



# 101 Sources of Spillover

## An Analysis of Unclaimed Savings at the Portfolio Level

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# Contributors

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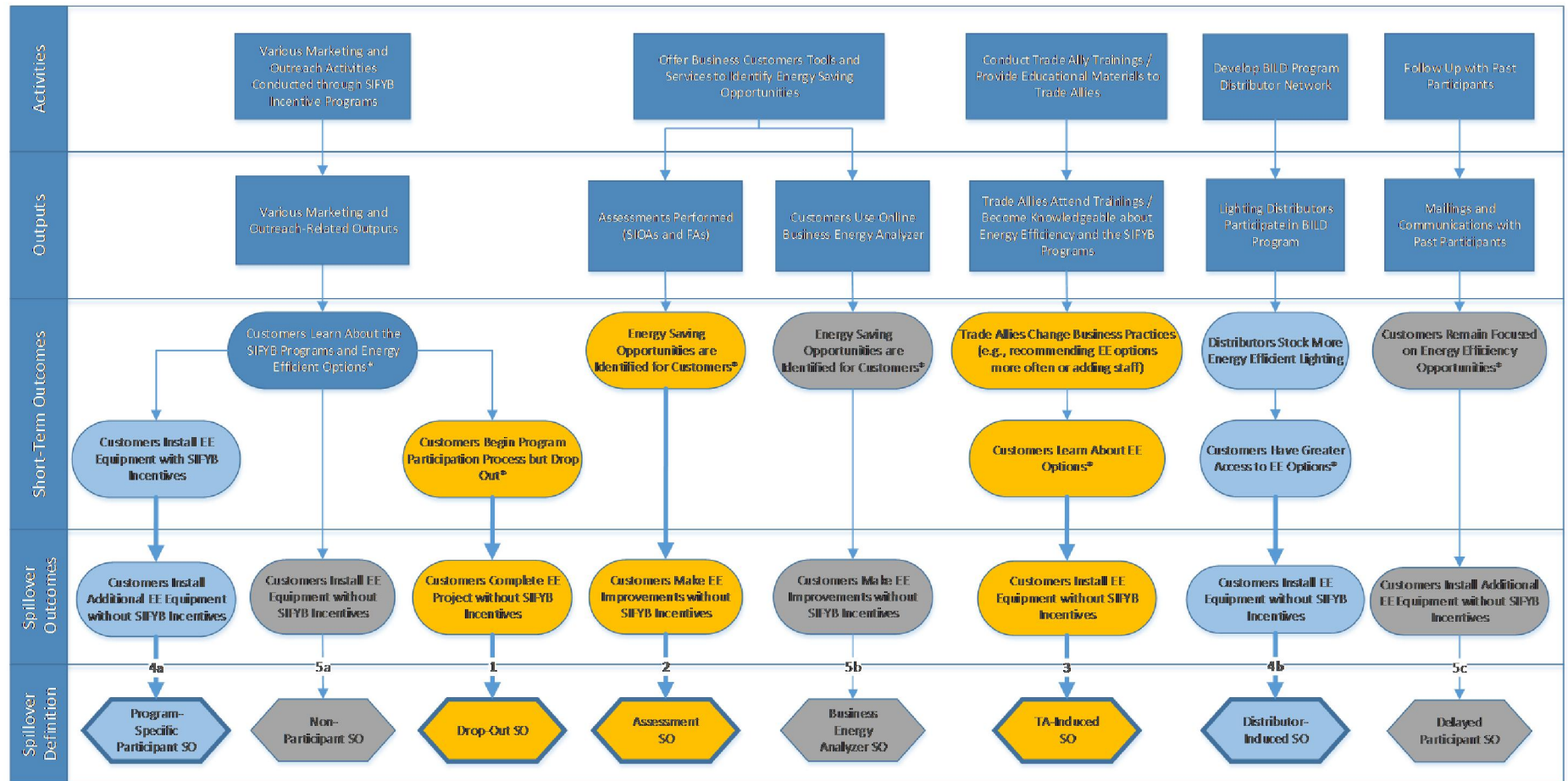
# Agenda

- Study Background
- Spillover Logic Model
- Cognitive interviewing

# Study Background

- Assessed various sources of spillover for Commonwealth Edison's portfolio of C&I programs (Program Year 6: June 2013 – May 2014)
- Methodology
  - Development of spillover logic model
  - Primary data collection
  - Integration of spillover results from individual PY6 program evaluations
- Study Report
  - Summary memo available
  - Final report is forthcoming
  - <http://www.ilsag.info/net-to-gross-framework.html>

# Logic Models



Key: 1-3: New research efforts; 1. Drop-Out Spillover: Measured through drop-out survey; 2. Assessment Spillover: Measured through assessment survey; 3. Trade Ally-Induced Spillover: Measured through TA survey (orange)  
 4: Part of program-specific evaluation efforts; 4a. Participant Spillover (various programs, participant self-reported); 4b. Distributor-Induced Spillover (BILD, distributor self-reported) (light blue)

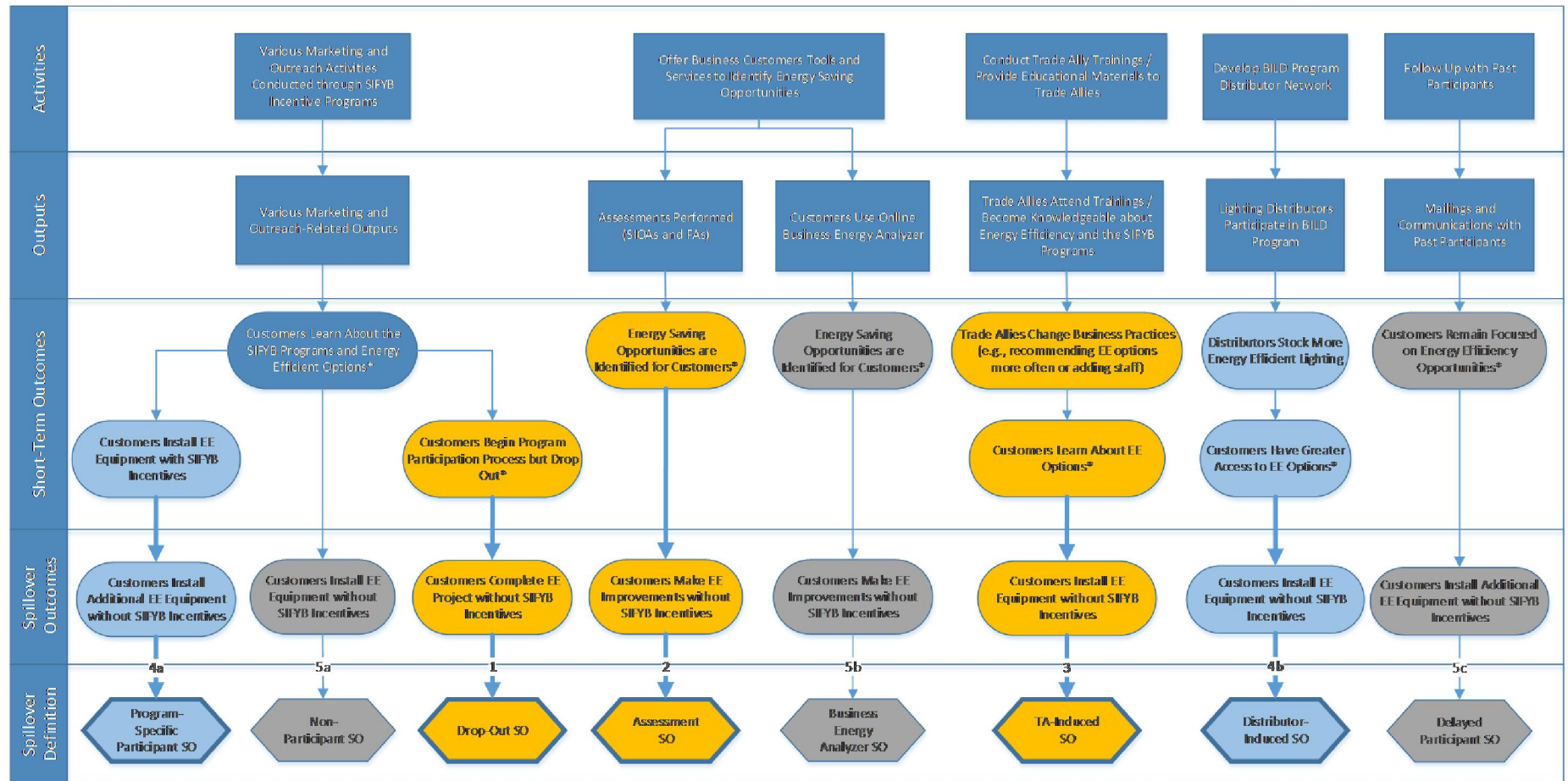
5: Not measured in current spillover task; 5a. Non-Participant Spillover; 5b. Business Energy Analyzer Spillover; 5c. Delayed Participant Spillover (gray)

\*This outcome also leads to participation in SIFYB programs, i.e., the installation of energy efficient equipment with a SIFYB incentive.

# Spillover Logic Model

- Focuses on activities that might lead to spillover
- At the portfolio level
- Identify sources of spillover that
  - ☐ Have been addressed by the individual program evaluations
  - ☐ Will be addressed with new primary research
  - ☐ Will not be included in the study

# Spillover Logic Model – Overview



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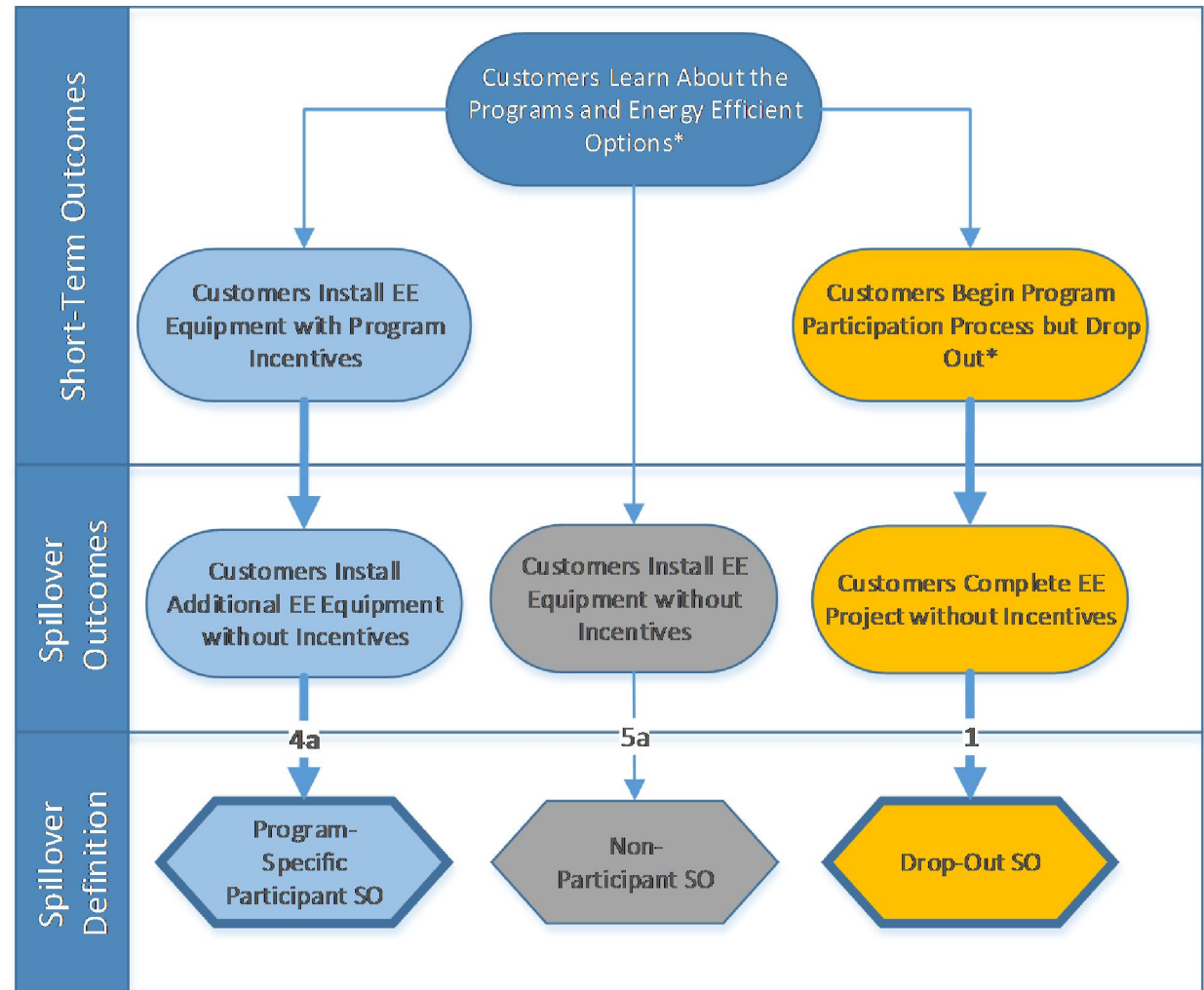
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# Logic Model – Marketing & Outreach Activities

- Activities: Various marketing and outreach activities conducted through the programs
- Outputs: Various marketing and outreach-related outputs





# Logic Model – Activities and Outcomes

Activity	Short-Term Outcome	Spillover Definition
Marketing and Outreach	Customers learn about the programs and energy efficient options	Participant spillover
		Drop-out spillover
		Non-participant spillover
Assessment Tools and Services	Energy savings opportunities are identified for customers	Assessment spillover
		Business Energy Analyzer spillover
Trade Ally Training and Support	Trade allies change business practices	Trade ally-induced spillover
Mid-stream Lighting Distributor Network	Distributors stock more efficient lighting products	Distributor-induced spillover
Follow-Up with Past Participants	Customers remain focused on energy efficiency opportunities	Delayed participant spillover

# Final Study Design

- Individual Program Evaluations

- ☐ Participant SO
- ☐ Distributor-induced SO

- New Primary Data Collection

- ☐ TA-induced SO
- ☐ Drop-out SO
- ☐ Assessment SO

- Not Included

- ☐ Non-participant SO
- ☐ Business Energy Analyzer SO
- ☐ Delayed Participant SO

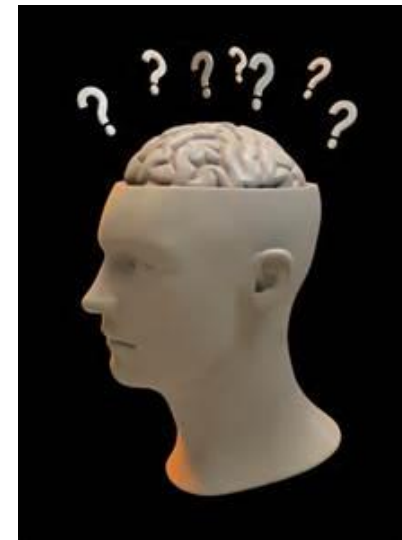
# Conclusions – Logic Model

- Logic model was a useful tool in research planning
  - Identify potential sources of spillover
  - Develop testable hypotheses
  - Prioritize research activities
  - Facilitate discussion with client

# Cognitive Interviewing – What is it?

“the administration of draft survey questions while collecting additional verbal information about the survey responses, which is used to evaluate the quality of the response or to help determine whether the question is generating the information that its author intends.”

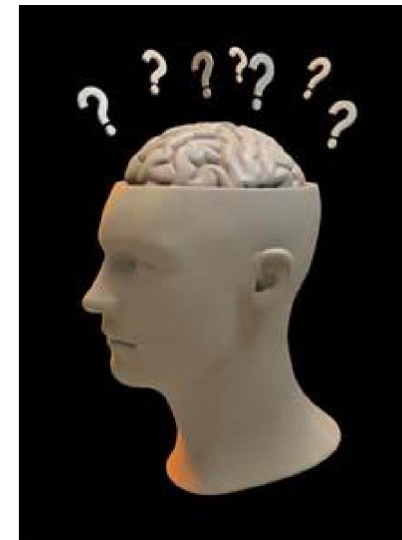
Beatty & Willis, 2007: *Research Synthesis: The Practice of Cognitive Interviewing*. Public Opinion Quarterly, Vol. 71, No. 2, Summer 2007, pp. 287–311.



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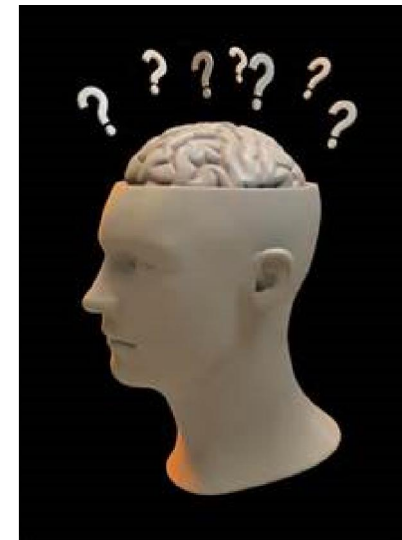
- Survey pretest method



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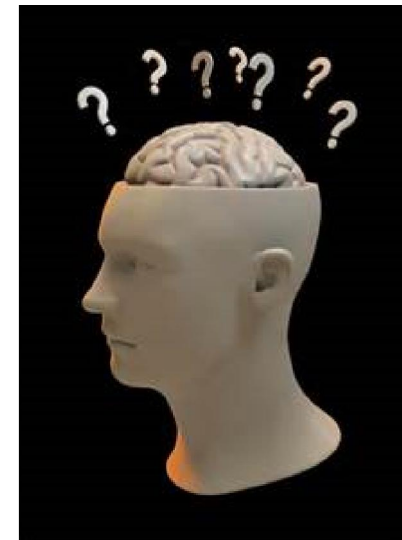
- More than monitoring
- Two major methods
  - Think-aloud
  - Verbal probing



# Cognitive Interviewing – What is it?

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- Quality of the response
- Is respondent providing the intended information?



# Cognitive Interviewing – TA Survey

- Why?
  - Online survey
  - New question design/algorithm
  - Complex, multi-faceted topic
- What?
  - Four interviews: two using the original survey design, two with modified questions
  - Participants received a \$125 incentive
- How?
  - Set up a webinar and observed their progress taking the survey
  - Blend of think-aloud and verbal probing



# Cognitive Interviewing – Example

- Algorithm input: *Percentage of high efficiency installations that received an incentive*
- Original questions

Approximately what percentage of your total sales of equipment in ComEd's service territory (in terms of dollars) qualifies for a ComEd Smart Ideas incentive?

%

☐ Don't know

Of the equipment that *qualifies* for a ComEd incentive, for what percentage do customers receive an incentive from ComEd?

%

☐ Don't know

# Cognitive Interviewing – Example

- Revised question

For the next question, please think about all of your jobs in ComEd's service territory during ComEd's Program Year 6 (i.e., between June 1, 2013 and May 31, 2014).

Approximately what percentage of your total equipment installations (in terms of dollars) was... (Please provide your best estimate, if unsure of exact percentages.)

	Percentage	Don't Know
Standard Efficiency	<input type="text"/> %	<input type="checkbox"/>
High Efficiency - that DID RECEIVE an incentive from ComEd	<input type="text"/> %	<input type="checkbox"/>
High Efficiency - that DID NOT RECEIVE an incentive from ComEd	<input type="text"/> %	<input type="checkbox"/>

# Conclusions – Cognitive Interviewing

- Very valuable tool for testing new questions
- Ask questions in a way that matches how respondents think about a concept, rather than how the responses best fit into an algorithm
- Ask questions in a way that enables trouble-shooting responses
  - In-survey consistency check
  - Data cleaning during analysis phase

# Questions?

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# Primary Data Collection

	TA Survey	Drop-out Survey	Assessment Survey	
			Smart Ideas Opportunity Assessment	Commercial Building Assessment / Technical Assistance Services
Mode	On-line	CATI	CATI	Professional
Population	218	539	855	30
Completes	48 (census attempt)	87	72	8 (census attempt)
Response Rate	29%	19%	11%	27%

# Spillover Results

Program	Spillover (% of Verified Gross Savings)	Sources of Spillover		
		TA Survey	Drop-Out Survey	Other Survey
Standard	1.1%	√	√	Participant
Custom	0.5%	√	√	Participant
Industrial Systems	1.5%	√		Participant
Data Centers	0.0%	√		Participant
Small Business	2.0%	√		
New Construction	0.0%			Participant Trainee
RCx	4.0%			Service Provider
BILD	7.0%			Customer
<b>C&amp;I TOTAL</b>	<b>3.2%</b>			