



Advancement Plan Feedback Response

Induction Ranges & Cooktops

This document provides a comprehensive list of comments received from both the public and the Market Transformation Advisory Board (MTAB) on the draft Induction Ranges and Cooktops Market Transformation Initiative (MTI) Advancement Plan and CalMTA's response to those comments. The draft Advancement Plan was posted to the CPUC's PDA website for comment from Dec. 6-20, 2023. [Visit calmta.org to access updated Advancement Plans](https://www.calmta.org). Note: All feedback that appears in this document is presented verbatim as submitted, with no edits made by CalMTA.

Source	Feedback Provided	CalMTA Response
Public (Unknown)	Yes my comment was regarding the induction stovetop MTI and if and/or how CalMTA plans to account for adoption derived from municipalities (city ban on gas stoves) and federal legislation/action (IRA).	CalMTA will account for market adoption resulting from current and upcoming/pending legislation and regulatory conditions (including growth in adoption due to municipal bans and Inflation Reduction Act (IRA) incentives) at the time of launching the MTI in the baseline market adoption (BMA) forecast. CalMTA will evaluate the influence of the MTI on any additional policy and market changes subsequent to the launch of the MTI as part of its market progress evaluation.
Public (Southern California Gas Company)	External Program Review and Stakeholder Engagement: The draft Report identifies various potential overlaps with current programs offered by local jurisdictions and utilities. The Report should look at coordinating with all the utilities and Portfolio Administrators (PA) in California on future leveraging opportunities. The utilities and PAs, including those third-party program providers, have existing long-term relationships with key market actors (e.g., large, and regional retailers) within the appliance industry, which should be utilized to ensure efficient coordination with utilities and PAs program portfolios.	We agree on the importance of coordinating with all programs that offer potential overlap with induction cooking technology, thus minimizing confusion and maximizing leverage for all parties. Recognizing this, we have already engaged in significant conversations with key stakeholders in this space, including Portfolio Administrators. As we conduct research and identify strategic interventions during Phase II of our multi-stage MTI

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		<p>development process, we will coordinate with program administrators, codes and standards (C&S) teams, and subject matter experts (SMEs) on research and pilot participants. We will also conduct webinars to share the research scope and results. Once the MTI reaches Phase III: Market Deployment, we will develop a coordination plan that will likely include regular coordination calls with stakeholders working in this market.</p>
	<p>Participant Costs:</p> <p>The incremental cost associated with the conversion of a gas stove top to an electric induction cooktop should recognize not only the significant incremental equipment and installation costs. The installation cost should recognize the additional wiring (including panel upgrades) to accommodate the increase in amperage (typically from 30-50 amperage). These incremental costs should be accounted for in the TRC cost-effectiveness showing. The Report should confirm such costs were included and what assumptions (including reference to specific secondary research) support the estimate that induction cooktops have an assumed TRC ratio of 0.76. Also, the Report should confirm it recognized the customer cost associated with magnetic pots and pans necessary for induction cooktops</p>	<p>We agree that electrical upgrades pose a significant barrier and additional cost. This is a common concern with electrification initiatives in general. For the induction cooktop’s preliminary Total Resource Cost (TRC) ratio, incremental measure costs were restricted solely to the appliance in each base case and did not include any additional costs such as services, installation, or cookware. In Phase II: Program Development, CalMTA will gather additional information about specific electric upgrades required, the percentage of the housing stock requiring electrical upgrades, and associated costs. We will consider how to best incorporate these costs into the MTI’s TRC.</p>
	<p>BMA Assumptions:</p> <p>The draft Report assumes that local governments will restrict gas hook-ups for new homes over the next 20 years. The Report should include what estimates were used and provide the references supporting this assumption.</p>	<p>We cannot easily document the specific knowledge base of each panelist in the mini-Delphi panels who generated the inputs to panel-derived estimates. It is our understanding that at least the following local jurisdictions (a significant portion of the state) are or have been investigating new gas hookup bans: Berkeley, Fairfax, Half Moon Bay, Hercules, Los Angeles, Marin County, Martinez, Morgan Hill, Oakland, Ojai, Pasadena, Petaluma, Richmond, Riverside, Sacramento,</p>

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		<p>San Anselmo, San Bruno, San Francisco, San Jose, San Luis Obispo, San Rafael, Santa Barbara, Santa Cruz, Santa Monica, Sunnyvale. It is not yet clear what the impacts are from the U.S. Court of Appeals ruling against Berkeley’s ban in terms of decision-making at other jurisdictions. More details will be included in the updated Baseline Market Adoption (BMA) calculated as part of Phase II activities.</p>
	<p>Risk and Possible Mitigation Approach:</p> <p>The draft Report assigns a moderate risk to ESJ households associated with increased electric costs and panel upgrades. With significant increases in electric utility rates over recent years and the high cost of rewiring and upgrading the electric panel, the Report should elevate this risk to ESJ customers from medium to high</p>	<p>CalMTA assessed this factor as a financial risk that may preclude environmental and social justice (ESJ) communities from adopting induction cooking technology. We will elevate the severity of the risk to high in Table 9 of the Advancement Plan based on this feedback.</p>
	<p>Market Pilot 2: Community-Based Organization (CBO) Partnerships:</p> <p>The draft Report indicates the primary objective of the CBO pilot is to investigate key messaging and strategies that will be successful in encouraging ESJ communities to adopt induction technology. A key market barrier to adoption beyond the initial cost is product availability. Typically, retailers will adjust their stocking habits for each retail location based on prior sales. The Market Pilot 2 should be expanded to investigate ways to modify the stocking habits of retailers located in ESJ communities.</p>	<p>As CalMTA has adjusted our initial strategy pilot plans for this MTI, we have eliminated the CBO messaging pilot that specifically targets induction cooking and will remove it from our updated Advancement Plan. Our analysis indicates that this messaging investigation has largely already been completed by other entities and we will instead seek to leverage their findings.</p> <p>We agree that retailer stocking practices present a key barrier to adoption. To better understand the impact of this, particularly for ESJ audiences, we have proposed a strategy test pilot leveraging the ENERGY STAR® Retail Products Platform (ESRPP) that targets affordable induction ranges and cooktop models in ESJ communities. A description of this pilot can be found in Section 5.2.2 of the Advancement Plan; more details can</p>

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		be found in the draft program strategy pilot plan currently pending public comment and approval.
Public (TRC Companies, Inc.)	<p>TRC supports the proposed MTIs focus area and suggests that induction ranges and cooktops technology needs further validation and advancement in terms of energy savings and effective useful life to gain market confidence and successful adoption. Removing technological barriers early on will avoid bad reputation due to failures. We recommend that before the MT initiative develops new opportunities with induction, the pilot validates and addresses the technology and performance issues. Similarly, installation issues outlined (cabinet ventilation or volume requirements when flush with counter), UEL established, reliability characterized, repair and replacement considerations detailed on existing induction cooktop products. TRC conducted literature review of the induction cooktops for 2022 all-electric CASE report and found very little energy saving potential- 2022-T24-Final-CASE-Report_MF-All-Electric_updated_V2.pdf (title24stakeholders.com).</p>	<p>We generally agree that product reliability poses a potential risk to market transformation efforts if uptake is accelerated before product reliability is on par with less-efficient models. This is especially true for lower-income and ESJ communities: these consumers should not feel like or be part of a high-risk experiment. The list of technology assessment activities in Table 5 of the Advancement Plan therefore includes investigation of product performance risk. We will also investigate installation challenges as part of our effort to verify barriers to induction in the market characterization work detailed in Table 3.</p> <p>We will review the work TRC has already completed on induction ranges and cooktops. We recognize that there are not significant electrical energy savings with induction, especially compared to some heating, ventilation, and air conditioning (HVAC) measures, but we consider induction to be an important “lynchpin” measure for consumers to move to full electrification. If we do not accelerate the adoption of induction cooking, we run the risk of utilities needing to maintain a gas infrastructure and its associated costs in service of a single remaining home appliance.</p>
	We suggest detailed market segmentation effort which will help define the baselines for the MTI. Residential multifamily and single family covers a wide range of baselines. Segmentations may include building types (single family, multifamily attached, multifamily detached, low rise, midrise etc.) baseline system types (gas cooktops, electric	We agree that the MTI should include additional market segmentation to understand the applicability and focus for targeted efforts, and will add this strategy to Table 3 of the Advancement Plan. Research in Phase II will help better define these segments.

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	resistance etc.), climate zones. We suggest clear segmentation of the market to help understand the applicability and focus targeted efforts.	
	Electric resistance cooktops are only 5 to 10 percent less efficient than induction cooktops and they provide other benefits that induction doesn't have including being able to be used with any pots, more even distribution, better capability to pan fry, better reliability, lower upfront cost, no noise. So, we suggest that the MTI should revisit the electric cooktop technologies and not just focus on induction technology. We recommend CalMTA also incorporate development of modern electric resistance ceramic cooktop for market transformation project to meet more consumer needs, especially ESJ communities that may not be able to afford changing out all the pots and pans to induction grade. We recommend considering common 24" cooktop applications and products to replace those, to cover wide range of uses and performance	This comment aligns with feedback received from MTAB. We will examine this through our product and market characterization research in Phase II. Should we determine that broadening our product definition to include all electric resistance cooking represents a viable MTI, we will adjust this MTI to be inclusive of electric resistance and induction. Engaging manufacturers, retailers, and other programs will allow us to better understand the degree to which cookware is a barrier and what interventions are possible regarding product improvements.
	For product-specific research we recommend including ways to improve induction performance to cook at low energy rates and wider circumferences with small cooktop options. There are significant product specific research areas that rank higher for e.g. affordability versus efficiency.	We will review this in our assessment of opportunities for technology advancement/improvement as detailed in Table 3 of the Advancement Plan and will consider adjusting the MTI in accordance with the findings.
	We see that battery backup product research is high on the priority list in the MTI. There are many product improvement opportunities with induction to explore that are critical and higher priority, for warranty, ease of repair, upfront cost, diameter of burner, low temp cooking capability, reducing noise, etc. Induction cooktops consume a significant amount of electricity from 1200 to 3300 watts per burner, for backup, the battery would have to be very large to provide more than an hour or two of cooking time at max wattage. We suggest looking at battery backup as a secondary product advancement priority. If you are going to consider integrated battery, go after the standard 30" width induction range and use batteries to enable a step down from 240V	While battery backup merits further investigation as a solution for 120 volt-only installations, we agree that many of these alternative opportunities are more important and merit priority investigation. We will ensure that they are included in the research to be conducted in 2024. We are aware of the Channing Copper products, and will include them in our market characterization research.

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	<p>requirement to 120V for gas range replacement. https://www.channingcopper.com/products/pre-order.</p> <p>The MTI plan has identified upfront costs as one of the key market barriers, developing a cost benefit model to articulate the pay-back for building owners would be critical to convey the value propositions of high-efficiency features and the associated higher upfront costs. We suggest instead of TSB, finding a metric that really matters to consumers - such as operational and first costs - and address those concerns directly.</p>	<p>We agree that the MTI should identify the value proposition and business case for consumers/building owners to invest in induction cooking, and have planned to do so as part of our demand-side market characterization research. We will update Table 3 of the Advancement Plan to explicitly address this work.</p> <p>CalMTA calculates Total System Benefit (TSB) to determine the return on MTI investment to California ratepayers; it is not a consumer-facing metric.</p>
Public (Pacific Gas & Electric Company)	<p>We support the Induction Cooktop Advancement Plan (Induction Cooktop AP), intervening in the market with the US Retail Product Platform (USRPP), bundling induction cooktops with electrical panel upgrades, and changing customer perceptions.</p> <p>The most significant induction cooktop market barriers are customer attachment to natural gas, retail stocking practices, and limited electric panel capacity. Addressing these barriers would include supporting USRPP, bundling cooktops with electrical panel upgrades, and changing customer perceptions. Induction cooktop manufacturers are working to solve specific issues, such as size range, longevity concerns, cooking ability, backup batteries, and pacemaker compatibility. Moreover, manufacturers are highly motivated to address the technical challenges to maximize the US Inflation Reduction Act of 2022 (IRA) point-of-purchase rebates for induction cooktops. Privately, manufacturers have confirmed that the technological changes are in process.</p>	<p>We will work in partnership with Statewide National Codes & Standards Advocacy Team (NCSA) and build upon their work with manufacturers. As we prepare our market characterization research scope of work, we will coordinate with NCSA before reaching out to manufacturers to ensure leverage. Through the market characterization we will verify/identify key barriers and opportunities that need to be prioritized in the program. We look forward to further conversations.</p>

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	<p>The Statewide National Codes & Standards Advocacy Team (NCSA) is engaged in ongoing communications and customer research with manufacturers to assist with future technical and test procedure changes. NCSA also supports round-robin laboratory testing on cooktops to support the test procedure and shares the data with U.S. Department of Energy (DOE) consultants. The Statewide Building Code Advocacy Team (SBCA) endorses the California Energy Commission (CEC) in modifying the 2028 California Building Code to include potential requirements for induction cooktops. Please note that more detailed information will be discussed in C&S and CalMTA coordination meetings.</p>	
<p>MTAB (Southern California Edison)</p>	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p> <p>The first sentence seems to indicate that both the cooktop and the oven are induction. This should be clarified that only the cooktop and the cooktop portion of a range is induction.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p> <p>Where it states, "traditional gas or electric", it would be clearer if it states, "traditional electric and gas." Otherwise, it may sound as though it applies to all electric ranges and not just traditional electric ranges.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p> <p>Avoid using the term "stove" and use only the terms "range" or "cooktop" to avoid inconsistencies and confusion. This comment applies throughout the document.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>

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	<p>Rather than referencing only natural gas, it would more accurate to reference "natural gas and propane" since many ESJ communities are using propane.</p>	
	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p> <p>Not only is indoor air quality impacted but criteria pollutants to the outdoors are also an issue with natural gas and propane combustion.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p> <p>GHG emissions of gas should be discussed - both direct and indirect (through leakage of natural gas in pipelines).</p>	<p>We appreciate this important point and will update the product definition section of the Advancement Plan to reflect this topic. We will also include it in Table 5 under the "Gas / Electric Infrastructure" section.</p>
	<p>Comments or questions regarding "Product, Service, or Practice Definition"</p> <p>The 24" product problem is primarily with ranges. There are 24" induction cooktops available. This comment applies throughout the document.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Please describe the baseline for induction. Is it gas cooktops, or electric resistance cooktops?</p>	<p>The baseline looks at two installation conditions for electric resistance and gas. Details of our methodology can be found in Table 1 of Appendix 1.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Table 2's Equity Metrics seem to be primarily "process" metrics with only one "impact" metric that is noted with "This may be difficult/costly to measure quantitatively". Please explain this issue more thoroughly.</p>	<p>As noted in the Advancement Plan, Table 2 shows CalMTA's preliminary thinking on possible equity metrics, which will be developed during Phase II. Quantifying market adoption in specific communities is challenging because it requires obtaining a data source that reflects sales in those specific communities.</p>

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		Through our proposed strategy test pilot , we intend to explore the possibility of using ESRPP data to track sales in identified ESJ community zip codes. We will update the note in Table 2 of the Advancement Plan to more clearly reflect that.
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.1: The MTI Advancement plan should include a little historical background. For example, while gas cooking has been around for decades, it wasn't nearly as big a problem as today with tighter homes. Therefore, the IAQ problem has been more recent than the entire time gas cooking has been present in homes. Also, it may be worth mentioning that the technology has improved drastically from early induction cooking and traditional resistance cooktops.</p>	We will update the Advancement Plan to reflect this feedback.
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.3: The MTI Advancement Plan should mention Lack of Awareness of Benefits and Resistance to Change/Attachment to Existing Technology.</p>	We will update the Advancement Plan to reflect this feedback.
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.3: Again the 24" product is mostly related to ranges and not cooktops. Also, there is the issue of being able to cook during a power outage if the range hood isn't operable. This is bigger problem with gas, but is it OK with electric? Should the range battery also power the hood?</p>	We will update the Advancement Plan to reflect that 24" products are only a range. The comment regarding the range hood will be incorporated into our Phase II research plan.
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p>	We will incorporate the use of demonstrations and a clear value proposition, including easier cleaning and

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	<p>Paragraph 3.4: MTI Advancement plan should focus on demonstrations of induction as part of consumer ed campaigns. Consumer education campaigns should develop a clear value proposition such as the induction smooth cooktop is easier to clean, has a sleeker, uncluttered look, is better for the environment, and far superior cooking.</p>	<p>superior cooking experience, in any consumer marketing once this MTI reaches Phase III: Market Deployment. Initial conversations with existing program administrators and implementers indicate that these benefits are very important to consumers and have significant impact on adoption of induction cooking.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.5: A transformed market should go a bit further to be perceived by all parties that induction is a superior way to cook and is the preferred choice for a cooktop or range.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.6: In the last bullet, note that both electric and gas utilities have online marketplaces.</p>	<p>We will update the Advancement Plan to reflect this feedback.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.9: The last item in Table 1 should be more than just awareness, it should be closer to "winning hearts and minds".</p>	<p>We agree that tracking awareness of induction's benefits should lead to "winning hearts and minds." We will measure consumer preferences over the life of the MTI to monitor this influence. Associated metrics related to this work will be documented in our subsequent MTI evaluation plan.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p> <p>Paragraph 3.9 In Table 2, the non-energy impacts should also include convenience</p>	<p>The equity metrics listed in Table 2 are examples of possible metrics and do include "user experience." Additional equity metrics will be further developed as part of our market characterization and development of an expanded logic model for the full MTI plan.</p>
	<p>Comments or questions regarding "Market Transformation Theory and Opportunity"</p>	<p>We agree that tracking awareness of induction's benefits should lead to "winning hearts and minds." We will measure consumer preferences over the life of the MTI</p>

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	<p>Paragraph 3.9 In Table 2, there should also be a metric closer to “winning hearts and minds.”</p>	<p>to monitor this influence. Associated metrics related to this work will be documented in our subsequent MTI evaluation plan.</p>
	<p>Comments or questions regarding "Gap Analysis"</p> <p>For this and all Advancement Plans, please include the results of Step 4 “Top ideas checked against CA activities”. Please discuss the programmatic gap in CA that this MTI activity seeks to fill.</p>	<p>Details of our initial review of existing programs and activities can be found in Section 6: External Program Review and Stakeholder Engagement. This market understanding will be further developed as CalMTA begins initial MTI outreach and research.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>It seems that this MTI is targeting currently available products as well as aiming to develop new generations of products. Describe how the research on currently available products and the current market status will be applicable to forecasted adoption and savings from future generations of products and future market status. This question applies to all the MTI Advancement Plans.</p>	<p>We will use research to improve our forecasts of the BMA (what would have occurred without the MTI). Information from manufacturers and other subject matter experts will be incorporated into the market adoption baseline established during Phase II, which will be subtracted from TMA to estimate the incremental impact of the MTI. The evaluation methodology and supporting research will be documented in the MTI Plan required before the MTI can advance to Phase III: Market Deployment.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>This MTI is particularly sensitive to the duration of the IRA incentives. The MTI Advancement plan should detail exit strategies in case one or more Phase 2 activities are not completed on time. This should detail which of these Phase 2 activities are on the critical path to developing an MTI and which are not.</p>	<p>We have updated Section 7: Risk and Possible Mitigation Approach to reflect this feedback.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>The MTI Advancement plan should prioritize understanding “Opportunities for Technology Advancement” and “Evaluate Policy</p>	<p>Some information from the “other” technical assessment studies is required to inform the “Opportunities for Technology Advancement” and vice versa. To meet CalMTA’s required timeframe, these related research efforts must necessarily overlap to some degree.</p>

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	Tools, Utility and Regulatory Landscape” before committing funds to the other technology assessment studies, particularly since there may be data requirements that the technology assessment studies must meet.	Attention to critical path dependencies between different research elements, “no-regrets” activities, and the risk of timing/data gaps will drive the scheduling of research activities in early 2024 to optimize outcomes.
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>d) The MTI Advancement plan should discuss the readiness of the studies and the steps needed to assess the technology. For example, the MTI Advancement Plan should discuss if it needs to building relationships with manufacturers, gaining manufacturer trust, and putting NDAs in place.</p>	Full MTI Plans will provide greater detail on steps for market deployment, including manufacturer engagement and mechanisms like non-disclosure agreements or memorandums of understanding.
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>Please specify what deliverables there will be for each research task. Will there be quarterly updates, presentations on early findings, draft reports, final reports? This is applicable to all the MTI Advancement Plans.</p>	All research tasks will be compiled into a report which, once finalized, will be posted publicly. In addition, CalMTA will provide periodic research updates to MTAB and stakeholders that include interim findings.
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>Since 2009, the CPUC has required that Pilots submitted for CPUC consideration in the EE proceeding be filed with 10 required elements (D.09-09-047, OP 20). While the requirement to use these rules is uncertain, these required elements have been in use by the CA EE PAs and an provide a useful framework to think through the expectations for proposed pilot plans. The 10 required elements are: “1. A specific statement of the concern, gap, or problem that the pilot seeks to address and the likelihood that the issue can be addressed cost-effectively through utility programs;</p>	<p>CalMTA’s proposed strategy test pilots are currently in draft form.</p> <p>Additionally, CalMTA proposes pursuing some limited studies to test MTI-specific assumptions and strategies and gain greater insights into potential market barriers to adoption of a technology or practice. CalMTA’s proposed strategy test pilots are unlike the energy efficiency pilots as defined in D.09-09-047, which are intended to be longer in duration, have significantly greater budgets, and inform IOU statewide programs. Instead, our strategy test pilots seek to address a limited</p>

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	<p>2. Whether and how the pilot will address a Strategic Plan goal or strategy and market transformation;</p> <p>3. Specific goals, objectives and end points for the project;</p> <p>4. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed;</p> <p>5. A clear budget and timeframe to complete the project and obtain results within a portfolio cycle - pilot projects should not be continuations of programs from previous portfolios;</p> <p>6. Information on relevant baselines metrics or a plan to develop baseline information against which the project outcomes can be measured;</p> <p>7. Program performance metrics following the methodology outline in Ordering Paragraph 11;</p> <p>8. Methodologies to test the cost-effectiveness of the project;</p> <p>9. A proposed EM&V plan; and</p> <p>10. A concrete strategy to identify and disseminate best practices and lessons learned from the pilot to all California utilities and to transfer those practices to resource programs, as well as a schedule and plan to expand the pilot to utility and hopefully statewide usage."</p>	<p>set of questions that are included in our Advancement Plan over a shorter duration. Our pilots and other strategy testing efforts are aligned with the requirements of D.19-12-021 and our 2023 Annual Budget Advice Letter but do not include all the information required of or follow the same process for getting approval of energy efficiency "pilots" as is outlined in D.09-09-047.</p> <p>Finally, a more robust strategy test pilot plan for this MTI is currently in draft form for review on CalMTA's website.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>For the proposed pilots, please provide the following information</p> <p>The pilot's criteria for deciding that ESRPP is an adequate delivery channel. A discussion on the baseline against which pilot performance will be assessed.</p>	<p>A more robust strategy test pilot plan for this MTI is currently in draft form for review on CalMTA's website. After this plan is approved, we will be able to acquire California ESRPP data sets that can help us determine baseline against which pilot performance will be assessed.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>For the proposed pilots, please provide the following information:</p>	<p>A more robust strategy test pilot plan for this MTI is currently in draft form for review on CalMTA's website. If ESRPP does not turn out to be a viable market channel for this research, we will develop alternate interventions.</p>

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	<p>A discussion of any other delivery channels to be piloted. Discussion on alternatives should ESRPP not be a viable long term delivery channel?</p>	
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>For the proposed pilots, please provide the following information:</p> <p>A discussion of what is being "piloted" in the CBO partnership. The criteria used to determine whether a particular message or strategy was successful or not. A discussion of how the baseline against which a message or strategy's performance will be assessed.</p>	<p>As CalMTA has adjusted our initial strategy pilot plans for this MTI, we have eliminated the CBO messaging pilot that specifically targets induction cooking and will remove it from our updated Advancement Plan. Our analysis indicates that this messaging investigation has largely already been completed by other entities and we will instead seek to leverage their findings.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>For the proposed pilots, please provide the following information:</p> <p>Table 7 says the CBO pilot will be used to inform the "strategies to overcome electrical panel upgrade barrier". If this is this a primary objective of this MTI, it is a much more important and potentially impactful market transformation objective than installation of induction cooktops. Please provide more details should be given. Also, it seems more should be done than just engage with CBOs, as the issue is known to be more than a messaging or "strategy" problem, and not one that can be addressed via ESRPP, which is the only delivery channel being pilot tested.</p>	<p>As CalMTA has adjusted our initial strategy pilot plans for this MTI, we have eliminated the CBO messaging pilot that specifically targets induction cooking and will remove it from our updated Advancement Plan. Our analysis indicates that this messaging investigation has largely already been completed by other entities and we will instead seek to leverage their findings.</p> <p>At this time, the only strategy test pilot identified for induction cooking at this time seeks to test retailers' ability to adjust the ESRPP delivery mechanism in reaching ESJ customers with more affordable products.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p>	<p>Our market characterization will explore these topics. We will update Table 3 in the Advancement Plan to address your feedback.</p>

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	<p>Table 3: Characterization of induction should include: cooktop vs range and sizes of cooktops and ranges.</p>	
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>Table 5: The other aspect of having a battery and/or lower wattage cooking equipment is potentially lower energy bills (and lower GHG and criteria pollutant emissions from power generation) where time of use rates are higher during the time when dinner is being prepared. If batteries can shift the load to lower cost and lower emission time periods it will benefit tenants.</p>	<p>CalMTA follows a CPUC-approved stage-gate process. The Advancement Plans are the last Stage 2 deliverables for Phase I, which describes the work that will occur in Phase II. As our research progresses in Phase II, we will use the CalMTA website, MTAB meetings, and stakeholder outreach meetings to share our findings and the ways in which they inform development of the MTI strategy.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>Paragraph 5.3: First bullet: Batteries with induction cooking not only provide backup but also the potential for lower electric demand that may reduce the need for an electrical system upgrade, and the potential for lower rates as energy use can be shifted away from the peak TOU rates that coincide with the dinner preparation.</p>	<p>We will consider this feedback during the research phase of this MTI.</p>
	<p>Comments or questions regarding "Research and Program Development Plan"</p> <p>Paragraph 5.3: It may be worthwhile to consider reducing the cost of electrical system upgrades if it can be bundled with other decarbonization installations (such as heat pumps, electric vehicles, solar, and/or batteries).</p>	<p>Bundling induction with upgrades to electric panels is one of the intervention strategies contemplated in the conceptual logic model in Figure 1. We will consider this feedback during the research phase of this MTI.</p>
	<p>Comments or questions regarding "External Program Review and Stakeholder Engagement"</p> <p>Please describe the outreach conducted to income-qualified programs and the feedback provided.</p>	<p>Outreach to and coordination with external programs, including income-qualified offerings like the Energy Savings Assistance (ESA) programs, will be part of CalMTA's 2024 work. The external program review section of the Advancement Plans reflects initial market</p>

Source	Feedback Provided	CalMTA Response
		research and stakeholder identification. 2023 outreach activities focused on initial briefings with CBOs and other ESJ stakeholders as well as listening sessions designed to gather cross-cutting insight into barriers faced by ESJ communities, including low-income households.
	<p>Comments or questions regarding "External Program Review and Stakeholder Engagement"</p> <p>The MTI Advancement Plan should include consultation with PG&E and SCE staff that work on their San Joaquin Disadvantaged Communities electrification pilots, which include extensive work with CBOs to help customers without access to natural gas with direct installation of electric/induction cooktops, and finding funds for remediation of any electrical panel needs. o https://www.calmac.org/publications/SJV_DAC_Process_Evaluation_Final_Report_102022.pdf o https://www.calmac.org/publications/SJV_DAC_Data_Gathering_Findings_Report_Vol1_FINAL_2021-08-27.pdf</p>	CalMTA will review the reports provided and include identified PG&E and SCE staff in the next phase of our research. We will add the San Joaquin Disadvantaged Communities electrification pilots to Table 8 of the Advancement Plan.
	<p>Comments or questions regarding "External Program Review and Stakeholder Engagement"</p> <p>The MTI Advancement Plan should include engagement with the Statewide Codes and Standards Advocacy programs to ensure coordination with ongoing related work. Refer to separate comments submitted by PG&E, Lead Program Administrator representing the IOUs for the Statewide Codes and Standards Advocacy programs.</p>	CalMTA has been and will continue to engage with statewide C&S programs. We will add the Statewide Codes and Standards Advocacy programs to Table 8 of the Advancement Plan.
	Comments or questions regarding "Initial Cost Estimate, Timing and Expected Results"	We will conduct more thorough secondary research to better identify work that has already been done related to induction cooking by the IOUs and other program administrators. Existing efforts will provide leverage and

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	<p>The MTI Advancement Plans could do more to leverage IOU and other PA expertise in identifying what information already exists on each of the research topics. Further secondary research and coordination with the IOUs and other PAs, will help ensure that future costs estimates are accurate and that all studies in this Advancement plan are necessary.</p>	<p>in turn, may help us reduce our MTI research budget. We will conduct further secondary research before to embarking on work identified in the Advancement Plan.</p>
	<p>25. Comments or questions regarding "Initial Cost Estimate, Timing and Expected Results"</p> <p>The MT Adopted Framework included a 7 stage "stage-gate" model that describes the decision points at which stakeholders agreed they would like to have visibility and feedback. Now that Batch 1 has been identified, future MTI Advancement Plan development should establish an ongoing, sustainable process that more closely follows the suggested Stage Gate model.</p>	<p>CalMTA agrees that it is vitally important for CalMTA to maximize program alignment and leverage. We have facilitated multiple meetings with the C&S team and IOU EE directors to discuss the MTI development process and our Batch 1 Advancement Plans in particular. Moving forward, we will continue to meet with the C&S team, EE program directors, and identified SMEs for each target technology to support the MTI research phase. We will also continue identifying and reaching out to other energy efficiency programs and stakeholders in California to build collaborative relationships.</p> <p>CalMTA has developed a regular cadence for ongoing transparency into the MTI development process and stakeholder input at every stage. Draft Advancement Plans are submitted for public comment on the CPUC's PDA site as well as MTAB comment at public MTAB meetings, where the public is also welcome to comment. Once Advancement Plans are final, stakeholders have the opportunity to be involved in responding to draft MTI Plans at MTAB meetings at least every other month, which will also provide opportunities to learn about and give input on the next batch of ideas at a regular cadence as they are evaluated and</p>

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	<p>Comments or questions regarding Appendix 1: TSB Estimation Approach</p> <p>Please provide more details about your methods. Please explain, how many experts did you assemble for the mini-Delphi panel, what were their areas of expertise and experience, were they part of the CalMTA team, the RI team? What parameters did they use to describe their forecast, and how much agreement or disagreement was there in their initial estimates?</p>	<p>advanced through every stage of the MTI development process.</p> <p>CalMTA used a mini-Delphi panel method to forecast market adoption of portable heat pumps. Our Delphi panel consisted of three experts, each with more than 20 years of experience in the energy and environment sector, and two experts with specific experience in market transformation who support the CalMTA project. Panel members based their forecasts on secondary research and their own industry knowledge. For adoption by existing households, a Bass Diffusion Model was used, and panel members provided their forecasts using the following three model parameters: m or maximum market potential, p or coefficient of innovation and q or coefficient of imitation. For adoption by new construction buildings, panel members estimated the market share of the technology in two-year intervals until 2035 and five-year intervals after that. For existing households, the forecast of proportion of households with induction cooktops in 2045 ranged from 18% to 28%. For new construction, the market share in 2045 ranged from 25% to 76%.</p>
	<p>Comments or questions regarding Appendix 1: TSB Estimation Approach</p> <p>Please explain how the Bass diffusion curves were developed when the MTI targets not only currently available measures, but also measures that have yet to be developed (through the MTI).</p>	<p>We will use research to improve our forecasts of the baseline market adoption (what would have occurred without the MTI). Information from manufacturers and other subject matter experts will be incorporated into the market adoption baseline established during Phase II: Program Development, which will be subtracted from total market adoption to estimate the incremental impact of the MTI. The diffusion models were developed</p>

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		for aggregate adoption of induction cooktops/ranges, not for individual measures/models.
	<p>Comments or questions regarding Appendix 1: TSB Estimation Approach</p> <p>Thank you for providing the detail that you used European adoption trends as the basis of your TMA forecast. There are a lot of differences between Europe and California. Do you think you will be able to get better, California-specific data to inform an MTI Application, within the 10-month timeline of this Advancement Plan?</p>	<p>Yes. In Phase II CalMTA plans to survey potential customers as well as interview other market participants and review sales data to better understanding existing barriers specific to California and also assess impact of potential MTI interventions in California.</p>
	<p>Comments or questions regarding Appendix 1: TSB Estimation Approach</p> <p>For Table 1 and all the other MTI Advancement Plans, the MTI Advancement Plan should consistently use either Total Market Adoption or "incremental adoption" across the MTI forecasts. It's unclear which is being shown in Table 1, because the text discusses "proportion of incremental adoption" and refers the reader to Table 1.</p>	<p>TMA refers to the actual market uptake that occurs over time. Incremental adoption is derived as TMA-BMA. The incremental adoption was allocated to the identified installation conditions described in Table 1.</p>
	<p>Comments or questions regarding Appendix 1: TSB Estimation Approach</p> <p>Please include a description of how TRC and TSB were calculated and whether or not this differs from the TSB inputs and calculations that are required from the IOU EE programs.</p>	<p>TRC and TSB were calculated in line with IOU requirements for EE programs, with costs and benefits modified to accommodate a statewide value. Utility/climate zone avoided costs are averaged by the share of customers from each of the three largest IOUs and with average values applied to the remaining portion of California served by other utilities. TRC includes all avoided cost categories, including electric/gas/greenhouse gas and refrigerant benefits, program costs, incremental measure costs, etc. The Avoided Cost Calculator and projected lifetimes savings were also used to generate TSB.</p>

Source	Feedback Provided	CalMTA Response
Public (CalNEXT)	<p>The CalMTA Induction Ranges and Cooktops Draft Advancement Plan represents an opportunity help California meet its decarbonization goals. CalNEXT offers the following comments for your consideration.</p> <p>Current research suggests that the potential decarbonization impact of household cooking represents less than 4 percent of total site gas usage. Consider expanding the scope of the Advancement Plan to include commercial induction cook stoves, and residential induction cook stoves that are being used in small commercial applications, which could still work serve in disadvantaged communities (DAC) and Hard-to-Reach (HTR) communities that rely on communal cooking resources.</p>	<p>CalMTA appreciates this idea and finds it interesting. Through our market characterization research, we may be able to identify an expanded scope and discrete strategies that could reach small commercial properties with induction cooking.</p>
	<p>The CalMTA Induction Ranges and Cooktops Draft Advancement Plan represents an opportunity help California meet its decarbonization goals. CalNEXT offers the following comments for your consideration.</p> <p>Recommend addressing the barriers associated with learning new cooking methodologies that exist around adoption of this new technology. For example, some traditional cookware - cookware made from aluminum, copper, glass, or ceramic - won't work unless there's an induction plate built into the base of the pan. This may require some households/kitchens to upgrade their cookware inventory in addition to their stove, which embeds higher project costs.</p>	<p>In the next phase of research, we will verify this barrier and possible strategies to overcome the barrier. The need for consumers to change their cookware to use induction technology has been identified as an initial barrier, especially for ESJ community members. As such, this MTI will likely need to include an intervention to address this barrier.</p>
	<p>The CalMTA Induction Ranges and Cooktops Draft Advancement Plan represents an opportunity help California meet its decarbonization goals. CalNEXT offers the following comments for your consideration.</p> <p>Consider adding partnering with consumers and industry professionals to advance technology adoption and promote workforce training to the strategies for mitigating barriers. Engagement with consumers is</p>	<p>Partnering with industry and consumer organizations is embedded into CalMTA's approach to awareness-building and consumer engagement. We will also consider adding a workforce development intervention to this MTI.</p>

Source	Feedback Provided	CalMTA Response
	<p>essential to improve familiarity with and confidence in the new technology.</p> <p>The CalMTA Induction Ranges and Cooktops Draft Advancement Plan represents an opportunity help California meet its decarbonization goals. CalNEXT offers the following comments for your consideration.</p> <p>Incremental cost is a barrier for induction stoves. Currently, induction is sold at huge premiums compared to ceramic electric resistance stoves and the incremental efficiency benefits are minimal, especially when the need for cookware replacement is considered.</p> <p>The CalMTA Induction Ranges and Cooktops Draft Advancement Plan represents an opportunity help California meet its decarbonization goals. CalNEXT offers the following comments for your consideration.</p> <p>Home cooking measures have proven incredibly difficult to access, due to California having one of the lowest home ownership rates in the country, particularly among low and moderate-income households. Additionally, split incentives will continue to be a barrier for renter households. Consider including a strategy to engage with property owners, which will be critical for gaining access to this market in an equitable way.</p>	<p>We have identified consumer cost as a key barrier for this MTI. In Phase II, we will investigate several possible interventions to address this barrier, including engaging manufacturers to reduce the upfront cost of products and providing upgraded cookware with the sale of qualifying products. We will also engage retailers to stock and promote affordable models, leveraging Inflation Reduction Act (IRA) incentives and current program offerings. Over the lifecycle of the MTI, we expect that as induction market share grows, economies of scale will eventually drive down the cost of induction ranges and cooktops.</p> <p>We are currently assessing potential market transformation strategies that can address the split incentive barrier for renters. Engaging property owners will be included and explored in Phase II.</p>
Public (Enervee)	<p>Importance of safe, affordable financing options to overcome financial barriers. We therefore request the following additions to the Advancement Plans in all relevant sections (including the logic model):</p> <ul style="list-style-type: none"> Barriers: Add "lack of access to capital" to the list of barriers 	<p>We will explore proposed interventions that address access to capital and financing after we have completed our research phase and consider adding these elements to the updated logic model included in our full MTI Plan. The Advancement Plan includes cost as a significant barrier to this technology's adoption; CalMTA</p>

Source	Feedback Provided	CalMTA Response
		recognizes the need to leverage existing financial assistance, incentives, and rebates when available.
	<p>Importance of safe, affordable financing options to overcome financial barriers. We therefore request the following additions to the Advancement Plans in all relevant sections (including the logic model):</p> <ul style="list-style-type: none"> • Strategic Interventions: Add “facilitate access to capital”: “Engage private lenders and philanthropic partners to ensure that safe and affordable loan products are available to those facing financial barriers”. Philanthropic dollars, for example, could be used to buy down interest rates for those facing the greatest financial barriers. 	<p>We will explore proposed interventions that address access to capital and financing after we have completed our research phase and consider adding these elements to the updated logic model included in our full MTI Plan. We will also ensure that this is added to the research efforts to verify the barrier, leverageable opportunities, and interventions.</p>
	<p>Importance of safe, affordable financing options to overcome financial barriers. We therefore request the following additions to the Advancement Plans in all relevant sections (including the logic model):</p> <ul style="list-style-type: none"> • Outcomes: Add “Financing is available, so consumers can pay for [portable/window heat pumps] or [induction cooking appliances] with affordable monthly payments.” 	<p>We will explore proposed interventions that address access to capital and financing after we have completed our research phase and consider adding these elements to the updated logic model included in our full MTI Plan. We will also ensure that this is added to the research efforts to verify the barrier, leverageable opportunities, and interventions.</p>
<p>Opportunities to better leverage statewide online marketplace: Implement an Enervee Score for cooking appliances.</p> <ul style="list-style-type: none"> • Gain an understanding of the role of financing and the interplay between layered financial incentives and financing to empower target communities to purchase these technologies at retail. This will also provide data on the level of incentives needed by different consumer segments to optimize the design of incentive programs, such as the IRA HEAR rebates and the statewide Equitable Building Decarbonization incentives. 	<p>Through the proposed research in the next MTI development phase, we will explore financing barriers and opportunities and further assess the potential to leverage online marketplaces and existing programs.</p>	

Source	Feedback Provided	CalMTA Response
	<ul style="list-style-type: none"> Gain an understanding of the potential to: expand retail fulfillment partners and inventory; leverage OEM and retail fulfillment partner financial contributions to reduce the purchase price of the technologies; and engage leading manufacturers and retail partners in co-marketing. Enervee is currently facing limitations sourcing induction cooking appliances and portable/window heat pumps, and the pilot could address this. Work with retail fulfillment partners to develop a portable/window/room air conditioner haul-away and recycling program to ensure proper end-of-life handling of refrigerants. Over 1/3 of those purchasing refrigerators and freezers via ca.enervee.com have voluntarily paid to have their existing appliances professionally recycled. Explore opportunities to engage utilities and other program administrators in efforts to market these technologies via the statewide online marketplace and cross promote the online marketplace and other programs 	
	<p>Work with iBank and philanthropic partners to understand opportunities to reduce the cost of financing for those facing the greatest financial barriers (for example, by providing low-cost lending capital or funding interest rate buy-downs).</p>	<p>We will include a better understanding of the financing barriers faced by different target audiences and possible leverageable partners to address this barrier in the next phase of our research.</p>
<p>MTAB (Shelly Lyser, on behalf of MTAB member,</p>	<p>Induction Cooktops: Market Transformation Theory and Opportunity:</p> <p>Foremost, it is concerning that CalMTA is selecting a front-runner with a TRC of 0.76 as part of Batch 1. As previously mentioned, CalMTA's forecasted costs of the current portfolio will likely exceed the \$50 million annual budget set by the decision (D.19-12-021 at 63). As a result, CalMTA should be more selective in its MTIs, especially when</p>	<p>The TRC estimates developed during Stage 2 are preliminary and should not be used as a criterion to reject high-scoring MTA ideas at this early stage until we research and confirm the potential for MTI strategies to reduce costs over time. Similarly, MTI implementation costs are preliminary at this stage and not all ideas that advance to Phase II will advance to Phase III Market</p>

Source	Feedback Provided	CalMTA Response
Ky-An Tran, CalPA	<p>considering that there isn't an obvious equity target for this MTI. In fact, the high entry level cost for induction stoves and cooktops, as noted in the Draft Advancement Plan) leads to a market that is disproportionately represented by higher income customers. Additionally, the high cost of each unit will likely mean that fewer total customers will be able to participate in this MTI or that the MTIs costs will balloon.</p>	<p>Deployment. Therefore, the preliminary cost modeled in the MTAB meeting slides should not be used to forecast a cost overrun several years into Phase III.</p> <p>This MTI includes a strategy to reduce the cost of induction cooking products and expand induction to serve multiple price points and target audiences. If we do not address induction's affordability and product availability, this product will primarily serve upper-income customers, and lower-income customers will continue to use gas appliances and not be able to fully transition to all-electric options. If we discover that we cannot encourage manufacturers to make more affordable products, we may expand the current product definition to include all electric cooking technology as mentioned earlier in this document.</p>
	<p>It is also noteworthy to consider that all levels of government are beginning to emphasize electrifying appliances and so the market has a number of influencing factors that are likely to drive widespread adoption. Municipalities like Los Angeles and Berkeley have tried to ban gas stoves, the California Air Resources Board has pushed to electrify millions of appliances to meeting California's decarbonization goals, and the Inflation Reduction Act has spurred many governments to identify methods of electrification to take advantage of this funding. The market may already have begun transforming and there may not be a need for the current version of the MTI, unless it is particularly targeted at improving equity outcomes.</p>	<p>The existing work to electrify appliances and the relative outcomes have been factored into our baseline forecast. In addition, this MTI has a significant focus on improving equity outcomes. We will refine our market adoption and cost-effectiveness estimates in Phase II.</p> <p>We acknowledge the need for policy and regulations in this market. It should be noted that the intent of this MTI effort is to proceed and enable adoption of these regulations more readily over time.</p>

Source	Feedback Provided	CalMTA Response
	<p>While the discussion during the 11/30 & 12/1 MTAB meeting was productive in identifying modifications that would improve this MTI's equity potential, the current Advancement Plan does not incorporate those ideas. This is problematic. If CalMTA wants to proceed with this MTI, more consideration should be made to either make the program cost-effective or be more inclusive of equity customers.</p>	<p>CalMTA has refined several aspects of this MTI to have a greater focus on equity customers, especially by addressing the need for lower-priced products. The strategy test pilot proposed for this MTI focuses entirely on equity considerations. We have made several other changes that seek to address the availability of affordable induction cooking products through engagement of both manufacturers and retailers.</p> <p>In the conceptual logic model and other strategies discussed in the Advancement Plan, we identify the need to coordinate with and leverage existing programs that target equity customers and provide them with access to affordable products. We are also considering additional pilots in which affordable induction technology would be distributed through equity-aligned housing efforts, such as transitional "micro" homes for unhoused individuals.</p>
<p>MTAB (Fred Gordon, Energy Trust of Oregon)</p>	<p>Induction Cooktops: Market Transformation Theory and Opportunity:</p> <p>This writeup seems focused on both expanding sales in the mainstream market and developing products for the limited income and multifamily markets. The idea that we will both make induction stoves more affordable and build in battery backup seems a bit contradictory. It is often difficult to persuade manufactures to move in one direction. Asking them to develop two new products, one affordable, one premium, seems like asking a lot. It may be important to prioritize or phase.</p> <p>P 8- graphic</p>	<p>In Phase II of this MTI, we will engage manufacturers to determine the feasibility of influencing product development. Past market transformation efforts have successfully led manufacturers to expand their models and product portfolio to serve multiple markets by including both premium models with additional functionalities that impact efficiency and more basic models that still include efficiency measures but are available at a lower cost. We recognize that ensuring availability of more affordable induction products is the MTI's primary goal and inclusion of models with battery backups will be secondary.</p>

Source	Feedback Provided	CalMTA Response
	<p>I think the idea that induction might be moved to the same price as resistance stoves is not realistic. Manufacturers develop premium products to make more money off of them. I think even if the imbedded cost is modest, this will take a very long time.</p>	<p>We acknowledge the challenge of achieving this goal, but we believe that we can drive some costs down by creating greater demand and influencing manufacturing improvements. We also believe that the benefits of induction will convince customers to pay a slightly higher cost more for superior cooking capabilities.</p>
<p>MTAB (Fred Gordon, Energy Trust of Oregon)</p>	<p>Comments or questions regarding Gap Analysis:</p> <p>P9- The most common reason for energy efficiency programs to not meet savings expectations is “oops, it turns out the load we were trying to save is half of what we assumed”. Carbon savings also depend on energy savings. Table 1 does not include research to establish what energy use is for stoves. I think (do not know) that as household sizes have decreased, microwaves have become the dominant cooking appliance, and through the behavior changes from the pandemic and post-pandemic, loads may have significantly diminished. I do not know if you have contemporary data on energy use, especially as applies to limited income and multifamily households. Before we get too far into program design, it’s important to know the magnitude of load that could be saved, so we know if there’s much utility system benefit. I recognize that health and removing a barrier to home decarbonization are important drivers for this initiative. But we need to make sure the savings are there first. If such data do not exist or are unaffordable, one simple sensitivity test would be to cut the assumed savings in half for energy and carbon and assess whether the program is still attractive.</p> <p>Unless you have decent recent load research data, this belongs in your risk chart. Conversely if loads are low it reduces risk of increase costs to ESJ households compared to gas cooking. In either case, given the puny contribution of cooking to overall household energy use, I would expect the fiscal impact to be very small.</p>	<p>We agree that we need to understand the existing load and will add this to the research tasks and risk table in the Advancement Plan.</p>

Source	Feedback Provided	CalMTA Response
<p>MTAB (Fred Gordon, Energy Trust of Oregon)</p>	<p>Comments or questions regarding " Research and Program Development Plan"</p> <p>P 18. The first pilot concept, using the products platform, seems to make sense once there is an established and tested 24-inch product 120 v that meets program specifications. This sounds like it might be a couple or three year out? Or do you expect manufacturers to jump to develop a product they weren't considering?</p>	<p>The strategy test pilot's objectives include testing whether the ESRPP platform can be adapted to target specific zip codes and subcategories of product, as well as how willing retailers will be to participate in the proposed approach. At the same time, we will be engaging manufacturers on the development of more 24" products. We do not expect the pilot to be able to target 24" products in 2024, so instead will target products that are currently available at lower price points. Based on the outcomes of this initial strategy test, interventions can be targeted to focus on certain products or used to influence product specifications and manufacturer behavior.</p>
<p>MTAB (Fred Gordon, Energy Trust of Oregon)</p>	<p>Comments or questions regarding "Initial Cost Estimate, Timing and Expected Results:</p> <p>P 25 Gantt chart does not include market entry of new products such as 24-inch 120 V unit or units with battery storage. Are these "must have" or "nice to have"? It would seem that for the ESJ component they are "must have"?</p>	<p>The Gantt chart on Page 25 tracks CalMTA's activities for 2024. As such, we cannot predict the market entry for new products. However, our efforts will track that information as it becomes available.</p>
<p>Public (Pacific Gas & Electric Company)</p>	<p>To ensure a complete understanding of current activities and the feasibility of C&S for MTI, biweekly or monthly coordination meetings with C&S and MTA would be ideal.</p> <p>Ongoing communication between C&S and MTA would ensure that each team fully understands the team's activities. Continuous conversations are more effective than providing specific activities and market data after a proposal is accepted.</p>	<p>CalMTA is committed to coordinating productively with statewide programs and specifically with the Statewide C&S Advocacy team leading this important work. We have had several meetings with the C&S team to discuss our development of these market transformation ideas and have identified a cadence for regular future meetings with the C&S team and EE program directors at the investor-owned utilities (IOUs), as well as identified SMEs for each target technology, throughout the research phase of MTI development.</p>

Source	Feedback Provided	CalMTA Response
	<p>C&S team retains control of the Advocacy Program’s current scope, and MTA assistance is at the request of the C&S Advocacy team. The C&S program has conducted advocacy since 1990 and is a leader in the field. The Energy Efficiency Portfolio recognizes C&S as the lead statewide program administrator with “sole responsibility” for all aspects of the codes and standards area (CPUC). The CPUC approved C&S Advocacy scope in the business plans, and that scope should be respected.</p>	<p>CalMTA understands the important role and significant history of the C&S teams in California and looks forward to continuing our coordination efforts and partnership development. We have found our initial series of meetings productive and look forward to deeper dives with appropriate C&S teams for each MTI selected to advance to Phase II.</p>
	<p>DOE feedback should be addressed and incorporated into the Advancement Plans: PG&E assisted CalMTA with contacting DOE to discuss CalMTA’s support of DOE in the Advancement Plans. Although PG&E did not participate in the conversation, any feedback received should be addressed and incorporated into the Advancement Plans.</p>	<p>CalMTA staff have facilitated preliminary discussions with DOE staff to discuss these MTIs. Their input was incorporated into our draft Advancement Plans.</p>
	<p>The total system benefits for all Advancement Plans are high, and additional information is necessary to provide more specific comments: CPUC’s Cost-effectiveness Tool (CET) calculates total system benefit (TSB) for energy efficiency programs using avoid costs for avoided generation capacity, energy, ancillary services, greenhouse (GHG) emissions, transmission, and distribution capacity. It is unclear if CalMTA used the same avoided costs as those provided by CPUC Avoided Cost Calculator to estimate TSB for three market transformation initiatives (MTIs). If not, please provide the methodologies and cost assumptions used to estimate energy, grid, and GHG benefits. If CalMTA’s calculation methods and cost assumptions for energy, grid, and GHG benefits differ from those used by CPUC CET, CalMTA may want to give it another name to avoid confusion with TSB.</p>	<p>CalMTA applied avoided costs using the Avoided Cost Calculator as would be used in the CPUC’s CET, along with specific load shapes modeled to account for when technologies are likely to be used throughout the year. TSB results were derived using the CPUC’s TSB methodology. The team will refine TSB and cost-effectiveness estimates based on newly available data when it is collected in Phase II: Program Development.</p>

Source	Feedback Provided	CalMTA Response
	<p>For all three MTIs, TMA in 2045 is near the maximum market adoption potential or equivalent to having a corresponding C&S with a high compliance rate:</p> <p>For induction cooktops, the estimated incremental market adoption is four million, representing approximately one-third of the California residential market. Is this a reasonable forecast based on the planned MTI budget? For comparison, what resources have been spent on water heater electrification to achieve a similar level of market adoption?</p>	<p>Incremental market adoption represents the difference between the BMA and TMA, which is the cumulative adoption in 2045 in presence of CalMTA intervention and builds on an assumption that market barriers to adoption will be addressed. BMA and TMA estimates will be reviewed in Phase II: Program Development based on a more robust Delphi panel and refined understanding of target market conditions.</p> <p>CalMTA will account for market adoption resulting from current and upcoming/pending legislation and regulatory conditions at the time of launching the MTI (including growth in adoption due to municipal bans and IRA incentives) in the baseline market adoption forecast. CalMTA will evaluate the influence of the MTI on any additional policy and market changes subsequent to MTI launch as part of its market progress evaluation.</p>