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Memorandum

To: **Erin Daughton, Rick Tonielli, ComEd; Jennifer Morris, ICC; Celia Johnson, SAG Facilitator**

From: **Jan Harris, Patricia Plympton, Jeff Erickson, Guidehouse**

Date: **December 10, 2020**

Re: **CY2020 and CY2021 Net-to-Gross Ratio for the Commercial Food Service Equipment Pilot**

INTRODUCTION

The ComEd Upstream Commercial Food Service Equipment (CFSE) Pilot CY2020 Evaluation Plan includes "a (small) literature review for net-to-gross (NTG) values for upstream programs in similar regions to find a reasonable proxy. If none exist, we will use the default NTG of 0.80". Guidehouse conducted this literature review and determined that a reasonable NTG for the CFSE pilot does not exist. Therefore, Guidehouse recommends using the NTG default value of 0.80 for this pilot in CY2020 and CY2021.

SUMMARY OF THE RESEARCH

Guidehouse acquired a list of 20 midstream CFSE programs nationwide from Frontier Energy, the CFSE Program Implementation Contractor (IC).

Table 1: CFSE Programs Nationwide

	Utility	Region	State	Program Status
1	Focus on Energy	Midwest	Wisconsin	In Effect
2	DTE Energy	Midwest	Michigan	In Effect
3	Consumer's Energy	Midwest	Michigan	In Effect
4	ComEd	Midwest	Illinois	Pilot
5	Efficiency Maine	Northeast	Maine	In Effect
6	Con Ed	Northeast	New York	Scoping
7	PSE&G LI	Northeast	New York	In Effect
8	Energize CT	Northeast	Connecticut	In Effect
9	Mass Save	Northeast	Massachusetts	In Effect

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	Utility	Region	State	Program Status
10	NHSaves	Northeast	New Hampshire	In Effect
11	UGI	Midatlantic	Pennsylvania	In Effect
12	PPL	Northeast	Pennsylvania	In Effect
13	Duke Energy	Southeast	North Carolina	In Effect
14	Duke Energy Progress	Southeast	Florida	In Effect
15	New Mexico Gas	Southwest	New Mexico	In Effect
16	Dominion Energy	Southwest	Utah	In Effect
17	SoCalGas	West	California	In Effect
18	PG&E	West	California	In Effect
19	Southern California Edison	West	California	In Effect
20	SMUD	West	California	In Effect

The research team sought evaluation reports or other sources for NTG information specific to this program type. Many of the programs in Table 1 are not stand-alone CFSE programs but include food service equipment through their commercial programs. As a result, the team did not find much CFSE program specific information. Our research included the following reports (and summarizes relevant findings):

- "Focus on Energy (WI) Calendar Year 2018 Evaluation Report" Appendices. Cadmus. May 17, 2019. Focus launched a midstream CFSE pilot in 2017. Free Ridership (FR) and Spillover (SO) determined through self-report surveys of 43 participants.
  - ***FR = 0.69 SO=0.01 NTG=0.32***

- "PPL Electric Utilities Annual Report to the Pennsylvania Public Utility Commission" Cadmus. November 2018.
  - NTG analysis not specific to CFSE**. NTG=0.69 for Equipment and 0.85 for Midstream Lighting**

- "Final Report for Energy Efficiency in Commercial Food Service Program*" (Program run by Fisher-Nickel, Inc. San Ramon, CA)* Equipoise Consulting, Inc. in association with Quantum Consulting Inc., Energy Solutions, and RJ Research. April 2, 2004.
  - ***Did not include NTG information***

- "Food Service Equipment Center Process Evaluation" Prepared for Southern California Gas Company Prepared by KEMA Inc. November 14, 2008.
  - ***Did not include NTG information***

- "Massachusetts Sponsors' Commercial and Industrial Programs Free-ridership and Spillover Study". SUBMITTED TO: Massachusetts Program Administrators SUBMITTED BY: NMR Group, Inc. DNV GL, Inc. Tetra Tech, Inc. August 14, 2018.
  - ***Utilities across the state reported NTG values for commercial downstream prescriptive EE programs ranging from 0.76 to 0.94 for non-lighting measures. (Net of free ridership and spillover as determined via phone surveys.) The study includes food service equipment program specific research however the sample size (3) was too small to be statistically relevant.***

- "ENERGY EFFICIENCY PROGRAMS 2018 ANNUAL REPORT" for So Cal Gas.
  - ***Study included net values, but no explanation of NTG.***

- "Evaluation of the Southern California Gas Company 2004-05 Non-Residential Financial Incentives Program." Final Report. June 7, 2006 Prepared for the California Public Utilities Commission and the Southern California Gas Company. Prepared by ECO Northwest.
  - ***This study found a NTG value of 0.80 for food service equipment found through self-reported participant surveys. This value is net of free ridership but did not include spillover analysis.***

- "2004/2005 Statewide Express Efficiency and Upstream HVAC Program Impact Evaluation." Prepared for the California Public Utilities Commission and the California's Investor-Owned Utilities. Prepared by Itron and Kema, Dec 31, 2008.
  - ***The study, which included all 4 CA IOUs, found an overall free-ridership rate of 28% through self-reported participant surveys. The study did not include spillover analysis. NTG = 0.72.***

- "Net to Gross Evaluation of 2013-14 upstream HVAC Programs" DNV GL. For the CPUC. 2017.
  - ***This program is structurally similar to the ComEd Program. NTG= 0.64. The study did not include treatment of spillover or market effects.***

We searched for reports containing NTG valuations specific to commercial upstream programs. We found that there are several commercial energy efficiency programs that include commercial food service equipment. However, they seldom develop a food service equipment specific NTG ratio. Also, often their reported NTG values are net of free ridership, but do not count spillover effects.

The average NTG value for non-lighting commercial programs at ComEd today (also eliminating the low-income program's NTG values which are always 1.0 regardless of performance,) is 0.87. The few relevant NTG values we found through this research are also in the range of 0.80 (0.69 – 0.94).

Given the factors outlined above, Guidehouse recommends the use of the default NTG value of 0.80 for CY2020. If or when the pilot becomes a program, we will consider primary research to determine a program specific NTG.