

Verified Gross Savings Specification

to New York State Public Service Commission, Att: Honorable Michelle Philips, Secretary
 from The Joint Utilities of New York and NYSERDA
 date December 14, 2020

**Re: Verified Gross Savings Specification – Statewide LMI Portfolio:
 Existing 1-4 Family Homes**

Verified Gross Savings Specification	
Date of Implementation Plan Filing	December 14, 2020
Initiative Name	Statewide LMI Portfolio: Existing 1-4 Family Homes
Initiative Description	The 1-4 family LMI customer market segment is served by several programs including EmPower NY and Assisted Home Performance with ENERGY STAR (“ AHPwES ”) administered by NYSERDA statewide, the Low-Income Usage Reduction Program (“ LIURP ”) in National Fuel Gas (“ NFGDC ”) territory, and the Home Energy Affordability Team (“ HEAT ”) program in the National Grid-Long Island territory. The EmPower NY, LIURP, and HEAT programs are available to low-income households and provide no-cost energy services, while the AHPwES program is available to both low and moderate-income households, providing a 50% cost share towards the cost of an energy efficiency work scope. Utilities currently refer customers to EmPower NY in accordance with currently effective Commission policy.
Gross Savings Methodology	<p>Programs in this initiative anticipate claiming annual MMBtu savings. Initiative savings are expected to be realized and reported in Scorecards, at a program-level, as MWh energy and MW peak demand savings for electric, and MMBtu energy savings and peak MMBtu reductions for fossil fuels (including natural gas).</p> <p>In general, the Program Administrators rely on the TRM and best practices to estimate savings and achieve VGS goals. For prescriptive measures, baseline studies or other evaluation data will be leveraged, where available, to calculate an average existing condition baseline that approximates the type and age of equipment currently installed by LMI customers. In the future, these baseline assumptions will be directly documented in the TRM. Energy savings for EmPower and AHPwES are estimated from modeling tools used by contractors when conducting home energy audits. For custom measures, project-specific existing condition baselines will be used.</p>
Realization Rate (RR)	Due to recent and ongoing evaluation efforts, each utility and NYSERDA administered program will be using program-specific RRs, where available, during the 2020 program year.

	<p>The NYSERDA administered EmPower program has initial VGS RRs of 58% for MWh and 44% for MMBtu, based on the impact evaluation for program period 2012-2016 (<i>NYSERDA Residential Retrofit Impact Evaluation (PY2012-2016)</i>, filed in June 2020). These initial VGS RRs are applied retrospectively; note that current Clean Energy Fund (“CEF”) project savings reflect evaluated per project savings from a prior evaluation, so the VGS RRs are not applied prospectively.</p> <p>The NYSERDA administered AHPwES program has initial VGS RRs of 43% for MWh and 43% for MMBtu, based on the impact evaluation for program period 2012-2016 (<i>NYSERDA Residential Retrofit Impact Evaluation (PY2012-2016)</i>, filed in June 2020). These initial VGS RRs are applied retrospectively; note that current CEF project savings reflect evaluated per project savings from a prior evaluation, so the VGS RRs are not applied prospectively.</p> <p>LIURP, a program administered by NFGDC and implemented as part of the NYSERDA EmPower program, has initial VGS RRs of 52% for MMBtu, based on the impact evaluation for program period 2012-2016 (<i>NYSERDA Residential Retrofit Impact Evaluation (PY2012-2016)</i>, filed in June 2020). These initial VGS RRs are applied retrospectively and prospectively until completion of the next Gross Savings Analysis.</p> <p>The HEAT program has an initial VGS RR of 98% for MMBtu based on the impact evaluation of the 2018 program year (<i>Home Energy Affordability Team (HEAT) Program Evaluation: 2018 Calendar Year Impact Evaluation</i>, completed in December 2019). This initial VGS RR is applied retrospectively and prospectively until completion of the next Gross Savings Analysis.</p>
<p>Planned VGS Approach</p>	<p>NYSERDA’s EmPower and AHPwES will undergo Gross Savings Analysis for program period 2017-Q1 2019 and then on a periodic basis moving forward. For this study, details related to the Gross Savings Analysis methodology will be submitted in an EM&V Plan in Q4 2020. Independent evaluator NMR Group will perform the Gross Savings Analysis. Moving forward, NYSERDA will conduct statewide evaluations for EmPower and AHPwES using methods similar to prior work (i.e., IPMVP Option C).</p> <p>NFGDC’s LIURP will undergo Gross Savings Analysis for program period 2017-Q1 2019 as part of the NYSERDA EmPower study. Details related to the Gross Savings Analysis methodology will be submitted in an EM&V Plan in Q4 2020. Moving forward, NYSERDA will conduct statewide evaluation for this program using methods similar to prior work (i.e., IPMVP Option C).</p> <p>National Grid’s HEAT program underwent a Gross Savings</p>

	<p>Analysis for the 2018 program year which developed a realization rate. National Grid will determine an appropriate schedule for future HEAT Gross Savings Analysis and incorporate details into a future ETIP/SEEP filing.</p> <p>In addition to Program Administrator-specific evaluation activities, the Joint Utilities and NYSERDA are:</p> <ul style="list-style-type: none"> • Working to develop a standardized series of survey questions for statewide use when conducting process evaluation research with LMI customers in 1-4 family homes by Q2 2021 • Collaborating to develop statewide and regional average existing condition baselines, facilitated through the TRM Management Committee, with key 1-4 family home LMI measures identified for further research by Q3 2021 • Aligning on impact evaluation methods and/or joint procurement processes, within budgetary constraints, to ensure comparability across statewide programming by Q1 2023
Exemption from EAM Status	Not exempt

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from
date

New York State Public Service Commission, Att: Honorable Michelle Philips, Secretary
The Joint Utilities of New York and NYSERDA
December 14, 2020

**Re: Verified Gross Savings Specification – Statewide LMI Portfolio:
Existing Affordable Multifamily Buildings**

Verified Gross Savings Specification	
Date of Implementation Plan Filing	December 14, 2020
Initiative Name	Statewide LMI Portfolio: Existing Affordable Multifamily Buildings
Initiative Description	<p>Existing affordable multifamily buildings are served through utility administered programs and NYSERDA administered programs. Through the Clean Energy Fund (“CEF”), NYSERDA administers the Multifamily Performance Program (“MPP”), RetrofitNY, and Real Time Energy Manager (“RTEM”) throughout the State including in territories that have a utility administered multifamily program. NYSERDA additionally administers a Technical Services program (“FlexTech”). Con Edison,* National Grid (KEDLI, KEDNY, and Niagara Mohawk) and NYSEG/RG&E each offer financial incentives for approved equipment upgrades by measure for affordable multifamily buildings. Each of these utility programs differs slightly in measures offered and incentive structure.</p> <p>*Con Edison’s Multifamily Energy Efficiency Program (“MF Program”) includes sub-program initiatives focused on New York City Housing Authority (NYCHA) and Westchester County Housing Authorities (WCHA) customers.</p>
Gross Savings Methodology	<p>Programs in this initiative anticipate claiming annual MMBtu savings. Initiative savings are expected to be realized and reported in Scorecards, at a program-level, as MWh energy and MW peak demand savings for electric, and MMBtu energy savings and peak MMBtu reductions for fossil fuels (including natural gas).</p> <p>In general, the Program Administrators rely on the TRM and best practices to estimate savings and achieve VGS goals. For prescriptive measures, baseline studies or other evaluation data will be leveraged, where available, to calculate an average existing condition baseline that approximates the type and age of equipment currently installed by LMI customers. In the future, these baseline assumptions will be directly documented in the TRM. For custom measures, project-specific existing condition baselines will be used.</p>
Realization Rate (RR)	Due to recent and ongoing evaluation efforts, each utility and NYSERDA administered program will be using program-specific RRs, where available, during the 2020 program year.

	<p>As discussed in more detail in the VGS Spec for Con Edison’s MF Program (filed on September 15, 2020), the Con Edison administered program is using the following AP RRs:</p> <ul style="list-style-type: none"> • Lighting MWh: 46% • Lighting MW: 36% • Energy Management System (EMS)^ MMBtu: 100% • EMS Peak MMBtu: 100%* <p>These AP RRs are premised on adopting evaluation-recommended changes, which were implemented in Q1 2020, retroactive to January 1, and will continue to be effective for the full 2020 program year. As such, effective 2020, these AP RRs will be applied prospectively for 18 months or until a new Gross Savings Analysis is completed. No applicable RRs have been determined for non-lighting and non-EMS measures for this program within the preceding five-year time frame. Con Edison’s MF Program electric and fossil fuel energy savings and demand reductions will be reported at the program-level based on savings-weighted RRs.</p> <p>As discussed in more detail in the VGS Spec for NYSERDA’s LMI Multifamily Initiative, the NYSERDA administered MPP is using a VGS RR of 81% for MMBtu, based on the impact evaluation for program period 2014-Q2 2018. No applicable RRs have been determined for MWh for this program within the preceding five-year time frame. Additionally, no applicable RRs have been determined for RetrofitNY, RTEM or FlexTech within the preceding five-year time frame.</p> <p>No applicable RRs have been determined for National Grid’s or NYSEG/RG&E’s administered programs within the preceding five-year time frame.</p> <p><small>^For purposes of Verified Gross Savings, the Energy Management System and Advanced Boiler Control TRM measures should be considered equivalent. *Peak MMBtu was not specifically evaluated. The MMBtu RR is used for this metric with concurrence by the evaluator.</small></p>
<p>Planned VGS Approach</p>	<p>An impact evaluation was performed for Con Edison’s MF Program for the 2017 program year by West Hill Energy and Computing (WHEC). The final Evaluation Report was filed in Q1 2020. In accordance with the use of an AP RR, the next Gross Savings Analysis for this program will be completed by Q2 2021. This Gross Savings Analysis will evaluate lighting and EMS measures. An additional Gross Savings Analysis to evaluate non-lighting electric and non-EMS fossil fuel program offerings is scheduled for the 2021 program year. The evaluation plan for this program is expected to be filed in Q2 2021. The final results are expected to be published in Q2 2022.</p>

NYSERDA's **MPP** will undergo Gross Savings Analysis for program period Q3 2018-2022 and details related to the Gross Savings Analysis methodology will be submitted in an EM&V Plan in 2023 (note that discussions are ongoing regarding this timeline and evaluation efforts may be accelerated depending on programmatic activity). NYSERDA will competitively procure an independent evaluator to perform the Gross Savings Analysis in 2023 and anticipate results will be available by late 2023 or early 2024. Evaluation for **RetrofitNY** is anticipated on the same timeline. An **RTEM** evaluation is currently underway with results anticipated in Q3 2021.

National Grid's Multifamily Program is currently undergoing Gross Savings Analysis by the independent evaluator NMR Group for the 2019 program period. Details related to the Gross Savings Analysis methodology will be submitted in an EM&V Plan in Q1 2021. The estimated completion of the Gross Savings Analysis Report is Q1 2021.

NYSEG/RG&E's Multifamily Program will undergo Gross Savings Analysis for the program period 2019-2020. Details related to the Gross Savings Analysis methodology were submitted in an EM&V plan in December 2019. The estimated completion of the Program Year 2019 Gross Savings Analysis Report is Q1 2021, at which point program-level VGS RRs will be available for retrospective and prospective application, as of the Rate Case effective date of April 1, 2020. Program Year 2019 evaluation results will be supplemented with Program Year 2020 sampled participants, with an emphasis on customers classified as LMI, to develop overall and LMI-specific VGS RRs for Program Years 2019-2020. The estimated completion of the Gross Savings Analysis Report is Q4 2021, at which point LMI-specific VGS RRs are expected to be available for retrospective and prospective application to the LMI program, as of the Rate Case effective date of April 1, 2020. An independent evaluator, ERS, will perform the Gross Savings Analysis.

In addition to Program Administrator-specific evaluation activities, the Joint Utilities and NYSERDA are:

- Working to develop a standardized series of survey questions for statewide use when conducting process evaluation research with Multifamily LMI customers by Q2 2021
- Collaborating to develop statewide and regional average existing condition baselines, facilitated through the TRM Management Committee, with key Multifamily LMI measures identified for further research by Q3 2021
- Aligning on impact evaluation methods and/or joint

	procurement processes, within budgetary constraints, to ensure comparability across statewide programming by Q1 2023
Exemption from EAM Status	Not exempt

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to New York State Public Service Commission, Att: Honorable Michelle Philips, Secretary
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**Re: Verified Gross Savings Specification – Statewide LMI Portfolio:
 Affordable New Construction**

Verified Gross Savings Specification	
Date of Implementation Plan Filing	December 14, 2020
Initiative Name	Statewide LMI Portfolio: Affordable New Construction
Initiative Description	<p>NYSERDA administers the Affordable New Construction program across the State, which provides:</p> <ul style="list-style-type: none"> • Technical assistance to projects seeking to achieve high performance energy efficiency buildings • Incentives to housing developers and builders and Residential Energy Services Network (“RESNET”)-accredited Rating Quality Assurance Providers, with incentive levels based on the performance of the building • Quality Assurance (QA) services through third parties such as RESNET-accredited Rating Quality Assurance Providers, or qualified certifiers/verifiers to one of the Passive House standards <p>In addition, NYSERDA administers the Buildings of Excellence Competition program, which seeks to identify replicable models for the design, construction, and renovation of affordable housing.</p>
Gross Savings Methodology	<p>Programs in this initiative anticipate claiming annual MMBtu savings. Initiative savings are expected to be realized and reported in Scorecards, at a program-level, as MWh energy and MW peak demand savings for electric, and MMBtu energy savings and peak MMBtu reductions for fossil fuels (including natural gas).</p> <p>Energy savings are calculated by independent third-party contractors who utilize site-specific energy models to estimate savings above code.</p>
Realization Rate (RR)	No applicable RRs have been determined for programs in this initiative within the preceding five-year time frame.
Planned VGS Approach	Program areas offering incentives plan to undergo Gross Savings Analysis for the program period 2017-2020. An independent evaluation contractor will be procured by NYSERDA by Q1 2021 to perform this analysis. Details related to the Gross Savings Analysis methodology will be submitted in an EM&V Plan in Q1 2021. The

	estimated completion of the Gross Savings Analysis report is Q4 2021.
Exemption from EAM Status	Not exempt

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**Re: Verified Gross Savings Specification – Statewide LMI Portfolio:
 Additional LMI Initiatives**

Verified Gross Savings Specification	
Date of Implementation Plan Filing	December 14, 2020
Initiative Name	Statewide LMI Portfolio: Additional LMI Initiatives
Initiative Description	<p>In addition to market segment-specific programming, LMI customers are served through a series of programs administered by utilities and by NYSERDA that aim to increase awareness of and access to energy efficiency and clean energy solutions across LMI market segments.</p> <p>NYSERDA, as part of the Clean Energy Fund Market Development Portfolio, administers the New York State Healthy Homes Value-Based Payment Pilot (“Healthy Homes”) and the Solar for All program. Both programs are designed to increase access to clean energy solutions and improve energy affordability for LMI residents and communities. As NYSERDA’s Solar for All is focused on clean energy generation, not energy savings, no RR will be determined for this program and it will not be discussed further in this Spec.</p> <p>Central Hudson’s Community Lighting program provides LED bulbs to customers that utilize services from organizations such as United Way.</p> <p>Con Edison offers additional programming to its LMI customers through Food Bank Bulb Distribution (“Food Bank”) as part of its Retail Lighting program and targeted messaging to LMI customers via Home Energy Reports (“HER”). Additionally, both Con Edison and Orange & Rockland offer an Efficiency Starter program, which provides free kits of low-cost energy savings measures to LMI customers within their respective service territories.</p>
Gross Savings Methodology	<p>Programs in this initiative anticipate claiming annual MMBtu savings. Initiative savings are expected to be realized and reported in Scorecards, at a program-level, as MWh energy and MW peak demand savings for electric, and MMBtu energy savings and peak MMBtu reductions for fossil fuels (including natural gas).</p> <p>In general, the Program Administrators will rely on the TRM and best practices to estimate savings and achieve VGS goals. For prescriptive measures, baseline studies or other evaluation data will be leveraged, where available, to calculate an average existing</p>

	<p>condition baseline that approximates the type and age of equipment currently installed by LMI customers. In the future, these baseline assumptions will be directly documented in the TRM.</p> <p>For custom measures, project-specific existing condition baselines will be used. Savings attributed to NYSERDA’s Healthy Homes Pilot will be calculated using EmPCalc, a custom, whole-house modeling software that is also used in the EmPower program.</p>
<p>Realization Rate (RR)</p>	<p>Due to recent and ongoing evaluation efforts, each utility and NYSERDA administered program will be using program-specific RRs, where available, during the 2020 program year.</p> <p>As discussed in more detail in the VGS Spec for Con Edison’s Retail Lighting program (filed on September 15, 2020), this program, including the Food Bank Bulb Distribution channel, was using the following AP RRs from Con Edison’s Rate Case effective date of January 1, 2020 through August 31, 2020:</p> <ul style="list-style-type: none"> • MWh: 100% • MW: 100% <p>As of September 2020, the Food Bank portion of the program has new VGS RRs (61% for MWh, 65% for MW) from the impact evaluation of this program in 2018 (<i>Residential Retail Lighting 2018 Program Evaluation</i>, filed in Q3 2020). Based on the independent evaluator’s assessment of recommended programmatic changes and savings estimation approaches identified in this impact evaluation, the following AP RRs are identified for the Food Bank portion of the program:</p> <ul style="list-style-type: none"> • Food Bank First-Year Annual MWh: 58%¹ • Food Bank Lifetime MWh: 74%¹ • Food Bank MW: 58% <p>These AP RRs, effective September 1, 2020, are premised on adopting the following evaluation recommendations at the program-level:</p> <ul style="list-style-type: none"> • Consumption HVAC Interaction Factor (HVACc): 0.060 • Demand HVAC Interaction Factor (HVACd): 0.125 • Updated Baseline Wattages for Reflector, Decorative, and Globe Categories <p>AP RRs will be applied prospectively from September 1, 2020 for 18 months or until a new Gross Savings Analysis is completed.</p>

¹ Due to differences in in-service rates (ISRs) over time as identified in the evaluation, Food Bank bulbs should apply different RRs for first-year annual and for lifetime kWh.

	<p>As discussed in more detail in the VGS Spec for Con Edison’s HER program (filed with the evaluation report on December 1, 2020), this program was using the following AP RRs from Con Edison’s Rate Case effective date of January 1, 2020 through November 30, 2020:</p> <ul style="list-style-type: none"> • MWh: 100% • MMBtu: 100% • Peak MMBtu: 100%² <p>Additionally, the initial VGS RR of 55% for MW was applied retrospectively and prospectively, from January 1, 2020 through November 30, 2020.</p> <p>Con Edison’s HER Program has new VGS RRs (98% for MWh, 54% for MW, 69% for MMBtu, and 69% for peak MMBtu) from the evaluation of the 2019 program year (<i>Home Energy Reports Program: 2019 Comprehensive Report</i>, filed on December 1, 2020). These VGS RRs are applied prospectively, effective December 1, 2020, until completion of the next Gross Savings Analysis.</p> <p>No applicable RRs have been determined for NYSEERDA’s Healthy Homes pilot, for Central Hudson’s Community Lighting program, nor for either Con Edison’s or Orange & Rockland’s Efficiency Starter programs within the preceding five-year time frame.</p>
Planned VGS Approach	<p>An initial impact evaluation was performed for Con Edison’s Retail Lighting program for the 2017 program year by Navigant, a Guidehouse Company. The final Evaluation Report was filed in Q2 2019. A subsequent impact evaluation of the 2018 program year was completed by Guidehouse. The final Evaluation Report was filed on September 15, 2020. In accordance with the use of an AP RR, the next Gross Savings Analysis will be completed by March 2022.</p> <p>An initial impact evaluation was performed for Con Edison’s HER program for the 2018 program year by Navigant, a Guidehouse company. The final Evaluation Report was filed in Q1 2020. A subsequent evaluation was performed by Guidehouse for the 2019 program year. Electric and gas savings and peak reductions from Con Edison’s HER Program were calculated, and further insights were provided into LMI and non-LMI customer performance. Guidehouse completed this Gross Savings Analysis. The final Evaluation Report was filed on December 1, 2020.</p>

² Peak MMBtu was not specifically evaluated. The MMBtu RR is used for this metric with concurrence by the evaluator.

	<p>An impact evaluation for Con Edison’s Efficiency Starter program is forthcoming, with an expected evaluation plan submission of Q3 2021. The final results are anticipated to be published by Q3 2022.</p> <p>Orange & Rockland will determine an appropriate schedule for future Efficiency Starter program Gross Savings Analysis and incorporate details into a future ETIP/SEEP filing.</p> <p>Central Hudson’s Community Lighting program will undergo Gross Savings Analysis for the program period 2018-2019. Due to the low cost and relatively low energy savings associated with this program, the analysis will be limited to an engineering review of the savings estimation methodologies. This was further described in an EM&V Plan filed on June 1, 2020. The estimated completion of the Gross Savings Analysis Report is Q1 2021. Independent evaluator Demand Side Analytics will perform the Gross Savings Analysis.</p> <p>NYSERDA’s Healthy Homes pilot will undergo Gross Savings Analysis at a future date depending on the start date and progress of the pilot. The Gross Savings Analysis methodology will consist of a bill savings analysis to be detailed in an EM&V Plan and conducted by an independent evaluator. The impact evaluation for Healthy Homes will be conducted cooperatively by NYSERDA and the New York State Department of Health to measure effects of the interventions.</p>
Exemption from EAM Status	Not exempt