



Value of Solar and Utility Cost Recovery

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Analysis of Costs and Benefits of DG Solar Must be Comprehensive

Benefits Typically Included in Value of Solar

Avoided energy and fuel expenses, incl. reduced RPS compliance	Avoided conversion of greenspace and farmland
Avoided generation capacity	Reduction in wholesale prices
Avoided transmission & distribution	Energy price hedging effect
Air quality and health benefits	Avoided line losses
Avoided greenhouse gases	

Benefits of DG Solar Can be Sizeable

- Transmission capacity
 - In 2018 CAISO canceled \$2.6 billion of previously-approved projects, attributed to load reductions from efficiency and rooftop solar
- Generation capacity
 - 2013 E3 study estimated average benefit of \$40/MWh generated by BTM solar
- Fuel price hedging
 - Clean Power Research calculated \$250 million per year benefit statewide

Distribution Benefits Will Likely Grow in Future

- SMUD's IRP projects increase of 350 MW of peak demand by 2030 and increased load of over 1,300 GWh for building and transportation electrification
- Customer-sited solar can potentially avoid or defer costly distribution network investments
- Increasing adoption of storage with solar enhances ability to provide grid value
- SMUD should consider tools to identify distribution deferral opportunities and pay DERs for performance

Preferred Approaches to Cost Recovery

- After accounting for all benefits, **if** an undercollection remains, should be evaluated in broader context
 - Is impact material?
 - Staff estimate of 2030 undercollection (\$80 million, based on energy-only benefit) results in average rate increase of 0.6 cents/kWh
- Fair cost recovery should be effected through non-discriminatory means
 - Consistent rate design elements for all customers or adjustments to export credits