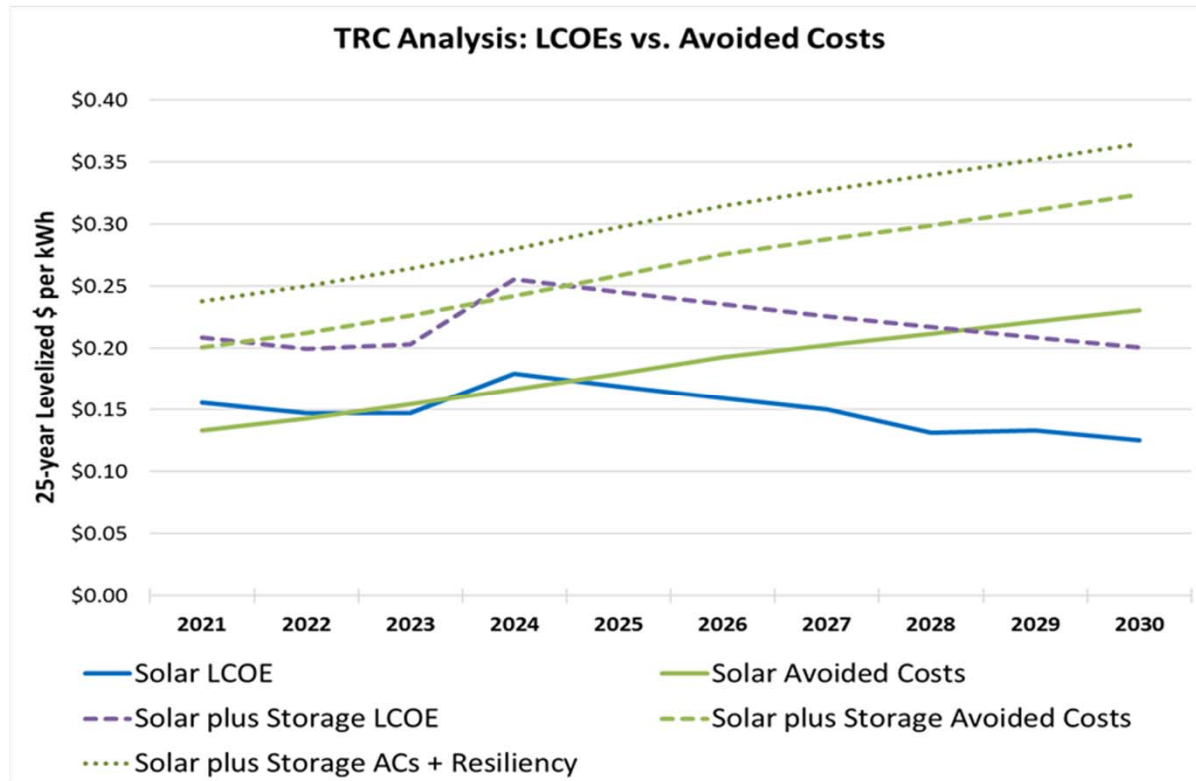
## NEM 3.0 General Market Tariff – C&I

- No change from NEM 2.0
- Key metrics
  - Lower bill savings due to C&I rate structures
  - Similar benefits as residential from the 2020 ACC
  - Growth has lagged in recent years due to the TOU period change.



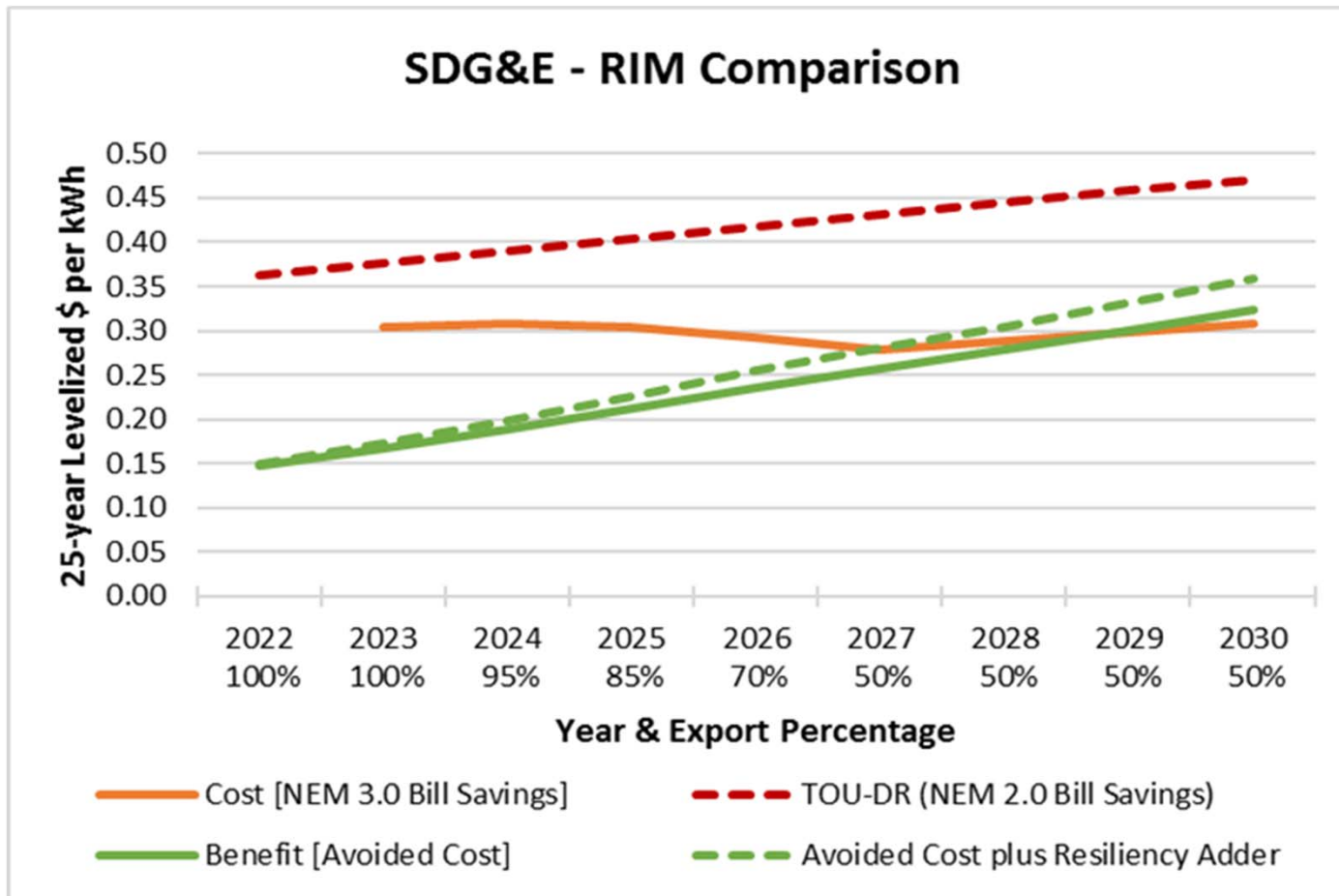
# TRC Analysis

- Solar and Solar-plus-storage are cost-effective resources for the CAISO electric system.
  - Costs: lifecycle LCOEs
  - Benefits: 25-year levelized avoided costs from the 2020 ACC



## RIM Analysis

- ACC benefits = bill savings in 2027 (on a lifecycle basis)
- \$960 million in savings vs. NEM 2.0 from 2023-2020





## PCT Analysis

- Lower PCT results than NEM 2.0
  - PCT scores of 1.36 to 1.53 after 2024
  - Simple paybacks 7-8 years for solar, 9-11 years for S+S
- Challenges:
  - Uncertain costs and availability of battery storage
  - Federal ITC stepdown to zero in residential market in 2024
  - More challenging rate structure
  - Larger investment required for solar-plus-storage
  - Reduced export rates



## Next Re-evaluation of NEM Policies

- SEIA and Vote Solar propose 2030.
- DER customers, LSEs, and the DER industry all need certainty.