Illinois NTG Working Group Update

Presentation to Stakeholder Advisory Group – September 28, 2015

Objective

Create agreed upon protocols for calculating NTG to ensure consistency across Illinois program administrators and programs.

Background

NTG Protocols initiated in response to ICC directive

TRM Version 4.0 began process

- Appliance Recycling drafted
- Residential Upstream Lighting drafted
- Initiated Commercial & Industrial agreements

Goal for TRM Version 5.0

• Complete full draft

Overall Process*

NTG Working Group met regularly to discuss approaches. October 2: Protocols to be emailed to SAG with instructions for commenting

October 16: Stakeholder comments due on TRM Sharepoint site NTG Working Group to review comments during late October Stakeholder webinar to discuss comments during November

Finalize protocols for full draft TRM during December

Final Version 5.0 TRM available in February

*Additional materials related to missing components of the protocols may be released on October 23rd for stakeholder comment.

Residential Approach

Organized programs in place or planned by delivery approach/technologies Prioritized programs types by size, need Began work on largest program first – Residential Rebates Discussed approaches used historically, differences and similarities Researched protocols and positional papers from other jurisdictions Designed an algorithm flow chart for discussion Identified issues, discussed solutions and modified flow chart

Residential Protocols

Audit/Direct Behavior Rebates Install Modification **Building Codes** Multifamily Kits Nonparticipant **Appliance** Upstream Recycling Spillover Lighting

Basic Residential Method

Two-part scoring: average results

- Program Influence
- Non-Program (Counterfactual)
- (where applicable)

0-10 Scores

- Degree of Program Influence
- Likelihood of counterfactual
- Threshold for specific adjustments

Consistency Checks

- Minimum of open-ended question
- Document if evaluator adjusts score

Spillover

- General utility marketing and education can create spillover not specific to program theory
- Ensure spillover does not get double counted

Basic/Enhanced Methods

• Where applicable, enhanced methods allow for use of trade allies or secondary method to provide further information

Recommended Revisions to TRM V4

- Appliance Recycling
 - Change spillover restriction

Non-Residential Approach

Protocol based on evaluation best practices and industry research Reviewed program types Focused on core free ridership methodology that would be broadly applicable Discussed approaches used historically, including differences and similarities Discussed alternative proposals and tested algorithms Developed participant spillover protocol applicable to all programs

Differences between Historical Non-Residential Self-Report Methods

IOU Nonresidential

- Three program attribution indices averaged
- Basic (most customers) and Standard or Enhanced (large customers) rigor levels
- Respondent numeric responses used as direct inputs to algorithm
- Range of possible NTGR tends to be spread out

DCEO Nonresidential

- Matrix scoring approach
- Financial ability sets the stage for application of other information from survey
- Possibility of different levels of questioning
- Range of possible NTGR is "chunky"

Core Non-Residential Method

Free Ridership

Scoring Components

- Program Components Score
- (Relative) Program Influence Score
- No-Program Score (Counterfactual)

0-10 Scores

- Degree of influence of individual factors on decision
- Likelihood of implementation in absence of program
- Exception: 0 100 Program Influence Score

Consistency Checks

- Respondent rescores in some cases
- Document if evaluator adjusts score

Spillover

Participant Spillover

- •General program marketing and education may cause spillover not specific to program theory
- •Ensure spillover does not get double counted

Scoring Components Detail

Free Ridership

Program Components Score

- Degree of influence of individual factors on decision
- Comprehensive list of Program and Non-Program factors

(Relative) Program Influence Score

- Relative influence of Program and Non-Program factors taken as a whole
- Higher level than Program Components; considers weight of combined program elements and combined non-program elements

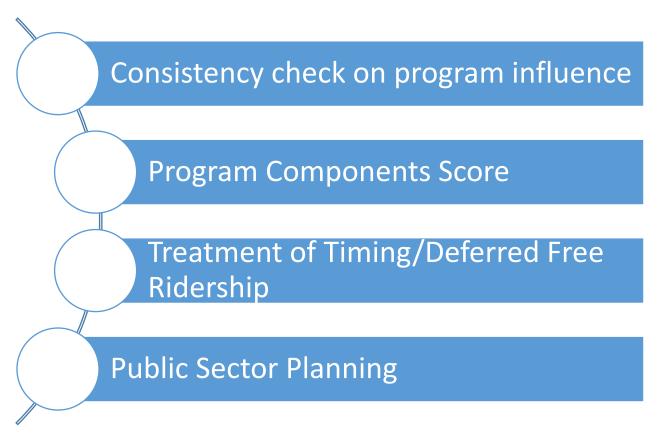
Counterfactual – No Program Score

• 0-to-10 likelihood of implementing the same energy efficiency project in absence of program

Counterfactual – Timing Adjustment

- Reflects effect of delayed installation timing in the absence of the program
- Under historical IOU approach, projects that would have been installed 4 or more years later get No Program Free Ridership Score of 0.

Updated Elements of NTG Framework



Consistency Check on Program Influence

Triggered if respondent reports learning of a program *after* decision to implement was made and also reports strong influence on decision by the program.

Alternative Specifications of Program Components Score

Historical IOU Approach

- Score based on highest rated program factor
- Tended to produce outlier program components score (lower free ridership estimate).

Modified California Approach

- Score based on highest rated program factor divided by the sum of the highest rated program and non-program factors
- Preliminary data analysis suggests low variability in scores (i.e., most fall between 4 and 6) compared with other scoring components.

Alternative Treatments of Timing/ Deferred Free Ridership

Free Ridership

- Historical IOU Method (Adjust No Program Score for Timing)
- First, adjust the Counterfactual-No Program Score with Timing Adjustment
- Then average Program Component, Program Influence and Counterfactual-No Program Scores

- 2. Adjust Overall FR for Timing
- First, average the Program Component, Program Influence and Counterfactual-No Program Scores
- Then adjust the result with the Timing Adjustment

- 3. Average No-Program Score with Timing Score
- First, average the Program Components and Program Influence Scores
- Then average the Counterfactual-No Program Score with the Timing Adjustment Score
- Then average the 2 results

Alternative Specifications within Core Method

Evaluator develops estimates for each of the alternative specifications for calculating a program-level NTGR

Evaluator selects a single specification for calculating net achieved savings

Evaluator presents results of applying non-selected specifications and justifies choice of selected specification

Public Sector Planning

ICC Final Order, Docket 11-0593

"All parties, including DCEO, are cautioned that, with respect
to a determination regarding 'free ridership', the person or
entity in question should have actual energy efficiency plans
before they are to be considered to be 'free riders', as
opposed to persons who have some goal to be met in the
distant future regarding energy efficiency products and
services."

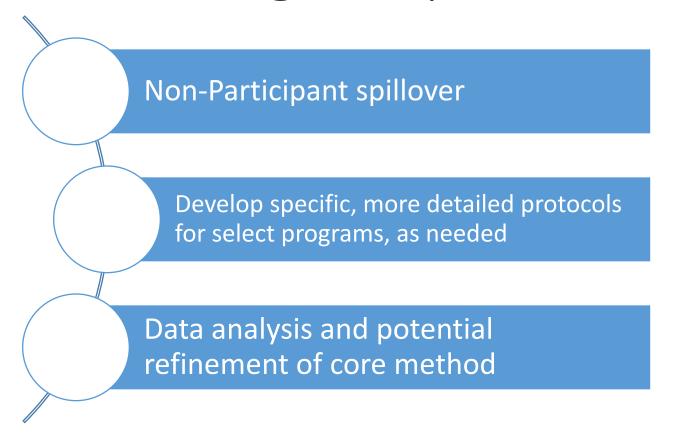
Draft Protocol Language

 Protocol content, if any, subject to NTG Working Group discussion prior to SAG meeting

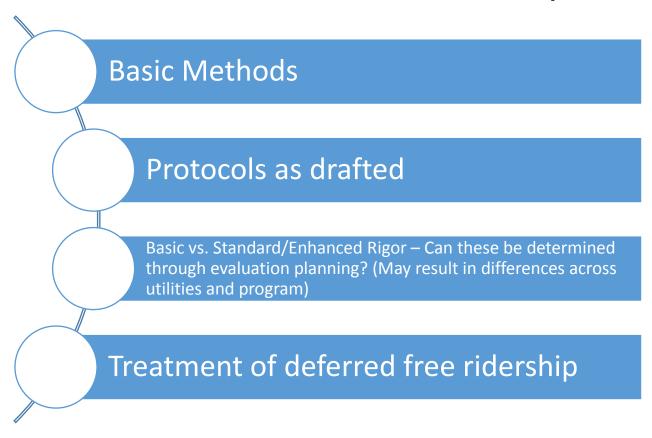
Non-Residential Participant Spillover Protocol

Applicable to all nonresidential programs Survey administered with other survey modules or on standalone basis Attribution based on responses to two questions Threshold approach for estimating savings: there are no "partial spillovers" Savings estimated using TRM, methods specified in EM&V plan, or other evaluator-determined methods.

Forthcoming Group Activities



Stakeholder Feedback Requested



Forthcoming Meetings of NTG Working Group

To participate in forthcoming group meetings, contact:

Full Working Group: Hannah Arnold (harnold@opiniondynamics.com)

Residential Group: Jane Colby (jane.colby@cadmusgroup.com)

Non-Residential Group: David Diebel (david@admenergy.com)