



Memorandum

To: Erin Daughton, Vince Gutierrez, Molly Lunn, ComEd

CC: Jennifer Morris, David Brightwell, ICC: Martin Montes, ComEd

From: Jennifer Ma, Chelsea Lamar, Randy Gunn, Jeff Erickson, Rob Neumann, Patricia Plympton, Jan Harris Navigant

Date: December 13, 2017

Re: Bridge Period Public Sector Programs' Net-to-Gross Recommendations

Summary and Recommendations

This memo provides Navigant's net-to-gross (NTG) recommendations for public sector energy efficiency programs formerly administered by the Department of Commerce and Economic Opportunity (DCEO) for the bridge period (June 1, 2017 – December 31, 2017).

Navigant recommends that the most recent NTG ratios (without the free ridership adjustment of a "plans score" where available) calculated by DCEO's evaluator, ADM Associates, Inc (ADM) available on the IL Stakeholders Advisory Group (SAG) website⁶ should be used to calculate net savings for the DCEO Public Sector programs in the bridge period. Note: We are not making this same recommendation for the NTG value for CY2018 and do not consider our recommendation in this memo to establish precedent for the CY2018 value. Rather, we are presenting this memo as a simplified approach to report the savings associated with the former DCEO program which will not affect ComEd's savings goals. Our recommended NTG values for CY2018 are presented in a separate memo.

For some former DCEO programs, the most current evaluation reports are draft reports for EPY8/GPY5. For other programs, the most recent versions are the final EPY7/GYP5 reports. Navigant gathered the most current NTG ratios available, which are presented in Table 1.

As discussed further in the ADM NTG Calculation Methodology and Modification section below, ADM included an "Energy Efficiency Plans Score" adjustment in their calculation of free-ridership. The TRM does not specify that the "had plans" criteria should be addressed in survey questions nor does it specify how the result should be treated in the algorithm. As a result, for the bridge period, **Navigant recommends using NTG ratios without the "plans score" adjustment (when this information is available) to be consistent with other ComEd evaluations.** Comparisons to ComEd CY2018 ratios from similar ComEd programs are also included for reference.

Table 1. DCEO Program NTG ratios (Energy and Demand) with ComEd Comparison Programs

Program	NTG Ratios Without "Plans Score" Adjustment (Navigant Recommended)	NTG Ratios With "Plans Score" Adjustment	Source	ComEd Comparison Program	NTG Ratios	Source
Aggregation (MMC, Elevate – Street Lighting, Elevate Park District Lighting)	Custom: 0.83 kWh, 0.82 kW	Custom: 0.97 kWh, 0.97 kW	Evaluation of Illinois Energy Now Public-Sector Custom and Standard Incentives Programs: June 2015 through May 2016 ¹	Business Custom	0.58 kWh, 0.70 kW	ComEd Net-to-Gross Ratios 3/1/2017 ²
	Standard: 0.65 kWh, 0.65 kW	Standard: 0.73 kWh, 0.72 kW		Business Standard, Lighting	0.71	
Waste Water Treatment	0.83 kWh, 0.82 kW	0.97 kWh, 0.97 kW	Business Custom	0.58 kWh, 0.70 kW		
Standard and Custom: Data Centers	0.83 kWh, 0.82 kW	0.97 kWh, 0.97 kW	Data Centers	0.68 kWh and kW		
New Construction	0.53 kWh	0.87 kWh	Evaluation of Illinois Energy Now Public Sector Custom, Standard, and New Construction Incentives Programs: June 2014 through May 2015 ³	Business New Construction	0.60	
Savings Through Efficient Products (STEP)	0.96 kWh, 0.96 kW	0.96 kWh, 0.96 kW	Evaluation of Illinois Energy Now Savings Through Efficient Products Program: June 2014 through May 2015 ⁴	Efficient Products (STEP)	0.96	
Free Lights						
Retro-commissioning	0.98 kWh, 1.03 kW	1.01 kWh, 1.04 kW	Evaluation of Illinois Energy Now Public Sector Retro-Commissioning Program: June 2014 through May 2015 ⁵	Business Retro-commissioning	0.95	
PHA Efficient Living Program	1.00	1.00	Deemed in the TRM			

Source: Navigant Analysis

¹ Department_of_Commerce_Public_Sector_CS_Programs_EPY8_GPY5_Draft.docx

² <http://www.ilsag.info/net-to-gross-framework.html>

³ Department_of_Commerce_Public_Sector_CS_NC_Programs_EPY7-GPY4_Final.pdf

⁴ DCEO_STEP_Program_EPY7_GPY4_Final_Report.pdf

⁵ Department_of_Commerce_Public_Sector_Retro-Commissioning_EPY7_GPY4_Final.pdf

Overview of Public Sector NTG Research

Detail on the NTG ratios reported in Table 1 are discussed below.

ADM NTG Calculation Methodology and Modification

Navigant recommends using the free ridership estimate without the “plans score” adjustment since that is consistent with other ComEd evaluations for the period and because we do not believe ADM’s approach to the “plans score” was appropriate based on the current TRM NTG protocol.

The TRM does not specify that the “had plans” criteria should be addressed in survey questions nor how the result should be treated in the algorithm. ADM developed their own approach and incorporated the Plans Score in the calculation of Free Ridership as follows:

$$\text{Free ridership} = ([\text{No Program Score}] + [\text{Program Influence Score}] + [\text{Program Components Score}]) * \text{Timing adjustment Factor} * \text{Energy Efficiency Plans Score}$$

The Energy Efficiency Plans Score is set to “0” if participants answered that they did not have any plans or their plans did not include the measures that were implemented or they did not have funds to implement the measures. Participants must also have answered these questions with certainties greater than 7 on a 0-10 scale.

ADM used free ridership estimates with the “plans score” to calculate net savings. ADM reported the free ridership estimates without the “plans score” adjustment in the appendices of the evaluation reports for the custom, standard, new construction, and retro-commissioning programs. Navigant used the appendices to determine the NTG without the “plans score” reported in Table 1. The free ridership values that included the “plans score” adjustment approach were significantly lower than those that did not.

ADM included free ridership with and without the “plans score” adjustment for two timing options. Under Timing Option 1, the timing adjustment factor was multiplied by the No-Program Score, which was then averaged with the Program Influence and Program Components Score. For Timing Option 2, the average of the No-Program, Program Influence and Program Components Scores was multiplied by the timing adjustment factor. Navigant determined that Timing Option 2 was more similar to the NTG procedure laid out by the TRM. Navigant found the difference in free ridership without and with the “plans score” adjustment for Timing Option 2 and subtracted that from the reported NTG ratios.

NTG Recommendation Detail

Navigant selected the NTG from the most recent available ADM public sector program evaluation report on the SAG⁶ website. Table 1 below details which program year report Navigant selected. For programs where ADM evaluated the program for multiple utilities, we selected the ComEd specific NTG.

⁶ <http://www.ilsag.info/evaluation-documents.html>

Table 2. ADM Evaluation Report Reference

Program	ADM Evaluation Reference	Draft or Final?
Aggregation (MMC, Elevate – Street Lighting, Elevate Park District Lighting)	Custom Program Evaluation EPY8/GPY5	Draft
	Standard Program Evaluation EPY8/GPY5	Draft
Waste Water Treatment	Custom Program Evaluation EPY8/GPY5	Draft
Standard and Custom: Data Centers	Custom Program Evaluation EPY8/GPY5	Draft
New Construction	New Construction Evaluation EPY7/GPY4	Final
Savings Through Efficient Products (STEP)	STEP Evaluation EPY7/GPY4	Final
Free Lights		
Retro-commissioning	Retro-commissioning Evaluation EPY7/GPY4	Final
PHA Efficient Living Program	PHA Efficient Living Evaluation EPY7/GPY4	Final

Source: Navigant Analysis

Additional detail on the NTG ratios selected by Navigant is provided below.

Aggregation (MMC, Elevate – Street Lighting, Elevate Park District Lighting)

For these programs, Navigant recommends the use of Standard or Custom Program NTG ratios (without “plans score”) based on savings type. If a project’s savings come from TRM-based calculations, Navigant recommends using Standard Program EPY8/GPY5 NTG ratios. If a project’s savings are not TRM-based, Navigant recommends using Custom Program EPY8/GPY5 NTG ratios.

Waste Water Treatment and Data Centers

In EPY7/GPY4, a customer received custom incentives for retrofitting an aerobic digestion process with new blowers at their waste water treatment plant. Similarly, in the draft evaluation of the Custom and Standard Incentives Program for EPY8/GPY5, a customer received custom incentives for the shutdown of air handling units at their data center. Therefore, Custom Program NTG ratios from EPY8/GPY5 were chosen for both programs.

Savings Through Efficient Products (STEP)

Navigant selected the most current NTG ratios from ADM’s evaluation of STEP in EPY7/GPY4. NTG was not calculated in EPY8/GPY5 due to limited participation.

Free Lights

Navigant reviewed the program design for Free Lights. Navigant recommends the use of NTG ratios from the STEP program as STEP’s program self-install design is the most similar to that of Free Lights.

PHA Efficient Living

Historically, ADM assigned the PHA Efficient Living program a 1.0 NTG ratio because the program targeted the income-eligible sector and the TRM NTG assigns a NTG ratio of 1.0 to income-eligible sector.