

**Technical Resource Manual Management Plan**

**November 8, 2021**

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## I. Introduction

As directed in the February 26, 2015 Order Adopting Regulatory Policy Framework and Implementation Plan (the “REV Track One Policy Order”) in the Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (the “REV Proceeding” or “REV”) issued by the New York State Public Service Commission (“Commission”),<sup>1</sup> and subsequently augmented by the January 22, 2016 Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2016-2018 (the “2016 Utility Energy Efficiency Order”) in the Matter of Utility Energy Efficiency Programs,<sup>2</sup> Central Hudson Gas and Electric Corporation (“Central Hudson”), Consolidated Edison Company of New York, Inc. (“Con Edison”), National Fuel Gas Distribution Corporation (“National Fuel”), New York State Electric & Gas Corporation (“NYSEG”), Niagara Mohawk Power Corporation d/b/a National Grid, The Brooklyn Union Gas Company d/b/a National Grid NY and KeySpan Gas East Corporation d/b/a National Grid (collectively “National Grid”), Orange and Rockland Utilities, Inc. (“O&R”), Rochester Gas and Electric Corporation (“RG&E”), and Long Island Electric Utility Servco LLC as agent of and acting on behalf of Long Island Lighting Company d/b/a LIPA (“LIPA”), and the New York State Energy Research and Development Authority (“NYSERDA”) (collectively the “TRM Administrators<sup>3</sup>”) hereby submit this Technical Resource Manual (“TRM”) Management Plan.

The REV Track One Policy Order stated:

The utilities will work collectively to support the maintenance of a New York State TRM, while allowing for utility territory specific inputs, as appropriate. The Joint Utilities will file a TRM Management Plan by no later than June 1, 2015. Upon filing this plan, the utilities will assume responsibility for the TRM from Staff. This plan should include a process that ensures each utility’s and NYSERDA’s input is considered, all changes to the

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<sup>1</sup> Case 14-M-0101 – *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision* (“REV Proceeding”), Order Adopting Regulatory Policy Framework and Implementation Plan (issued and effective February 26, 2015).

<sup>2</sup> Case 15-M-0252 – *In the Matter of Utility Energy Efficiency Programs*, Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2016-2018 (issued and effective January 22, 2016).

<sup>3</sup> Long Island Electric Utility Servco LLC, as agent of and acting on behalf of Long Island Lighting Company d/b/a LIPA (“LIPA”), was added in 2016, changing the reference from “Joint Utilities” to “TRM Administrators” as a result.

TRM are transparent to Staff and stakeholders, and an updated TRM will be filed annually in accordance with the schedule discussed below. In addition, the TRM Management Plan should include any plans for the use of contractor support, including the expected schedule for obtaining such support. Staff will retain a monitoring and auditing role.<sup>4</sup>

Accordingly, the Joint Utilities' representatives, with the participation of New York State Department of Public Service ("DPS") Staff ("Staff"), NYSERDA, and Public Service Enterprise Group ("PSEG")/Long Island Power Authority ("LIPA") began the TRM Transition Subcommittee with a kick-off meeting on April 1, 2015. Representatives from the Joint Utilities were present at the initial meeting, and subsequent meetings were held with the aforementioned parties in order for the Joint Utilities to successfully issue an initial TRM Management Plan on June 1, 2015.

On June 19, 2015, the Commission issued an Order Authorizing Utility-Administered Gas Energy Efficiency Portfolios for Implementation Beginning January 1, 2016 (the "2015 Gas Energy Efficiency Order"), which directed: (1) "all gas utilities implementing energy efficiency programs in 2016 to participate in the maintenance of the TRM," and (2) the "TRM Management Plan filed on June 1, 2015 in Case 15-M-0252 to be modified."<sup>5</sup>

On October 15, 2015, the Secretary to the Commission established a new matter number dedicated to the TRM, Matter 15-01319, In the Matter of the Technical Resource Manual. This Matter was

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<sup>4</sup> REV Proceeding, *supra* note 1.

<sup>5</sup> Case 15-M-0252 – *In the Matter of Utility Energy Efficiency Programs*, Order Authorizing Utility-Administered Gas Energy Efficiency Portfolios for Implementation Beginning January 1, 2016 (issued and effective June 19, 2015) ("2015 Gas Energy Efficiency Order"), at 13.

intended by Staff to facilitate the transparent and orderly conduct of activities related to the TRM, aiding parties in tracking developments.

On January 22, 2016, the Commission issued the 2016 Utility Energy Efficiency Order, which directed the Joint Utilities to make additional modifications to the TRM Management Plan.<sup>6</sup>

On March 15, 2018, the Commission issued the Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2019-2020 (“the March 2018 Order”), which directed the utilities to file a TRM Evaluation, Measurement and Verification (“EM&V”) Coordination Report that “include[s] a plan to use the information gleaned through EM&V activities to improve assumptions and factors within the TRM.”<sup>7</sup> The March 2018 Order also directed the TRM Management Committee to update the TRM Management Plan.<sup>8</sup>

On September 9, 2021, the Commission issued the Order Approving Clean Energy Fund Modifications (“the September 2021 Order”), transitioning NYSERDA from a consultative role to a full voting member on the TRM Management Committee. NYSERDA is furthermore granted “stature, right, and responsibilities, including proportional sharing of associated costs, within the Technical Resource Manual Management Committee’s voting structure that are equal to that of the entities that has a share of the Technical Resource Manual Management Committee votes currently shared by the Utilities and LIPA.”<sup>9</sup> The September 2021 Order accordingly directed the

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<sup>6</sup> Case 15-M-0252 – In the Matter of Utility Energy Efficiency Programs, Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2016-2018 (issued and effective January 22, 2016), at 40 and 41.

<sup>7</sup> Case 15-M-0252 – March 2018 Order, at ordering clause 10, on page 53.

<sup>8</sup> Case 15-M-0252 - March 2018 Order, at ordering clause 11, on page 53.

<sup>9</sup> Case 14-M-0094 –, Order Approving Clean Energy Fund Modifications (issued and effective September 9, 2021), on page 91 and 92.

TRM Management Committee to update the TRM Management Plan to reflect NYSERDA's new role.

## **II. Purpose**

The initial purpose of the TRM Transition Subcommittee (a “form and fold” subcommittee of the E2 Working Group<sup>10</sup>) was to prepare a plan that will facilitate an effective transition, from Staff to the Joint Utilities, of the functional responsibility for maintaining the TRM. As part of this transition, the TRM Transition Subcommittee provided input, and the Joint Utilities designed the TRM Management Plan to provide the foundational venue for utilities to work together to maintain and update the TRM prospectively. Now that the transition from Staff to the Joint Utilities has been effectuated, the TRM Transition Subcommittee has folded.

Per the REV Track One Policy Order, the Joint Utilities assumed responsibility from Staff for maintaining and updating the TRM, effective June 1, 2015, when the Joint Utilities filed the initial TRM Management Plan. As part of the initial TRM Management Plan filing, the Joint Utilities established a TRM Management Committee (“TRM MC”) that replaced the folded Technical Manual Subcommittee, the details of which are described in greater detail herein. Version 3 of the TRM, also known as the *New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs- Residential, Multi-family, and Commercial/Industrial Measures, Version 3*, was provided to the Joint Utilities by Staff. A letter indicating this fact was filed by Staff on June

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<sup>10</sup> The E2 Working Group was established in February 2014 and operated in the context of broader Commission proceedings. The E2 Working Group has been subsumed into the Clean Energy Advisory Council (“CEAC”). The CEAC Steering Committee consists of Staff, NYSERDA, representatives from the major electric and gas utilities, LIPA, the New York Power Authority (“NYPA”), PSEG, and designees from various working groups. CEAC meetings are open to all stakeholders and parties in Cases 07-M-0548, 15-M-0252, 14-M-0094, and 14-M-0101. The CEAC's primary objective is to support innovation and collaboration leading to the development of the most impactful clean energy programs and to reduce cost and achieve scale for these resources, including an effective transition from current clean energy program offerings and on-going delivery thereafter.

1, 2015 in case 15-M-0252.<sup>11</sup> Supporting documentation, as listed in Appendix A to this Plan, was also provided to the Joint Utilities by Staff.<sup>12</sup>

The primary purpose of the TRM is to provide a standardized, accurate, fair, and transparent approach for estimating gross savings. To do so, the TRM provides standardized energy savings calculations and assumptions at the measure level for estimating energy savings.<sup>13</sup> It should be noted that the TRM is not intended to measure net energy and net demand savings (*i.e.*, savings that have been adjusted based on completed evaluation study results, incorporating adjustments such as free ridership, spillover, market effects, etc.). The Plan presented herein addresses the ongoing methodology and practices that the TRM MC will undertake to maintain and update the TRM.

### **III. Overview**

The TRM Management Plan generally describes the overall process used to maintain the savings estimate approach and update the TRM, as described in greater detail herein. This process accommodates a variety of inputs, including but not limited to: (1) impact evaluation findings or focused Measurement and Verification (“M&V”) analyses relevant to savings algorithms; (2) studies documenting emerging and developing technology; (3) updates to industry standards or energy conservation codes; and (4) demand savings assumptions. DPS will exclusively oversee all TRM updates that involve commission policy and staff guidance described in Appendix B of the 2018 Order<sup>14</sup>.

The TRM will continue to evolve over time and will incorporate various inputs, some of which are currently not known. The complexity of some of the inputs may require further analysis in

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<sup>11</sup> Case 15-M-0252 – Letter from Colleen L. Gerwitz, DPS Director of the Office of Clean Energy, to the Commission Secretary, filed on June 1, 2015.

<sup>12</sup> Staff developed and provided Appendix A to the Joint Utilities for use and inclusion in the TRM Management Plan.

<sup>13</sup> Additionally, the TRM provides measure-specific effective useful lifetimes.

<sup>14</sup> Case 15-M-0252 – March 2018 Order, Appendix B

order to be understood and appropriately integrated into the TRM. Additionally, there may be a need to engage specialized industry expertise to aid in such understanding and integration.

In the future, utility program administrators will continue to plan and conduct Evaluation, Measurement and Verification (“EM&V”) studies or focused M&V analyses at any of the following levels: technology or measure level, program level, portfolio level, and/or statewide level. TRM revisions will make use of relevant EM&V impact study findings or detailed impact M&V analyses.

#### **IV. Organizational Structure**

A TRM MC was formally established on June 1, 2015, with the initial filing of the TRM Management Plan. To create the TRM MC, each utility identified one lead representative who would participate in ongoing TRM MC activities. Representation on the TRM MC from the major utilities, consisting of Central Hudson, Con Edison, National Fuel, NYSEG, National Grid, O&R, RG&E, and PSEG LI is required.<sup>15</sup> NYSERDA was also added to the TRM MC on September 9, 2021<sup>16</sup>. Each lead representative is responsible for inviting other organization representatives to participate in ongoing TRM MC meetings as appropriate.

Although each of the ten legal organizations specified in the introduction have equal representation on the TRM MC, in accordance with the requirements specified in the REV Track One Policy Order and further clarified in the 2015 Gas Energy Efficiency Order, there are differences with respect to the TRM MC’s voting structure and funding structure, both of which are described in greater detail herein. With respect to voting, there are a total of eight votes, with Con Edison, Central Hudson, National Fuel, National Grid, NYSEG/RGE, O&R, LIPA, and NYSERDA each representing a single vote. With respect to funding, the member organizations of the TRM MC have agreed upon a set funding methodology which is also described in greater detail herein. The funding methodology is at the legal entity level, with the exception of National Grid which is shown as a consolidated number for all three National Grid legal entities. These differences are

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<sup>15</sup> Representation on the TRM MC from Corning Natural Gas Corporation and St. Lawrence Gas Company, Inc. is strongly encouraged, to the extent that these utilities have energy efficiency interests in the future.

<sup>16</sup> Case 14-M-0094 – September 2021 Order, at ordering clause 5, on pages 88-92.

specified here for transparency purposes and have been agreed upon by the member companies of the TRM MC.

The TRM MC will ensure that all changes made to the TRM are transparent to both Staff and stakeholders, as described in greater detail below. The TRM MC is responsible for adding new measures to the TRM, and maintaining and updating the TRM, in accordance with the Commission's Orders outlined above.

Two co-chairs from the TRM MC are selected to serve a term of twelve months.<sup>17</sup> The voting and election for both co-chairs occur every April. The term of the co-chairs lasts from May 1 to April 30. The co-chairs are responsible for establishing the monthly meeting schedule, facilitating meetings, prioritizing workloads, managing all TRM MC activities, and ensuring that TRM MC deliverables are met. Additional meetings, beyond monthly meetings, are scheduled on an as needed basis. Through regular meetings of TRM MC, and through work contributions from “form and fold” subcommittees,<sup>18</sup> the TRM will be maintained and updated.

Within the organizational structure, the co-chairs may appoint designees or request assistance from members of the TRM Administrators in order to complete specific detailed tasks. For example, the co-chairs have appointed a Secretary designee that is responsible for general administration work, scheduling meetings, facilitating communication, and other ad hoc assignments.

The TRM MC has agreed upon the fixed cost share percentages<sup>19</sup> outlined below for contracting purposes, based on an on-going productive dialogue and negotiation process facilitated amongst

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<sup>17</sup> Any MC member from any MC organization can serve as Co-chair. Co-chairs are not prohibited from serving multiple consecutive terms, with the TRM MC's consensus. After the conclusion of a twelve-month term, the TRM MC reserves the right to identify new co-chairs or continue operating with the existing co-chairs. To the extent agreement is not reached in selecting new co-chairs, the existing co-chairs may choose to continue to serve for the next twelve-month term. After the completion of a consecutive two-year term, a new co-chair should be selected.

<sup>18</sup>“Form and fold” subcommittees would be comprised of TRM MC member company personnel.

<sup>19</sup> Cost share percentages were determined by each MC member organization's 2021-2025 average annual energy efficiency budget (including LMI and Heat Pumps) divided by the total sum of the MC member organizations' 2021-2025 average energy efficiency budgets. Central Hudson, Con Edison, National Fuel, National Grid, NYSEG, RG&E, and Orange & Rockland applied the budget numbers found in the [January 16, 2020 Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025](#). PSEG LI/LIPA provided their energy efficiency budgets for 2021-2025 (including LMI and Heat Pumps). NYSERDA's budget numbers were developed from their CEF Market Development budget, which is \$1.9B, rounded up to \$2B to support energy efficiency (including heat pumps and LMI) over a ten-year period, averaging \$200M per year. The cost share percentages shown in Table 1 will be applied to TRM Administrative Vendor invoices, which are approved for payment, as support work is completed.

member organizations. To the extent that the TRM MC incurs costs associated with: (1) obtaining administrative support, or (2) maintaining and updating the TRM, the following percentages will be utilized:

**Table 1: TRM MC Cost Allocations**

| <b>Management Committee Organization</b> | <b>Allocated Cost Share Percentage</b> |
|--|--|
| Central Hudson                           | 2%                                     |
| Con Edison                               | 34%                                    |
| LIPA                                     | 8%                                     |
| National Fuel                            | 2%                                     |
| National Grid                            | 20%                                    |
| NYSEG                                    | 7%                                     |
| O&R                                      | 2%                                     |
| RG&E                                     | 3%                                     |
| NYSERDA                                  | 22%                                    |

To the extent that the TRM MC identifies a need to switch cost methodologies or make further adjustments to individual cost shares resulting from new contract negotiations for TRM Administrative Vendor support, the TRM MC will revise the TRM Management Plan accordingly and file the updated TRM Management Plan with the Commission.<sup>20</sup>

**V. TRM Administrative Details**

**A. Cyclical Filing Schedule**

The primary function of the TRM MC will be to issue TRM updates that reflect information from EM&V studies, M&V analyses, technology changes, or updates to industry codes and standards.

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<sup>20</sup> Under extenuating circumstances, the fixed cost share percentages may be adjusted temporarily, if all TRM MC members agree and the decision is documented with a vote.

The TRM MC will file quarterly record of revisions for any additions or revisions to the TRM, for stakeholder benefit and transparency purposes. A consolidated TRM will be filed once a year that incorporates the changes from the previous twelve month's record of revision filings. The annual filing is submitted in July of each year. A representative example of a typical cyclical filing schedule is included as Appendix B to this filing. The cyclical filing schedule will document, the filing schedule for record of revisions and the annual update. If unforeseen circumstances delay review and the MC deviates from the typical cyclical filing schedule, an extension request will be filed with DPS for transparency purposes.

## **B. Addition/Change Process**

The TRM MC has established a functional workflow process to outline how submittals for measure additions, or revisions to existing measures in the TRM, will be worked and advanced through the TRM MC. A copy of this functional workflow process is included as Appendix C "TRM MC-Addition/Change Process" to this filing, and will be posted to the website.<sup>21</sup> Submittals prepared by TRM MC member companies and submittals prepared by non-TRM MC entities (described in more detail below) will both follow the same functional workflow process.<sup>22</sup> Proposed new and proposed revised measures may be submitted at any time during the calendar year. Submitted measures will then be considered by the TRM Administrators on a continuous basis in accordance with the functional workflow. Review will typically take at least eight weeks to complete. Specific start dates and estimated end dates will be established when submittals are received. Such dates will be communicated to the TRM MC and the submitting party. Dates will ultimately be tracked and updated within the detailed work plan maintained by the TRM MC. In special situations, measures deemed time sensitive or high priority will receive an expedited review and filing timeline. It should be noted that emerging technologies and new market innovations will also be accommodated within this workflow, however; the timelines for these submittals will be discussed and established during TRM MC meetings. The TRM MC reserves the right to accelerate or temporarily postpone the review of submittals, as necessary. In addition, the TRM MC may elect

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<sup>21</sup> <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/72C23DECF52920A85257F1100671BDD?OpenDocument>

<sup>22</sup> The term "entity" is not restrictive – this could include utilities, Staff, NYSEDA, technology providers, stakeholders, or any other entity not specified that is working on a submittal. The TRM MC also recognizes that multiple entities may be working together on a submittal.

to postpone the review of a submittal when appropriate (e.g., if additional information has been requested or if consultation with technical expertise is deemed necessary). A resubmittal is required when there is a “NO” vote on the proposed addition or revision, while a postponement is required when the TRM MC requires further research or supporting documentation. In the case of a postponement or resubmittal, the TRM MC will communicate to the submitting party the reason behind the postponement or resubmittal. The TRM MC will vote on submittals for their potential inclusion in the TRM. The voting structure is described in greater detail in the Organizational Structure section. Votes cast by TRM Administrators are defined below. The following voting definitions have been further refined by the TRM MC during the preparation of the TRM Management Plan:

- “YES” – defined as no technical issues with the submittal being presented based on the best available information known by the TRM MC.
- “NO” – defined as technical issues with the submittal being presented, or outstanding questions that have not been addressed in full. “NO” votes are meant to work towards a consensus process, and require further discussions (between or during TRM MC meetings), to move the submittal forward. The entity<sup>23</sup> presenting a submittal that receives a “NO” vote is responsible for responding to the technical issues or outstanding questions identified by the TRM MC, or to inform the TRM MC that the submittal should no longer be considered. “NO” votes can be re-voted to “YES” or “ABSTAIN” based on discussions that ensue or additional information that is ultimately presented. To the extent a submittal receives a “NO” vote and no action has occurred to respond to the “NO” vote within two calendar months, then TRM MC member companies can elect to nullify the submittal; requiring a new submittal if the measure is presented in the future. Reasons for a nullified

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<sup>23</sup> *Id.*

submittal will be documented in quarterly record of revision filings for transparency purposes.<sup>24</sup>

- “ABSTAIN” – defined as a vote that does not stop the TRM MC’s consensus process from moving forward. The reason a TRM MC member is electing an “ABSTAIN” vote can be provided: (1) during the voting process, or (2) during discussions at TRM MC meetings. These reasons will be documented in TRM MC voting spreadsheets.

It should be noted that the TRM Administrator’s voting process only considers the technical accuracy of submittals being presented. If a measure or technology is included in or added to the TRM, it does not mean that it is supported or expressly endorsed by the member companies of the TRM MC (*e.g.*, for gas-only utilities, non-gas measures or technologies may never be supported or expressly endorsed). There is no guarantee that measures included in the TRM will be offered by all utilities.

When a submittal receives “YES” or “ABSTAIN” votes from all TRM MC organizations, then the change has officially been adopted by the TRM MC. Adopted additions or revisions will formally be documented in the quarterly Record of Revision filing and with effective dates in the detailed work plan.

It is important to note that submittals to the TRM MC require a specific form and format, which includes among other things: supporting references, resource documentation, calculation, and input variances. A template for the specific form and format will be made available on the DPS website<sup>25</sup> and is included in Appendix D to this filing. Any entity<sup>26</sup> wishing to prepare a new or revised measure submittal is encouraged to contact member companies of the TRM MC, the TRM MC co-chairs, or a designee (such as the Secretary designee described earlier) directly with questions or completed submittals. The TRM MC should be able to address any questions that arise when a submittal is in the process of being prepared and the TRM MC will determine when

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<sup>24</sup> Rather than filing exhaustive meeting notes from each of these discussions, the TRM MC will summarize reasons for nullified submittals within the quarterly record of revision filings, for transparency purposes.

<sup>25</sup> See <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/72C23DECFF52920A85257F1100671BDD?OpenDocument>.

<sup>26</sup> *Supra* note 15

a submittal is ultimately deemed complete and is ready for TRM MC membership voting. Submittals to change existing content within the TRM must be accomplished by redlining the existing page or pages in the currently effective TRM. Supporting information, if available, for the redlined changes being made must accompany the redlined document. Once the redlined document is prepared it can be submitted to any member organization within the TRM MC or the TRM MC co-chairs, Secretary designee, or other designee of the TRM MC co-chairs. During TRM MC meetings, any input (either verbal during meetings or written between meetings) received from TRM MC member companies, Staff or other external stakeholders is welcomed and will be considered by the TRM MC.

### **C. TRM MC Activities**

The following work activities are conducted by the TRM MC to support its on-going, primary purpose of maintaining and updating the TRM:

#### **1. Meetings**

The TRM MC will schedule meetings which will be communicated to all TRM MC participants. The purpose of these meetings is to discuss progress on current work, planning for future work, and to discuss any outstanding items.

#### **2. Detailed Work Plan**

The TRM Administrators will follow and manage a detailed work plan which will include a recap of work completed, and an on-going workload prioritization list. A representative example of a current, detailed work plan is included as Appendix B to this filing. The TRM Administrators will include a copy of the most up-to-date version of the detailed work plan within quarterly record of revision filings, for transparency purposes. A list of approved measures for the quarter and a brief explanation for measures not approved will be included in the detailed work plan each quarter. The detailed work plan will focus on codes, standards, demand savings updates, new measures, emerging technologies, as well as results from on-going EM&V studies.

##### ***a) Codes, Standards, and Demand Savings***

The TRM Administrators will continue to assess current TRM assumptions such as: codes/standards, baselines, input variables, and components of savings algorithms. The TRM MC obtained contractor support (“TRM Administrative Vendor”) in late 2016, and immediately

initiated a thorough review of energy codes, industry standards and demand savings assumptions. The TRM Administrators works with the TRM Administrative Vendor to update these items prospectively, where applicable, in order to maintain an accurate and reliable TRM. The approach and plan for updating codes, standards and demand savings assumptions will be documented within the detailed work plan described above.

***b) New Measures***

The TRM Administrators will incorporate new measures into the TRM as submittals are developed and provided to the TRM MC. The TRM Administrators require that submittals adhere to the Addition/Change process described above, and that each submission follow the standardized format. The most up to date version of the standardized format template is located on the DPS website.<sup>27</sup>

***c) EM&V***

Results from filed EM&V and M&V studies should be presented to the TRM MC by the utility, NYSERDA, or 3rd party entity that managed the study following the Addition/Revision process defined in this plan. The TRM MC expects that the party filing completed EM&V results, where an update to the TRM is necessary (e.g., these changes are typically found in impact evaluation studies), present such updates to the TRM MC within 60 days of completion for their review and consideration. This may be in the form of a redline submittal or the identification of items to be added to the detailed work plan (when items are identified requiring further research, analysis or investigation). It should be noted that submittals resulting from completed evaluation studies may be presented at any time during the calendar year. EM&V revisions will be included in the above detailed work plan with the corresponding effective dates. To the extent that the TRM MC is facing a significant workload with respect to pending submittals under review, member organizations will prioritize the workload during discussions at TRM MC meetings.

**3. Vendor Support**

The TRM Administrators have contracted with a vendor that will provide administrative and technical support to the TRM MC. The scope of work outlining the role of this vendor is included as Appendix E to this filing.

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<sup>27</sup> <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/72C23DECF52920A85257F1100671BDD?OpenDocument>

#### **4. Outstanding Revisions**

Outstanding revisions to the TRM will continue to be identified, discussed, and prioritized during TRM MC meetings. Other potential items (i.e., form and format, consistency of reference citations, and the relevancy of appendices) will also be prioritized during TRM MC meetings.

#### **5. Emerging Technologies**

The TRM MC's approach to emerging technologies uses a multi-faceted plan to proactively engage stakeholders and to continuously and appropriately update the TRM. The TRM MC's method includes:

##### ***a) Member contributions***

The utilities and NYSERDA, both individually and collectively, utilize the knowledge they gain through direct market interactions with customers, vendors, contractors, technology innovators, and other stakeholders, to develop new TRM measures from which market players can benefit. As such, the TRM MC regularly brings new measures to the TRM, reflecting "market demand" for emerging technologies. The members submissions follow the process and timeline outlined in Appendix C of the Management Plan, when measures are considered for potential inclusion in the TRM.

##### ***b) Third party contributions***

Market actors, such as vendors and manufacturers, are welcome to bring new measure submittals to the TRM MC. To encourage continuous market development, TRM MC works with these entities to advise the following: (1) how to prepare submittals for the TRM MC's consideration, and (2) supporting documentation that should be provided. All measures submitted to the TRM MC must align with the format provided in Appendix D of this document, before they can be considered for technical merit or voting.

##### ***c) EM&V and market potential studies***

TRM MC members regularly perform market potential and baseline studies to identify areas of the marketplace where there may be opportunities for increased measure uptake. All studies completed by NYSERDA are considered when planning for TRM development. In addition, TRM MC's utility members conduct impact evaluations of their individual energy efficiency programs. Upon completion of any such study, the results are analyzed in accordance with the protocol outlined in the "EM&V" section above. The TRM MC will review the results of these

analyses and, depending on the results, emerging technologies could be identified and considered for possible incorporation into the TRM.

*d) Stakeholder Forums*

In consultation with Staff and other stakeholders, the TRM MC will host a minimum of one stakeholder forum each year. The forum(s) will provide a general overview of the TRM, an update of recent TRM activity, and emerging technology trends. Since stakeholder forums need to be coordinated with Staff, the TRM MC recognizes that the schedule of forums will need to be determined, and information regarding the logistics of the forums will need to be prepared and disseminated. These forums may potentially occur as a part of the schedule of energy efficiency topical forums that Staff was ordered to develop in the March 2018 Order.<sup>28</sup> Notification of stakeholder forums will be formally filed under Matter 15-01319.

**D. Transparency**

One of the primary goals of the TRM MC is to ensure transparency with respect to past and current versions of the TRM, and the functional processes employed by the TRM MC. To that end, stakeholders are encouraged to contact TRM MC Administrators, or the TRM co-chairs directly, to the extent they have questions or wish to prepare a submittal for the TRM MC's consideration. The contact information for the current TRM MC co-chairs and secretary are located on the DPS website.<sup>29</sup>

If a non-TRM MC entity<sup>30</sup> wishes to prepare a submittal for the TRM MC's consideration, the process to do so (as well as the timing of the process) is described above in the "Addition/Revision Process" section of the TRM Management Plan. The TRM MC will include non-TRM MC entities in TRM MC meetings, as needed, to: (1) review or move forward a submittal, or (2) identify if outside technical expertise is necessary.<sup>31</sup> The TRM MC co-chairs, or a designee named by the co-

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<sup>28</sup> Case 15-M-0252 – March 2018 Order, at ordering clause 17, on pages 53-54.

<sup>29</sup> See <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/72C23DECFF52920A85257F1100671BDD?Open Document>

<sup>30</sup> *Supra* note 17.

<sup>31</sup> The TRM Administrators reserve the right to caucus, when necessary, and will provide follow up from those discussions (e.g., this may be necessary for the TRM Administrators to make a group decision, about the need for and cost of outside technical expertise).

chairs, will be in contact with non-TRM MC entities to discuss the status of their submittal(s), as well as “next steps” in the functional workflow.

Each filing cycle, a TRM MC member will file a cover letter, records of revision, and all relevant documents on behalf of the entire TRM MC. The filing party is indicated in the Detailed Work Plan. TRM filings will be made through the Commission’s Document and Matter Management (“DMM”) system, in Matter 15-01319.<sup>32</sup> When quarterly record of revisions, or annual TRM filings are completed, the information filed becomes a public document, thus ensuring stakeholder transparency.

The TRM MC will continue to work with Staff to coordinate website updates and to post relevant information that pertains to the TRM or the TRM MC. The opportunity to collaborate and coordinate with Staff in this regard is greatly appreciated by the TRM MC and will help expand the reach of TRM information to stakeholders and members of the general public.

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<sup>32</sup> Matter 15-01319 – *In the Matter of the New York State Technical Resource Manual.*

**TRM Management Plan**  
**Appendix A. New York State Department of Public Service**  
**TRM Supporting Documents**

Materials provided to the Joint Utilities by Staff, as described above in the TRM Management Plan:

- I. All previously approved technical resource manuals, in Adobe PDF file format, as listed below:
  - a. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs - Selected Residential and Small Commercial Measures (Electric), December 28, 2008
  - b. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs (Gas) - Selected Residential and Small Commercial Gas Measures, March 25, 2009
  - c. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Measures in Multi-family Programs, July 9, 2009
  - d. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Measures in Commercial Industrial Programs, September 1, 2009
  - e. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs - Single Family Residential Measures, December 16, 2009
  - f. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs - Residential, Multi-family, and Commercial/Industrial Measures (Version 1), October 15, 2010
  - g. New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs – Residential, Multi-family, and Commercial/Industrial Measures (Version 2), December 12, 2014
- II. A list of in progress measures previously submitted to the Technical Manual Subcommittee (“TMSC”), and associated material.
- III. The May 11, 2010 Evaluation Advisory Group (“EAG”) White Paper - Technical Manual Proposed Recommendations. An EAG review of the five Technical Manuals approved by the Commission between December 2008 and December 2009 for consolidation and streamlining into one manual, the October 15, 2010 TRM.
- IV. A list of website addresses typically utilized by Staff during research, analysis, and clarification of TRM issues.
- V. A compiled list of completed EEPS 1 & EEPS 2 EM&V Studies.
- VI. A Staff compiled list of issues to be reviewed and addressed in future revisions of the TRM.

# **TRM Management Plan**

## **Appendix B. TRM MC - Schedules and Work Plan**

## Cyclical Filing Schedule

Below is a representative sample of the cyclical filing schedule that shows all filings that will occur throughout the year. The schedule below, updated as of the date of this filing, shows all filings anticipated through the end of calendar 2022.

| Item No. | Filing                                  | Due Date         |
|----------|---|------------------|
| 1        | 2021 Q4 Record of Revision              | 12/31/2021       |
| 2        | 2022 Q1 Record of Revision              | 3/30/2022        |
| 4        | 2022 Q2 Record of Revision              | 6/30/2022        |
| 3        | <b>TRM Version 10 Filing (for 2022)</b> | <b>7/31/2022</b> |
| 5        | 2022 Q3 Record of Revision              | 9/30/2022        |
| 6        | 2022 Q4 Record of Revision              | 12/31/2022       |
| 7        | 2023 Q1 Record of Revision              | 3/31/2023        |
| 9        | 2023 Q2 Record of Revision              | 6/30/2023        |
| 8        | <b>TRM Version 11 Filing (for 2023)</b> | <b>7/31/2023</b> |
| 10       | 2023 Q3 Record of Revision              | 9/30/2023        |
| 11       | 2023 Q4 Record of Revision              | 12/31/2023       |

## Tentative High Level Annual Schedule

Below are the high level goals the committee will be focused on each year through 2022. The details and sub-tasks of this schedule will be documented within the detailed work plan. Any changes will be addressed in the detailed work plan.

| Year | High Level Annual Schedule  |
|------|---|
| 2020 | <ul style="list-style-type: none"> <li>*Add new measures, corrections, and revisions</li> <li>*Incorporate results from any filed EM&amp;V studies</li> <li>*TRM Stakeholder Forum</li> <li>*Integration of heat pump measures</li> <li>*Establishment of fuel neutrality throughout the TRM</li> </ul>   |
| 2021 | <ul style="list-style-type: none"> <li>*Add new measures, corrections, and revisions</li> <li>*Incorporate results from any finalized and filed EM&amp;V studies</li> <li>*TRM Stakeholder Forums</li> <li>*Integration of LMI measures into the TRM</li> <li>*Inclusion of example calculations for each measure</li> <li>*Add Category 5 to Custom Measures Section: “Residential Retrofit Standardized Simulation for Measure Packages”</li> </ul> |
| 2022 | <ul style="list-style-type: none"> <li>*Add new measures, corrections, and revisions</li> <li>*Incorporate results from any finalized and filed EM&amp;V studies</li> <li>*TRM Stakeholder Forum</li> <li>*Add additional heat pump technologies</li> <li>*Integration of LMI measures into the TRM</li> </ul>  |

## **Detailed Work Plan**

Attached is a representative sample of the detailed work plan. Since this document will be continuously refined, any updates to the detailed work plan will be included in the quarterly record of revision and will be located on the DPS TRM website.<sup>1</sup>

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<sup>1</sup> <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/72C23DECFF52920A85257F1100671BDD?OpenDocument>

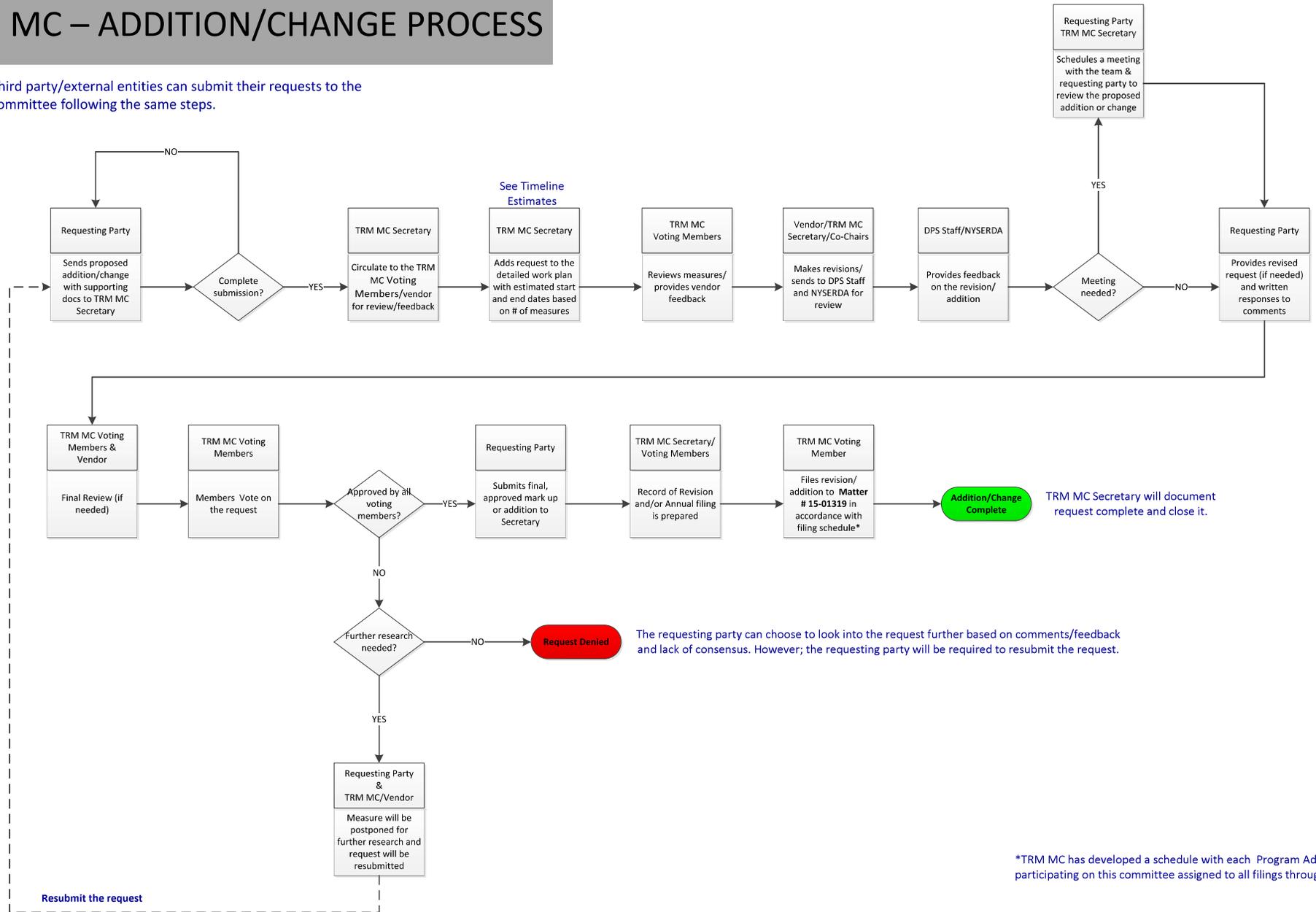
| 4/9/2021 - Q1 Record of Revision TRM Filing<br>Illustrative Example of Detailed Work Plan |  |                           |                       |  |
|---|--|---------------------------|-----------------------|--|
| No.   | Task   | Estimated Completion Date | Effective Date in TRM | Comments   |
| 1   | <b>File Q1 2021 ROR</b>                                    |                           |                       | To be filed by PSEG LI 4/9/2021  |
|   | <b>New Measures</b>  |                           |                       |  |
| C&I   | Clothes Washer   | 4/9/2021                  | 4/9/2021              |  |
| C&I   | Drain Water Heat Recovery (DWHR)                           | 4/9/2021                  | 4/9/2021              |  |
| C&I   | PEI-Rated Clean Water Pump                                 | 4/9/2021                  | 4/9/2021              |  |
| C&I   | High Frequency Battery Charger                             | 4/9/2021                  | 4/9/2021              |  |
| C&I   | High Efficiency Transformer                                | 4/9/2021                  | 4/9/2021              |  |
|   | <b>Review of updates/questions within various measures</b> |                           |                       |  |
| RES   | Air Leakage Sealing  | 4/9/2021                  | 1/1/2022              |  |
| RES   | Blown-In Insulation  | 4/9/2021                  | 1/1/2022              |  |
| RES   | Insulation - Opaque Shell                                  | 4/9/2021                  | 1/1/2022              |  |
| RES   | Adaptive Photonic Control                                  | 4/9/2021                  | 1/1/2022              |  |
| C&I   | Refrigerators and Freezers                                 | 4/9/2021                  | 1/1/2022              |  |
| C&I   | Air Leakage Sealing  | 4/9/2021                  | 1/1/2022              |  |
| C&I   | Insulation - Opaque Shell                                  | 4/9/2021                  | 1/1/2022              |  |
| C&I   | Steam Trap - Low Pressure Space Heating                    | 4/9/2021                  | 1/1/2022              |  |
| C&I   | Steam Trap Monitoring System                               | 4/9/2021                  | 1/1/2022              |  |
| C&I   | Adaptive Photonic Control                                  | 4/9/2021                  | 1/1/2022              |  |
| RES/C&I   | Appendix P   | 4/9/2021                  | 1/1/2022              |  |
| RES/C&I   | Appendix Q   | 4/9/2021                  | 1/1/2022              |  |
|   | New Technology Proposals to TRM                            | 4/9/2021                  | 1/1/2022              |  |
| 2   | <b>File Q2 2021 ROR</b>                                    |                           |                       | To be filed by National Grid 6/30/2021   |
|   | <b>New Measures</b>  |                           |                       | <i>Work plan for Q2 2021 is an estimate of the work anticipated to be completed for the quarter. This list is subject to change based on TRM MC priorities and workload.</i>   |
| RES   | Dryer Conversion   | 6/30/2021                 | 6/30/2021             | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool (moved from B26)   |
| RES   | Battery Powered Electric Lawn Mowers                       | 6/30/2021                 | 6/30/2021             | Submitted by PSEG LI   |
| C&I   | Energy Efficient Hydraulic Lubricants                      | 6/30/2021                 | 6/30/2021             |  |
| C&I   | Energy Efficient Gear Lubricants                           | 6/30/2021                 | 6/30/2021             |  |
| C&I   | Solar Pool Covers  | 6/30/2021                 | 6/30/2021             | Submitted by PSEG LI   |
| RES/C&I   | Ground Source Heat Pump with Central Pumping               | 6/30/2021                 | 6/30/2021             |  |
| RES/C&I   | Ground Source Heat Pump Air-to-Water                       | 6/30/2021                 | 6/30/2021             |  |
| RES/C&I   | Air-to-Water Heat Pump                                     | 6/30/2021                 | 6/30/2021             |  |
|   | <b>Review of updates/questions within various measures</b> |                           |                       |  |
| RES   | Heat Pump Water Heater - Air Source                        | 6/30/2021                 | 1/1/2022              | Consideration of kW deemed savings where baseline units are fossil fuel heated   |
| RES   | Thermostats (Wifi)   | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool  |
| RES   | Interior Lighting  | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool  |
| RES   | Refrigerator/Freezers                                      | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool  |
| RES   | Furnace Clean and Tune                                     | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool  |
| RES   | Showerheads  | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool  |
| RES   | Hot Water and Steam Pipe Insulation                        | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool (moved from B26)   |
| RES   | Storage Tank and Instantaneous Domestic Water Heater       | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool (moved from B26)   |
| RES   | Boiler, Furnace and Unit Heater                            | 6/30/2021                 | 1/1/2022              | Reviewed and updated to align the baseline and other assumptions for low-income household for measure savings calculated using the NYSERDA EmPCalc Tool (moved from B26)   |
| C&I   | High Speed Fan   | 6/30/2021                 | 1/1/2022              | There is some concern that the assumed hours of operation are overstated. This assumption will be reviewed and revised as appropriate.   |
| C&I   | High Volume Low Speed Fan                                  | 6/30/2021                 | 1/1/2022              | Baseline assumptions should be reviewed for legitimacy (ventilation vs. circulation). Additionally, the method as written may prove restrictive given the information typically provided for these products on manufacturer spec sheets. Will review and revise approach to align baselines and accommodate a wider range of products. |
| C&I   | Elevator Modernization                                     | 6/30/2021                 | 1/1/2022              | Potential revision to assumptions surrounding M-G drive efficiency/losses, as recommended by Con Ed.   |
| C&I   | Economizer/Advanced RTU Control                            | 6/30/2021                 | 1/1/2022              | Potential revision to align baseline assumptions for these two measures to address an inconsistency identified by Con Ed.  |
| 3   | TRM Version 9 Filing                                       | 7/30/2021                 | 1/1/2022              | To be filed by National Grid 7/30/2021   |

# **TRM Management Plan**

## **Appendix C. TRM MC – Addition/Revision Workflow Process**

# TRM MC – ADDITION/CHANGE PROCESS

Third party/external entities can submit their requests to the committee following the same steps.



**TRM Management Plan**  
**Appendix D. Measure Template**

*Define Sector*

**Name of Measure**

**Measure Description**

*A BRIEF SUMMARY OF THE MEASURE (See current descriptions in the TRM as examples)>>*

**Method for Calculating Annual Energy and Peak Coincident Demand Savings**

<<SHOW THE CALCULATION(S) IN DETAIL<<

**where:**

<<INCLUDE DEFINITION OF VARIABLES IN RELATION TO THE INFORMATION REQUIRED IN THE CALCULATION(S)>>

**Summary of Variables and Data Sources**

<<DETAIL APPROPRIATE INFORMATION HERE>>

**Coincidence Factor (CF)**

<<DETAIL APPROPRIATE INFORMATION HERE>>

**Baseline Efficiencies from which Savings are Calculated**

<<DETAIL APPROPRIATE INFORMATION HERE>>

**Compliance Efficiency from which Incentives are Calculated**

<<DETAIL APPROPRIATE INFORMATION HERE>>

**Operating Hours**

<<DETAIL APPROPRIATE INFORMATION HERE>>

**Effective Useful Life (EUL)**

<<DETAIL APPROPRIATE INFORMATION HERE>>

**Ancillary Fossil Fuel Savings Impacts**

<<IF REQUIRED>>

**Ancillary Electric Savings Impacts**

<<IF REQUIRED>>

**References**

<<LIST ALL REFERENCES HERE (INCLUDING SUPPORTING STUDIES)>>

**Record of Revision**

| <b>Record of Revision Number</b> | <b>Issue Date</b> |
|----------------------------------|-------------------|
|                                  |                   |
|                                  |                   |

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# **TRM Management Plan**

## **Appendix E. TRM MC - Administrative Support**

# Scope of Work

## TRM Administrative Vendor

### Technical TRM Editor – Roles/Responsibilities

The primary responsibility of the Technical TRM Editor is to provide administrative assistance, ensuring that changes to the TRM are maintained in an effective and accurate manner. The editor role at this level would also provide technical support for measures, particularly new measures. This may include the research and provision of energy savings and or cost information for individual measures, as directed by the TRM MC. Specific responsibilities for the selected vendor include but are not limited to:

- Take redlined changes approved by the TRM MC and effectuate the redline changes into the relevant sections of the official TRM. Relevant sections may include, but are not limited to, engineering algorithms, technical descriptions, page number alignment, table of contents referencing, footnote management, appendix management, document formatting services, etc. Examples are included in the embedded files in the Reference Documents section.
- Document and compile a list of revisions made in the TRM, utilizing a record of revision format provided by the TRM MC. Documentation shall include the name of the measure being revised, revision number, issue date, effective date, description of the revision, and the page number in which the revision is located.
- Provide a secure means of exchanging electronic documents with the members of the TRM MC.
- Assist the TRM MC by working directly with New York State Department of Public Service Staff (“Staff”) to publicly post most current versions of the TRM. This may include: coordinating with Staff to have a document posted on the Department of Public Service website, or possibly issuing e-mails or notifications. Specific direction for this task will be provided by the TRM MC. Quarterly updates is the minimum expectation required. It should be noted that the July update represents the “annual” update, with changes to become effective January 1<sup>st</sup> of the following year.
- Attend and host TRM MC meetings. Typically, these meetings are one hour in length and held on a weekly basis. In addition, ad hoc meetings may be scheduled by the TRM MC, depending on workload requirements. \
- When tasked with the development of a new measure, develop engineering narratives for the TRM MC’s consideration, using the specified form and format for each measure. This may include incorporating information from evaluation, measurement or verification

work completed within New York State or on a national level. Examples are included in the embedded files in the Reference Documents section.

- Perform independent reviews of approved redlined changes being effectuated into the TRM, and advise the TRM MC if additional edits may be necessary for future consideration.
- At the direction of the TRM MC, perform code and standards reviews for specific measures. Make suggested redlines for the TRM MC's potential consideration. To the extent this type of work is authorized by the TRM MC, individual scopes of work will be presented to the Technical TRM Editor. The Technical TRM Editor will then have the opportunity to prepare a price quotation to perform such work, using the hourly rates established in the TRM bid sheet. The price quotation will ultimately be subject to the TRM MC's review and approval before such work is awarded and authorized to commence.
- Make recommendations to the TRM MC on ways to streamline and/or standardize the TRM document.
- Research measures identified by the TRM MC and provide accurate and reliable cost and savings information on the measures. This would be provided for informational purposes and not included as part of the TRM