

SunPower is a global solar technology company and energy services provider serving residential, commercial, and utility customers in major markets around the world. With nearly 30 years' experience in photovoltaic (PV) power markets, we have a unique perspective on the current issues confronting the efficient and effective deployment of distributed energy resources (DER), especially distributed PV. Some utilities see the growth of distributed technologies as eroding adequate revenue support to recover their costs. Some distributed PV companies see the actions of utilities regarding the deployment of solar DG as an effort to limit the continued sales of solar DG in their service territories. The resulting standoff does little to advance the interests of the ultimate consumers of energy services and fails to consider the most efficient means to deliver those services. SunPower is publishing this roadmap to advance the debate regarding the best practices to provide consumers with optimal distributed energy resource choices.

Innovate | Promote alternative distribution utility business models and regulatory frameworks that enable customer choice and promote efficient and cost effective deployment and management of distributed energy technologies. Ensure that all stakeholders responsible for playing a part in meeting customers' total energy service needs (including grid investments and services that support distributed energy technologies) have the opportunity to be fairly compensated for the services that they provide. Encourage optimum distribution utility investment in new technologies that improve grid performance and enable two-way energy and information exchange between customers and the grid.

Sustain Growth | Where distributed PV system penetration is low, retain net energy metering (NEM) laws as a simple and effective way to encourage the early adoption of clean solar technology. Sustain NEM until solar penetration levels materially affect distribution utility fixed cost recovery or require substantial distribution upgrade investments or both.

Transition Gradually | Where distributed PV system penetration is significant, implement a gradual transition to alternative rate structures and service arrangements that include dynamic energy and capacity pricing and other measures that enable customers to respond to price signals in ways that improve grid efficiency, reliability, and resilience.

Ensure Transparency | Ensure predictability, transparency and consistency in the transition of rate structures and other policies governing the operation of the distribution grid in order to allow all market participants sufficient visibility to plan and develop new offers and to adapt and respond to new regulatory frameworks and market designs.

Share Responsibility | Recognizing that alternative rate structures may take time and require technological advancements to implement, consider minimum monthly bills (as an alternative to fixed charges) where distributed PV penetration has a significant impact on fixed cost recovery as a reasonable alternative mechanism for ensuring that all customers contribute equitably to the costs of operating, maintaining, and improving the distribution system. The level of minimum monthly bill charges should reflect both the costs and the benefits to the grid resulting from customers' adoption of behind-the-meter DER.

Protect Customer Rights | Support customers' right to to acquire, deploy, own, operate, and interconnect behind-the-meter energy technologies of all types (energy efficiency, management, storage, and clean generation), ensuring customers' ability to use behind-the-meter energy technologies to offset their own load and thereby reduce or manage their electricity consumption without bias.

Streamline Interconnection | Apply simple, uniform technical standards for interconnecting distributed technologies to protect the safety and reliability of utility networks and personnel while simplifying, expediting, and streamlining the interconnection process.

Be Targeted | Encourage distribution system operators to publish information regarding locations where grid upgrade will be most cost effective. Establish market based structures for encouraging appropriate DER adoption in those areas. Compensate customers and distribution utilities fairly to recognize their contribution in reducing or deferring network infrastructure costs.