



Room Heat Pumps Market Transformation Initiative

Appendix G: Risk Management Plan

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Introduction

This document details the potential risks that could negatively impact the Room Heat Pump (RHP) Market Transformation Initiative (MTI) and CalMTA's plan to monitor and mitigate the risks. Additional information is included to establish the severity of the risk, likelihood of occurring, indicators that the risk is occurring, and assumptions around the possible mitigation approach. If the risk is designed with an "*", then the risk is listed in Section 9 of the RHP MTI plan as part of the summary of key risks that could impact this MTI.

The risks are listed in the chronological order in which we expect them to become evident (assuming they do occur), generally corresponding to the timing of CalMTA's planned strategic interventions. For example, the first risk is associated with one of CalMTA's first interventions: engaging manufacturers and motivating them to invest in the development and commercialization of California-appropriate RHPs due to documented strong demand for these products. In addition, we are defining "high," "medium," and "low" for each risk as follows.

For "Probability of Occurring" in the third column, CalMTA is defining:

- **High:** Through our research and discussion with market actors, CalMTA deems this risk having a high probability of occurring. The program needs to monitor closely and identify a solid backup plan with resources that can be deployed to mitigate the risk if it comes to fruition.
- **Medium:** This risk has a medium probability of occurring given what we know about the market. The MTI needs to track and have a mitigation plan.
- **Low:** The probability of this risk occurring is low based on what know about the market to date. It could have some impact on the need for resources and timing, so the MTI needs to track.

For "Severity" in the fourth column, CalMTA is defining:

- **High:** If this risk plays out and our mitigation approach is unfeasible, then the success of the MTI may be in jeopardy.
- **Medium:** This may have an impact on the timing or overall success of the MTI, but the MTI will be able to pivot with more time or resources.
- **Low:** This level of risk will likely require a program intervention adjustment, but it will not jeopardize the timing or resources needed level.

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Table 1. Risk assessment

	Risk	Probability of occurring	Severity	How will we know the risk is occurring?	Responsible & tracking ¹	Mitigation approach
1*	Large enough demand signal for manufacturers: Multifamily (MF) building owners do not agree to purchase enough units of the product proposed in the Tech Challenge, resulting in a smaller than needed demand signal for manufacturers to invest in the development of the product.	Medium	Medium	Engagement with MF building owners	Strategy Manager and Program Manager	Work with MF building owner trusted partners to secure additional signed agreements. CalMTA could pay a portion of the product costs to reduce cost to building owners or CalMTA develops bulk purchase pricing with manufacturers to help reduce costs. CalMTA couples promise to purchase with another program like Energy Savings Assistance to help offset costs.
2*	Manufacturer response to product that meets California window types: Manufacturers do not respond to Tech Challenge with product roadmaps that meet California window configuration needs.	Low	High	Engagement with manufacturers and lack of response to Tech Challenge	Product Management	Use examples of heat pump appliances from other markets and product categories to demonstrate feasibility. Reward the one known manufacturer that currently has the product with the entire MF order to stimulate competition and other manufacturers to join. Build a larger demand signal with California programs and other partners targeting a broader set of MF building owners.
3*	Manufacturer response to product that meets California climate needs: Manufacturers do not respond to Tech Challenge with product roadmaps that meet California mild climate needs.	Low	Medium	Engagement with manufacturers and lack of response to Tech Challenge	Product Management	Show market that it can be done through one manufacturer that we know has already done it. Reward the one known manufacturer that currently has the product with the entire MF order to stimulate competition and other manufacturers to join. Build a larger demand signal with California programs and other partners targeting a broader set of MF building owners. Revise spec to be more achievable in the near term.
4	Manufacturer response to build products that include air filtration: Manufacturers do not respond with products that add air filtration ability to room heat pump functionality.	Medium	Medium	Engagement with manufacturers	Product Management	Show market that it can be done through demonstrations with manufacturer that we know have already done it (Gradient with heat pump and Friedrich with window AC). Build a larger demand signal with California programs and other partners targeting a broader set of MF building owners. Develop tiered specification with adjusted energy efficiency for products offering high efficiency filtration. Work with manufacturers to use off-the-shelf furnace filters to reduce ongoing operating costs of filter replacement.
5	National specification alignment: National Collaborative members, especially members in more mild climates, decide not to participate, move too slowly or do not align with California on test procedures and ENERGY STAR product specifications.	Medium	Low	Engagement with room heat pump Collaborative and ENERGY STAR	Strategy and Program Manager	Develop data set on California market for partners that will likely influence manufacturers. Provide public comment through ENERGY STAR product specification process. Expand CalMTA investment and acquire data sets across national climate zones to build more robust, representative dataset to help convince other partners.

¹ The roles listed under the column “responsible & tracking” will be on point to track and identify if the risk is something that needs attention. The team will then work to deploy the appropriate mitigation strategy.

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	Risk	Probability of occurring	Severity	How will we know the risk is occurring?	Responsible & tracking ¹	Mitigation approach
						Conduct additional CalMTA sponsored field studies.
6	Impact of new administration on ENERGY STAR specification: EPA stalls or discontinues future ENERGY STAR specification for RHPs.	Low	Medium	Engagement with room heat pump Collaborative, EPA and ENERGY STAR	Strategy and Program Manager	Ensure continued tracking of market share, awareness and other relevant data so that when EPA restarts ENERGY STAR efforts, they will be able to rapidly update specifications to capture gains acquired during previous period. Continue to partner and expand efforts to support other voluntary standards and specifications such as CEE's RHP specification.
7	Data on RHP use and impacts on bills: CalMTA is unable to gather RHP usage data from other partners and aggregate into one data set for all partners.	Low	Low	Engagement with other research partners and national collaborative members	Strategy and Program Manager	Expand CalMTA investment and acquire data sets across all California climate zones to build more robust, representative dataset for California. Conduct additional CalMTA sponsored field studies.
8*	Product labeling: Manufacturers continue to label and describe room heat pumps in a variety of conflicting and confusing ways (inverter technology, heat pumps, etc.), which makes retailer and consumer product selection challenging.	Low	Medium	Web surveys, interviews with retail merchants, consumer surveys	Market Research and Evaluation Lead	Incorporate streamlined messaging into all RHP marketing partnerships. Require retailers to add "Heat Pump - reverse cycle" filter to online search engines, if they are to receive midstream incentives for qualified RHPs. Continue to advocate for consistent messaging through manufacturers engagement and RHP collaborative partners.
9*	Inclusion in California programs: Programs that provide incentives for efficient products or other offerings that seek to influence consumer adoption (energy efficiency, weatherization, climate resilience programs, equity, etc.), fail to include this measure in their programs.	Low	Medium	Engagement with Program Administrators (PA) and manufacturers, CEDARS database	Strategy and Program Manager	Support program inclusion through data and market support (manufacturers, retailer, community-based organizations, and marketing support).
10	Retail stocking practices: Retail partners do not change stocking practices to include RHPs in stores and fail to offer affordable RHPs in stores that are designate as predominantly serving environmental and social justice (ESJ) communities.	Medium	Medium	Retailer sales data from ENERGY STAR Retail Products Platform program and web scrapping information Interviews with retail product buyers and program staff	Market Research and Evaluation Lead	Continue base stocking incentives to retailers to continue to acquire data. Develop marketing plans with retailers at targeted stores that support ESJ communities to demonstrate demand.
11	Use of lower global warming potential (GWP) refrigerants in California: Standards setting bodies in California do not move to change rules allowing manufacturers to utilize lower GWP (ultra-low or natural refrigerants) in RHPs.	High	Low	Engagement with policy makers and manufacturers	Strategy and Program Manager	Continue to support partners pushing for change in refrigerant use through field test data, lab research, use cases from Europe, and advocacy to standard setting bodies.
12*	Electrification rates in California: California utilities roll out electrification enabling rate structures, especially for ESJ communities, slower than anticipated thus dampening consumer interest in moving to electric heat pumps.	Low	Medium	Engagement with policy makers, CPUC and utility partners	Strategy and Program Manager	Across all CalMTA consumer product MTIs (Heat Pump Water Heating, Room Heat Pumps, and Induction Cooking) support policy makers and advocates in the movement towards electrification friendly rates through bill impact information, avoided costs, and other non-energy benefit for the consumer. Focus initial interventions on those customers likely to benefit the most from a switch to RHP (those with inefficient electric heating).



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						Provide stipends to customers who switch to an RHP, and experience bill impacts as temporary measure.
13	Heat pump product competition: The market for other heat pump products like mini-splits evolves superseding RHPs, and fills the market gap that RHPs is meant to fill.	Low	Medium	Heat pumps sales data. Interviews with PAs, interviews with manufacturers and supply chain	Product Manager	Gather data and watch.
14	Consumer price: Prices of products that meet the window and climate needs of California do not decline over time.	Low	Medium	Sales data collection, interviews with manufacturers	Market Research and Evaluation Lead	Continue to push for RHP inclusion in other types of programs to help bring down costs. Encourage more HVAC manufacturers to offer room heat pump products to increase price competition.
15	Impact of new administration on IRA funding: The new administration discontinues tax credits that cover RHP and/or they expire before the MTI interventions take effect and, thus, this MTI misses the opportunity to leverage them in the near-term.	Medium	Medium	Engage with the Department of Energy/Environmental Protection Agency and manufacturers, California Energy Commission, and PAs	Strategy and Program Manager	Mitigate impact of Inflation Reduction Act (IRA) incentive expiring by continuing to push for RHP inclusion in other types of programs. Provide layered bulk purchases for RHPs. Engage CBOs on layered bulk purchasing pricing for RHPs. Engage online energy efficiency platforms that offer financing options for ESJ consumers with targeted RHP promotions.
16	Owners of multifamily buildings resist installation: Owners of MF properties do not allow window versions of room heat pumps to be installed in their properties for a variety of possible reasons (fear of potential hazards of window units falling out of windows, condensate management, or aesthetic concerns).	Medium	Medium	Engagement with PAs running MF programs, MF building owners and their aggregators	Strategy and Program Manager	Engagement with manufacturers to ensure safety measures are included in products. More education for both owners of MF units and their tenants.



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