A Statewide Energy Efficiency Program for Public Sector Entities: a state agency pilot

June 3, 2020

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SMART ENERGY DESIGN ASSISTANCE CENTER

Providing effective energy strategies for buildings and communities

Who we are

Smart Energy Design Assistance Center (SEDAC)

Our mission: Reduce the energy footprint of Illinois

We assist buildings and communities in achieving energy efficiency, saving money, and becoming more sustainable.

We are an applied research and training program at University of Illinois.

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SEDAC Experience and Background

Energy saving programs, education, and research in Illinois since 2004

Energy Efficiency Programs

- DCEO Small Business Smart Energy and Public Sector EEPS
- ComEd EE Programs and Emerging Tech
- Ameren IL Public Sector Assessments and Workforce Development
- 2,700+ assessments & RCx for public and commercial facilities
- Savings: 2.4 billion kWh, 120 million therms, $300 million energy costs

Other Gov Agency Programs

- Illinois EPA Office of Energy Wastewater Assessment Program and Energy Code Education and Training
- US DOE Energy Code Training
- Solar Feasibility (Illinois state agencies)
- Net Zero Climate Action Planning (Illinois state agencies and IGEN community colleges)

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Idea: Statewide Energy Efficiency Program for Public Sector

Illinois public sector would benefit from a single, cohesive comprehensive statewide program

New proposed program approach would apply to all utilities

Start with a **pilot for Illinois state agencies**

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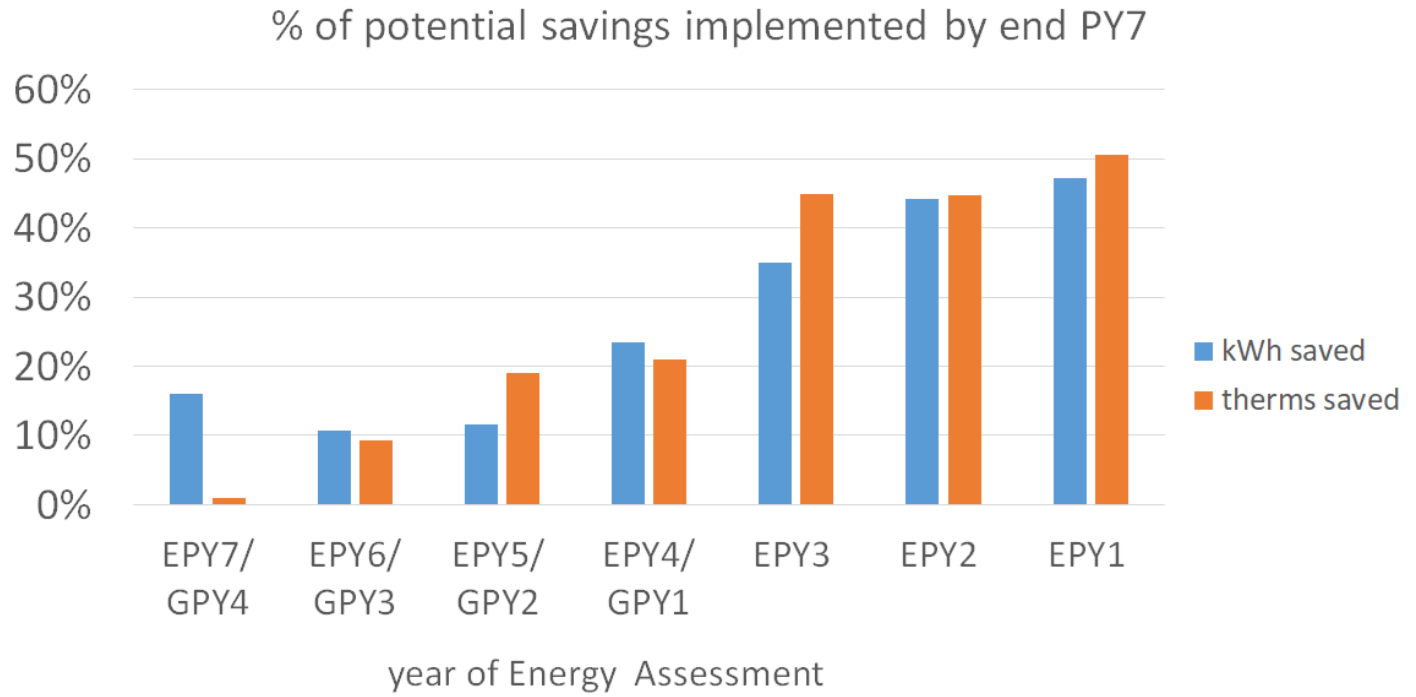
The problem: public ≠ commercial

Slower decision-making processes

Annual and multi-year budgetary & implementation cycles

2-5 years to implementation is typical



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The problem: public ≠ commercial

Fiscal constraints

- Budget cuts
- Contractor procurement
- Need for transparency
- Need for board approval

Staff constraints

- May lack staff or expertise
- Need advice before proceeding with measures
- Need support for navigating contracting, financing, administrative requirements

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The problem: public ≠ commercial

Different attitudes

- Public interest is primary goal
- Opportunity to tap into public benefits of energy efficiency
- Money is a constraint, not a goal in itself
- Ability & interest in engaging in longer paybacks, deeper savings

Building trust

- “Advice” rather than “sales” approach
- Look to sources they can trust (e.g., U of I)
- More trust = greater implementation of complex or capital-intensive measures
- Trust grows over time

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The problem: public ≠ commercial

Comments from Utility Program Quarterly Reports

"Public sector projects often require a longer sales cycle due to the more stringent procurement procedures and due diligence. Approval from multiple decision makers that meet on a set schedule is typically required."
ComEd Q1 (2018) Quarterly Report: Public Sector Small Facilities

"The program is finding challenges with public sector engagement."
ComEd Q2 (2019) Quarterly Report: Public Sector Custom

"Education and delivering on assessment reports starts the dialogue, but takes time for capital improvement dollars to be approved, before projects hit the pipeline."
Nicor Q1 (2019) Quarterly Report: BEER Custom Incentives

"Long procurement timelines in the public sector make it difficult to implement low hanging fruit measures."
NSG/PG Q1 (2019) Quarterly Report: Business – Public Sector

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The problem: public ≠ commercial

The result: higher program costs

Public sector energy efficiency programs cost more because there is a need for more services, targeted support, and higher incentives.

Program costs of public sector vs C&I for 41 states from 2009-2015

Public Sector* Program Administrator costs	Mixed C&I Prescriptive	Mixed C&I Custom
$0.041/kWh**	$0.019/kWh**	$0.022/kWh**

*The report refers to Municipal, University, Schools, and Hospitals
**In 2006 dollars

Source: Hoffman, et al. (2018). "The Cost of Saving Electricity Through Energy Efficiency Programs Funded by Utility Customers: 2009-2015." LBNL

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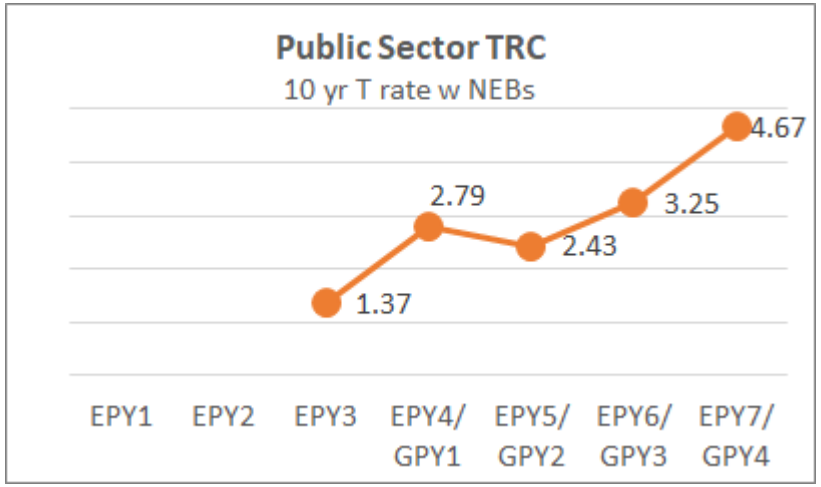
How did they compare? DCEO vs. utility programs in other states

DCEO results

- Experienced, statewide, targeted public sector approach
- Effectiveness increased over time
- Cost effective TRC track record
- High performance: Cost/kWh 40% lower than national average, according to a 2014 LBNL study.*



* Billingsley, M. et al. (2014). The Program Administrator Cost of Saved Energy for Utility Customer-Funded Energy Efficiency Programs. LBNL-6595E

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How do they compare? DCEO vs. current Illinois utility programs

Utility results

Utility public sector program data hard to find

> "Program Administrators are **encouraged** to report public sector savings at the program level, where available."

More analysis needed

- Data to compare engagement, spending & savings between DCEO public sector and utility program public sector
- Public sector stakeholder engagement needs assessment

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Idea: Statewide Energy Efficiency Program for Public Sector

We propose a statewide public sector program that is

- Cohesive across utility territories with a single program contact
- Responsive to public sector issues and timelines

We propose that the program be **piloted with state agencies**.

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Idea: Statewide Energy Efficiency Program for Public Sector

Why start with state agencies?

- State agencies have a single statewide portfolio of buildings that are spread across utility boundaries.
- Multiple utilities reach out to state agencies, creating fragmentation and confusion.
- State agency energy use has increased since the disruption of DCEO Public Sector EEPS in FY2016*

There's an opportunity to streamline energy efficiency programs for state agencies.

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*SmartState Energy Report, Illinois Department of Central Management Services

Idea: Statewide Energy Efficiency Program for Public Sector

Approach & benefits

- Get buy-in from all utilities
- Provide single point of contact to improve efficiency and reduce customer confusion
- Provide tailored support for comprehensive benefits for public sector building portfolios
- Coordinate incentive assistance and capital planning to respond to budget cycles and for better EE program forecasting
- Delivered by trusted public sector entity

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Idea: Statewide Energy Efficiency Program for Public Sector

Savings potential

State agencies

- State agencies consume **550,000 MWh/yr** and **25 million therms/yr***
- 1% annual savings: **5.5 million kWh & 0.25 million therms**

Public sector

- Public sector facilities consume **14,000,000 MWh/yr** and **570 million therms/yr****
- 1% annual savings: **140,000 MWh and 5.7 million therms**

*SmartState Energy Report, Illinois Department of Central Management Services. Does not include rural coops and munis.

**Energy Resources Center, 2016: Illinois Public Sector & Low-Income Housing Energy Efficiency Potential Study

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Thank you!

Questions?

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