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## PRESERVING ENERGY ACCESS FOR DISTRIBUTED GENERATION

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### BACKGROUND

Since at least the 1930s, the American power sector long has operated based on a paradigm of centralized generation.<sup>1</sup> The advent of the alternating current grid enabled the bulk transmission of electricity over long distances. This allowed large-scale centralized generating facilities to produce power for many widely distributed customers.

For much of its existence, this centralized generation paradigm has created economies of scale, ensured reliability and addressed immediate environmental and health concerns by moving generation outside of highly populated areas. The model favored highly regulated monopoly utilities, who would be responsible for the generation, transmission and distribution of electricity.

But recent innovations have driven a significant shift in the way we produce and deliver electricity. Technologies designed to harness wind, solar, and geothermal power are equally effective on a customer's roof or in his or her back-

### ISSUE SNAPSHOT

- Moving our energy generation paradigm increasingly toward distributed generation and market choice provides many potential benefits.
- Regulations and state policy should ensure access to existing infrastructure at rates that are fair to distributed generators, while protecting non-participating ratepayers from indirectly subsidizing the practice.

yard as at a large, centralized installation. Broader adoption of these sources of renewable energy are having a variety of effects on the market, and lawmakers and regulators need to be prepared to respond to these changes.

Power produced through a network of many small installations is called distributed generation. Photovoltaic solar (PV) and small wind turbines allow individual residential and commercial customers to generate power on-site for themselves. This new technology also allows those who previously were energy consumers to become energy producers, selling power to their neighbors on the same electrical grid used by the large utility generators.

### POLICY CONSIDERATIONS

Distributed generation has the ability to foster technological innovation, improve national energy security and provide new options for consumers. At the same time, emergent technologies remain reliant on existing transmission infrastructure and backup generation.

The challenge across the nation is to foster policies that maintain the stability and reliability of legacy generation, transmission and distribution systems while simultaneously opening opportunities for distributed generation and emerging energy technologies to compete in the market. This inevitably will challenge America's longstanding energy-generation paradigm.

## RECOMMENDATIONS

With these considerations in mind, regulators and legislators should focus on the following principles to develop an effective new energy generation model:

- Consumers should be free to generate their own electricity and protected from punitive regulatory measures or rate assessments designed to protect the status quo.
- Utilities should receive fair payment for their services, including grid access, maintenance, reliability and backup generation.
- Consumers who do not self-generate power should not bear any increased cost imposed by the addition of distributed generation.
- Access to existing energy distribution and transmission infrastructure should be afforded to all customers and all power sources.
- Regulators and legislators should avoid discriminating between particular types of distributed generation.

## ENDNOTES

1. Sanya Carley, "Distributed generation: An empirical analysis of primary motivators," *Energy Policy*, Volume 37, Issue 5, May 2009, Pages 1648-1659. <http://www.sciencedirect.com/science/article/pii/S030142150900010X>