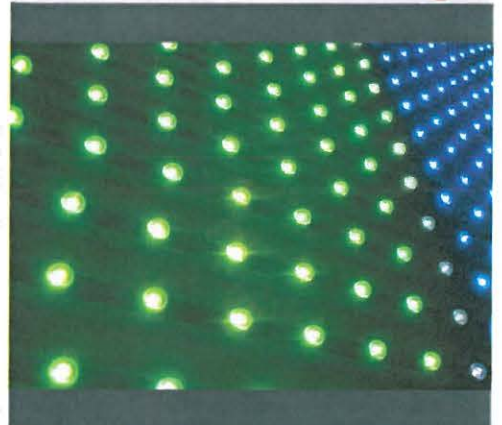


UTILITY-SCALE SMART METER DEPLOYMENTS:

BUILDING BLOCK OF THE
EVOLVING POWER GRID

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IEI Report
September 2014



The Edison Foundation

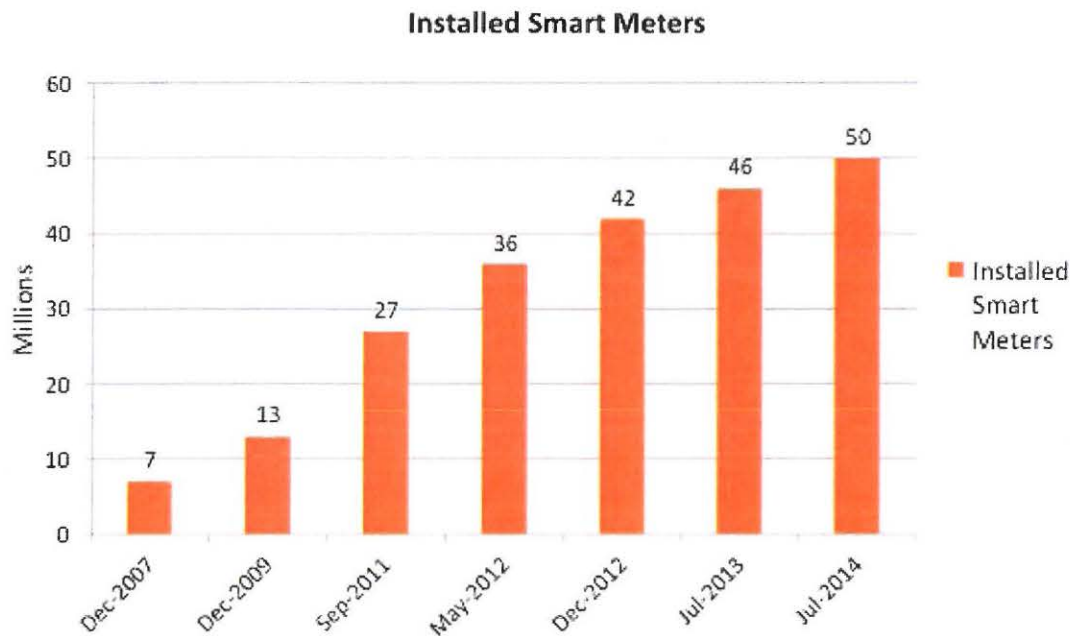
INSTITUTE for
ELECTRIC INNOVATION

EXECUTIVE SUMMARY

Smart meters are playing a critical role in shaping the electric grid of tomorrow and enabling the integration of new technologies and innovations across the grid. As the power grid evolves into a broad platform for integrating new energy services and technologies, the ability to connect legacy assets and systems and integrate new ones is critical; smart meters are supporting this evolution. In addition, the data collected by smart meters (or automated metering infrastructure (AMI)) opens the door for greater integration of new resources and new energy services for customers.

As shown in Figure 1, as of July 2014, over 50 million smart meters had been deployed in the U.S., covering over 43 percent of U.S. homes, up from 46 million smart meters a year ago.

Figure 1. Smart Meter Installations in the U.S. Reach 50 Million

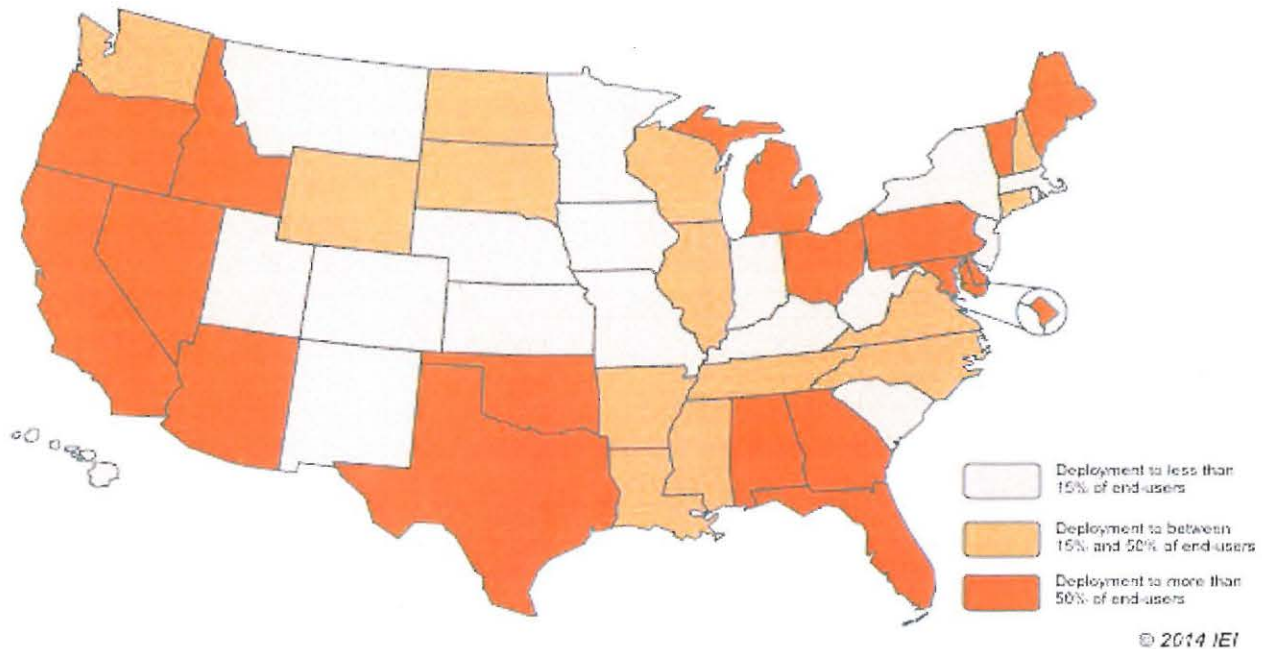


This report discusses how electric utilities are (1) integrating smart meters with their existing systems to provide enhanced outage restoration, improved distribution system monitoring, and new customer services; and (2) connecting new resources to the grid. The report also provides a synopsis of the 50 million smart meter installations by electric utilities nationwide. Figure 2 shows the expected smart meter deployments by state on a percentage basis by 2015. Thirty of the largest utilities in the U.S. have fully deployed smart meters to their customers.

A smart meter is a digital electric meter that measures and records usage data hourly, or more frequently, and allows for two-way communications between the utility and the customer.

Several states have implemented policies that allow customers to opt out of smart meters, but, to exercise this option, these customers typically pay an initial fee and a monthly opt-out fee. The number of customers that have officially requested to opt-out of a smart meter installation is extremely low.

Figure 2. Expected Smart Meter Deployments by State by 2015



Note: Figure 2 shows the extent of smart meter deployments by state by 2015 that are either completed, underway, or planned. This map does not include automatic meter reading (AMR) installations.

LEVERAGING SMART METERS

With 50 million smart meters deployed, utilities are now focused on integrating and optimizing information gathered by smart meters (and transmitted by AMI communications systems) and other investments in the digital grid to provide benefits and new capabilities to customers and system operators. The IEI 2014 Smart Meter survey highlighted a few areas where utilities are leveraging smart meters.

- **Systems Integration.** AMI systems integration with outage management systems (OMS) and distribution management systems (DMS) is providing enhanced outage management and restoration and improved distribution system monitoring.
- **Integrating New Resources.** Smart meters position the grid as a platform for the integration of distributed energy resources such as distributed generation, community solar, electric vehicles, storage, and micro-grids.
- **Operational Savings.** Smart meters result in operational savings such as reduced truck rolls, automated meter reading, and reduced energy theft.
- **New Customer Services.** Smart meters have enabled services such as automated budget assistance and bill management tools; energy use notifications; and smart pricing and demand response programs.

SYSTEMS INTEGRATION

As utilities advance towards managing the grid as an integrated network, smart meter data are increasingly combined with other streams of data for both analytical and real-time functionality. A good example of this is CenterPoint's integration of its information technology (IT) and operations technology (OT) functions into a single function called CenterPoint Technology (CT). According to Gary Hayes, Chief

Information Officer, CenterPoint Energy, “The focus on outcomes drives collaboration across the IT/OT organizations. Operations will leverage the technologies and skills from the IT team while also incorporating operational principles in the deployment of field device technologies. This benefits the operations and reliability of all technologies supporting our Smart Grid.”

Many utilities with smart meters installed are integrating their AMI and OMS systems to improve outage management and restoration services. When utility service restoration crews can see the status of the electrical network in near-real time, this helps them: identify embedded outages, resolve problems on the first visit, reduce repeat calls from customers, avoid unnecessary truck rolls, and improve customer satisfaction. IEI survey responses show that several more utilities are on a similar path and will complete the AMI-OMS integration within the next year.

We’re very pleased with the integration of power outage and restoration notifications from smart meters to our outage management system and we’re looking forward to building on this success and integrating more information from other grid-edge devices, and further improving our operational efficiencies.

Utilities are also integrating AMI with DMS for distribution automation and circuit reconfiguration, Volt/VAR management, device monitoring, and predictive asset maintenance along the distribution network. “We’re very pleased with the integration of power outage and restoration notifications from smart meters to our outage management system and we’re looking forward to building on this success and integrating more information from other grid-edge devices, and further improving our operational efficiencies,” said Karen Lefkowitz, Vice President, Business Transformation, Pepco Holdings, Inc.

INTEGRATING NEW RESOURCES

Across the U.S., utilities are connecting new resources to the power grid. In addition to providing bi-directional metering of energy flows for resources such as rooftop solar and storage, smart meters also provide greater visibility into what is occurring at the edge of the network. Grid operators are using the AMI communications network to provide situational awareness of distributed resource operations. By better understanding the dynamics of intermittent resources on the grid, utilities can manage the grid more efficiently.

Connecting AMI systems with demand response management and distributed energy resource management systems is also underway or planned. This convergence provides the foundation for integrating and managing the increasing number of distributed resources at the edge of the network.

As more distributed resources are developed, visibility at the individual or feeder-level becomes ever more important. A digital grid platform supported by AMI allows for proactive monitoring and management of distribution network conditions and the sustainable integration of new resources.

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OPERATIONAL SAVINGS

The most basic operational savings from a smart meter is the reduced need to send an employee in a vehicle to a customer site to read the meter. Utilities with smart meters deployed have saved several millions of dollars. In addition, the ability to remotely connect and disconnect service means that customers receive much quicker service when moving in or out of a residence. “Operational savings gained through smart meters will be passed on to customers through lower rates on their electric bills as they occur through yearly rate adjustments,” said Mike McMahan, Vice President, AMI Implementation, Commonwealth Edison. “Over time, these savings will more than offset the costs of the smart meters.”

Other advanced operational efficiencies empowered by smart meters include the application of data analytics to help utilities “see” what is going on in the field. By using a variety of analytical tools that cross reference customer billing and information systems with the meter data management system, utilities are identifying and resolving theft leads and unmetered current – all of this results in savings. “The implementation of advanced metering at DTE Energy continues to show positive results,” said Bob Sitkauskus, General Manager, Major Enterprise Projects, DTE Energy. “Meter reading rates are at the highest levels in history, regardless of weather or traffic. Completing remote activities such as miscellaneous reads, re-connects and disconnects, along with outage and restoration notifications through the network continues to enhance customer service and distribution operations. On top of these efficiencies, customers now have access to their usage with details down to the minute, all in an effort to allow personal energy decisions.”

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NEW CUSTOMER SERVICES

Investing in digital technologies provides utilities an opportunity to educate, learn from, and connect with the 21st century customer. With high levels of digitization all around us, it is not surprising that consumers want more control over their daily activities, including how they use energy. As the trusted energy advisor, customers expect their utilities to provide guidance on electricity matters and the majority of electric utilities have implemented multi-year plans to better serve, educate, and engage customers.

Smart meters provide a digital link between the utility and the customer and opens the door for energy management. Popular new services that utilities provide to customers include: budget setting and high usage alerts, online portals with easy to understand graphics, home energy reports, and easily

Over 8 million smart metered customers in California, Delaware, the District of Columbia, Maryland, and Oklahoma are eligible to participate in a variety of ‘smart pricing’ programs.

downloadable energy usage data which customers can upload into their preferred app. These simple, smart services are powered by the information collected by smart meters.

Smart pricing programs are growing across the U.S., resulting in energy and bill savings for the majority of customers enrolled such programs along with increased customer satisfaction. Today, over 8 million smart metered customers in California, Delaware, the District of Columbia, Maryland, and Oklahoma are eligible to

participate in a variety of ‘smart pricing’ programs which reward participants for voluntarily reducing energy consumption when demand for electricity and prices are expected to be especially high. Smart pricing programs include Baltimore Gas & Electric’s *Smart Energy Rewards*, Oklahoma Gas & Electric’s *SmartHours*, Pepco and Delmarva Power’s *Peak Energy Savings Credit*, San Diego Gas & Electric’s *Reduce Your Use*, and Southern California Edison’s *Save Power Day*.

Some customers are using devices like programmable controllable thermostats to respond to the price signals, while others are altering their behavior – all to take advantage of the opportunity to save money on their electricity bill. While these programs have different names and nuances, all are enabled by smart meters and, for most customers, the result is energy savings, bill savings, and increased satisfaction. “At BGE, we commend our customers on their participation in BGE Smart Energy Rewards and the great savings they are able to achieve,” said Ruth Kiselewich, Director, Demand Side Management Programs, BGE. “We look forward to working with them to sustain and increase participation in each Energy Savings Day so they can save on their electric bills, help ease peak demand, contribute to improved reliability, and help make a positive impact on the environment.”

IEI 2014 SMART SURVEY

Twenty utilities (representing 37 operation companies) provided responses to IEI’s 2014 Smart Meter survey. These utilities account for roughly 27 million of the 50 million smart meters captured in this report. The remaining information on smart meter deployments was obtained from the Energy Information Agency’s Form 826 Advanced Metering worksheet and Smartgrid.gov’s project information build metrics datasheet. The data that are represented in this report were compiled from May through July 2014. This report identifies general trends and examples of how utilities are using smart meters. The report does not attempt to cover all of the ways in which utilities are leveraging investments in their smart meters. For inquiries or to provide feedback, please contact Adam Cooper at acooper@edisonfoundation.net.

Summary of Smart Meter Installations and Projected Deployments

Utility Type	Meters Installed	Target Number of Meters
Investor-Owned Utilities	43,115,000	60,126,000
Municipal and Cooperative-Owned Utilities	6,963,000	9,874,000
Total as of July 2014	50,078,000	70,00,000

Smart Meter Installations and Projected Deployments by Investor-Owned Utility

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
AEP	IN, OH, OK, TX	1,199,000	2,714,000	AEP's Indiana Michigan Power (I&M) subsidiary has deployed 9,917 meters to customers in South Bend, IN; AEP Ohio has deployed 131,635 in the Columbus area; AEP Texas has deployed 1,024,849; and AEP's Public Service Company of Oklahoma (PSO) has deployed 32,538 meters. Timing for the remaining deployments will depend on specific conditions in each of the operating company subsidiaries and approval by the relevant utility commissions.	IEI Smart Meter Survey Summer 2014
Allete (d/b/a Minnesota Power)	MN	8,000	8,000	Allete plans to invest \$3M and deploy 8,000 smart meters in northeast Minnesota. The utility also intends to purchase automation equipment and begin dynamic pricing program. \$1.5M of the project cost is covered by federal funds.	SmartGrid.gov
Alliant Energy	IA, MN	442,300	442,300	Wisconsin Power & Light, a subsidiary of Alliant Energy, reached full deployment in 2011. Interstate Power & Light has a 1,000 meter pilot supporting the Sustain Dubuque Initiative, which fully deployed in 2010. Additional AMI deployment in IA and MN has been deferred indefinitely.	IEI Smart Meter Survey Summer 2014
Ameren Illinois	IL	0	780,000	Ameren Illinois will have 40,000 meters installed by December 2014 and anticipates 780,000 meters installed by December 2019.	IEI Smart Meter Survey Summer 2014

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
Avista Utilities	WA	13,000	13,000	Avista has installed 13,000 smart meters in Pullman, WA as part of a five-state, five-year demonstration project leveraging DOE SGDG funds. Long term decisions about future deployment have yet to be made.	IEE Smart Meter Survey Q2 2013
Arizona Public Service	AZ	1,206,000	1,206,000	APS achieved full deployment at the end of May 2014.	IEI Smart Meter Summer 2014 Survey
Baltimore Gas & Electric	MD	1,150,000	1,360,000	BG&E installed 1,115,000 smart meter meters thru May 2014. Full deployment is expected by the end of 2014.	IEI Smart Meter Survey Summer 2014
Bangor Hydro-Electric	ME	120,100	120,100	BHE has fully deployed 120,100 smart meters in its service territory.	EIA Form 826
Black Hills Energy	CO	96,200	96,200	Black Hills Energy has fully installed 96,249 smart meters in Colorado and is now testing direct load control and peak time rebate offers with their residential customers.	IEE Smart Meter Q2 2013 Survey; SmartGrid.gov
Black Hills Power	MT, SD, WY	69,600	69,600	Black Hills Power has fully deployed 69,607 in its service areas across Montana, Wyoming, and South Dakota.	IEE Smart Meter Q2 2013 Survey
CenterPoint Energy	TX	2,283,000	2,283,000	CenterPoint received approval in 2008 to install an advanced metering system across its service territory. It completed deployment in July 2012, installing 2,283,012 smart meters.	IEI Smart Meter Survey Summer 2014; PUCT Docket 36699
Central Maine Power Company	ME	623,800	623,800	Central Maine Power Company completed its smart meter deployment in 2012, installing 623,790 AMI meters.	IEI Smart Meter Survey Summer 2014
Cheyenne Light, Fuel & Power	WY	39,700	39,700	Cheyenne Light, Fuel & Power completed its smart meter installation in 2011.	IEE Smart Meter Q2 2013 Survey
Cleco Power	LA	289,000	289,000	Cleco Power fully deployed smart meters across the utility's entire service territory, after receiving approval from the Louisiana Public Service Commission in 2011.	IEI Smart Meter Survey Summer 2014
Commonwealth Edison	IL	400,000	4,157,000	In June 2013, ComEd received regulatory approval for full deployment of smart meters. 400,000 smart meters have been deployed with full deployment to over 4 million customers will be complete by 2018, three years in advance of the originally scheduled 2021 completion date.	IEI Smart Meter Survey Summer 2014
Consolidated Edison	NY	4,100	4,100	Con Edison piloted a \$6M smart grid program in northwest Queens. 1,500 meters will be deployed and 300 customers will test in-home displays that monitor energy usage by appliance. Intent to file for approval to expand deployments has not been announced	EIA Form 826

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
Consumers Energy	MI	246,500	1,800,000	As of May 2014, 246,500 smart meters had been deployed with full deployment of 1.8 million meters anticipated by 2018.	IEI Smart Meter Survey Summer 2014
Dominion	NC, VA	223,300	2,704,000	Dominion has completed installation of 223,289 smart meters in North Carolina and Virginia. The AMI business case and full deployment plans for 2.7M meters are still under development.	IEI Smart Meter Survey Summer 2014
DTE Energy	MI	1,327,000	2,603,000	As of May 2014, 1,326,984 meters had been installed with full deployment of 2.6M expected by end of 2017.	IEI Smart Meter Survey Summer 2014
Duke Energy	FL, KY, NC, OH, SC	1,112,200	1,269,700	Duke has fully deployed 717,000 smart meters in Ohio. In other jurisdictions, Duke has achieved targeted deployments of 74,392 meters in Florida; 39,000 in Kentucky; 223,209 in North Carolina; and, 68,650 in South Carolina. An additional 157,500 meters are planned for the Carolinas by year end. Duke is still in its planning stages for deployment in Indiana.	IEI Smart Meter Survey Summer 2014
Entergy	LA	5,100	19,800	Entergy New Orleans has installed 4,755 smart meters in a dynamic pricing pilot for low-income households in New Orleans. Entergy Louisiana has installed 300 smart meters.	EIA Form 826
FirstEnergy Corporation	MD, OH, PA, WV	56,400	2,153,000	FirstEnergy operating company Illuminating Company in Cleveland, OH installed 32,300 meters as part of a 44,000 meter pilot. In Pennsylvania, Act 129 (2008) requires electric distribution companies with more than 100,000 customers to file a smart meter technology procurement and installation plan. FirstEnergy subsidiary West Penn Power in Pennsylvania installed 23,000 smart meters as part of a pilot with full deployment starting in 2017. Pilot activities in Morgantown, WV and Urbana, MD are testing 1,140 smart meters.	EIA Form 826; SmartGrid.gov First Energy Implementation Plan (Docket M-2013-2341990)
Florida Power & Light Company	FL	4,625,000	4,800,000	FPL has fully deployed its smart meter program to residential customers. Deployment to remaining 200,000 Commercial and Industrial customers is underway with completion expected in 2015.	IEI Smart Meter Survey Summer 2014
Green Mountain Power	VT	260,600	260,600	Green Mountain Power has deployed 260,600 smart meters to customers across Vermont	EIA Form 826
Idaho Power	ID, OR	512,300	512,300	Idaho Power has fully deployed 512,348 smart meters across its service territory in Idaho and Oregon.	IEE Smart Meter Survey Q2 2013; EIA Form 826
Indianapolis Power & Light	IN	11,900	42,000	IPL has installed 11,888 meters, and does not anticipate installing additional meters. IPL intends to not fully deploy AMI to its service territory, instead pairing it with AMR meters.	IEE Smart Meter Survey Q2 2013

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
Kansas City Power & Light	MO	14,000	14,000	KCP&L completed the installation of 14,000 smart meters in 2011 for its SmartGrid Demonstration project in midtown Kansas City, MO. The project includes piloting in-home displays, demand response thermostats, a web portal, and investments in distributed energy resources, distribution, and substation automation. The project concludes in 2014.	IEE Smart Meter Q1 2012 Survey; KCP&L Smart Grid Presentation
Madison Gas & Electric	WI	5,100	5,900	MGE is installing a small scale smart grid network, including 5,100 meters, EV charging stations, and in-home management systems.	IEE Smart Meter Q2 2013 Survey; SmartGrid.gov
National Grid	MA	15,000	15,000	National Grid's pilot was approved by the DPU in August 2012. 15,000 smart meters have been installed in Worcester, MA for a pilot demonstration.	EIA Form 826
NV Energy	NV	1,205,000	1,300,000	NV Energy has installed 1.2 million meters and are in the final stages of exchanging meters with major account customers. Full deployment of 1.3 million is expected by the end of 2014.	EIA Form 826
Oklahoma Gas & Electric	AR, OK	871,700	871,700	OG&E has fully installed 871,708 meters: 804,078 in Oklahoma, and 67,630 in Arkansas. Residential customers in Oklahoma can sign up for a TOU-CPP rate plan as part of the SmartHours program.	IEE Smart Meter Survey Q1 2012; SmartGrid.gov
Oncor	TX	3,302,000	3,302,000	Oncor has fully deployed 3,302,181 smart meters across its service territory.	EIA Form 861; PUCT Project 36157
Pacific Gas & Electric	CA	5,140,000	5,140,000	PG&E has deployed 5.14M meters and completed its SmartMeter Project on December 31, 2013. Customers with smart meters can participate in PG&E's SmartRate plan, a voluntary critical peak pricing (CPP) rate plan that will help manage system load during hot summer days, and receive EnergyAlerts which notify customers of when they are moving into higher-priced electricity tiers.	IEI Smart Meter Survey Summer 2014
PECO Energy Company	PA	1,227,000	1,600,000	PECO has installed 1,226,665 smart meters, and has moved up its full deployment timeline by five years, indicating 1.6M meters will be installed by the end of 2014.	EIA Form 826
PEPCO Holdings, Inc.	DC, DE, MD	1,357,000	1,360,000	PHI subsidiary Delmarva Power has reached full deployment in Delaware with 315,000 meters installed; Pepco has reached full deployment in the District of Columbia with 279,000 meters installed; and, Pepco and Delmarva Power in Maryland has reached full deployment with 763,000 meters installed. There is no active AMI project in New Jersey.	IEI Smart Meter Survey Summer 2014

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
Portland General Electric	OR	841,000	841,000	PGE's smart meter program was approved by the commission in 2008; full deployment was completed by the fall of 2010.	EIA Form 826;
PPL	PA	1,438,000	1,438,000	PPL is in compliance with PA Act 129 and has fully deployed 1,438,000 smart meters in its service territory. The PA electric distribution companies are engaged in a collaborative process to develop standards and formats for electronic communication of meter data and access by customers and third parties.	IEI Smart Meter Survey Summer 2014; PA Docket No. M-2009-2092655
San Diego Gas & Electric	CA	1,406,000	1,406,000	SDG&E has fully deployed over 1.4M meters across its service territory. SDG&E is using its Itron meters for bill/usage alerts, demand response, and remote connect/disconnect, among other uses.	IEE Smart Meter Survey Q2 2013
Southern California Edison	CA	4,990,000	5,001,000	SCE has deployed roughly 5 million smart meters. Additional deployments are scheduled through 2015 to accommodate population growth. SCE's SmartConnect program uses the meters to offer Critical Peak Pricing (CPP) and Peak Time Rebate (PTR) rates to customers with enabling technology.	EIA Form 826
Southern Company	AL, FL, GA, MS	4,288,000	4,470,000	Southern Company's Georgia Power, Alabama Power, and Gulf Power (FL) are fully deployed. Georgia Power reached full deployment in 2012 and has 2,395,786 meters, Alabama Power reached full deployment in 2010 and has 1,444,882 meters. Gulf Power reached full deployment in 2012 and has 441,008 meters. Mississippi Power has installed 6,716 meters and is awaiting approval from the PSC for full deployment of 188,660 by 2018.	IEI Smart Meter Survey Summer 2014
Texas New Mexico Power	TX	162,300	240,000	In July 2011, TNMP received PUCT approval for full deployment of 240,000 meters in Texas by 2016. It is using Itron meters to facilitate outage detection/restoration and remote connect/disconnect.	IEE Smart Meter Survey Q2 2013; PUCT Project 39772
United Illuminating	CT	145,300	350,000	United Illuminating has installed roughly 145,300 of its projected 350,000 smart meters. The company is considering expanding its use of IBM meters to natural gas customers as well.	EIA Form 826;
Unitil	MA, NH	104,000	104,000	Unitil has fully deployed 104,000 smart meters across its service territory around Concord, NH and Fitchburg, MA. It has used this technology to, among other things, implement a TOU pricing pilot.	IEE Smart Meter Q2 2013 Survey

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
Westar Energy	KS	62,000	132,000	Westar piloted smart meters in its SmartStar project in Lawrence, KS and given the results is deploying meters to additional customers. Currently, Westar has 62,000 smart meters installed with another 30,000 planned by year end 2014 and an additional 40,000 planned for following year. In total, 132,000 smart meters will be installed by year end 2015.	IEI Smart Meter Survey Summer 2014
Xcel Energy	CO	23,700	23,700	Xcel Energy has completed deployment of its pilot project in Boulder, CO, as part of its SmartGridCity initiative. It has deployed 23,000 residential meters and 700 commercial meters. The utility initially planned to install 50,000 meters, but was forced to decrease the deployment due to cost overruns.	EIA Form 826
Other Investor-Owned Utilities	10 States	193,800	2,141,500	Limited deployments in 10 states by multiple operating companies account for 193,800 smart meter installations.	IEI Smart Meter Survey Summer 2014; EIA Form 826; SmartGrid.gov
Total as of July 2014		43,115,000	60,126,000		

Smart Meter Installations and Projected Deployments by Municipal and Cooperative Utility

Utility	State	Meters Installed	Target Number of Meters	Notes	Resources
Austin Energy	TX	418,900	418,900	Austin Energy's smart meter program was approved in 2008, and reached full deployment of 418,900 in 2009.	IEE Smart Meter Survey Q1 2012
CPS Energy	TX	40,000	707,000	CPS intends to install 700,000 smart meters by 2018. Its initial 40,000 meter pilot, which started in 2011, is complete. Phase two of the deployment will begin in 2014.	EIA Form 826
Los Angeles Department of Water and Power	CA	52,000	52,000	Los Angeles DWP installed 52,000 smart meters as part of its Smart Grid L.A demonstration project. Based on the success of the demonstration project, involving less than 5% of LADWP customers, the utility will consider replacing all existing meters with smart meters.	EIA Form 826; LA DWP Smart Grid L.A. website
JEA	FL	64,800	64,800	After an initial dynamic pricing pilot for 3,000 customers, JEA has now installed over 40,000 smart meters.	EIA Form 826
Nebraska Public Power District	NE	47,400	68,500	NPPD is in the process of installing smart meters throughout the state. 68,500 smart meters will be installed by 2015.	EIA Form 826
Sacramento Municipal Utility District	CA	617,500	617,500	SMUD completed full deployment of smart meters within its service territory in 2012. The overall smart grid plan includes dynamic pricing, 100 EV charging stations, and 50,000 demand response controls.	SmartGrid.gov
Salt River Project	AZ	866,000	1,000,000	Salt River Project has currently installed over 860,000 smart meters, and has scheduled to have 1M meters installed by 2013.	EIA Form 826
Tacoma Public Utilities	WA	18,100	152,000	Tacoma Public Utilities currently has over 18,000 smart meters installed and intends to fully deploy over 150,000 meters.	EIA Form 826
Tennessee Valley Authority	TN, MS	606,355	606,355	TVA currently has over 559,000 meters installed.	EIA Form 826
Other Coops and Municipal Utilities	44 States	4,231,945	6,186,945	Over 4M meters have been installed by other municipal utilities, cooperatives, and non-IOU electric distribution companies, with plans to deploy about 5.7M. These electricity providers operate in 45 states.	EIA Form 826; SmartGrid.gov
Total as of July 2014		6,963,000	9,874,000		

Smart Meter Installations by Utility Type and State (July 2014)

State	IOU Smart Meters Installed	Municipal and Cooperative Smart Meters Installed	Total
AK	-	13,267	13,267
AL	1,491,034	-	1,491,034
AR	69,055	236,599	305,654
AZ	1,061,444	1,000,316	2,061,760
CA	11,536,696	943,038	12,479,734
CO	119,949	122,177	242,126
CT	145,272	24,183	169,455
DC	279,000	-	279,000
DE	315,000	11,982	326,982
FL	5,140,843	473,857	5,614,700
GA	2,460,139	722,011	3,182,150
HI	30	29,629	29,659
IA	1,000	3,104	4,104
ID	495,000	31,343	526,343
IL	400,000	58,698	458,698
IN	21,805	17,052	38,857
KS	76,000	-	76,000
KY	41,000	66,474	107,474
LA	306,292	75,730	382,022
MA	44,119	23,043	67,162
MD	1,878,000	-	1,878,000
ME	743,914	-	743,914
MI	1,573,482	-	1,573,482
MN	8,030	52,716	60,746
MO	14,000	17,773	31,773
MS	6,829	415,126	421,955

State	IOU Smart Meters Installed	Municipal and Cooperative Smart Meters Installed	Total
MT	41	6	47
NC	223,209	279,488	502,697
ND	-	71,153	71,153
NE	-	58,788	58,788
NH	75,000	83,326	158,326
NJ	-	-	-
NM	-	19,262	19,262
NV	1,204,727	22,531	1,227,258
NY	4,100	20,581	24,681
OH	1,017,200	37,600	1,054,800
OK	850,953	103,464	954,417
OR	858,352	38,511	896,863
PA	2,687,162	11,554	2,698,716
RI	-	201	201
SC	65,771	122,386	188,157
SD	68,067	55,007	123,074
TN	-	559,430	559,430
TX	6,772,370	718,739	7,491,109
UT	-	19,983	19,983
VA	236,053	153,332	389,385
VT	260,600	44,864	305,464
WA	16,499	18,215	34,714
WI	471,919	-	471,919
WV	1,140	-	1,140
WY	42,698	24,959	67,657
Multi-state	30,726	161,749	192,475
Total as of July 2014	43,114,520	6,963,247	50,077,767

About the Edison Foundation Institute for Electric Innovation

The Edison Foundation Institute for Electric Innovation (IEI) focuses on advancing the adoption and application of new technologies that will strengthen and transform the power grid. IEI's members are the investor-owned electric utilities 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, policymakers, 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 more than 30 smart grid technology company partners.

Visit us at: www.edisonfoundation.net

About The Edison Foundation

The Edison Foundation is a 501(c)(3) charitable organization dedicated to bringing the benefits of electricity to families, businesses, and industries worldwide. Furthering Thomas Alva Edison's spirit of invention, the Foundation works to encourage a greater understanding of the production, delivery, and use of electric power to foster economic progress; to ensure a safe and clean environment; and to improve the quality of life for all people. The Edison Foundation provides knowledge, insight, and leadership to achieve its goals through research, conferences, grants, and other outreach activities.

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