



The Edison Foundation

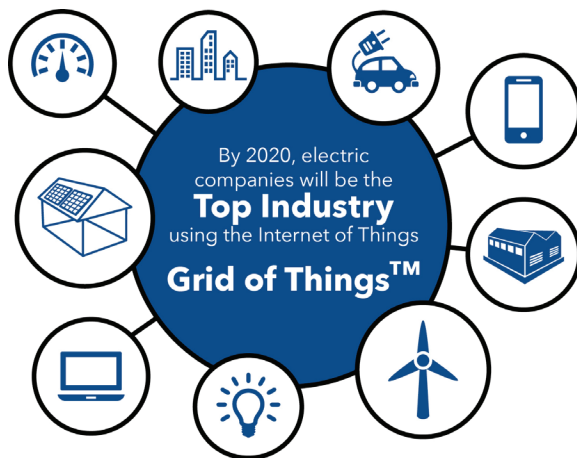
INSTITUTE for
ELECTRIC INNOVATION

Top 10 Things You Should Know About Developing Smarter Energy Infrastructure

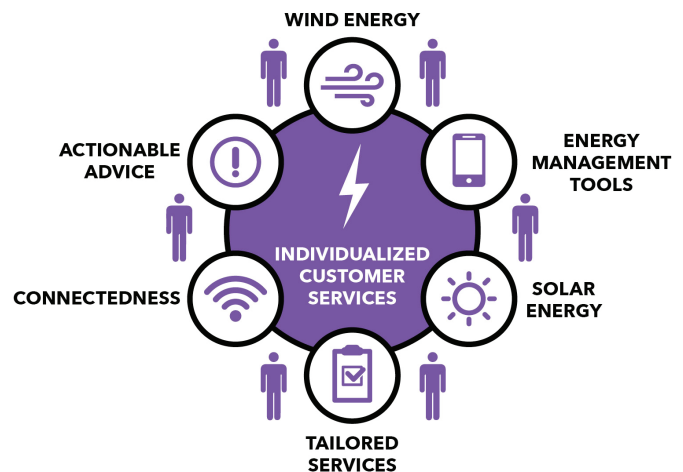
1 Grid modernization is primarily about the electric power distribution system. In 2016, electric companies invested about \$32 billion in the distribution system alone.

2 Grid modernization means developing smarter energy infrastructure that empowers customers, ensures reliability, reinforces resiliency, and integrates more clean and distributed energy resources (DERs).

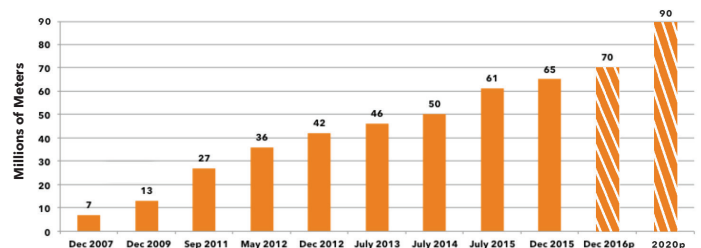
3 Grid modernization is essential for seamlessly integrating DERs such as private solar, electric vehicles, battery energy storage, and smart devices.



4 Grid modernization provides a platform to individualize energy services for customers and to offer solutions.



5 Grid modernization includes the deployment of more than 70 million digital smart meters, covering 55 percent of all U.S. households today. Smart meters improve reliability, resiliency, and services for customers.



- 6 Grid modernization or the digitization of the grid is the intersection of energy technology, wireless communication technology, and information technology.
- 7 Smarter energy infrastructure provides more visibility into the energy grid and is essential to improved reliability and resiliency.

- 8 Grid modernization technologies are being used today to improve energy grid management; improve outage management and restoration; provide customer solutions; and integrate and manage DERs.
- 9 Grid modernization depends on partnerships between electric companies and technology companies to demonstrate and deploy new technologies.
- 10 Grid modernization is a multi-billion dollar, multi-year effort to develop smarter energy infrastructure. Electric companies around the country are investing in the distribution system to make the energy grid smarter, safer, cleaner, more dynamic, more reliable, and more secure.

Features of Smarter Energy Infrastructure						
Grid Modernization Technologies	Energy Grid Optimization	Optimized Power Quality & Power Flow	Data Systems Integration	Grid Visibility & Diagnostics	Automated Outage Management & Service Restoration	DER Integration & Management
Smart Meters	○		●	●	●	○
Power Flow Management Technologies						
Smart Inverters	●	●	○	●	●	●
VOLT/VAR Management	●	●		○		○
PowerLine Monitors	●	●		●	○	○
Distribution Management and Outage Management Technologies						
OMS	○		●	●	●	
DMS	○	○	●	●	●	○
WMS			○	●	●	
FLISR	○	○	●	●	●	
ADMS	●		●	●	●	○
DERMS	●	●	●	○	○	●

● primary benefit ○ secondary benefit

About the Institute for Electric Innovation

The Institute for Electric Innovation focuses on advancing the adoption and application of new technologies that will strengthen and transform the energy grid. IEI's members are the investor-owned electric companies that represent about 70 percent of the U.S. electric power industry. The membership is committed to an affordable, reliable, secure, and clean energy future.

IEI promotes the sharing of information, ideas, and experiences among regulators, policy makers, technology companies, thought leaders, and the electric power industry. IEI also identifies policies that support the business case for the adoption of cost-effective technologies.

IEI is governed by a Management Committee of electric industry Chief Executive Officers. In addition, IEI has a Strategy Committee made up of senior electric industry executives and a select group of technology companies on its Technology Partner Roundtable.