

Application No.: 24-12-XXX (CalMTA)

Exhibit No.: MTA-02

Witnesses: Lynette Curthoys and Jeff Mitchell

Commissioner: _____
ALJ: _____

**CALIFORNIA MARKET TRANSFORMATION ADMINISTRATOR
PREPARED TESTIMONY OF LYNETTE CURTHOYS AND
JEFF MITCHELL**

**DESCRIPTION AND MERITS OF THE PROPOSED MARKET
TRANSFORMATION INITIATIVES**

Application 24-12-XXX
California Market Transformation Administrator (CalMTA)

December 20, 2024

1 **EXHIBIT MTA-02**

2 **DESCRIPTION AND MERITS OF THE PROPOSED MARKET**
3 **TRANSFORMATION INITIATIVES**
4

5 Q. 1. *Ms. Curthoys, what is the purpose of your testimony in this Application?*
6

7 A. 1. As indicated in my Statement of Qualifications, I am the Vice President of Market
8 Transformation for Resource Innovations and am charged with leading the
9 CalMTA Program. In that role, I have dedicated my efforts to ensuring that the
10 entire process for soliciting, receiving, and selecting Market Transformation
11 Initiative (MTI) proposals by CalMTA and the Market Transformation Advisory
12 Board (MTAB) has been fair and in full compliance with Commission directives,
13 both those specific to Decision (D.)19-12-021 and those resulting from
14 continuous communication and collaboration with the California Public Utilities
15 Commission's (CPUC's) Energy Division. In this role I am supported by Jeff
16 Mitchell, who is the Principal of Market Transformation for the CalMTA program.
17

18 Q. 2. *What has been the result of that process?*
19

20 A. 2. The result is the selection of an initial tranche of the first two MTIs developed in
21 California—the Room Heat Pump MTI and the Induction Cooking MTI. Detailed
22 MTI Plans for each of these MTIs are included in Appendix 1 and Appendix 2 of
23 the Application, respectively. While CalMTA anticipates adding more initiatives to
24 our portfolio of MTIs in the future, these two initiatives alone are estimated to
25 deliver more than \$1 billion in total system benefit (TSB) over their life cycle and
26 produce 2.2 times more benefits than costs using total resource cost (TRC) test
27 as a metric. These benefits would be lost if these initiatives do not move forward.

1 As detailed in this testimony and the testimony in Exhibit MTA-06, the Room Heat
2 Pump and Induction Cooking MTI Plans were developed by CalMTA in close
3 collaboration with the MTAB and CPUC Energy Division staff following the stage
4 gate process established in approved Market Transformation Framework (MT
5 Framework) attached to D.19-12-021.¹ As detailed in the Phase I Disposition
6 Report in Attachment 1 of Exhibit MTA-06, these first two MTIs represent two
7 high-scoring initiatives that also met CalMTA's criteria to support expedited MTI
8 Plan development. That is, they both have:

- 9 1. A well-defined product, preliminary MT theory, and program logic;
- 10 2. Clear leverage points that are likely to be effective in producing market
11 change;
- 12 3. A clear role for CalMTA; and
- 13 4. Any needed research or pilot projects were clear and well understood.

14 In addition, the initiatives incorporate specific strategies to include participants
15 from environmental and social justice (ESJ) communities to ensure these
16 ratepayers are not left behind as detailed in Section 2.3 of each MTI Plan and the
17 testimony in Exhibit MTA-08.

18
19 Q. 3. *Why are these first MTIs good opportunities for California?*

20
21 A. 3. In addition to cost-effectively delivering the tremendous electric system benefits
22 to California mentioned above, both MTIs present compelling market
23 transformation opportunities that help the Commission and the State meet energy
24 efficiency and greenhouse gas (GHG) reduction policy goals with targeted
25 strategies to ensure ESJ communities share in the benefits.

¹ See D.19-12-021, pp. 93-162.

1
2 Heating and cooling represent the largest energy consumption end-use for
3 California homes and more than 59%² of households use outdated gas and
4 inefficient electric appliances for space conditioning. Room heat pumps provide a
5 more efficient option that can be self-installed in a standard 120V outlet without a
6 panel or service upgrade. The technology provides an attractive option to low-
7 income consumers who cannot afford the installation cost of other heat pump
8 alternatives or are unable to install permanent equipment due to landlord
9 restrictions.

10
11 Cooking is a comparatively smaller energy-consumption end-use than
12 heating/cooling, but it is one of the most visible and personal uses of energy in
13 households. As detailed in the Product Assessment Report in Appendix C of the
14 Induction Cooking MTI Plan (Appendix 2 of CalMTA's Application), induction
15 cooking is the most efficient cooking option over natural gas and electric radiant
16 models. In a future state where residential buildings are electrified, this initiative
17 will work to ensure efficient, high-quality induction products are available at all
18 price points and configurations. Beyond its energy efficiency (EE) advantages,
19 high-performance induction cooking can increase consumer acceptance of
20 whole-home electrification, making it a linchpin technology for California's
21 building decarbonization goals. If consumers electrify space conditioning, water
22 heating, and other appliances but do not embrace electric cooking, residential
23 gas customers may be left to bear the cost of maintaining gas distribution
24 infrastructure to homes for one last remaining appliance.
25

² EIA RECS 2020; CalMTA recalibration of household population to the American Community Survey (ACS) 2022. This also includes a small percentage of oil and wood stove heating that are binned with gas zonal heating.

1 Q. 4. *What high-level principles did the Commission establish for selecting MTIs in*
2 *D.19-12-021?*

3
4 A. 4. The approved MT Framework in Attachment A of D.19-12-021 listed the following
5 high-level principles required for all MTIs:³

- 6 1. Drive incremental savings that achieve the state's energy efficiency,
7 equity, and GHG reduction goals.
- 8 2. Be managed cost-effectively as a portfolio under the MT framework
9 and just and reasonable for ratepayers to fund.
- 10 3. Use a stage gate process for development and deployment.

11
12 Q. 5. *How do the Room Heat Pump and Induction Cooking MTI Plans drive incremental*
13 *savings that achieve the state's EE, equity, and GHG reduction goals (high-level*
14 *principle 1)?*

15
16 A. 5. The two MTIs drive incremental savings by producing a forecasted TSB of more
17 than \$1 billion over their life cycle, which is a significant incremental contribution
18 to reducing electric-system costs. Both MTIs support California's bold goal to
19 achieve carbon neutrality economy-wide by 2045 by advancing zero-carbon
20 solutions for existing single and multifamily homes, which are difficult to
21 decarbonize since many lack the panel capacity and 240V wiring required for full
22 electrification. The proposed MTIs take on barriers to residential building
23 decarbonization that are not easily addressed in the traditional EE portfolios since
24 the technologies are not widely offered by the EE program administrators (PAs).

³ See D.19-12-021, p. 102.

1 In addition, as detailed in the previous response, both initiatives address barriers
2 to adoption of these efficient, zero-carbon appliances in ESJ communities.

3 The Room Heat Pump MTI includes strategies to bring to market affordable,
4 efficient heat-pump equipment that is appropriate to the California climate and
5 building stock. These portable units offer low-income consumers and their
6 families the opportunity to own, and take with them in a move, appliances that
7 deliver comfort and climate resiliency benefits.

8
9 The Induction Cooking MTI also makes this transformational cooking product
10 more accessible to residents in ESJ communities. Many induction cooking
11 products on the market today are premium 30- to 36-inch designs that require a
12 240V outlet, which is not available in most California kitchens, particularly in ESJ
13 communities.⁴ Through the proposed market interventions in the Induction
14 Cooking MTI Plan, CalMTA will influence development of affordable induction
15 cooking products, including smaller 24-inch designs suitable for multifamily and
16 accessory dwelling units, and battery-enabled options that plug into existing 120V
17 outlets. The innovative battery-enabled products that are just now entering the
18 market at a high price point limit the need for panel upgrades, deliver comparable
19 cooking performance to 240V induction stoves, and reduce peak electrical
20 demand by allowing off-peak charging.

21
22 Additional details about the equity benefits and strategies of each initiative can be
23 found in Sections 2.1.8 and 2.3 of the MTI Plans. Equity metrics for each MTI Plan

⁴ The ESJ Action Plan defines ESJ communities as 1) Disadvantaged Communities, defined as census tracts that score in the top 25% of CalEnviroScreen 3.0, along with those that score within the highest 5% of CalEnviroScreen 3.0's Pollution Burden but do not receive an overall CalEnviroScreen score; 2) All Tribal lands; 3) Low-income households (Household incomes below 80 percent of the area median income); and 4) Low-income census tracts (Census tracts where aggregated household incomes are less than 80 percent of area or state median income).

1 can be found in the Appendix F Evaluation Plans in Section 4.2 (see Appendix 1
2 and 2 of CalMTA's Application).

3
4 Q. 6. *How will CalMTA manage the MTIs cost-effectively as a portfolio under the MT*
5 *Framework so that the MTIs are just and reasonable for ratepayers to fund (high-*
6 *level principle 2)?*

7
8 A. 6. The first two MTIs proposed by CalMTA represent a cost-effective foundation for
9 California's emerging MT portfolio. Table 2 in the Application shows the combined
10 cost-effectiveness of the Induction Cooking MTI and the Room Heat Pump MTI
11 over their life cycle.

12
13 While D.19-12-021 did not set a cost-effectiveness threshold for the MT program
14 at the MTI or portfolio level, it did set forth an expectation that the program will be
15 managed with an "eye toward increasing cost-effectiveness and benefits
16 exceeding costs of the entire portfolio over the long term."⁵ These initiatives meet
17 and exceed the Commission's expectation.

18
19 Appendix B of each MTI Plan (Appendix 1 and Appendix 2 of CalMTA's
20 Application) detail the methodology used to forecast cost-effectiveness using the
21 Commission-approved cost-effectiveness tests; the testimony in Exhibit MTA-05
22 adds further context.

23
24 As shown on Figure 1, the MTIs are a reasonable long-term investment for
25 ratepayers to fund. The first five years of Market Deployment (Phase III) funding
26 will begin the process of removing market barriers to accelerate adoption of room

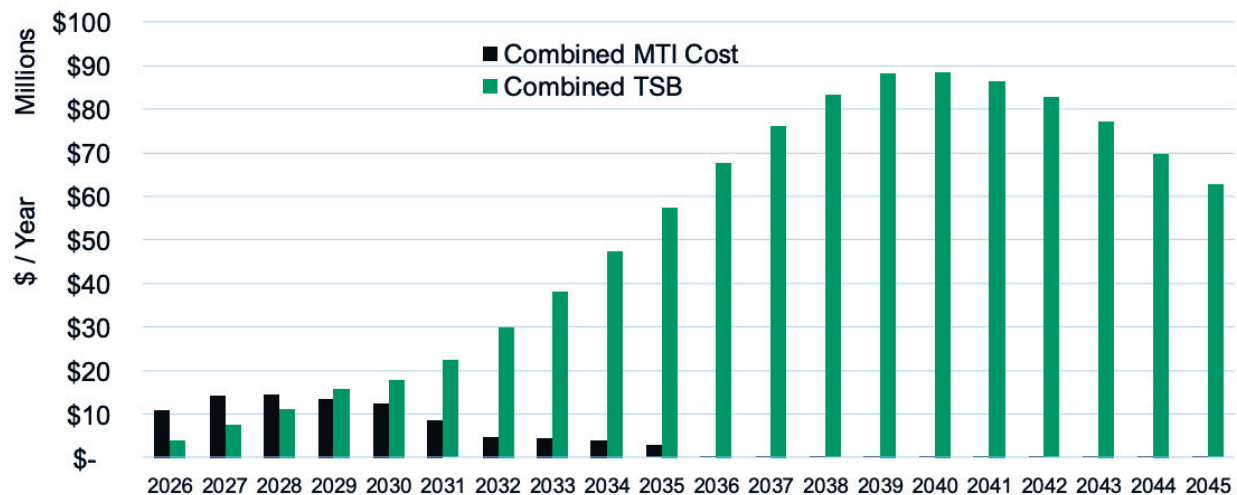
⁵ See D.19-12-021, p. 131

1 heat pumps and induction cooking. In future funding cycles, as the adoption
2 curves accelerate, a minimal investment in monitoring and evaluation is needed
3 to confirm the forecasted net incremental benefits continue to accrue. The Room
4 Heat Pump MTI is forecasted to reach cost-effectiveness by the TRC test in 2034
5 and the Induction Cooking MTI is forecasted to reach cost-effectiveness in 2042.

6
7 CalMTA will continue to consider long-term portfolio-level cost-effectiveness as
8 we propose additional MTIs for California's MT portfolio.

9
10 While CalMTA's forecasted TSB for these cost-effective MTIs is tremendous, the
11 benefits to California overall are even larger as these estimates do not count the
12 approximately \$360 million in TSB that will be generated in California outside of
13 the service area of the investor-owned utilities (IOUs).

14
15 **Figure 1: Total System Benefit and MTI Costs for Room Heat Pump and**
16 **Induction Cooking MTIs**



1 Q. 7. *Did CalMTA use the stage gate process for development of the MTIs included in*
2 *this Application and will CalMTA use the same process for the development of*
3 *future MTIs (high-level principle 3)?*
4

5 A. 7. Yes, CalMTA used Phase I Concept Development (Stages 1 and 2) and Phase II
6 Program Development (Stages 3 and 4) of the stage gate process to develop the
7 Room Heat Pump and Induction Cooking MTIs as required by D.19-12-021.⁶ A
8 description of the stage gate process used to develop the MTIs can be found on
9 the CalMTA website. Exhibit MTA-06, Chapter 1 (regarding MTI development)
10 further describes Phase I and Phase II activities that CalMTA performed to
11 develop the first two MTI Plans. CalMTA will utilize the stage gate process for the
12 deployment of MTIs included in this Application and the development and
13 deployment of future MTIs. Four additional MT ideas are currently in Phase II.
14

15 Q. 8. *Did the Commission identify any additional principles that MTIs should meet?*
16

17 A. 8. The MT Framework identified nine additional principals that MTIs should meet
18 (principles 4 to 12), while acknowledging some may not be applicable to each
19 and every MTI:⁷

20 4. Complement and coordinate with Rolling Portfolio programs.

21 5. Support and not stifle innovation.

22 6. Leverage existing processes and forums where appropriate.

23 7. Integrate strategies to maximize equity.

⁶ See D.19-12-021, pp. 104-115.

⁷ See D.19-12-021, p. 102.

8. Be informed, measured, and evaluated by data and information.
9. Include metrics to assess progress toward MTI and state and Commission policy goals.
10. Be vetted in an inclusive, open, and transparent manner.
11. Ensure that the energy efficiency workforce is adequately trained, skilled, and available.
12. Synchronize with the evolving long-term structural changes to California's energy production and consumption.

Q. 9. *How do the MTIs complement the EE PAs' Rolling Portfolio⁸ programs (principle 4)?*

A. 9. CalMTA coordinated extensively with the EE PAs before proposing the two MTIs included in this Application. This included regular bi-weekly meetings with the IOU C&S program teams and meetings with the EE PAs on other program efforts. These meetings identified similarities, where coordination might create leverage points, or other ways the MTIs and EE programs could both benefit or coordinate. For more information on the EE PA programs that CalMTA has identified that require coordination, see Appendix E, Table 1, of each MTI Plan (Appendix 1 and Appendix 2 of CalMTA's Application). Appendix E, Table 2, of each MTI Plan organizes these programs according to aligned goals and the kinds of support CalMTA plans on providing the PA programs.

⁸ When D.19-12-021 was adopted the EE PAs operated under the Rolling Portfolio process. This process was eliminated with the adoption of D.21-05-031, which fully phased out the Rolling Portfolio on January 1, 2024.

1 CalMTA's proposed MTIs will also complement and not duplicate the portfolios
2 and efforts of the EE PAs. To understand how the proposed MTIs could best
3 complement the portfolios of the EE PAs, CalMTA did an extensive review of the
4 programs offered by the EE PAs and similar types of demand-side efforts.⁹ When
5 reviewing these programs, CalMTA paid particular attention to efforts that had
6 similarities to or operated in the same markets as the MTIs proposed in this
7 Application so that CalMTA could avoid market confusion and identify possible
8 leverage points to benefit both efforts.

9
10 CalMTA's upstream interventions in the induction cooking market will supplement
11 existing incentive and loaner programs focused on end-use consumer adoption.
12 As CalMTA is successful through these MTIs in increasing the suitable product
13 offerings from manufactures, retail stocking practices, and consumer demand,
14 the costs of both induction cooking and room heat pumps are anticipated to
15 decrease, making them a more attractive, cost-effective option for the EE portfolio
16 and other efforts administered outside of the EE portfolios. While these benefits to
17 other programs will be generated by CalMTA's market interventions, they are not
18 reflected in CalMTA's TSB and cost-effectiveness forecasts because CalMTA will
19 subtract out verified EE savings that the EE PAs claim for the same products
20 included in the MTIs. For more information on CalMTA's approach to calculating
21 our net incremental impact, refer to Appendix B of each MTI Plan and to the
22 testimony in Exhibit MTA-05.

⁹ In addition to reviewing the programs offered by the EE PAs under the EE proceeding (R.13-11-005), CalMTA reviewed income qualified programs such as Energy Savings Assistance (A.19-11-003), programs under the building decarbonization proceeding (R.19-01-011) and programs administered by the California Energy Commission or with funds from the Inflation Reduction Act.

1 Similarly, room heat pumps have limited inclusion in EE programs due to the
2 emerging nature of the products and relatively high incremental costs. CalMTA is
3 currently supporting the development of a measure package for potential
4 inclusion in Energy Savings Assistance (ESA) programs and broader EE
5 programs, and supporting the development of a business case to accelerate the
6 development of room heat pumps that are more suitable for the California climate
7 and window configurations than products currently available.
8

9 Q. 10. *How do the MTIs proposed in this Application support and not stifle innovation*
10 *(principle 5)?*
11

12 A. 10. The two MTIs proposed in this Application will support innovation in a number of
13 ways across the EE portfolios and other demand-side program activities offered
14 in California.
15

16 First, the MTIs are innovative because both initiatives include interventions to
17 accelerate development of new products for California, which, as of the filing of
18 this Application, are not widely available across the state or in the EE PAs
19 portfolios and will have significant, long-term impacts. Secondly, as stated above,
20 CalMTA will use primarily upstream intervention strategies for delivering the MTIs,
21 resulting in incremental impacts and providing lift to other EE programs.
22

23 In addition, each of the MTIs has specific interventions to spur innovation in each
24 market. For instance, room heat pumps are generally available for purchase in
25 California, but room heat pumps appropriate for California's climate or that fit in
26 casement or sliding windows (the predominant type in California) are not. This
27 MTI will aggregate demand through a Technology Challenge to encourage
28 innovation to develop more California-appropriate products. CalMTA will further

1 drive product innovation by encouraging inclusion of air filtration capabilities in
2 future product iterations to improve indoor air quality.

3
4 As noted above in this testimony, many induction cooktops on the market today
5 are premium products that require a 240V outlet, which is not available in most
6 California kitchens, particularly in ESJ communities. Through the Induction
7 Cooking MTI, CalMTA will aggregate demand through a Technology Challenge to
8 encourage innovation to develop affordable induction cooking products, including
9 24-inch products suitable for multifamily and accessory dwelling units, and
10 battery-enabled options that plug into existing 120V outlets. CalMTA is currently
11 working with California-based businesses to develop such products.

12
13 For additional information on the products and product innovations that will be
14 encouraged by each MTI, see Section 7 of the Product Assessment Reports
15 (Appendix C of each MTI Plan). For additional information on CalMTA's proposed
16 interventions that will stimulate product innovation, refer to Section 2.2 of each
17 MTI Plan and the Logic Model in Appendix A of each MTI Plan.

18
19 Q. 11. *How did CalMTA leverage existing processes and forums to seek input on the*
20 *MTIs included in this Application where appropriate (principle 6)?*

21
22 A. 11. Ordering Paragraph 8 of D.19-12-021 directed that the MTAB is the primary
23 forum for CalMTA to get input on MTI development because the members of the
24 MTAB represent key stakeholders in energy efficiency and all MTAB meetings are
25 open to the public.

26
27 In addition, CalMTA also used other existing processes to share information and
28 get input from the public. First, CalMTA staff provided updates on our progress in
29 presentations to the California Energy Efficiency Coordinating Committee

1 (CAEECC) at the following CAEECC Quarterly Meetings: February 22, 2023 (Q1,
2 2023), June 21, 2023 (Q2, 2023), November 29, 2023 (Q4, 2023), March 14,
3 2024 (Q1, 2024), and November 13, 2024 (Q4, 2024). Secondly, CalMTA utilized
4 the EE service list (R.13-11-005) to ensure that interested members of the public
5 were aware of MTAB meetings and when documents were ready for feedback or
6 had been finalized. Third, CalMTA used the CPUC Energy Division's Public
7 Document Area (PDA) to solicit public feedback on key documents. Fourth,
8 CalMTA attended and presented at strategically targeted conferences that are
9 relevant to the MTIs included in this Application and that were attended by
10 important market actors. Finally, as stated before, CalMTA collaborated
11 extensively with the EE PAs, as outlined in Appendix E to each of the MTI Plans.
12

13 Q. 12. *How did CalMTA integrate strategies to maximize equity into the MTIs proposed*
14 *in this Application (principle 7)?*
15

16 A. 12. The Room Heat Pump MTI will address equity through manufacturer interventions
17 to develop more affordable products and increase the stock of qualifying room
18 heat pumps at retailers serving ESJ communities. It will further help mitigate
19 electric bill impacts to ESJ communities by gathering usage data and messaging
20 about best practices for installation and use.
21

22 The Induction Cooking MTI will address affordability through encouraging
23 manufacturers to develop 120V battery-equipped products, which can obviate the
24 need for an electrical upgrade, and more affordable models. Additionally, the
25 negative health impacts of gas cooking disproportionately impact ESJ communities
26 and induction products will improve indoor air quality.
27

28 Additional details about the equity benefits and strategies of each initiative can be
29 found in Sections 2.1.8 and 2.3 of the MTI Plans. Equity metrics for each MTI Plan

1 can be found in the Appendix F Evaluation Plans in Section 4.2 (see Appendix 1
2 and 2 of CalMTA's Application).

3
4 Q. 13. *How are the MTIs included in this Application informed, measured, and evaluated*
5 *by data and available information (principle 8)?*
6

7 A.13. CalMTA has made, and will make, data-driven decisions throughout the
8 development and deployment of the MTIs included in this Application and for
9 future MTIs. This starts with the scoring process for the potential MT ideas that
10 were received through the initial RFI, where the scoring team used consistent
11 criteria to evaluate each idea's viability as a possible MTI. Data drove the process
12 for selecting the MTIs to include in this Application, as the MTI development team
13 used existing market and program data to understand which ideas might be able
14 to gain market traction, save energy, reduce GHGs, serve ESJ customers, and be
15 administered in a cost-effective portfolio of MTIs.

16
17 As detailed in the Appendix C: Product Assessment Report of each MTI Plan,
18 CalMTA performed extensive product research to inform the MTI Plan, including
19 significant modeling to determine performance metrics required to maximize
20 impacts while minimizing costs.

21
22 As detailed in the Appendix D: Market Characterization Study of each MTI Plan,
23 CalMTA gathered secondary research and performed extensive market research
24 to inform the MTI Plan, including target markets, baseline awareness levels, and
25 key barriers to market adoption.

26
27 For more information on the data-driven assumptions that went into each MTI,
28 see Appendix B for the market data used to develop the baseline and market

1 adoption assumptions for the interventions of each MTI, the TSB savings, and
2 cost-effectiveness estimates.

3
4 Upon approval of the MTIs included in this Application and for future MTIs,
5 CalMTA will continue to make data-driven decisions in the deployment of the
6 MTIs and evaluation of their impacts. While CalMTA will not implement the MTIs
7 and will instead bid them out to third-party implementers, CalMTA intends to
8 review market data provided via periodic evaluations to adaptively manage the
9 MTIs based on market conditions and ensure the MTI is reaching its market
10 progress goals. Each MTI will have a periodic third-party evaluation to confirm the
11 data and assumptions used to forecast MTI impacts and cost-effectiveness. For
12 more information on the evaluation plans and the data that will be used to assess
13 progress towards established market progress milestones, see Appendix F of
14 each MTI Plan.

15
16 Q. 14. *How will CalMTA use metrics to assess progress toward MTI and State and*
17 *Commission policy goals (principle 9)?*

18
19 A. 14. CalMTA's MTI Plans include metrics that will assess how the MTIs will support
20 California's most important and ambitious legislative efforts and policies enacted
21 in the furtherance of EE, climate change mitigation, and decarbonization,
22 including Senate Bill 350 (2015), The Clean Energy and Pollution Reduction Act;
23 Assembly Bill (AB) 32 (2006), The Global Warming Solutions Act of 2006; AB
24 1279 (2022), The California Climate Crisis Act, and SB 100 (2018), The 100
25 Percent Clean Energy Act of 2018. Both the Room Heat Pump MTI and the
26 Induction Cooking MTI will advance the energy efficiency, building
27 decarbonization, and climate mitigation objectives of these legislative efforts and
28 help California to meet our GHG reduction mandates.

1 Appendix B of each MTI Plan details the methodology used to arrive at the
2 primary metric of CalMTA's impact, TSB, which includes both EE and GHG
3 reduction as constituent components. The MT theory and logic model for each
4 MTI Plan identifies clear outcomes that will produce each MTI's net incremental
5 impact and the Evaluation Plan in Appendix F of each MTI Plan maps each
6 outcome to clear market progress indicators and milestones, which function as
7 the metrics for the MTI.

8
9 Finally, the two MTIs will support Commission D.23-04-035, which addresses
10 reducing incentives for natural gas measures and was adopted in the energy
11 efficiency proceeding (R.13-11-005). The Commission approved D.23-04-035 as
12 part of the future-looking framework in which ratepayer-funded natural gas EE
13 incentives may no longer be available as California continues to transition to
14 cleaner electric alternatives.

15
16 *Q. 15. How were the MTIs included in this Application vetted in an inclusive, open, and*
17 *transparent manner (principle 10)?*

18
19 *A. 15.* The MTAB is the primary forum for CalMTA to get feedback on potential MTIs.
20 Refer to the testimony in Exhibit MTA-06, Chapter 3, for details regarding MTAB
21 meetings and public review of the MTIs as they advanced through the stage gate
22 process. These efforts go beyond the requirements of D.19-12-021 to ensure that
23 the MTIs were vetted by all interested parties before submitting them in this
24 Application. For more information on how CalMTA sought feedback on our MTIs,
25 see our response to the question above about leveraging existing forums and
26 Appendix E of the MTI Plans.

27
28 *Q. 16. How will the MTI's proposed in this Application help ensure that the energy*
29 *efficiency workforce is adequately trained, skilled, and available (principle 11)?*

1
2 A. 16. Yes, Section 2.4 of each MTI Plan identifies workforce development opportunities
3 for each MTI. The Induction Cooking MTI pushes for increased adoption of all
4 induction and ENERGY STAR® certified electric resistance cooking, which is
5 currently dominated by 240V products. Therefore, there will be workforce needs
6 in the near term to help install 240V circuits to accommodate these products.
7 This MTI will also work to jumpstart the development of 120V battery-equipped
8 products that will not require large workforce development needs. Given this, the
9 workforce development approach will be to collaborate and contract with
10 community-based organizations (CBOs) that are working to develop
11 electrification workforce skills. CalMTA's proposed Strategic Interventions also
12 address training builders and remodelers to understand the benefits of induction
13 to encourage them to change design plans and increasingly utilize induction
14 products. Similarly, the retailer-focused strategic interventions will require training
15 of retail sales staff on the benefits of induction cooking.

16
17 The primary workforce development approach for the Room Heat Pump MTI will
18 be to collaborate and contract with CBOs that are working to help communities
19 add this technology for energy efficiency and climate resilience. These local
20 CBOs also support community engagement and increase awareness of the
21 benefits of this technology.

22
23 This MTI will look for opportunities to ensure the proper recycling of window AC
24 units that RHPs aim to replace to ensure the older, higher GWP refrigerants are
25 dealt with in an environmentally responsible manner. This could also involve local
26 CBOs and serve as a workforce development opportunity.

27
28 In addition, CalMTA has several MT ideas that are currently in development that
29 will advance California's clean energy and EE workforce, including Efficient

1 Rooftop Units, Commercial Replacement & Window Attachment Solutions, and
2 Residential Heat Pump Water Heating.

3
4 Q. 17. *How will CalMTA's MTIs synchronize with the evolving long-term structural*
5 *changes to California's energy production and consumption (principle 12)?*
6

7 A. 17. From CalMTA's perspective, California has a couple of primary goals as it relates
8 to long-term energy production and consumption patterns. As required by SB
9 100, California has set a goal of eliminating the use of fossil fuels as a source of
10 electricity generation by 2045. This is part of California's broader effort to use
11 cleaner energy sources to mitigate the risks of climate change. The two MTIs
12 included in this Application support this effort by transitioning the fuel source for
13 some space conditioning and cooking from natural gas to electricity. In addition,
14 the MT ideas that are currently in development for future deployment will further
15 these objectives as most of them also induce customers to switch from using
16 natural gas to electricity and reduce the demand for both electricity and natural
17 gas.
18

19 An additional primary objective of California is to reduce energy consumption at
20 peak hours, which is often driven by customers needing to cool and heat their
21 homes. Reducing consumption during peak hours can be done by installing
22 equipment that operates more efficiently than other available products. The MTI
23 Plans included in this Application will support reducing peak energy consumption
24 by promoting products that operate more efficiently during peak demand. In
25 addition, room heat pumps allow for the heating or cooling of specific zones or
26 rooms, reducing the need to condition an entire home, further reducing peak
27 impacts.
28

29 Q. 18. *Does that conclude your testimony?*

1

2 A. 18. Yes.