The Performance of Indiana’s Utilities’ Energy Efficiency Programs

Commissioned by Citizens Action Coalition of Indiana, Applied Economics Clinic (AEC) compared the energy efficiency programs of five investor-owned utilities in Indiana: Duke Energy, Indiana Michigan Power Company (I&M), Indianapolis Power and Light Company (IPL), Northern Indiana Public Service Company (NIPSCO), and Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery (Vectren). This policy brief presents side-by-side comparisons of Indiana’s investor-owned electric utilities’ sales, energy efficiency savings and program costs from 2012 to 2019. This brief serves as a companion to another AEC policy brief entitled *The Economic Impacts of Repealing Indiana’s Energy Efficiency Resource Standard* that examines the energy efficiency savings, ratepayer impacts, and job impacts that would have been achieved had Indiana’s energy efficiency resource standard not been repealed.

Lost Energy Savings

The repeal of Indiana’s energy efficiency resource standard in 2014—by way of Senate Enrolled Act 340 (SEA 340)—resulted in Indiana’s utilities saving less energy than had been mandated prior to the repeal.

<table>
<thead>
<tr>
<th>Year</th>
<th>Mandated savings</th>
<th>Actual savings</th>
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<tbody>
<tr>
<td>2012</td>
<td>444</td>
<td>561</td>
</tr>
<tr>
<td>2013</td>
<td>632</td>
<td>877</td>
</tr>
<tr>
<td>2014</td>
<td>812</td>
<td>787</td>
</tr>
<tr>
<td></td>
<td><strong>SEA 340 PASSED</strong></td>
<td></td>
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<tr>
<td>2015</td>
<td>959</td>
<td>551</td>
</tr>
<tr>
<td>2016</td>
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<td>502</td>
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</tr>
<tr>
<td>2018</td>
<td>1765</td>
<td>643</td>
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<tr>
<td>2019</td>
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Indiana launched its electric energy efficiency resource standard and statewide programs in 2012

In 2004, the Indiana Utility Regulatory Commission began an investigation to review energy efficiency issues and programs in the state. The investigation took place in two phases; the first evaluated the current energy efficiency landscape, and the second addressed specific energy efficiency programs, including their implementation and evaluation.

In December 2009, the Commission ordered Indiana’s jurisdictional electric utilities to achieve an annual energy savings goal of 2 percent of weather-normalized average electric sales within ten years (by 2019) by offering five core energy efficiency programs for delivery by a statewide independent administrator (residential home energy assessments; residential lighting; commercial and industrial prescriptive rebates; residential low-income weatherization; and energy efficient schools), as well as offering additional joint or utility-specific program delivery offerings to meet the annual energy savings goal in the order. Utilities worked together with the Office of Utility Consumer...
Counselor, large industrial customers, the Indiana Municipal Power Agency, and Citizens Action Coalition of Indiana to design the core energy efficiency programs and to choose third-party administrators to run and evaluate the programs. As part of the same order, utilities were required to submit their energy efficiency plans every three years, beginning on July 1, 2010, with annual supplemental updates in the interim periods.

In January 2012, under the direction of former Governor Mitch Daniels, the state of Indiana fully launched its energy efficiency resource standard (EERS) and associated programs, called Energizing Indiana. Similar to the way in which other utility resources and services are funded, the energy efficiency programs were funded by utility customers through a small monthly fee on their electric bill—the average household paid $2/month—and the money was used to provide energy education for students, conduct energy audits, implement weatherization programs, provide rebates on energy-saving appliances, and fund other energy efficiency programs.

Figure 1. Energy Efficiency Savings by Utility (GWh)
Indiana repealed its energy efficiency resource standard and statewide energy efficiency program in 2014

In March 2014, the Indiana Senate passed Senate Enrolled Act 340 (SEA 340), which allowed customers above 1 megawatt (MW) to opt out and leave the energy efficiency programs. When SEA 340 went to the floor of the Indiana House, it was amended on second reading without additional public hearing or comments to repeal the EERS and end the statewide program implementation. Then-Governor Mike Pence neither signed nor vetoed the bill, thereby allowing it to become law on December 31, 2014, and simultaneously making Indiana the first state in the nation to roll back its EERS.

Intended as replacement legislation, then-Governor Pence signed Senate Enrolled Act 412 (SEA 412) in May 2014. SEA 412 required utilities to draft energy efficiency plans, “beginning no later than calendar year 2017, and not less than one time every three years.” However, the legislation still permits customers over 1 MW to opt out of the programs and permits utilities to set their own electric savings goals.

Energy efficiency savings and “lost revenue” recovery

Back in 1995, Indiana approved a provision to its guidelines on integrated resource plans (or IRPs, which are 20-year resource planning documents) and demand-side management (meaning energy efficiency and demand response) whereby utilities can recoup the revenue they do not receive from sales when customers use less electricity because of energy efficiency programs—what is known as a “lost revenue” adjustment mechanism. While these mechanisms are common—16 states used them in 2017—they can also be controversial, as rigorous and transparent evaluation of energy savings is needed to prevent either overcharging customers or undervaluing a utility’s purported lost revenues.

In Indiana, the issue was particularly contentious prior to SEA 412 because there was no cap or time limit on the recovery of lost revenues, leading some to express concern that utilities could recoup “lost revenues” that exceed the total cost of their energy efficiency programs. For example, Indiana Michigan Power Company’s 2015 energy efficiency program budget was $16.9 million with a forecasted lost revenue collection of $29.3 million. The Commission, upon request of various consumer parties and with new statutory language from SEA 412 requiring lost revenue collection to be “reasonable,” instituted a cap on the LRAM to four years or the lifetime of the measure, whichever is shorter, for a series of cases, which reduced these types of impacts. Since then, however, the Commission has changed direction and is again allowing uncapped LRAM recovery.

Savings have fallen since SEA 340

As discussed above, the passage of SEA 340 repealed Indiana’s existing EERS and statewide program implementation by an independent third-party, which was later replaced by SEA 412. SEA 412 still requires electric utilities to draft energy efficiency plans but is weaker than its predecessor in two important ways: first, industrial customers, defined as more than 1 MW, are permitted to opt out of the program, and second, utilities are permitted to set their own electricity savings goals.

Prior to the passage of SEA 340, average energy efficiency savings totaled 148 GWh across all five utilities. After SEA 340, average savings fell to 127...
GWh (see Figure 1 above).

Of the five Indiana electric utilities, only IPL achieved greater average energy efficiency savings in the period after SEA 340 ended Indiana’s first EERS and Energizing Indiana than it did during the EERS and program’s tenure. The average savings of Vectren and I&M fell by 16 and 12 GWh, respectively, after 2014, which represents a 28 percent drop for Vectren and an 8 percent drop for I&M. The average savings of NIPSCO and Duke fell by 52 and 57 GWh, respectively, which represents a 31 percent drop for NIPSCO and a 24 percent drop for Duke.

**Savings as a percent of total utility retail sales are lower since SEA 340**

Prior to SEA 340, kilowatt-hour energy efficiency savings as a share of retail sales averaged 0.93 percent across all five utilities. After SEA 340, average savings fell to 0.77 percent (see Figure 2 below).

Since SEA 340, the two largest utilities in terms of a percentage of retail sales—Duke and I&M—exhibit the lowest average energy efficiency savings, while the two smallest utilities in terms of a percentage of retail sales—Vectren and IPL—exhibit the highest average energy efficiency savings.

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**Figure 2. Energy Efficiency Savings as a Percent of Retail Sales**

![Energy Efficiency Savings Chart](chart.png)
Between 2015 and 2017, energy efficiency savings as a percent of retail sales—averaged across all five utilities—were 0.5 to 0.7 percentage points lower than what would have been accomplished had former Governor Mitch Daniels’ and the Commission’s EERS been allowed to continue. In 2018 and 2019, energy efficiency savings as a percent of retail sales are projected to be 1.1 to 1.3 percentage points lower than had SEA 340 not been passed and the EERS been allowed to continue.

**Higher future peak energy demand is expected since SEA 340**

Every two years, the State Utility Forecasting Group at Purdue University publishes forecasts of Indiana’s electricity consumption, prices and resource requirements to assist state officials in evaluating the need for proposed new power plants, and—as the state faced the prospect of restructuring its electric industry—predicting the impact of various scenarios of future conditions in a competitive market.

Prior to SEA 340 and the repeal of Indiana’s EERS, each of Purdue’s bi-annual reports forecasted lower peak demand than the last, with the lowest demand forecasts projected in their 2013 report. After SEA 340, the 2015 and 2017 reports both forecasted higher peak demand than did the 2013 report (see Figure 3 below).
Energy efficiency program budgets have fallen since SEA 340

Prior to SEA 340, the amount of money dedicated to energy efficiency programs averaged $20.2 million per year state-wide. After SEA 340, average program spending fell to $19 million per year (see Figure 4 below).

Out of the five Indiana utilities, only IPL dedicated greater resources to energy efficiency programs following SEA 340 than before it, raising average annual efficiency program costs from $21.5 million to $25.9 million. The remaining utilities reduced program spending by $0.7 million (I&M), $1.2 million (Duke), $1.5 million (Vectren), and $6.6 million (NIPSCO).

Figure 4. Energy Efficiency Program Cost (Millions $)
Energy efficiency program costs on a per unit basis have grown since SEA 340

Prior to SEA 340, energy efficiency program costs averaged 2.0 cents per kilowatt-hour of savings each year across all five utilities. After SEA 340, energy efficiency program costs grew to 2.2 cents per kilowatt-hour of savings a year (see Figure 5 below). Out of the five Indiana electric utilities, only IPL maintained the same average energy efficiency program cost on a per unit basis following SEA 340 as before it, holding steady at 2.2 cents per kilowatt-hour. The remaining utilities saw increased energy efficiency program costs on a per unit basis, ranging from an increase of 0.1 cent (NIPSCO) to 0.5 cents (Duke and Vectren).

Figure 5. Energy Efficiency Program Cost per kWh ($)
Savings from behavioral programs have grown as a share of total savings since SEA 340

Prior to SEA 340, the share of residential energy efficiency savings coming from behavioral programs—those programs that do not involve physical efficiency measures but instead aim to change customer behaviors or teach people to be more aware of their energy usage—averaged 19 percent across all five utilities. After SEA 340, average savings from behavioral programs increased to 39 percent (see Figure 6 below).

Citizens Action Coalition of Indiana (CAC) has offered criticism of such behavioral programs insofar as they divert funding from programs promoting the physical installation of measures to produce long-term energy savings.6

Of the five Indiana electric utilities, only NIPSCO decreased the share of residential energy efficiency savings from behavioral programs following SEA 340 than before it. The remaining utilities increased their share of savings from behavioral programs by 19 percent (Vectren), 24 percent (Duke), 29 percent (IPL) and 43 percent (I&M).

Figure 6. Percent of Residential Energy Efficiency Savings from Behavioral Programs
Lost savings and higher costs

Since the repeal of Indiana’s energy efficiency resource standard and the independent delivery of statewide programs in 2014:

- Annual average statewide energy efficiency savings have fallen by a 21 GWh, which represents a 15 percent drop;
- Annual average statewide energy efficiency savings as a share of retail sales have fallen by 0.16 percentage points;
- Annual average statewide energy efficiency program budgets have fallen by approximately $0.1 million;
- Annual average statewide energy efficiency program costs on a per unit basis have grown by approximately 0.2 cents per kilowatt-hour of savings;
- Average annual savings from behavioral energy efficiency programs increased by 20 percent; and
- The State Utility Forecasting Group has forecasted higher peak demand, requiring more generation to meet electricity needs.

Notes

1 In 1995, the Indiana Utility Regulatory Commission established an administrative rule for lost revenue recovery (170 IAC 4-8-6) as part of its guidelines for demand-side management cost recovery.
3 Except for Indiana Michigan Power Company, for which the cap is three years or life of measure, whichever is shorter.
4 See Indiana Utility Regulatory Commission Cause No. 44645, 43955 DSM 4, and 44927 for reference. Note that these cases are currently on appeal.
5 Energy Efficiency Program costs per kilowatt-hour are calculated by multiplying each year’s gross energy savings by each year’s total utility demand side management costs and dividing the result by a capital recovery factor. The capital recovery factor used is derived from Duke Energy Indiana’s 2016 Demand Side Portfolio weighted measure life of 10 years and their most recent weighted average cost of capital, 7.3 percent, as established in their most recent rate case from 2002 (IURC Cause No. 42359, pp.53. Available online at: https://iurc.portal.in.gov/_entity/sharepointdocumentlocation/a05611b9-3883-e611-810e-1458d04f0178/bb9c6bba-fd52-45ad-8e64-a444aef13c39?file=42359ord_051804.pdf).

Works Cited

Data Sources


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