

CAEECC-Hosted Market Transformation Working Group

Report and Recommendations to the California Public Utilities Commission

March 18, 2019

Table of Contents

List of Tables	5
List of Figures	5
Acronyms	6
Section 1: Introduction & Overview	8
Report Structure	9
Section 2: Market Transformation Initiative Principles, Guidelines, & Strategies	11
Introduction	11
Market Transformation Guidelines & Strategies	12
Section 3: Market Transformation Stage-Gate Proposal & Decision Criteria	13
Introduction	13
Ideation & Intake	13
Phase I: Concept Development	14
Stage 1 – Concept Scanning & Identification	14
Stage 2 – Concept Development & Assessment.....	15
Review 1	16
Phase II: Program Development	17
Stage 3 – Strategy Development	17
Stage 4 – Strategy Testing	18
Review 2	18
Phase III: Market Deployment	19
Stage 5 – Market Development.....	19
Stage 6 – Long-Term Monitoring.....	19
Review 3	19
Stage 7 – Transition or Sunset MTI	19
Section 4: Stakeholder Roles & Responsibilities	20
Definitions	20
Role of the Market Transformation Administrator(s) (MTA(s))	21
Concept Development Phase (Phase I)	21
Program Development Phase (Phase II)	21
Market Deployment Phase (Phase III)	21
Role of the Market Transformation Advisory Board (MTAB)	22
Criteria and Guidance Setting (Pre-Stage 1).....	22
Concept Development & Assessment Stage (Stage 2 of Phase I).....	22
Beyond Phase I	22
Composition of the MTAB	23
Role of an Independent Review Committee (IRC)	23
Section 5: Administration Options for the Market Transformation Portfolio	24
Option 1: Administration by the Existing Program Administrators	24

Rationale for Administration by the Existing PAs.....	24
Features Related to Administration by the Existing PAs	26
Option 2: Administration by a Single, Independent Statewide Administrator	28
Rationale for Administration by a Single, Independent Statewide Administrator	28
Selection of the Single, Independent Statewide Administrator	31
Features Related to Administration by a Single, Independent Statewide Administrator	31
Section 6: Budget.....	32
Amounts & Caps.....	32
Budget Approval Process	32
Integration with the Rolling Portfolio	33
Funding Split	33
Section 7: Market Transformation Cost-Effectiveness (CE) Framework.....	34
Scope of Recommended Modifications.....	34
Recommendations: Counting Codes & Standards (C&S) Savings & Costs.....	34
Inclusion of C&S into the CE Methodology	34
Estimating the MTI C&S Savings & Costs.....	35
Recommendation: Timeframe of Costs & Benefits (Separate from C&S)	35
Recommendation: Net-to-gross Methodology	36
Recommended Options: CE Threshold	36
Option 1: 1.25 Total Resource Cost Test/Program Administrator Cost Test.....	37
Option 2: 1.5 Total Resource Cost Test/Program Administrator Cost Test.....	37
Section 8: Market Transformation Initiatives and Resource Acquisition Programs	39
Introduction	39
Overview.....	39
Types of Overlap	40
Activities to Encourage Cooperation.....	40
Selecting MTIs to Enhance Positive and Minimize Negative Overlaps	41
Identifying & Assessing Overlaps	41
Activities to Avoid/Reduce/Mitigate Overlap	41
Resolution of Conflicts.....	42
Appendix A: Market Transformation Work Group Member Organizations & Representatives.....	44
Appendix B: Goals & Ground Rules of the Market Transformation Work Group	45
At Meetings.....	45
Between Meetings	45
Substantive Issues (Discussing Issues, Developing Options, & Exploring Agreement)	46
Process Issues.....	46

<i>Appendix C: Draft Stage-gate Criteria</i>	47
General MT Criteria Categories	48
<i>Appendix D: Draft Intake Application Form</i>	53
Draft Intake Form	53
Section 1	54
Section 2 (All Programs)	54
Section 3 (All Programs)	55
Section 4 (MT-Specific Intake Questions)	55
Section 5: Turnkey MTI Intake Form & Criteria	58
<i>Appendix E: Staff Proposal’s Content Guidance for Market Transformation Accord/Plan</i>	60
Content Guidance for the Market Transformation Accord/Plan	60
<i>Appendix F: Stage-gate Schematic</i>	62

List of Tables

Table 1: Market Transformation Working Group Member Organizations..... 9

List of Figures

Figure 1: Stage-gate Process Schematic..... 14
Figure 2: Schematic of Stakeholder Roles & Responsibilities..... 20
Figure 3: Schematic of Stakeholder Roles & Responsibilities Under Existing PA Administration 27
Figure 4: Schematic of Stakeholder Roles & Responsibilities Under a Single, Independent Statewide Administrator 29

Acronyms

Acronym	Definition
3P of 3Ps	Third party/parties
3PI or 3PIs	Third party implementer(s)
ABAL	Annual Budget Advice Letter
ADR	Alternative dispute resolution
AMI	Advanced Metering Infrastructure
C&S	Codes and Standards
CAEECC	California Energy Efficiency Coordinating Committee
CCAs	Community Choice Aggregators
CE	Cost-effectiveness
CET	Cost-effectiveness tool
CPUC	California Public Utilities Commission
EE	Energy efficiency
EM&V	Evaluation, Measurement and Verification
ESRPP	ENERGY STAR® Retail Products Platform
ET	Emerging Technologies
ETCC	Emerging Technologies Coordinating Council
ETP	Emerging Technologies Program
GHG	Greenhouse gas
IDSMS	Integrated demand-side management
IE	Independent Evaluator
IOUs	Investor-owned utilities
IRC or IRCs	Initiative Review Committee(s)
IRP	Integrated Resource Planning
ISSM	Integrated Standards and Savings Model
ME&O	Marketing Education and Outreach
MT	Market transformation
MTA(s)	Market Transformation Administrator(s)
MTAB	Market Transformation Advisory Board
MTI(s)	Market transformation initiative(s)
MTWG	Market Transformation Working Group
NEEA	Northwest Energy Efficiency Alliance
NMEC	Normalized Metered Energy Consumption
O&M	Operations and Maintenance
OTF	Open Text Field
PA(s)	Program Administrator(s)
PAC	Program Administrator Cost Test
PG&E	Pacific Gas and Electric
POU	Publicly owned utility
PRG	Procurement Review Group
RA	Resource Acquisition
RENS	Regional Energy Networks
RFA	Request for Abstract

RFP	Request for Proposal
SDG&E	San Diego Gas and Electric
SME	Subject matter expert
TRC	Total Resource Cost Test
WE&T	Workforce Education and Training

Section 1: Introduction & Overview

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) in Rulemaking 13-11-005.¹ In that proceeding, an April 26, 2018, Scoping Memorandum identified MT approaches as a priority. To facilitate examination of the policies and framework surrounding MT, Commission Staff issued a Staff Proposal on August 28, 2018. CPUC-hosted workshops on the Staff Proposal were held on September 19, 2018, and November 6, 2018. Comments were solicited in between these two workshops. Following the conclusion of the second workshop, a short-term MTWG hosted by the California Energy Efficiency Coordinating Committee (CAEECC) was formed with support of the CPUC. The MTWG was tasked with developing a joint MT proposal for the CPUC's consideratio

The MTWG's 18 Member organizations shown in Table 1 are drawn largely but not exclusively from the CAEECC's Membership. Several additional Ex Officio/Resource Members also participated. CAEECC Facilitators Dr. Jonathan Raab, Ellen Zuckerman, and Meredith Cowart facilitated the MTWG meetings. A complete list of the Member organizations and their representatives is provided in Appendix A. The MTWG met three times: (1) from December 6-7, 2018; (2) on January 14, 2019; and (3) on February 27, 2019. Between meetings, sub-working Groups met to discuss issues and develop recommendations for broader MTWG consideration. The primary agreed upon goal of the MTWG was, "To develop a proposed market transformation framework (including the necessary processes and procedures) for developing, deploying, and monitoring energy efficiency market transformation initiatives in California. "

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 a few instances noted in this document. Consistent with the MTWG's goals and ground rules (see Appendix B), any non-consensus item provides two or more options and lists the MTWG Members that support each option as well as any members who abstained.²

¹ The CPUC defines market transformation as follows: "Market transformation is long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies, processes or building design approaches until they are adopted into codes and standards (or otherwise substantially adopted by the market), while also moving forward to bring the next generation of even more efficient technologies, processes or design solutions to the market." [Decision 09-09-047](#) pg. 88-89, Sept. 24, 2009

² Ex Officio/Resource Members helped inform the MTWG but are not included in the consensus or non-consensus recommendations.

Table 1: Market Transformation Working Group Member Organizations³

Member Organizations	
California Efficiency + Demand Management Council (CEDMC)	Resource Innovations
Center for Sustainable Energy (CSE)	San Diego Gas & Electric (SDG&E)
CLEAResult	Sheet Metal Workers Local 104
Coalition for Energy Efficiency (CEE)	Small Business Utility Advocates (SBUA)
CodeCycle	Southern California Gas Company (SoCalGas)
Energy Solutions	Southern California Regional Energy Network (SoCalREN)
Natural Resources Defense Council (NRDC)	Southern California Edison (SCE)
Pacific Gas and Electric (PG&E)	The Energy Coalition
Public Advocates Office	The Utility Reform Network (TURN)
Ex Officio/Resource Members	
California Energy Commission (CEC)	Northwest Energy Efficiency Alliance (NEEA)
California Public Utilities Commission (CPUC)	

Report Structure

This Report is structured as follows:

- **Section 2: Market Transformation Initiative Principles, Guidelines, & Strategies** — Details the MTWG’s principles, guidelines, and strategies for market transformation initiatives (MTIs).
- **Section 3: Market Transformation Stage-Gate Proposal & Decision Criteria** — Outlines the MTWG’s vision for how MT should function within a state-gate framework characterized by three phases and seven stages.
- **Section 4: Stakeholder Roles & Responsibilities** — Defines the roles and responsibilities of key stakeholders vis à vis the state-gate framework including MT Administrator(s), the MT Advisory Board, and Initiative Review Committee(s).
- **Section 5: Administration Options for the Market Transformation Portfolio** — Discusses the rationale for two proposed administration models for the MT Administrator(s): (1) the Existing Program Administrators (PAs); and (2) a Single, Independent Statewide Administrator.
- **Section 6: Budget** — Discusses how MTI budgets should be set and funded.
- **Section 7: Market Transformation Cost-Effectiveness (CE) Framework** — Offers the MTWG’s recommendations for evaluating MTI cost-effectiveness.
- **Section 8: Market Transformation Initiatives and Resource Acquisition Programs** — Delineates a process for reducing and reconciling any potential conflicts between new MTIs and existing resource acquisition (RA) programs.

³ The MTWG representatives for each Member organization are shown in Appendix A.

The document's appendices include:

- **Appendix A: Market Transformation Work Group Member Organizations & Representatives**
- **Appendix B: Goals and Ground Rules of the Market Transformation Work Group**
- **Appendix C: Draft Stage-gate Criteria**
- **Appendix D: Draft Intake Application Form**
- **Appendix E: Staff Proposal's Content Guidance for Market Transformation Accord/Plan**
- **Appendix F: Stage-gate Schematic**

Section 2: Market Transformation Initiative Principles, Guidelines, & Strategies

Introduction

MTIs should conform to the high-level principles as defined in this document and align with existing State and Commission policy direction (e.g., policies that advance energy efficiency, equity and workforce objectives as well as greenhouse gas (GHG) emission reduction targets). “High-level principles” describe program goals that every MTI should aim to achieve. “Guidelines and Strategies” provide guidance on how to implement the intent of the high-level principles.

High-Level Principles

MTIs must:

- 1) Drive incremental savings that achieve the state’s energy efficiency (EE), equity, and GHG reduction goals.
- 2) Be cost-effective under the MT framework and just and reasonable for ratepayers to fund.
- 3) Use a stage-gate process for development and deployment.

MTIs should also meet the following principles, while acknowledging that some principles may not be applicable to each and every MTI:

- 4) Complement and coordinate with Rolling Portfolio programs.
- 5) Support and not stifle innovation.
- 6) Leverage existing processes and forums where appropriate.
- 7) Integrate strategies to maximize equity.
- 8) Be informed, measured, and evaluated by data and information.
- 9) Include metrics to assess progress toward MTI and State and Commission policy goals.
- 10) Be vetted in an inclusive, open, and transparent manner.
- 11) Ensure that the EE workforce is adequately trained, skilled, and available.
- 12) Sync with the evolving long-term structural changes to California’s energy production and consumption.

Market Transformation Guidelines & Strategies

Guidance on how to implement the intent of the high-level principles.

- 1) MTIs should not be limited to technologies and should consider additional approaches that strive to meet the State's goals (e.g., behavior, equity, workforce, code compliance strategies, etc.). *This supports principles 1 and 3.*
- 2) MTIs should support and complement additional State and Commission goals to achieve substantial GHG emissions reductions, such as through demand response, integrated demand-side management (IDSM), and strategies that ensure grid stability. *This supports principles 1 and 3.*
- 3) MTI Plan development should not be overly expensive or prevent timely action and important learnings. *This supports principle 4.*
- 4) MTIs should consider how to transform the EE marketplace to maximize energy savings, health, affordability, and job access for disadvantaged communities. *This supports principle 7.*
- 5) MTIs should have timely feedback and evaluations to enable pivoting strategies if needed in support of continuous improvement. *This supports principle 8.*
- 6) MTIs should be vetted in a transparent way and include stakeholder, community, and potential participant feedback processes as applicable. *This supports principle 10.*
- 7) MTIs must make commitments that adequately cover the time expected to realize MT to effectively address market barriers and facilitate functional industry partnerships. *This supports principle 1.*
- 8) MTIs should consider how to transform the EE marketplace to ensure both the availability and utilization of a well-trained and suitability-skilled EE workforce. *This is related to principle 11.*
- 9) MTIs should be designed to address or at least complement the likely long-term structural changes to California's energy industry including relying on carbon-free resources coupled with efficient electrification. *This supports principle 12.*

Section 3: Market Transformation Stage-Gate Proposal & Decision Criteria

Introduction

Stage-gate processes have been in use with varying degrees of formality in every industry, including the research and product development teams within the investor-owned utilities (IOUs). We have developed a description of how stage-gates may be applied to MTI development and funding in order to understand how MT Administrator(s) (MTA(s)) would ensure that an MT idea is worthy of being implemented across the service territories of the four IOUs. These stage-gates describe critical decision-making points and expected activities at each stage including ideation, potential intervention testing and refinement, MT Plan⁴ development, and sunset or transition of both unsuccessful and successful MTIs.

Note, however, that the MTI development process in real life is non-linear; some stages may be repeated; some stages may run in parallel with each other; and/or some stages may be skipped. The stage-gate depiction is also intended to help MTA(s) and stakeholders anticipate what different data and sets of expertise might be needed at each stage.

Through collaborative discussion with subject matter experts in MT and California policy, we have arrived at a depiction of a process with three overarching phases and seven stages. See Figure 1.

The proposed stage-gate process is highlighted below along with a detailed description of each phase, the corresponding activities, deliverables, and key review points at each phase. Draft stage-gate criteria are discussed in Appendix C.

Ideation & Intake

The Ideation process focuses on the intake and collection of concepts for possible MTIs prior to the start of the stage-gates. In this process, the MTA(s) would manage a portal where third parties (3Ps), industry actors, or other stakeholders could submit ideas for MTIs via a standardized intake form.⁵ The intake form will include an initial set of self-screening questions and multiple levels of questions to determine the amount of pre-existing documentation that is available along with the level of maturity of each concept (see Appendix D).

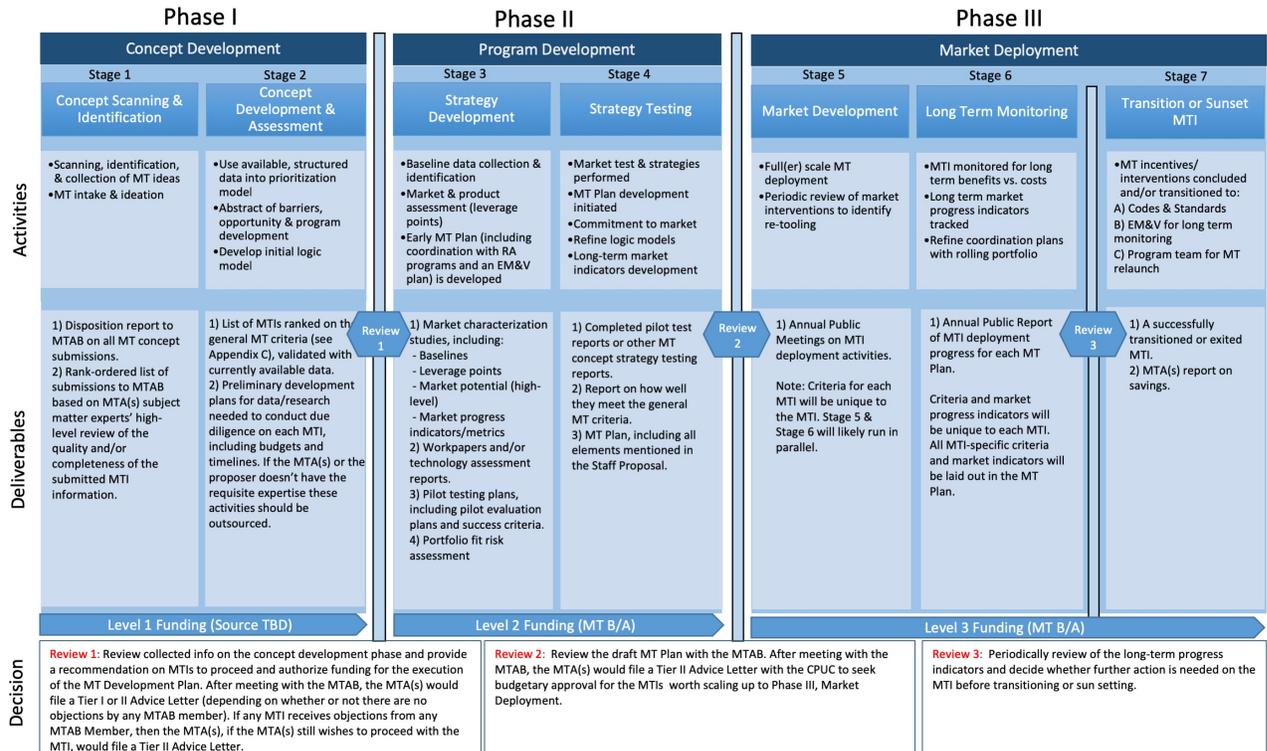
Any ideas including from the emerging technologies Portfolio and Codes and Standards (C&S) proposals, would also complete the intake form. For the initial round of ideation, the portal for completed intake forms would remain open for at least 1-2 months. The MTA(s) will determine what stage of development the MTI idea is at and proceed with development through the remaining stages as necessary. Any ideas received after closure of the intake portal window would be reserved for an additional round of solicitations on an as-needed basis or on a scheduled timeframe to be determined by the MTA(s).

⁴ An MT Plan is the blueprint/roadmap of the MTI that includes but is not limited to a timeline, metrics, intended outcomes, coordination with RA programs, and an Evaluation, Measurement and Verification (EM&V) plan. It is analogous to Staff's "Market Transformation Accord" described in Appendix E.

⁵ See Appendix D for an illustrative example. The intake form will need to be finalized by the MTA(s) in consultation with the Market Transformation Advisory Board (MTAB).

It is acknowledged that the MTA(s) may need to help guide or develop MTI proposals to fully meet the MT criteria.

Figure 1: Stage-gate Process Schematic



See Appendix F for a larger version of this schematic.

Phase I: Concept Development

Stage 1 – Concept Scanning & Identification

At this scanning and identification stage, the MTA(s) scans submitted ideas and may also submit their own concepts on potential technologies, target markets, and services that might be developed into productive MTIs based on a clear, pre-defined set of criteria⁶ to identify market gaps and opportunities. Considering the need for transparency, fair treatment, and a clearly defined and reportable rationale for decision-making, these criteria will be monitored throughout the life of each MTI. Setting these criteria will also ground the objective of each MTI to ensure the original justification for the MTI does not become obsolete.

The MTA(s) will also clearly outline which concepts are not eligible for submission (hereinafter “Peremptory Criteria”). Such MTIs would accordingly be rejected by an MTA(s) before being scored and ranked. There are three known reasons this might occur. First, a program might already be pursued through other parts of the portfolio (how to address such program overlap is more fully discussed in

⁶ Ideally, the general criteria for MTIs remain essentially the same throughout all three Phases but differ in the level of rigor with which they are assessed. See Appendix C.

Section 8 of this Report). Second, external laws, regulations, or CPUC rulings might prohibit certain types of programs. At the discretion of the MTA(s), such external limitations may be either explicitly listed by the MTA(s) or incorporated by broad reference. Third, internal policies of an MTA(s) might prohibit an MTA(s) from supporting certain types of MTIs. The MTA(s) will be transparent in the MT administration process by stating any such known, internally-driven program limitations.

The MTA(s), MT Advisory Board (MTAB), or the CPUC may determine other reasons to introduce Peremptory Criteria to the process. When an MTI is rejected due to Peremptory Criteria, the responsible MTA(s) would provide documentation to the MTAB as to its reason for rejecting that MTI. For purposes of conciseness, this peremptory rejection sub-stage is not restated in further delineations of the stage-gate process in this Report.

Considering the need to manage financial risks throughout, the Concept Development Phase leverages and is driven by existing, readily available data, and low-cost research and development if needed. Further, the previously described intake form will also allow the MTA(s) to rank order and prioritize the review of submissions based on data availability and verifiable claims to be considered for scaling up to Stage 2. Stage 1 concludes with a rank ordered list of MT opportunities based on information provided in the intake form.

For any ideas not selected to move forward, the MTA(s) would provide a short explanation to the MTAB and the proposer including rationale for the decision. Depending on the number and quality of ideas received, the MTA(s) could choose to retain certain ideas to pursue if higher-priority ideas do not prove promising upon further development in Stage 2.

We anticipate Stage 1 to be limited to 1-2 months after the closure of the intake portal, so that MTA(s) can proceed with concept development in a timely manner. (How often to initiate Phase I/Stage 1 concept identification should be decided by the MTA(s) and MTAB.⁷)

Stage 1 Deliverables:

- 1) Disposition report to the MTAB on all MT concept submissions.
- 2) Rank-ordered list of submissions to the MTAB based on MTA(s) subject matter experts' high-level review of the quality and/or completeness of the submitted MTI information.

Stage 2 – Concept Development & Assessment

The MTA(s) at this Stage begins the initial due diligence of vetting the top ideas with the Initiative Review Committees (IRCs) as applicable,⁸ conducting a more extensive review of existing available data and assessing the potential for leverage points⁹ within the target markets for intervention strategies and opportunities.

⁷ See Section 4. Initiative Review Committee(s) could be formed for each MTI or groups of MTIs as desired by the MTA(s) and/or the MTAB on an as needed basis.

⁸ See Section 4.

⁹ The term "leverage point" refers to, "Venues of concentrated market activity, where a large portion of market exchanges occur. At these points, a relatively small and strategic intervention can influence large numbers of transactions, decisions or behaviors far more efficiently and cost-effectively than individual incentives." See: Administrative Law Judge's Ruling Seeking Comment on Market Transformation Staff Proposal, Rulemaking 13-11-005, August 29, 2018.

The MTA(s), drawing upon internal and external resources and data, could employ a prioritization model,¹⁰ or any other well-articulated, transparent approach to rank order and prioritize ideas from pre-defined criteria to emphasize opportunities that meet agreed upon priorities and objectives. The use of a prioritization model and the relative weighting of the criterion will be determined by the MTA(s) in consultation with the MTAB but the rationale for such a structured approach is to provide equity and transparency into all ideas presented as well as the ability to clearly document and report on data-driven decisions.

To gauge potential leverage points and the feasibility of intervention strategies, the MTA(s) may undertake initial conversations with potential industry partners. This process will result in a greater understanding of key criteria and outlines of potential logic models and is likely to yield a further winnowed list of potential MTIs.

This Stage would take place over several months after Stage 1, however, MTIs in subsequent Phases would likely be on individualized timeframes, as the pace of any one MTI moving through the stage-gate process could vary based on the characteristics of each MTI.

This Stage concludes with a refined list of MTIs, initial identification of intervention strategies, and the initial development of logic models and intervention theories in advance of Review 1.

Stage 2 Deliverables:

- 1) List of MTIs ranked on the general MT criteria (see Appendix C), validated with currently available data.
- 2) Preliminary development plans for data/research needed to conduct due diligence on each MTI, including budgets and timelines. If the MTA(s) or the proposer doesn't have the requisite expertise these activities should be outsourced.

Review 1

The MTAB will review the MTA(s) recommendations and supporting data gathered in the Concept Development Phase and provide a recommendation on top MTIs to proceed into Phase II: Program Development. This recommendation to proceed will then authorize additional funding for program development beyond funding in Phase I. After meeting with the MTAB, the MTA(s) would file a Tier I or II Advice Letter (depending on whether or not there are no objections by any MTAB member) with the Commission to seek budgetary approval for the MTIs recommended to progress to Stage 3.

¹⁰ A prioritization model is an example of a structured approach to enable alignment on key criteria including feasibility, policy alignment, Portfolio fit, savings potential, and cost-effectiveness.

Phase II: Program Development

Stage 3 – Strategy Development

Building on the existing knowledge gained in Phase I and with a financial commitment to the target market(s), the MTA(s) will collaborate with the Initiative Review Committee(s) (IRCs), where applicable, to conduct further market research and product assessments to identify critical gaps in knowledge. Stage 3 is also where a further refined logic model identifying market actors and potential leverage points will be developed resulting in a hypothesized strategic intervention. A Bass Diffusion Model¹¹ may also be developed to assist with baselining and setting short- and long-term milestones over time. An early Evaluation, Measurement and Verification (EM&V) Plan is also developed in coordination with an independent EM&V subject matter expert (SME) that is not involved in program implementation to agree on metrics for savings estimates and baseline forecasts. The evaluator would also be responsible for monitoring market developments, providing market evaluation reports on market dynamics and characteristics over time, and providing non-biased evaluation data for decision-making.

It is important to note that in this Strategy Development Stage, and in subsequent Stages, the MTA(s) will need the flexibility to rapidly adapt to new information and market dynamics as the MTIs prepare for strategy testing and market deployment.

This stage concludes with a defined market baseline against which market changes and savings will be measured and evaluated, and the initial development of a Rolling Portfolio coordination plan and MT strategy.

Stage 3 Deliverables:

- 1) Market characterization studies, including:
 - Baselines
 - Leverage points
 - Market potential (high-level)
 - Market progress indicators/metrics (likely based on the leverage points and overall market characteristics).
- 2) Workpapers and/or technology assessment reports.
- 3) Pilot testing plans, including pilot evaluation plans and success criteria.
- 4) Portfolio fit risk assessment (projections of savings potential, savings likelihood, and impact on EE Portfolio goals and existing EE programs).

¹¹ A Bass Diffusion Model is a widely used forecasting tool to determine the speed and timing of market adoption. This modeling approach is consistent with the model used in forecasting for the EE Potential and Goals studies in California.

Stage 4 – Strategy Testing

At this Strategy Testing Stage, the MTA(s) will collaborate with the IRCs where applicable to conduct market tests to test the hypothesized strategic intervention(s) defined in the previous Stages. In some cases, market tests may determine that an MTI is no longer feasible or has deviated from the initial logic and criteria. These insights will allow for off-ramping of an MTI before wasteful wide-scale deployments. For each MTI that is off-ramped, the MTA(s) would provide clear documentation on the rationale for the decision.

Further addressing the need for transparency and a clearly documented rationale and approach to intervening in a market, an MT Plan will then be developed for each promising MTI that remains in alignment with the initial criteria, applying insights from market test results in preparation for the initiatives being proposed to move to Phase III.

The MT Plan, which also solidifies a commitment to the market and relevant market actors, will describe specific anticipated market benefits including but not limited to: elimination of barriers to EE, potential to scale, desired time to reach specified levels of market adoption/saturation, and other variables that would influence the Bass Diffusion curve.

The MT Plan will also contain more detailed coordination and communication plans to ensure MTIs are working synergistically with the Rolling Portfolio programs, including RA and C&S. Should a RA program need to be “ramped down” to avoid interfering with an MTI, the MT Plan should contain an estimate of the reduced Rolling Portfolio savings goal and lowering of the Total Resource Cost test (TRC) that would result from removing the savings potential of the RA programs impacted by the MTI. Those savings would no longer be within PA control. Acceptance of the MT Plan would be considered Commission acceptance that the savings potential associated with the relevant RA programs will be removed from the PA Portfolio savings goals, and that any concomitant reduction in the TRC is also acceptable.

This Stage concludes with the filing of the MT Plan as a Tier II Advice Letter for a decision on whether to proceed into Phase III.

Stage 4 Deliverables:

- 1) Completed pilot test reports or other MT concept strategy testing reports.
- 2) Report on how well they meet the general MT criteria.
- 3) MT Plan, including all elements mentioned in the Staff Proposal.

Review 2

The MTAB will review the MT Plan and provide a recommendation on whether the MTI is worth scaling up to Phase III: Market Deployment. After meeting with the MTAB, the MTA(s) would file a Tier II Advice Letter with the Commission to seek budgetary approval for the MTIs worth scaling up to Phase III, Market Deployment.

Phase III: Market Deployment

Stage 5 – Market Development

The Market Deployment Phase begins with the full(er)-scale implementation of the approved MT Plans. The MTA(s) will continue to collaborate and engage with the MTAB and the IRCs where applicable, market actors, Rolling Portfolio programs, and/or 3Ps to track, refine, and adapt or terminate strategies as the market changes and/or implementation changes (e.g., hitting or missing key milestones established in the MT Plans). This Stage concludes with the refinement of long-term market indicators and a refined market transition strategy.

Stage 5 Deliverable:

- 1) Annual Public Meetings on MTI deployment activities. Criteria for each MTI will be unique to the MTI (see Stage 6: Long-Term Monitoring). Stage 5 and Stage 6 will likely run in parallel.

Stage 6 – Long-Term Monitoring

This is the Stage where the MTA(s) will track the metrics and milestones established in the MT Plan. Some of the key metrics at this Stage include the long-term benefits versus costs and the long-term market progress indicators.

Stage 6 Deliverable:

- 1) Annual Public Report of MTI deployment progress for each MTI Plan.

Review 3

Periodically review the long-term progress indicators and recommend whether further action is needed on the MTI before transitioning or sunsetting.

Stage 7 – Transition or Sunset MTI

Once metrics indicate successful transformation of the market where publicly funded interventions are no longer necessary, MTA(s) will implement the market transition strategy. The MTA(s) will conclude the intervention through a transition to C&S, continuation of long-term monitoring through EM&V as provided for in the MT plan, or transition to Rolling Portfolio program teams for a relaunch.

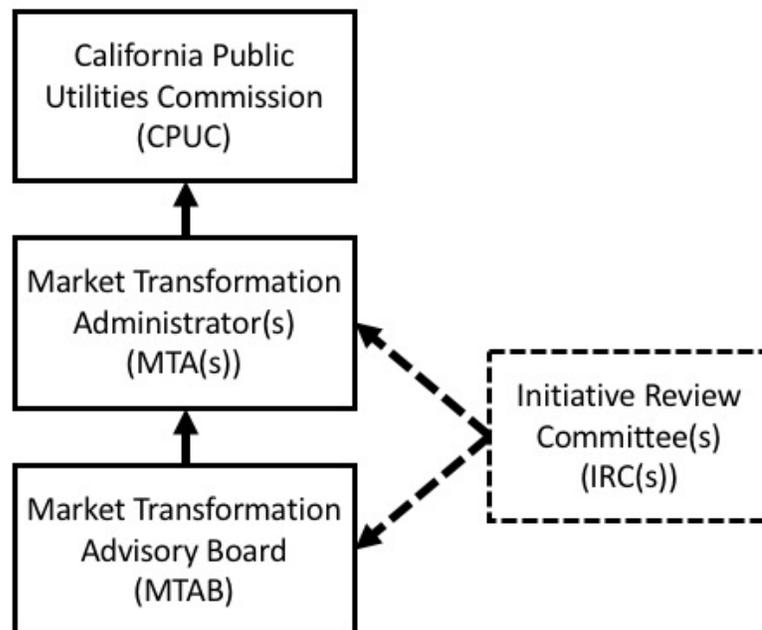
Stage 7 Deliverables:

- 1) A successfully transitioned or exited MTI.
- 2) MTA(s) report on savings.

Section 4: Stakeholder Roles & Responsibilities

This section describes the various groups engaged in MT and defines their roles and responsibilities. See Figure 2. While there is agreement on these roles and responsibilities, there are two proposals for which entities should be the Market Transformation Administrator(s) (MTA(s)): (1) the Existing Program Administrators (Existing PAs); or (2) A Single, Independent Statewide Administrator. These options are described in Section 5.

Figure 2: Schematic of Stakeholder Roles & Responsibilities



Definitions

- **Market Transformation Administrator(s) or MTA(s):** The entity responsible for overseeing the stage-gate process including the scanning, ranking, selecting, and overseeing of the implementation of MTIs.¹²
- **Market Transformation Advisory Board or MTAB:** A group of individuals from organizations with a long-term background in California or national EE; broad-based interest in outcomes of California or national EE proceedings; and solid understanding of MT principles assembled to advise California’s MTA(s) and provide recommendations.
- **Initiative Review Committee(s) or IRC(s):** A group of technical advisors assembled (if needed) for specific MTIs.

¹² As noted above the MTWG is divided regarding whether the MTA should be comprised of the Existing PAs or a new Single, Independent Statewide Administrator. This is discussed in Section 5.

- **Two additional entities that are only relevant to the Existing PAs MTA(s) model described in Section 5 of this Report are:**¹³
 - **Procurement Review Group(s) or PRG(s):** A group of volunteer, non-financially interested stakeholders, potentially assembled from the MTAB, tasked with providing advice for MT solicitations, and work in conjunction with the Independent Evaluator (IE) to ensure openness and transparency of the solicitation process.
 - **Independent Evaluator or IE:** An independent expert with relevant EE and competitive solicitation experience embedded in the MT process to ensure compliance and fairness in the selection of MT implementers and evaluators. The IE would also provide regular reports to the MTA(s) and MTAB as well as the PRG(s).

Role of the Market Transformation Administrator(s) (MTA(s))

Concept Development Phase (Phase I)

In this initial Phase, there would both be an open call for ideas to all stakeholders, and the MTA(s) Staff would be actively scanning for MT opportunities. All of the identified concepts would require a standardized set of information, and the MTA(s) Staff would assess the concepts (as described in Section 3) based on agreed upon criteria. The concepts would be summarized and scored by the MTA(s) and presented to the MTAB with recommendations by the MTA(s) Staff. There will also be clear criteria and guidance to indicate what potential MTI concepts would not be eligible to proceed beyond this stage.

Program Development Phase (Phase II)

The purpose of this Phase is to develop the MTI concepts into full MT Development Plans (or to scrap them if they are deemed unworkable as more information is gathered). The MTA(s) would be the lead for program development: They would oversee any product and market testing needed, identification of the market adoption baseline, creation of the logic model, and establishment of progress metrics. The MTA would also work with PAs, other stakeholders, and market actors to ensure the MTI is coordinated with other existing programs. The end result would be an MT Development Plan for each MTI or scrapping MTIs that seem less promising. Scrapping MTIs would be largely at the discretion of the MTA(s), as it would need to manage the number of MTIs and total budgets, but the MTA(s) would need to provide an explanation and any lessons learned to the MTAB. For continuing MTIs, the MT Development Plan would include a detailed description of the implementation work required (in addition to coordinated work that may be ongoing through an RA program, for example), and identify what part of this work would be bid out through an Request for Proposal (RFP) if the MTI is approved.

Market Deployment Phase (Phase III)

This Phase is where the MTIs are implemented, adjusted as needed, and evaluated in real-time. The MTA(s) would bid out much of the MTI implementation work. The best entities for each MTI will likely vary significantly depending on the focus of the MTI. The MTA(s) could also choose to form an IRC, if

¹³ Non-IOU PAs administered by local government agencies will have equivalent entities but will not identically resemble IOU PA PRGs or IEs.

helpful for the success of the MTI. The MTA(s) will actively administer each MTI and will provide the real-time evaluation and feedback function (as the Northwest Energy Efficiency Alliance does for its programs) to the implementers. The MTA(s) and implementers will work in partnership to assess and adjust the MTI as needed to achieve success; and there will be clear milestones for ending the MTI if required.

Role of the Market Transformation Advisory Board (MTAB)

Criteria and Guidance Setting (Pre-Stage 1)

The MTAB (with the MTA(s)) would be responsible for establishing both the criteria and intake form. The process would be public and transparent, with ultimate approval required by the CPUC. This is required to clearly outline the expectations of the process prior to launch of either scanning the market or soliciting 3P ideas.

Concept Development & Assessment Stage (Stage 2 of Phase I)

During Stage 2, the MTA(s) will present the most promising potential MTIs to the MTAB. The MTAB could also request a summary of MTI ideas brought to the MTA(s) but rejected, along with rationale for rejection. The MTAB will provide feedback and recommendations to pursue, modify, or reject each potential MTI brought forward by the MTA(s). Because the MTAB is not an authoritative body, its recommendations are not binding, but are intended to be taken into consideration by the MTA(s) and the CPUC.

If an MTI receives no objection from the MTAB members, then the MTA(s) would file a Tier I Advice Letter with the CPUC. If any MTI receives objections from any MTAB member, then the MTA(s), if the MTA(s) still wishes to proceed with the MTI, would file a Tier II Advice Letter with the CPUC. Following the Tier II Advice Letter submission, MTAB members both for and against a particular MTI could submit protests or responses directly to the CPUC for it to consider.

Beyond Phase I

A similar review and recommendation process would occur for each MTI that the MTA(s) wishes to progress to Stage 5 (Market Development) or terminate before Stage 5, except a Tier II Advice Letter would be filed at Review 2.

For long-term MTIs (those reaching Stage 6: Long-term Monitoring), the MTA(s) should provide the MTAB an update at minimum once every year. However, for longer term MTIs, the MTA(s) would not necessarily be seeking a recommendation for continuation or termination. Rather, milestones and contingencies established in the Plan would preferably dictate continuation or termination of the MTI. In the event that the MTA(s) wishes to continue an MTI that does not adhere to the Plan, consultation with the MTAB would be needed and the recommendation of the MTAB would still be sought. At no stage would the MTAB have authority to discontinue or force the continuation of an MTI. Rather the MTAB would provide recommendations for the MTA(s)' and CPUC's consideration.

Composition of the MTAB

The MTAB should consist of individuals from organizations with a long-term background in California or national EE; broad-based interest in outcomes of California or national EE proceedings; and solid understanding of MT principles.¹⁴ Organizational members of the MTAB should remain constant unless the organization is discontinued or encounters a long-term conflict of interest. The MTAB would not change depending on the MTI but would oversee all California MTIs. It may be difficult to entirely eliminate the possibility of conflicts of interest from MTAB members, but in individual cases where a clear conflict arises, a Member may step aside or be asked by the CPUC or other Members of the MTAB to recuse itself. For instance, if an MTAB Member is a partner in an MTI, that party should be recused from any recommendations associated with that MTI. Members of the MTAB would be expected to devote the necessary time to review materials and provide insightful advice. Given this expectation, Members of the MTAB would be eligible for intervener compensation in line with current CPUC Rules and Regulations. The MTA(s) will administer an application process, analogous to the Procurement Review Group process, and provide final recommendations for review and approval by the CPUC. The MTAB should also include up to two CPUC Ex-officio Members.

Role of an Independent Review Committee (IRC)

IRCs can be used to advise baseline development, vet intervention strategies, or provide technical advice on specific products or markets. Formation of an IRC is optional and can be done by the MTA(s) at any point of an MTI's lifecycle where independent technical assessments and recommendations are needed. If an IRC is formed, its insights and recommendations should be provided to the MTAB before an update or a recommendation is sought. Members of an IRC would likely provide the most value if they devote the time needed to research the technical questions at hand and understand the MTI. Given the potential for in-depth work, members of the IRC would be eligible for intervener compensation in line with current CPUC Rules and Regulations. Regardless of the status of an IRC, the MTA(s) would still be able to seek informal advice from industry or technical experts.

Composition of an IRC

IRCs may consist of industry experts, academics from national laboratories or universities, individuals from governmental organizations such as the United States Department of Energy or Environmental Protection Agency, or others with needed subject matter expertise. Because MTIs may vary dramatically from one to another, the composition of an IRC would be expected to differ per MTI. Members of the IRC should not stand to benefit from the potential MTI and should be free from other conflicts of interest to the extent possible.

¹⁴ The composition of the MTAB would vary depending whether the MTA(s) is comprised of the Existing PAs or a new Single, Independent Statewide Administrator; if the MTA(s) is the Existing PAs then those PAs would not be eligible for inclusion on the MTAB.

Section 5: Administration Options for the Market Transformation Portfolio

As noted in the previous section, the MTWG is divided on whether the MTA(s) should be comprised of: (1) the Existing Program Administrators (Existing PAs); or (2) a Single, Independent Statewide Administrator. Those who support each option, discuss the rationale and ramifications of each alternative below.¹⁵

Option 1: Administration by the Existing Program Administrators

The following MTWG Members support this option: Energy Solutions; Pacific Gas and Electric Company; Resource Innovations; San Diego Gas & Electric; SoCalGas; SoCalREN; Southern California Edison; and The Energy Coalition

Rationale for Administration by the Existing PAs

D.16-08-019 clearly describes the role the Commission envisions for Existing PAs to engage in EE program activities. Citing movement toward all-source solicitations and the need to manage potential overlap between programs and proceedings, the Commission noted the, “Increasing importance of the utility administrators as portfolio designers.”¹⁶ The Decision went on to state that, “At this time, there is no other logical existing entity besides the utility that is able to handle this portfolio design role on behalf of their entire geographic service area.”¹⁷ Adding to this vision, the Decision continues, “[W]e wish to continue to push the utilities to focus more on their role as determiners of ‘need’ and portfolio design, and less on their role as program designers and implementers.”¹⁸

Since this Decision, the Existing PAs have filed EE Business Plans, embarked upon significant restructurings of their EE organizations, established the pay-for-performance platform, launched 3P solicitations, and filed refined forecasts for EE savings and budget requests for each year through 2025. The Existing PAs have taken these steps to best orchestrate the EE Portfolio in line with the Commission’s direction. In the role of Portfolio administrator, Existing PAs must balance numerous goals and directives, including energy savings targets, cost-effectiveness mandates, statewide program requirements, 3P outsourcing obligations, various non-resource policy objectives, management and reporting of more than 300 metrics,¹⁹ and the anticipated transition of EE to the Integrated Resource Planning (IRP) process, among others.

A portfolio of MTIs stands to impact each of these important responsibilities and must be managed accordingly. As administrators of the Rolling Portfolio and owners of the Business Plans, the Existing PAs are naturally positioned to cultivate MTIs that complement the broader EE Portfolio and work synergistically with RA and non-RA programs. A successful MT framework would enhance the prospects for a California EE Portfolio capable of delivering on long-term SB 350 goals, in large part by providing

¹⁵ The following MTWG Members abstained from taking a position on this issue at this time: The California Efficiency + Demand Management Council and CLEAResult. The MTWG Member whose name appears under both options could support either option.

¹⁶ D.16_08_019 p. 71

¹⁷ D.16_08_019 p. 71

¹⁸ D.16_08_019 p. 71

¹⁹ Pacific Gas and Electric Company’s (U-39-M) EE Business Plan Portfolio and Sector-Level Metrics, 2018.

tools to effectively bridge emerging technologies, RA, and C&S, and all program areas already administered by the Existing PAs. Existing PAs also administer EM&V studies, Workforce Education and Training (WE&T), and Normalized Metered Energy Consumption (NMEC) platforms,²⁰ have savings and cost-effective reporting structures in place, benefit from immediate access to Advanced Metering Infrastructure (AMI) data for every customer,²¹ retain extensive engineering and marketing resources, and undertake rate design and associated customer communications, all of which can be potentially utilized for holistic MTIs.

Creating an MTA outside the roles defined in D.16-08-019 would splinter accountability for important goals and metrics and would ultimately inhibit the ability of current EE program PAs to fulfill their responsibilities. An entirely separate entity would introduce a number of logistical issues and risks across the Portfolio for the existing PAs and 3P implementers. It is not practical to believe that a separate MTA could effectively coordinate with the complex and rapidly transitioning Rolling Portfolio and the hundreds of programs therein.

Going forward, a vital role the Existing PAs must fill across distributed energy resource portfolios will be to define temporal and locational grid needs and identify long-term opportunities for aggressive decarbonization based on forecasted demand and associated generation requirements. Recently the CPUC recognized the need for PAs to optimize the EE Portfolio to more deliberately support the goals of the IRP process.²² Increasingly, integrated programs that can deliver savings at the right times along with dynamic load management will be required to cost-effectively meet these objectives. Given these realities, which stem from California's rapid clean energy advancements, we strongly believe the MT framework must extend beyond undiscerning load reduction. With Existing PAs identifying the need and 3Ps proposing the solutions, the MT framework can be used to drive long-term GHG reductions with purposeful, integrated initiatives. A separate MTA would not be naturally connected to integrated planning processes.

We also recognize the importance of established industry relationships to secure the types of long-term commitments needed to drive MT. These commitments include the sharing of sensitive business data, altered product planning, and ultimately changing supply chain dynamics. The IOUs can bring these relationships to bear to drive MTIs but stand to be far less effective in doing so if not administering the initiatives. Non-IOU PAs can bring local or regional perspectives to hard-to-reach markets and pilot programs that have potential to scale.²³ The existing Joint Cooperation Memos provide a foundation into which coordinated MTI roles can be readily incorporated. The Existing PAs also have established relationships with the 3Ps likely to propose, design, and implement MTIs. These companies have been willing and able to offer insights and opportunities for EE initiatives because the IOUs have respected 3P intellectual property, and 3Ps have treated IOU data with care. These mutually beneficial feedback loops would be even more important when establishing MT Plans.

By bringing to bear organized resources across EE Portfolios, building effective industry and national partnerships, and executing programs and evaluations with 3P support, the Existing PAs have shown the capacity to transform important markets. California's lighting programs have played a major role in transforming lighting from incandescent technology to energy efficient fluorescent products, and more

²⁰ Normalized Metered Energy Consumption (NMEC) – see AB 802

²¹ Advanced Metering Infrastructure or AMI – Generally IOUs maintain hourly and 15-minute interval electric consumption data for residential dwellings and commercial buildings. Gas consumption data is tracked on a daily basis.

²² Staff Proposal for Incorporating Energy Efficiency into the SB 350 Integrated Resource Planning Process, 2018.

²³ D.16-08-019 Finding of Fact 5

recently to high-quality LEDs that meet future iterations of Title 20.²⁴ California's new construction programs help ensure the construction builder workforce is prepared for successful adoption of advancing building codes, which enables C&S advocacy efforts that support successful Title 24 advancements leading to Zero Net Energy.²⁵ Through a partnership with ENERGY STAR®, the Retail Products Platform²⁶ has expanded to 12 states, 14 PAs, and six major retailers and buying groups. This national effort (the ENERGY STAR Retail Products Platform or ESRPP) was initiated by PG&E and NEEA. In the absence of an MT framework, many of these programs have achieved MT milestones despite lacking a mechanism to recognize benefits and therefore often at low TRC. With a California MT framework, existing PAs would have the tools they need to more purposefully pursue dedicated and holistic MTIs, and the resource portfolio could be better focused on achieving immediate cost-effective savings and transitioning to the IRP.

We believe a California MT portfolio administered by the Existing PAs would benefit from robust stakeholder engagement, transparent decision-making, and external expert advice where needed. We have taken care to balance the need for open, transparent processes, with the need for timely decision-making and respect for 3P intellectual property.

Features Related to Administration by the Existing PAs

Below we discuss some of the features related to having the existing PAs be the MTA(s) including the addition of an IE and the use of PRGs (as shown in Figure 3 below).

The Concept Development Phase (Phase 1) focuses on the collection of concepts for possible MTIs. In the MTA (Existing PAs) model, the IOUs would manage a portal where 3Ps, industry actors, or other stakeholders could submit ideas for MTIs via a standardized intake form. During this phase the MTA (Existing PAs) is also expected to scan the market for potential opportunities. Any ideas originating within the Existing PAs, including from the emerging technologies portfolio, would also complete the intake form.

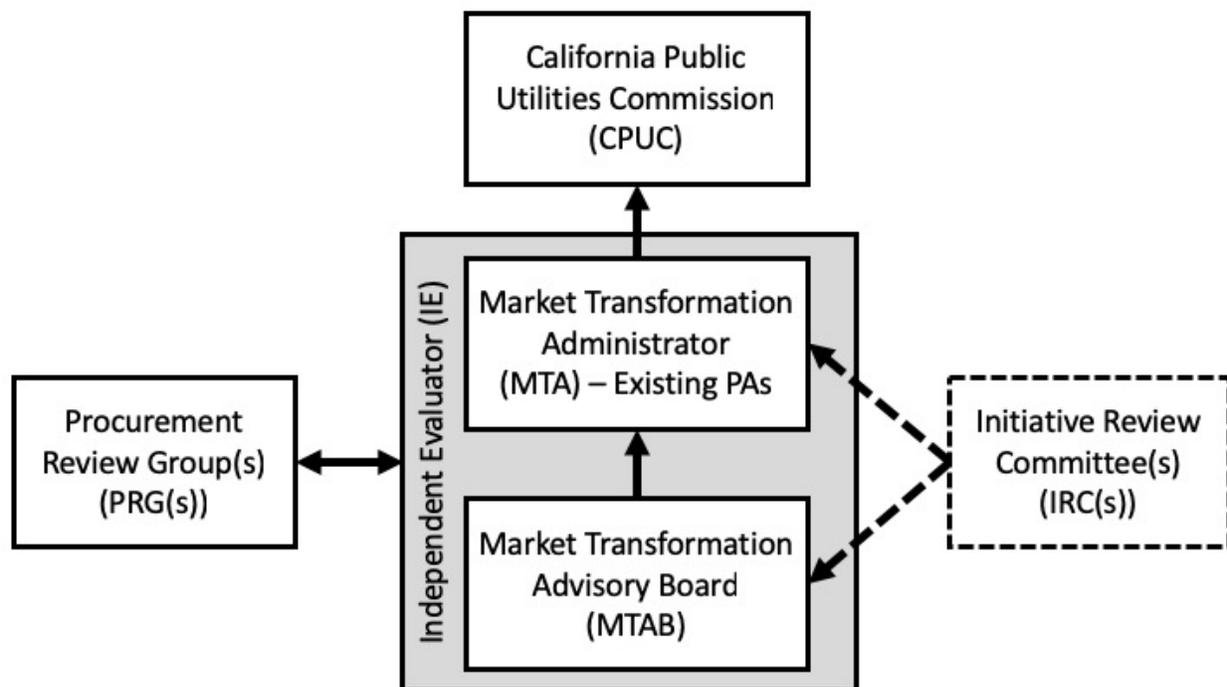
During Stage 1 (Concept Scanning & Identification) in the MTA (Existing PAs) model, an IE would be utilized to assist the MTA (Existing PAs) in undertaking an initial assessment of key criteria for each idea brought forward via the intake form. For any ideas not selected to move forward, the MTA (Existing PAs) would provide short feedback to the proposer, including rationale for the decision. Depending on the number and quality of ideas received, the MTA (Existing PAs) could choose to retain certain ideas to pursue if higher-priority ideas do not prove promising upon further development in Stage 2 (Concept Development & Assessment).

²⁴ Voluntary California Quality Light-Emitting Diode (LED) Lamp Specification 3.0, California Energy Commission Final Staff Report, December 2016. "This is the third update to the specification, which will continue driving the market towards higher quality products and prepare for the upcoming appliance efficiency regulations for state regulated LED lamps. For this purpose, the Voluntary California Quality LED Lamp Specification, Version 3.0, is aligned with the Title 20 standards." p. i

²⁵ 2018 California Advanced Homes Program Participant Handbook and Program Agreement for Single-family and Multi-family New Construction Projects, California IOUs, "The 2018 California Advanced Homes Program serves to encourage residential new construction builders to meet two visionary goals set forth by the California Public Utilities Commission (CPUC). The first is to help builders prepare for future code changes and build homes better-than-code. The second is for all new homes to reach ZNE." p. 2

²⁶ See ABAL 3668-G/4765-E and Supplemental ABAL 3668-G-A/4765-E-A. RPP is a dedicated market transformation pilot that focuses on the growing plug load and appliance market. In less than three years, the ESRPP has expanded to 14 utility sponsors across 12 states, covering roughly 20% of the U.S. population.

Figure 3: Schematic of Stakeholder Roles & Responsibilities Under Existing PA Administration



If needed throughout the MTI, the MTA (Existing PAs) could use short-term technical assistance contracts for 3P support,²⁷ again under the consultation of the IE. During Stage 2, the MTA (Existing PAs) may undertake initial conversations with potential industry partners. This process will result in greater understanding of key considerations and outlines of potential logic models and is likely to yield a further winnowed list of potential MTIs before consultation with the MTAB.

In the MTA (Existing PAs) model, a key aspect of Stage 2 will be providing transparency into all ideas presented to the PAs while also respecting intellectual property of 3P and industry proposers. The MTA (Existing PAs) should make available to the MTAB synopses of all ideas submitted through the IOU-hosted intake portal, including those initially rejected, along with the criteria(on) by which the ideas were eliminated from consideration. If the MTAB disputes the basis for rejection of an idea (keeping in mind the process was undertaken with the assistance of an IE), the MTA (Existing PAs) would either provide additional detail to the MTAB or would include the idea for further development and consideration.

In the MTA (Existing PAs) model, market trials conducted in Stage 3 (Strategy Development) and Stage 4 (Strategy Testing), would be done in one or more of the Existing PAs' service territories. However, the solicitation process for 3P implementation beginning in Stage 5 (Market Development) would utilize much of the existing Rolling Portfolio statewide and 3P solicitation framework including the PRG and IEs.²⁸ In lieu of issuing a Request for Abstract (RFA) that would lead to a RFP, the MTA (Existing PAs) would issue RFPs only as much of the ideation work should be completed at this point. As with the

²⁷ At this stage additional research is not meant to be exhaustive, overly expensive, or delay engagement with the market for an extended period of time. Therefore, direct award contracts to third parties with specific subject matter expertise should be encouraged over lengthy competitive bidding processes to meet the requirements of Stage 2.

²⁸ D.18_01_004. See implementation details for example at https://www.pge.com/en_US/for-our-business-partners/energy-efficiency-solicitations/energy-efficiency-solicitations.page

Rolling Portfolio statewide programs, one lead PA will be assigned for each MTI. As described above, the PRGs would provide input and recommendations throughout the bid review and scoring process. The IEs would assist the MTA (Existing PAs) in compliance and help to ensure fairness.

A key role of the MTA (Existing PAs) throughout the MTI development and long-term monitoring will be to ensure synergistic implementation of existing and new 3P RA and non-RA programs, C&S programs, and MTIs.

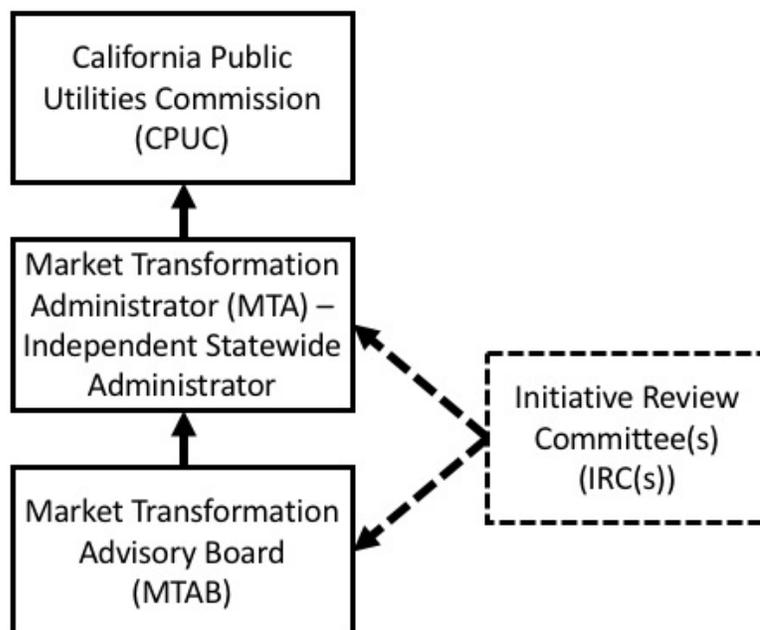
Option 2: Administration by a Single, Independent Statewide Administrator

The following MTWG Members support this option: Center for Sustainable Energy; Coalition for Energy Efficiency; CodeCycle; Natural Resources Defense Council; Public Advocates Office; Resource Innovations; Sheet Metal Workers Local 104; Small Business Utility Advocates; and The Utility Reform Network

Rationale for Administration by a Single, Independent Statewide Administrator

In order to successfully carry out the Commission’s MT agenda, the functions of program selection, design, and management should be carried out by a Single, Independent Statewide Administrator, which we will refer to as the MTA (Independent Statewide). The MTA (Independent Statewide)’s purpose is to centralize the core functions associated with running an MT program within a single organization. These functions may include program design, evaluation preparedness and ongoing real-time evaluation, and the day-to-day management and coordination of MTIs; management of the overall MT portfolio; and the monitoring of relevant markets in order to identify future opportunities and gain the strategic information needed to flexibly adapt the MT portfolio and ensure that MTIs are relevant. The MTA (Independent Statewide) will also be responsible for bidding out implementation work as needed. See Figure 4.

Figure 4: Schematic of Stakeholder Roles & Responsibilities Under a Single, Independent Statewide Administrator



The MTA (Independent Statewide) would provide California with three overarching and interrelated benefits over the MTA (Existing PAs):

- 1) Stability and focused expertise that flow from mission alignment;
- 2) Efficiencies associated with a “natural” statewide purview; and
- 3) Agility associated with being a non-utility.

First, choosing an independent (meaning non-IOU) administrator allows for the selection of an entity with a mission fully aligned with promoting EE and conservation, including MT. Indeed, mission alignment is considered a best practice in MT administration.²⁹ As Prah and Keating (2014) point out:

“Any list of entities that have been most successful in carrying out market transformation initiatives is likely to include the Northwest Energy Efficiency Alliance (NEEA); the Northeast Energy Efficiency Partnership (NEEP); the New York State Energy Research and Development Authority (NYSERDA); and Efficiency Vermont (EVT). What all four of these entities have in common is that they are not utilities, and they are explicitly tasked with market transformation as a key organizational objective.”³⁰

²⁹ See e.g., “What Does it Take to Turn Load Growth Negative? A View From the Leading Edge,” Vermont Energy Investment Corporation, August 2008, (discussing the importance of “Mission Alignment”); “Building a Policy Framework to Support Energy Efficiency Market Transformation in California,” Prah, R. and Keating, K. December 9, 2014, p. 14 (discussing the selection of MTA(s)).

³⁰ “Building a Policy Framework to Support Energy Efficiency Market Transformation in California,” Prah, R. and Keating, K., December 9, 2014, p. 16.

MT requires sustained effort, patience, flexibility, and long-term dedication. A mission-aligned Single, Independent Statewide Administrator will provide the necessary stability in planning, development, and implementation of MTIs, as well as requisite expertise.

In contrast, an electrical or natural gas utility corporation (an IOU), even an IOU with a long history of promoting EE programs, is inherently an organization with a mission broader than promoting EE and conservation. Depending on the broader priorities of the organization, an IOU will adjust how it carries out its EE functions, both in the long-term and near-term. In California, we have seen significant changes in the size and organization of utility EE staff over the past five years, some driven by state policy changes and some not. Further, utilities can and do temporarily re-deploy resources when emergencies occur in other parts of the organization (such as the Aliso Canyon Storage Facility natural gas leak in 2015-2016 and the Southern and Northern California wildfires in 2017 and 2018).

A Single, Independent Statewide Administrator will ensure the most efficient use of expertise regarding the management and administration of MT. It will also insulate these programs from changes in management priorities and other organizational pressures that might otherwise undermine their effectiveness if the various IOUs are left to manage them.

Second, a Single, Independent Statewide Administrator will have a natural statewide purview, whereas a utility has a natural service territory focus. This statewide orientation will contribute improved efficiencies in the delivery of ratepayer-funded EE activities in California by taking a statewide approach to defined markets targeted for transformation. Achieving sufficient market impact will occur more quickly, with less noise and fewer confounding factors, when there is uniformity, ease of access, fewer variables, and less complexity. “Market actors, and collaborators in other states, must see a unified front,” for California to have effective MTIs.³¹ Related, the Single, Independent Statewide Administrator will have an inherently “neutral” vantage point, one that avoids any perceived or actual bias towards IOU- or non-IOU proposals, or proposals impacting measures more prevalent in or relevant to one utility service territory than the others. Finally, centralizing MT in a single organization will facilitate statewide coordination among EE activities of all types. In addition to overseeing MT activities across the state, the MTA (Independent Statewide) will serve as a central point of coordination with all of the Rolling Portfolio PAs to ensure that the MTIs and Rolling Portfolio activities are integrated as appropriate and are otherwise complementary. In contrast, under a framework with multiple Existing PA MTAs, each would need to coordinate and integrate its MT activities not only with its own Rolling Portfolio, but also with the Rolling Portfolios of each of the other PAs.

Last but not least, MT requires tools and approaches that are institutionally difficult for IOUs to pursue. A Single, Independent Statewide Administrator will enjoy an organizational nimbleness that an IOU lacks. For instance, an IOU may be hesitant to take on certain issues (such as improving compliance through permit requirements or additional support for code enforcement beyond education as part of an MTI targeting non-compliance in a particular building retrofit market) or may not be optimally positioned to partner with local governments (such as water districts). A Single, Independent Statewide Administrator will not have the same limitations. Likewise, an IOU may not be well-suited to partner with a publicly owned utility (POU) (which could be a potential competitor, among other complicated factors). A Single, Independent Statewide Administrator will be more able to convene a larger and broader group of partners and enter a larger array of markets because it is not an IOU.

³¹ Ibid.

All of these reasons, taken together, support the selection of a Single, Independent Statewide Administrator for California's MTIs.

Selection of the Single, Independent Statewide Administrator

To create the appropriate regulatory framework and identify and hire an appropriate MTA (Independent Statewide), the Commission should select an IOU to act as the statewide lead on MT. The Commission should then order the lead IOU to conduct an appropriate solicitation and hire the MTA (Independent Statewide). The IOU that acts as statewide lead will be the contracting agent, responsible for managing the procurement process. However, the selection of the MTA (Independent Statewide) would require approval by the CPUC Energy Division, and the selection should be based on additional input from other stakeholders in the process. The solicitation for the MTA (Independent Statewide) should also follow the normal procedures of IE and PRG review established by D.18-01-004, which are currently practiced for all 3P qualified EE programs, to ensure fair and well-managed procurements. However, once the MTA is in place, the MTA's own activities would not be subject to the IE/PRG procurement oversight process, which is employed by the Commission to mitigate risks uniquely arising in the context of IOU procurement.

The entity selected as the MTA (Independent Statewide) should be offered a four-year contract to conduct initial MT work. At the end of the third year, the MTAB will review the performance of the MTA and recommend to the Commission whether the lead-IOU should renew the current MTA (Independent Statewide)'s contract or conduct a solicitation to identify a new administrator.

Features Related to Administration by a Single, Independent Statewide Administrator

Annual funding of the MTA (Independent Statewide) will also be contingent on Commission approval of a Tier II Annual Budget Advice Letter (ABAL) submitted by the MTA (Independent Statewide). The ABAL submitted by the MTA (Independent Statewide) will contain a report and recommendation to the Commission by the MTAB. As with other statewide programs, the budget for the MTA (Independent Statewide) would be shared among the four IOUs proportionally according to their load shares. For individual MTIs, the MTA (Independent Statewide) would be required to submit Advice Letters (as outlined in the consensus stage-gate proposal in Section 3) to seek Commission authorization to expand MTIs.

While much of the day-to-day work and even longer-term strategic planning related to MTIs will be done by the MTA (Independent Statewide), the MTA (Independent Statewide)'s work will be overseen by a stakeholder MTAB, as assisted by MTI-specific IRCs when needed. (These entities are described in Section 4 above.) With a Single, Independent Statewide Administrator, the Rolling Portfolio PAs would be encouraged to be MTAB members, as their input on resource planning, coordination and integration with the Rolling Portfolios, as well as market opportunities for MT, would be invaluable. Likewise, the Rolling Portfolio PAs could participate on the IRCs.

A key advantage of this structure is that it facilitates independent administration of MTIs, with strategic direction and oversight from stakeholders with MT expertise through the MTAB and IRCs, while the Commission retains ultimate decision-making authority over the use of ratepayer funds.

Section 6: Budget

Amounts & Caps

The budget associated with MTIs should not be predetermined, but instead based on the initiative scope and need. The budget should be secured to ensure consistency for each MTI over its lifetime. The Commission should follow a model similar to the California Energy Commission's (CEC) Food Production Investment Program, by setting a not-to-exceed budget for a defined number of years and authorize MTIs from this pool of available funds. The budget should be incremental to the currently authorized budget levels within the EE Rolling Portfolios.

Budgets should be authorized for each phase of the MT process, and each stage-gate should serve as a checkpoint for further funding authorization via a Tier II Advice Letter. Since MTIs would be administered outside of the EE Rolling Portfolios, they would not be subject to the caps and targets for each cost category. However, the caps and targets should serve as guides for implementation. For example, an MTI in early phases may not need a marketing budget but may need more budget for administration or implementation. These needs should be identified in the MTI proposal at each stage-gate.

Budget Approval Process

As noted above, the Commission should set a not to exceed budget for all MTIs administered by the MTA(s) over an initial period of time (e.g. four years). Within this budget, the MTWG recommends that the Commission authorize an annual funding allocation for Phase I activities such as concept scanning, soliciting, and development. Funding for Phase II and III activities for specific MTIs should be authorized via submission of Tier I or II Advice Letters for each MTI.

Annual funding requirements will likely vary considerably as MTIs are approved or sunset or as modifications are made to approved MTIs. In order to facilitate budget adjustments, the MTWG recommends that the MTA(s) submit a Tier II ABAL that requests funding authorization of and cost recovery for anticipated MT activities for the upcoming program year. The ABAL should include funding for general Phase I activities as well as any MTI-specific Phase II and III activities that have been approved (or are anticipated to be approved) by the Commission for the upcoming program year.

The ABAL model is adapted from the EE Rolling Portfolio cycle and balances flexible and timely budgeting with sufficient budget oversight and authorization by the Commission. The MTWG anticipates that the not-to-exceed budget for the first budget period of 3-5 years will be set by the Commission in the same decision in the EE rulemaking (R.13-11-005) that will approve the MT policy framework.

For subsequent budget cycles, the Commission should determine whether to authorize funding through a motion (or other procedural vehicle) in the EE rulemaking proceeding or its successor or to require MTA(s) to file an MT Business Plan application requesting funding authorization. The choice of process may depend in part on which MTA model the Commission ultimately selects.

Integration with the Rolling Portfolio

Any program elements of an MTI that rely on RA activities should be included in EE Business Plan budgets authorized via application and included in PAS' annual portfolio ABALs.

Funding Split

MTIs should be funded in the same way as statewide EE programs, and should consider the electric/gas split associated with each initiative. The proposal for a shared funding mechanism for statewide programs was presented in SDG&E ABAL 3268-E-A/2701-G-A and is pending before the Commission.³² This funding model would work regardless of the administrator structure, but if a Single, Independent Statewide Administrator is selected, there likely would need to be a contract between a lead IOU and the Single, Independent Statewide Administrator, following the model of Statewide Marketing Education & Outreach.

³² See <http://regarchive.sdge.com/tm2/pdf/3268-E-A.pdf>

Section 7: Market Transformation Cost-Effectiveness (CE) Framework

Scope of Recommended Modifications

The MTWG recommends using the current dual test of the Total Resource Cost Test (TRC) and Program Administrator Cost (PAC) Test with a focus on modifying the following three categories:

- 1) Counting C&S savings;³³
- 2) Timeframe of costs and benefits; and
- 3) The net-to-gross methodology.

The following recommendation is consistent with NEEA's approach to CE, as well as the December 2014 Ralph Prahl and Ken Keating white paper developed for the CPUC entitled, "Building a Policy Framework to Support Energy Efficiency Market Transformation in California."³⁴

This narrowly focused approach is intended to prioritize those inputs that are most important to align with a longer-term MT effort, rather than open discussion of CE in general. By limiting the scope of modifications, we strive to avoid triggering the need for a new proceeding or modified scope, which could delay the implementation of this effort. In addition, any updates to the CE methodology resulting from ongoing or new CPUC proceedings, including changes in energy system values over the timeframe of the MTIs, would trigger an update to this proposal.

Recommendations: Counting Codes & Standards (C&S) Savings & Costs

Inclusion of C&S into the CE Methodology

The initial CPUC Staff Proposal did not explicitly consider the potential for savings from C&S advancements that result from MTIs nor implications for CE. However, several parties noted the importance of capturing the value of C&S in an MT CE framework. The MTWG therefore recommends:

Any MTI CE calculation should include projected C&S costs and savings, when applicable.

Such an approach would be applicable if an objective of the MTI were to yield C&S. We do not propose updating the TRC/PAC inputs more generally at this time (e.g. to consider additional benefits such as equity, non-energy benefits such as comfort and health, or environmental adders beyond what is included) as such a discussion would likely require a modification in the scope of R.13-11-005.

However, we reiterate our recommendation that this CE framework be updated to incorporate applicable changes to EE CE policy or input assumptions adopted by the Commission in the future,

³³ The MTWG did not address how attribution of codes and standards within an MTI should be determined in relation to the existing Rolling Portfolio codes and standards programs. This is an item that requires further discussion.

³⁴ CPUC Energy Data Web Access to "Building a Policy Framework to Support Energy Efficiency Market Transformation in California," December 9, 2014. <accessed February 15, 2019>
<https://pda.energydataweb.com/#!/?q=Building%20a%20Policy%20Framework%20to%20Support%20Energy%20Efficiency%20Market%20Transformation%20in%20California&summary=false&attachment=false>

including updates to the value of energy, other grid services, and additional benefits that EE would provide over the time horizon of the MTI.

Estimating the MTI C&S Savings & Costs

Additionally, the CPUC Energy Division raised the challenge that the current CE methodology does not provide for a contiguous calculation of savings that would be achieved throughout a single long-term MTI that envisions ultimate adoption of a product into a C&S. Instead, the current methodologies are applied independently depending on whether the program is categorized as a RA program or a program that is designed to lead to a C&S (i.e. the cost-effectiveness test is applied to RA programs and the Integrated Standards and Savings Model (ISSM) is used to calculate savings and costs relevant to C&S programs).³⁵

To address this concern initially, the MTWG proposes a two-step process, which should be subject to revision in the future as experience dictates, allowing for an iterative approach to estimating costs and savings as new information becomes available.

To the extent that this is an issue, we offer two approaches for Commission consideration to estimate preliminary CE of an early-stage MTI that is intended to lead to the adoption of C&S:

- A) The MTA(s) would separately calculate the CE of pre-C&S activities plus C&S, using the Commission-approved methodologies for each. These CE values would then be combined to derive a complete CE estimate of the MTI, reflecting all anticipated costs and savings. This combination could occur in different ways, such as by calculating a weighted average of each TRC and PAC value, based on the number of years of MTI activity reflected in the pre-C&S and C&S phases, or calculating the arithmetic mean. The MTWG is not offering a prescriptive approach at this time.
- B) Alternatively, the MTA(s) might calculate the CE of the MTI without C&S (e.g. where methodological challenges might prohibit reasonable estimates) and determine the savings necessary from the C&S period in order to meet the CE threshold. The MTA could explain why it would be reasonable to expect C&S to yield that “necessary” level of savings to satisfy the CE threshold. This approach might be useful to overcome challenges of calculating C&S savings early in the MTI planning process and otherwise avoid the awkwardness of stringing together CE values based on two different methodologies.

The MTWG encourages the CPUC to solicit input on this issue in conjunction with developing a record on the proposed MT framework.

Recommendation: Timeframe of Costs & Benefits (Separate from C&S)

Since MTI timeframes are much longer than traditional RA programs, the MTWG recommends that:

³⁵ See here for CET: <http://eega.cpuc.ca.gov/> and see here for details on the C&S methodology (i.e., ISSM): “Findings from Review of the Process for Codes & Standards Program Cost-effectiveness Reporting,” October 10, 2017, http://www.calmac.org/publications/CS_CE-Report_FINAL_10-10-2017_with_comments.pdf

Any MTI CE calculation should be measured on the same time horizon as the projected term of the initiative for both the benefits and costs associated with the initiative, plus C&S costs and benefits as recommended above. Such an approach would need to account for (i) costs of the initiative in the near-term versus the long-term to account for expected decline in costs over time and (ii) benefits over time, accounting for growing measure adoption (and thus benefits) in later years as compared to initiative launch.

This longer time horizon proposal does not encompass changes to the existing methodology used by the CPUC to measure C&S savings but rather focuses on the attribution of those savings to MTIs over time. However, any updates to assumptions that modify inputs (e.g. energy costs) should be integrated into the CE calculation as applicable.

Recommendation: Net-to-gross Methodology

Assessing what would have happened without an EE intervention is challenging. The Prah and Keating white paper indicates the need to assess net-to-gross differently, embedding “naturally occurring” into the assessment. Savings above the agreed-upon projected baseline would be attributed to the MTI and therefore would be the “net” savings. This approach would be in lieu of a net-to-gross ratio.

The CPUC Staff Proposal approaches the situation in a similar manner: “A key component of the envisioned MT Accord is a collaboratively vetted forecast baseline that represents a general agreement among stakeholders about long-term market trends and opportunities for energy efficiency. The initial forecast baseline adopted in the MT Accord should represent the best possible forecast of how the market would develop with and without the Market Transformation Initiative.”

The MTWG therefore recommends that:

Any MTI CE calculation should assess “what would have happened anyway” through a baseline approach that relies on available market data when possible or other accepted methodologies when such data is unavailable. The baseline should also incorporate anticipated savings from potentially overlapping RA whenever applicable. Achievement beyond the agreed-upon projected baseline would be attributed to the initiative.

Recommended Options: CE Threshold

The MTWG also considered whether the MT Framework should include a CE threshold specific to MT or whether the general EE CE threshold should be applied if all of the MTWG CE recommendations are adopted by the CPUC. This issue came to our attention because CPUC Energy Division Staff proposed that a CE threshold of 1.5 be applied to each MTI to account for the inherent risk associated with MT. This threshold is higher than the threshold of 1.25 that the Commission has historically applied, with some exceptions, to the EE Portfolios administered by the current PAs.

The MTWG explored whether additional research was necessary to evaluate the reasonableness of Staff’s proposed threshold. Specifically, the MTWG explored whether the PAs, or others familiar with the Cost-effectiveness Tool (CET), could run a variety of scenarios on potential or existing MTIs, using our methodological recommendations, if possible, to inform our recommendation for a CE threshold.

The MTWG hoped to use this information to determine whether at least some desirable and well-conceived MTIs could meet this threshold, or whether it would bar most MTIs from their inception.

However, when the MTWG explored who might do this work and how, it became apparent that the analysis contemplated was infeasible under current time and resource constraints. In addition, the PAs were uncertain whether the current CE calculator had the technical capabilities to carry out an MT scenario run. Without the ability to test the practical impact of a 1.5 threshold, the MTWG was unable to reach a consensus on whether or not Staff's Proposal should be adopted.³⁶

In the future, the MTWG Members recommend that the Commission may want to consider whether a portfolio-level CE threshold makes more sense for MT than an MTI-specific threshold. However, there could be practical challenges with such an approach, depending on the administrative structure adopted by the Commission and the process for seeking Commission approval of MT.

Option 1: 1.25 Total Resource Cost Test/Program Administrator Cost Test

The following MTWG Members support this option: Center for Sustainable Energy; CLEAResult; Energy Solutions; Natural Resources Defense Council; Pacific Gas and Electric Company; Resource Innovations; Small Business Utility Advocates; SoCalREN; The Energy Coalition; and The Utility Reform Network

As a result, we recommend that the Commission apply the same CE threshold in the MT context as is applied to the general EE context. The 1.25 threshold per MTI (which would include C&S costs and savings) provides a meaningful hedge against the risk that costs will be higher or savings will be lower than anticipated at the outset of the MTI. We note that this threshold, if applied individually to each MTI as opposed to a portfolio of MTI, would be a more exacting standard than is currently applied to the EE Rolling Portfolios, where individual programs need not necessarily meet the threshold, as long as the Portfolio as a whole does. This greater scrutiny at the MTI level may be justified by the greater risk associated with MTI, as noted by Staff.

Option 2: 1.5 Total Resource Cost Test/Program Administrator Cost Test

The following MTWG Members support this option: Coalition for Energy Efficiency; CodeCycle; Public Advocates Office; San Diego Gas & Electric; SoCalGas; and Southern California Edison

We concur with the CPUC Energy Division Staff Proposal in setting a 1.5 forecast CE threshold for approving MTIs.

The logic of setting a CE threshold above 1.0 is to hedge against forecast uncertainty and the possibility that CE forecast estimates will be overly optimistic and evaluated CE will be lower. The Commission's use of 1.25 threshold for ex ante approval of EE Portfolios was designed to hedge against this optimism. However, there are several reasons that setting a higher threshold for MTIs is reasonable.

³⁶ The following MTWG Members abstained from taking a position on this issue at this time: The California Efficiency + Demand Management Council and Sheet Metal Workers Local 104.

First, while the 1.5 CE threshold proposed in the Energy Division Staff Proposal appears higher than the 1.25 threshold used for the EE Portfolios, they are in fact counting different things. The 1.25 threshold used to approve EE Portfolios excludes C&S savings, which are highly cost-effective and account for nearly half of Portfolio savings. Accounting rules for MTI savings, on the other hand, will allow a share of future C&S savings to be attributed to the MTI. With C&S included, each PA's current Portfolio would easily meet a 1.5 CE threshold. It is unreasonable to set the CE bar lower for MTIs than for RA activities, particularly given the greater uncertainty and speculative nature of MTI CE forecasts.

Second, MTIs play out over a much longer time period than RA programs and use a more indirect path to reducing energy use. The stage-gate process proposed in the Energy Division Staff Proposal and elaborated by the MTWG is designed to reduce and manage the risk inherent in undertaking MTIs. However, even with stage-gating, the MTA(s) will have sunk some cost into failed initiatives that cannot be recovered. Other MTIs may continue over their entire foreseen lifecycle, but not realize their ex ante forecasts because of exogenous events that could not be anticipated, such as shifts in markets or available technologies that quickly make the adopted technology obsolete. In short, MT is a risky proposition, particularly when compared to short-term RA. Investors generally require higher returns for risky investments; in the technology sector, for example, venture capitalists often look for potential returns of 10-times or greater. It is reasonable for the Commission to set a somewhat higher threshold for approving the funding of MTIs in order to compensate for the greater risk these initiatives entail.

Section 8: Market Transformation Initiatives and Resource Acquisition Programs

Introduction

As MTI ideas are being collected and progress through the stage-gate approval process, their potential impacts on RA program(s) and C&S implementation should be carefully considered. The MTWG suggests applying the framework described in this section to identify overlaps, find opportunities for collaboration, and where necessary, help resolve conflicts between MTIs and RA and/or C&S program(s).

The MTA(s), and any impacted PA(s), 3P Implementers (3PIs) of RA programs, and C&S teams each have a role in charting a course that enhances the efficiency outcomes (potentially including savings as well as equity, grid support, and other objectives) of the proposed MTI as well as of RA and C&S programs. Each may also have a role in eliminating or minimizing and mitigating any conflict between the MTI and RA/C&S programs. The MTWG recommends that these parties are provided every opportunity to work collaboratively toward these objectives. While the CPUC is the ultimate arbiter in the event of conflict between an MTI and RA/C&S program(s), customers and California's policy objectives for the energy system will be best served if the MTA(s), PA, 3PIs, and C&S teams can optimize outcomes amongst themselves.

Overview

The MTWG proposes a multi-step framework for addressing MTI overlaps with RA/C&S programs. The framework is discussed in further detail in subsequent sub-sections below.

- 1) **Identify Overlaps.** During the process of identifying and developing any MTI, the MTA(s), working with the MTI proposer(s), relevant PA(s), 3PIs, C&S teams and other stakeholders, will evaluate whether, and to what extent, the proposed MTI might overlap with any RA/C&S programs.
- 2) **Select MTIs to Enhance Positive and Minimize Negative Overlaps.** The MTA(s), during the process of identifying and developing any MTI, will consider the nature and extent of overlap with RA/C&S implementation programs as part of the MT selection process, seeking opportunities for positive overlaps and the elimination or reduction of negative overlaps.
- 3) **Collaboration to Enhance Outcomes.** The MTA(s), MTI proposer(s), and relevant PA(s), 3PI(s) and C&S implementation team(s) will work collaboratively together to find ways for the proposed MTI and affected RA/C&S programs to work synergistically, increasing value to customers and the energy system and promoting a robust and competitive market for efficiency.
- 4) **Informal Dispute Resolution.** The MTA(s), PA, 3PI(s)/C&S teams and relevant MTI proposer(s) would engage in informal discussions intended to find project-by-project solutions to any conflicts.

- 5) **Formal CPUC Alternative Dispute Resolution (ADR) Procedures.** If a conflict remains after the informal discussions, the MTA(s), PA, 3PI or C&S team(s), or MTI proposer(s) may invoke expedited CPUC resolution procedures.³⁷ The CPUC would be the ultimate arbiter in the event the parties cannot resolve the dispute themselves.

Types of Overlap

Overlap issues may take many forms, both positive and negative; it is impossible to foresee all of the potential overlaps, as we cannot forecast all of the potential MTIs. Ideally, overlaps could enhance the benefits realized from RA/C&S programs as well as those from the MTIs. An MTI might also conflict with an RA/C&S program; it may or may not promise equal or superior benefits, and the degree of certainty of its benefits may also vary significantly. Conflicts could include:

- Customer confusion among the proposed MTI target customers and existing or potential 3PI customers and/or C&S target communities.
- Prevention or diminished ability of the MTI and RA/C&S programs to meet anticipated efficiency outcomes (potentially including premature reduction or cessation of RA/C&S programs, or loss of post-contract outcomes expected to result from RA).
- Prevention or diminished ability of the MTI and RA/C&S programs to serve a unique market segment.

Activities to Encourage Cooperation

The best outcome for securing maximum cost-effective EE is for all parties to work together. The MTA(s) and PAs should set a constructive tone and work to create a collaborative environment, with the full cooperation of parties implementing RA, C&S and MTIs. CPUC rules, guidance and oversight should be designed to promote that environment.

- MTA(s) and PAs will take responsibility to facilitate cooperation between MTI, RA and C&S implementers.
 - MTA(s) will ensure that MTI proposers and RA implementers engage early in the MTI development process and have frequent opportunities to talk thereafter.
 - PAs will “seek and pitch the positive.” MTIs will be intended to bring new or increased benefits to the market (more product, lower cost, more trained workforce), and generally on a longer timeline than RA or C&S implementation programs (which must focus on keeping costs to a minimum and producing immediate benefits). Overlaps should ideally be viewed as “dovetailing” rather than replacing RA/C&S programs and should be shaped accordingly.

³⁷ Existing CPUC alternative dispute resolution processes could be used, preferably with expedited timing. See <http://www.cpuc.ca.gov/adr/>.

Selecting MTIs to Enhance Positive and Minimize Negative Overlaps

The MTA should review and select markets to take advantage of synergistic overlaps, and to avoid or minimize negative overlaps, keeping in mind how extensive the overlap will be, the nature and degree of impacts on overall and market segment customer and system benefits, and the likely receptivity of the parties to work together.³⁸ These criteria should be in addition to all other desired MT qualities (CE savings, lasting change, leverage points, etc.).

Identifying & Assessing Overlaps

The MTA(s), working with the MTI proposer(s) and with relevant PA(s), 3PIs, and C&S implementation teams, will:

- 1) **Identify Potential Conflicts**
Review potential MTIs and potentially affected 3PI/C&S programs to identify any potential overlaps, including those noted above.
- 2) **Assess Significance of Benefit Loss.** Assess the potential of the overlap to:
 - a. Eliminate or reduce benefits from the MTI and/or the RA/C&S programs;
 - b. Cause customer or market confusion;
 - c. Decrease competition/chill investment;
 - d. Deter or increase costs of financing the MTI or RA/C&S program(s).
- 3) **Assess Timing Overlap.** Assess:
 - a. The remaining RA contract term/C&S implementation phase relative to the MTI implementation timing;
 - b. When the MTI is expected to begin impacting customers in a way that might interfere with RA/C&S program(s);
 - c. Whether any conflict(s) could be resolved by adjusting the timing of the MTI and/or the RA/C&S program(s).
- 4) **Cost of Coordination**
Assess any additional cost to coordinate the MTI and the RA/C&S program(s) to avoid:
 - a. Loss of anticipated benefits from the MTI or the RA/C&S program(s);
 - b. Customer confusion; or
 - c. Other harm to a robust, competitive market.

Activities to Avoid/Reduce/Mitigate Overlap

- Define principles and expectations of coordination prior to MT idea solicitation: The MTA(s) and Rolling Portfolio PA(s) should develop and share mutually agreed upon guidance to potential

³⁸ This will require the parties working on selection criteria to include overlap (positive and negative) in the criteria.

proposers regarding the types and potential implications of MTI/Rolling Portfolio coordination.³⁹

- Design MTI with cooperation in mind: All MTIs will be designed, and MTI RFPs/RFAs will include requirements, to work together with RAs, C&S implementation, and other mechanisms delivering EE in that market, seeking to maximize beneficial cooperation and minimize conflict. MT Plans will include a discussion of RA coordination.
- Modifying the MTI: The MTA(s) will modify the MTI as appropriate to maximize customer and energy system benefits, maximize collaboration and synergistic benefits with RA/C&S programs, and minimize conflicts detrimental to CPUC's EE policy objectives. For example, if a proposed MTI might stop an existing RA program before the MTI could be effective, the MTA(s) should seek to ramp implementation of the MTI on a timeline that would enable the RA program to complete its work.
- Early alignment during RA RFPs: Future RA RFPs will include incentives for 3PIs to collaborate in the development and implementation of MTIs, in coordination with MTA(s) and MTI proposer(s)/implementer(s). Any potential to adjust RA/C&S programs in conjunction with MTI implementation should avoid increasing uncertainty for the 3PI, which would increase financing burden and cost and, as a result, increase customer cost.⁴⁰
- Accessible info: All MT RFPs/RFAs will include a brief description of related RA and C&S implementation programs, as well as links to detailed descriptions. MTI proposer(s) will be required to include a discussion of how their potential MTIs would dovetail with existing RA/C&S implementation effort(s) in their submission(s).⁴¹
- Opportunities pro-actively sent to 3P implementers: The MTA(s), when releasing any solicitation of MT ideas/proposals, will simultaneously send the notice of opportunity to all 3PIs. This will allow 3PIs to participate in developing MTIs, to think through MT approaches to their market, and to submit bids should they so desire.

Resolution of Conflicts

If conflicts remain after efforts to coordinate, collaborate, and avoid, minimize and mitigate conflicts, the MTWG recommends that the conflict is resolved through the following process. We recommend that the CPUC develop proposed guidelines and rules to be applied to this process, building on the assessment factors and avoidance, minimization, and mitigation activities discussed above.

³⁹ This would be analogous to the joint cooperation memos between the IOUs, Community Choice Aggregators (CCAs), and Regional Energy Networks (RENs).

⁴⁰ Increasing cost or difficulty of financing has been established to increase cost of delivering energy products to market, requiring implementers to increase bid prices, which in turn increases customer costs.

⁴¹ In practice the MTWG thinks that the first MTI proposals reaching "Review 1" (see illustration at the end of this paper) may not happen until 2020 or 2021. In this case, early RA programs will already be in year 2 or 3 of typically three-year contracts. In this scenario the RA program will be needing to extend or be rebid and MT work then underway can be more easily integrated.

We suggest three stages of dispute resolution:

- 1) **Informal Dispute Resolution.** The MTA(s), MTI proposer(s) and relevant PA and 3PI(s)/C&S teams would engage in informal discussions focused on developing project-specific solutions that would maximize efficiency benefits while maintaining a robust, competitive market and minimizing customer confusion.
- 2) **Formal ADR Procedures.** If a conflict remains after the informal discussions, the MTA(s), MTI proposer(s) or relevant PA, 3PI(s) or C&S team(s) may use a mediator through the CPUC's ADR procedures, an independent mediator, or the CAEECC's facilitation team. The party invoking dispute resolution would be required to provide a summary of issues and impacts. To minimize harm to the proposed MTI and the affected RA/C&S program(s), the ADR would follow an expedited schedule. Ideally, the ADR results would be included in the Advice Letter submission for the applicable MTI phase.
- 3) **Last Resort: CPUC Decision.** If informal and formal dispute resolution efforts are unavailing, the CPUC would be the ultimate arbiter, ideally including its decision within its approval of the Advice Letter for the applicable phase of the MTI.

Appendix A: Market Transformation Work Group Member Organizations & Representatives

Member Organizations & Representatives		
Organization/Entity Represented	First Name	Last Name
BlueGreen Alliance (supporting CEE & Sheet Metal Workers)	Sam	Appel
California Efficiency + Demand Management Council (CEDMC)	Arthur	Haubenstein
California Efficiency + Demand Management Council (CEDMC)	Nate	Kinsey
Center for Sustainable Energy (CSE)	Stephen	Gunther
Center for Sustainable Energy (CSE)	Rebecca	Menten
CLEAResult	Chad	Ihrig
Coalition for Energy Efficiency (CEE)	Bernie	Kotlier
CodeCycle	Dan	Suyeyasu
Energy Solutions	Brian	Barnacle
Energy Solutions	Teddy	Kisch
Natural Resources Defense Council (NRDC)	Merrian	Borgeson
Natural Resources Defense Council (NRDC)	Lara	Ettenson
Pacific Gas and Electric Company (PG&E)	Adam	Scheer
Public Advocates Office	Dan	Buch
Public Advocates Office	Sasha	Cole
Resource Innovations	Margie	Gardner
San Diego Gas & Electric (SDG&E)	Athena	Besa
San Diego Gas & Electric (SDG&E)	Jesse	Emge
San Diego Gas & Electric (SDG&E)	Raghav	Murali
Sheet Metal Workers Local 104	Dave	Dias
Small Business Utility Advocates (SBUA)	James	Birkelund
Small Business Utility Advocates (SBUA)	Ivan	Jimenez
Southern California Gas Company (SoCalGas)	Erin	Brooks
Southern California Gas Company (SoCalGas)	Elizabeth	Gomez (Baires)
Southern California Regional Energy Network (SoCalREN)	Lujuana	Medina
Southern California Regional Energy Network (SoCalREN)	Matt	Skolnik
Southern California Edison (SCE)	Jesse	Feinberg
Southern California Edison (SCE)	Derek	Okada
Southern California Edison (SCE)	Kevin	Thompson
Southern California Edison (SCE) (Consultant)	Carol	Yin
The Energy Coalition	Marc	Costa
The Utility Reform Network (TURN)	Hayley	Goodson
Ex Officio/Resource Members		
Organization/Entity Represented	First Name	Last Name
California Energy Commission (CEC)	Nicholas	Janusch
California Energy Commission (CEC)	Brian	Samuelson
California Public Utilities Commission (CPUC)	Christina	Torok
California Public Utilities Commission (CPUC)	Hal	Kane
Northwest Energy Efficiency Alliance (NEEA)	Jeff	Harris
Northwest Energy Efficiency Alliance (NEEA)	Dulane	Moran

Appendix B: Goals & Ground Rules of the Market Transformation Work Group

Goals of CAEECC-Hosted Market Transformation Working Group:

1. To develop a proposed market transformation framework (including the necessary processes and procedures) for developing, deploying, and monitoring market transformation initiatives in California.
2. To seek consensus (defined as unanimity) where feasible among Working Group Members
3. To document the proposed market transformation framework in a Final Report to the CPUC. The Final Report would include descriptions of all consensus recommendations, as well as descriptions of any alternative options on issues and elements where consensus was not reached as well as who supports each option.
 - *Note as described below the supporters of any non-consensus options will have the lead responsibility in drafting the descriptions and rationale for those options.*

At Meetings

- 1) Come prepared to discuss agenda items (by reviewing all documents disseminated prior to the meeting, conferring with your organization and other colleagues, etc.).
- 2) Be forthright and communicative about the interests and preferences of your organization and actively seek agreement if recommendations/advice are being sought.
- 3) Be clear so that everyone understands your interests and proposals.
- 4) Be concise so that everyone who wants to provide input has an opportunity to do so.
- 5) Minimize electronic distractions during meetings.

Between Meetings

- 1) Keep your organizations informed of developments in the process.
- 2) Confer with other Members during meeting breaks and in between meetings, as needed.
- 3) Notify the Facilitation Team prior to the meeting (by telephone or e-mail) if you or your proxy cannot attend a meeting.

- 4) Be responsible for actively tracking Facilitation Team and Working Group communications as well as relevant proceedings and policies.
- 5) Provide input, feedback, and written material when requested by the Facilitation Team.
- 6) Any presenter (Member or their proxy or designee) should have their presentation ready for posting at least five (5) business days prior to the meeting; and presenters should work with the Facilitator Team prior to the posting deadline to help ensure that materials are clear, concise, and on topic.
- 7) Discuss pertinent matters with the Facilitation Team and CAEECC Co-Chairs when and if the need arises.

Substantive Issues (Discussing Issues, Developing Options, & Exploring Agreement)

- 1) The goal of the process is to fully explore substantive issues before the Work Group, define options, elicit constructive feedback, clarify and narrow points of divergence, seek consensus where feasible, and document points of convergence and any remaining divergence.
- 2) During the substantive discussions, if a Member cannot agree with a substantive option under consideration that member should explain why and propose a specific alternative that he or she can support.
- 3) Documentation of consensus and multiple options on any particular issue in the Work Group's final recommendations would include a clear description of each option and supporting rationale, and include the Members supporting each option. The Working Group Members will review and approve the wording in the Final Report, and those supporting each option on a non-consensus issue will be responsible for drafting the final description and rationale for the option.
- 4) The Working Group in consultation with the CPUC will determine the most appropriate way to file the Final Report at the CPUC.
- 5) Prior to filing the Working Group's final recommendations, there will be an opportunity for other CAEECC Members who did not directly participate in the Working Group, to add their Organization's name to the document including ascribing to options for non-consensus issues (but not proposing any additional options).

Process Issues

- 1) For process related issues (including setting meeting dates, finalizing agenda designs, etc.) the Facilitation Team in consultation with the Co-Chairs, and after seeking input and feedback from Working Group Members, will have the responsibility to make these decisions.
- 2) All the other pre-existing CAEECC Facilitator roles and responsibilities will apply. See: https://docs.wixstatic.com/ugd/849f65_68e76679fd054bd6ad34e1c2ba0a4168.pdf

Appendix C: Draft Stage-gate Criteria

NOTE: We lay out an approach to stage-gate criteria at a high-level of detail but expect the MTA(s) in consultation with the MTAB to further refine the criteria discussed here. We caution against using this document prescriptively; it only lays out one possible approach.

The overall objective of MT development in Phase I and Phase II is to conduct the necessary due diligence to develop data-driven business cases for scaling up an MT concept in Phase III. Ideally, the general criteria for MTIs remain essentially the same throughout all three phases but differ in the level of rigor with which they are assessed. As a concept progresses through the due diligence stages, the data and analysis supporting decision-making in each stage will necessarily be more detailed and rigorous. Once an MTI is launched, the general MT criteria should be monitored over the long term to ensure externalities do not make the original justification for the MTI obsolete.

Ideally, the criteria would be weighted so that the MTA(s) can give greatest weight to those objectives that are deemed most important. This weighting can be quantified in a “prioritization model” that simply consists of an equation with multiple terms, with each term corresponding to a criterion, along with a weighting factor for each term.

The MTWG also agreed that the stage-gate criteria should align with any objectives stated in Section 2: Market Transformation Initiative Principles, Guidelines, & Strategies. Of the principles and criteria discussed to date, there are five objectives:

- 1) Energy savings.
- 2) GHG reduction.
- 3) Workforce development.
- 4) Can be coordinated with the Rolling Portfolio to result in net increase in energy savings. (See Principle 1: “Drive incremental savings that achieve the state’s energy efficiency (EE), equity, and GHG reduction goals”; Principle 3: “Complement and coordinate with Rolling Portfolio programs”; and the overall objective of supporting SB 350, which calls for doubling of energy savings.)
- 5) Equity.

We expect the MTA(s) to review and revise these objectives. The other principles and criteria discussed by the MTWG focus on MT development process, but do not seem to be intended as criteria for deciding whether enough due diligence has been conducted for an MT idea to proceed to the next stage of due diligence.

Because the gating criteria discussed so far are not comprehensive, we lay out some general criteria that may be considered by the MTA(s). The general criteria are centered around the following categories and subsume the five objectives in the MTI Principles and Guidelines.

Without getting into the weeds, nominal, ordinal, and/or quantitative scales can be developed for any criteria to track level of documentation/understanding of the MTI in that category.

General MT Criteria Categories

- 1) Projected long term CE (including energy savings potential and total cost of the MTI).
- 2) Feasibility
 - a. Technical performance of the measure/solution
 - b. Market leverage point(s)/MTI logic (including supply chain readiness)
 - c. Measurability/evaluability
 - d. Agreement of non-MTA(s) market actors
 - e. Likelihood of persistence (longevity of MTI relevance).
- 3) Portfolio Fit (coordination with Portfolio).
- 4) Societal Benefits
 - a. Policy fit
 - b. Equity
 - c. Non-energy benefits
 - d. From the customer perspective, is there a compelling value proposition?

In Phase III, the criteria for continued funding and exiting or transition will be unique to each MTI but should include projected CE. These criteria will be defined in the MT Plan so that all stakeholders can provide review and feedback before an MTI is funded for larger scale implementation. In addition to the MTI-specific criteria, the general MTI criteria will require continuous monitoring to ensure that market changes and technology advancements have not made the MTI obsolete and that the forecasted savings still supports long-term CE.

There are several paths for exiting or transitioning out of an MTI; the particular path depends on the MTI approach that will be laid out in the MT Plan. For example, an MTI may target transitioning to a C&S, transitioning to a deemed approach, or exiting due to market saturation and mass market adoption.

These criteria will not address regulatory decision points, including when Advice Letters should be filed, and at what Tier.

Key Criteria to Advance.	Expertise /Resources Needed
Phase I: Stage 1 - Concept Scanning & Identification	
Note: Submitted ideas are expected to vary widely in terms of maturity and pre-existing documentation. The MTA(s) will use two channels for idea intake. MTA(s) will conduct a formal solicitation for a turnkey MT program, ideally in coordination with the ongoing 3P solicitations. ⁴² In addition to a formal solicitation, ideas that are not turnkey or	Staffing Needed for: <ul style="list-style-type: none"> • Validation of program design and implementation – High-level only (e.g. “Does this program design seem plausible upon first glance?”)

⁴² The MTWG decided that all MTIs, including turnkey MTIs, will go through the same intake and ideation process.

Key Criteria to Advance.	Expertise /Resources Needed
<p>“shovel-ready” can be submitted through on online or email channel.</p> <p>Rank ordering of all ideas will be based on the General MTI Criteria listed above. The MT criteria should be weighted, after discussion of overall MT objectives.</p> <p>The applicant will be asked for information at five levels of detail; only one level (Level 2) is required.</p> <p>Level 1. Pre-screening (Optional; See Appendix D, Section 1)</p> <p>Before even applying, the applicant will first be asked to self-screen their idea, to determine if it is appropriate for an MTI. (Source: NEEA)</p> <p>Level 2. Proposed idea and category (Required, See Appendix D, Section 2)</p> <p>The applicant can fill out an application, on which there are 15 required items on contact information, product category, and a description of proposed idea. At this point the application can be submitted, or the applicant can provide more detailed, optional information. (Source: ETP/ETCC/SCE)</p> <p>Level 3. Product benefits, costs, distribution (Optional; See Appendix D, Section 3)</p> <p>If the application has the information, they can fill out 19 optional questions on a) benefits and costs, b) technology production and distribution, and c) market information. If the applicant has documentation of their product data, they can upload this information. (Source: ETP/ETCC/SCE)</p> <p>Level 4. Market transformation intervention logic (Optional; See Appendix D, Section 4)</p> <p>If the applicant is ready to provide information on the MT intervention logic, they can fill out this section. (Source: SCE MT team)</p> <p>Level 5. Turnkey MT quantitative documentation (Optional; See Appendix D, Section 5 for a placeholder pending further development)</p> <p>If the applicant has a program that is ready to launch, they will be asked to provide a quantitative summary and backing documentation. (Source: B. Barnacle).</p> <p>Rank ordering</p> <p>At this early stage, rank ordering may need to be done based on a binary “Data available/Data not available” basis. The objective of the rank ordering is to allow the MTA(s) to identify those submissions that have verifiable claims. This ranking can allow MTA(s) to prioritize their review, and to gauge the amount of additional development/data necessary for due diligence on the submissions.</p>	<ul style="list-style-type: none"> • Validation of savings potential – High-level only (e.g. “Do the savings seem plausible upon first glance?”) <p>Data Needs:</p> <ul style="list-style-type: none"> • As submitted on the intake form, and reviewed by technologists and subject matter experts in engineering

Key Criteria to Advance.	Expertise /Resources Needed
<p>See above discussion about needing to set overall objectives of MT before weighting any criteria. Suggest: Top 15 ranked submissions advance to Stage 2 Note: Confidential and/or proprietary information will need to be redacted from the summarized list.</p>	
<p>Phase 1: Stage 2 - Concept Development & Assessment</p>	
<p>To advance (i.e. be included in an MT Development Plan), the MT concept must be one of the top ideas, after considering these General MTI Criteria (weighting to be determined later).</p>	<p>Staffing Needs:</p> <ul style="list-style-type: none"> • Validation of program design and implementation • Validation of Portfolio fit • Validation of savings potential • Validation of market potential • Validation of policy alignment • Others? <p>Data Needs:</p> <ul style="list-style-type: none"> • Existing internal research-workpapers, EM&V reports • Secondary research – industry market reports • Others?
<p>Phase I DECISION GATE – Approving and funding Development Plans</p>	<p>See Roles and Responsibilities</p>
<p>Phase II: Stage 3 - Strategy Development</p>	
<p>To advance (i.e. be included considered for pilot testing or other strategy testing), the MT concept must be one of the top ideas, after considering these General MTI Criteria (weighting to be determined later). The market leverage point, measure savings, and program Portfolio fit needs to be clearly understood before testing or piloting. For example, the MTI’s market(s) have been characterized and/or are well understood, the per-unit savings of the solution have been validated, a good intervention has been identified to take advantage of a leverage point within the market, there is evidence that the solution can be scaled up across the statewide IOU territory, there is evidence that the solution can become cost-effective at scale, there are no regulatory or policy barriers that would put savings at risk, the pilot test and/or scaled up intervention will not have unintended consequences on the rest of the Rolling Portfolio (such as altering price signals), the MTI provides something not otherwise available through the Rolling Portfolio (e.g. new market, accelerated adoption, new intervention).</p>	<p>Staffing Needs:</p> <ul style="list-style-type: none"> • Validation of program design and implementation • Validation of Portfolio fit • Validation of savings potential • Validation of market potential • Others? <p>Data Needs:</p> <ul style="list-style-type: none"> • Existing internal research-workpapers, EM&V reports • Secondary research – industry market reports • Primary research – Commissioned industry market reports, market characterization studies, market leverage point and/or market barrier studies • Others?
<p>Phase II: Stage 4 - Strategy Testing</p>	
<p>Strategy testing can be conducted under controlled conditions if full factorial design is desired, and via in-situ</p>	<p>Staffing Needs:</p>

Key Criteria to Advance.	Expertise /Resources Needed
<p>pilots to understand real world challenges. Strategy testing should focus on primarily testing the intervention strategy, the ability to engage contributing non-MTA(s) market actors, and Portfolio fit. However, in situ pilots offer an opportunity to provide data for all criteria categories. Results will be compared against the pilot test success criteria defined in Stage 3 (see above).</p> <p>To advance and be considered for inclusion in an MT Plan, an MTI must meet its own defined pilot success criteria and continue to rank highly on the General MTI Criteria.</p>	<ul style="list-style-type: none"> • Validation of program design and implementation • Validation of Portfolio fit • Validation of savings potential • Validation of market potential • Validation of pilot/testing evaluation plan • Validation of policy alignment <p>Data Needs:</p> <ul style="list-style-type: none"> • Existing internal research-workpapers, EM&V reports • Secondary research – industry market reports • Primary research – Commissioned industry market reports, market characterization studies, market leverage point and/or market barrier studies
<p>Phase II DECISION GATE – Approving and funding MT Plans</p>	<p>See Roles and Responsibilities</p>
<p>Phase III: Stage 5 - Market Development</p>	
<p>Criteria for each MTI will be unique to the MTI (see Stage 6). Stage 5 and Stage 6 will likely run in parallel.</p>	<p>See Stage 6.</p> <p>Staffing Needs:</p> <ul style="list-style-type: none"> • MTI implementers
<p>Phase III: Stage 6 - Long-Term Monitoring</p>	
<p>Exit/transition criteria and market progress indicators will be unique to each MTI. All MTI-specific criteria and market indicators will be laid out in the MT Plan.</p> <p>The prime objective of monitoring the General MTI Criteria will be monitored to identify changes that may affect forecasted savings potential.</p>	<p>Staffing Needs:</p> <ul style="list-style-type: none"> • Validation of savings potential • Validation of market potential • Validation of savings and savings forecasts <p>Data Needs:</p> <ul style="list-style-type: none"> • Existing internal research-workpapers, EM&V reports • Secondary research – industry market reports • Primary research – Periodic industry market reports, market characterization studies, market leverage point and/or market barrier studies
<p>Phase III: Stage 7 - Transition or Sunset MTI</p>	
<p>Currently, the objectives of MT are to exit when, “Continuation of the same publicly-funded intervention is no longer appropriate in that specific market,” or, “Until</p>	<p>Staffing Needs:</p> <ul style="list-style-type: none"> • Validation of savings potential • Validation of market potential

Key Criteria to Advance.	Expertise /Resources Needed
<p>they are adopted into codes and standards” (or otherwise substantially adopted by the market).</p> <p>Due to the unique nature of each MTI, the MTI-specific exit criteria will be laid out in the MT Plan. The overarching exit criteria would be:</p> <p><i>“When the annual forecast of MTI savings shows that continued scaling would not result in a cost-effective program,” Or, “When a better (lower cost, more effective) intervention can be implemented.”</i></p> <p>Other MTI-specific exit criteria should address the same General MTI Criteria prioritization. If there is a change so that an MTI does not meet any of the original General MTI Criteria, the MTA(s) should consider whether an exit is warranted.</p>	<ul style="list-style-type: none"> • Validation of savings and savings forecasts • Validation of policy alignment <p>Data Needs:</p> <ul style="list-style-type: none"> • Existing internal research-workpapers, EM&V reports • Secondary research – industry market reports • Primary research – Periodic industry market reports, market characterization studies, market leverage point and/or market barrier studies

Appendix D: Draft Intake Application Form

NOTE: We lay out an approach to stage-gate criteria at a high-level of detail but expect the MTA(s) in consultation with the MTAB to further refine the criteria discussed here. We caution against using this document prescriptively; it only lays out one possible approach.

The MTWG discussed leveraging existing processes and intake forms. Currently, the utilities use one intake form for consideration of new measures as well as new RA programs. This form can be found on the ETP/ETCC website, and on each utilities' website, such as at sceideas.com. For the sake of space, we will not replicate that form here. However, we suggest that this form can be incorporated into the Draft Intake Application Form in Sections 2 (required items) and Section 3 (optional items). The MTWG also liked NEEA's pre-screening questions that each applicant can ask themselves. We have replicated those questions here in Section 1.

The IOU PAs have used the existing intake forms to successfully vet measures and ideas for RA programs. With MTIs, however, additional information needs to be obtained in order for the MTA(s) to determine whether a submission is a valid MT idea as opposed to another RA program. The MTWG drafted some MT-specific intake questions for consideration, incorporated in Section 4 below. Finally, the MTWG acknowledges that there may be numerous excellent MT program ideas already being implemented outside of California, for which there is existing documentation of market leverage points and evidence of successful intervention. For these, the MTWG incorporates an intake form and criteria that would be suitable for mature programs that might be proposed through a targeted solicitation for turnkey MTIs.⁴³

In developing any MTI intake form, we recommend that the MTA(s) include the official definition of MT in California, to help submitters and 3Ps understand any differences in California's definition compared to definitions by other organizations.

Draft Intake Form

[D.09-09-047](#) on p.88-89

"Market transformation is long-lasting, sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where continuation of the same publicly-funded intervention is no longer appropriate in that specific market. Market transformation includes promoting one set of efficient technologies, processes or building design approaches until they are adopted into codes and standards (or otherwise substantially adopted by the market), while also moving forward to bring the next generation of even more efficient technologies, processes or design solutions to the market."

California's definition of MT (above) includes two end states: One when an MTI results in C&S adoption, the other when market barriers have been reduced to the point where the same intervention is no longer needed. In other words, the MT effort needs to be designed towards the exit of the intervention.

⁴³ The MTWG decided that all MTIs, including turnkey MTIs, will go through the same intake and ideation process.

To help MTA(s) determine whether your idea is suitable for an MTI please answer the following questions to the best of your knowledge. This information does not have to be complete but will help the MTA(s) determine whether a “shovel-ready” MT opportunity exists, or how much development would be needed for your idea to reach that state.

Section 1

To help determine whether your idea is suitable for consideration as an MTI, please review the following questions. If you answer Yes to any of these, your idea may be better suited for consideration in the existing energy efficiency (EE) Rolling Portfolio. (This is based on the Criteria sub-working Group’s positive initial response to NEEA’s five short screening questions, available at <https://neea.org/get-involved/submit-your-idea/proposal-criteria>.) In addition, please carefully review the list of ineligible MTI concepts, if any, before proceeding.

Ineligible MTI Concepts:

- 1) Concept description
- 2) Concept description

Preliminary self-screening questions:

- 1) Does your product or service have the potential to save energy in California?
- 2) Can the energy savings be easily measured?
- 3) Is the product or service commercially available today?
- 4) Does your product or service have the potential to meet or exceed existing utility customer needs?
- 5) Is there a compelling opportunity to address a non-financial market barrier that is keeping your product or service from being widely adopted?

If you answered “Don’t Know” to any of the above items, you should address those issues prior to submitting a Proposal Application to the MTA(s). If you answered “No” to any of the questions, unfortunately, your product or service is not appropriate for this solicitation.

Section 2 (All Programs)

See the existing IOU intake form (same form is available at both sites): <https://www.etcc-ca.com/idea-proposal-form> and <https://sceideas.com> for the specific REQUIRED questions about:

- 1) The requestor’s contact information.
- 2) Product description.

- 3) Product stage.
- 4) Product availability.
- 5) Product end use category.
- 6) Product target market.

Section 3 (All Programs)

See the existing IOU intake form (same form is available at both sites): <https://www.etcc-ca.com/idea-proposal-form> and <https://sceideas.com> for the specific OPTIONAL questions about:

- 1) Benefits and costs.
- 2) Technology production and distribution.
- 3) Market information, including known market barriers.

Section 4 (MT-Specific Intake Questions)

Please answer the following questions to the best of your knowledge. These are open-ended questions, and the MTA(s) may follow up with you on these questions.

Phase I: Concept Development (Stages 1-2)

Part A: The Concept Development form should be built into an online intake tool e.g. ETCC, for the intake of initial MT ideas.

1.) MT Objectives

Define the market barriers and rationale for MT intervention.

- a. What market barrier(s) does the MTI address?
 - i. Describe the barrier(s), e.g. customer awareness, supply chain, product availability, pricing, environmental externalities, etc. Include whether the barrier(s) is/are long-term vs. short-term.
 - ii. Provide the source of this information (i.e. attach study summary, link to report, etc.).
 - iii. How does this intervention improve the customer experience?
- b. How will the MT intervention overcome/alleviate the defined market barrier(s)? e.g. increased awareness, adoption/penetration, increased non-energy benefits, etc.
 - i. Provide the program theory or logic supporting the effectiveness of the intervention (i.e. "Why do you expect your intervention(s) to work? Why your specific intervention(s) and not another option?")

- ii. Provide an expected timeline for savings once the market barriers are removed/addressed and describe how long-term savings persistence will be ensured.

Phase II: Program Development (Stages 3-4)

Part B: The Program Development form should be submitted as Tier II Advice Letter for testing and development.

2.) Intervention Strategy

Describe why an MT intervention is the best strategic approach over Resource Acquisition (RA).

- a. What technology, measure or product is being targeted for the MTI and why?
 - i. Provide estimates of the technical, economic, and market potential for the MTI target. Provide the sources of these estimates.
- b. Are the barriers currently being addressed in a RA program?
- c. How much would this intervention cost over the life of the initiative?
- d. If so:
 - i. Identify the program and describe how an MTI will complement the existing RA intervention strategy.
 - ii. Provide the program theory or logic supporting the need for a complementary MT intervention strategy.
- e. Describe how and why the MT intervention is the best strategic approach to addressing the barrier(s) versus a RA intervention.
 - i. Provide justification for use of your specific MT intervention strategy above other choices.

3.) Market Engagement

Define the market, market actors, and market channels the MTI will engage (e.g. manufacturers, distributors, retailers, contractors, consumers, etc.).

- a. Provide a market characterization and assessment of the relationships and/or dynamics among market actors, including identification of the key barriers.
 - i. Provide the source of this market characterization (i.e. attach study summary, link to report)
- b. Describe how the MTI will deliver savings (upstream, downstream, direct install, etc.), how it will reach customers, and the services it will provide to engage the market.
- c. What MT tools will be used to engage and inform market actors (e.g. incentives, Marketing Education and Outreach (ME&O), WE&T, Emerging Technologies (ET) and

C&S.

- d. What MT coordination activities need to be established to gain market traction (e.g. partnerships for collaboration)

Market Actor Engagement (including manufacturers, Regional Energy Networks (RENs), Community Choice Aggregators (CCAs), municipal utilities)

- e. Define the market actors who would be able to help implement an MTI
 - i. What role would they play, that could not be achieved by others?
 - ii. How would their involvement accelerate MT?
 - iii. Have you approached them and discussed their willingness to participate?
 - iv. Why are they interested in being an MTI partner?

4.) **Performance Metrics**

Describe the market progress metrics (metric, measurement method, frequency, etc.).

- a. Provide quantitative information describing the current EE program baseline information (and/or other relevant baseline information (current level of adoption)) for the market segment and major sub-segments, as available. Provide the source of this information
- b. What are some initial (0-5 year) and long term (5+ year) milestones to ensure the MTI is on track to achieve its objectives and savings? Which of these are leading indicators and which are lagging indicators?

5.) **EM&V**

Describe any process evaluation or other evaluation efforts that the MTA(s) will undertake.

- a. Identify the evaluation needs and data collection strategies that ensure ease of reporting and near-term feedback.

Section 5: Turnkey MTI Intake Form & Criteria

Criteria	Structured Data Prompt	Structured Data Format	Open Text Field (OTF)	Attachments	Purpose for structured data and review	Outcome from Review
Energy Savings	What percent energy savings does your product/service offer relative to standard practice?	Percentage	Please discuss standard practice and why your product is not currently being adopted. (500 words)	Third-party reports; Product specifications	Structured data feeds into market potential calculation. SME review of OTF and attachments may decrease/confirm percentage based on level of confidence.	Refined / validated energy savings estimate
Market Sizing	What are your target market segments for your product/service?	Select all that apply	Please summarize current penetration into each market segment, competitive advantages, barriers, growth opportunities, and other factors. (500 words)	Case studies;	Structured data pulls from CA models for (1) market sector size (2) EE potential models, (3) stock turnover, etc. to calculate total savings potential. SME review of OTF refines market size based on confidence.	Refined / validated market size
Commercial Readiness	Are there third-party tests and reports justifying your claims for energy savings and other benefits?	Yes / No	Please summarize the findings. (500 words)	Third-party reports	Presence of third-party testing and reports may allow for certain MT assessment and planning steps to be streamlined. SME review helps refine understanding if risk and confidence in claims.	Readiness score
Commercial Readiness	Are there third-party ratings that cover your product?	Yes / No	Please discuss the state of existing ratings and opportunities to evolve them. (250 words)	Link to rating specification(s)	Is there a third-party function to assist with standardizing key product features to ensure product quality and help build consumer trust?	Readiness score
Supply Chain	What percentage of your sales are direct to customer?	Percent	Please summarize the strengths and weaknesses of your sales and services channels. (1,000 words)		Indicative of how mature the supply chain is. Generally speaking, an immature supply chain will require discrete interventions and may/may not pose immediate market opportunities.	Maturity score

Costs	Estimate the full-term program cost.	Dollar Value	Summarize the use of program funds “Program Development” and “Market Development.” (500 words)		Structured data feeds into initial cost-benefit calculation for automated prioritization. The SME review of costs and barriers to be addressed will refine the number, proving a more realistic cost-benefit analysis.	Refined / validated MTI costs
Equity	Does your project provide benefits to low-income, disadvantaged, or otherwise hard-to-reach ratepayers?	Yes / No	Please summarize the benefits and how they can be measured.		Structured data triggers a review by a low-income SME. Qualitative review by low-income SME results in an “equity score.”	Equity score
Benefits	Does your product provide benefits beyond energy savings?	Yes / No	Please elaborate on the scope of benefits your product/service offers to customers and utilities. Include third-party reports and case studies if available. (500 words)	Third-party reports; case studies	SMEs review to assess the benefits beyond EE... it may be flexible capacity for utilities, or customer-specific benefits that dwarf EE savings such as space utilization, smart Operations and Maintenance (O&M), employee productivity, etc.	Benefits score

Appendix E: Staff Proposal's Content Guidance for Market Transformation Accord/Plan

The MTWG has not discussed the Staff Proposal's Content Guidance in detail but acknowledge that it is complementary to the Stage-Gate and Criteria sections of this Report and therefore should be considered by the MTA(s) and MTAB, when they're finalizing both the stage-gate processes and procedures and the MT criteria. A few edits have been suggested in redline to update the Staff Proposal Guidance with clarifications based on MTWG discussions.

Content Guidance for the Market Transformation Accord/Plan

Complete Market Transformation Accords should include the following elements:

- Define a target market that is well-understood and manageable.
- Define target technologies, behaviors, sectors and applications.
- Present current product performance data and/ or relevant behavior research.
- Address energy savings potential, competing products, and the costs and benefits associated with target and competing products.
- Describe the supply chain, product demand and delivery methods, the role of each market actor and how the market operates and functions.
- Present a thorough assessment of market drivers and barriers.
- Present a clear program theory and logic model, identifying market leverage points and intervention strategies. This should draw a clear and logical link between the present state of the market, the contemplated intervention strategies and the desired future state of the market.
- Describe strategies and data for sizing the market and projecting a naturally occurring adoption curve or baseline for the market.
- Appoint members of the Initiative Review Committee.
- Complete a Delphi process to finalize the initial baseline projection over the life of the initiative.
- Specify a plan for updating the **baseline savings** forecast ~~using a Delphi processes~~ at regular intervals. **The original baseline for normally-occurring adoption will not be changed, as it forms the justification for the MTI using best available data at that time.**
- **If the MTI includes an existing RA program,** present a RA coordination plan that demonstrates support from, and coordination with, all related RA programs. This plan would offer a fixed free-ridership rate for the resource programs for an interim period. This plan will also present a schedule and process for updating free ridership assumptions and for phasing out the resource programs altogether over the

longer-term, in sync with the progress of the Market Transformation Initiative.

- Articulate the data and methods that will be used to determine energy savings attributable to the program over its lifecycle.
- Present a forecast of energy savings over the lifecycle of the initiative, as well as a budget, and a schedule of cost-effectiveness.
- Carefully define interim market indicators and milestones that will track progress, and a data collection plan to support their measurement.
- Specify which milestones would be associated with PA-incentive reward payments.
- For each milestone that triggers a PA-incentive payment, define a maximum allowable delay for achieving that milestone. (Delays that exceed of the maximum allowable time will trigger **review for program termination processes, as described in section 3.3.**)
- Provide a detailed plan for ongoing evaluation, measurement and evaluation to track progress, adjust strategies or metrics if needed, and to substantiate savings claims.
- Characterize the amount of risk associated with the effort and how it would be distributed across stakeholders. Describe risk mitigation strategies.
- Describe the desired **end goal** state of the market **for the MTI**, and define the program exit strategy.
- Specify when and how progress reports will be shared with the Commission and stakeholders that detail Initiative activities, results and progress against milestones.

Appendix F: Stage-gate Schematic

