



The Edison Foundation

INSTITUTE for
ELECTRIC INNOVATION

Report

Energy Efficiency Trends in the Electric Power Industry

December 2017

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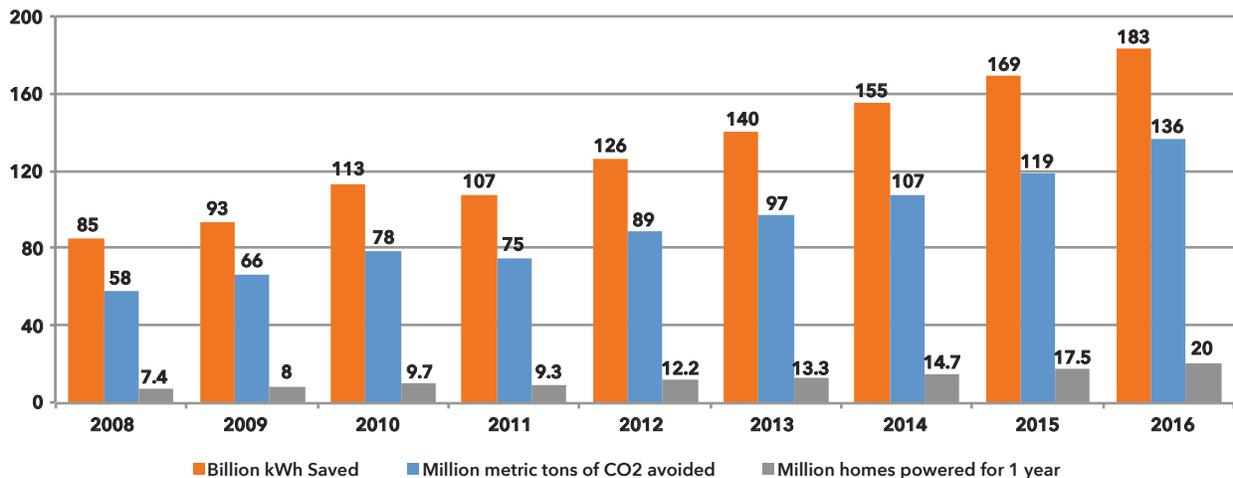
EXECUTIVE SUMMARY

Energy efficiency (EE) programs are a win-win - customers save energy and electric companies reduce carbon emissions. For several decades, electric companies have supported their customers' interest in energy efficiency by providing incentives and information that lower the cost of purchasing energy-efficient appliances and devices and encourage energy management through energy efficiency and demand response programs.

According to the most recent information, electric company customer-funded EE programs (i.e., both efficiency and demand response programs) saved 183 terawatt-hours (TWh) of electricity in 2016, up from 169 TWh in 2015.

- EE savings grew 45 percent over the past 5 years, from 126 TWh saved in 2012 to 183 TWh in 2016.
- In 2016, EE programs avoided the generation of 136 million metric tons of carbon dioxide.¹
- In 2016, EE programs saved enough electricity to power 20 million U.S. homes for one year.²

Figure 1. U.S. Energy Efficiency Savings and Carbon Dioxide (CO2) Emissions Avoided (2008-2016)



Since 2008, customer-funded EE program expenditures more than doubled, increasing from \$3.4 billion to \$7.5 billion in 2016. A 2017 report from Lawrence Berkeley National Laboratory found EE programs continue to be very cost-effective, delivering energy savings at a cost of roughly 2 cents per kWh over the lifetime of the investment.³

1. U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

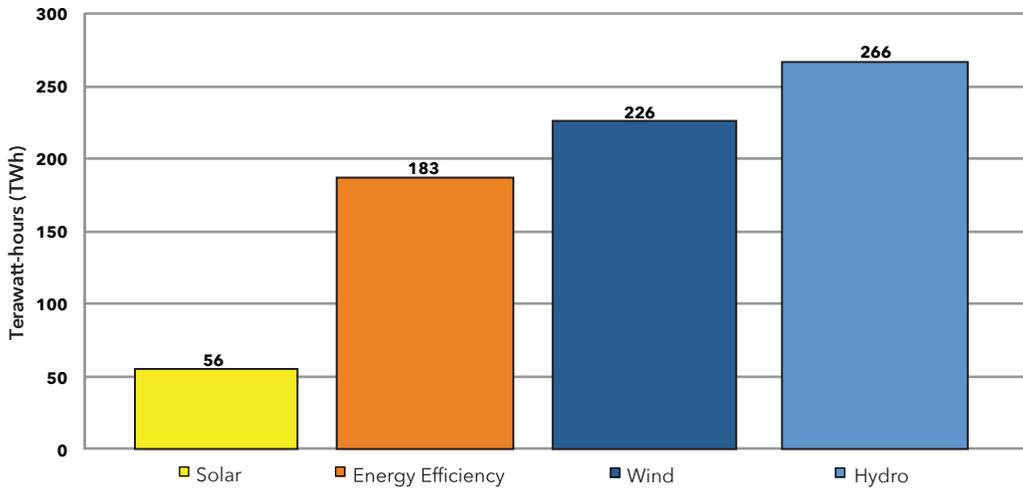
2. Ibid

3. Trends in the Program Administrator Cost of Saving Electricity for Utility Customer-Funded Energy Efficiency Programs. Lawrence Berkeley National Laboratory. January 2017.

Similar to renewable energy resources, EE programs reduce carbon dioxide emissions and are an important part of the U.S. energy mix. Figure 2 shows that:

- EE programs in 2016 saved three-times the amount of electricity generated by solar resources in 2016.

Figure 2. EE Programs Saved More Energy than Solar Generated in 2016



It is widely recognized that supportive regulatory frameworks are key to expanding the electric power industry’s already large commitment to EE. Homes and businesses that take advantage of EE programs benefit from them.

- States with regulatory frameworks that support electric company investments in EE programs tend to be leaders in savings.
 - ✓ In total, 33 states have approved fixed-cost recovery mechanisms – 17 states have revenue decoupling and 16 have lost revenue adjustment mechanisms (see Table 1).
 - ✓ In total, 30 states have performance incentives in place.

More details on the regulatory frameworks by state are provided in the second half of this report.

Table 1. Summary of State Regulatory Frameworks in 2017

Energy Efficiency Incentive Mechanisms		Number of States	Pending
Fixed-Cost Recovery Mechanisms	Lost Revenue Recovery	16	0
	Revenue Decoupling	17	1
Performance Incentives		30	0
Energy Efficiency Resource Standard (EERS)		26	0

INTRODUCTION

Historically a product of public policy with varying levels of participation, EE programs are now viewed by the electric power sector as an essential element in an ever-expanding set of service offerings – high efficiency lighting, smart thermostats, dynamic rates, renewable power options, storage, and more – to meet the expectations of electric customers who live in an on-demand, service-centric world. For customers, this is the beginning of a new era of choice and control over their energy supply and use. Increasingly, customers are gaining access to technology that gives them the ability to tailor energy use to their personal needs and wants.

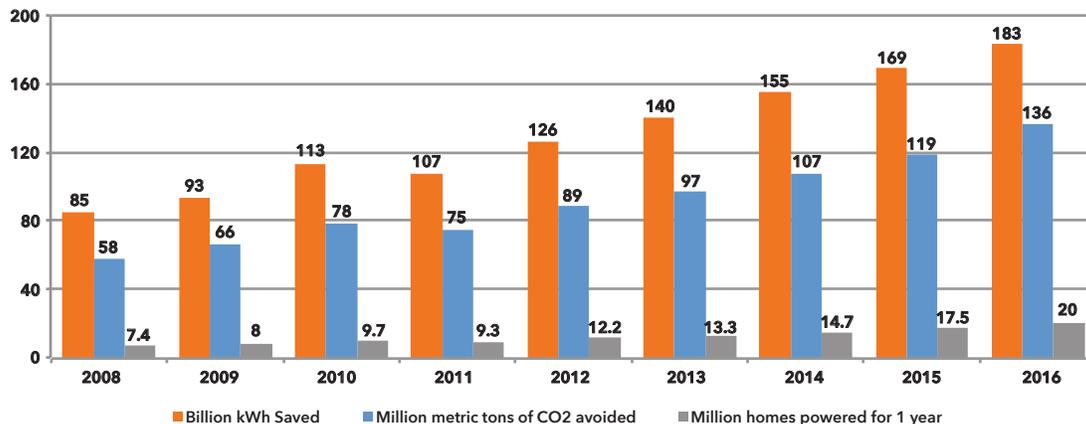
The goal of EE programs is to produce energy and capacity savings that benefit customers, electric companies, and society as a whole. For several decades, electric companies have supported their customers' interest in energy efficiency by providing incentives and information that lower the cost of purchasing energy-efficient appliances and devices and encourage energy management through energy efficiency and demand response programs.

- The focus of energy efficiency programs is to reduce energy consumption while increasing energy input productivity (e.g., fewer kilowatt-hours in exchange for equal or improved output).
- The focus of demand response (DR) programs is to reduce peak energy demand when the wholesale price of electricity is relatively high or for power system reliability reasons.

2016 ENERGY EFFICIENCY SAVINGS

In 2016, EE programs saved 183 TWh of electricity, enough to power 20 million homes for one year, and avoided the generation of 136 million metric tons of carbon dioxide (see Figure 3).⁴ The energy savings from EE programs is equivalent to 4.8 percent of total end use electricity consumption in 2016.

Figure 3. U.S. Energy Efficiency Savings and Carbon Dioxide (CO₂) Emissions Avoided (2008-2016)



4. U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

Of the total 183 TWh saved in 2016, 29 TWh are incremental energy savings from either new programs or new participants in existing programs in 2016. Estimates of energy savings are developed based on the following:

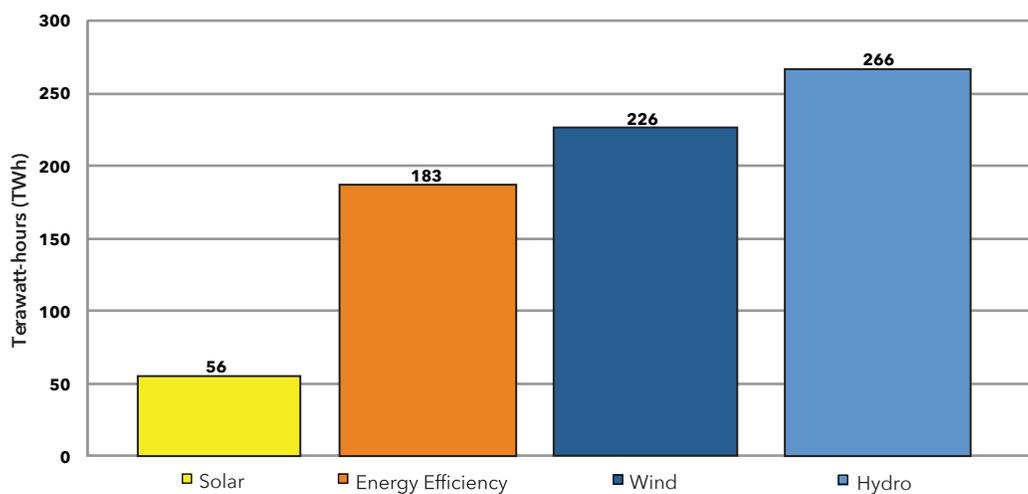
- Energy savings due to past program participation, which continue to deliver measurable and verifiable savings (e.g., a high efficiency refrigerator installed in 2011 continues to save energy in 2016).
- Energy savings due to customer participation in new programs (e.g., in 2016, an electric company offers a brand new LED product rebate and a customer purchases and installs an LED lamp in 2016).
- Energy savings due to new participants in an existing program (e.g., in 2016, an electric company continues to offer rebates for high efficiency refrigerators and a customer utilizes the rebate to purchase an eligible refrigerator).

EE programs are cost-effective ways to manage energy use. A 2017 report from Lawrence Berkeley National Lab found that electric company customer-funded efficiency programs that reported results during 2009-2013 delivered energy savings at a cost of roughly 2 cents per kilowatt-hour (kWh) saved over the lifetime of the investment.⁵

Similar to renewable energy resources, EE programs reduce carbon dioxide emissions and are an important part of the U.S. energy mix. Figure 4 shows that:

- EE programs in 2016 saved three-times the amount of electricity generated by solar resources in 2016.
- EE programs saved about 80 percent of the electricity generated by wind resources in 2016.

Figure 4. EE Programs Saved More Energy than Solar Generated in 2016



5. Trends in the Program Administrator Cost of Saving Electricity for Utility Customer-Funded Energy Efficiency Programs. Lawrence Berkeley National Laboratory. January 2017.

2016 ENERGY EFFICIENCY EXPENDITURES

Table 2 shows EE program expenditures of \$7.5 billion in the United States in 2016, an increase of 4 percent from 2015. IEI believes that the slight increase is a result of more state regulatory policies supporting customer-funded energy efficiency programs, as well as state energy efficiency resource standards which set energy savings goals and targets that tend to increase over time. With energy efficiency resource standards in half of all U.S. states and with more than 30 states with regulatory frameworks that support electric company investments in EE, IEI believes that expenditures are likely to exceed \$9 billion by 2025.

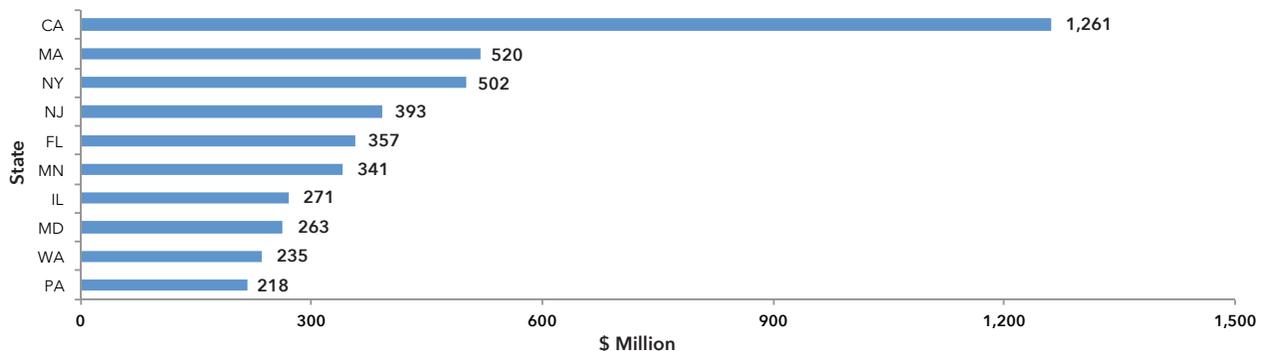
Electric companies, encompassing investor-owned, municipal, cooperative, and federal utilities, are the largest providers of EE programs in the United States, with program-related expenditures of \$6.6 billion, comprising 88 percent of expenditures nationwide.

Table 2. U.S. Customer-Funded Energy Efficiency Expenditures (2008-2016)

	Total	Electric Company	Third-Party Administrator	Electric Company Share of Total	Percent Increase
2008	\$3,395,273,000	\$3,009,522,000	\$385,751,000	89%	
2009	\$3,770,398,000	\$3,312,287,000	\$458,111,000	88%	11%
2010	\$4,831,868,000	\$4,271,691,000	\$560,177,000	88%	28%
2011	\$5,711,277,000	\$4,914,351,000	\$796,926,000	86%	18%
2012	\$5,861,219,000	\$5,244,288,000	\$616,931,000	89%	3%
2013	\$6,440,303,000	\$5,811,865,000	\$628,438,000	90%	10%
2014	\$7,285,637,000	\$6,589,178,000	\$696,459,000	90%	13%
2015	\$7,232,937,000	\$6,490,523,000	\$742,414,000	90%	-1%
2016	\$7,513,376,000	\$6,613,805,000	\$899,571,000	88%	4%

Figure 5 shows the 10 states with the largest 2016 energy efficiency expenditures. These 10 states accounted for 58 percent of U.S. electric efficiency expenditures in 2016. California leads the states with \$1.26 billion in expenditures, with Massachusetts second and New York third.

Figure 5. 2016 Energy Efficiency Expenditures – Top 10 States



Though expenditures at the national level grew modestly in 2016, two states increased their energy efficiency program expenditures by 50 percent or more relative to 2015 – Louisiana and New Jersey.

To provide some sense of the relative magnitude of spending, it is important to consider spending on energy efficiency in both absolute terms and in relation to the state’s share of the nation’s total population and electricity consumption. Table 3 shows 2016 energy efficiency expenditures, population by state, and the state’s relative share of U.S. energy efficiency expenditures, population, and electricity consumption.

Nine states – California, Connecticut, Hawaii, Maryland, Massachusetts, Minnesota, New Jersey, Rhode Island, Vermont – have 2016 energy efficiency expenditure shares that are at least double their share of U.S. electricity consumption. Energy efficiency programs in these states have delivered substantial cumulative energy savings, thus lowering the per-capita consumption of electricity. This is reflected in the fact that in these nine states, the percent of U.S. electricity consumption is lower than the percent of U.S. population.

Table 3. Summary of U.S. Customer-Funded Energy Efficiency Efforts by State

State	2016 Energy Efficiency Expenditures (\$Millions)	Population (2016 U.S. Census)	% of Total 2016 U.S. EE Expenditures	% of U.S. Population	% of 2016 U.S. Electricity Consumption
AK	\$0.1	741,894	0.0%	0.2%	0.2%
AL	\$69.3	4,863,300	0.9%	1.5%	2.3%
AR	\$111.4	2,988,248	1.5%	0.9%	1.2%
AZ	\$133.9	6,931,071	1.8%	2.1%	2.1%
CA	\$1,260.6	39,250,017	16.8%	12.1%	6.8%
CO	\$130.6	5,540,545	1.7%	1.7%	1.5%
CT	\$177.2	3,576,452	2.4%	1.1%	0.8%
DC	\$23.7	681,170	0.3%	0.2%	0.3%
DE	\$15.1	952,065	0.2%	0.3%	0.3%
FL	\$356.7	20,612,439	4.7%	6.4%	6.3%
GA	\$67.7	10,310,371	0.9%	3.2%	3.7%
HI	\$40.3	1,428,557	0.5%	0.4%	0.3%
IA	\$178.6	3,134,693	2.4%	1.0%	1.3%
ID	\$61.2	1,683,140	0.8%	0.5%	0.6%
IL	\$270.5	12,801,539	3.6%	4.0%	3.7%
IN	\$112.3	6,633,053	1.5%	2.1%	2.8%
KS	\$9.1	2,907,289	0.1%	0.9%	1.1%
KY	\$101.7	4,436,974	1.4%	1.4%	2.0%

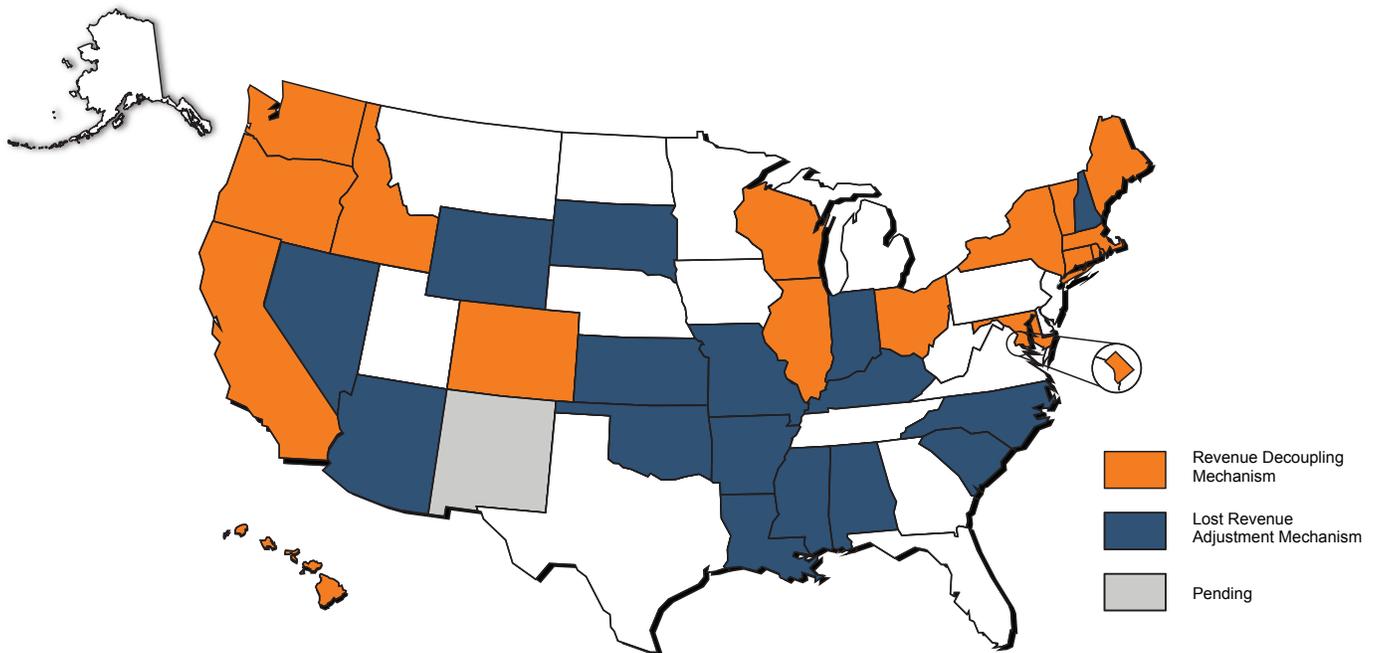
State	2016 Energy Efficiency Expenditures (\$Millions)	Population (2016 U.S. Census)	% of Total 2016 U.S. EE Expenditures	% of U.S. Population	% of 2016 U.S. Electricity Consumption
LA	\$13.5	4,681,666	0.2%	1.4%	2.4%
MA	\$520.4	6,811,779	6.9%	2.1%	1.4%
MD	\$262.7	6,016,447	3.5%	1.9%	1.6%
ME	\$32.6	1,331,479	0.4%	0.4%	0.3%
MI	\$190.5	9,928,300	2.5%	3.1%	2.8%
MN	\$341.3	5,519,952	4.5%	1.7%	1.8%
MO	\$91.0	6,093,000	1.2%	1.9%	2.1%
MS	\$43.9	2,988,726	0.6%	0.9%	1.3%
MT	\$14.3	1,042,520	0.2%	0.3%	0.4%
NC	\$198.2	10,146,788	2.6%	3.1%	3.6%
ND	\$17.4	757,952	0.2%	0.2%	0.5%
NE	\$21.0	1,907,116	0.3%	0.6%	0.8%
NH	\$8.1	1,334,795	0.1%	0.4%	0.3%
NJ	\$392.5	8,944,469	5.2%	2.8%	2.0%
NM	\$39.9	2,081,015	0.5%	0.6%	0.6%
NV	\$48.9	2,940,058	0.7%	0.9%	1.0%
NY	\$501.6	19,745,289	6.7%	6.1%	3.9%
OH	\$146.6	11,614,373	2.0%	3.6%	4.0%
OK	\$90.1	3,923,561	1.2%	1.2%	1.6%
OR	\$157.4	4,093,465	2.1%	1.3%	1.3%
PA	\$217.7	12,784,227	2.9%	4.0%	3.9%
RI	\$60.6	1,056,426	0.8%	0.3%	0.2%
SC	\$154.3	4,961,119	2.1%	1.5%	2.1%
SD	\$13.1	865,454	0.2%	0.3%	0.3%
TN	\$80.1	6,651,194	1.1%	2.1%	2.7%
TX	\$175.4	27,862,596	2.3%	8.6%	10.6%
UT	\$62.0	3,051,217	0.8%	0.9%	0.8%
VA	\$58.5	8,411,808	0.8%	2.6%	3.0%
VT	\$74.0	624,594	1.0%	0.2%	0.1%
WA	\$235.0	7,288,000	3.1%	2.3%	2.4%
WI	\$109.3	5,778,708	1.5%	1.8%	1.9%
WV	\$10.4	1,831,102	0.1%	0.6%	0.9%
WY	\$9.2	585,501	0.1%	0.2%	0.4%
Total	\$7,513	323,127,500			

ENERGY EFFICIENCY REGULATORY FRAMEWORKS

The regulatory environment in each state is a major factor in determining the size of customer-funded EE programs. Three regulatory mechanisms are critical for aligning incentives for electric companies to treat demand-side resources as financial equivalents to supply-side investments: direct cost recovery, fixed-cost recovery, and performance incentives.

- Direct cost recovery refers to regulator-approved mechanisms for the recovery of costs related to the administration of the efficiency program; implementation costs such as marketing; and the actual cost of product rebates and mid-stream product buy-downs. Such costs are recovered through regulatory rate reviews, system benefits charges, and tariff rider/surcharges.
- Fixed-cost recovery refers to decoupling and lost revenue adjustment mechanisms that assist the electric company in recovering the marginal revenue associated with fixed operating costs. Ratemaking practices tie the recovery of fixed costs to volumetric consumption based on an assumed level of energy sales. The purpose of energy efficiency programs is to reduce the consumption of electricity; decoupling and lost revenue adjustment mechanisms allow for timely recovery of fixed costs. Figure 6 shows fixed-cost recovery mechanisms by state.

Figure 6. Lost Revenue & Decoupling Mechanisms – by State



- Performance incentives are mechanisms that reward electric companies for reaching certain energy efficiency program goals and that impose a penalty for performance below the agreed-upon goals. Performance incentives allow electric companies to earn a return on their investment in energy efficiency, similar to the return on supply-side investments. Figure 7 shows performance incentives by state.

CONCLUSION

The role of demand-side resources continues to expand in the nation's energy mix. Electric companies are well-positioned to ensure that EE continues to grow as a smart business solution that delivers broad-based benefits to customers. IEI believes that EE expenditures and savings will continue to grow over the next decade.

While 2016 was a strong year in terms of energy savings and expenditures, challenges persist. Recent legislative efforts to either repeal or freeze EERS' create market uncertainty for customers who rely on EE programs to help manage energy costs. Low natural gas prices and the growth of distributed energy resources like private solar and storage impose new market dynamics and may challenge EE programs under current planning paradigms and cost-effectiveness tests.

The key issue facing not just EE programs but the industry as a whole is whether electric companies, technology companies, and regulators can collaborate to help customers take advantage of new service offerings and unlock value. Electric companies are instrumental not just in closing the energy efficiency investment gap in the United States, but also in providing energy services that customers want. The regulatory frameworks that support electric company investments in EE programs have proven successful and are a foundation for the next generation of electric company regulation.

METHODOLOGY

There is diversity in how electric companies estimate and report EE savings, largely influenced by filing requirements of their respective regulatory bodies.⁷ Not all electric companies maintain EE ‘aggregate’ or ‘annual’ program results. In fact, the U.S. Energy Information Administration tracks and publishes only ‘incremental’ and ‘lifecycle’ impacts. Incremental savings only capture the impacts of new programs and new participants in existing programs for a one-year period (e.g., 2016). Lifecycle savings extend incremental savings over the anticipated useful life of the EE investment.

Electric companies may report energy impacts in ‘net’ or ‘gross’ terms. Gross savings are defined as the total change in energy consumption that results from program-promoted actions taken by program participants regardless of the extent or nature of program influence on their actions. Net savings are defined as the change in energy consumption attributable only to the EE program efforts, separating out exogenous influences on energy consumption, such as customer self-interest, program free riders, and program spillover. This report primarily includes gross energy savings.

To account for differences across the collected information, IEI employs a simple calculation to develop an aggregate estimate of energy savings in 2016. First, a basic decay rate is applied to 2015 aggregate energy savings by major census region to approximate the effect of past program measures reaching the end of their useful life. Second, 2016 incremental savings by region are added.

- 2016 aggregate energy savings *equals* 2015 aggregate energy savings by region, *less* the product of the decay rate, *plus* 2016 incremental savings.

DATA, LIMITATIONS, AND INTERPRETATIONS

All results were voluntarily provided and the total reported figures should be considered conservative. Information on program expenditures, impacts, and budgets are in calendar year format. In 2017, the U.S. Energy Information Administration (EIA) released customer-funded electric efficiency program savings and expenditures data for 2016. This dataset covers 574 companies in the U.S. – 564 electric and combined companies and 10 third-party energy efficiency administrators. From this dataset and past IEI survey efforts, IEI estimated energy savings in 2016.

We encourage participation from all EE program administrators, their staff, and the respective state commissions. We kindly request that comments or questions regarding the findings contained in this report be sent to Adam Cooper, Director, Research and Strategic Alliances at IEI, acooper@edisonfoundation.net.

7. For additional details on the diversity in how states report energy savings, see “Examining the Net Savings Issue: A National Survey of State Policies and Practices in the Evaluation of Ratepayer-Funded Energy Efficiency Programs.” American Council for an Energy-Efficient Economy. January 2014.

LOST REVENUE AND DECOUPLING MECHANISMS - STATE DETAILS

The table below lists the states that have approved lost revenue and/or decoupling mechanisms in place, provides a short description of how the mechanism works, and the relevant regulatory order or decision.

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Alabama	<ul style="list-style-type: none"> • Lost revenue due to efficiency programs can be recovered through a rate rider. • Rates can also be set annually to allow for recovery of energy efficiency, through a Rate Stabilization and Equalization (RSE) mechanism. 	Approved	Lost Revenue: Docket 31045
Arizona	<ul style="list-style-type: none"> • In May 2012, a lost-fixed-cost-recovery (LFCR) was approved, as part of a rate case filed by APS, effective July 1, 2012. • Electric companies can recover a portion of transmission and distribution costs related to sales reduced by efficiency or distributed generation. • Recovered revenue can be adjusted annually. • In April 2017, the Arizona Corporation Commission approved APS' reset of the LFCR to 2.2993% of a customer's bill. 	Approved (2012)	Lost Revenue: Decision #73183, #75558 and #75742 (addendum), Docket E-01345A-11-0224
Arkansas	<ul style="list-style-type: none"> • In December 2010, the Arkansas Public Service Commission issued Order #14 in Docket 08-137-U, allowing electric companies to submit applications within the annual energy efficiency tariff filing process to collect "lost contributions to fixed costs" (LCFC) contemporaneously with program implementation. • LCFC is based on the best available data, which may include deemed savings, to be followed by an annual Evaluation, Measurement & Verification (EM&V) true-up calculation. 	Approved (2010)	Lost Revenue: Docket 08-137-U, Order No. 14
California	<ul style="list-style-type: none"> • California has had some form of decoupling since 1982. • The current "decoupling plus" program is a revenue decoupling program combined with performance incentives for meeting or exceeding energy efficiency targets (performance-based rates). • Revenue requirements are adjusted for customer growth, productivity, weather, and inflation on an annual basis with rate cases every three or four years (varies by utility). • The incentive structure caps penalties/earnings for energy efficiency programs at \$450 million. 	Approved (Decoupling "Plus" approved in 2007)	Decoupling: Code Sec. 9, section 739(3) and Sec. 10, section 739.10, as amended by A.B. XI 29; Decisions 98-03-063 and 07-09-043

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Colorado	<ul style="list-style-type: none"> In July 2017, the Colorado Public Utilities Commission issued a decision order granting Public Service Company of Colorado's (Xcel's) application to implement a Revenue Decoupling Adjustment (RDA) mechanism. The RDA mechanism is "full decoupling" and will use actual sales (i.e., no weather normalization) to charge or credit customers based on changes to use per customer. The RDA will apply to customers on residential (Schedule R) and small commercial (Schedule C) rate classes. The annual adjustments to revenues by an RDA are capped at 3 percent. The RDA mechanisms will operate through 2023, with true-up that may extend on customer bills through mid-2025. The RDA formula will be filed by Xcel after its next Phase I rate case. 	Approved	Decoupling: Proceeding Number 16A-0546E, Decision No. C17-0557
Connecticut	<ul style="list-style-type: none"> Connecticut statute (Public Act 13-298), requires electric distribution companies to submit a comprehensive three-year Conservation & Load Management (C&LM) plan to the Department of Energy and Environmental Protection (DEEP) and the Public Utilities Regulatory Authority (PURA). In December 2016, DEEP approved a final C&LM plan for the 2016-2018 program cycle. United Illuminating's existing decoupling mechanism recovers revenues from lost sales, while Connecticut Light and Power's (CL&P) full decoupling mechanism was approved in a 2015 rate case. Act 13-298 provides for PURA to ensure that additional revenues required to fund the approved C&LM budgets are "provided through a fully reconciling conservation adjustment mechanism for each electric company" of not more than three mills per kWh. 	Approved (2013)	Decoupling: Public Act No. 13-298; Docket No. 12-08-11; Docket No. 13-03-02; Docket NO. 14-05-06; DOCKET NO. 16-06-04
District of Columbia	<ul style="list-style-type: none"> The DC Public Service Commission approved PEPCO's Bill Stabilization Adjustment (BSA) in October 2009. Like the BSA approved for Maryland, a revenue per customer (RPC) mechanism is employed which adjusts quarterly. 	Approved (2009)	Decoupling: PSC Order 1053-E-549; PSC Order 1053, Case No. 15556
Hawaii	<ul style="list-style-type: none"> The Hawaii PUC approved decoupling in August 2010 with a mechanism which allows for decoupling of revenues from sales, rate base adjustments for O&M costs and planned capital additions, and a mechanism for sharing earnings with rate payers should a company exceed their allowed ROE. True-ups occur annually. 	Approved (2010)	Decoupling: Docket 2008-0274 Order dated Aug.31, 2010

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Idaho	<ul style="list-style-type: none"> • After a five-year pilot, the Idaho Public Utilities Commission approved Idaho Power Company's request to convert Schedule 54, a fixed-cost adjustment (FCA) mechanism from a pilot to an ongoing, permanent schedule. • The FCA uses a fixed cost per customer approach and sales are adjusted for weather. • FCA rate increases are capped at 3% over the previous year. • The mechanism is only applied to residential and small general service customers. 	Approved (2013, after a 5-year pilot, 2007-2011)	Decoupling: Case No. IPC-E-04-15, Order No. 30267; Case No. IPC-E-09-28, Order No. 31063; Case No. IPC-E-11-19, Order No. 32505, Order No. 32731
Illinois	<ul style="list-style-type: none"> • Enacted in December 2016, the Future Energy Jobs Act (FEJA, SB2814) contains a decoupling mechanism and allows for electric companies to earn a return on energy efficiency expenditures. 	Approved (2016)	Decoupling: SB 2814
Indiana	<ul style="list-style-type: none"> • The Utility Regulatory Commission approved Duke Energy Indiana, Indiana Michigan Power Company, Northern Indiana Power & Light, and Indianapolis Power & Light for lost margin recovery mechanisms. • In 2014, after Senate Bill 340 was adopted, the Commission limited the "pancaking" effect of the lost revenue adjustment mechanisms (LRAM). • The cap is 4 years or life of measure, whichever is shorter, for all but Indiana Michigan Power Company, which was capped at 3 years or life of measure. 	Approved	Lost Revenue: Cause No. 43827; Cause No. 43955; SB 340; SB 412; Dockets 43966, 44841, 44792, 44634
Kansas	<ul style="list-style-type: none"> • The Kansas Corporation Commission allows lost revenue adjustment in certain cases. • In Docket No. 10-WSEE-775-TAR, Westar was granted a shared savings mechanism, which is similar to lost revenue recovery. • The Commission does not favor lost revenue recovery, but will consider it if it achieves established efficiency goals. 	Approved	Lost Revenue: Docket No. 10-WSEE-775-TAR; Docket No. 12-GIMX-337-GIV
Kentucky	<ul style="list-style-type: none"> • Lost revenue recovery mechanisms are determined on a case-by-case basis, but all electric companies in Kentucky have demand-side management (DSM) proposals in place that include similar lost revenue recovery due to DSM programs. • Lost revenue is calculated using the marginal rate, net of variable costs, times the estimated kWh savings from a DSM measure over a three-year period. 	Approved (2006)	Lost Revenue: Statute Ch. 278, Title 285; Case No. 2016-00281

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Louisiana	<ul style="list-style-type: none"> In June 2013, the LA PSC voted to reinstate a 2012 initiative, giving electric companies a year to develop energy efficiency programs for their customers. In November 2014, the three investor-owned electric companies (Cleco, Entergy Louisiana/Gulf States, and SWEPCO) began implementing energy efficiency programs, to include a lost contribution to fixed costs (LCFC) mechanism. The LCFC formula is still being finalized, with Phase II Rulemaking beginning in August 2017 (Docket R-31106). The amount of proposed recovery may be considered a regulatory asset and may be considered in a base rate or formula rate proceeding, whichever comes first. Alternatively, electric companies may use the Energy Efficiency Rate Rider to recover contemporaneously the amount of proposed recovery from participating customers, subject to annual true-up. 	Approved (2013)	Lost Revenue: Docket R-31106
Maine	<ul style="list-style-type: none"> Maine PUC statutory provisions allow for decoupling and incentives. In 2014, Central Maine Power Company was granted decoupling in its rate case (Docket No. 2013-00168). 	Approved (2014)	Decoupling: Docket No. 2013-00168; 35-A MRSA, section 3195, subsection 3195 (1)(A)
Maryland	<ul style="list-style-type: none"> In 2007, Maryland electric companies were approved for a revenue per customer (RPC) decoupling mechanism, which adjusts quarterly and accounts for major customer outages. The mechanism is similar to the Bill Stabilization Adjustment (BSA) approved for Washington, DC. 	Approved (2007)	Decoupling: SB 205 (2008); PSC Case No. 9093; Order 81518, Case No. 9153; Case No. 9154; Case No. 9155; Case No. 9156; Case No. 9157
Massachusetts	<ul style="list-style-type: none"> In May 2009, National Grid was the first electric company to submit a revenue decoupling ratemaking (RDR) plan, which proposed a revenue per customer (RPC) mechanism that adjusted quarterly. Since 2012, all electric companies had RDR plans approved. Target revenues are determined on an electric company-wide basis and can be adjusted for inflation or capital spending requirements if necessary. 	Approved (2008), full implementation, 2012	Decoupling: Docket 07-50; Docket 09-39; DPU 07-50-A

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Mississippi	<ul style="list-style-type: none"> In July 2013, the Mississippi Service Commission issued a final order in Docket No. 2010-AD-2, adding Rule 29, allowing for electric companies to recover energy efficiency program costs through a rider, the Energy Efficiency Cost Rate (EECR) Energy efficiency costs are defined as incremental program costs that are not already included in electric company rates, and the lost contribution to fixed costs (LCFC) associated with approved programs. Electric companies will file a schedule of actual program costs for the reporting period, actual amounts collected under the rider for the reporting period, actual and projected LCFC, and approved program budgets for the current calendar year. The EECR will then be adjusted to reconcile any over- or under-recovery for the prior year and the approved budget for the current program year. 	Approved (2013)	Lost Revenue: Docket No. 2010-AD-2
Missouri	<ul style="list-style-type: none"> In 2011, the Missouri Energy Efficiency Investment Act authorized electric companies to file plans to recover a portion of the net benefits of demand-side energy efficiency programs. In early 2016, the Commission approved DSM programs and demand-side programs investment mechanisms (DSIM) for Ameren Missouri (EO-2015-0055), KCP&L (EO-2015-0240) and KCP&L Greater Missouri Operations Company (EO-2015-0241), which allow each electric company to bill customers for estimated lost revenues due to the programs and to true-up the billed lost revenues as a result of energy savings. 	Approved (2012)	Lost Revenue: SB 376; Case EO-2015-0055, Case No. EO-2015-0240, Case No. EO-2015-0241
Nevada	<ul style="list-style-type: none"> In June 2010, Nevada's Public Utilities Commission (PUC) approved a lost revenue adjustment mechanism for electric companies, as legislated by the 2009 SB 358 (section 11.3). The mechanism allows electric companies to recover "lost revenues" based on estimated savings through a third-party M&V contractor during annual DSM filings. In 2015, the PUC completed an investigation into alternative lost revenue mechanisms and proposed a new multiplier method (multiplied by the utility's authorized overall rate of return grossed up for taxes applicable to the utility's equity portion of the authorized rate of return) (Docket No. 14-10018). Effective January 1, 2016. 	Approved (2010)	Lost Revenue: PUC Docket 12-12030; Docket 14-10018

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
New Hampshire	<ul style="list-style-type: none"> In August 2016, as part of a settlement agreement (Order No 25932), it was recommended that the PUC implement a lost revenue adjustment mechanism (LRAM), beginning January 1, 2017. The LRAM is calculated by dividing the projected cumulative lost distribution revenue associated with energy efficiency savings for a given period by the projected billed consumption for that period. The annual savings, for which lost revenue may be recovered, will be capped at 110% of planned savings. Settling Parties agreed that the LRAM for each electric company will cease when a new decoupling mechanism, or other mechanism as an alternative to the LRAM, is implemented. 	Approved (2017)	Lost Revenue: Docket No. 15-137, Order No 25932
New Mexico	<ul style="list-style-type: none"> In New Mexico, no electric company currently has a decoupling or lost revenue adjustment mechanism in place. However, in Case No. 15-00261-UT, PNM proposed a decoupling mechanism. In its August, 2016 Recommended Decision, the Hearing Examiner recommended rejecting the proposal; the Commission has not issued a final order. 	Pending	
New York	<ul style="list-style-type: none"> Following an April 2007 order, electric and gas electric companies must file proposals for true-up based decoupling mechanisms in ongoing and new rate cases. Proposals have been approved for Consolidated Edison and Orange & Rockland utilities, both for revenue-per-class mechanisms. True-ups occur annually. 	Approved (2007)	Decoupling: Cases 03-E-0640, 07-E-0949, 07-E-0523
North Carolina	<ul style="list-style-type: none"> The North Carolina Public Utilities Commission approved Duke Energy Carolinas' lost revenue adjustment mechanism LRAM as part of their cost recovery mechanism. Net lost revenues for each annual period are recovered over 3 years and determined by multiplying lost sales by a net lost revenue rate, which is the difference between the average retail rate applicable to the customer class impacted by the measure and 1) the related customer charge component of the rate, 2) the fuel component rate, and 3) the incremental variable operations & maintenance (O&M) rate. True-ups occur annually. 	Approved (2009)	Lost Revenue: Docket E-2, Sub 931; Docket No. E-7, Sub 1105; Docket No. E212, Sub 536

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Ohio	<ul style="list-style-type: none"> The Public Utilities Commission of Ohio ordered AEP Ohio and Duke Energy Ohio to develop a 3-year decoupling pilot program for 2012-2014, which was revised and extended to 2020; or until its next distribution base rate case. The original pilot had no cap of annual rate decreases to customers. The distribution decoupling rider is subject to a three percent cap on annual adjustment, with balances carrying forward at the long-term cost of debt. 	Approved (2012)	Decoupling: ORC 4928.143(B)(2)(h); ORC 4928.66; ORC 4901:1-39-07; Case No. 11-3549-EL-SSO; Case No. 11-0351-EL-AIR; Case No. 14-841-EL-SSO; Case No. 11-5905-EL-RDR
Oklahoma	<ul style="list-style-type: none"> OG&E has direct lost revenue adjustment (“Class Lost Revenue Factor”) built into the approved demand program rider (DPR) structure, which includes a shared savings mechanism. As the name implies, lost revenue amounts are examined by customer class. 	Approved (2009)	Lost Revenue: Cause No. PUD 200800059, Order 556179; Cause No. PUD 200700449 (ID No. 3710105, April 8, 2008)
Oregon	<ul style="list-style-type: none"> In 2009, Portland General Electric was approved for a two-year pilot employing a revenue per customer (RPC) decoupling mechanism, called a Sales Normalization Adjustment, under Order 09-020, which was twice extended for three additional years, through 2016. In March 2016, PGE filed Advice No. 16-02, docketed as UE 306, seeking to renew the decoupling mechanisms for an additional three-year period, effective January 1, 2017. The SNA mechanism was approved under Order 16-359; True-ups occur annually. 	Approved (2009)	Decoupling: Order 16-359; Docket UE 306
Rhode Island	<ul style="list-style-type: none"> In May 2010, Rhode Island passed the Decoupling Act (R.I.G.L. 39-1-27.7.1), mandating that Narragansett Electric Co., a subsidiary of National Grid Group Plc., decouple its revenue from sales. In October 2010, National Grid filed a request with the Rhode Island Public Utilities Commission to implement revenue decoupling mechanisms for its electric and gas operations. In May 2012, Order 20745 was issued approving National Grid’s RDM proposal. It is retroactive to April 2011 and an adjustment factor is to be annually calculated. 	Approved (2012)	Decoupling: R.I.G.L. 39-1-27.7.1; Docket No. 4206, Order 20745

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
South Carolina	<ul style="list-style-type: none"> The Commission approved a lost revenue adjustment mechanism for Duke Energy Carolinas as part of their cost recovery mechanism. Net lost revenues for each annual period are recovered over 3 years and determined by multiplying lost sales by a net lost revenue rate, which is the difference between the average retail rate applicable to the customer class impacted by the measure and 1) the related customer charge component of the rate, 2) the fuel component rate, and 3) the incremental variable operations & maintenance (O&M) rate. True-ups occur annually. 	Approved (2009)	Lost Revenue: Docket 200-251-E
South Dakota	<ul style="list-style-type: none"> Beginning in 2010, the South Dakota electric companies switched from receiving performance incentives to receiving a fixed percentage of lost revenues. MidAmerican and Ottertail Power converted in 2010 and 2011, respectively. Black Hills and Xcel Energy began recovering in 2011, and NorthWestern Energy in 2012. All programs are still in the pilot phase and have not been incorporated into the base rate cases yet. All allow for riders with annual true-ups for the recovery of lost revenues. 	Approved (2010)	Lost Revenue: Dockets EL11-012; GE10-001; EL11-002; EL11-013; GE12-001
Vermont	<ul style="list-style-type: none"> In 2007, a revenue per customer (RPC) decoupling mechanism was approved for Green Mountain Power under the Alternative Regulation Plan. Rates can be adjusted up to four times per year with an annual reconciliation on allowed earnings. Changes in base rates cannot exceed 2% per year. 	Approved (2007)	Decoupling: Dockets 7175, 7176, 7336
Washington	<ul style="list-style-type: none"> In June 2013, the Washington Utilities and Transportation Commission (WUTC) approved decoupling mechanisms for Puget Sound Energy (PSE) effective in 2014. PSE is allowed to increase rates through 2019, at a maximum of 3% of its revenue with any excess amounts above the 3% recovered in the following year. Avista proposed a full decoupling mechanism in its 2014 general rate case (Docket UE-140188), which was approved by the Commission in November 2014. 	Approved (2013)	Decoupling: Docket UE-140188 ; Docket UE-121373

State	Lost Revenue and Decoupling Description	Status	Codes, Orders & Resources
Wisconsin	<ul style="list-style-type: none"> In 2008, a 4-year decoupling pilot by Wisconsin Public Service Corporation (WPS) was approved. In 2012, the pilot was extended with a modified Revenue Stabilization Mechanism (RSM). The RSM is based on a total rate case margin, instead of a total rate case margin per customer, intending to remove the sensitivity related to sales per customer. Using a future test year to determine the revenue requirement, the electric company compares the total target revenue with actual revenue and defers the difference, subject to carrying costs based on approved short-term debt rate. The margin equals the total revenue for each tariff, less the costs associated with the annual per-kWh value established for monitored fuel costs, and excluding any surcharges, credits, taxes, or similar charges. The formula for calculating an over-or-under collection is: actual margin minus the rate case forecasted margin established in the most recent rate proceeding. The new RSM will be in effect on a pilot base until WPS' next general rate order. 	Approved	Decoupling: Docket No. 6690-UR-121; Docket 6690-UR-119
Wyoming	<ul style="list-style-type: none"> In 2007, a tracking adjustment mechanism that includes direct lost revenue recovery was approved for Montana Dakota Utilities (MDU). The adjustment is applied to all MDU customers to recover costs and lost revenues for load management programs only. 	Approved (2007)	Lost Revenue: Docket No. 200004-65-ET-06

PERFORMANCE INCENTIVES - STATE DETAILS

The table below lists the states that have approved performance incentives in place, provides a short description of how the incentive is calculated, and the relevant regulatory order or decision.

State	Performance Incentive Description	Status	Codes, Orders & Resource
Alabama	<ul style="list-style-type: none"> Alabama Power is able to recover a "reasonable rate of return" on efficiency program spending through a rate rider. 	Approved	Docket 31045
Arizona	<ul style="list-style-type: none"> Arizona Public Service (APS), Tucson Electric Power (TEP), and UniSource all have performance incentives in place under a shared savings mechanism, set at a percentage of demand-side management (DSM) program net economic benefits and capped at a percentage of total DSM expenditures. The percentages are dependent on achievement relative to energy efficiency goals and determined on a case-by-case basis. 	Approved (2005)	Docket No. E-01345A-05-0816 (Decision 67744), Docket No. E-01933A-12-0291 (Decision 73912), Docket No. E-01345A-12-0224 1 (Decision 74406)
Arkansas	<ul style="list-style-type: none"> In 2010, the Arkansas Public Service Commission issued Order No. 15, approving performance incentives through a shared savings approach limited to 10% of net benefits of budgets. Total incentive awards are capped at: 4% of budgets for 80% achievement; 5% for 90% achievement; 6% for 100% achievement; 7% for 110% achievement; and 8% for 120% achievement. Net benefits shall be based on a total resource cost (TRC) test. Recent energy efficiency portfolio goals as a percentage of energy sales include: 2011: 0.25%, 2012: 0.50%, 2013: 0.75%, 2014: 0.75%, 2015: 0.9%, 2016: 0.9%. 2017 - 2019 second cycle goals are to be determined. 	Approved (2010)	Docket 08-137-U, Order No. 15

State	Performance Incentive Description	Status	Codes, Orders & Resource
California	<ul style="list-style-type: none"> • Adopted in 2013, California electric companies are eligible to earn the Energy Efficiency Savings and Performance Incentives (ESPI) mechanism, authorized for 10 years of funding. • Potential ESPI earnings available annually are capped for each utility individually. • Performance incentive opportunities include the following categories: • A. Energy Efficiency Resource Savings paid as a combination of ex ante “locked down” and ex post verified savings results, according to the level of uncertainty of the measure for which savings are being claimed. Resource savings are measured based on net lifecycle savings. Incentives for EE resources savings are capped at 9% of resource program budgets, minus funding dedicated to administrative activities, codes and standards programs, EM&V, and community choice aggregator and regional energy networks programs. • B. Ex-Ante Review (EAR) Process Performance rewards an IOU’s conformance with the ex-ante review requirements, as a means to benchmark performance, with incentives earned based on performance scores and paid as an award of up to 3% of resource program expenditures. • C. Codes and Standards (C&S) Program Management Fees for savings associated with an utility’s advocacy for energy savings through appliance and building code change, equaling 12% of the authorized C&S program expenses, excluding administrative costs. • D. Non-Resource Management Fees for implementing energy efficiency activities and programs that do not directly generate energy savings but provide support to savings-based programs. Capped at 3% of non-program expenditures. 	Approved	R. 12-01-005; Decision 13.09.023
Colorado	<ul style="list-style-type: none"> • In May 2014, the Colorado Public Utilities Commission issued a decision order on Public Service Company of Colorado’s demand-side management (DSM) plan, providing a financial incentive of 5% of net dollar savings when energy savings are 100% or greater goal. • The cap on the percentage of net dollar savings earned has been removed as the approved incentive no longer constrains an incremental adder for energy savings over 100% of goal. • The current \$30 million cap on the combined bonus and performance incentive is retained to ensure ratepayers are protected from rate increases. 	Approved	Proceeding No. 13A-0686EG, Decision No. C14-0731

State	Performance Incentive Description	Status	Codes, Orders & Resource
Connecticut	<ul style="list-style-type: none"> The Connecticut PUC requires annual hearings for utilities, where the past year's results for energy savings are reviewed and a performance incentive (known as a "management fee") is determined, which ranges from 2% to 8% of program costs before taxes. The threshold for earning the minimum incentive (2%) is 75% in 2016-18; reaching 100% of goals earns 4.5% and reaching 135% of goals earns 8%. 	Approved (1988, mechanism changes over time)	Dockets 07-10-03; 08-10-03; 09-10-03
District of Columbia	<ul style="list-style-type: none"> Section 202 of the DC Clean and Affordable Energy Act of 2008 authorizes the District's Department of the Environment to award "performance based" and "financial" incentives to the operator of DC's Sustainable Energy Utility, VEIC, for meeting or exceeding specific performance benchmarks established in its contract. The contract with the Department of the Environment also includes financial penalties should the utility fail to meet the performance benchmarks. 	Approved (2008)	Section 202 of the DC Clean and Affordable Energy Act of 2008
Georgia	<ul style="list-style-type: none"> Georgia Code (O.C.G.A 46-3A-9) authorizes electric companies to recover costs and an "additional sum" for approved programs As agreed to under the 2013 Integrated Resource Plan stipulation resolution, Georgia Power will receive an Additional Sum of 8.5% of the net present value of verified electricity savings for achieving 50% or more of the projected savings, with no cap. If savings are less than 50% of the projected savings, the Additional Sum is 0.5% for demand response measures and 3% for energy efficiency measures. If the Additional Sum exceeds program costs, the portion that exceeds program costs shall be calculated based on 4% of actual net benefits of verified kWh savings as determined by the Program Administrator test from certified DSM programs Georgia Power will update all data relating to actual program participation, as well as the actual energy savings and actual program costs when calculating the Additional Sum each year. 	Approved	Docket & Order 36499
Hawaii	<ul style="list-style-type: none"> In July 2009 Hawaiian Electric Company (HECO) transferred administration of its energy efficiency programs to a third-party "Public Benefits Fee" administrator, Hawaii Energy. Hawaii Energy is compensated by the Commission for satisfactory performance of its contract. 	Approved (2008)	Docket 2009-0029, Order 23258; Docket 2007-0323, Order 23681

State	Performance Incentive Description	Status	Codes, Orders & Resource
Indiana	<ul style="list-style-type: none"> • Indiana statute allows for either shared savings or adjusted/ bonus ROE mechanisms as DSM incentives. • For I&M, the 2017 order (Cause No. 44841) allows a two-tier shared savings mechanism calculated as the lower of (a) 15% of 90% of each individual sector's net benefits under the utility cost test, or (b) 15% of sector program costs. • Second, individual sector performance incentives will be (a) reduced by 15% if IBM fails to achieve at least 15% of the sector's energy savings goal based on final EMSV analysis, and (b) increased by 10% if IBM achieves 105% of the sector's energy savings goal. 	Approved	Administrative Code, Title 170, 4-8-7 (a), 44497, 44495, 44486, 44634; Cause No. 44841
Kentucky	<ul style="list-style-type: none"> • Kentucky Statute 278.285 allows utilities to recover the full costs of DSM programs via rates and allows incentives designed to provide financial rewards for utilities and encourage implementation of cost-effective DSM programs. • Duke Energy, Kentucky Power (AEP), and Louisville Gas & Electric (LG&E) each have a shared savings mechanism in place. • Duke and AEP can earn an incentive of up to 10% of net savings after program costs while LG&E can earn up to 15% of net resource savings. 	Approved (2007)	Rev. Stat. 278.285(1)(c); Docket 2008-00473; 2007-00477; Docket No. 2016-00382
Louisiana	<ul style="list-style-type: none"> • In June 2013, the LA PSC voted to reinstate a 2012 initiative, giving electric companies a year to develop energy efficiency (EE) programs for their ratepayers. • In November 2014, the three investor-owned electric utilities (Cleco, Entergy Louisiana/Gulf States, and SWEPCO) began implementing energy efficiency programs, including a Lost Contribution to Fixed Costs (LCFC) performance incentive mechanism. • The LCFC formula is still being finalized, with Phase II Rule-making beginning in August 2017 (Docket R-31106). 	Approved (2013)	Docket R-31106
Maine	<ul style="list-style-type: none"> • Overseen by the Maine PUC, statutory provisions (35-A MRSA) allow for decoupling and incentives. 	Approved	Docket No. 2013-00168; 35-A MRSA, section 3195, subsection 3195 (1)(A)

State	Performance Incentive Description	Status	Codes, Orders & Resource
Massachusetts	<ul style="list-style-type: none"> • Electric companies can earn about 5% of program costs for energy efficiency programs that meet established program goals. • The incentive structure is determined on a program-by-program basis but generally utilizes a three-tiered structure. • The first “design performance” level is defined as performance that a Program Administrator expects to achieve in implementing its energy efficiency programs. • The second “threshold performance” level is 75% of the design level. • The third “exemplary performance” level is 125% of the design level. • Incentives are awarded only if a program achieves the threshold level or above. 	Approved (2010)	Docket 04-11, Order 98-100; Order 11-120A
Michigan	<ul style="list-style-type: none"> • Under PA 295, Michigan electric companies were also allowed to request a performance incentive mechanism in their Energy Optimization plans that allow them to earn the lesser of 15% of program expenditures if they reach 115% of their savings goals, or 25% of net benefits. • Newly passed legislation (PA 342, Section 75) revised the performance incentives to be the lesser of (a) 15% of program expenditures, or 25% of net benefits if annual incremental savings are 1-1.25% of prior year electricity sales, (b) 17.5% of program expenditures or 27.5% of net benefits if annual incremental savings are 1.25-1.5%, or (c) 20% of program expenditures, or 30% of net benefits if annual incremental savings are greater than 1.5%. 	Approved (2009)	PA 295 (2008); PA 342 (2017), Section 75; Case No. U-1762; Case No. U-18262
Minnesota	<ul style="list-style-type: none"> • Since 1999, Minnesota has had a shared benefit incentive in place, with electric companies retaining a portion of net benefits based on the level of achievement, measured as a percent of retail sales (including a cap of 20% of net benefits on the amount of incentive that may be earned). • At savings of 1.5% of retail sales, electric companies will earn an incentive of \$0.07 per kWh saved. • The percentage of net benefits to be awarded to each electric company at different energy savings levels will be set at the beginning of each year. • The PUC adopted an updated DSM benefit incentive mechanism for 2017-2019 with the following provisions: For electric companies, the threshold is set for 1% of retail sales. For each energy savings increase of 0.1% of retail sales, net benefits awarded increase by 0.75% until reaching the net benefits cap at energy savings achievements equal to 1.7%. • At savings of 1.7% and higher, the incentive provided equals the net benefit cap times the net benefits. 	Approved (1999), Revised Mechanism (2010)	Docket CI-08-133; Statute 216B.241

State	Performance Incentive Description	Status	Codes, Orders & Resource
Mississippi	<ul style="list-style-type: none"> • In July 2013, the Mississippi Public Service Commission issued a final order in Docket No. 2010-AD-2, adding Rule 29, related to the Conservation and Energy Efficiency Programs. • Section 106 in Rule 29 states that electric companies may propose an approach to earn a return on energy efficiency investments through a shared savings or other performance based incentive mechanism to make these investments more like other investments on which they earn a return. • The electric company may file a return on investment calculation through the Energy Efficiency Cost Rate (EECR) based on its performance to meet or exceed specific reporting year energy savings targets expressed as percentages of energy sales. 	Approved	Docket No. 2010-AD-3
Missouri	<ul style="list-style-type: none"> • The approved DSM programs and DSIMs for Ameren Missouri (Case No. EO-2015-0055), KCP&L (Case No. EO-2015-0240) and KCP&L Greater Missouri Operations Company (Case No. EO-2015-0241) allow each electric company to receive an earning opportunity determined after the completion of the 3-year plan period and to recover any approved earnings opportunity over a 2-year period. • The earnings opportunity amount is based upon the achievement of each DSM program relative to established performance metrics for the DSM program, which metrics are most commonly 3-year cumulative annual energy targets and/or 3-year cumulative annual demand savings targets. • Actual 3-year cumulative annual energy and/or demand savings for programs are determined through retrospective net-to-gross EM&V performed by each utility's independent EM&V contractors and reviewed by the Commission's EM&V auditor. • For the 2016-2018 cycle, earnings opportunity caps (including adjustments) are as follows: Ameren Missouri, \$53,783,516; KCP&L GMO, \$20,000,000; and KCP&L, \$15,500,000. 	Approved (2012)	Case Numbers EO-2015-0055; EO 2015-0241; EO 2015-0240
Montana	<ul style="list-style-type: none"> • Montana statute allows for the Public Service Commission to add 2% to the authorized rate of return for demand side management (DSM) investments. • It has not yet been approved for a specific utility. 	Pending	Code 69-3-712

State	Performance Incentive Description	Status	Codes, Orders & Resource
New Hampshire	<ul style="list-style-type: none"> • In September 2013, the New Hampshire Commission approved a new performance incentive mechanism beginning with the 2014 program year. • The new mechanism applied a new ratio of electric lifetime savings to total lifetime energy savings, as related to the total program portfolio. • If electric lifetime savings are greater than or equal to a 55% threshold of total lifetime energy savings, a higher performance incentive applies. • If electric lifetime savings are below the 55% threshold, a lower incentive applies. • In August 2016, as part of a settlement agreement (Order No. 25932) the PUC recommended that performance incentive levels going forward be identical for electric and gas companies. • The performance incentive maximum was reduced to a cap of 6.875% with a target of 5.5% upon implementation of the LRAM in 2017. 	Approved (2013)	Docket DE 12-262, Order No. 25569
New Mexico	<ul style="list-style-type: none"> • New Mexico's Efficient Use of Energy Act and Rule allows an electric company to propose a profit incentive mechanism that is based on satisfactory program performance and does not exceed the product of the approved annual program costs and its weighted average cost of capital. PNM, EPE, and SPS all earn an incentive award. • El Paso Electric's annual incentive from 2014-2016 was 7% of program expenditures; its 2017 incentive is 7.1% (Case No. 16-00185-UT). • PNM's 2017 proposed incentive is 7.5% (Case No. 16-000096-UT). • Southwestern Public Service (SPS) earned a base level of 6.8% of program expenditures in 2016 (case No. 16-00110-UT) 	Approved	Case No. 16-00096-UT (PNM), Case No. 16-00110-UT (SPS); Case No. 16-00185-UT (EPE)
New York	<ul style="list-style-type: none"> • Beginning in 2011, The incentive program provided for a two-tier incentive: for achievement of company targets, and also for the achievement of statewide goals (based on its proportional share of the electric company's aggregate targets). • In 2014, New York initiated a proceeding, Case 14-M-0101, "Reforming the Energy Vision," (REV) to examine the potential for major changes to the regulatory structure within the state. • The PSC's Phase I REV Decision established minimum savings goals of 0.37% in 2016, and required energy efficiency plans for 2016-2018 but did not specify specific energy savings goals. • Additionally, in 2015, the Commission established a new case, 15-M-0252, for electric companies post-2015 energy efficiency programs. 	Approved (2011)	Commission Opinion No. 89-29, Case 14-M-0101; Case 15-M-0252

State	Performance Incentive Description	Status	Codes, Orders & Resource
North Carolina	<ul style="list-style-type: none"> North Carolina statute states that an electric company may propose incentives for demand side management (DSM) or energy efficiency programs to the Commission for consideration. In 2015, Duke Energy Progress was granted a new recovery mechanism (Docket No. E-2, Sub 931 - Order dated January 20, 2015), including a bonus incentive of 11.75% on a shared savings model. Dominion received approval of a revised cost recovery mechanism (May 7, 2015 in Docket No. E-22, Sub 464) with a program performance incentive (8% for DSM programs and 13% for EE programs). 	Approved (2009)	Docket No. E-2, Sub 931 (Order dated January 20, 2015); Docket No. E-22, Sub 464 (Order dated May 7, 2015)
Ohio	<ul style="list-style-type: none"> Statute OAC 4901:1-39-07 allows utilities to submit a request for a shared savings incentive, approved on a case-by-case basis. First Energy and AEP have had performance incentives approved; the recovery mechanism is an annually reconciled rider which includes conditioned adjustments for shared savings with a maximum 10% shareholder incentive if at least 65% of targeted savings are achieved. In 2017, Duke Energy Ohio received approval for a share savings performance incentive structure, ranging from six to twelve percent if Duke exceeds its annual statutory benchmark for savings achieved, and caps the company's recovery on annual shared savings at \$8 million after taxes. AEP Ohio, Duke Energy Ohio, and Dayton Power & Light have annual caps on total EE/PDR program costs and shared savings equal to four percent of the company's 2015 operating revenues. 	Approved (2008)	Statute OAC 4901:1-39-07; Case No. 11-4393-EL-RDR; Case No. 16-576-EL-POR; Case No. 16-574-EL-POR; Case No. 16-649-EL-POR
Oklahoma	<ul style="list-style-type: none"> A shared savings program has been approved for Public Service Oklahoma (AEP), which allows for two different returns: an incentive of 25% of net savings for programs for which savings can be estimated and 15% of the costs for other programs (e.g. education and marketing programs). OG&E also has an incentive mechanism where they receive shared benefits for achieving savings goals, calculated on a measure-by-measure basis. 	Approved: PSO (2008), OG&E (2009)	Cause No. PUD 200700449, Order 555302; Cause No. PUD 200800059, Order 556179

State	Performance Incentive Description	Status	Codes, Orders & Resource
Rhode Island	<ul style="list-style-type: none"> • Since 2005, Rhode Island has had a shareholder incentive for electric companies, with the mechanism including two components: performance-based metrics for specific program achievements and kWh savings target by sector. • The program performance metrics are established for each individual program, such as achieving specific savings or a certain market share for the targeted energy-efficient technology. • National Grid's target base incentive rate is 5%, applied to the annual eligible spending budget. The threshold performance level for energy savings by sector is set at 75% of the annual energy and demand savings goal for the sector (Docket 4366). • The cap for the target incentive amount of energy savings is 125%. • Additionally, in 2015, the Commission approved 30% of the target electric program incentive to be based on demand savings, while the remaining 70% will be based on energy savings (Docket 4527). 	Approved (2005)	Docket 3635, Order 18152; Docket No. 4527; Docket No. 4366
South Carolina	<ul style="list-style-type: none"> • South Carolina law allows for the PSC to adopt procedures encouraging electric company investments in energy efficient technologies and conservation programs. • Duke Energy Progress and South Carolina Electric & Gas Company both have shared savings incentives based on the net present value (NPV) of each program, calculated using a Utility Cost Test (UCT) (Docket 2009-261-E). • In addition, the PSC approved Duke Energy's Save-A-Watt program (Dockets 2007-358-E and 2008-251-E). 	Approved: Progress Energy Carolinas (2009), Duke Energy (2010)	Title 58. Public Utilities, Services And Carriers, Chapter 37, Energy Supply and Efficiency; Dockets 2007-358-E, 2008-251-E, 2009-261-E
South Dakota	<ul style="list-style-type: none"> • The South Dakota Commission approved performance incentives for OtterTail in 2008, and MidAmerican in 2010. • OtterTail has a flat-rate bonus incentive, while MidAmerican has a straight return on the program's budget. • Montana-Dakota Utilities, Northwestern Energy, Black Hills Power, and Xcel Energy also have performance incentives. 	Approved (2008)	Docket Nos. EL-07-015, GE10-001, GE09-001

State	Performance Incentive Description	Status	Codes, Orders & Resource
Texas	<ul style="list-style-type: none"> • Texas state code specifies that an electric company may be awarded a performance bonus (a share of the net benefits) for exceeding established demand reduction goals that do not exceed specified cost limits. • Net benefits are the total avoided cost of the eligible programs administered by the company minus program costs. • The performance bonus is based on the energy efficiency achievements for the previous calendar year. • If achievements exceed 100% of its demand reduction goal, the bonus is equal to 1% of the net benefits for every 2% that the demand reduction goal has been exceeded, up to a maximum of 20% of the utility's program costs. • Electric companies that meets at least 120% of its demand reduction goal with at least 10% of its savings achieved through Hard-to-Reach programs receives an additional bonus of 10% of the bonus calculated. 	Approved (2008)	PUC of Texas Substantial Rule 25.181(h); CenterPoint Energy Houston Electric 2016 Energy Plan & Report
Vermont	<ul style="list-style-type: none"> • The operator of Efficiency Vermont, VEIC, is eligible to receive a performance incentive for meeting or exceeding specific goals established in its contracts. • There is also a holdback in the compensation received by VEIC, pending confirmation that contractual goals for savings and other performance indicators have been achieved. • The initial contract (2000-2002) allowed incentives of up to 2% of the overall energy efficiency budget over the three-year contract period. • The 2015-2017 plan allows for incentives up to 2.5%. 	Approved (2000)	Contract 0337956, Attachment C; Efficiency Vermont Triennial Plan 2015-2017
Wisconsin	<ul style="list-style-type: none"> • As of 2008, Wisconsin Power & Light (Alliant Energy) may earn the same rate-of-return on its investments in energy efficiency made through its "shared savings" program for commercial and industrial customers as it earns on other capital investments. • Electric companies may propose incentives as part of their rate cases, but there have been no proposals from other companies under the most recent version of performance incentives. (Note: Wisconsin dropped performance incentives in the 1990s.) 	Approved (2008)	Docket 6680-UR-114

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.

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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



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