



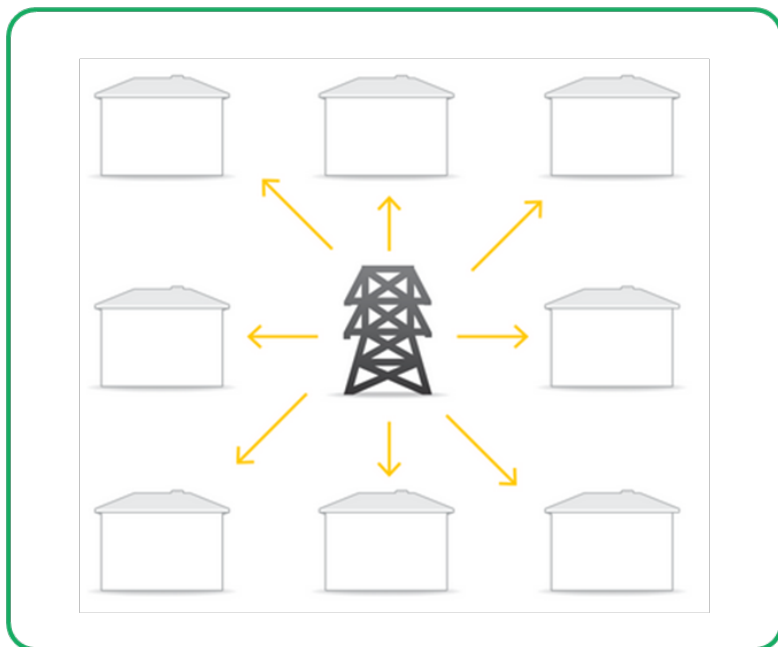
Implications of TAC Assessment on Distributed Generation

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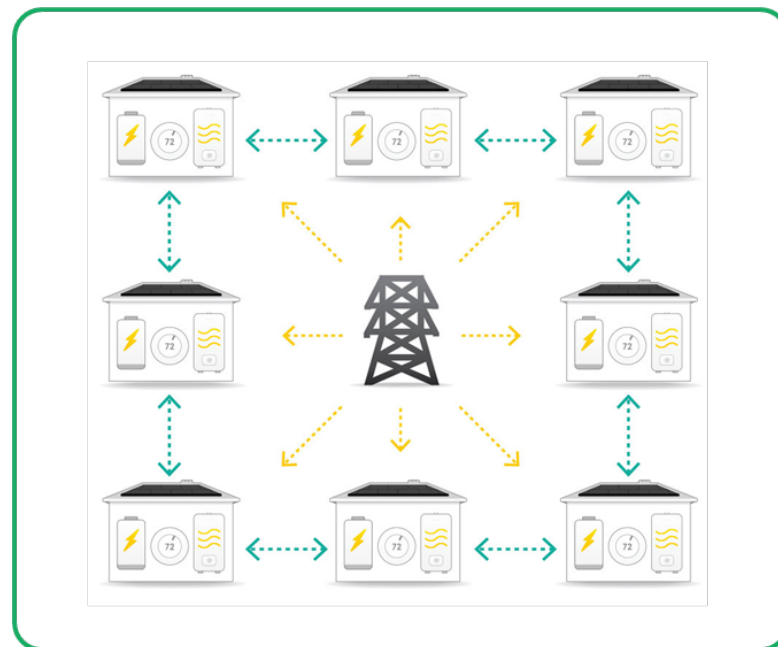
Designing a 21st Century Grid

- SolarCity envisions a grid built on interconnected smart energy homes, where power is produced, consumed and exchanged on the distribution grid

Today



Tomorrow



Advantages of a Distributed Grid

- Better resiliency through decentralized generation
- Reduction of land use, wildlife disturbance, fresh water use and marine impacts
- Improved system utilization through replacement of large “lumpy” investments with modular ones
- Potential ratepayer savings through elimination of large “failure-prone” infrastructure investments
- Avoidance of climate pollution and emissions

Value of Avoided Transmission

- Avoiding transmission investment is a major way that distributed resources convey benefits to ratepayers
- California Energy Commission: “*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.***”
- Greentech Media: “Californians just saved \$192 million from Energy Efficiency and Rooftop Solar”
 - “The canceled projects include line improvements, transformer replacements and bus upgrades.”

LSEs Should Share the Benefits of Avoided Transmission

- **Perverse Incentives**: Utilities benefit via return on assets when they build new transmission, but they do not benefit when their customer programs avoid the need to make those investments
- **FERC Order 1000** requires ISOs to consider “non-transmission alternatives” (NTAs) in lieu of new transmission lines, but it does not provide a way for utilities to earn a return of and on investments in NTAs
- Because TAC charges are socialized across LSEs and assessed at the EUML, utilities are further dis-incented from using local resources to avoid transmission

Impact of TAC Assessment on DG policy

- If utilities could reduce customer TAC charges through generating power at the distribution level, they might factor those savings into investment decisions
 - This could be particularly relevant in an expanded ISO, where not all utilities are subject to the same state policy requirements
- Assessing the TAC at the TED would provide an easily-quantifiable way to account for avoided transmission in cost-effectiveness analysis
- Assessing the TAC at the TED could improve the scoring of distribution-site renewables in RPS solicitations