



Residential HPWH: MPIs and Milestones

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Metrics by strategic intervention:

Influence product development and match technology to housing stock

LM Outcome	Time frame	MPI	Milestone
Energy efficiency partner organizations/ programs include greater diversity of HPWH product tiers/program offerings to meet market demand	Medium (3-5 years)	4. Number of energy-efficiency partner organizations/programs that support HPWHs with a variety of form factors (e.g., split and integrated systems, 120v and 240v systems)	Ten or more EE partner organizations/ programs support HPWHs with a variety of form factors in their offerings by mid-2032
		5. Supply chain partners support/participate in trainings and use tools/resources to match HPWH technologies to California housing stock	Majority of installers report using tools/resources to match HPWH technologies to their customers' homes by mid-2032
Greater diversity in products with alternative form factors installed in California homes to meet needs of California housing stock	Medium (3-5 years)	6. Percent of homes where installers report HPWH technology is "fit-for-purpose"	50% of installers report having ability (access, knowledge) to match appropriate HPWH technology to customers' homes by mid-2032
		EQ6. Percent of homes in ESJ communities where installers report HPWH technology is "fit-for-purpose"	50% of installers working in ESJ communities report having ability (access, knowledge) to match appropriate HPWH technology to customers' homes by mid-2032

Metrics by strategic intervention:

Influence product development and match technology to housing stock

LM Outcome	Time frame	MPI	Milestone
HPWHs newly installed in California utilize lower GWP refrigerants and include load shift capabilities	Long (6-10+ years)	7. Percent of annual HPWHs sales in California that use lower GWP refrigerants	No specific milestone: more (including historically dominant) manufacturers shift to lower GWP refrigerants in response to regulatory requirements and market forces
		8. Percent of annual HPWHs installations in California that meet AHRI 1430 load shift requirements	100% of HPWHs meet AHRI 1430 load shift requirements after 12 years of MTI implementation (mid-2039)

Metrics by strategic intervention:

Aggregate statewide buying power to attract market partners & build momentum in scalable submarkets



LM Outcome	Time frame	MPI	Milestone
Increased HPWH installations in early MTI-identified submarkets	Short (1-2 years)	9. Increased sales of HWPWs in early MTI-identified submarkets	15% increase in HPWH sales in two MTI-identified submarkets by EOY 2029
Increased installer confidence and acceptance of HPWH technology	Short (1-2 years)	10. Installers working in early MTI-identified submarkets believe there is an HPWH solution for majority of their customers in MTI-identified submarket	35% of installers working in MTI-identified submarkets believe there is an HPWH solution for majority of their customers by EOY 2029
Total installed cost decreases for MTI-identified submarkets	Short (1-2 years)	11. Total installed cost of HPWHs in MTI-identified submarkets	Average of 15% decrease in installed HPWH costs in MTI-identified submarkets by EOY 2029
		EQ11.Total installed cost of HPWHs in ESJ MTI-identified submarkets	Average of 15% decrease in installed HPWH costs in ESJ MTI-identified submarkets by EOY 2029

Metrics by strategic intervention:

Aggregate statewide buying power to attract market partners & build momentum in scalable submarkets

LM Outcome	Time frame	MPI	Milestone
Retail channel sees an increase in HPWH sales and is competitive with distributor channel	Medium (3-5 years)	12. Price parity across retail & distributor channels throughout California	Average HPWH retail price within 10% of average distributor price by mid-2032
		13. Increased HPWH sales in retail channel throughout California	10% increase (over 2032 BMA) in HPWH sales through the retail channel in California by mid-2032
Increased California program consistency strengthens market and supply chain business case	Medium (3-5 years)	14. Number of HPWH units shipped to California	20% increase (over 2032 BMA) in number of HPWHs shipped to California by mid-2032

Metrics by strategic intervention:

Aggregate statewide buying power to attract market partners & build momentum in scalable submarkets

LM Outcome	Time frame	MPI	Milestone
HPWHs reach a technology adoption tipping point in existing residential homes	Long (6-10+ years)	15. Percent of water heaters installed annually (market share) in existing residential homes that are HPWHs	40% of water heaters installed in existing homes annually are HPWHs by mid-2037

Metrics by strategic intervention:

Develop, support, and coordinate statewide operational infrastructure

LM Outcome	Time frame	MPI	Milestone
California program partners align on a shared definition of qualified HPWH products, creating consistency for market partners and end customers	Short (1-2 years)	16. Percent of active California programs aligning on CalMTA-identified definition of qualified HPWH products	At least 50% of active programs in California align on qualified HPWH product definition by mid-2029
Installer market partners and programs utilize shared messaging and research to educate and accelerate HPWH adoption	Short (1-2 years)	17. Percent of active California programs using shared messaging about HPWH benefits	At least 50% of active programs in California use shared messaging about HPWH benefits by mid-2029

Metrics by strategic intervention:

Develop, support, and coordinate statewide operational infrastructure

LM Outcome	Time frame	MPI	Milestone
OUTPUT: Statewide Market Intelligence Hub	Short (1-2 years)	18. Status of Market Intelligence Hub	Market Intelligence Hub developed, tested, and ready for use by mid-2029
Market and program partners leverage and participate in Market Intelligence Data Hub creating quid pro quo data relationships	Short (1-2 years)	19. Percent of market and program partners <i>contributing to the Market Intelligence Hub as well as using data from the Market Intelligence Hub</i>	Majority of manufacturers, medium-size and regional retailers, and program partners, contribute data to the Market Intelligence Data Hub by mid-2029
Data are leveraged by California programs and market actors and create additional value streams to support funding of California's heat pump goals	Medium (3-5 years)	20. Market actors and programs demonstrate the value of the Market Intelligence Hub by using it	CalMTA identifies and tests one value stream with two or more market actors or programs by mid-2032

How CalMTA Will Assess its HPWH MTI Strategy

	Influence Product Development and Match Technology to Housing Stock	Aggregate statewide buying power to attract market partners & build momentum in scalable submarkets	Develop, support, and coordinate statewide operational infrastructure
Short-term: 1-2 years	<ul style="list-style-type: none"> ✓ Product and program support roadmaps ready for use ✓ Manufacturers committed to delivering HPWHs to meet increasing demand ✓ Programs committed to ongoing scale-up support 	<ul style="list-style-type: none"> ✓ Increased HPWH sales in early submarkets ✓ Installers in early submarkets have appropriate HPWHs for their customers ✓ Installed HPWH costs decrease in early submarkets (incl ESJ) 	<ul style="list-style-type: none"> ✓ Active HPWH programs aligned on qualifying product definition ✓ Active HPWH programs aligned on messaging HPWH benefits ✓ Market Intelligence Hub (MIH) established and used by market actors
Medium-term: 3-5 years	<ul style="list-style-type: none"> ✓ Partner orgs/programs include HPWHs with a variety of form factors ✓ Installers use tools/resources to match HPWH technologies to homes ✓ Installers able to match HPWH technologies to homes (incl ESJ) 	<ul style="list-style-type: none"> ✓ Retail prices of HPWHs roughly equivalent to distributor prices ✓ Increase retail sales of HPWHs ✓ More HPWHs shipped to California 	<ul style="list-style-type: none"> ✓ Value stream for MIH established
Long-term: 6-10+ years	<ul style="list-style-type: none"> ✓ More manufacturers using lower GWP refrigerants in HPWHs ✓ All HPWHs meet industry-specified load shift requirements 	<ul style="list-style-type: none"> ✓ Increased market share of HPWHs in existing homes 	