



MTAB Meeting Notes

April 25, 2024

Virtual Meeting

Welcome & Introductions

Stacey Hobart opened the meeting by welcoming attendees and reviewing the meeting agenda. She then had the MTAB members introduce themselves, including a new member, Karina Camacho from the Western Riverside Council of Governments/I-REN.

Stacey invited any comments regarding the previous meeting (1/25) notes. There were none.

Annual MTAB COI Requirements Refresher

Lynette Curthoys reviewed the MTAB charter, including roles and responsibilities, member expectations, and process for meeting notices, public comment, and meeting notes. She then presented the conflict of interest (COI) policy for MTAB members and CalMTA as well as the plan to electronically send the annual MTAB Public Disclosure form for members to sign.

Draft MTI Plan Template

Jeff Mitchell described required elements of the Market Transformation Initiative (MTI) Plans developed through Phase II of CalMTA's process and the current layout of CalMTA's proposed plan template, for which MTAB feedback will be solicited using a form distributed via email.

It was asked whether feedback on the draft MTI Plan template should be shared in discussion at the meeting or submitted through the form. Stacey noted that all comments received through the form will be appended to the meeting notes (see Attachment 1 at the end of this document), but if discussion is desired, specific feedback could be shared with other MTAB members as a follow-up email.

Jeff then introduced several discussion topics including offramps (when action is required based on an MTI's performance with regards to critical market outcomes/impacts), the template's description of stakeholder engagement (coordination with external programs and activities) and market engagement (coordination with market actors like manufacturers and retailers), the inclusion of appendices to provide more detailed information for key sections, and next steps in finalizing the plan template. These topics elicited the following comments and questions from MTAB members:

- Is the offramp process meant to address lack of success or "failure of hope?" Using heat pump water heaters (HPWHs) as an example, MT work has been happening in this market according to a 30-year timeline rather than immediate success. CalMTA

should guide offramp conversations to examine whether there's still a compelling business case for the MTI at key points.

- Jeff Mitchell acknowledged the importance of having offramp conversations transparently with the MTAB to determine why an MTI is worth continuing or not. Some cases may require adjusting the strategy to achieve desired outcomes, while in other cases the MT theory may not play out as anticipated or the market may not be ready, and CalMTA should leave the market.
- Who is the target audience for the MTI Plans and what level of familiarity with the material should be assumed by CalMTA? Even educated energy efficiency stakeholders might not understand MT and not be able to follow the plan.
 - Jeff clarified that the primary audience is the CPUC, MTAB members, and stakeholders with the goal of facilitating a conversation about the MT theory and what is known about the market today. The plans are not intended to provide the level of detail or background information a stakeholder who hasn't already been engaged in CalMTA's work would need. Multiple other mechanisms, such as web content and webinars, will bring this information to a broader audience in a more digestible way.
- Are outlines for the appendices available for review?
 - Jeff responded that while those templates were still in development, they could be shared with MTAB at a later date.

Progress Report: MT Ideas in Phase II

Elaine Miller provided updates on the Induction Cooktops & Ranges and Portable/Window Heat Pumps MTIs, including results of the technology assessment, key takeaways from market characterization study, updates on active and in-development pilots, and next steps. MTAB members provided the following questions and feedback:

Induction Cooktops & Ranges

- It was recommended that the MTI differentiate between cooktops and ranges, as 240V cooktops and 240V wall ovens will essentially double amperage requirements due to electric code and panel capacity considerations.
 - Elaine said that the MTI product team will take this into consideration.
- What were the data sources and sample size for the panel capacity research findings shared in this presentation?
 - Elaine clarified that no primary research was conducted by CalMTA and that this report compiles findings from 37 existing research efforts. She acknowledged that the lack of a comprehensive data set on multifamily panel size remains a significant gap.
- While CalMTA's investment in this MTA is still very early, this research will be valuable to California as the state works towards electrification.

- Jeff cautioned that this information is very preliminary, and it is still to be determined how these data points will impact the MTI. As CalMTA gains a greater understanding of these market considerations, it will be important to share them more widely.

Portable/Window Heat Pumps

- Is there a potential niche for (1) preventing higher-capacity central cooling, and (2) providing supplemental heating, to reduce capacity requirements in both seasons? It may not be necessary for this technology to meet the full heating load at low temperatures.
- Does the additional volume of portable heat pumps requested for the Strategy Pilot impact the overall sampling of manufacturers and installers, or will it bias CalMTA more towards a specific manufacturer or installation practices?
 - Rick Dunn noted that it helps make form factor distribution in the pilot more even. The requested units are the most expensive but have the most potential to stay permanently installed. A limited number of these models were initially included due to cost, but the manufacturer came back to CalMTA with a price reduction that made doubling the number of units included possible.
 - Regarding self-selection of products by pilot partners, Rick added that all products are designed to be self-installed, but participants will likely require some support from partner organizations. Limiting the number of included product types simplifies the support these partners will need to provide. Building/window design will determine available options and some tenant selection between limited options may follow.
- A recent *New York Times* article that discussed installation challenges for inexpensive U-bent products was mentioned. (<https://www.nytimes.com/2024/04/14/nyregion/heat-pumps-climate-change.html>)
- Is the assumption that portable heaters are much more common than portable air conditioners accurate?
 - Hope Lobkowitz shared data compiled by CalMTA showing that 18% of households own a portable heater, 13% own a portable AC, and 8% own both.
- It was noted that market characterization feedback indicates that this technology is viewed as something used sporadically with a very low purchase price, which doesn't align with the MTI's vision of measure that is used for a sustained period to reduce energy consumption.
- The three communities targeted by the self-installation strategy pilot are all coastal areas with stable climates. Is the pilot looking only at installation practices or also how the heat pump functions post-installation?
 - Elaine confirmed that the pilot was focused on validating the self-installation potential of these products and not product performance.

Efficient Rooftop Units

Alexis Allan presented on progress for ERTUs, including refining product definition to focus on the right technology package for California, market research and timeline, stakeholder interviews. MTAB members provided the following questions and feedback:

- Whether CalMTA had reviewed relevant reports on the Energy Transition Coordinating Council (ETCC) website or checked in with the ASHRAE 205 committee on how an ERTU can be modeled? Because the Department of Energy is not focused on incorporating product components in a regulated RTU, modeling can help understand how features like economizers impact RTU efficiency.
 - Alexis clarified that the list of organizations cited in the presentation was not inclusive of all the entities that CalMTA will coordinate with, and that the team will be sure to engage with the ETCC. Regarding ASHRAE, an MTI team member is directly involved with this work and there are active conversations about the MTI modeling approach.

Stacey asked if the level of detail and information provided was sufficient for the MTAB to understand progress towards completing Advancement Plan activities. MTAB members confirmed that it was the right level.

MTI Portfolio Characteristics

Lynette and Rick introduced an exercise to help define CalMTA's portfolio composition and areas to prioritize including impact estimates for current ideas under development and CalNEXT's priorities and alignment with those ideas. Jeff shared an overview of MTI ramp rate and cumulative total system benefits (TSB) over time, noting the relatively long timeline for this work. Initial questions received from MTAB members included:

- Does the ramp rate forecast look only at quantifiable MTI results/impacts, or does it factor in CalMTA's investment over time and the period of getting an MTI off the ground?
 - Jeff replied that when you drill down on the data, it shows the MTIs getting off the ground at different speeds, but the desire is to identify the right mix of MTIs for the funding period. It's important to consider how quickly the portfolio can accrue positive benefits, but there is also a need to convey that the greatest benefits will be accrued over time.
- How are equity impacts centered in the discussion of portfolio balance?
 - Lynette noted that because initial analysis indicated a good balance of equity and workforce development considerations in the MTIs, these factors were not included in the poll, but that CalMTA could factor equity impacts into the discussion.

- How is risk being captured in this exercise? While CalMTA wants to strive for mostly lower risk MTIs, it could be acceptable for several MTIs to be high-risk if the portfolio still gets to the best-case scenario overall.
 - Jeff acknowledged the need to establish overall risk tolerance with the CPUC and the MTAB, as risk can be defined in different ways (cost-effectiveness, ability to move the needle, accurately forecast and evaluate, etc.). Risk tolerance will be especially important when new MTIs enter the portfolio.
- How important is it for CalMTA to target all market segments because ratepayers in all segments are funding the program? Is sector diversity already addressed at the utility level, so that CalMTA can focus on efforts that represent the best fit for MT?
 - Christie Torok confirmed that CalMTA should focus on gaps in the market that aren't already addressed by the IOU resource acquisition/energy efficiency portfolios.
- What timeline is expected for MTIs that will be cost-effective sooner, and which MTIs are anticipated to be cost-effective more quickly?
 - Jeff replied that this varies widely and the timeline could range from Day 1 to Year 5 and could be 10 years and beyond. Some MTIs might be incredibly valuable but not fully cost-effective until after CalMTA leaves the market.

Breakout sessions were then facilitated virtually, with MTAB members asked to rank portfolio factors from most to least important, with 1 as the most important and 5 as the least important. Results from this exercise are summarized in the table below (low scores are highest priority).

Missing market segments (e.g., agriculture, industrial)	Ideas incubated by CalNEXT that are suitable for MT	Quick ramp rate to demonstrate early wins and proof of concept	Highest lifecycle TSB to have the greatest impact	Ideas that will be cost effective sooner
41	33	22	14	25

Additional feedback from MTAB members after the breakout sessions included:

- Ideas incubated by CalNEXT would be more mature and have less risk with a shorter timeline for achieving success. A maturity matrix could be helpful for new ideas, looking at factors like technology-, market-, and MT-program readiness.
- CalNEXT coordination should be a priority, but this isn't necessarily reflected in the score, as that alignment is assumed to be required.
- There may be value in looking at other market transformation organizations' work to develop a reasonable understanding of when MTIs can be cost-effective.

CalMTA Program-level KPIs

Karen Horkitz provided an overview on proposed program-level key progress indicators (KPIs) that would be used as a component of evaluating overall CalMTA performance, with

illustrative values. She noted that individual MTI Plans will have MTI-level scorecards included. Comments and questions from MTAB members included:

- The drill-down menu is nice but is it only appropriate for one particular metric (Incremental Savings and Benefits toward CA Goals)?
 - Karen noted that prior feedback indicated there were too many metrics, so the drill-down approach seeks to balance simplicity with the need to show which factors impacted the overall number.
- When market progress indicator targets are set for each MTI, CalMTA should be careful about assigning 100% achievement as a reasonable target, since not all are likely to be satisfied at a particular time.
- It's difficult to look at co-created TSB without wanting to know how much energy was saved. Is the benefit-cost ratio intended to be cumulative?
 - Karen replied that by default, benefit-cost ratios represent lifetime values. MTIs are long-term investments, so calculating this ratio in the short-term will look unnecessarily negative.
- The description of co-created TSB refers specifically to utility programs, but could it also include other efforts and a broader definition of co-creation?
 - Karen confirmed that a highly specific definition will need to be developed for each MTI in the evaluation plan and that it is highly dependent on what external efforts are included in the baseline. For instance, if the impact of Inflation Reduction Act tax credits is reflected in the baseline, we wouldn't consider this co-creation. If external programs or activities wouldn't happen without CalMTA collaboration, this would be deemed co-creation.
- Suggestion that CalMTA develop KPIs related to high-level principles in D.19-12-021
- Should there be a KPI for portfolio balance that takes into account how Phase II "MTI Development" ideas distributed with regards to end uses (e.g. not limited to technologies), fuels, customer segments, market potential, etc.?

Stacey noted that this was an introductory conversation and there would be the opportunity for further discussion at the next MTAB meeting.

Public Comment

- Carol Yin: Can CalMTA speak more about the relationship between the KPIs and the MTI requirements in the Decision and the upcoming five-year evaluation? Any needs that could be anticipated now should be, since CalMTA will likely be evaluated on the requirements in the Decision.
 - Karen clarified that these KPIs were not specified in the Decision but the five areas introduced are all areas that are discussed in the Decision. MTAB is charged with reviewing CalMTA's performance, and the assumption is that MTI scorecards, combined with individual MTI performance, would be considered in the 5th year review.

- Carol Yin: In anticipation of the five-year review it might be worth creating metrics to track CalMTA's compliance with Decision requirements, especially those related to what the MTIs are supposed to accomplish or include (e.g., provisions for a well-trained workforce).

Stacey invited any final comments from MTAB and reviewed the timeline for presenting Phase I materials at upcoming meetings. The meeting was adjourned.

Attendees (all virtual)

MTAB Members

Karina Camacho, Western Riverside Council of Governments
Cyane Dandridge, Strategic Energy Initiatives
Hayley Goodson, The Utility Reform Network
Fred Gordon, Energy Trust of Oregon
Jeff Harris, Northwest Energy Efficiency Alliance
Randall Higa, Southern California Edison
Peter Miller, Natural Resources Defense Council
Christie Torok, California Public Utilities Commission
Ky-An Tran, California Public Advocates

Participating Staff & Consultants

Alexis Allan, Brio, (on the CalMTA team)
Lynette Curthoys, CalMTA/Resource Innovations
Rick Dunn, CalMTA/Resource Innovations
Margie Gardner, CalMTA/Resource Innovations
Rachel Good, CalMTA/Resource Innovations
Stacey Hobart, CalMTA/Resource Innovations
Karen Horkitz, consultant to the Cadmus Group on the CalMTA team
Elaine Miller, CalMTA/Resource Innovations
Jeff Mitchell, CalMTA/Resource Innovations
Hope Lobkowitz, The Cadmus Group (on the CalMTA team)

Guests

Mary Anderson, PG&E
Don Arambula
Nancy Barba, Frontier Energy
Athena Besa, SDG&E
Kyle Booth, Energy Solutions
Martha Camacho-Rodriguez, Central Basin
Paul Campbell, ICF
Sebastien Csapo, PG&E

Vida Daneshmand, LADWP
James Dodenhoff, Silent Running LLC
Chidinma Emenike, CEE
Richard Fennelly, CoilPod LLC
Carlo Gavina, SoCalGas
Brian Gaze, Evari GIS Consulting
Rocco Guaragno, Resource Innovations
Hilary James, Tanko Lighting
Nicholas Janusch, CEC
Marisa Lee, Energy Solutions
Margaret Marchant, Frontier Energy
Chris Malotte, SCE
Savannah McLaughlin, CPUC
Elizabeth Medrano, SoCalGas
Howard Merson, Energy Solutions
Nick Michel, Northwest Energy Efficiency Alliance
Jose Orozco Pelico, Los Angeles Cleantech Incubator
Phanindra Pagadala, PG&E
Emily Pelstring, CPUC
Jose Pineda, LADWP
Sarah Price, LBNL
Stacie Riskey, SDG&E
Rebecca Rothman, VEIC
Armen Saiyan, LADWP
Luis Sanchez, Community Resource Project
Luke Sun, LADWP
Charlie Toledo, Suscol Intertribal Council
Jacquelyne Vera, Acterra
Jay Wilson
Babak Yazdanpanah, LADWP
Carol Yin, Yinsight, Inc.

Attachment 1

MTAB member feedback on the MTI Plan Template

To view the document, visit: <https://calmta.org/wp-content/uploads/sites/263/MTI-Plan-Template-Draft.pdf>

Section	MTAB Comment	CalMTA Response
2	It is useful to have a spot where you ask: "explain how the case for market transformation is compelling." The difference between a promising and less promising market transformation opportunity is often some feature of the product that lines up with a deep unmet consumer need, or an ability to piggyback on some action that is certain to go forward, commitment by manufacturers for their own reasons, etc. It's often difficult to pull this compelling reason out of the outline or know if one exists.	Added text in executive summary for writers to explain why this MTI opportunity is compelling.
2	Is there a list of ESJ priorities? Or what do we expect applicants to be referring to when it comes to ESJ priorities? I like the 3 outcomes, short, medium and long. I like the addition of other non-energy benefits.	Our intention is to weave ESJ priorities and strategies throughout the MTI Plan, to ensure it is incorporated throughout our strategy and logic model as opposed to a single location. Additionally, we have included a high-level ESJ summary in Section 2.1 table.
2	p. 4: Section 2.1 - Theory of Market Transformation Market End State (What is the desired end goal if the MTI is successful?) <ul style="list-style-type: none"> • Is this a place to acknowledge potentially complementary EE programs like C&S? Without an acknowledgement, this information might create "turf" concerns. • While complementary efforts are also addressed in Section 5.1 Stakeholder Engagement Strategy, it could be good to also flag at a high level in Section 2.1. 	Added a row in the 2.1 table: "Key Leverage Points (Complementary efforts and EE programs leveraged by this MTI)."
2	pp. 5-6: Section 2.3 -- Initiative Budget & Outcomes <ul style="list-style-type: none"> • It looks like the Phase III - Market Development Budget does not break budget down by time period. Is that correct? • I see more budget information in Section 9 - Budget, but not broken out by "critical activity" as in Section 2.3. Will a budget breakdown by time period be provided elsewhere - e.g., Appendix I? 	Yes, it is correct that the Market Development budget is not broken down by time period and is intended to give the reader a snapshot of estimated cost across the lifecycle of the initiative. The more detailed budget will be included in the budget appendix.

Section	MTAB Comment	CalMTA Response
2	<p>p. 6: Section 2.5 - ESJ Community Benefit and Section 2.6 - Workforce Development</p> <ul style="list-style-type: none"> • Will these sections include a breakdown of benefits by similar time periods as in Section 2.3? 	<p>This would appear in the final logic model, where ESJ outcomes are included with associated time periods to ensure these targets are incorporated into the overarching initiative strategy.</p>
3	<p>3.2 I've seen this sort of exposition and it's often puzzled me. It can be about the baseline situation or about an alternative technology or initiative. At NEEA, program proposers sometimes throw in whatever they have. This often means that the writing is about the baseline condition when there is an alternative change that manufacturers or others are considering which is more laborious to study but in the end more important. If you try to stuff both in this one format, it tends to be confusing as it's too succinct. I suggest: (1) limit the competitors to one or two. (2) have a place to say, "the primary potential competition is from " _____ " as promoted by " _____ " and here's why we are focusing on that. If it's just the baseline because there are no other market dynamics that may lead to major change, say that. Then there's some context for the stuff in the chart.</p>	<p>Reduced competitors in table to two and added sentence in subsection description to have writers summarize the primary competing product/practice and why.</p>
3	<p>For 3.3 it would be great if this is "total market potential, considering what is known about limitations on product applications due to technical, supply chain, or preference patterns". This would at least create pressure to think through the market. I suggest this based on my experience with such estimates in that they tend to shrink at each initiative stage. If it is infeasible to do this sort of reduction at the stage that the template is used, at least there should be an asterisked statement noting that contents may settle due to shipping.</p>	<p>The Decision describes 'market potential' similarly to 'program potential,' as "technical, economic, and market potential." Therefore, the estimates of potential benefits will be inclusive of market forces. We do understand the potential to overestimate at early stages of market deployment and will review estimates prior to finalizing.</p>
3	<p>p. 7: Section 3.2 -- Competitive Analysis</p> <ul style="list-style-type: none"> • What are "internal" versus "external" strengths and weaknesses? 	<p>Strengths and weaknesses refer to internal factors of the product/company (i.e. brand or technology), while opportunities and threats are external factors that we can't control (i.e. market trends).</p>
4	<p>Where is the description of how the product or service must change to reach the stated needs of a broader market? Is that under barriers and strategies in #2, or is it here?</p>	<p>Key Product changes will be summarized in Section 3.5. with a more detailed analysis in the Product Assessment appendix.</p>
	<p>Is 4.5 to describe baseline assumptions not just about</p>	<p>4.5 is now 4.4 due to consolidating the</p>

Section	MTAB Comment	CalMTA Response
	current market conditions but how the market will evolve without the initiative? Should the author assume that other initiatives in this market that would occur independently of CalMTA are part of the baseline conditions, and consider them in creating efficiency or sales trend forecasts? If so, maybe there should be a statement to that effect.	template. The baseline market characterization report will provide more detailed context around the assumptions made and we will update the text here to reflect that.
4	Do we want to provide more details on what type of response we're looking for target market overview? Or would that be too leading and we want to keep it open-ended and see their responses?	The questions in the table should provide enough guidance for the writers. We also added a row to restate the target market for clarity on what market we're targeting.
4	p. 9: Section 4.4 - Market Baseline & Assumptions and Section 4.5 - Key Baseline Assumptions • What's the difference?	Consolidated these two sub-sections into one.
5	pp. 9-10: Section 5 - Stakeholder & Market Engagement • The italics refer to "supply chain players" while Section 5.2 -- Stakeholder Engagement Strategy refers to "Market Actor". Using different terminology might introduce confusion.	Updated term to "market actor."
6	This section has the first mention of success metrics but focuses only on progress indicators. Should there be mention of later results-based success indicators somewhere?	We will have more detail of metrics and indicators in the logic model packet and have included critical outcomes in Section 2.3. We updated the description text to capture "success indicators" as we see those as the same as critical outcomes.
6	p. 10: Section 6.2 - Market Progress Indicators • "Responsible" - referring to entity responsible for collecting the data? Or responsible for the Data Source? Change to make clearer.	Updated text to "Responsible Entity/Team."
7	It would be good to have a bullet summary of the most important evaluation goals before listing activities.	Added a sentence for writers to call out the key evaluation goals.
7	I like how we keep "insert year" to see what they propose for an evaluation cadence. What does savings forecast mean?	The savings forecast is how the evaluation team will project the estimated benefits of the MTI over time.
7	p. 11: Section 7.1 - Evaluation & Research Approach Summary • Italics refer to "evaluation, measurement, and evaluation" - should one of those be verification?	We updated this to simply "evaluation."

Section	MTAB Comment	CalMTA Response
8	This comment is based on reviewing risk discussions in several NEEA proposals. This format walks us through risks, their severity, likelihood, and mitigation approaches. Such a format often left me wondering or guessing the degree to which mitigation is likely to succeed. Should there be a column for "likelihood that mitigation could succeed"? There could be a three-point scale, something like: 1. Desperate and uncertain. 2. Who knows? 3. Good chance to succeed. My choice of words is slightly snarky, but in the interest of clarity. The idea is to challenge designers to own up if they are just papering over a problem. If there are nicer words that do that, I'm all for them.	Added "likelihood that mitigation will succeed" column in the full Risk Management Plan - the table in the MTI Plan is intended to be a high-level summary and due to formatting restrictions, we do not want to overcrowd.
8	Good questions for risk mitigation and the HML scale.	
8	p. 11: Section 8 - Risks & Mitigation • Typo in italics under Section 8 heading (cut "of")	Typo - updated text.
9	I'm not clear what "end of contract means." Resource Innovations? MTAB? Maybe specify the end year instead. Is there a place, and value, for a first-year estimate? From a benefit/cost perspective it's not the most important thing, but from a fiscal management point of view it might be.	End of contract refers to the current CalMTA funding period. Updated text in section description to clarify.
9	Do we want to add a miscellaneous category or ask about incidentals and inflation; anything they could expect would change their budget?	These categories may be included in the full budget appendix. The budget here is intended to be high-level.
10	Seems like a lot of material but probably necessary.	
10	The components look right to me, but I can't comment on the presentation of information since sample appendices have not been provided.	
General	It looks pretty good to me. I think my comments are about making it clearer and more useful. Areas where I'm less clear are where what you write depends on the maturity of the initiative when this is written, which likely varies.	
	Looks great. Awesome work	