CAEECC-Hosted Market Transformation Working Group

Compilation of Sub-Working Group Preliminary Work Products

January 7, 2019

**Table of Contents**

[I. MTI Principles, Characteristics, Guidelines, and Strategies 4](#_Toc534629414)

[Sub-Working Group Members 4](#_Toc534629415)

[Introduction 4](#_Toc534629416)

[High-Level Principles 4](#_Toc534629417)

[Market Transformation Characteristics (as described by NEEA) 4](#_Toc534629418)

[Market Transformation Guidelines and Strategies 5](#_Toc534629419)

[II. Market Transformation Stage-Gate Proposal and Decision Criteria 6](#_Toc534629420)

[Sub-Working Group Members 6](#_Toc534629421)

[Introduction 6](#_Toc534629422)

[Phase I: Concept Development 7](#_Toc534629423)

[Stage 1 – Concept Scanning & Identification 7](#_Toc534629424)

[Stage 2 – Concept Development & Assessment 8](#_Toc534629425)

[Review 1 8](#_Toc534629426)

[Phase II: Program Development 8](#_Toc534629427)

[Stage 3 – Strategy Development 8](#_Toc534629428)

[Stage 4 – Strategy Testing 9](#_Toc534629429)

[Review 2 9](#_Toc534629430)

[Phase III: Market Deployment 9](#_Toc534629431)

[Stage 5 – Market Development 9](#_Toc534629432)

[Stage 6 – Long Term Monitoring 10](#_Toc534629433)

[Review 3 10](#_Toc534629434)

[Stage 7 – Transition or Sunset MTI 10](#_Toc534629435)

[III. Potential Administration Models 11](#_Toc534629436)

[Potential Administration Model A — Existing Program Administrators 11](#_Toc534629437)

[Sub-Working Group Members 11](#_Toc534629438)

[Background 11](#_Toc534629439)

[Administration of the Market Transformation Portfolio 11](#_Toc534629440)

[Stage Gates 14](#_Toc534629441)

[Stakeholder Roles and Responsibilities 14](#_Toc534629442)

[Phase I: Concept Development 15](#_Toc534629443)

[Phase II: Program Development 16](#_Toc534629444)

[Phase III: Market Deployment 17](#_Toc534629445)

[Potential Administration Model B — Statewide Independent Administrator 19](#_Toc534629446)

[Sub-Working Group Members 19](#_Toc534629447)

[Introduction and Rationale for an Independent Administrator 19](#_Toc534629448)

[Proposed Regulatory Structure 20](#_Toc534629449)

[Options for the Formation / Structure of the MT Board 22](#_Toc534629450)

[MT Board [This group’s position on the composition and power of the MT Board are preliminary formulations and do not represent a group consensus.] 23](#_Toc534629451)

[Tech advisory group [will probably delete this group] 24](#_Toc534629452)

[MT technical advisory board 24](#_Toc534629453)

[MTI-specific advisory groups 24](#_Toc534629454)

[Proposed Roles and Responsibilities for the MTA (Independent) Model 24](#_Toc534629455)

[Budgets and Contracts 25](#_Toc534629456)

[Relationship to IOU Portfolios and 3Ps 26](#_Toc534629457)

[IV. Market Transformation Cost-Effectiveness Framework 28](#_Toc534629458)

[Sub-Working Group Members 28](#_Toc534629459)

[Scope of Modifications 28](#_Toc534629460)

[Proposal 28](#_Toc534629461)

[Counting Codes & Standards Savings and Costs 28](#_Toc534629462)

[Timeframe of costs and benefits (separate from codes and standards) 29](#_Toc534629463)

[Net-to-Gross methodology 29](#_Toc534629464)

[Additional Items to Discuss at the Full Working Group Meeting 30](#_Toc534629465)

[Next Steps 31](#_Toc534629466)

[V. Appendices 33](#_Toc534629467)

[Appendix A: Stage-gate Criteria 33](#_Toc534629468)

[General MT criteria categories 33](#_Toc534629469)

[Appendix B: Draft Intake Application Form 39](#_Toc534629470)

[Section 1 39](#_Toc534629471)

[Section 2 39](#_Toc534629472)

[Section 3 41](#_Toc534629473)

[Section 4 43](#_Toc534629474)

[Section 5: Placeholder (Brian Barnacle’s suggested intake form) 46](#_Toc534629475)

[Appendix C: Staff Proposal’s Content Guidance for Market Transformation Accord 48](#_Toc534629476)

[Content Guidance for the Market Transformation Accord 48](#_Toc534629477)

# MTI Principles, Characteristics, Guidelines, and Strategies

## Sub-Working Group Members

* Blue Green Alliance – Sam Appel
* NRDC – Lara Ettenson
* The Energy Coalition – Marc Costa

## Introduction

Market Transformation Initiatives (MTIs) should conform to the high-level principles as defined in this document and align with existing Commission policy direction. *High-level principles* describe program goals that every MTI should aim to achieve. *Market Transformation Characteristics* describe best practices of Market Transformation within energy efficiency procurement (as defined by NEEA). *Guidelines and Strategies*clarify and elaborate on how to implement the intent of the high-level principles.

## High-Level Principles

Market transformation initiatives should:

1. Help drive incremental savings to achieve the state’s energy efficiency and GHG reduction goals
2. Ensure that costs to ratepayers are just and reasonable
3. Support and do not stifle innovation
4. Complement and coordinate with rolling portfolio programs
5. Use a stage-gate process for development and deployment
6. Leverage existing processes and forums where appropriate
7. Be cost-effective under the proposed market transformation framework
8. Integrate strategies and metrics wherever applicable to ensure equity
9. Be informed, measured, and evaluated by data whenever available
10. Be vetted in an inclusive, open, and transparent manner
11. Ensure that the energy efficiency workforce is adequately trained and skilled.

## Market Transformation Characteristics (as described by NEEA)

1. Whole market perspective – aligned with resource planning
2. Focus on long-term outcomes
3. Design grounded in barriers and opportunities
4. Sustained market change
5. Leverage points and natural market forces
6. Measured by market progress
7. Adaptively managed as markets change

## Market Transformation Guidelines and Strategies

* 1. MTIs should not be limited to technologies rather should consider whole market and cross-market approaches (e.g., behavior, equity, workforce, code compliance strategies, etc.).
	2. All MTIs should consider how to integrate equity into applicable stages of implementation by maximizing savings, health, affordability, and job access for disadvantaged communities.
	3. Savings and cost-effectiveness are likely to be low in the early stages of an MTI. Early-stage MT spending should not have a negative impact on resource portfolio cost effectiveness.
	4. The CPUC’s proposed “Accord” framework has value, but development of an Accord should not be overly expensive or prevent timely action and important learnings.
	5. A Stage Gate process specific to California’s goals and needs could best facilitate successful MTIs that are vetted in a transparent way, including community feedback processes as applicable.
	6. California’s stage gate process should utilize existing resources, filings, stakeholder groups, and processes where possible.
	7. Timely feedback and evaluation is critical to pivoting strategies if needed in support of continuous improvement.
	8. Where possible, MTIs should support C&S advancements. Savings and cost effectiveness should reflect C&S advancements enabled by the MTI.
	9. Before launching a full MTI, piloting approaches may often provide key learnings at less budget.
	10. To effectively address market barriers and facilitate functional industry partnerships, MTIs must make long-term commitments.
	11. All MTIs should have standard metrics (in addition to MTI-specific metrics) to ensure statewide objectives are being considered and measured where applicable (e.g., equity and workforce).
	12. MTIs need off-ramps.
	13. MTIs should enhance the goals of ensuring both the availability and utilization of a well-trained and suitability-skilled energy efficiency workforce. Savings and cost-effectiveness should reflect the indirect energy savings that will occur from creating a better trained workforce that will also work on non-ratepayer-subsidized projects.
	14. MTIs may include increasing code compliance. Savings and cost-effectiveness should reflect code compliance advancements enabled by the MTI.
	15. MTIs should support and not impede SB 350 goals to increase reliance on renewable energy while maintaining grid stability through, among other strategies, increasing demand response capabilities.

# Market Transformation Stage-Gate Proposal and Decision Criteria

Sub-Working Group Members

Over the course of 3 working sessions from mid-December to early January, the sub-working team revised the stage-gate process and worked together with other sub-working teams (decision criteria, IOU Administered MT portfolio). The stage-gate sub-working group team included the following members:

* Energy Solutions – Brian Barnacle
* NEEA – Jeff Harris
* Resource Innovations – Margie Gardner
* SCE – Derek Okada, Kevin Thompson, Jesse Feinberg, Carol Yin (consultant)

The revised stage-gate process is described below and the decision criteria is included in the appendix.

## 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 IOUs. We have developed a description of how stage-gates may be applied to market transformation initiative development and funding in order to understand how Market Transformation Program Administrator(s) (MT PA(s)) would ensure that a market transformation 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 Accord development, and sunset or transition of both unsuccessful and successful Market Transformation Initiative(s) (MTI).

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, some stages may be skipped. The stage-gate depiction is also intended to help MT PA(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 market transformation and California policy, we have arrived at a depiction of a process with three overarching phases and seven sub-stages.

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. The Stage-gate criteria are discussed in Appendices B and C.



Figure 1

Note: Prior to starting the stage-gate process, upfront decisions should be made to establish clear policy objectives, funding mechanisms, and decision making bodies to inform the long-term strategic direction for pursuing market transformation initiatives.

## Phase I: Concept Development

### Stage 1 – Concept Scanning & Identification

At this ideation and intake stage, the MT Program Administrator (MT PA(s)) collects ideas on technologies, target markets, and services that might be developed into productive MT initiatives. Initial screening criteria and a standardized intake form[[1]](#footnote-1) will be used to help the MT PA(s) prioritize the opportunities that will advance to Stage 2. This stage concludes with a rank ordered list of MT opportunities, based on information provided by the bidders on the intake form (with PA(s) conducting gut-checks as necessary). We anticipate the intake and solicitation stage to be limited to one month, so that MT PAs can proceed with ideation in a timely manner. No other time limitations are proposed at this time for any other Stage.

Stage 1 Deliverables:

1. Disposition report on all MT concept submissions
2. Rank-ordered list of submissions, based on MT PA subject matter experts’ high-level review of the quality and/or completeness of the submitted MTI information.

Stage 2 – Concept Development & Assessment

The MT PA(s) at this stage begins to further assess market transformation opportunities identified in Stage 1. MT PA(s), drawing upon internal and external resources, begin the initial due diligence of vetting the top ten ideas with subject-matter experts (SMEs) —The MT PA(s) will employ a prioritization model[[2]](#footnote-2) with existing and available data, and low-cost research to characterize the target market, identify market barriers, and potential opportunities for program development. This stage concludes with a refined list of MT initiatives (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 A), validated with currently available data
2. Preliminary development plans for data/research needed to conduct due diligence on each MTI, including budgets and timelines

### **Review 1**

Review the information gathered in the concept development phase and provide a recommendation on 3-5 MTIs to proceed into Phase II Program Development. This recommendation to proceed will then authorize additional funding for program development beyond the initial tranche of funding in Phase I.

## 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), MT PA(s) will collaborate with relevant SMEs, and/or third parties 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. An early EM&V Plan is also developed in coordination with an EM&V SMEs to agree on metrics for savings estimates and baseline forecasts. 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 market transition strategy.

Stage 3 Deliverables:

1. Market characterization studies, including:

	* Baselines
	* Leverage points
	* Market potential (high level)
	* Market progress indicators (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)

### Stage 4 – Strategy Testing

At this Strategy Testing stage, MT PA(s) will collaborate with relevant SMEs, and/or third parties to conduct market tests to test the hypothesized strategic intervention(s) defined in the previous stage. A Market Transformation Accord will then be developed applying insights from market test results in preparation for Phase III. The MT Accord, which solidifies a commitment to the market and relevant market actors, will document the target market, strategic intervention, logic model, long term market indicator metrics and outcomes. This stage concludes with the filing of the MT Accord 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. Rank ordered list of MT Accord candidates, including reports on how well they meet the general MT criteria
3. MT Accord, including all elements mentioned in the Staff proposal

### **Review 2**

Review the Market Transformation Accord and provide a recommendation on whether the MTI is 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 Accords. MT PA(s) will continue to collaborate and engage relevant SMEs, market actors, rolling portfolio programs, and/or third-parties to track, refine and adapt strategies as the market changes. This stage concludes with the refinement of long-term market indicators and a refined market transition strategy.

Stage 5 Deliverable:

1. Annual Meetings on MTI deployment activities. Criteria for each MTI will be unique to the MTI (see Stage 6). Stage 5 & Stage 6 will likely run in parallel

### Stage 6 – Long Term Monitoring

This is the stage where MT PA(s) track the metrics and milestones established in the MT Accord. Some of the key metrics at this stage include the long-term benefits vs. costs and the long-term market progress indicators. This stage concludes with refined rolling portfolio coordination plans.

Stage 6 Deliverables:

1. Annual Report of MTI deployment progress in Rolling Portfolio Annual Report.

### **Review 3**

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

### Stage 7 – Transition or Sunset MTI

Once metrics indicate successful transformation of the market where publicly funded interventions are no longer necessary, MT PAs will implement the market transition strategy. The MT transition will conclude the intervention through a transition to codes and standards (C&S), continuation of long term monitoring through EM&V, or transition to rolling portfolio program teams for a relaunch.

Stage 7 Deliverable:

1. A successfully transitioned or exited MTI.
2. Report on savings achieved, lessons learned.

#  Potential Administration Models

## Potential Administration Model A — Existing Program Administrators

### **Sub-Working Group Members**

* CEDMC — Arthur Haubenstock
* Energy Solutions — Brian Barnacle
* PG&E — Adam Scheer
* SCE — Derek Okada
* The Energy Coalition — Marc Costa

### Background

On Aug. 29, 2018 the CPUC issued a Ruling seeking comment on a staff proposal to establish a Market Transformation (MT) framework for California energy efficiency (EE).[[3]](#footnote-3) Numerous parties filed formal comments and the CPUC hosted two stakeholder workshops to explore issues and potential solutions. With several important questions remaining, the CPUC asked stakeholders to undertake further discussions with the goal of developing a joint proposal. At the first of these meetings, organized through the California Energy Efficiency Coordinating Committee (CAEECC), parties diverged on the assignment of MT portfolio administration. Several parties believed that the IOUs and approved non-IOU program administrators (Existing PAs) should retain administration of the MT portfolio while others believed that another administrative structure would be preferable. This proposal, authored by the above-listed parties (joint parties) outlines the rationale for existing PA administration of the MT portfolio along with recommended roles and responsibilities. The stakeholder roles and responsibilities proposed in this draft are anticipated to change in order to fit rationally within the MT Stage Gate process, which is subject to change based on parallel development.

### Administration of the Market Transformation Portfolio

D.16-08-019 clearly describes the role the Commission envisions for existing PAs to engage in energy efficiency (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.”[[4]](#footnote-4) 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.”[[5]](#footnote-5) 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.”[[6]](#footnote-6)

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 third-party 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, the IOUs must balance numerous goals and directives, including energy savings targets, cost effectiveness mandates, statewide program requirements, third-party outsourcing obligations, various non-resource policy objectives, management and reporting of more than 300 metrics,[[7]](#footnote-7) and the anticipated transition of EE to the Integrated Resource Planning (IRP) process, among others.

A portfolio of market transformation initiatives (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 resource and non-resource 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 tools to effectively bridge emerging technologies, resource acquisition, and codes and standards, all program areas already administered by existing PAs. Existing PAs also administer EM&V studies, WE&T, and NMEC[[8]](#footnote-8) platforms, have savings and cost effectiveness reporting structures in place, benefit from immediate access to AMI[[9]](#footnote-9) data for every customer, 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 a MT administrator 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 third-party implementers. It is not practical to believe that a separate MT administrator could effectively coordinate with the complex and rapidly transitioning Rolling Portfolio and the hundreds of programs therein.

Going forward, a vital role of 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 Integrated Resource Planning (IRP) process.[[10]](#footnote-10) 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, the joint parties strongly believe the MT framework must extend beyond undiscerning load reduction. With existing PAs identifying the need and third parties proposing the solutions, the MT framework can be used to drive long-term GHG reductions with purposeful, integrated initiatives. A separate MT administrator would not be naturally connected to integrated planning processes.

The joint parties 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.[[11]](#footnote-11) 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 third parties 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 third party intellectual property and third parties have treated IOU data with care. These mutually beneficial feedback loops would be even more important when establishing MT Accords.

By bringing to bear organized resources across EE portfolios, building effective industry and national partnerships, and executing programs and evaluations with third party 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 recently to high quality LEDs that meet future iterations of Title 20.[[12]](#footnote-12) California’s new construction programs help ensure the construction builder workforce is prepared for successful adoption of advancing building codes, which enables Codes and Standards advocacy efforts that support successful Title 24 advancements leading to Zero Net Energy.[[13]](#footnote-13) Through a partnership with Energy Star, the Retail Products Platform[[14]](#footnote-14) has expanded to 12 states, 14 program administrators (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 the Northwest Energy Efficiency Alliance (NEEA). In the absence of a market transformation framework, many of these programs have achieved market transformation milestones despite lacking a mechanism to recognize benefits and therefore often at low TRC. With a California market transformation framework, existing PAs would have the tools they need to more purposefully pursue dedicated and holistic Market Transformation Initiatives (MTIs) and the resource portfolio could be better focused on achieving immediate cost-effective savings and transitioning to the IRP.

The joint parties believe a California market transformation portfolio administered by the existing PAs would benefit from robust stakeholder engagement, transparent decision-making, and external expert advice where needed. In the proposal below for roles and responsibilities under an existing PA administered MT portfolio (MTA-Existing PAs) the joint parties have taken care to balance the need for open, transparent processes, with the need for timely decision-making and respect for third party intellectual property.

### Stage Gates

A “stage gate” process for market transformation initiatives (MTIs) has been an important focus of joint party discussions. These stage gates establish critical decision-making points and processes for MTIs, including ideation, potential intervention testing and refinement, MT Accord[[15]](#footnote-15) development, and sunset or transition of both unsuccessful and successful MTIs. Any administration framework, including specific assignments of roles and responsibilities, must work in harmony with the stage gate process. While the specifics of the stage gate proposal are still being negotiated, at this juncture conversation has centered on a process with three overarching stages and eight sub-stages. The latest outline of the stage gate process is provided as an attachment here (right click on the image, navigate to “Slide Object” and select “Open” for a full Powerpoint slide). This proposal will make frequent references to specific stage gates and elements therein.



### Stakeholder Roles and Responsibilities

The joint party proposal for stakeholder roles and responsibilities is broken out by Stage Gate. At several points reference is made to entities defined as follows:

* **MTA (Existing PAs)**: The Investor-Owned Utilities (IOUs), Regional Energy Networks (RENs), and Community Choice Aggregators (CCAs) authorized to administer EE portfolios
* **Market Transformation Advisory Board (MTAB)**: A group of non-PA California EE stakeholders assembled to advise California’s Market Transformation Portfolio and provide recommendations. The MTAB should include up to two representatives from the CPUC and consist of individuals with background in California EE and understanding of market transformation.
* **Initiative Review Committee (IRC)**: A group of technical advisors assembled if needed for specific MTIs. IRCs can be used to advise baseline development, vet intervention strategies, or provide technical advice on specific products or markets. IRCs may consist of industry experts, academics from national laboratories or universities, individuals from governmental organizations such as the Department of Energy or Environmental Protection Agency, or others with needed subject matter expertise. Members of the IRC should not stand to benefit from the potential MTI and be free from other conflicts of interest.
* **Peer Review Group (PRG)**: 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 IE to ensure openness and transparency of the solicitation process.
* **Independent Evaluator (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 MTAB as well as the PRG upon its formulation at the RFP stage.

To promote transparency and open sharing of information and ideas and to protect intellectual property, members of the MTAB, IRC, PRG, and IEs would be asked to sign Non-Disclosure Agreements. In addition to these groups, Key Criteria for MTIs and MT Accords are defined as follows:

* **Key Criteria**: Feasibility, Portfolio Fit, Savings Potential, Cost Effectiveness, and Policy Alignment (including equity considerations), and Milestones
* **MT Accord**: The document that governs a full-scale MTI

### Phase I: Concept Development

Stage 0: Ideation

The Ideation phase focuses on the collection of concepts for possible MTIs. In this stage, the IOUs would manage a portal where 3Ps, industry actors, or other stakeholders could submit ideas for MTIs via a standardized intake form. Any ideas originating within the Existing PAs, including from the emerging technologies portfolio, would also complete the intake form. For the initial round of ideation, the portal for completed intake forms would remain open for at least one month. Any ideas received after closure of the intake portal window would be reserved for additional rounds, which would be initiated in consultation with the MTAB on an as-needed basis.

Stage 1: Selection

With the assistance of an IE, the Existing PAs would undertake an initial assessment of Key Criteria For each idea received in Stage 0. This step would yield a narrowed list of ideas from potentially dozens of submissions. For any ideas not selected to move forward, the Existing PAs would provide short feedback to the proposer, including rationale for the decision. Depending on the number and quality of ideas received, the Existing PAs could choose to retain certain ideas to pursue if higher-priority ideas do not prove promising upon further development in Stage 2.

Stage 2: Concept Development and Assessment

For each potential MTI passing Stage 1, the MTA (Existing PAs) would orchestrate the completion of more extensive review of existing available data, assessment of potential for leverage points within target markets, and refinement of intervention strategies. This should take place in consultation with the idea proposer. If needed, the Existing PAs could use short-term technical assistance contracts for third party support,[[16]](#footnote-16) again under the consultation of the IE. At this stage, the Existing PAs could also choose to form IRCs where independent technical assessments and recommendations are needed. To gauge potential leverage points and the feasibility of intervention strategies, the MTA (Existing PAs) may undertake initial conversations with potential industry partners. This process will result in greater understanding of Key Criteria and outlines of potential logic models and is likely to yield a further winnowed list of potential MTIs.

The MTA (Existing PAs) would then present the most promising potential MTIs, along with assessment of Key Criteria, initial intervention strategies, and logic models to the MTAB. In cases where IRCs were formed and provided feedback or recommendations, this information would also be presented to the MTAB. The MTAB would provide recommendations for moving forward or not for the potential MTIs. For the first round, a target number of five MTIs should progress to Stage 3, in which program development would begin in earnest. However, this number may vary depending on budget considerations and the number of quality ideas received that show potential. The MTA (Existing PAs) may choose to present more than five potential MTIs to the MTAB and seek advice on which to prioritize.

After meeting with the MTAB, the MTA (Existing PAs) would file a Tier II advice letter with the Commission to seek budgetary approval for the MTIs proposed to progress to stage 3. If disagreements exist between Existing PAs and the MTAB, the Existing PAs could choose to file two Advice Letters – one for the MTIs both Existing PAs and the MTAB agree should move forward, and one for MTIs where resolution is needed.

A key aspect of Stage 2 will be providing transparency into all ideas presented to the PAs while also respecting intellectual property of third party and industry proposers. The joint parties recommend that the Existing PAs 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 Existing PAs would either provide additional detail to the MTAB or would include the idea for further development and consideration.

### Phase II: Program Development

Stage 3 - 4: Market Trials and Baseline Development

Nowhere in the stage gate process is there a greater need for flexibility than upon initiation of stage 3. At this point the next logical step will be highly dependent on the circumstances specific to an MTI. While many MTIs will need rigorous baseline development for the long-term MT Accord, often there will be a simultaneous need to develop program logistics and test intervention strategies. Delaying intervention for the sake of further research at this stage may lead to missed opportunities.

Regardless of the state of baseline development, many of the MTIs that reach stage 3 would likely benefit from initial deployments that are limited in scale. These market trials[[17]](#footnote-17) would be intended to test intervention strategies and smooth out logistical details. Learnings from these efforts would then be incorporated into Accord development and would enable smoother rollout at large scale. In some cases market trials may determine that an MTI is not feasible, allowing for sunset before wasteful wide-scale deployments. In other cases, stage 3 may be best embodied by product or channel development work with a specific manufacturer or industry actor, the success of which would enable further market development and justify baselining work.

In most cases it is expected that the MTA (Existing PAs) will contract with third parties to implement market trials. Because these trials are expected to be of relatively short duration in order to yield rapid learnings, direct award contracts are expected to be most useful at this point of an MTI. In cases where a third party implementer proposed the idea, the MTA (Existing PAs) would be likely to pursue trial and development work with that vendor assuming the company can provide competitive pricing.

The MTA (Existing PAs) are also likely to need third party EM&V support in developing baselines, detailed logic models, milestones, and cost effectiveness forecasts. For succeeding MTIs, this information will ultimately be combined with additional learnings from market trials, budgetary needs, and advanced assessment of Key Criteria for full Accord development. Accords should describe specific anticipated market benefits including but not limited to: elimination of barriers to efficiency, potential to scale, desired time to reach specified levels of market adoption/saturation and variables that would influence the Bass Diffusion Curve. The MT Accord will also contain more detailed coordination plans to ensure MTIs are working synergistically with the Rolling Portfolio programs, including resource acquisition and Codes and Standards.

If an IRC was formed as part of stage 2 or during stages 3 or 4, its review should be taken into consideration by both the MTA (Existing PAs) as well as the MTAB. Similar to stage 2, stages 3 – 4 will culminate with an MTAB meeting and Tier II Advice Letter authored by the MTA (Existing PAs) if Accord development is desired and supported by progress of the nascent MTI.

### Phase III: Market Deployment

Stages 5 and 6: Market Development and Long-Term Monitoring

At this stage the MTA (Existing PAs) would issue a competitive solicitation for the implementation and evaluation of each full-scale MTI as well as additional needs described in the Accord such as database management, laboratory testing, milestone tracking, etc. This solicitation process would utilize much of the existing Rolling Portfolio statewide and third-party solicitation framework including the PRG and IEs.[[18]](#footnote-18) In lieu of issuing a request for abstract (RFA) that would lead to a request for proposal (RFP), the MTA (Existing PAs) would issue RFPs only as much of the ideation work should be completed at this point. As with 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.

As part of the ongoing evaluation, long term monitoring of market dynamics will be conducted. This monitoring, along with process evaluation results, will inform changes to logic models and potential updates to baselines if better data become available throughout the course of the MTI. For long-term MTIs the MTA (Existing PAs) would provide a progress update to the MTAB at least once every two years, again including input from the IRC if one was formed.

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 third-party resource acquisition and non-resource programs, codes and standards programs, and MTIs.

Stage 7: Transition or Sunset MTI

The MT Accords should describe a clear vision for MTI sunset or transfer with an understanding that intervention strategies, logic models and timelines may need to evolve to meet conditions “on the ground,” to be responsive to evaluation results and recommendations or based upon IRC and/or MTAB input. Sunset, expansion/contraction, or transfer may be predicated upon MTIs yielding new cost-effective measures best delivered through a resource acquisition model, data to support codes and standards advancements, or independent sustained changes in market dynamics. Sunset may also be justified based on the failure to meet key MT Accord milestones, including forecast cost effectiveness. Depending on the circumstances of individual MTIs, continued monitoring should be undertaken to ensure markets to not revert to pre-intervention states and to provide timely information on where additional support may be needed. Sunset of MTIs that reach stage 5 would require an update to the MTAB.

## Potential Administration Model B — Statewide Independent Administrator

### Sub-Working Group Members

* CEDMC – Arthur Haubenstock, Nathaniel Kinsey
* CSE – Beckie Menten
* CPUC – Daniel Buch, Alexander Cole
* NRDC – Merrian Borgenson, Lara Ettenson
* TURN – Hayley Goodson

### Introduction and Rationale for an Independent Administrator

In order to successfully carry out the Commission’s market transformation agenda, the functions of program selection, design, and management should be carried out by a single statewide administrator, which we will refer to as the Market Transformation Administrator (“MTA”). The MTA’s core purpose is to centralize the core functions associated with running a market transformation 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 market transformation initiatives; management of the overall market transformation portfolio; and the monitoring of relevant markets in order to identify future opportunities and gain the strategic information needed to flexibly adapt the market transformation portfolio and ensure that initiatives are relevant. The MTA will also be responsible for bidding out implementation work as needed.

A statewide independent MTA would provide California with three overarching benefits over an IOU administrator: (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. These are interrelated.

First, choosing an independent (meaning non-IOU) administrator allows for the selection of an entity with a mission fully aligned with promoting energy efficiency and conservation, including market transformation. Indeed, mission alignment is considered a best practice in market transformation administration.[[19]](#footnote-19) As Prahl 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.”[[20]](#footnote-20)

Market transformation requires sustained effort, patience, flexibility, and long-term dedication. A mission-aligned independent administrator will provide the necessary stability in planning, development, and implementation of market transformation initiatives, 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 energy efficiency programs, is inherently an organization with a mission broader than promoting energy efficiency and conservation. Depending on the broader priorities of the organization, an IOU will adjust how it carries out its energy efficiency functions, both in the long-term and near-term. In California, we have seen significant changes in the size and organization of utility energy efficiency 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).

Second, an independent 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 energy efficiency 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 market transformation initiatives.[[21]](#footnote-21) Related, the independent 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.

Last but not least, market transformation requires tools and approaches that are institutionally difficult for IOUs to pursue. An independent administrator will enjoy an organizational nimbleness that an IOU lacks. For instance, an IOU may be hesitant to take on permitting issues (such as improving compliance through support for code enforcement as part of a market transformation initiative targeting non-compliance in a particular building retrofit market) or may not be optimally positioned to partner with local governments (such as water districts). An independent administrator will not have the same limitations. Likewise, an IOU may not be well-suited to partner with a POU (which could be a potential competitor, among other complicated factors). An independent 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.

All of these reasons, taken together, support the selection of an independent administrator for California’s market transformation initiatives.

### Proposed Regulatory Structure

As argued above, centralizing market transformation in a single organization will greatly facilitate statewide coordination. It will also ensure the most efficient use of expertise regarding the management and administration of market transformation and will insulate these programs from changes in management priorities and other organizational pressures that might otherwise undermine their effectiveness if the various investor owned utilities are left to manage them.

To create the appropriate regulatory framework and identify and hire an appropriate a Market Transformation Administrator, the Commission should select an IOU to act as the statewide lead on market transformation. The Commission should then order the lead IOU to conduct an appropriate solicitation and hire the MTA. The IOU that acts as statewide lead will be the contracting agent and responsible for managing the procurement process. However, the selection of the MTA would require approval by Energy Division, and the selection should be based on additional input from other stakeholders in the process. The solicitation should also follow the normal procedures of Independent Evaluator (IE) and procurement review group (PRG) review established by D.18-01-004, which are currently practiced for all third-party qualified energy efficiency programs, to ensure fair and well-managed procurements.

The entity selected as the MTA should be offered a 4-year contract to conduct initial market transformation work. At the end of the third year, a Market Transformation Board (MT Board) will review the performance of the MTA and recommend to the Commission whether the lead-IOU should renew the current MTA’s contract or conduct a solicitation to identify a new administrator. Annual funding of the MTA will also be contingent on approval of a Tier 2 Annual Budget Advice Letter (ABAL) by the MTA. The ABAL submitted by the MTA will contain a report and recommendation to the Commission by the MT Board. As with other statewide programs, the budget for the MTA would be shared among the four IOUs proportionally according to their load shares. For individual market transformation initiatives (MTIs), the MTA would be required to submit an advice letter at two key stage gates (as outlined in the consensus stage gate proposal) to seek Commission authorization to expand the MTI.

While much of the day-to-day work and even longer-term strategic planning related to market transformation initiatives will be done by the MTA, the MTA’s work will be overseen by a stakeholder board (MT board), assisted by MTI-specific advisory groups, as needed. The MT Board would be advisory and would not have final decision-making authority (this authority would remain with the Commission, where not explicitly given to the MTA as part of their contract), but the MTA would be required to present progress to the MT Board regularly and consult the MT Board before submission of its ABAL and stage gate advice letters. Stage gate advice letters would be Tier 1 if no member of the MT Board objects; otherwise stage gate advice letter would be Tier 3 and require Commission authorization via resolution. [NOTE: THE TIER 3 AL IS NOT A CONSENSUS POSITION. Some Group members preferred a Tier 2 AL]

The purpose of the MT Board is to provide strategic direction and oversight to the MTA. In addition, each market transformation initiative will be subject to Commission review at pre-defined stage-gates as it proceeds through its lifecycle. A key advantage to this structure is that it facilitates independent administration of market transformation initiatives while the Commission retains ultimate decision-making authority over the use of ratepayer funds.

In the event that the MTA repeatedly fails to appropriately consider and act on stakeholder input, an additional regulatory option stakeholders may wish to consider is the inclusion of an explicit process for stakeholders to file a motion for relief in an open energy efficiency proceeding. This would be most appropriate either for formal consideration of policy or process changes or for the Commission to consider changing market transformation administrators.

### Options for the Formation / Structure of the MT Board

At this point, the group has considered three potential organizations that could form the basis of the MT Board:

1. [ETCC](https://www.etcc-ca.com/) should be coordinated with during any MTI process if applicable but not utilized as a structure for this effort (i.e., there is no mention of ETCC below) (suggest the ETCC could be added in the IOU / MTA coordination section)
2. CAEECC makes sense for logistics for 2 main reasons (1) it is closely linked to Rolling Portfolio already and (2) using the infrastructure avoids duplicative costs and makes it easier for stakeholders and CPUC to participate.
3. [CalTF](http://www.caltf.org/) could be leveraged if the existing folks have MT expertise. If not, might make more sense to have one new request for members via the MT Board than to have multiple groups. Challenge is that the CalTF is not currently tied into the rolling portfolio nor is there existing authority to work on these matters as there is with the CAEECC process.

The following table provides proposed Pros and Cons of existing forums to inform our discussion on developing a non-IOU administered MT effort. However, without fully knowing the structure or role of the Market Transformation Administrator (MTA), some of these Pros/Cons may change. Conversely, once we define the specifics of the MTA, we may have additional Pros/Cons.

|  |  |  |
| --- | --- | --- |
| **Forum** | **Pro** | **Con** |
| CAEECC | * + - 1. Existing authority and budget allocation
			2. Existing infrastructure including ground rules, process steps, and website
			3. Closely connected to the Rolling Portfolio process and stakeholders making it potentially a more natural way of integrating MT and RP throughout the various stage gates and processes
			4. Can easily adapt participants as seen with the MT working group structure
			5. Would eliminate potentially duplicative costs for running parallel efforts under 2 different contracts
 | 1. May not have the right people on the CAEECC2. The MT Administrator may want to be the facilitator/mediator instead of using existing facilitation team3. The MT Administrator may not want to coordinate with existing approach4. No decision-making authority (would need to have a CPUC decision modify authority of any MT component, which would be the case for either approach) |
| CalTF | 1. Existing infrastructure
2. Potentially the right people (would have to assess)
3. The Policy Advisory Committee has entities beyond IOU territory limits
4. Could be adapted to be a subgroup of the CAEECC or at least use experts as appropriate for a technical review group
 | * + - 1. No recognized authority
			2. Not fully integrated into current Rolling Portfolio effort and therefore would need another layer of coordination.
 |
| ETCC | 1. Existing expertise on ET
2. Existing process experience for intake ideas
3. Serves one of the many functions of a potential MT administrator
4. Could use people on the ETCC to seed the MT general advisory group or technical group (CAEECC or otherwise)
 | * + - 1. Focused on ET only vs. the entirety of the process
			2. Functions likely will be done by MT administrator so may not needed.

  |

### MT Board [This group’s position on the composition and power of the MT Board are preliminary formulations and do not represent a group consensus.]

*\*The MT Board would be a unique branch of the CAEECC. It would use the existing protocols and facilitation team but not rely on existing membership. Existing CAEECC members would be able to apply for the MT Board but would not be given preferential treatment. The MTA would be responsible for the development of all MT related activities but rely on the CAEECC facilitation team for document management, meeting planning, and meeting facilitation. This would enable close coordination with the Rolling Portfolio, eliminate potential redundant expenses associated with standing up and implementing a parallel process, and make it easier for stakeholders and Energy Division to participate and follow the process. If the MT Board ultimately has voting rights, the CPUC would need to include such direction in a forthcoming decision.\**

MT advisory board of interested stakeholders, including IOUs, POUs (if interested) interested parties, and other subject matter experts

* Board to include self-nominated organizations, with ED approving
* Consider including nominal funding for travel (and perhaps stipends?) as part of MT admin budget
* Board is advisory to MT Admin and Commission, but plays a robust role in greenlighting/off-ramp at key stage gates (see regulatory section below)
* Meetings are regularly scheduled/periodic (quarterly?)

### Tech advisory group [will probably delete this group]

*\*If the CalTF has the right experts, this could be handled through their existing meetings but would require CPUC direction to provide them with this scope. If the CalTF does not have the right composition, it might make more sense to solicit for technical expertise as part of the MT board to reduce the number of meetings/forums/groups. Since it is anticipated that the MTA and any related consultants would conduct the technical work, the review is more to “gut check” or advise on protocols vs. develop those protocols. Given the existing infrastructure of the CAEECC and the fact that an application process is needed for the new MT Board, it may make more sense to combine the two in structure.\**

### MT technical advisory board

* Board to include self-nominated individuals, with ED approving (alternative would a contract relationship via competitive solicitation)
* Consider including nominal funding for travel (and perhaps stipends?) as part of MT admin budget (alternative is a modest contract)
* Board is advisory to MT Admin and MT advisory board (and Commission). Provides technical review of MT Admin work products through the lifecycle of a MT initiative.
* Meetings are regularly scheduled and/or ad hoc (monthly?)
* Smaller group than advisory board; somewhat analogous to Independent Evaluator role in PRGs

### MTI-specific advisory groups

Each market transformation initiative (MTI) can have an MTI-specific advisory board that include key market or policy actors. This is optional and is at the discretion of the MTA (Independent) during the Market Development Phase, as defined below. MTI-specific advisory group should be closely coordinated with MT Board to better ensure consistency with MT guidelines and objectives.

### Proposed Roles and Responsibilities for the MTA (Independent) Model

This section describes the roles and responsibilities for the MTA (Independent) model for each of the three phases that are aligned with the NEEA process: Concept development, Program development, and Market development.

Concept Development Phase

In this initial phase there would both be an open call for ideas to all stakeholders, and the MTA (Independent) staff would be actively scanning for MT opportunities. All of the identified concepts would require a standardized set of information, and the MTA (Independent) staff would assess the concepts based upon agreed upon criteria. The concepts would be summarized and scored by the MTA (Independent) and presented to the MT Board with recommendations by the MTA (Independent) staff.

*\*In addition to using the MT Board to review and approve the final scores proposals, the MTA would utilize the MT Board/CAEECC to establish this process at the onset, including finalizing the intake form, criteria for review, etc.\**

The MT Board would vote to approve promising concepts for further development in the “Program development” phase. [The group did not reach on consensus on this issue]

Program Development Phase

The purpose of this phase is to develop the MTI concepts into a full Market Development Plans (or to scrap them if they a deemed unworkable as more info is gathered). The MTA (Independent) would be the lead for program development – they would do any product and market testing that is needed, identify the market adoption baseline, create the logic model, establish progress metrics, and would work with other stakeholders and industry to ensure the MTI is coordinated with other existing programs. The end result would be a Market Development Plan for each MTI or scrapping MTIs that seem less promising than thought. Scrapping MTIs would be largely at the discretion of the MTA, as they would need to manage the # of MTI and total budget available for the next phase, but the MTA would need to provide an explanation and any lessons learned to the MT Board. This 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 RFP if the MTI is approved.

The MT Board would vote to approve the MTIs presented by the MTA (Independent), which would be implemented in the Market Development Phase.

Market Development Phase

This phase is where the MTIs are implemented, adjusted as needed, and evaluated in real time. The MTA (Independent) 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 (Independent) could also choose to form an MTI-specific advisory group, if helpful for the success of the MTI. The MTA (Independent) will actively administer each MTI, and will provide the real-time evaluation and feedback function (as NEEA does for its programs) to the implementers. The MTA (Independent) 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.

*\*The MT Board would have a similar function as the CAEECC will have in reviewing ongoing implementation of the Rolling Portfolio. Every so often (e.g., quarterly/semi-annual) the MTA would report to the Board on the progress of the initiative, including attainment of or progress toward the pre-determined metrics.\**

### Budgets and Contracts

Max budget? How structured (since MTIs aren’t identified until after a contract with MTA (Independent) signed)

Propose a process like the Business Plan where the MTA (Independent) is authorized to spend a certain amount on program admin and on MTI’s approved by the board; subcontracting with implementers as necessary to carry out MTIs to be done between MTA (Independent) and implementer

How $ will flow

Need to check with ED on their flow of funds, but my preference would be directly from CPUC to MTA (Independent). If not possible, a very prescriptive and clean contract with a lead IOU to transfer funding on either a quarterly or annual (preferred) basis with true up reports on spending quarterly.

Limit on % that can go to the MTA (Independent) versus implementers/incentives (or keep flexible?)

MT admin contracted for a definite term by designated IOU; oversight and selection by the Energy Efficiency Procurement Review Group, with final decision made by ED if consensus is not achieved.

Some stakeholders prefer a dedicated MT admin statewide entity, but this would require legislation

Contracting via competitive solicitation for MT admin role is reasonable in concert with robust stakeholder and Commission oversight

IOU cost-sharing by proportionate load

### Relationship to IOU Portfolios and 3Ps

Relationship to IOUs [The group did not reach on consensus on this issue]

* 1. MTI program accomplishments count towards IOU goals (note, not attribution)
	2. IOUs serve on the MTI Board (whatever iteration it ends up in) as an advisory member
		1. Serves to keep MTA Board informed about existing IOU plans, programs, constraints, opportunities - MTI’s should be informed by helping IOUs meet CPUC / state targets, i.e. integration of EE and IRP planning, TOU, integration of resources, etc.
		Keeps IOU informed about MTA activities (i.e. for resource planning)
	3. MT initiatives should leverage existing programs whenever possible

		1. Could use ME&O dollars in RA programs to support MTI
		2. MTI should conform to certain EE policies (i.e. safety, workforce, equity) where possible and relevant - propose via Tier 2 AL where MTA / Board want to deviate and no consensus
	4. MTI accomplishments reported out publicly quarterly; combined into SW reporting for EE stats, etc.

Relationship to 3P programs [The group did not reach on consensus on this issue]

* 1. Need for very clear assessment of degree of overlap and assurance that MTI will not undermine economic expectations for existing programs
	2. Existing program implementers should have right of first refusal where overlap with MTI is significant, provided program implementer demonstrates capacity to achieve MTI objectives
	3. If new programs are needed, IOUs could run new solicitations for implementers
	4. Need an equitable and fair mechanism to make program changes to existing 3P contracts that support new MT initiatives w/o undermining market procurement or program financing

Technical Advisory Capacity

From time to time MT Board may need additional technical expertise to appropriately vet MTI proposals. We weren’t able to come to consensus on a recommendation for how to achieve this. There is a tension between the need for administrative simplicity, the specific technical expertise which may be required (for example to inform appropriate baselines, stage gates, etc.), and whether or not this technical expertise would require funding. Some of the options discussed are below; this sub-group seeks input from the larger group.

1. Existing group such as Cal TF
2. Specific MT technical consultant board (volunteer)
3. MTI specific technical advisors (to be identified in the MTI application and approved by the MTA, volunteer basis)

#  Market Transformation Cost-Effectiveness Framework

## Sub-Working Group Members

* CEDMC – Arthur Haubenstock, Nathaniel Kinsey
* CEE – Bernie Kotlier
* NRDC – Lara Ettenson
* [PG&E – Adam Scheer—conferred w/Adam but not part of sub-WG]
* Sheet Metal Workers Local 104 – Dave Dias
* TURN – Hayley Goodson

## Scope of Modifications

The Market Transformation Cost-Effectiveness (MT C/E) Subgroup proposes to use the current dual test of the Total Resource Cost test and Program Administrator Cost test with a focus on modifying the following three categories: (1) counting savings, (2) timeframe of costs and benefits, and (3) the net-to-gross methodology. The following proposal is consistent with NEEA’s approach to cost-effectiveness 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](https://efficiencycouncil-my.sharepoint.com/%3Aw%3A/g/personal/nkinsey_cedmc_org/EaPN3gfWuJpFhudabu8DJK0BFDaoNpGtqZwOtSyUPIDkNQ?e=4mRKED).”

This narrowly focused approach is intended to prioritize those inputs that are most important to align with a longer-term market transformation effort, rather than open discussion of cost-effectiveness in general. By limiting our proposal, we are more likely to ensure that the full CAEECC Market Transformation Working Group proposal would not trigger the need for a new proceeding or modified scope, which could delay the implementation of this effort. In addition, any updates to the cost-effectiveness methodology resulting from ongoing or new CPUC proceedings, including changes in energy system values over the timeframe of the Market Transformation Initiatives (MTIs), would trigger an update to this proposal.

## Proposal

### Counting Codes & Standards Savings and Costs

The initial CPUC Staff Proposal did not explicitly consider the potential for savings from codes and standards advancements that result from MTIs nor implications for cost-effectiveness. However, several parties noted the importance of capturing the value of codes and standards in a market transformation cost-effectiveness framework. We therefore propose:

*Any market transformation initiative cost-effectiveness calculation should include projected codes and standards costs and savings as a benefit, when applicable.*

Such an approach would be applicable if an objective of the MTI were to yield codes and savings. 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 cost-effectiveness framework be updated to incorporate applicable changes to energy efficiency cost-effectiveness policy or input assumptions adopted by the Commission in the future, including updates to the value of energy, other grid services, and additional benefits that efficiency would provide over the time horizon of the market transformation initiative.

### Timeframe of costs and benefits (separate from codes and standards)

Since market transformation initiative time frames are much longer than traditional resource acquisition programs, we propose:

*Any market transformation initiative cost-effectiveness 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 codes and standards costs and benefits as recommended in Section II.1. Such an approach would need to account for (i) costs of the initiative in the near term vs. the longer 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.*

*See below for a discussion of accounting for the changes in energy system values over a market transformation initiative timeline.*

This longer time horizon proposal does not encompass changes to the existing methodology used by the CPUC to measure codes and standards savings but rather focuses on the attribution of those savings to market transformation initiatives over time. However, any updates to assumptions that modify inputs (e.g., energy costs) should be integrated into the cost-effectiveness calculation as applicable.

### Net-to-Gross methodology

Assessing what would have happened without an energy efficiency intervention is challenging. The Prahl 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 initiative 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 Market Transformation 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 Market Transformation Accord should represent the best possible forecast of how the market would develop with and without the Market Transformation Initiative.”

We therefore propose:

*Any market transformation initiative cost-effectiveness 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 resource acquisition whenever applicable. Achievement beyond the agreed-upon projected baseline would be attributed to the initiative.*

### Additional Items to Discuss at the Full Working Group Meeting

A number of items were raised in the subgroup discussions but not resolved. Consistent with focusing on those items that are most needed to align with a market transformation framework, the questions to resolve are: (1) are the following items sufficiently accounted for in current methodologies? And (2) if not, are the following items unique enough to market transformation to warrant a change?

Estimated useful life:

* **Challenge:** Applying the current EUL cap of 20 years could limit valuation of potential future savings associated with an MTI that targets a measure with an EUL greater than 20 years. However, the challenge with extending the EUL is that it may not be the best way to capture the costs and benefits of a multi-year MTI. For example, in resource acquisition programs, the EUL is applied to capture future savings associated with the item that was installed in “year 1.” For MTIs, technologies, behaviors, etc. are being installed over the life of the MTI (i.e., there will be multiple “year 1s” in an MTI that would need to be added together). This is a larger issue than addressing EULs alone.
* **Question:** How do we account for the multiple “Year 1s” in an MTI? Do we need to extend the cap beyond 20 years to be successful in market transformation endeavors for every “Year 1” activity? Are there other ways of ensuring sufficient valuation of long-term savings?

Discount rate

* **Challenge:** Currently, a discount rate of ~8% is applied to energy efficiency benefits across the measure EUL (as well as costs beyond the installation year). It is unclear to the subgroup whether this discount rate would be applied to MTI benefits accruing from measures adopted in later years of the initiative when most savings are expected to be achieved. The same challenge noted above for EULs also applies to the discount rate.
* **Question:** How should we calculate the net present value of costs and benefits associated with MTI activities after the initial year(s)? Would applying the current discount rate unreasonably discount the value of future measure adoption, which is when the majority of energy savings are anticipated? Or are there other methodologies for accounting for future MTI costs and benefits to support long-term MTI initiatives?

Contingency Evaluations of Changes to the Energy System:

* **Challenge:** The future of energy costs and values are likely to change dramatically over the course of an MTI.
* **Questions:** Does the current avoided cost adequately account for such future changes? If not, should we incorporate scenarios to reflect reasonably anticipated changes in the energy system over the expected lifetime of an initiative?

Dual Test

While not discussed at the subgroup, an approach briefly raised at the initial market transformation working group meeting was to apply the dual test in a manner that values both tests.

* **Challenge:** The current dual test is in practice a single test as the TRC is always lower than the PAC and determines the portfolio of programs that can be approved. The current approach does not integrate the value of the PAC into the decision-making process.
* **Questions:** Given that we are applying the cost-effectiveness calculation to an individual MTI (vs. a portfolio of programs), does it make sense to ensure that the PAC is equally valued in the MTIs and therefore establish a truly dual test where both calculations are considered?

### Next Steps

The MT C/E Subgroup proposes the following next steps:

1. Gather Input: The MT C/E Subgroup seeks input on the proposal at the next full CAEECC Market Transformation Working Group meeting (1/14/2018) to inform the next iteration for consideration.
2. Refine Which Inputs to Modify: In addition to general feedback, the subgroup requests input from the full group regarding the additional items to discuss (Section III).
3. Run Scenarios to Inform Threshold: To evaluate whether the CPUC Staff Proposal of 1.5 threshold is reasonable, the MT C/E subgroup proposes that the Program Administrators, or others familiar with the CET, run a variety of scenarios on potential or existing market transformation initiatives, using the methodological recommendations presented in Section II, if possible. The working group meeting on 1/14/2018 should determine whether it is possible to run such scenarios given the current construct of the CET and if so, which scenarios should be run. Those scenarios could then be used by the MT C/E subgroup to inform a proposal on the cost-effectiveness threshold to be discussed at the next CAEECC Market Transformation Working Group meeting in February.
4. Reconvene the MT C/E subgroup to update proposal: After receiving input from the full CAEECC MT Working Group and reviewing the data provided through the scenario runs, we propose this group, including additional interested working group members with deep expertise on the avoided cost and cost-effectiveness calculations, reconvene to update the proposal including the addition of a threshold recommendation.

#  Appendices

## Appendix A: Stage-gate Criteria

NOTE: The level of detail in this document is not indicative of the level of detail that will go into the MT Framework document to be sent to ALJ Fitch. The objective of providing this high level of detail is so that the subgroup can collectively determine whether there is a feasible approach that can be refined later. We caution against using this document prescriptively; it only lays out one possible approach.

The overall objective of MT development in Phase 1 and Phase 2 is to conduct the necessary due diligence to develop data-driven business cases for scaling up an MT concept in Phase 3. 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 will be weighted so that the MT PA can place greatest importance on, say, time-to-become cost effective. 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. However, the CAEECC MT WG needs to have a substantive discussion about the overall objectives of MT before any weighting can be considered. For now, in the absence of that discussion, we do not consider weighting.

The general criteria centered around the following categories. 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 cost effectiveness (including energy savings potential and total cost of the MTI)
2. Feasibility
	1. Technical performance of the measure/solution
	2. Market leverage point(s) / MTI logic (including supply chain readiness)
	3. Measurability/evaluability
	4. Agreement of non-MT PA market actors
	5. Likelihood of Persistence (longevity of MTI relevance)
3. Portfolio Fit (Coordination with portfolio)
4. Societal Benefits
	1. Policy fit
	2. Equity
	3. Non-energy benefits
	4. From the customer perspective, is there a compelling value proposition?

In Phase 3, the criteria for continued funding and exiting or transition will be unique to each MTI but should include projected cost effectiveness. These criteria will be defined in the MT Accord 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 cost-effectiveness.

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 Accord. For example, an MTI may target transitioning to a code or standard, 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 1: Stage 1 - Concept Scanning** |  |
| Note: Submitted ideas are expected to vary widely in terms of maturity and pre-existing documentation. The MT PAs will use two channels for idea intake. MT PAs will conduct a formal solicitation for a **turnkey** MT program, ideally in coordination with the ongoing 3P solicitations. In addition to a formal solicitation, ideas that are not turnkey or “shovel-ready” can be submitted through on online or email channel. 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.The applicant will be asked for information at five levels of detail; only one level (Level 2) is required.**Level 1. Pre-screening (Optional; See Appendix B, Section 1)**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)**Level 2. Proposed idea and category (Required, See Appendix B, Section 2)**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)**Level 3. Product benefits, costs, distribution (Optional; See Appendix B, Section 3)** 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)**Level 4. Market transformation intervention logic (Optional; See Appendix B, Section 4)**If the applicant is ready to provide information on the market transformation intervention logic, they can fill out this section.(Source: SCE MT team)**Level 5. Turnkey MT quantitative documentation (Optional; See Appendix B, Section 5 for a placeholder pending further development)**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).**Rank ordering**At this early stage, rank ordering may need to be done on based on a binary “Data available/Data not available” basis. The objective of rank ordering is to allow the MT PAs identify those submissions that have verifiable claims. This ranking can allow MT PAs to prioritize their review, and to gauge the amount of additional development/data necessary for due diligence on the submissions.See above discussion about needing to set overall objectives of MT before weighting any criteria.Suggest: Top 15 ranked submissions advance to Stage 2Note: Confidential and/or proprietary information will need to be redacted from the summarized list. | Staffing Needed for:* Validation of program design and implementation – High level only (e.g. “Does this program design seem plausible upon first glance?”)
* Validation of savings potential – High level only (e.g. “Do the savings seem plausible upon first glance?”

Data Needs:* As submitted on the Application Form, and reviewed by technologists and subject matter experts in engineering
 |
| **Phase 1: Stage 2 - Concept Development & Assessment**  |  |
| To advance (i.e., be included in a MT Development Plan), the MT concept must be one of the top ideas, after considering these General MTI Criteria (weighting to be determined later). | Staffing Needs:* Validation of program design and implementation
* Validation of portfolio fit
* Validation of savings potential
* Validation of market potential
* Validation of policy alignment
* Others?

Data Needs:* Existing internal research-workpapers, EM&V reports
* Secondary research – industry market reports
* Others?
 |
| Phase 1 DECISION GATE – Approving and funding Development Plans | See Roles and Responsibilities |
| **Phase 2: Stage 3 - Strategy Development**  |  |
| 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). | Staffing Needs:* Validation of program design and implementation
* Validation of portfolio fit
* Validation of savings potential
* Validation of market potential
* Others?

Data Needs:* 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?
 |
| **Phase 2: Stage 4 - Strategy Testing**  |  |
| Strategy testing can be conducted under controlled conditions if full factorial design is desired, and via in-situ pilots to understand real world challenges. Strategy testing should focus on primarily testing the intervention strategy, the ability to engage contributing non-MTPA 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).To advance and be considered for inclusion in an MT accord, an MTI must meet its own defined pilot success criteria and continue to rank highly on the General MTI Criteria. | Staffing Needs:* 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

Data Needs:* 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
 |
| **Phase 2 DECISION GATE – Approving and funding MT Accords**  | See Roles and Responsibilities |
| **Phase 3: Stage 5 - Market Development**  |  |
| Criteria for each MTI will be unique to the MTI (see Stage 6). Stage 5 & Stage 6 will likely run in parallel. | See Stage 6.Staffing Needs:* MTI implementers
 |
| **Phase 3: Stage 6 - Long Term Monitoring**  |  |
| 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 Accord.The prime objective of monitoring the General MTI Criteria will be monitored to identify changes that may affect forecasted savings potential. | Staffing Needs:* Validation of savings potential
* Validation of market potential
* Validation of savings and savings forecasts

Data Needs:* 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
 |
| **Phase 3: Stage 7 - Transition or Sunset**  |  |
| 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 they are adopted into codes and standards” until they are adopted into codes and standards (or otherwise substantially adopted by the market)Due to the unique nature of each MTI, the MTI-specific exit criteria will be laid out in the MT Accord. The overarching exit criteria would be:*“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.”*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 MT PA should consider whether an exit is warranted. | Staffing Needs:* Validation of savings potential
* Validation of market potential
* Validation of savings and savings forecasts
* Validation of policy alignment

Data Needs:* 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 B: Draft Intake Application 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 market transformation (above) includes two end states: one when a market transformation initiative results in Codes & Standards adoption, the other when market barriers have been reduced to the point where the same intervention is no longer needed. In other words, the market transformation effort needs to be designed towards the exit of the intervention.

To help PAs determine whether your idea is suitable for a Market Transformation Initiative, please answer the following questions to the best of your knowledge. This information does not have to be complete but will help PAs determine whether a “shovel-ready” market transformation 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 Rolling Portfolio. [This is based on the Criteria subgroup’s positive initial response to NEEA’s 5 short screening questions.]

*Preliminary self-screening questions:*

1. *Does your product or service have the potential to save energy in CA?*
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 MT PA. If you answered “No” to any of the questions, unfortunately, your product or service is not appropriate for this solicitation.*

### Section 2

Market Transformation Initiative Intake Form (draft)

Required elements in red

1. Name
2. Title
3. Company
4. Phone
5. Email
6. Date (autofilled)
7. Product name
8. Product URL
9. Describe the product, program, or service that you are proposing in 200 words or less
10. What is your desired outcome from a utility review of your product, program, or service?

 (e.g., Inclusion in utility or third-party demand-side management program, customer adoption, feedback only, etc.)

1. Product Stage:
* In Development - Concept Stage
* Demonstration - Early Prototype
* Commercialized - Distribution Support
* Not Applicable
1. If commercially available, how many years has this product been on the market?
2. Product Category (choose up to 3):

	* Behavioral Offering
	* Business Process Re-engineering
	* Customer Engagement Offering/Tool
	* Demand Response
	* Distributed Generation
	* Energy Efficiency
	* Energy Storage
	* Permanent Load Shift
	* Pricing/Rates
3. Product Sub-category (choose up to 4):

	* Analysis Tool
	* Battery Storage
	* Billing/Payment
	* Building Envelope
	* Cogeneration
	* Controls
	* Food Service
	* Fuel Cell
	* HVAC
	* Lighting (outdoor/indoor)
	* Other
	* Photovoltaic
	* Plug Load
	* Process
	* Rates
	* Refrigeration
	* Solar Hot Water
	* Thermal Energy Storage
	* Water Efficiency
	* Whole Building
4. Target Market:

	* Agricultural - Food Processing
	* Commercial, Office
	* Commercial, Small
	* Commercial
	* Educational Facilities
	* Food Service Industries
	* Government - Institutional Facilities
	* High Technology
	* Hospitality
	* Industrial – Manufacturing
	* Medical – Healthcare
	* Other
	* Residential
	* Retail
	* Supermarket

### Section 3

Provide the following information, if known

Optional questions in blue

BENEFITS AND COSTS

1. Unit of Measure (e.g. lamp, etc.)
2. Product Cost/Unit $
3. Annual Savings/Unit  kWh
4. Demand Reduction/Unit  kW
5. Installation Cost/Unit $
6. Annual Operational Cost $
7. Effective Useful Life  years
8. What is the warranty term?  years
9. What proven benefits does this product offer beyond energy and cost savings

e.g. improved reliability, user productivity, customer satisfaction, societal benefits, greenhouse gas mitigation

TECHNOLOGY, PRODUCTION AND DISTRIBUTION

Provide the following information, if applicable:

1. Describe what the product technology does and what additional technologies or requirements, if any, are needed to implement this product
2. Is a vendor or a contractor required to install/implement this product/program/service? If yes, describe installation/implementation service requirements
3. What, if any, established product distribution channels exist?
4. What is the current manufacturing production capacity  # units/year?

MARKET INFORMATION

Provide the following information, if known:

1. What are the primary market barriers limiting broad adoption of this product, program, or service?
2. What is the expected annual market adoption rate in California over the next five years?
3. **State the number of units sold, customers/users/installations to-date within California and outside California. If the product has not yet launched, when is the planned market launch date?**
4. **What utilities, if any, you are currently partnering with or are evaluating your product**
5. **Is there anything else you’d like to share?**
6. If you would like to attach any documents to your submission, please upload them below

NOTE: A maximum of 3 files, each 5MB or less, will be allowed. Please only submit PDF, GIF, JPG, or PNG documents.

### Section 4

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

**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. **Market Transformation Objectives**

*Define the market barriers and rationale for MT intervention*

* 1. What market barrier(s) does the Market Transformation Initiative (MTI) address?
		1. 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.
		2. Provide the source of this information (i.e. attach study summary, link to report, etc.).
		3. How does this intervention improve the customer experience?
	2. How will the MT intervention overcome/alleviate the defined market barrier(s)? E.g., increased awareness, adoption/penetration, increased non-energy benefits, etc.
		1. 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?”
		2. Provide an expected timeline for savings once the market barriers are removed/addressed and describe how long-term savings persistence will be ensured.

**Program Development (Stages 3-4)**

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

1. **Intervention Strategy**

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

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

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

* 1. Provide a market characterization and assessment of the relationships and/or dynamics among market actors, including identification of the key barriers.
		1. Provide the source of this market characterization (i.e. attach study summary, link to report)
	2. 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.
	3. What MT tools will be used to engage and inform market actors (e.g., incentives, ME&O, WE&T, Emerging Technologies (ET) and Codes and Standards (C&S)).
	4. What MT coordination activities need to be established to gain market traction (e.g., partnerships for collaboration)

Market Actor Engagement (including manufacturers, RENs, CCAs, municipal utilities)

* 1. Define the market actors who would be able to help implement an MTI
		1. What role would they play, that could not be achieved by others?
		2. How would their involvement accelerate MT?
		3. Have you approached them and discussed their willingness to participate?
		4. Why are they interested in being an MTI partner?
1. **Performance Metrics**

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

* 1. 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
	2. 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?
1. **Evaluation, Measurement, and Verification (EM&V)**

*Describe any process evaluation or other evaluation efforts that the Program Administrator (PA) will undertake.*

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

### Section 5: Placeholder (Brian Barnacle’s suggested intake form)

MT Intake Form

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria** | **Structured Data Prompt** | **Structured Data Format** | **Open Text Field (OTE)** | **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 OTE 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 OTE 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 O&M, employee productivity, etc. | Benefits score |

## Appendix C: Staff Proposal’s Content Guidance for Market Transformation Accord

##

### Content Guidance for the Market Transformation Accord

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 resource acquisition coordination plan that demonstrates support from, and coordination with, all related resource acquisition 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.
1. See Appendices B and C. [↑](#footnote-ref-1)
2. A prioritization model will be developed by the MT PA to enable a focus on feasibility, policy alignment, portfolio fit, savings potential, and cost-effectiveness. The relative weighting of each of these criteria will depend upon further discussion by the CAEECC MT Working Group. [↑](#footnote-ref-2)
3. Administrative Law Judge’s Ruling Seeking Comment on Market Transformation Staff Proposal, 2018. [↑](#footnote-ref-3)
4. D.16\_08\_019 p. 71 [↑](#footnote-ref-4)
5. D.16\_08\_019 p. 71 [↑](#footnote-ref-5)
6. D.16\_08\_019 p. 71 [↑](#footnote-ref-6)
7. Pacific Gas and Electric Company’s (U-39-M) Energy Efficiency Business Plan Portfolio and Sector-Level Metrics, 2018. [↑](#footnote-ref-7)
8. Normalized Metered Energy Consumption (NMEC) – see AB 802 [↑](#footnote-ref-8)
9. Advanced Metering Infrastructure (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. [↑](#footnote-ref-9)
10. Staff Proposal for Incorporating Energy Efficiency into the SB 350 Integrated Resource Planning Process, 2018. [↑](#footnote-ref-10)
11. D.16-08-019 Finding of Fact 5 [↑](#footnote-ref-11)
12. 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 [↑](#footnote-ref-12)
13. 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 [↑](#footnote-ref-13)
14. See Advice Letter 3668-G/4765-E and Supplemental Advice Letter 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. [↑](#footnote-ref-14)
15. In the CPUC Market Transformation staff proposal, the MT “Accord” served as a foundational document for the full-scale MTI. The Accord would contain essential strategic elements including logic models, baselines, cost effectiveness projections, and milestones among other pieces of critical information. [↑](#footnote-ref-15)
16. 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. [↑](#footnote-ref-16)
17. Market trials should be conducted by one PA. If the trial is successful, the full MTI should be conducted with the resources of all PAs. [↑](#footnote-ref-17)
18. 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> [↑](#footnote-ref-18)
19. *See, e.g.,* Vermont Energy Investment Corporation (August 2008) “What Does it Take to Turn Load Growth Negative? A View From the Leading Edge” (discussing the importance of “Mission Alignment”); Prahl, R. and Keating, K. (Dec. 9, 2014) “Building a Policy Framework to Support Energy Efficiency Market Transformation in California,” p. 14 (discussing the selection of MT program administrators). [↑](#footnote-ref-19)
20. Prahl, R. and Keating, K. (Dec. 9, 2014) “Building a Policy Framework to Support Energy Efficiency Market Transformation in California,” p. 16. [↑](#footnote-ref-20)
21. Prahl, R. and Keating, K. (Dec. 9, 2014) “Building a Policy Framework to Support Energy Efficiency Market Transformation in California,” p. 16. [↑](#footnote-ref-21)