

Memorandum

**To:** ComEd, Illinois Stakeholder Advisory Group (SAG)  
**From:** Evaluation Team; Antje Flanders, Mary Sutter (Opinion Dynamics)  
**Date:** February 23, 2015  
**Re:** ComEd C&I Spillover Analysis – *Final Results*

**Introduction**

This memorandum presents results of the spillover (SO) analysis conducted for ComEd’s C&I portfolio during the 6<sup>th</sup> Program Year (PY6).

The estimated overall C&I Portfolio spillover is 3.2%. This estimate is built up from various research activities that addressed individual C&I programs or groups of programs (described in this memo). Spillover estimates vary significantly by program; we therefore recommend applying program-level spillover values, rather than the overall portfolio estimate. Table 1 summarizes the results.

**Table 1: Summary of Preliminary C&I Spillover Results**

Program	PY6 Verified Gross Savings (MWh)	PY6 Spillover <sup>A</sup>		Sources of SO <sup>B</sup>
		MWh	%	
Standard	267,664	3,071	1.1%	Participant survey, TA survey, Drop-out survey
Custom	26,588	123	0.5%	Participant survey, TA survey, Drop-out survey
Industrial Systems	22,390	328	1.5%	Participant survey, TA survey
Data Centers	21,333	-	0.0%	Participant survey, TA survey
Small Business	135,303	2,728	2.0%	TA survey
New Construction <sup>C</sup>	27,518	-	0.0%	Participant survey, Trainee survey
RcX	24,704	988	4.0%	Service provider survey
BILD	261,342	18,294	7.0%	Customer survey
<b>C&amp;I TOTAL</b>	<b>786,842</b>	<b>25,533</b>	<b>3.2%</b>	

<sup>A</sup> The portfolio-level SO ratio is calculated by dividing total PY6 SO (in MWh) by total PY6 verified gross savings.

<sup>B</sup> In addition, the assessment survey found spillover of 0.012% which is not included in this table.

<sup>C</sup> Spillover estimates for the New Construction, Retro-Commissioning, and BILD programs are based on the PY6 evaluation reports. This study did not include any new research or analysis for these programs.

The spillover study included three primary data collection efforts:

1. Online survey with ComEd C&I Trade Allies (TAs) – Results provided herein
2. C&I customers with cancelled projects (“drop-outs”) – Results provided herein
3. C&I customers who received a Smart Ideas assessment – Estimated as 0.012% of PY6 Verified Gross Savings

In addition, we leveraged PY6 spillover estimates from the individual PY6 C&I program evaluations, all of which (*except for SBES*) included investigation of spillover.

### **Discussion of Spillover Results**

The following subsections present a high-level overview of the survey approach, methodology, and results of the new primary data collection efforts as well as a summary of the results from the PY6 program evaluations. A detailed discussion of the program-specific spillover analysis conducted in support of the PY6 evaluations can be found in the respective PY6 evaluation reports.

#### **Online TA Survey**

- Online Survey
  - Included TAs in the following programs: Standard/Custom, Industrial Systems, Data Centers, Small Business
  - List of TAs obtained from ComEd with flags denoting programs for which the TA was included
  - 48 completes (out of population of 218)
- Methodology
  - Program influence on unincented, high efficiency installations was determined if the following conditions were met:
    - Either the % of sales that is high efficiency or the total volume of high efficiency sales increased since the contractor became a trade ally;
    - Program importance on at least one of these increases was an 8, 9, or 10 (on a scale of 0 to 10);
    - TAs gave a rating of 8, 9, or 10 (on a scale of 0 to 10) for the importance of their recommendation on installations of high efficiency equipment that DID NOT receive an incentive from ComEd; and
    - Open-ended response about why customers with eligible projects do not receive an incentive supported that non-incented high efficiency installations can be considered spillover.
  - Savings of unincented, high efficiency installations were estimated through:
    - Survey questions about 1) the respective shares of their installations that are high efficiency with and without an incentive and 2) the size of unincented, high efficiency installations relative to those that did get an incentive; and
    - Program tracking data on the number and savings associated with PY6 program projects for that TA.
  - If program influence was determined, spillover savings were equal to unincented, high efficiency installations.
  - A TA spillover ratio was developed, for each program, by dividing the estimated spillover savings by total PY6 program savings associated with all responding TAs.
  - The TA spillover ratio was then applied to all PY6 program savings associated with a TA (whether a survey respondent or not).

- Results
  - Eight of the 48 interviewed TAs demonstrated program influence on unincented, high efficiency installations
    - 7 are Standard/Custom TAs
    - 1 is an Industrial Systems TA (this TA is also a Standard/Custom TA)
    - 2 are SBES TAs (1 TA is both Standard/Custom and SBES)
  - Estimated spillover, to be applied to PY6 program savings *associated with TAs*:
    - Standard/Custom: 2.0%
    - Industrial Systems: 2.0%
    - SBES: 2.0%
  - Estimated TA spillover, as a percent of *total PY6 verified program savings*:
    - Standard: 1.0%
    - Custom: 0.3%
    - Industrial Systems: 1.5%
    - SBES: 2.0%
    - No spillover for Data Center Program

### Telephone Drop-out Survey

- Telephone Survey
  - Included cancelled projects from the Standard and Custom programs from PY5 and PY6, obtained from ComEd
  - 85 completes (out of population of 532 unique contacts)
- Methodology
  - Program drop-outs are included in the spillover analysis if they meet the following conditions (questions were asked by end use):
    - They completed the project;
    - They did not receive an incentive for the installation (or have an incentive pending);
    - The customer and measure were eligible for an incentive;
    - They gave a rating of 8, 9, or 10 (on a scale of 0 to 10) for the importance of the program in their decision to install the equipment; and
    - Open-ended response about how the ComEd program influenced the decision to install high efficiency equipment supports that the installation can be considered spillover.
  - For each end use that qualified for spillover, we asked end use/measure specific questions about the installed equipment to estimate spillover.
  - We divided total estimated spillover by the number of responses (85) to determine average per project spillover (combined for the Standard and Custom programs).
  - The average per project spillover estimate was applied to all PY6 drop-out projects, separately for Standard and Custom.
- Results

- 33% of drop-out customers (28 of 85) completed the project for which they had initially applied
- Five of the 28 customers with a completed project had installations that qualified as spillover (i.e., that meet the conditions for spillover summarized above)
- Average spillover per drop-out project is 857 kWh
- When applied to all PY6 drop-out projects, spillover accounts for 324 MWh, or 0.1% of Standard and Custom PY6 verified savings

### Telephone Assessment Survey

- Telephone Survey
  - 72 completes with customers who received a Smart Ideas Opportunity Assessment (SIOA) (out of population of 730 unique contacts)
  - Completed interviews with six customers who received a Commercial Building Assessment (CBIA), covering 23% of savings associated with CBIA recommendations (out of population of 17 customers)
  - Completed interviews with three customers who received Technical Assistance Services (TAS), covering five projects and 19% of savings associated with TAS recommendations (out of population of 15 customers with 20 projects)
- Methodology
  - Assessment recipients are included in the spillover analysis if they meet the following conditions (questions were asked by end use):
    - They completed some or all of the assessment recommendations;
    - They did not receive an incentive for the installation (or have an incentive pending);
    - The customer and measure were eligible for an incentive;
    - They gave a rating of 8, 9, or 10 (on a scale of 0 to 10) for the importance of the assessment in their decision to install the equipment; and
    - Open-ended response about how the ComEd assessment influenced the decision to install high efficiency equipment supports that the installation can be considered spillover.
  - For each end use that qualified for spillover, we asked end use/measure specific questions about the installed equipment to estimate spillover.
  - We developed an assessment spillover ratio, by assessment type, by dividing the estimated spillover savings by the savings of all recommended measures for all assessment survey respondents.
  - The assessment spillover ratio was then applied to the savings of all PY6 assessment recommendations to derive a PY6 spillover estimate (in MWh).
  - Total PY6 spillover was estimated by dividing the PY6 spillover estimate by total PY6 verified gross savings
- Results
  - 69% of SOIA participants (50 of 72) made one or more of the recommended improvements

- Out of 99 implemented recommendations, 36 received an incentive through a ComEd program
- Only one SOIA participant reported spillover-eligible installations
- None of the interviewed TAS and CBIA participants reported spillover-eligible installations

### **PY6 Program Evaluation Spillover Results**

- The PY6 program evaluations developed the following spillover estimates. More information on how these estimates were developed can be found in the PY6 evaluation reports for each program.
  - Standard (based on participant survey):
    - No spillover by participants that did not use a TA
    - Spillover detected (but not quantified) for 3 respondents that used a TA; this spillover is captured by the TA survey (including it separately would result in double-counting)
  - Custom: No spillover based on participant survey
  - Industrial Systems: No spillover based on participant survey
  - Data Centers: No spillover based on participant survey
  - SBES: Spillover was not assessed in PY6; it was assessed in the PY7 survey that is the basis of the evaluation's free ridership recommendation.
  - New Construction: no spillover based on participant and trainee surveys
  - BILD: 7% spillover based on customer survey
  - Retro-Commissioning: 4% spillover based on service provider survey

### **Detailed SO Summary Table**

The table on the following page provides additional detail on how results of the TA and drop-out surveys were applied.

**Table 2: Development of TA and Drop-out Spillover Results**

Program	PY6 Verified Gross Savings (MWh)	TA SO					Drop-Out SO		Preliminary PY6 SO <sup>A,B</sup>	
		% Savings – TA Projects	PY6 Verified Gross Savings – TA Projects (MWh)	TA SO %	PY6 SO (MWh)	% PY6 Verified Gross Savings	Drop-Out SO (MWh)	% PY6 Verified Gross Savings	MWh	% PY6 Verified Gross Savings
Standard	267,664	51%	137,118	2.0%	2,782	1.0%	290	0.1%	3,071	1.1%
Custom	26,588	16%	4,378		89	0.3%	34	0.1%	123	0.5%
Industrial Systems	22,390	72%	16,175		328	1.5%		0.0%	328	1.5%
Data Centers	21,333	10%	2,226	0.0%	-	0.0%		0.0%	-	0.0%
Small Business	135,303	100%	135,303	2.0%	2,728	2.0%		0.0%	2,728	2.0%
New Construction <sup>C</sup>	27,518								-	0.0%
RcX <sup>C</sup>	24,704								988	4.0%
BILD <sup>C</sup>	261,342								18,294	7.0%
<b>TOTAL</b>	<b>786,842</b>								<b>25,533</b>	<b>3.2%</b>

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