

CAEECC-Hosted Market
Transformation Working Group –
Phase II

Report and Recommendations to the
California Public Utilities Commission

FINAL REPORT

February 1, 2021

Table of Contents

Section 1: Introduction & Overview	4
1.1 Background.....	4
1.2 Report Outline	5
1.3 CAEECC Member Participants	5
Section 2: Savings Attribution—MTIs and RA	7
2.1 Purpose.....	7
2.2 Background.....	7
2.3 Method to Prevent Double Counting.....	8
2.3a Option A: Remove all RA Savings.....	9
2.3b Option B: Deciding to Simply Subtract RA Savings Is Premature	10
Section 3: Savings Attribution—MTIs and C&S	13
3.1 Purpose.....	13
3.2 Background.....	13
3.3 Recommended Principles and Overall Approach	13
3.4 Attribution Factors	14
3.4a Option A: Addition of MTI Related Factors Now	15
3.4b Option B: Detailing Additional Factors is Premature Until Roles of Market Actors are Defined.....	17
3.5 Factor Weighting.....	19
3.5a Option A: Make Adjustments to Weighting of Factors Now	20
3.5b Option B: Adjustments to Weighting of Factors Now is Premature	22
3.6 Pre-Allocation of Savings.....	22
3.6a Option A: Pre-allocate a portion of savings and the rest allocated ex post.....	24
3.6b Option B: No pre-allocation of savings—entirely ex post.....	24
Section 4: Savings Goal-Setting for MTIs.....	25
4.1 Purpose.....	25
4.2 Proposal.....	25
4.3 MTI Goals if Implementor is a California Program Administrator	27
Appendix A: Market Transformation Work Group Member Organizations & Representatives.....	28
Appendix B: Additional Factors to Use in Ex-Post Evaluations.....	29
Appendix C: Savings Attributions: MTIs and C&S Weighting of Factors Option A—Make Adjustments to Weighting of Factors Now.....	30
Appendix D: Savings Attribution: MTIs and C&S Attribution Factors Option B—Detailing Additional Factors is Premature	34
Appendix E: Organization-Level Comments on Non-Consensus Option Choices	38

<i>Section 2: Savings Attribution – MTIs and RA</i>	38
Option A - Remove all RA Savings	38
Option B – Deciding to Simply Subtract RA Savings is Premature	38
<i>Section 3: Savings Attribution between MTIs and C&S – Attribution Factors</i>	38
Option A: Addition of MTI Related Factors Now	38
Option B: Detailing Additional Factors is Premature Until Roles of Market Actors Are Defined	39
<i>Section 3: Savings Attribution between MTIs and C&S – Factor Weighting</i>	39
Option A: Making Adjustments to Weighting of Factors Now	39
Option B: Adjustments to Weighting of Factors Now is Premature	39
<i>Section 3: Savings Attribution between MTIs and C&S – Pre-Allocation</i>	40
Option A: Pre-allocate a portion of savings and the rest allocated ex post.....	40
Option B: No pre-allocation of savings—entirely ex post	40

Table of Tables

Table 1 Market Transformation Working Group Member Organizations	6
Table 2 MTWG Support of Method for Double Counting Options A and B	9
Table 3 MTWG Support of Attribution of Factors Options A and B	15
Table 4 MTWG Support of Weighting of Factors Options A and B	20
Table 5 Sample Weighting Attribution Factors Scheme	21
Table 6 Sample Weighting Attribution Factors Analysis	22
Table 7 MTWG Support of Pre-Allocation of Savings Options A and B	23

Table of Figures

Figure 1 Examples of Activities Under the “Theory Umbrella”	7
Figure 2 Accounting for RA and MT Program Savings	8
Figure 3 All programs cause market effects that may lead either to market transformation or C&S adoption	12
Figure 4 Conceptual Timeline Showing Area of Focus for New MT-Focused Attribution Factors (1, 2) and Existing Advocacy-Focused Attribution Factors (3, 4, 5)	17

Section 1: Introduction & Overview

1.1 Background

Phase I of the Market Transformation Working Group (MTWG) was initiated to develop a proposed market transformation (MT) framework for submission to the California Public Utilities Commission (CPUC, or Commission) in Rulemaking 13-11-005. The MTWG was tasked with developing a joint MT proposal for the CPUC's consideration.

The California Energy Efficiency Coordinating Committee (CAEECC) hosted a Market Transformation Working Group between November 2018 and March 2019, culminating in a Report filed with the Commission on March 19th of 2019. The Report proposed a new framework for market transformation for energy efficiency in California.

In the Commission's final decision regarding the MTWG's Phase I recommendations, the Commission accepted most of the MTWG's recommendations, decided the non-consensus issues for the time-being, and praised the work of the MTWG. It also requested that the MTWG reconvene in a Phase II prior to the hiring of a market transformation administrator (MTA) to further flesh out a series of issues related to the potential overlap between future particular market transformation initiatives and Other Energy Efficiency (EE) Efforts.¹

Phase II convened from August 2020-February 2021, at the direction of the CPUC, with the following scope and key questions as outlined in the MTWG Phase II Prospectus²:

- How to ensure minimal duplication or negative overlap between market transformation initiatives administered by the MTA and Other EE Efforts.
- How to set goals for market transformation initiatives and Other EE Efforts where there will likely be overlap.
- How to attribute savings for market transformation initiatives and Other EE Efforts where there will likely be overlap.
- Optional and only if directed by Energy Division (ED)—Flesh out further the proposed cost-effectiveness framework for Market Transformation Initiatives vis a vis evolving overall EE cost-effectiveness framework issues.

The full Phase II WG met four times between August 2020 and January 2021. Two sub-working groups (sub-WGs) on Savings Attribution and Goal Setting met three and two times, respectively. Between meetings, sub-sub-working groups met to discuss issues and develop recommendations for broader sub-WG and full MTWG consideration.

The August 11, 2020 adopted MTWG prospectus indicated that a report, inclusive of consensus and non-consensus items, would be submitted via a motion for Commission consideration. However, at the November 16, 2020 MTWG meeting, Energy Division indicated that the report

¹ See Decision 19-12-021: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M321/K507/321507615.PDF>

² See MTWG August 11, 2020 meeting page, "MTWG Part II Prospectus" under "Documents Posted Before the Meeting": <https://www.caeccc.org/mtwg-tbd>

would instead be used as background material for the MTA solicitation process or as part of a subsequent process once the Administrator is on board, thereby removing the deliverable to submit a motion.

1.2 Report Outline

This report outlines the outcomes and recommendations of the Phase II MTWG and is organized as follows:

- Section 2: Savings Attribution—Market Transformation Initiatives (MTIs) and Resource Acquisition (RA)
- Section 3: Savings Attribution—MTIs and Codes and Standards (C&S)
- Section 4: Savings Goal-Setting for MTIs
- Appendix A: MTWG Member Organizations and Representatives
- Additional appendices to support Sections 2-4
 - Appendix B (Additional Factors to Use in Ex-Post Evaluations) *supports Section 3, Attribution Factors, Option A*
 - Appendix C (Savings Attributions: MTIs and C&S Weighting of Factors Option A—Make Adjustments to Weighting of Factors Now) *supports Section 3, Weighting of Factors, Option A*
 - Appendix D (Savings Attribution: MTIs and C&S Attribution Factors Option B—Detailing Additional Factors is Premature) *supports Section 3, Attribution Factors, Option B*
 - Appendix E: Organization-Level Comments on Non-Consensus Option Choices

All of the recommendations within this Report are made by consensus of the MTWG Members (where consensus is defined as unanimity among the Member organizations), except for four instances noted in this document. Consistent with the MTWG’s goals and Groundrules, we provide two or more options for any non-consensus recommendation and list the MTWG Members that support each option. The non-consensus option descriptions were drafted by a sub-set of the proponents of each option.

1.3 CAEECC Member Participants

The MTWG’s 18 voting member organizations and three ex-officio/resource organizations shown in Table 1 are drawn largely but not exclusively from the CAEECC’s Membership. CAEECC Facilitators Dr. Jonathan Raab and Katie Abrams facilitated the MTWG Phase II meetings. A complete list of the Member organizations and their representatives is provided in Appendix A.

Table 2 Market Transformation Working Group Member Organizations³

Organization
California Efficiency + Demand Management Council (CEDMC)
Coalition for Energy Efficiency (CEE)
CodeCycle
Center for Sustainable Energy (CSE)
Don Arambula Consulting
Energy Solutions
Enervee
Jay Luboff Consulting
Natural Resources Defense Council (NRDC)
Outthink
Pacific Gas and Electric (PG&E)
Public Advocates Office
Resource Innovations
Small Business Utility Advocates (SBUA)
Southern California Edison (SCE)
Sheetmetal Workers Local 104
Southern California Regional Energy Network (SoCalREN)
The Energy Coalition
Ex-Officio/Resource (non-voting):
California Energy Commission (CEC)
California Public Utilities Commission (CPUC)
Northwest Energy Efficiency Alliance (NEEA)

³ See Appendix A for a detailed list of each Market Transformation Work Group Member lead representative and alternate

Section 2: Savings Attribution—MTIs and RA

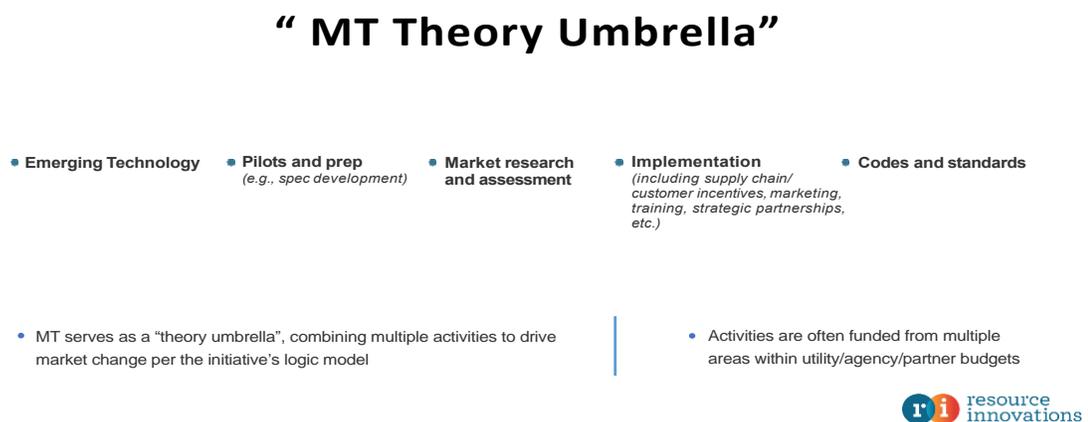
2.1 Purpose

This proposal describes the method that the MTWG recommends be used to prevent double counting of market transformation (MT) savings and Resource Acquisition (RA) savings when MT and RA activities are operating in the same market or targeting the same measure(s). There is a separate Section 3 of this Report on preventing double counting between MT and Codes and Standards savings.

2.2 Background⁴

Ideally, RA programs and MT activities (as well as other activities, like emerging technology efforts) would be an integrated effort, as depicted in Figure 1. This would allow for counting all savings in the target market regardless of assignment to either MT or RA. However, in the near-term, RA programs are likely to continue to be implemented and evaluated separately from MT programs. As a result, if RA and MT programs are operating simultaneously in the same market, there is a need to parse the savings between the MT and RA efforts to avoid double counting.

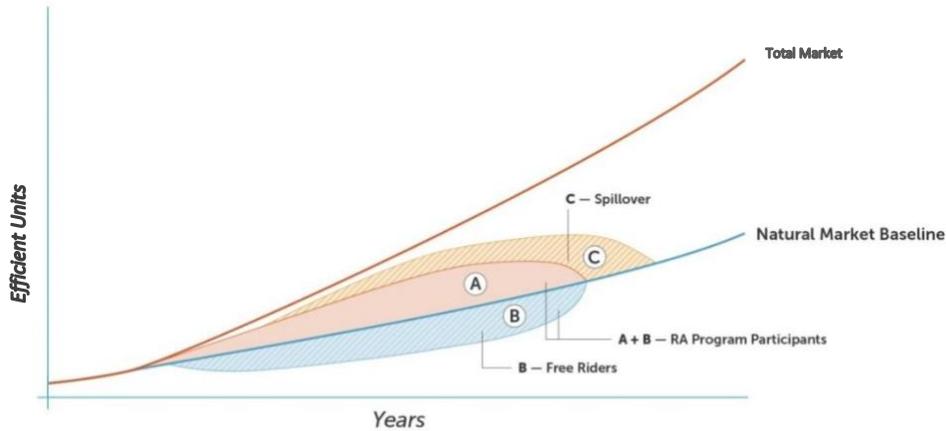
Figure 1 Examples of Activities Under the “Theory Umbrella”



⁴ This background section and Option A are based on material presented and discussed at two CAEECC MTWG meetings, which in turn was based on materials Resource Innovations, NEEA and Prahll and Associates developed for the Illinois Technical Reference Manual (IL TRM).

Figure 2 is a depiction of the typical components of RA savings overlaid on the MT savings framework.⁵

Figure 2 Accounting for RA and MT Program Savings



2.3 Method to Prevent Double Counting

The MTWG members are divided on the approach to prevent double counting. Two options are presented below for consideration. The first option is to remove net RA savings, after removing the natural market baseline. The second option argues that it's premature to decide to simply remove net RA savings.

⁵ On Figure 2, the Y-axis shows "efficient units" (with units being a device that consumes energy, like a refrigerator) but the same graphic could also demonstrate savings. The number of efficient units eventually counted (via the method discussed in the "Method to Prevent Double Counting" section) is then multiplied by savings per unit to translate units into savings.

The MTWG members who prefer each option and find each option acceptable are shown below in Table 2. In addition, some working group members have provided comments on their option choices in Appendix E.

Table 2 MTWG Support of Method for Double Counting Options A and B

Method for Double Counting Option	First Choice Option	Acceptable Option
Option A: Remove all RA Savings (7 first choice, 13 acceptable)	<ul style="list-style-type: none"> -CSE -CEDMC -CodeCycle -Jay Luboff Consulting -NRDC -Resource Innovations -The Energy Coalition 	<ul style="list-style-type: none"> -CEE -CSE -CEDMC -CodeCycle -Don Arambula Consulting -Energy Solutions -Jay Luboff Consulting -NRDC -Outthink -Resource Innovations -SBUA -SMART Local 104 -The Energy Coalition
Option B: Deciding to Simply Subtract RA Savings is Premature (11 first choice, 15 acceptable)	<ul style="list-style-type: none"> -CEE -Don Arambula Consulting -Energy Solutions -Enervee -Outthink -PG&E -Public Advocates Office -SBUA -SCE -SMART Local 104 -SoCalREN 	<ul style="list-style-type: none"> -CEE -Don Arambula Consulting -Energy Solutions -Enervee -Jay Luboff Consulting -NRDC -Outthink -PG&E -Public Advocates Office -SBUA -SCE -SMART Local 104 -SoCalREN -PG&E -The Energy Coalition

A discussion of options is presented below.

2.3a Option A: Remove all RA Savings

Option A removes all verified RA net savings⁶ from the calculation of MT savings where RA and MT activities are targeting the same market or measure(s). To derive MT savings, the following two items are subtracted from the Total Market (see Figure 2). Savings calculations can be done using total consumption, or number of units multiplied by savings per unit.

- Natural Market Baseline (NMB).
- Verified RA savings (usually the sum of A plus C in Figure 2)

⁶ It is possible that in the future the CPUC will start officially counting RA-induced or other ratepayer-program-induced market effects beyond spillover. These would be included in “Verified RA savings” for purposes of preventing double-counting.

- Verified RA savings should come from CEDARS where possible.
- Some RA programs may calculate savings on a whole building or meter basis, and in these cases, an estimate must be made for the portion of metered RA savings that overlap with the MT measures.
- In cases where the RA and MT programs are collaborating to execute the MTI's Market Transformation Initiative Plan,⁷ the free-ridership rate can be frozen⁸ at the value existing at the time the MTI enters Phase III.⁹ This would adjust the value pulled from CEDARS or metered savings.

Discussion for Option A

A key benefit of Option A is that netting out all verified RA savings allows for a straightforward assertion that “all savings counted through the RA programs have been removed from the MT initiative savings.” This simple statement should satisfy the needs of regulators and stakeholders that double counting did not occur without requiring further detail on the differences between the RA and MT frameworks.

Option A proponents felt that the merits of Option B were not sufficient to outweigh its downsides. Option A was developed within the context of the currently accepted methodology for evaluating and attributing savings to RA programs. Option B proposes a significant change to those methodologies.

While the CPUC may eventually develop methods to measure and verify the market effect-savings of RA-funded programs where savings are not yet counted (such as Emerging Technology Program (ETP), ME&O or WE&T) as described in Option B, it is not current CPUC policy. The change of counting savings from these programs merits its own separate discussion which could take significant time and resources. This work is not a task included in the final MT decision.

MT development and implementation needs to move forward, and the straightforward approach of Option A which relies on existing CPUC policies will allow immediate progress. In addition, Option A can accommodate any future changes to how the CPUC counts savings from RA-funded programs not currently counted if that should occur (see FN 5).

2.3b Option B: Deciding to Simply Subtract RA Savings Is Premature

Option B proponents disagree with the first approach and believe that in principle, market effects not caused by the MTI should not be attributed to the MTI.

⁷ Parameters of the MT Initiative Plan are listed in Appendix C of D.19-12-021. The MT Initiative Plan is a comprehensive description and analysis of the target market, its actors (including RA implementors) and products, and the logic model of how planned intervention strategies will result in the desired future state of that market. There may also be a “Strategic Market Plan” developed by the MTA that sets out the overall strategic direction in a market which can encompass more than one MTI and would also document coordination with RA implementors and other actors in the market.

⁸ See the twelfth bullet in Appendix C of D.19-12-021.

⁹ Phase III is the “market deployment” phase as identified in Appendix D of the CPUC Decision 19-12-021.

As discussed at the January MTWG meeting, much depends on what the savings attribution calculation is used for. The calculation method described in Option A would under value the contribution from RA and non-resource programs towards market transformation. If this calculation is to be used for a formative evaluation, or an annual or biennial assessment of a multi-year MTI to see whether its progress is “on track” and only used within the context of the MT program, simply subtracting RA claimed savings from some estimate of market-level savings may be sufficient. In other cases, such as when programs across multiple initiatives are compared, a better understanding of the market transformation impacts of all influences (e.g., MTI, RA, non-source, C&S, municipal, federal programs) using consistent methods may be needed.

In line with the philosophy of the other Option B proposals throughout this document, we suggest that it is premature to make a blanket decision on how to remove RA and non-resource program savings without knowing the nature of the MTI, the purpose of the calculation, who the actors are, and what data might be used to track its progress. As described across Stages 2 and 3 of the Market Transformation Stage Gate in the Adopted Market Transformation Framework (D.19-12-021), the MTA should work collaboratively with the relevant PAs during MTI development and discuss whether or not high rigor is needed in separating MTI and RA/non-resource program market effects at various points of the MTI and, if so, how this type of calculation should be done. As stated in the Adopted MT Framework, “Stage 3 is where a refined logic model is developed that identifies key market actors and their roles” (p. 110).

Per the Adopted Framework, an independent review committee (IRC) should conduct a technical review of the methodology for distinguishing market effects, and the MTA should include this agreed-upon methodology in the market transformation accord as part of the MTI application. It is entirely possible that the MTA and PA can use such a discussion as an opportunity to find incentives to motivate collaboration and coordination (e.g., MTA claims any unclaimed RA program spillover in return for an increase in RA program NTG).

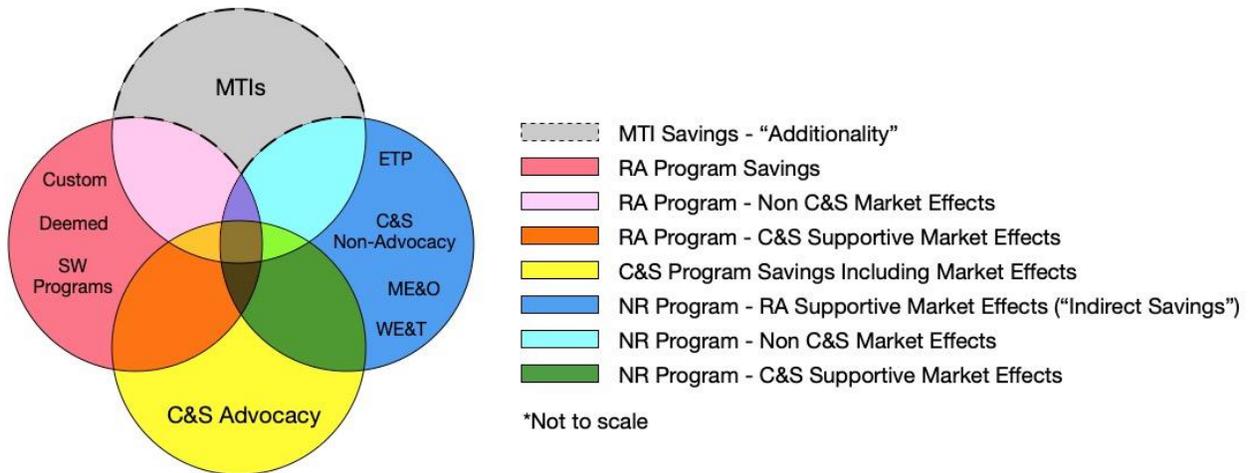
Figure 3 below shows how the existing Rolling Portfolio affects the markets. The entire top circle represents market transformation programs. The gray area shows the “additionality” that an MTI must demonstrate, while the other areas of the top circle show existing market transformation interventions being implemented by other programs, whether or not savings are being claimed. Note that all IOU Statewide Programs are market transformation programs per D.16-08-019 OP 5 and OP 8.

In an ideal world, there would be enough data to support easy evaluations of all these sources of market effects. In practice, the MTA and evaluators must strike a balance between the benefits and costs of data collection. Option B proponents are not suggesting that all market effects evaluations must be conducted every year,¹⁰ but that the MTA and impacted PA(s) work

¹⁰ Option A states that the CPUC does not have methods to measure and verify market effects savings. Please note that current CPUC evaluation policy does include measuring and verifying market effects from any ratepayer

collaboratively to determine whether it is necessary, feasible, and useful to estimate these market effects. The solution they agree upon may end up being the same as Option A after considering the benefits and costs of all options, but we suggest a) it is more collaborative to start that journey from the mutual agreement that market effects not caused by the MTI should not be attributed to the MTI, and b) that existing and any new methodologies for estimating attribution be explored.

Figure 3 All programs cause market effects that may lead either to market transformation or C&S adoption



funded program, including non-resource programs, and the Energy Division has conducted numerous such studies to date. One upcoming study expected to be reported in Q1 2021 evaluates the savings attributed to the Emerging Technologies Program, a non-resource program (the final version will be posted on Calmac.org). However, since non-resource programs are not required to report savings, these evaluations are conducted at the discretion of Energy Division staff.

Section 3: Savings Attribution—MTIs and C&S

3.1 Purpose

This proposal describes recommendations from the MTWG to avoid double counting of market transformation initiative (MTI) savings and codes and standards (C&S) savings when MTI and C&S activities are operating in the same market.

3.2 Background

Since both MT and C&S administrators have C&S adoption as part of their goals, it's important to specify how to allocate savings between MT work and C&S adoption work. While both administrators have code adoption as a goal, MT will focus on increasing and/or accelerating energy savings and it is envisioned that the teams will conduct complementary activities in a collaborative fashion.

3.3 Recommended Principles and Overall Approach

The following represent consensus recommendations of the MTWG unless otherwise noted:

1. The MTWG supports “close cooperation and collaboration between the MT portfolio and the existing rolling portfolio,”¹¹ including between the MT and the C&S teams.
2. The MTA and C&S Program Administrator are individually responsible to their own regulatory requirements, oversight and process rules.
3. The MTA (at the administrator level) will likely have near and long-term performance criteria in addition to attributed savings.
4. The MTA will create an initial forecast¹² of total MTI/C&S savings for planning purposes in close collaboration with C&S Program Administrator as described in the Decision 19-12-021. Combined C&S and MTIs savings are incremental to naturally occurring baseline.
 - a. For planning purposes, the MTA will also forecast initial savings for individual MTIs separate from savings achieved by the C&S Program Administrator. This will be done in collaboration with C&S Program Administrator and will de facto result in relative forecasted shares.¹³
5. There will be one or more mid-course updates¹⁴ (joint between C&S Program Administrator and MTA) to re-evaluate forecasted savings and update baselines as necessary, likely associated with new data becoming available.

¹¹CPUC Decision 19-12-021, Finding of Fact 27.

¹²CPUC Decision 19-12-021 includes forecasting as part of the MTI Plan, bullet #3 on page 159.

¹³ MTIs may also exist that do not have a code or standard goal, and any savings for these will be developed independently by the MTA.

¹⁴CPUC Decision 19-12-021, last bullet on page 158.

6. There will be an ex-post evaluation to determine total savings and attribution of savings to C&S and MTA (after subtracting RA) when C&S are included in individual MTI logic models.
 - a. Assuming a Delphi process is used during the ex-post evaluation, the scope of the Delphi will include all ratepayer funded activities that intentionally target a C&S adoption
 - b. MTI Strategic Market Plans, MTI logic models, MTI program interventions, MTI market progress evaluation reports etc. will all be part of the Delphi panel materials along with code change theory reports, CASE reports, and other documentation of influence

3.4 Attribution Factors

The MTWG members are divided on whether and what attribution factors need to be added at this time. Two options are presented below for consideration. The first option recommends adding specific new MTI related attribution factors and delineates those factors. The second option believes that this is premature and takes issue with the specific factors recommended.

The MTWG members who prefer each option and find each option acceptable are shown below in Table 3. In addition, some working group members have provided comments on their option choices in Appendix E.

Table 3 MTWG Support of Attribution of Factors Options A and B

Attribution Factor Option	First Choice Option	Acceptable Option
Option A: Addition of MTI Related Factors Now (4 first choice, 9 acceptable)	<ul style="list-style-type: none"> -CEDMC¹⁵ -CodeCycle -Jay Luboff Consulting -The Energy Coalition 	<ul style="list-style-type: none"> -CEDMC -CSE -CodeCycle -Don Arambula Consulting -Jay Luboff Consulting -NRDC -Outthink -SBUA -The Energy Coalition
Option B: Detailing Additional Factors is Premature Until Roles of Market Actors Are Defined (15 first choice, 17 acceptable)	<ul style="list-style-type: none"> -CEDMC -CEE -CSE -Don Arambula Consulting -Energy Solutions -Enervee -NRDC -Outthink -PG&E -Public Advocates Office -Resource Innovations -SBUA -SCE -SMART Local 104 -SoCalREN 	<ul style="list-style-type: none"> -CEDMC -CEE -CSE -Don Arambula Consulting -Energy Solutions -Enervee -Jay Luboff Consulting -NRDC -Outthink -PG&E -Public Advocates Office -Resource Innovations -SBUA -SCE -SMART Local 104 -SoCalREN -The Energy Coalition

A discussion of options is presented below.

3.4a Option A: Addition of MTI Related Factors Now

Current C&S Impact Evaluation methodologies focus solely on the code advocacy efforts that occur once a given efficiency measure is sufficiently evolved to be ready for potential regulatory inclusion. Decision 19-12-021 extended the scope of ratepayer funded activities that should be credited for C&S savings to include Market Transformation activities. “Thus, for any MTI that is proposed to lead to a code or standard, even if such a code or standard advocacy activity is already wholly or partially addressing a market touched by the new MTI, the codes and

¹⁵ Approximately half of CEDMC members support Option A as their first choice and half Option B.

standards activity, both costs and benefits, should be included in the cost-effectiveness calculation.”¹⁶

An implication of D.19-12-021 suggests that the Attribution Factors used to evaluate C&S influence should be expanded beyond the three existing Attribution Factors that focus on Code Advocacy. That expansion should include new factors that address the contributions of Market Transformation efforts. Those efforts occur largely before the commencement of Code Advocacy efforts.

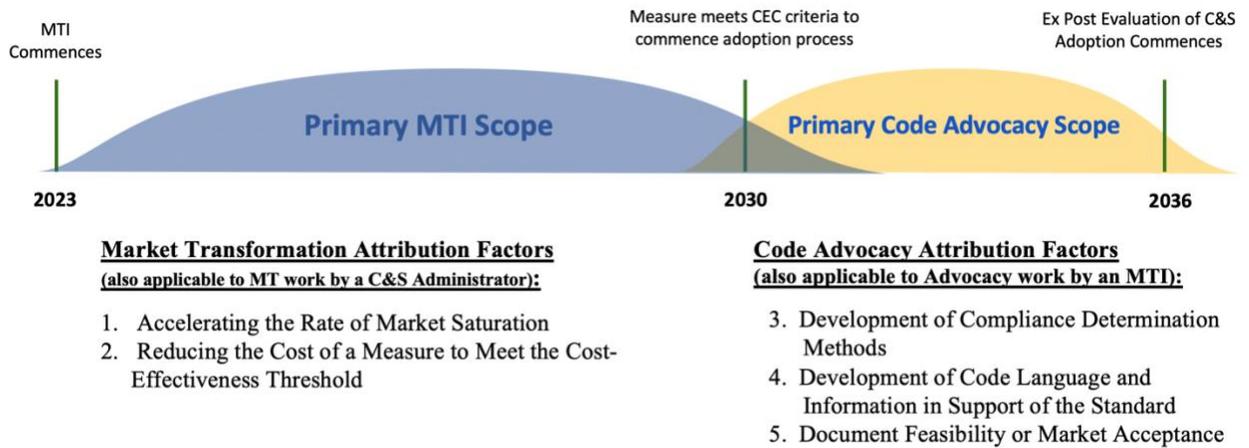
Option A supporters recommend that the following five attribution factors be used in the evaluation of C&S savings.¹⁷ [See Appendix B – Additional Factors to Use in Ex-Post Evaluations, for a fuller description of the factors not included in current C&S evaluations (1 & 2)] The factors are roughly organized and numbered in the order that they will be implemented in the evolution of a measure – from MTI commencement to final regulatory adoption.

1. Accelerating the rate of market adoption to meet market acceptance requirements
2. Reducing the cost of a measure to meet the cost-effectiveness thresholds for regulatory adoption
3. The development of compliance determination methods and other special analytical techniques
4. The development of code language and technical, scientific, and economic information in support of the standard
5. Documenting the feasibility or market acceptance of code adoption

¹⁶ CPUC Decision 19-12-021, page 69

¹⁷ Existing Factors are pulled from the last finalized Impact Analysis of the IOU C&S Advocacy program: “California Statewide Codes and Standards Program Impact Evaluation Phase Two, Volume Two: 2013 Title 24, June 23, 2017” (CALMAC Study ID: CPU0170.01) http://www.calmac.org/publications/CPUC_CS_Volume_2_Report_FINAL_R1_06232017ES.pdf

Figure 4 Conceptual Timeline Showing Area of Focus for New MT-Focused Attribution Factors (1, 2) and Existing Advocacy-Focused Attribution Factors (3, 4, 5)



3.4b Option B: Detailing Additional Factors is Premature Until Roles of Market Actors are Defined

Supporters of Option B believe that detailing attribution factors before any MTIs have been proposed is slightly premature. They recommend that Energy Division’s evaluators consider all the factors in Option A as well as others, but caution that evaluations must make a distinction between evaluating factors for the purpose of attributing savings and evaluating factors for the purpose of managing the progress of MTIs.

In evaluation of savings attribution, the ED evaluators should be aware that attribution factors are based on CEC code criteria for successful code adoption and requirements of the Warren Alquist Act. For example, market adoption rates and acceleration of market adoption rates are not CEC considerations when setting code. Factors outside of Warren Alquist may be suitable as indicators of MTI progress for interim evaluations, but likely will continue not to be a consideration by the CEC, and thus not a basis for attribution of savings in MTI impact evaluations. [See Appendix D - Attributing ex-post evaluated savings from C&S adoptions to overlapping MTIs, for additional explanation.]

A formal impact evaluation likely will only be conducted at the end of an MTI and thus may not occur for 10-15 years. The Option B proponents recommend that ED evaluators devote the bulk of immediate evaluation efforts to considering factors that support annual or biennial interim evaluations for the purpose of managing MTIs (e.g., “Should this MTI be continued, or ended?”). It may be too costly to include a savings attribution evaluation as part of these interim evaluations, but if the CPUC evaluators choose to attempt this, Option B proponents recommend that factors supporting interim evaluations should include qualitative factors, the most important of which will be continued “additionality” provided by the MTI. “Additionality” can be assessed at a high level and relatively inexpensively by soliciting feedback from the PAs: Should the evaluators find that most PAs believe the MTI has demonstrated valuable “additionality” to their program portfolios, and endorse the continuation of an MTI, that

qualitative finding should outweigh any short-term interim evaluation of savings or unfavorable savings forecasts.

Attribution factors cannot be assigned without knowing the specifics of the MTI, because we do not know whether there would be a role for RA and non-resource programs. Market effects from RA and non-resource programs can contribute to eventual market transformation or code. Attribution to multiple influences beyond C&S and the MTI can be conducted by qualified evaluation professionals at the same time as the attribution to C&S and MTIs are made. Because MTI success is judged in part by its cost effectiveness (TBD, but must count total benefits against total costs), MTIs cannot claim savings or benefits caused by other program efforts including non-resource programs such as ME&O, WE&T, and ETP, merely because those other programs may not be claiming those savings.

This approach of assigning attribution to multiple market actors is fully aligned with current philosophy for evaluating C&S savings in California, in which multiple code development entities conduct code advocacy, including the municipally-owned utilities. In the C&S evaluation philosophy, it is important to estimate the relative contributions of the many recognized C&S advocacy entities when attributing savings to any single entity. For various reasons including the fact that, until recently, each IOU implemented both RA and C&S Advocacy programs that were vertically integrated within their own local portfolios, there is currently no mechanism for RA or non-resource programs to claim a portion of C&S savings for any role they may have had in transforming the market. However, the costs of the PA non-resource programs are counted in the portfolio cost effectiveness because the benefits and any “indirect impacts” of non-resource programs accrue to both RA and C&S programs, removing the need to conduct interim impact evaluations. We are not proposing that the current savings claims practices for C&S, RA, or non-resource programs be changed.

As already described in D.19-12-021’s Adopted Framework for MT, Section 8: “Coordination of Market Transformation Initiatives and Resource Acquisition Programs,” the MTA and any impacted PA(s) will work together collaboratively during MTI development to identify and project all the key PA program market effects for the duration of the MTI. This results in the “market characterization” deliverable that comes out of the MTI development and vetting (see Stages 2 and 3 of the MT Stage Gate Proposal & Decision Criteria in the Adopted Market Transformation Framework, D.19-12-021, Attachment A). This market characterization deliverable likely will be part of the MTI application, to justify how an MTI would be “filling a gap,” and whether market effects from other actors (be they C&S, PA resource acquisition, PA non-resource, regional, or national) might affect the likelihood of the MTI’s success.

The attribution factors cannot be determined in advance of any MTI/C&S/PA coordination plan, because the MTI’s role first needs to be determined, based on need, core competencies, and regulatory responsibilities as may be Ordered in previous Decisions as well as CEC code development practices. For example, there is a distinction between Advocacy activities that can

only be led by the Statewide Lead PA,¹⁸ and advocacy support activities that can be conducted by entities.

In particular, it is important to note that C&S, both advocacy and non-advocacy, conduct market transformation interventions including compliance options, reach codes, prescriptive requirements, and parallel compliance paths. These interventions may not result in claimed savings, but nonetheless are enormously effective in continuing to transform the market following code adoption. It is important for the MTA to understand that within the C&S code development pipeline, these interventions are considered top candidates for future code cycles, and any unclaimed savings associated with these interventions are actualized and claimed by C&S if and when they are adopted into code. It is also important for the MTA to understand that due to resource constraints at the CEC, “more” codes is not necessarily feasible nor desirable, and that the SW C&S Program develops more code candidates than the CEC can accept.

Ratepayer-funded MTIs must deliver savings that are “additional” to any savings that are currently being achieved by other ratepayer-funded programs. This will be difficult in the already-crowded EE, C&S advocacy, and market transformation program marketplace. While MTI cost effectiveness has yet to be determined, the Commission expects that MTI cost effectiveness must reflect all costs against all benefits. To be good stewards of ratepayer dollars, MTIs should not be able to claim savings from spillover or market effects caused by RA and non-resource programs, to avoid inflating the cost effectiveness of the MTI. Again, Option B proponents recognize the necessity of striking a balance between the benefits and costs of data collection and attribution efforts. Ideally, savings attribution for each area labelled in Figure 3 should all be considered in the evaluation of MTIs. In practice, the evaluator’s ability to assign attribution will depend upon the quality and quantity of the data that are available to them. Likely, many market effects will not be evaluable, but it is important to explore current and any new methodologies and not pre-judge their evaluability.

3.5 Factor Weighting

The MTWG members are divided on whether and how the weighting of factors to accommodate MTIs need to be altered at this time. Two options are presented below for consideration. The first option recommends adjusting the current weighting approach now and provides options for doing so. The second option believes that this is premature and takes issue with the specific weighting recommendations in the first option.

¹⁸ D.18-05-041, OP 18.

The MTWG members who prefer each option and find each option acceptable are shown below in Table 4. In addition, some working group members have provided comments on their option choices in Appendix E.

Table 4 MTWG Support of Weighting of Factors Options A and B

Weighting of Factors Option	First Choice Option	Acceptable Option
Option A: Make Adjustments to Weighting of Factors Now (3 first choice, 7 acceptable)	<ul style="list-style-type: none"> -CodeCycle -Jay Luboff Consulting -The Energy Coalition 	<ul style="list-style-type: none"> -CodeCycle -CSE -Don Arambula Consulting -Jay Luboff Consulting -NRDC -Outthink -The Energy Coalition
Option B: Adjustments to Weighting of Factors Now is Premature (15 first choice, 17 acceptable)	<ul style="list-style-type: none"> -CSE -CEDMC -CEE -Don Arambula Consulting -Energy Solutions -Enervee -NRDC -Outthink -PG&E -Public Advocates Office -Resource Innovations -SBUA -SCE -SMART Local 104 -SoCalREN 	<ul style="list-style-type: none"> -CSE -CEDMC -CEE -Don Arambula Consulting -Energy Solutions -Enervee -Jay Luboff Consulting -NRDC -Outthink -PG&E -Public Advocates Office -Resource Innovations -SBUA -SCE -SMART Local 104 -SoCalREN -The Energy Coalition

A discussion of options is presented below.

3.5a Option A: Make Adjustments to Weighting of Factors Now

The process of weighting the factors to determine their relative impact on eventual code adoption include the following criteria:

1. What were the relative levels of resources applied to each Factor?
2. What was the relative level of risk associated with each Factor? (i.e., a higher risk would result in a higher weighting)
3. To what degree did the Factor accelerate the adoption of the code measure as compared to an assumed base case with no ratepayer funded activities?
4. An effort should be made to avoid bias in the weighting of Factors that might unduly give a higher weight to events more recent in time merely because they are more vividly remembered.

- While C&S impact evaluations have historically only awarded ratepayer-driven savings to C&S Administrators working on code advocacy, evaluators should take care to assign weightings based on a clean-slate evaluation of respective levels of impact of the Attribution Factors to avoid anchor bias in the evaluation process tied to evaluations that occurred before MTA participation.

Related Proposal to Fix the Weighting Values for C&S Attribution Factors soon after MTA Formation

This proposal compliments the proposal to expand the Delphi process to ~5 Attribution Factors for use in determining C&S attribution.

As new Attribution Factors are added to the Delphi process, there is a need to weight the Attribution Factors in the final analysis. Under current evaluation protocols, those weightings are determined during the final impact evaluation, and the weightings are determined on a measure-by-measure basis.

This proposal recommends moving the weighting process forward to just after MTA formation. The CPUC would lead a process that is facilitated by an independent evaluator and uses a Delphi panel. Moving forward the weighting of Attribution Factors would also afford greater transparency to the weighting process.

This change in methodology would only apply to the evaluation of efficiency measures adopted into code where there is one or more overlapping MTI. For the majority of C&S measures that have no overlapping MTI, the attribution methodology would remain unchanged.

The revised process would set weighting factors for the five proposed Attribution Factors, with those weightings summing to 100%. The Weighting Values would be fixed across all MTIs, and if updated, only infrequently. Any given MTI would be subject to the weighting factors in effect at the time it commenced.

By way of example, the universal weightings might look like:

Table 5 Sample Weighting Attribution Factors Scheme

Factor:	Improve Saturation	Improve Cost-Effectiveness	Compliance Methods	Code Language	Document Feasibility	Total:
	40%	25%	10%	10%	15%	100%

This proposal takes advantage of the premise that the relative importance of these five levers for driving final code adoption might be relatively steady across measures. These values would not define the final attribution scores, as the role of the MTI, the C&S Administrator, and other influencers would still be discerned for each Attribution Factor.

In practice, the final analysis might look like the following table. The green cells are the Weighting Values that are fixed in advance -- before an MTI even takes shape -- and the blue cells would be the values determined by the ex post evaluation. The cells in yellow are calculated by multiplying the value in the respective blue cell by the respective Weighting Value in the green cells, and then summing [i.e., =sumproduct (greenRow, blueRow) in Excel].

Table 6 Sample Weighting Attribution Factors Analysis

Factor:	Improve Saturation	Improve Cost-Effectiveness	Compliance Methods	Code Language	Document Feasibility	Total:	Split:
Weight:	40%	20%	10%	10%	10%	= 100%	
C&S Admin	10%	10%	60%	70%	50%	24% <i>(sumproduct)</i>	46% <i>(24/52)</i>
MTI	50%	30%	0%	0%	20%	28% <i>(sumproduct)</i>	54% <i>(28/52)</i>
Other	40%	60%	40%	30%	30%	NA	

By fixing the Weighting Values in advance, little accuracy is lost in the final analysis, but significant certainty is gained for the MTA in evaluating and comparing the cost-effectiveness of potential MTIs. The early determination of Weighting Values will also dampen the inevitable jockeying for position between an MTA and the C&S Administrator in the C&S attribution analysis. In doing so, fixing the Weighting Values in advance would improve the ability of the MTA and the C&S Administrator to collaborate.

3.5b Option B: Adjustments to Weighting of Factors Now is Premature

Option B supporters respectfully suggest that discussing weighting before any MTIs have been proposed is premature. Option B proponents believe that during MTI development, the MTA should collaboratively engage with the Statewide Codes & Standards program to discuss all of the factors MTI proposers have employed to develop their savings forecasts (e.g., weighting, risk, market size, baseline conditions, measure savings, naturally occurring market adoption). This will ensure a consistent set of assumptions for ongoing MTI performance monitoring and ultimate savings attribution. We believe this approach can yield a mutually-agreeable savings attribution framework that will be found acceptable by the CPUC and their impact evaluation consultants.

3.6 Pre-Allocation of Savings

The MTWG members are divided on whether some future savings should be pre-allocated between MTIs and C & S. Two options are presented below for consideration. The first option recommends pre-allocating a portion of savings and assigning the rest based on ex post

evaluation. The second option believes that all savings should be allocated based on ex post evaluation.

The MTWG members who prefer each option and find each option acceptable are shown below in Table 7. In addition, some working group members have provided comments on their option choices in Appendix E.

Table 7 MTWG Support of Pre-Allocation of Savings Options A and B

Pre-Allocation Option	First Choice Option	Acceptable Option
Option A: Pre-allocate a portion of savings and the rest allocated ex post (6 first choice, 13 acceptable)	<ul style="list-style-type: none"> -CEDMC¹⁹ -CEE -CodeCycle -Jay Luboff Consulting -SoCalREN -The Energy Coalition 	<ul style="list-style-type: none"> -CEDMC -CEE -CodeCycle -CSE -Don Arambula Consulting -Jay Luboff Consulting -NRDC -Outthink -Resource Innovations -SBUA -SMART Local 104 -SoCalREN -The Energy Coalition
Option B: No pre-allocation of savings—entirely ex post (13 first choice, 18 acceptable)	<ul style="list-style-type: none"> -CEDMC -CSE -Don Arambula Consulting -Energy Solutions -Enervee -NRDC -Outthink -PG&E -Public Advocates Office -Resource Innovation -SBUA -SMART Local 104 -SCE 	<ul style="list-style-type: none"> -CEDMC -CEE -CSE -Don Arambula Consulting -Energy Solutions -Enervee -Jay Luboff Consulting -NRDC -Outthink -PG&E -Public Advocates Office -Resource Innovations -SBUA -SMART Local 104 -SoCalREN -SCE -SoCalREN -The Energy Coalition

¹⁹ CEDMC’s member organizations were split exactly 50/50 on Options A and B as their first choice, but either option is acceptable to nearly all CEDMC member organizations.

A discussion of options is presented Appendices C and D as described below.

3.6a Option A: Pre-allocate a portion of savings and the rest allocated ex post

Note: See full description and rationale for this approach in Appendix C.

3.6b Option B: No pre-allocation of savings—entirely ex post

Note: See full description and rationale for this approach in Appendix D.

Section 4: Savings Goal-Setting for MTIs

4.1 Purpose

This proposal describes how savings goals could be set for market transformation initiatives.

4.2 Proposal

The Working Group recommends that savings goals be set at the MTI level for now.^{20,21}

Savings goals should be set at the MTI level for the foreseeable future. Setting an MTA portfolio-level savings goal, other than by summing selected MTI bid-specific goals, has the potential of creating a host of problems for the MTA and Commission policymakers. It could also have adverse and unintended consequences on decisions made on administration of the program.

In D.19-12-021, the CPUC agrees that MTIs are “designed to ‘wrap around,’ in many cases, existing interventions in particular markets, in order to fill gaps and form a complete approach to transforming that particular market.²² The CPUC also states, “In general, we prefer that individual MTIs set goals at the time that they are formulated, with goals generally incremental to the other energy efficiency resource acquisition goals, because the MTIs should be going after savings that could not be achieved within the normal portfolio.”

Markets are inherently unpredictable. MTIs that are designed to fill specific gaps may be obviated if the market transforms due to external factors (such as federal code pre-emption, or the development of a disruptive technology that renders the subject of the MTI obsolete). In such cases, the gap or need no longer exists and thus any savings potential associated with that MTI is also removed. Setting any portfolio-level goal that persists after the constituent MTIs are no longer needed creates a perverse incentive for the MTA to seek additional MTIs that may not be filling any needs or gaps, solely to achieve a portfolio level goal.

Portfolio-level MTA goals are superfluous because the portfolio savings are already constrained by two factors: the portfolio level cost effectiveness (TBD), and the MTA’s approved budget. The need to achieve cost effectiveness given a certain budget (and a certain TBD cost effectiveness threshold) already creates a minimum portfolio-level savings objective, one that is necessary to achieve portfolio level cost effectiveness. Witness the decreasing cost effectiveness of the EE portfolio, and the concomitant reduction of both portfolio budget and portfolio savings; cost-effectiveness, budget, and savings are intrinsically tied together in a solvable equation.

²⁰ Other goals, such as interim market indicators, will also be set at the MTI level, but are not part of this discussion.

²¹ In the future, as a portfolio of MTI initiatives are developed and if there is a need, savings goals at the MT Administrator level could then be considered. In addition, the recommendation does not preclude setting other non-savings goals at the MT Administrator level (an example might be stakeholder engagement).

²² CPUC Decision 19-12-021, Page 73

Setting a portfolio-level goal creates unnecessary complexities and bureaucracies:

- It is unclear who will determine the MTA savings goals to be adopted by the Commission and on what basis the goals will be set. As discussed elsewhere in this report, there is already substantial complexity in setting the goals for individual MTIs without having to determine the savings potential and goals for a broad portfolio of likely disparate and unrelated activities possibly many years before those activities start achieving any savings.
- An MTA savings goal would not necessarily measure how effective an MTA is at implementing the program since it does not take into account the costs to achieve those savings. This may create a singular focus of the portfolio on achieving savings, regardless of the cost and could force the MTA to favor bids with the highest savings even if they have poor cost-effectiveness.
- Managing to a portfolio savings goal could also drive MTI selection toward bids that deprioritize or only narrowly address the other Market Transformation principles set out by the Commission, including supporting the state's equity and GHG reduction goals, in order to achieve the most or easiest savings for the portfolio. This could be detrimental to MTIs where savings may not be achieved as quickly or easily, which is counter to the point of the MT program.
- Having to manage to a portfolio savings goal could force an MTA into a difficult position if resultant MTI bids do not prospectively meet MTA portfolio-level savings goals. How will the MTA respond? Will the MTA continue to execute multiple solicitation rounds until the portfolio goal is prospectively met? How will the fixed budget accommodate this situation?
- Alternatively, how will the MTA select winning bids if their solicitation garners more bids than required to meet the MTA goal. Will the MTA only sign contracts for MTIs with the quickest or easiest savings to meet the portfolio goal possibly leaving some MTA budget unallocated to other possibly viable MTIs?
- An MTA portfolio savings goal does little in the near term to guide MTIs' operation, a key responsibility of the MTA. Significant savings will not be realized in the short to mid-term for MTIs. If the savings are to come through the adoption of codes, and the existence of an MTA savings goal does very little to ensure the adoption of code. The MTA should be focused on maximizing the results of its MTI selections, choosing MTIs with significant savings potential and long-term cost-effectiveness that also achieve the other principles of the MT program. Realization of individual MTI savings (that would presumably contribute to an MTA savings goal) requires unrelenting attention to the details of MTI implementation well before savings accrue.
- Since any portfolio savings are likely based on decisions made years prior and it is unclear what benefit there would be to a portfolio goal or what the consequences should be if an MTA does not meet its current portfolio goals based on decisions made so far in the past.
- Looking at savings (or even cost-effectiveness) at a portfolio level can obscure important aspects of overall program implementation performance including,
 - o the number and percentage of MTIs that achieved their objectives,

- the success of the stage-gate process at vetting individual MTIs,
 - adherence of the MTA to the established selection and reporting processes, and
 - did the MTIs include a comprehensive market characterization study that is used to set the goals and timeline that the MTI is evaluated against and were these goals and timelines evaluated regularly?
- For the reasons stated above about the long time horizon of delivering MTI savings, setting a portfolio-level MTA goal does not help the CPUC to manage the MTA. The CPUC needs leading indicators that can be informative in a timely manner, and MTI savings is a lagging indicator.

Therefore, the MTWG does not support a portfolio-level savings goal and believes that any value to looking at a portfolio-level savings could be achieved by looking at the performance of individual MTIs without losing the fidelity or adding the additional complexity and possible adverse consequences of another layer of savings goals.

4.3 MTI Goals if Implementor is a California Program Administrator

In the case of an MTI being implemented by a Program Administrator (PA), such as one of the IOUs, the MTI's costs and benefits will not be counted towards the EE portfolio goals, since the MTIs exist outside the Rolling Portfolio. The goal achievements for that MTI will count toward any goals set for the MTI. Cost effectiveness would also be calculated separately from Rolling Portfolio cost effectiveness. When reporting total California savings, for example when reporting to the CEC or legislature, no portion of MTI savings will be reported under Rolling Portfolio achievements.

Appendix A: Market Transformation Work Group Member Organizations & Representatives

Organization	Lead	Alternate
California Efficiency + Demand Management Council (CEDMC)	Serj Berelson	Greg Wikler
Coalition for Energy Efficiency (CEE)	Bernie Kotlier	
CodeCycle	Dan Suyeyasu	
Center for Sustainable Energy (CSE)	Raghav Murali	Stephen Gunther
Don Arambula Consulting	Don Arambula	Frank Spasaro
Energy Solutions	Teddy Kisch	James Hanna
Enervee	Anne Neiderberger Arquit	Jon Gordon
Jay Luboff Consulting	Jay Luboff	
Natural Resources Defense Council (NRDC)	Mohit Chhabra	Lara Ettenson
Outthink	Brian Barnacle	
Pacific Gas and Electric (PG&E)	Jonathan Burrows	Patrick Eilert
Public Advocates Office	Ashlyn Kong	Michael Campbell
Resource Innovations	Margie Gardner	Lauren Casentini
Small Business Utility Advocates (SBUA)	Ivan Jimenez	Ted Howard
Southern California Edison (SCE)	Randall Higa	Brandon Sanders
Sheetmetal Workers Local 104	Randy Young	
Southern California Regional Energy Network (SoCalREN)	Lujuana Medina	
The Energy Coalition	Marc Costa	
Ex-Officio/Resource (non-voting):		
California Energy Commission (CEC)	Brian Samuelson	
California Public Utilities Commission (CPUC)	Christina Torok	Hal Kane
Northwest Energy Efficiency Alliance (NEEA)	Jeff Harris	Ryan Brown

Appendix B: Additional Factors to Use in Ex-Post Evaluations

This attachment describes the Attribution Factors proposed to be added to the existing Attribution Factors in ex-post evaluations to assess the relative contributions of MTIs and C&S advocacy where savings overlap.

“Accelerating the Rate of Market Saturation to Meet Market Acceptance Requirements”: This Factor evaluates the work that increases the uptake of an efficiency measure, thereby helping the CEC to demonstrate market readiness. For example, if the measure would be unlikely to ever reach market readiness without the MTI, the Attribution Factor attributed to the MTI would be comparatively large. If the MTI accelerates adoption of a measure that might otherwise be adopted in later code updates, then the Attribution Factor attributed to the MTI would be more balanced.

“Reducing the Cost of a Measure to Help the Measure Meet Cost-Effectiveness Thresholds for Regulatory Adoption”: If activities help a given efficiency measure increase its market saturation in California, the overall cost of the measure is likely to decrease. The performance level of the measure -- in terms of overall efficiency -- might also increase. Both of these factors will cause a steady improvement in the cost-effectiveness of the measure. This improved cost-effectiveness will help the Energy Commission show that adoption of the measure complies with the requirements of the Warren Alquist Act.

Appendix C: Savings Attributions: MTIs and C&S Weighting of Factors Option A—Make Adjustments to Weighting of Factors Now

Purpose of Proposal:

This proposal -- when layered upon a modified Delphi process -- seeks to solve three key challenges:

1. The attribution process should be structured to foster collaboration between the MTA and a C&S Administrator to maximize overall ratepayer benefits.
2. For the portion of attribution that must be determined by an independent evaluator – using a Delphi panel of industry experts – the existing evaluation protocols should be expanded to fully credit the changes in market readiness that are fostered by an MTI.
3. This proposal allows a promising MTI to move forward with a reasonable forecast of C&S savings even when the MTA and C&S Administrator cannot come to agreement during the early forecasting period on the likely long-term attribution.

Experience from the Northwest also drives this proposal. Specifically:

- A considerable portion of the expected energy savings from many MTIs will come from the planned benefits of helping to move a measure into codes or standards. Making the final savings allocation more predictable will afford the eventual MTA much needed certainty as to when the MTA should move forward with a given MTI.²³
- Second, the success or failure of an MTI -- and the MTA in general -- in maximizing ratepayer benefits is highly dependent on the likely level of collaboration between interrelated efficiency programs. Developing an attribution mechanism that directly links existing programs with MTI efforts in terms of shared rewards will foster collaboration and be critical to increasing overall ratepayer benefits.

Establishing a transparent attribution process for the C&S savings that result from an MTI is critical to implement many aspects of Decision 19-12-021. For example, Conclusions of Law #30 states, “It is appropriate to set savings goals and other metrics for individual MTIs at the time they are initially approved by the Commission.” In order to set reasonable goals for the MTI, the

²³ As will be discussed further, the energy savings that will result from a given code measure cannot be known for sure, as that is dependent on both eventual code adoption and the independent evaluation of the projected energy savings. But greater certainty can be established for the share (or percentage) of the overall code savings that are attributable to the MTI.

MTA must have a clear understanding of how a given MTI will be evaluated in the C&S impact evaluation process.

1) Minimum Shared Savings will Foster Collaboration and Increase Ratepayers Benefits

Rationale:

Collaboration between the MTA and the C&S Advocacy entity (collectively, “the Parties”) will be best promoted by pre-distributing a significant percentage of the final evaluated C&S energy savings. This proposal builds off of a central piece of guidance in Decision 19-12-021:

*“... we would like to avoid disputes over which initiative or program created the energy savings, **preferring to celebrate the victory without arguing over attribution.**”* (Decision pg. 73)

Using the classic “pie splitting” metaphor, this approach to allocation seeks to focus the efforts of the Parties on working together to expand the overall pie rather than focusing their efforts on making their individual portion of the pie as large as possible.

Leaving the whole of the attribution decision to the end-state discretion of the independent evaluators virtually invites “zero sum game” optimization by the Parties. This competition for attribution will occur from the commencement of an MTI until the final impact evaluation is completed.

Given that an MTI cannot even commence until there is a reasonable forecast of the likely energy savings, and that forecast will depend on the MTA and C&S Administrator agreeing upon the likely attribution split, the “zero sum game” competition between the parties will start before the MTI is even launched. This will be counterproductive for ratepayers, and it runs contrary to the Commission’s desire to “celebrate the victory without arguing over attribution.”

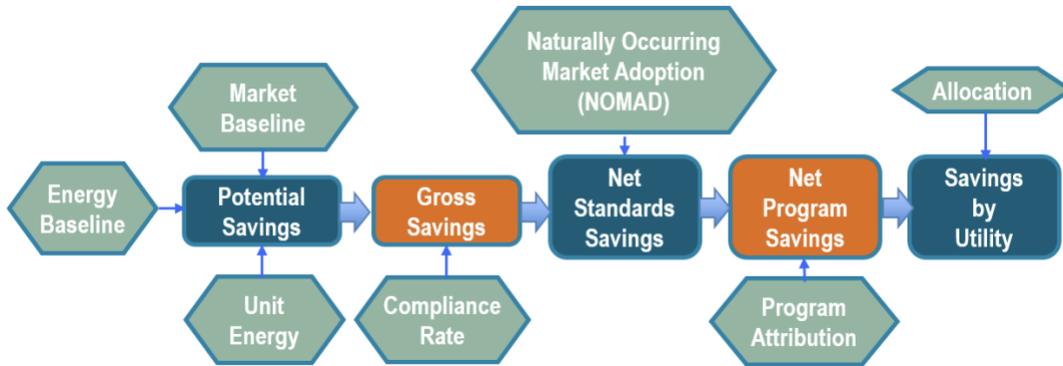
The proposed Minimum Shared Savings can be viewed, in a way, as a conscious decision to possibly sacrifice precision in the attribution process in order to achieve greater collaboration and greater savings along the way. But it may not be a tradeoff at all, as the Delphi attribution methodology – while conducted by experts – encompasses attribution steps that are highly subjective. Leaving the full attribution process until after code adoption also creates significant risk of over-valuing the final actions that move a measure into code (i.e., code advocacy) when compared to MTI efforts that were perhaps more influential but occurred years earlier in time.

Minimum Shared Savings Methodology:

We are outlining two different methods for pre-allocating the attribution percentages. One is simpler, and the other more refined. **They both have merit, but the first, simpler method is preferred.** Other methods might be proposed that achieve the same purpose.

These methods do not guarantee that a minimum level of energy savings will be granted to an MTI. The level of overall savings is dependent, first, on the measure being adopted into code.

Second, it is dependent on the “Net Standards Savings”, as determined by the independent evaluator (see flow chart below). The Minimum Attribution Percentage will impact some combination of “Program Attribution” and “Allocation” in the traditional C&S evaluation process.



i. Sub-Option 1 - Minimum Shared Savings of 25% for MTI and 25% for C&S Advocacy

The first option would allocate 50% of the overall savings between an MTI and the team that conducted the related code advocacy. That 50% would, in turn, be divided in half, such that each party received a minimum 25% share. The remaining allocation would be based on the attribution assessment performed by the independent evaluator and its Delphi panel. If the independent evaluator decided that the C&S advocacy team deserved 15% of the energy savings, and the MTI deserved 85%, the Minimum Shared Savings would shift those values to be 25% and 75% respectively. (The Minimum Shared Savings might also be thought of as an “attribution backstop”.)



We believe that a Minimum Shared Savings value of 25% for both entities is prudent, but it could be higher or lower.

This method provides a number of benefits:

- It creates an inherent framework of shared benefits. Both parties benefit when either party increases overall energy savings. This will incentivize the parties to help each other increase the overall size of the energy saving pie.

- It provides greater certainty for the MTA as it seeks to forecast the savings for an MTI during the go / no-go phases of analysis. The MTA can ultimately launch more MTIs with Minimum Shared Savings, as the attribution boundary will minimize the number of MTIs that are halted due to uncertainties in the savings forecast.

ii. Sub-Option 2 - A Two Variable Approach to Minimum Shared Savings

If the 25% bounds proposed in Sub-Option 1 are too generalized, a matrix of attribution bounds could be developed that is based on two of the most important influence variables. The following example proposes the two variables of: 1) starting market saturation for a measure, and 2) total MTI investment in that measure.

These minimum bounds would be developed during MTA formation, with input from the MTA, code advocacy experts, and other stakeholders. Given that these variables will likely be central to a final attribution analysis, this path may require no additional work, merely moving the analysis to the front of the process instead of the end. The matrix approach would also provide far greater certainty during MTI planning and would minimize biases that are likely to occur in analyzing impacts only after completion of the code advocacy process.

Sample Minimum Shared Savings Table (values for illustration purposes only)

	Overall MTI Investment before Code Adoption			
Starting Market Saturation	<i>\$0-2 million</i>	<i>\$2-6 million</i>	<i>\$6-12 million</i>	<i>\$12 million+</i>
	<i>C&S % / MTI % Shared Minimum Saving</i>			
under 1%	20% / 30%	15% / 40%	10% / 60%	10% / 60%
1% - 4%	25% / 25%	20% / 35%	15% / 55%	10% / 50%
4% - 10%	30% / 20%	25% / 30%	20% / 50%	15% / 55%
10% - 20%	40% / 15%	30% / 25%	25% / 40%	20% / 45%
over 20%	50% / 10%	40% / 25%	30% / 30%	25% / 35%

Appendix D: Savings Attribution: MTIs and C&S Attribution Factors Option B—Detailing Additional Factors is Premature

Background

Commission Decision 19-12-021 (December 5, 2019) directs that market transformation programs may include in their cost-effectiveness assessments savings delivered by codes or standards outcomes to which they contribute.²⁴ Beyond determining cost-effectiveness, these energy savings contributions are also expected to be counted toward overall MTA energy savings goals. The Commission established rigorous impact evaluation protocols for C&S program activities in 2005. These protocols have since been implemented in numerous C&S program evaluation cycles during which time the Commission's assigned C&S evaluation contractors have further updated these protocols. The evaluation protocols comprise the following steps:

1. **Determination of Potential Savings** – Potential savings are estimated as the product of appliance or building-specific energy savings times the applicable market size, i.e., number of appliances/buildings. Market size is typically determined through the use of market surveys. Baseline unit energy consumption values are estimated via metering, engineering, or conditional demand analysis and code-defined changes in efficiency are calculated in a manner that is consistent with the baseline consumption values to determine unit savings.
2. **Calculation of Gross Statewide Savings** – Gross statewide savings are the product of potential savings and code-specific compliance rates. The compliance rates are typically determined through appliance specification reviews and shelf surveys in the case of appliances and building energy simulation modeling for a sample of buildings in the case of building standards.
3. **Calculation of Net Statewide Savings** – Net statewide savings are determined by applying a “naturally occurring market adoption” (NOMAD) factor to gross statewide savings. The NOMAD factors are determined through the use of a Delphi panel familiar with the markets that the code is impacting.
4. **Determination of Net Statewide Savings Attributable to C&S Program Actions** – C&S savings attributable to program actions are determined using a Delphi panel that evaluates both the importance of three factors and the credit to be given to program efforts for each factor. The three factors are:
 - 1) The development of compliance determination methods and other special analytical techniques.
 - 2) The development of code language and technical, scientific, and economic information in support of the standard.
 - 3) Demonstrating the feasibility or market acceptance of code adoption.

²⁴ Conclusions of Law 28. The benefits and costs of activities related to codes and standards development and implementation should be included in the cost effectiveness calculations for MTIs where they are logically related.

The following principles guide determination of credit:

- a. Attribution is determined by disinterested third-party technical experts who did not have a stake in the amount of credit that was awarded.
 - b. Credit is awarded on the basis of evidence about C&S Program activities obtained from written sources and interviews.
 - c. The scoring process is transparent, documented, and repeatable.²⁵
5. **Allocation of Net C&S Program Administrator Savings to Individual IOUs** – Statewide savings attributable to C&S program activities are allocated to individual IOUs per guidance from D.18-05-041.

These evaluation protocols clearly allow for the inclusion of MTIs into the assessment process. For example, inducting a higher efficiency standard that would otherwise have occurred can be addressed through an adjustment of the potential savings in step 1. Accelerating adoption of a standard could be determined as part of the evidence collected for the attribution determination in step 4, as would the allocation of savings between the MTI and C&S program efforts. We recommend that these rigorous C&S impact evaluation protocols be reviewed and revised as necessary to comprehensively and fairly assess MTIs' contributions to their associated C&S outcomes.

Recommendation

We recommend that the process, assessment, and updates of the C&S/MTI evaluation protocols be handled by the Commission-assigned C&S and market transformation evaluation consultants in a forum that allows all stakeholders an opportunity for input, rather than in working groups under the purview of parties that have a financial interest in the outcome.

The Energy Division is interested in recommendations from the CAEECC MTWG regarding how ex-post evaluation could be modified to address overlapping savings between C&S programs and MTIs. To this end, we provide some perspectives below regarding the development of updated C&S/MTI evaluation protocols, including reactions to other non-consensus Options presented. We encourage the Commission to consider these perspectives, but we refrain from recommending specific evaluation methods and procedures because the MTWG and its sub-groups participants lack the required C&S evaluation expertise and because these working groups are not the appropriate venues for the actual work of assessing and developing technical methods and procedures for the ex-post C&S/MTI evaluation protocols.

Perspectives

Rigorous MTI definition process. While we expect that the MTIs will have a number of types of performance metrics beyond energy savings and peak demand reductions, it is likely that energy and demand impacts will be included as primary performance metrics of the MTIs and possibly the MTA. For that reason, rigorous ex-post evaluations are needed to accurately assess

²⁵ DNV-GL and CADMUS, *California Statewide Codes and Standards Program Impact Evaluation Report Phase Two, Volume One: Appliance Standards*, May 23, 2017, p. 23

MTIs' performance against their energy and demand goals, especially where attribution is being allocated between the MTA and C&S Program Administrator. A rigorous ex-post evaluation starts with a rigorous initial MTI vetting and definition process. This early focus is not only critical for managing the risks associated with the large, publicly funded investments in the MTIs but is crucial to laying the groundwork for successful ex-post evaluation.

The Commission has presented a robust stage-gate framework for developing, screening, and adopting MTIs in "Attachment A – Adopted Market Transformation Framework" (Framework) in Decision 19-12-021 (December 5, 2019). Following the detailed MTI definition process (which must include market and code change theory) stipulated in the Framework, there needs to be a thorough, ongoing process for documentation of activities and outcomes associated with the MTI that can later be considered during the C&S ex-post evaluation stage.

It is our understanding that the Commission expects MTIs to fill gaps not already being addressed by C&S program and other programs. As MTIs are defined, their logic models should, therefore, not include activity that is redundant on C&S program activity or directly competing with it. Thus, the Statewide C&S program will handle the C&S advocacy activities once an MTI has moved to the C&S advocacy stage. Among other benefits, avoiding activity redundancies will support more straightforward ex-post evaluations.

Program Administrators should have a voice in MTI selection and in ex-post evaluation processes. Regardless of the final details on how the C&S evaluation protocol is revised, as key stakeholders the C&S and other PA leads should have a seat at the table along with the MTA during ex-post evaluation of MTIs. We recommend that the CPUC require a resource acquisition coordination plan, first suggested in the Aug 28, 2018 "Energy Efficiency Market Transformation: A Staff Proposal" and reiterated in the April 10, 2019 ALJ Ruling seeking comment on the MTWG Report. As the Staff Proposal stated: "To be eligible for approval, Market Transformation Accords must present evidence of support and coordination with PAs running resource acquisition programs that affect measures or markets that are targeted by the proposed Market Transformation Initiative." Furthermore, the Statewide C&S Administrator should be part of the MTI proposal review process to prevent potential MTI overlap with current and planned C&S advocacy efforts and to ensure that MTI efforts will result in savings incremental to those expected from C&S advocacy efforts.

Additional attribution factors and weighting factors. Certain MTWG Members have proposed specific changes and additions to the C&S evaluation protocols that they believe would better address MTI savings. In particular they have proposed three specific, new attribution factors together with approaches to weighting the attribution factors. We do not yet agree with their specific proposals and, as reasonable as those proposals may sound to those not familiar with the C&S evaluation protocols, we believe there are technical and regulatory challenges to implementing their approach. It may be more effective to adjust the existing Attribution factors to properly accommodate MTI attribution rather than creating three separate MTI attribution factors. We believe that Energy Division, given their lead role in impact evaluation, should propose any modifications to the savings attribution process and that their proposal should be

vetted in a broader public process since IOU, REN, and CCA energy efficiency program savings claims and portfolio cost effectiveness may be impacted.

Prescriptive (guaranteed minimum) ex-post savings attribution. We strongly oppose proposals that seek to establish pre-allocated minimum ex-post attribution factors between the C&S Administrator and MTA. We find many aspects of approach troubling, including arbitrary minimum ex-post attribution factors. These proposals go against Commission precedent for EM&V protocols and strike us as illogical in this context. We believe that MTI/MTA performance risk, one of the driving concerns behind the proposal, should be managed through more appropriate means. Any risk removed from the MTI/MTA essentially redirects that risk squarely upon ratepayers. We find the arguments relating guaranteed ex-post attribution to foster collaboration between C&S and MTI teams to be incomplete and unconvincing. The ex-post attribution of savings to C&S Administrator and the MTA should be based on rigorous ex-post evaluation of the influence actually delivered by the C&S program and the MTI. Introducing guaranteed minimum attribution into the process is unavoidably arbitrary, unnecessary, and militates against the rigor of the ex-post evaluation process and the ability to faithfully report on program influence in the C&S/MTI outcome.

Developing MTI Baselines. Developing forecasts for the MTI baseline and the accomplishments is challenging. Guidance on what considerations need to be taken to develop these forecasts is required so that MTI proposals are commensurate with the level of rigor necessary to develop acceptable forecasts of the market and to develop an acceptable baseline over which to measure MTI accomplishments. Without this guidance, evaluating MTI accomplishments forecasts and evaluating MTI baseline would become a subjective and fraught exercise. Moreover, MTI, RA, and C&S initiatives need to apply consistent and aligned baseline assumptions. This means that when multiple intervention types are active at the same time, they should use the same baseline assumptions and when one intervention type follows another (e.g., an MTI or an RA sunset and a C&S takes over) then the baseline assumptions should be coordinated.

We concur with other participants that the issue of what baselines methodologies are used and how they may interact between C&S program and MTIs is important. We agree that,

“There will be one or more mid-course updates (joint between C&S Program Administrator and MTA) to re-evaluate forecasted savings and update baselines as necessary, likely associated with new data becoming available.”²⁶

The organizations supporting these comments recommend that the specific approach to aligning the definitions and applications of baselines in the determination of savings for overlapping C&S activities and MTIs be resolved in conjunction with a process led by a future working group or Commission-assigned evaluation consultants, perhaps following the establishment of the MTA.

²⁶ Quote is from Section 3: Savings Attribution – MTIs and C&S, principle #5 from “Recommended Principles and Overall Approach”

Appendix E: Organization-Level Comments on Non-Consensus Option Choices

The comments below are intended as a supplement to the option descriptions in the body of the report; these comments represent individual members' additional perspectives and commentary.

Section 2: Savings Attribution – MTIs and RA

Option A - Remove all RA Savings

NRDC: First, our response (preference for Option A) is contingent on a robust natural market baseline definition and forecast (Figure 2 in the draft report.)

While NRDC opted for Option A, we note that it is unclear what the use case is for attributing savings as such. If it is to understand the role and implications of MTIs on efficiency to ensure better planning and coordination, this is sufficient. If the attribution question will be used to identify specific quantitative inputs into demand forecasting or potential studies, then we would agree a more nuanced approach would be necessary

Resource Innovations: Savings adjustments should be based on what the CPUC officially counts. As that changes (as proposed in Option B), Option A will automatically accommodate it.

Option B – Deciding to Simply Subtract RA Savings is Premature

Energy Solutions: I decidedly prefer Option B, but could potentially support Option A

Section 3: Savings Attribution between MTIs and C&S – Attribution Factors

Option A: Addition of MTI Related Factors Now

CodeCycle: CodeCycle supports Option A, but submits the following comments on Option B. We apologize for their length, but many of the comments focus on text that was added following the final MTWG Phase II meeting.

Option B's new language states that: "Attribution factors cannot be assigned without knowing the specifics of the MTI". Option B also states that "We are not proposing that the current savings claims practices for C&S, RA, or non-resource programs be changed." Under current practices, there are three fixed Attribution Factors for all efficiency measures. They are 1) "Development of Compliance Determination Methods", 2) "Development of Code Language", and 3) "Document Feasibility or Market Acceptance. These Attribution Factors are fixed regardless of the nature of an efficiency measure. As such, it is wholly consistent with current practice to assign Attribution Factors without knowing the specifics of an MTI. Option A merely proposes five fixed Attribution Factors instead of three fixed Attribution Factors, responding to the CPUC directives to give credit for activities that improve the market for a given measure before it is ready for the code adoption process.

While the proponents of Option B are correct that an MTI should not proceed if it is unlikely to deliver “additional” savings, there is nothing within Decision 19-12-021 that would seem to require the attribution of savings for an MTI to be based on any concept of “additionality” to what would occur absent an intervention. Once an MTI is found to provide “additional” benefits to ratepayers, and then proceeds, the attribution of savings should be based on methods that weight the relative contributions of the respective parties, balancing the imperative to foster collaboration. An assertion that the C&S Administrators would have saved a given amount of energy without the involvement of the MTA should not be a part of the attribution analysis. The attribution analysis should look at the roles of the MTA and C&S Administrator side-by-side, as co-equal participants, neither with an inherently prioritized claim to the savings they eventually deliver. The result of the analysis need not be an equal split, but no favor should be given to the incumbent interests in the analysis

Option B would seem to speak for the CEC in suggesting that the CEC has little capacity to evaluate further efficiency measures for adoption into Title 24. While there are certainly resource constraints at the CEC (as with any agency), determining the CEC’s priorities in this context is a question that should be left to the CEC alone. It is quite possible that the CEC would rather marshal their code adoption resources behind a high-value measure that the MTA has championed rather than other low-impact measures that have not been as actively promoted within the market. Whatever the respective merits of different measures, it is for the CEC to decide what they will prioritize in the code adoption process, not the proponents of Option B.

Option B: Detailing Additional Factors is Premature Until Roles of Market Actors Are Defined

Resource Innovations: I'd like to see additional MTI-related factors included in the eventual analysis, but I think defining them should occur when evaluation planning is happening.

Energy Solutions: If there is a total impasse, I could potentially support Option A. But I strongly support Option B.

NRDC: The concept has merit but developing specific factors before understanding the MTIs is premature.

SoCalREN: We agree with the other PAs that attribution factors is currently premature.

Section 3: Savings Attribution between MTIs and C&S – Factor Weighting

Option A: Making Adjustments to Weighting of Factors Now

[no comments]

Option B: Adjustments to Weighting of Factors Now is Premature

Resource Innovations: I think this should be handled during evaluation planning.

Energy Solutions: If there is a total impasse, I could potentially support Option A. But I strongly support Option B.

Section 3: Savings Attribution between MTIs and C&S – Pre-Allocation

Option A: Pre-allocate a portion of savings and the rest allocated ex post
[no comments]

Option B: No pre-allocation of savings—entirely ex post

NRDC: While we prefer Option B, NRDC does not subscribe to the entirety of the text or tone in Appendix D, and factually not all MTWG members have a financial interest in the outcome.