



Room Heat Pumps Market Transformation Initiative

Appendix H: Phase III Cost Estimate

December 18, 2024

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Introduction

The cost estimates contained in this appendix include only the estimated costs for Phase III: Market Deployment and do not include Phase II: Program Development costs. Market Transformation Initiative (MTI)-specific Phase II costs for conducting research, completing strategy pilots, and developing the MTI Plan were included in CalMTA's authorized start-up budget and reflected in the 2024 and 2025 Annual Budget Advice Letters. Phase II costs are included in the total MTI lifecycle costs that were modeled to determine cost-effectiveness, as described in Appendix B: Market Forecasting and Cost-Effectiveness Modeling Approach.

This estimate is based on the MTI logic model and program strategy and was further informed by the experience of CalMTA team members who have delivered market transformation programs in other states. The estimate will be further refined as Phase III activities are launched and as the program strategy evolves over the life of CalMTA's market development activities. CalMTA's activities will focus on filling gaps not currently addressed by other programs; therefore, cost estimates may also change based on ongoing and future collaboration. Annual cost estimates will be refined in consultation with CPUC staff and the Market Transformation Advisory Board (MTAB) as part of the annual operations planning process, which may include fund-shifting between and among activities, MTIs, and program years.

Budget activity definitions

The following definitions describe the types of actions included in the Phase III cost estimate. Detailed descriptions of proposed market interventions for the Room Heat Pump (RHP) MTI Plan are included in Section 2: Market Transformation Theory & Opportunity.

- **MTI oversight, strategy, and management:** Activities required to manage MTI core deliverables such as subcontractor identification, onboarding and management, strategy development, stakeholder outreach, and metric reporting.
- **Awareness-building:** Awareness-building activities associated with the MTI strategy, including campaign strategy design and production, and campaign advertisements as required to build demand.
- **Policy development/support:** Activities required to support and influence relevant policies and standards as called out in the MTI strategy, such as federal and voluntary appliance standards (i.e., data-sharing, expert participation, and commenting on draft regulations or standards).
- **Supply chain engagement:** Activities along the full supply chain as defined in the MTI strategy, including workforce education and training (e.g., workforce outreach and recruitment, training material development and implementation), manufacturer outreach and



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engagement to support the development of products to better reflect the needs of California consumers, and retailer engagement on stocking practices, messaging, and program participation.

- **Market research:** Market research, as needed, to provide market insights that inform ongoing MTI strategy refinement and MTI effectiveness.
- **Data collection:** Continued collection of data over the course of the MTI to monitor the success of interventions as they progress and for future long-term monitoring and tracking.
- **Mid- or upstream incentives:** Manufacturer and retailer incentives to encourage product innovation and sufficient stocking practices.
- **Downstream incentives:** Consumer-facing incentives to encourage purchasing and adoption and create a meaningful market pull.
- **Evaluation:** Activities performed by the third-party evaluator as described in Appendix F: Evaluation Plan, including review of market adoption forecasts and cost-effectiveness, market progress evaluations, and long-term monitoring.



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Table 1 contains annual cost estimates by major program activity for the first five years of implementation, representing costs incurred over the initial CalMTA funding period allocated in CPUC D.12-21-021. A more detailed breakdown of these costs by CalMTA labor, CalMTA non-labor, third party-contracted labor, and incentives is included in the Application five-year budget.

Table 1. Year 1-5 cost estimate

Activity	Year 1 cost estimate	Year 2 cost estimate	Year 3 cost estimate	Year 4 cost estimate	Year 5 cost estimate	Five-year total
Program implementation						
MTI oversight, strategy, and management	\$1,022,000	\$1,066,000	\$1,097,000	\$1,130,000	\$1,164,000	\$5,479,000
Awareness-building	\$1,850,000	\$2,200,000	\$2,400,000	\$1,800,000	\$1,800,000	\$10,050,000
Policy development/support	\$100,000	\$100,000	\$100,000	\$100,000	\$75,000	\$475,000
Supply chain engagement	\$750,000	\$1,000,000	\$750,000	\$500,000	\$250,000	\$3,250,000
Market research						
Market research	\$115,000	\$106,000	\$109,000	\$112,000	\$115,000	\$557,000
Data collection	\$100,000	\$125,000	\$150,000	\$150,000	\$150,000	\$675,000
Incentives						
Mid-/upstream incentives	\$1,000,000	\$2,000,000	\$2,200,000	\$2,400,000	\$2,400,000	\$10,000,000
Downstream incentives	\$500,000	\$750,000	\$750,000	\$1,500,000	\$1,000,000	\$4,500,000
Evaluation						
Program evaluation	\$275,000	\$283,000	\$292,000	\$301,000	\$310,000	\$1,461,000
Total	\$5,712,000	\$7,630,000	\$7,848,000	\$7,993,000	\$7,264,000	\$36,447,000

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Table 2 contains annual cost estimates by major program activity for the full 20-year program period, representing all Phase III costs required to achieve full market transformation and to validate all impacts.

Table 2. Phase III cost estimate

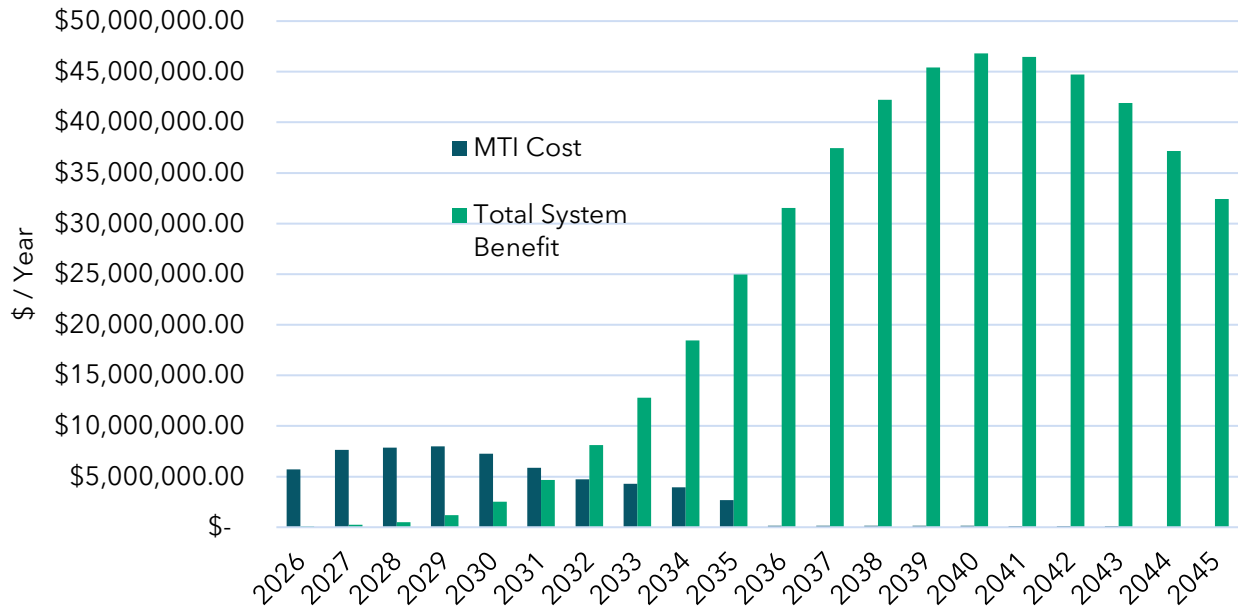
Activity	Years 1-5 cost estimate	Years 6-10 cost estimate	Years 11-15 cost estimate	Years 16-20 cost estimate	Total Phase III cost estimate
Program implementation					
MTI oversight, strategy, and management	\$5,479,000	\$6,367,000	\$212,000		\$12,058,000
Awareness-building	\$10,050,000	\$3,000,000			\$13,050,000
Policy development/support	\$475,000	\$175,000			\$650,000
Supply chain engagement	\$3,250,000	\$450,000			\$3,700,000
Market research					
Market research	\$557,000	\$631,000	-	-	\$1,188,000
Data collection	\$675,000	\$700,000	\$133,000	\$154,000	\$1,662,000
Incentives					
Mid-/upstream incentives	\$10,000,000	\$7,750,000			\$17,750,000
Downstream incentives	\$4,500,000	\$750,000			\$5,250,000
Evaluation					
Program evaluation	\$1,460,000	\$1,693,000	\$398,000	\$269,000	\$3,820,000
Total	\$36,447,000	\$21,515,000	\$743,000	\$423,000	\$59,128,000

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Figure 1 contains Phase III cost estimates by year and estimated annual total system benefit (TSB). This illustrates the estimated spend over time, showing a slight ramp-up over the first three years of market development activities followed by a taper-down of program spend over an estimated ten years. This highlights the long-term impacts of market transformation initiatives, with significant long-term impacts occurring after program activities have ramped down. The total cost associated with the remaining ten years includes only program evaluation costs, data acquisition costs, and program administration costs.

Figure 1. Phase III cost estimate and market impact by year



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