CalMTA

6.14.24

Market Transformation Advisory Board (MTAB) Meeting

1
Welcome & Agenda

Stacey Hobart
Principal, Stakeholder Engagement & Communications

Agenda

Time	Agenda Item	Presenter
10:00 a.m.	**1. Welcome & Agenda**	Stacey Hobart
10:05 a.m.	**2. Safety Minute & COI Declarations**	Taqua Ammar
10:10 a.m.	**3. Introductions & Ice Breaker**	MTAB & CalMTA
10:25 a.m.	**4. Review Draft MTAB Meeting Notes 4/25**	Stacey Hobart
10:30 a.m.	**5. Draft Advancement Plan: Residential Heat Pump Water Heating**	Alexis Allan
11:30 a.m.	*Break (10 min)*	
11:40 a.m.	**6. Draft Advancement Plan: Commercial Replacement & Attachment Window Solutions (CRAWS)**	Rick Dunn
12:40 p.m.	**7. Public Comment**	
12:50 p.m.	*Lunch (45 min)*	
1:35 p.m.	**8. CalMTA Program Level KPIs**	Karen Horkitz
2:05 p.m.	**9. Draft 2025 Annual Budget Advice Letter (ABAL)**	Lynette Curthoys

Time	Agenda Item	Presenter
3:20 p.m.	*Break (10 min)*	
3:30 p.m.	**10. MTI Plan Template Feedback**	Jeff Mitchell
4:00 p.m.	**11. Phase I Disposition Report Comment Summary**	Jennifer Barnes
4:15 p.m.	**12. Strategy Pilot: Chefluencer for Induction Cooking**	Jeff Mitchell
4:40 p.m.	**13. Public Comment**	
4:50 p.m.	**14. Next Meeting & Next Steps**	Stacey Hobart
5:00 p.m.	Adjourn	

Attendees will be muted throughout the meeting and can raise their hand during the public comment period to be unmuted.

2
Safety Min & COI Declarations

Safety min

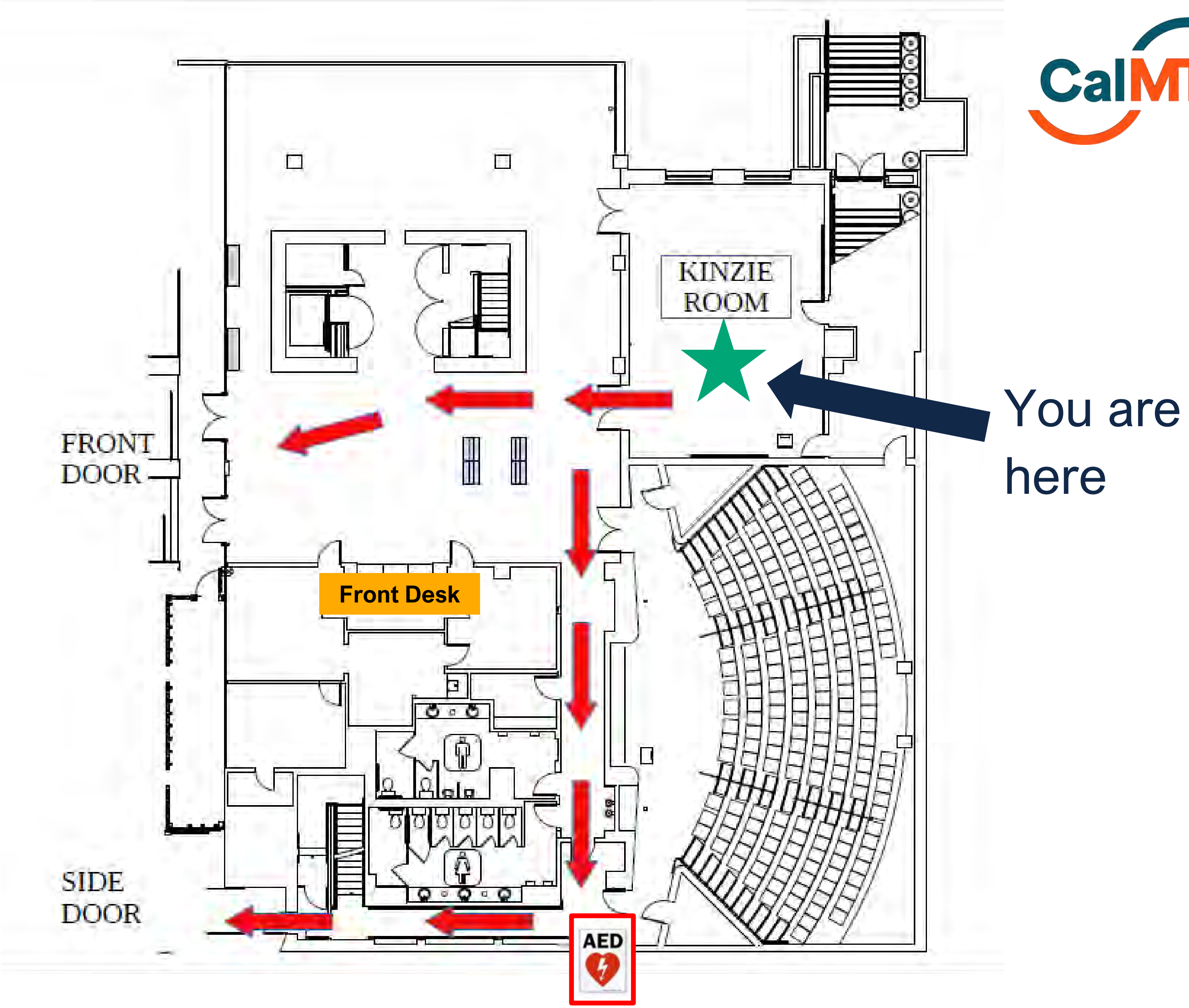
Brower Center
1st floor

= Exit route

= turn left down the hall

= end of the hall where restrooms are

Front Desk = For first aid kit or anything else



MTAB Declaration of COI

CalMTA

MTAB eligibility

- Can’t receive funding from CalMTA or be in pursuit of funding

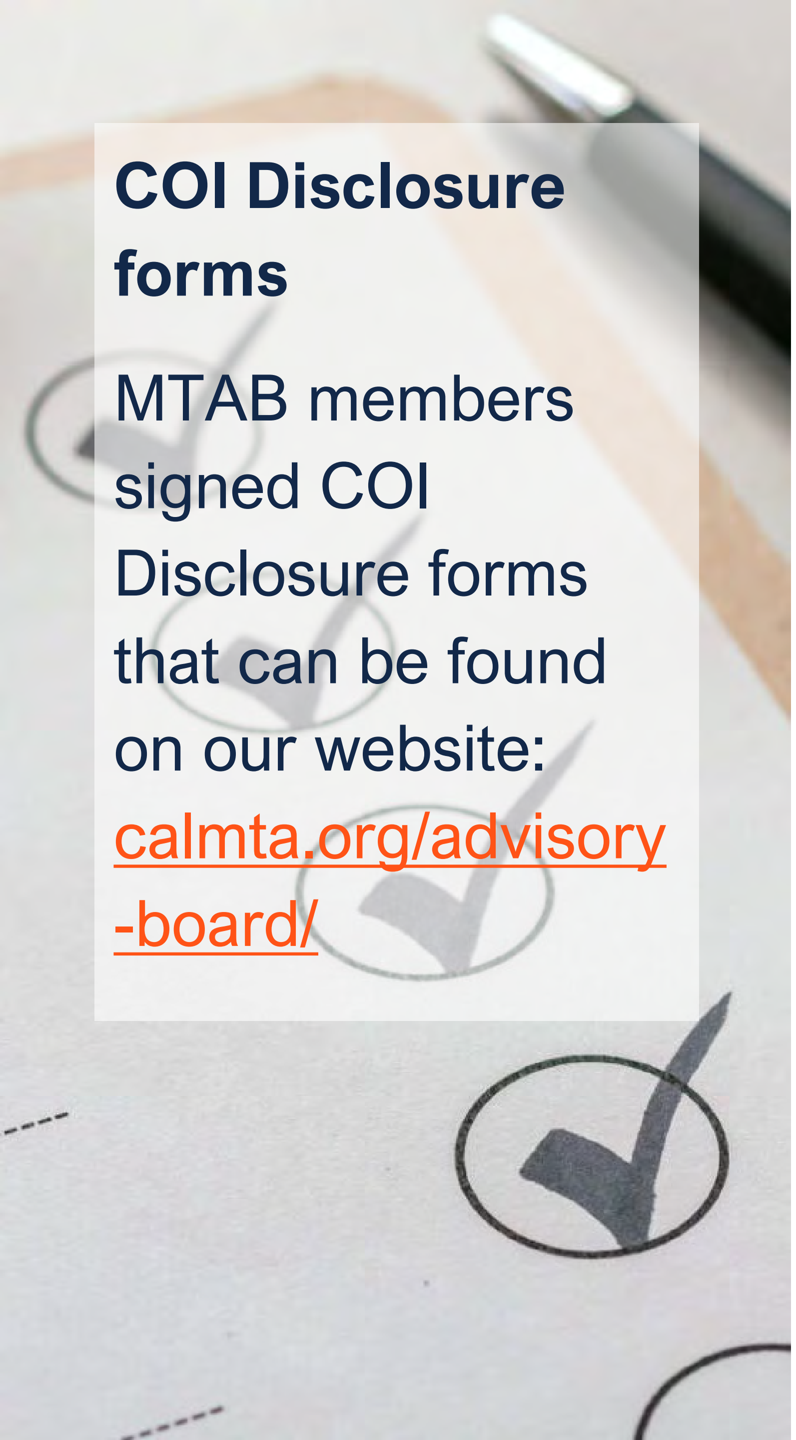
Recusal requirements

- Can’t bid on RFP/RFQ if giving input after Phase I
- Those with competitive interest can recuse from discussion, but must leave MTAB if responding to RFP
- Agree not to influence remaining MTAB
- Interpretation, if needed, done by CPUC staff

Transparency

- Public meetings & process where COI concerns can be raised by the public

MTAB Charter with Conflict of Interest



COI Disclosure forms

MTAB members signed COI Disclosure forms that can be found on our website: calmta.org/advisory-board/

CalMTA COI Policies

- CalMTA has robust COI policies to ensure decision-making is transparent, impartial, and unbiased
- RI team working on CalMTA has deep experience implementing MT and other efficiency programs
- RI employees and subcontractors, who are “decision makers,” are firewalled from any ongoing work with California utilities, covered entities
- Seek CPUC approval need specialized expertise from SMEs who also support work with covered entities

3
Introductions & Icebreaker

Ice Breaker

What is one thing you are looking forward to this summer?

CalMTA

4

Draft MTAB meeting notes – 4/25

CalMTA is a program of the California Public Utilities Commission
and is administered by Resource Innovations

MTI Development - status of ideas

PHASE I
Concept Development

STAGES 1 & 2
Identify & Score Ideas

Advancement Plan

PHASE II
Program Development

STAGES 3 & 4
Strategy Development & Testing

MTI Plan

PHASE III
Market Deployment

STAGES 5 & 6
Market Deployment & Long-Term Monitoring

Market Progress Reports

Commercial Replacement & Attachment Window Solutions

Residential Heat Pump Water Heating

Foodservice Water Heating Systems

Efficient Streetlighting

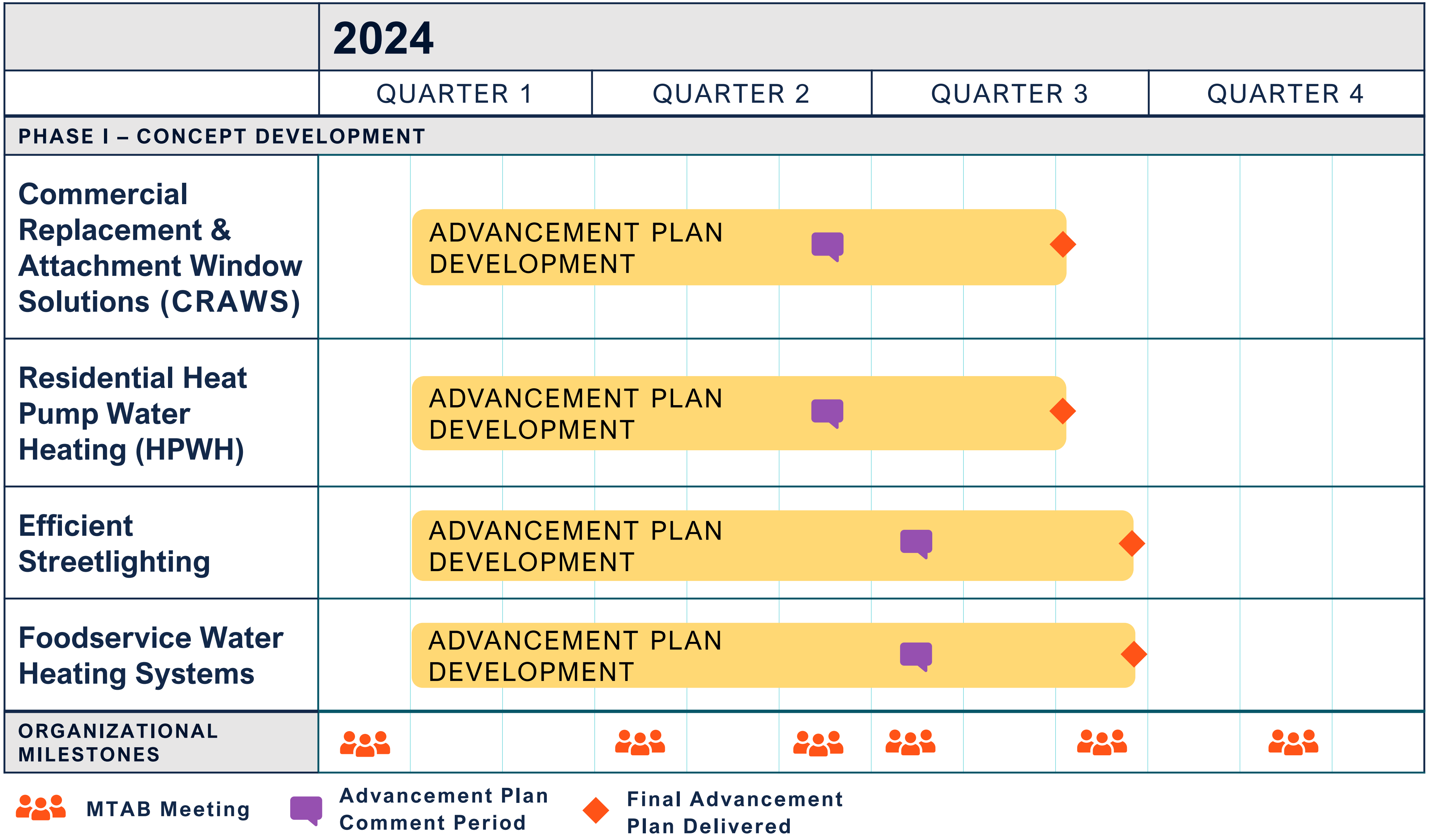
Portable/Window Heat Pumps

Induction Cooktops & Ranges

Efficient Rooftop Units (ERTUs)

MTI Plans in Application

Phase I ideas timeline



5
Draft Advancement Plan: Residential Heat Pump Water Heating (HPWH)

Alexis Allan
Contractor, Brio

Current challenge

Residential HPWHs are 2-3x more efficient than standard electric and gas water heaters, help cut GHG emissions, and improve air quality. Yet …

- HPWHs make up less than 2% of water heaters sold in California
- End consumers and trade allies seem to have limited interest – despite an abundance of programs
- Market is getting more complex
- Costs continue to rise

A vision for the future

Coordinated statewide effort harnessing the power of California's investment to rapidly accelerate residential HPWH adoption:

- Shared Strategic Plan
- Leveraged resources across efforts
- Clear consumer, market actor, and trade ally journey
- Cost is not a barrier to adoption

Majority of residential water heaters installed in any given year will be grid-enabled HPWHs by 2035

Our pathway to an MTI Plan

Residential Heat Pump Water Heating

Development of Statewide HPWH Strategic Plan

+

Market & Technology Research

Residential Heat Pump Water Heating MTI Plan

Product definition:

Grid-connected 120V and 240V electric, air-source HPWHs less than or equal to 120 gallons with standardized connectivity and controls to support electric load shifting

Target market

Residential single and multifamily new and existing construction

Assumed barriers

Complex and crowded programmatic landscape

Low manufacturer Return on Investment (ROI)

Higher operating costs for consumers moving from natural gas water heat

High installation and equipment costs

Consumer low interest and awareness of HPWHs

Installers are reluctant to promote and are not convinced of the business case

Complex installation in comparison to exiting equipment

Key

- Market
- Organizational

Opportunities

- Leverage existing California, regional and national programs aimed at increasing HPWH adoption
- Pending 2029 Federal Standard
- California Air Resource Board (CARB) zero emissions efforts
- Title 24 HPWH efforts
- Inflation Reduction Act (IRA) programs

Early interventions

1. Collaborative Statewide HPWH Strategic Plan development
2. Strategic Plan execution & monitoring

1. Collaborative Statewide HPWH Strategic Plan Development

a. Identify shared barriers, risks, interventions

b. Identify short and long-term goals (w/roles and responsibilities)

c. Explore alignment efforts across program efforts (i.e., messaging and promotion, training and product development)

d. Shared pathway to state and federal standards and codes

e. Illuminate market gaps and where CalMTA would best fit

2. Strategic Plan execution & monitoring

a. Coordination of efforts identified in Strategic Plan

b. Facilitating ongoing engagement

c. Identifying needs for the plan to evolve

d. Monitoring success

Preliminary MT theory

IF we create a coordinate statewide effort that	**THEN**
creates clear roles and responsibilities avoiding duplicate efforts	program costs can be shared and the cost to California is ultimately reduced
creates consistency for manufacturers	supply chain awareness and participation will increase
coordinates messaging and braids incentives	customers will experience a clean customer journey resulting in increased adoption
co-creates strategy with market actors	investments and business practices will change

Outcomes

1. Customers understand what to expect from this technology in their home
2. Supply chain values and adopts HPWHs as a prioritized segment of their business
3. Decrease the overall cost for California to move residential water heaters to heat pump technology
4. Accelerate the pace of adoption

Diffusion & Lastingness

- Federal Standard 2029 – Requiring heat pump technology for electric tanks greater than 50-gallons
- CARB – Zero Emissions Space & Water Heater Standards
- Title 24 – Building Energy Efficiency Standards
- Create change in supply chain practices

Technology assessment

1. Evaluate current 120V and 240V HPWH sizing practices
2. Leverage CalNEXT and other California and national programs to assess and evaluate performance solutions for HPWHs as replacement for gas water heaters
3. Monitor HPWH design changes, cost (first cost and operating costs), and replacement rates
4. Assess electric panel electrification readiness in California homes to identify and target HPWH replacements in residences with low expected fuel switching costs

Market research

1. Understand the existing HPWH program and policy landscape in CA, barriers, and opportunities
2. Leverage completed and ongoing market research, evaluation, and R&D efforts
3. Characterize the baseline market conditions and develop market baseline forecast
4. Characterize the supply- and demand-side market

Estimated Budget

Task	Cost Estimate
Market Research	$652,000
Technology Assessment	$265,000
Total	**$917,000**

Break (10 min)
We will be back soon.

6
Draft Advancement Plan & Strategy Pilot: Commercial Replacement & Attachment Window Solutions (CRAWS)

Rick Dunn
Senior Manager, Emerging Technology

Preliminary MT theory

Interventions include:

- Increased awareness of the energy and non-energy impacts of single-pane windows (SPW)
- “Envelope first” technical solutions
- Finance mechanisms to build and drive the market for commercial secondary windows (CSW) and vacuum insulated glass (VIG)

This solution will serve owners of buildings with SPWs forced to comply with emerging BPS compliance policies and/or building life-cycle management strategies.

Current challenge

- Although windows comprise ~15% of a building's exterior surface, they account for HVAC losses of ~40%, or ~12% of a typical building's overall energy use*
- Approximately 2.8 million commercial buildings in CA have SPWs
- The impact of poorly performing windows – even in mild climates – is not widely understood; as California drives towards electrification, this low awareness may impede decarbonization efforts and result in permanently forfeited TSB

* NEEA Commercial Secondary Window Field Test Report

Vision for the future: 2045

Over 25% of the existing commercial building sector’s square footage that currently has SPWs will utilize new technologies in support of California's plans to achieve carbon neutrality by 2045

Recent market events

- Manufacturers are pursuing product innovations (CSW that utilize VIG), manufacturing innovations (mobile, on-site manufacturing to reduce costs)
- DOE launched $2M secondary glazing innovation prize
- Increasing focus by DOE, RMI, NYSERDA, architects, etc. on “envelope first” strategies for optimizing building decarb and BPS compliance
- Major update to ASHRAE 55 for evaluating occupant comfort in existing buildings
- NY LL97 driving ConEd CSW project pipeline

Product definition

Vacuum-Insulated Glass (VIG) units, designed to replace existing SPWs while retaining use of the existing frame, are comprised of two glass panes separated by spacers and hermetically sealed around the edges

- Vacuum drawn on the void space between glass panes results in R-10 to R-15 insulating value of the glass unit (R-5 to R-10 for complete installed assembly)

Commercial Secondary Windows attach to interior or exterior of an existing window, creating an insulating air pocket between the new and existing panes

- Can have one or more panes and low-E coatings; multiple panes can have insulating gases or a vacuum between the two CSW panes, creating additional insulating value

Both products can be installed without disrupting occupants with VIG ~50% lower cost and CSW 75-90% lower cost than a full window replacement

Target market

- Existing commercial buildings built before 2000 that still have SPWs
- Initially, CalMTA will focus on submarkets within the commercial building market, including the MUSH market (municipal, universities, schools and healthcare): these are owner-occupied buildings where the owners typically pay for utilities
- ESJ Listening Session for CRAWS: strong interest in window upgrades for schools

Leverage points

- California Building Performance Standards Hubs
- Quantification of non-energy benefits (NEBs)
- Emerging “envelope first” building decarbonization strategies
- DOE initiatives: Building Envelope Campaign; Partnership for Advanced Window Solutions; $2M Secondary Glazing Systems Innovation Prize
- Supply chain engagement, advanced manufacturing capabilities
- ESCOs
- Ratings agencies (AERC, NFRC) and ENERGY STAR

Preliminary MT theory

IF	THEN
we drive awareness of real-world energy and non-energy impacts of SPWs	we will dispel the myth that windows don't matter in mild climates and we'll increase market commitment to exploring solutions
we develop a cohesive strategy for addressing envelope and HVAC concurrently, aligned with building life-cycle management strategies	we will bring down the capital and incremental costs of electrification
we bring down the capital costs of envelope upgrades	we will be able to leverage ESCOs for financing mechanisms
we do all of these	we will have a compelling value proposition for "envelope first" strategies for building owners required to comply with CA BPS

Conceptual Logic Model – barriers

Building owners are not aware of poor performing windows' role in energy use and CSW/VIG business case

High cost of upgrading SPWs in isolation of interactive impacts with HVAC

Commercial real estate market challenges post-Covid

VIG products not yet widely available/rated

Non-energy benefits are not well quantified

CSW and VIG not yet a robust supply side offering

Key

- Market
- Financial
- Technology

Conceptual Logic Model – opportunities

BPS growing as existing building policy tool

Full decarbonization goals and need to address poor performing envelope to reach goal (opp to downsize HP HVAC investment)

NEBs as drivers: thermal comfort, sound reduction, resilience and DR performance

Growing investment from DOE, advocacy, and EE organizations

Improving windows offers an opportunity to reduce investments in HVAC

Key

- Market
- Financial
- Technology

Conceptual Logic Model – interventions

CalMTA

- Field demonstrations to document benefits, including NEBs; start with MUSH market
- Engage manufacturers on innovations to drive down product and installation costs
- Engage supply chain partners and market actors on business case and go-to-market strategies, especially targeting MUSH market
- Build awareness of benefits and business case of upgrading poor performing windows through leveraged industry partnerships
- Advocate for envelope first strategies via BPS Hubs and provide technical support to building owners likely to be impacted by BPS policies in CA
- Bundle windows with other measures (i.e. HVAC) to optimize finance opportunities and payback periods; align with existing capital improvement plans to minimize incremental investment

Key

- Market
- Financial
- Technology

Conceptual Logic Model – outcomes

Awareness grows on the problems associated with and the benefits of dealing with poor performing windows as a key solution towards decarbonizations and climate resilience

VIG technology concerns are overcome and are increasingly used in large retrofit projects

NFRC rating in place for VIG and AERC rating for CSW grows

Incremental cost of manufacturing and installation of technologies declines over time

Strong business case exists backed up with data and modeling tools

Growing field of building professionals specializing in window installation and replacement

As BPS become more prevalent, more building owners prioritize improving poor performing windows

Growing percentage of commercial buildings with SPWs utilize technologies

Key

- Market
- Financial
- Technology

Diffusion and Lastingness Mechanisms

- BPS mandates will drive owners to reduce energy unit impacts and emissions: buildings with SPWs are likely to require and/or benefit from window upgrades prior to HVAC upgrades
- Rising temps and increasing extreme weather events will elevate the value of window upgrades for maintaining thermal comfort
- Increasing occurrence of Demand Response events to manage peak load will elevate the value of improved resiliency

Tech assessment priorities

1. Quantification of:
   a) Energy and non-energy impacts in CA climate zones
   b) Non-energy benefits
   c) Peak load, resiliency and flexible grid impacts
2. Evaluate product performance and durability
3. Investigate factors influencing product and installation costs

Market research priorities

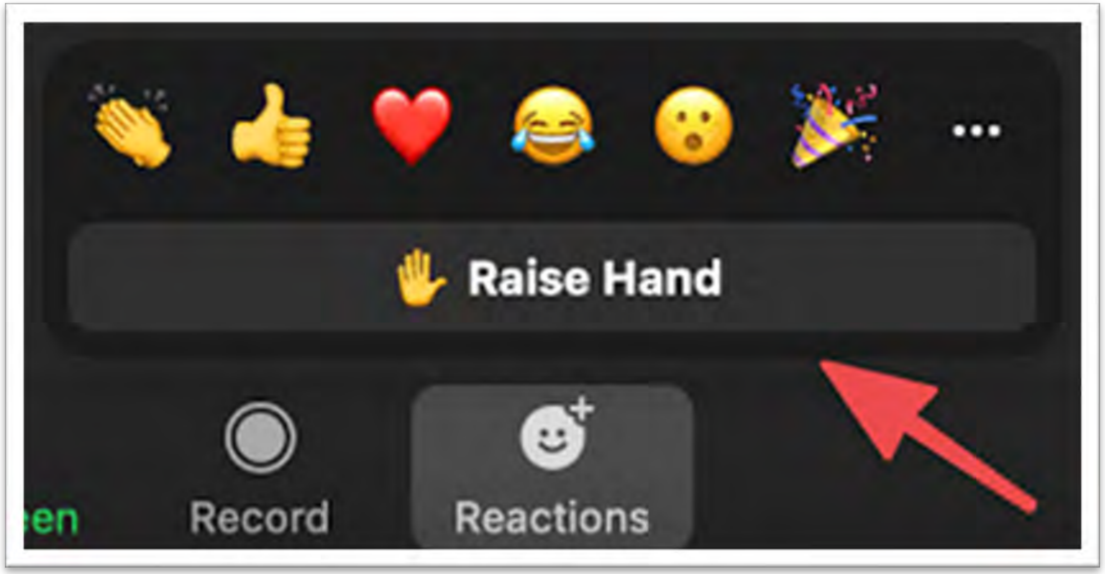
1. Characterize baseline market conditions including VIG and CSW market share
2. Demand-side & supply-side market characterization
3. Cost/benefit analysis and financing options
4. Document regulatory and policy landscape
5. Develop market baseline forecast

Proposed Phase II budget

Task	Estimated Cost
Technology assessment	**$875,000**
Market research	$400,000
Total	**$1,275,000**

7. Public Comment

Raise your hand using the “Reactions” feature and we will allow you to unmute yourself.



Lunch (45 min)
We will be back soon.

8
CalMTA Program-level KPIs

Karen Horkitz
Lead, Market Research and Evaluation

Recap: April 25 MTAB discussion

- Reviewed proposed CalMTA (“program-level”) KPIs
- 13 KPIs in 5 categories that correspond with CalMTA goals, per D.19-12-021
- KPIs roll up performance across the MTI portfolio; individual MTI scorecards (included in MTI plans) will have MTI-specific KPIs
- Clarifications: benefit/cost ratios include incremental impacts over the MTI 20-year lifetime (per the MTI evaluation framework)
- Public comment: consider adding a KPI to track compliance with Decision requirements

CalMTA KPIs will inform MTAB assessment of program performance

The initial entity selected as the independent statewide MTA should be offered a seven-year contract to conduct initial MT work. At the end of the fifth year, the MTAB will review the performance of the MTA.

- D.19-12-021 Attachment A (Adopted MT Framework)

Proposed CalMTA KPIs (with illustrative values)

KPI #	Performance Category	KPI	Target (per plan)[a]	Forecast[b]	Reported to Date	Status/ Date Updated
1	**Market Transformation Progress**	Achievement to Phase III MTI market progress milestones (% of [current year] milestones met)	100%	90%	90%	1/31/2027
2	**Equity/Environmental Justice**	MTI Equity Metric Attainment (% of [current year] MTI equity milestones met)	100%	100%	100%	1/31/2027
3		Percent of ESJ engagement milestones achieved (current year)	100%	100%	100%	1/31/2027
4	**Incremental Savings and Benefits towards CA Goals**	2026-2030 Net Incremental TSB ($)	$2.3B	$2.0B	$50M	1/31/2027
4a		2026-2030 Net Incremental Electric Energy Savings Forecast (GWh)	500	500	10	1/31/2027
4b		2026-2030 Net Incremental Gas Energy Savings Forecast (MM Therms)	45	35	1	1/31/2027
4c		2026-2030 Net Incremental Demand Savings Forecast (MW)	106	106	2	1/31/2027
4d		2026-2030 Net Incremental GHG Reduction Forecast (Metric tons)	238	200	4	1/31/2027
5		2026-2030 Co-Created TSB ($)	$2.9B	$2.9B	$100M	1/31/2027
6		Lifetime Net Incremental TSB ($)	$12.4B	$12.4B	$50M	1/31/2027
7	**Portfolio Cost Effectiveness**	Forecasted B-C Ratio, TRC	1.0	1.3		1/31/2027
8		Forecasted B-C Ratio, PAC	1.0	3.2		1/31/2027
9	**Administrative Performance**	Percent of Operations Plans Milestones achieved (current year)	100%	95%	95%	1/31/2027
10		Current Year Budget Expenditures ($M)	$50M	$48.7M	$48.7M	1/31/2027
11		Administrative expenditures to date as percent of total expenditures to date (current year)		9.7%	9.7%	1/31/2027
12		Budget accrued to third parties as percent of total program expenditures (current year)		20%	20%	1/31/2027
13		Budget accrued to third parties as percent of total program expenditures (2026-2030 cumulative)			4%	1/31/2027

Discussion and next steps

- What if any additional feedback do you have on the CalMTA KPIs?
- CalMTA will share a populated KPI scorecard at the first 2025 MTAB meeting
- If you have additional comments or questions between now and then, please send via email

9
Draft 2025 Annual Budget Advice Letter (ABAL)

Lynette Curthoys

VP, Market Transformation

Budget background

Decision established two major funding periods:

3-Year Startup Period

- Funding is authorized annually via ABAL
- Startup budget NTE $19.6M/year*

5-Year Authorized Application (MTI Implementation) Period

- Funding authorized via Application (to be filed at end of 2024)

*Decision-approved startup budget is $20M per year, but 2% reserved for PG&E administrative costs

Startup period budget summary

2025 is Year 3 of the startup period

	Year 1(+)		Year 2		Year 3
Cost Category	2022-23 Budget	2022-23 Actual Spent	2024 Budget	2024 Forecasted Spend*	2025 Budget
Administration	$1,636,831	$588,178	$1,011,287	$436,732	$967,434
Operations	$8,179,935	$5,075,958	$4,444,191	$4,718,534	$4,647,162
Initiative/Concept Development	$4,546,965	$5,385,303	$14,076,113	$14,376,260	$13,985,250
TOTAL	**$14,363,731**	**$11,049,439**	**$19,531,591**	**$19,531,527**	**$19,599,846**

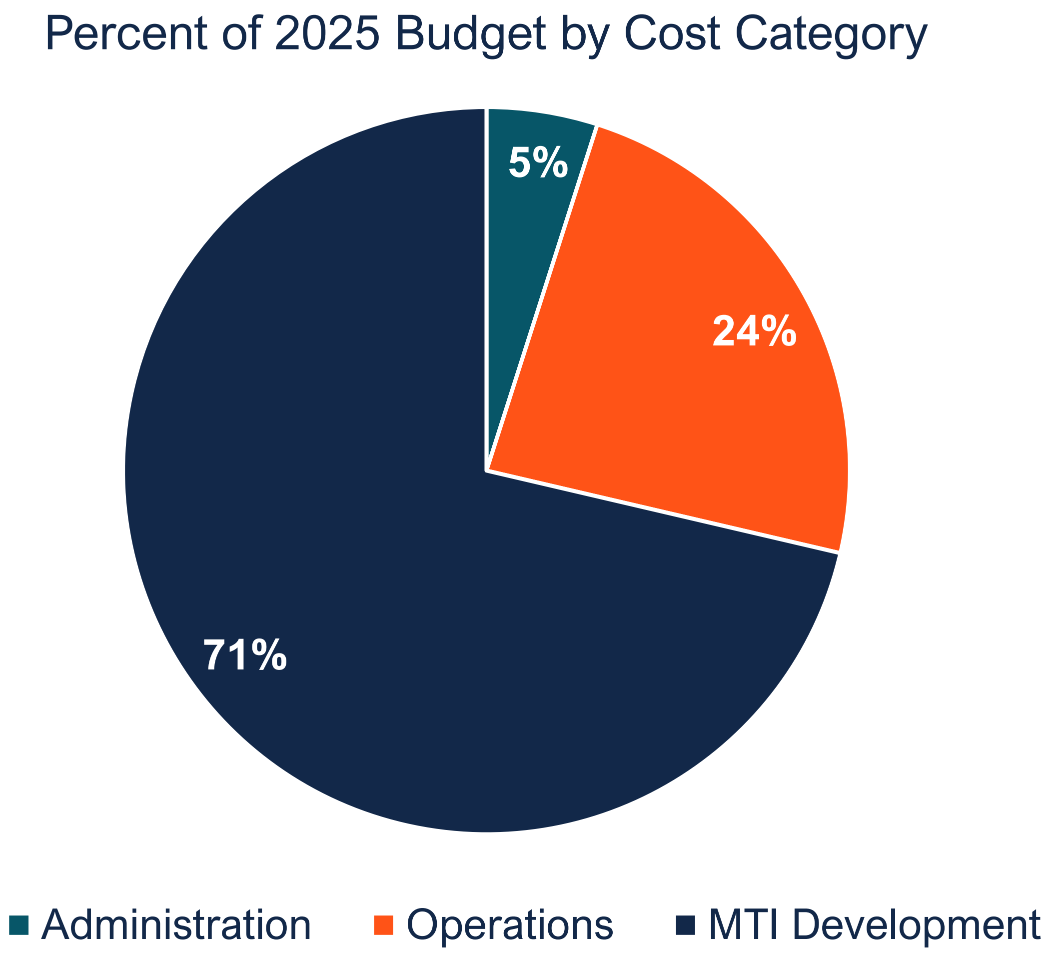
* Includes actuals for January – April and forecasted expenditures for May – December. Assumes funding that is conditionally allocated in the 2024 ABAL is requested by CalMTA and approved by CPUC staff.

2025 ABAL schedule

Target Date	Task or Deliverable
14-Jun	Present draft ABAL at MTAB meeting; gather initial feedback
24-Jun	Written feedback on ABAL due from MTAB members and CPUC Survey instrument will be sent at the end of this meeting
5-Jul	Send revised ABAL with Recommendations section to MTAB
12-Jul	MTAB meeting to review final ABAL, including Recommendations
~1-Aug	File final 2025 ABAL with CPUC

2025 Budget cost categories and major activities

- 3 of 5 cost categories included in 2025 budget
- 2 cost categories reserved for 5-year MTI Implementation Period (Phase II):
  - MTI Deployment
  - Evaluation



2025 Budget cost categories and major activities

Cost Category	Major Activity
MTA Administration	Routine Financial and Administrative Tasks
MTA Operations	Project Management and Operations
	MTAB Administration
	Policy
	Stakeholder Engagement and Communications
	Data Systems Development and Management
Initiative/ Concept Development	Concept Development (Phase I Activities)
	Technology Scanning and Research
	Preliminary Analysis, Modelling & Forecasting
	Advancement Plan Development
	Program Development (Phase II Activities)
	MTI #1: Induction Cooktops and Ranges
	MTI #2: Portable/Window Heatpumps
	MTI #3: Efficient Rooftop Units
	MTI #4: Efficient Streetlighting
	MTI #5: Commercial Replacement & Attachment Window Solutions
	MTI #6: Foodservice Water Heating Systems
	MTI #7: Residential Heat Pump Water Heaters
	MTI #8: Batch 3 MTI(s)

Administration cost category

5% of 2025 Budget

Routine financial and contract administrative activities including invoicing, budget management, accruals, forecasting, and other financial reporting

Also includes funds for:

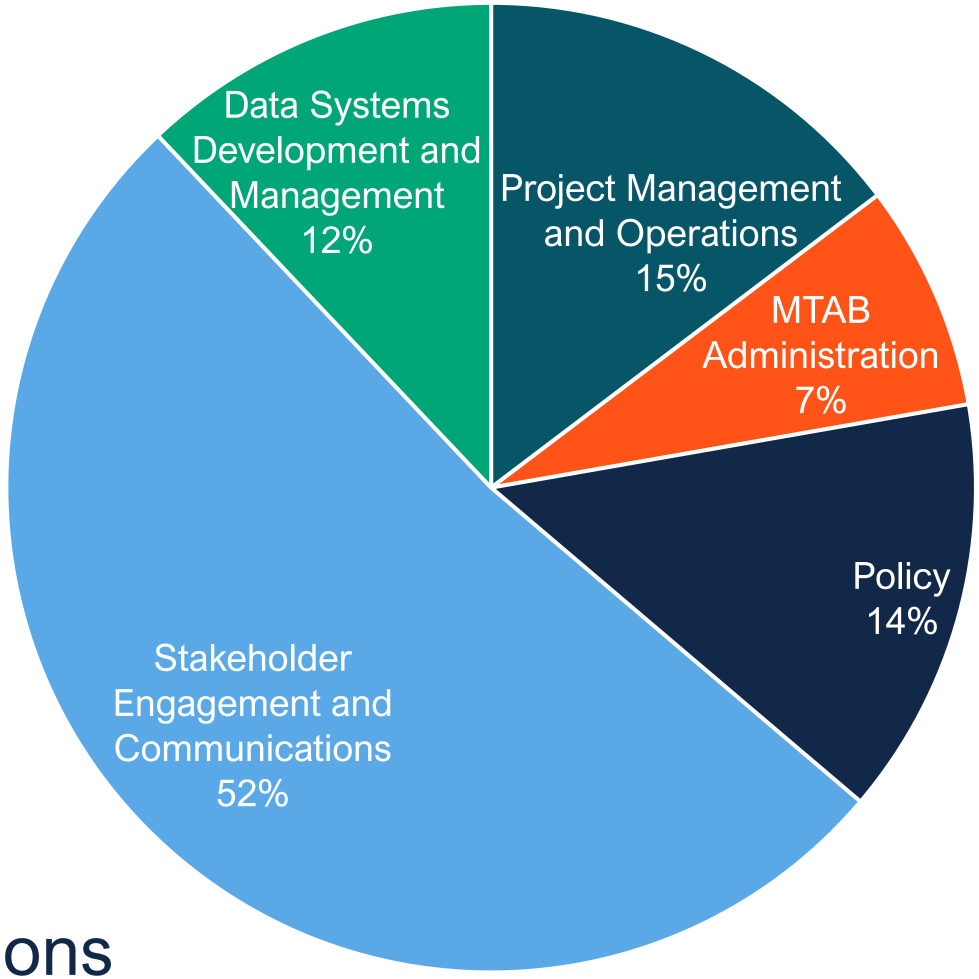
- Non-routine administrative requests (e.g., responses to ad hoc financial reporting requests from the CPUC or PG&E, or financial audits)
- Administrative and legal support activities related to CPUC filings

Operations cost category

24% of the 2025 Budget

Comprised of five major activities:

- MTAB Administration
- Data Systems Development & Management
- Policy
- Project Management and Operations
- Stakeholder Engagement & Communications



MTAB administration

7% of the Operations Budget

Budget includes:

- Labor and travel expense to administer MTAB meetings
- Facility, meals, and other direct expenses for meetings
- Member stipends and travel expenses

Key deliverables:

- 4 virtual and 4 in-person MTAB meetings
- Recruit and replace MTAB members whose two-year terms expire in April 2025

Data Systems Development/Management

12% of the Operations Budget

Key activities:

- IT needs assessment and design
- Managing & improving existing systems including CalMTA website, CRM, RFI portal, public commenting platform
- RFP/procurement platform solutioning
- Developing program/portfolio tracking and monitoring solutions
- Data analytics and dashboarding
- Data integration with partner systems

Policy

14% of the Operations Budget

Align CalMTA's efforts with CA and federal policy

- Conducting research related to California and federal regulations and legislation
- Tracking and informing CalMTA about key regulations, rulemakings, programs (e.g., CPUC, CEC, CARB, DOE)
- Providing support for CPUC filings and deliverables

Project Management & Operations

15% of the Operations Budget

Key activities:

- Operational planning & documentation development
- PM processes and tools
- Deliverables tracking
- COI compliance and tracking
- Contracts management
- Procurement planning & oversight

Key deliverables:

- 2026 Operations Plan

Stakeholder Engagement & Comms.

52% of the Operations Budget

Key program-level activities:

- Maintain and develop new channels to disseminate information
  - Regular email notices & social media
  - Webinar platform
  - Redevelopment of www.calmta.org
  - Conference presentations
- Maintain contact database, analytics, and other tools
- Publish and disseminate reports, documents, and updates
  - Annual and quarterly reports
  - Research reports
  - Advancement and MTI Plans
  - Collateral
- Manage and track stakeholder collaboration in all areas of the California efficiency market

Stakeholder Engagement & Comms.

52% of the Operations Budget

Key MTI-related activities:

- Manage Equity Sounding Board established in late 2024
- Manage and track direct engagements with market actors and existing program alignment
- Support crafting communications strategies for MTI Plans in 2025
- Support the program development team on message testing and other pilot, testing, or research activities

Stakeholder Engagement & Comms.

Key deliverables:

- Annual and quarterly reports
- Regular newsletters/notices
- Live webinars on CalMTA activities
- Analytics reporting
- New www.calmta.org site
- Stakeholder engagement reporting
- Collateral materials
- 3-4 meetings of the Equity Sounding Board
- Engagement and communications scopes in up to three MTI Plans

Initiative/Concept Development

71% of the total CalMTA budget

Phase I: Concept Development (15%)

Concept identification and assessment work that leads to the development of an Advancement Plan

Phase II: Program Development (85%)

Ongoing market monitoring and engagement, research, and/or strategy testing for pending MTI Plans

Market and technology research and program strategy development that leads to the development of additional MTI Plans

Phase I: Activities

Concept Identification

- Transition to a continuous RFI process, allowing ‘any time’ submissions
- Collaborate with market partners and stakeholders to identify/cultivate MTI ideas
- Catalog, research, and score RFI submissions

Concept Assessment

- Conduct cost/benefit analysis and create models that forecast market adoption to assess opportunities
- Coordinate with the MTAB to review and prioritize new MTI ideas
- Develop MTI Advancement Plans for those ideas that will move to Phase II

Phase I: Key Deliverables

- Reviews and score new ideas and discuss with MTAB
- Up to two Advancement Plans for MTI ideas recommended to transition to Phase II (Batch 3)

Phase II: Program Development Activities

- Listed as individual line items in the ABAL budget by MTI
- Assumptions
  - All three Batch 1 MTIs have some ongoing Phase II activities in 2025
  - All four Batch 2 MTI ideas advance to Phase II in Q3 2024 and Phase II activities continue into 2025
  - Up to two Batch 3 MTI ideas advance to Phase II in mid-2025

Phase II: Program Development Activities

- **Induction Cooktops & Ranges and Portable/Window Heat Pumps**
  - Ongoing market monitoring and engagement, research, and/or strategy testing as described in pending MTI Plans
- **ERTU Phase II activities continue into 2025, including:**
  - Completion of the ERTU field study
  - Finalization of energy modelling and measure analysis
  - Initial development of the MTI Plan

Phase II: Activities (continued)

- **Continuing Phase II work on four Batch 2 MTIs including:**
  - Ongoing market research and technology assessments per Advancement Plans
  - Characterize market structure and baseline conditions
  - Analyze cost and benefits
  - Review regulatory, stakeholder, and policy landscape
- Begin Phase II work on up to two additional MT ideas (Batch 3) from the 2023 or 2024 RFIs
- Provide ongoing updates on Phase II work to the MTAB and public

Phase II: Key Deliverables

- Market characterizations and other completed research (per MTI Advancement Plans)
- Up to three MTI Plans completed and ready to file after CPUC application decision

MTI Development - 2024

CalMTA

PHASE I: Concept Development

- Commercial Replacement & Attachment Window Solutions (CRAWS)
- Residential Heat Pump Water Heating
- Foodservice Water Heating Systems
- Efficient Streetlighting

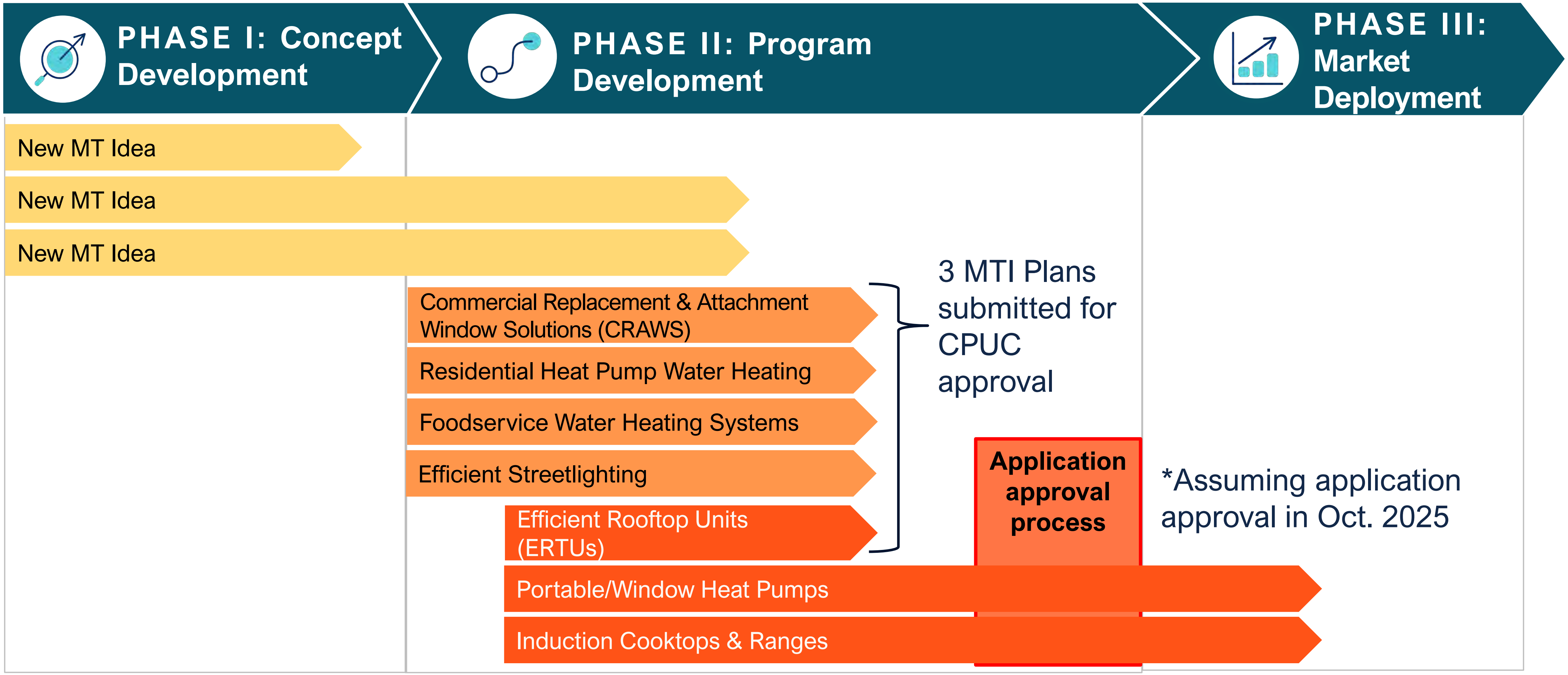
PHASE II: Program Development

- Efficient Rooftop Units (ERTUs)
- Portable/Window Heat Pumps
- Induction Cooktops & Ranges

Application approval process

PHASE III: Market Deployment

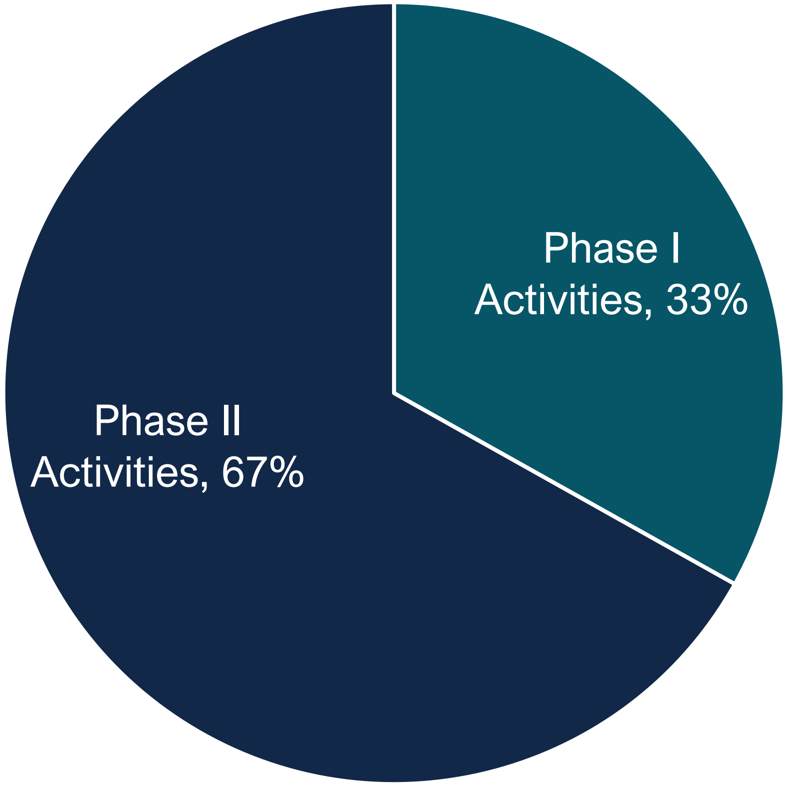
MTI Development - 2025



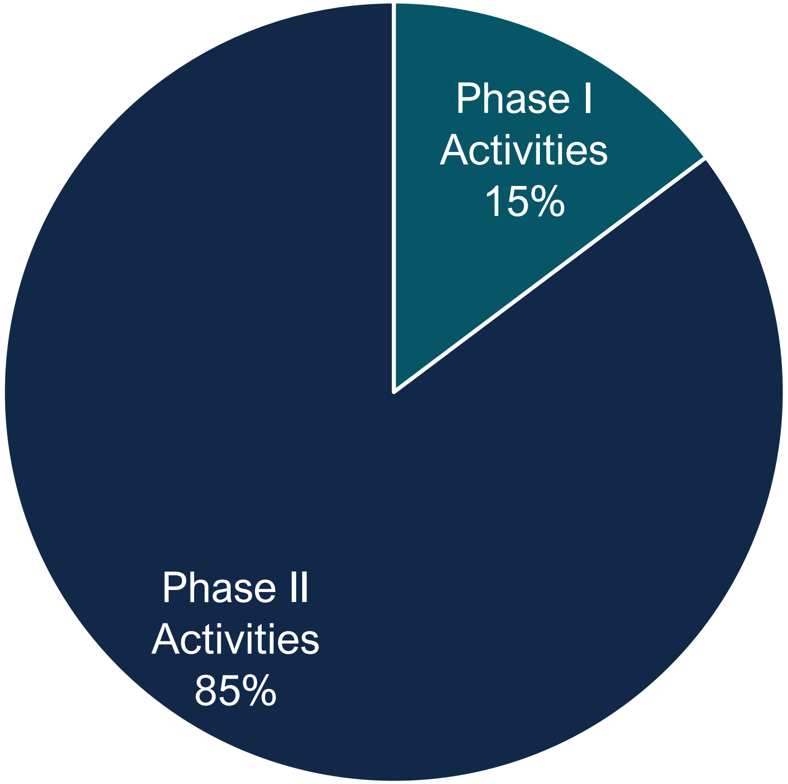
Initiative/Concept Development

Greater focus on Phase II (Program Development) activities in 2025

2024 Forecasted



2025 Budget



Initiative/Concept Development

Major Activity	Activity Detail				
	Estimated Labor Costs			Non-Labor Costs	Activity Totals
	Subs	RI	Total Labor Costs		
Concept Development (Phase I)	$ 721,627	$ 1,263,930	$ 1,985,557	$ 75,000	**$ 2,060,557**
Technology Scanning and Research	$ 81,119	$ 502,199	$ 583,318	$ 75,000	$ 658,318
Prelim. Analysis, modelling & forecasting	$ 208,088	$ 97,888	$ 305,976	$ -	$ 305,976
Advancement plan development	$ 432,420	$ 663,843	$ 1,096,263	$ -	$ 1,096,263
Program Development (Phase II)	$ 5,644,179	$ 4,505,514	$ 10,149,693	$ 1,775,000	**$ 11,924,693**
MTI #1: Induction Cooktops and Ranges	$ 177,966	$ 606,387	$ 784,352	$ 600,000	$ 1,384,352
MTI #2: Portable/Window Heatpumps	$ 171,808	$ 559,935	$ 731,742	$ 600,000	$ 1,331,742
MTI #3: Efficient Rooftop Units	$ 577,316	$ 430,507	$ 1,007,823	$ -	$ 1,007,823
MTI #4: Efficient Streetlighting	$ 1,055,298	$ 439,917	$ 1,495,216	$ -	$ 1,495,216
MTI #5: Commercial Replacement & Attachment Windows	$ 620,557	$ 964,086	$ 1,584,643	$ 475,000	$ 2,059,643
MTI #6: Foodservice Water Heating Systems	$ 1,340,905	$ 435,571	$ 1,776,476	$ 100,000	$ 1,876,476
MTI #7: Residential Heat Pump Water Heating	$ 1,123,803	$ 439,200	$ 1,563,003	$ -	$ 1,563,003
MTI #8: Batch 3 MTI(s)	$ 576,526	$ 629,912	$ 1,206,438	$ -	$ 1,206,438

Phase 1

Phase 2 (by MTI)

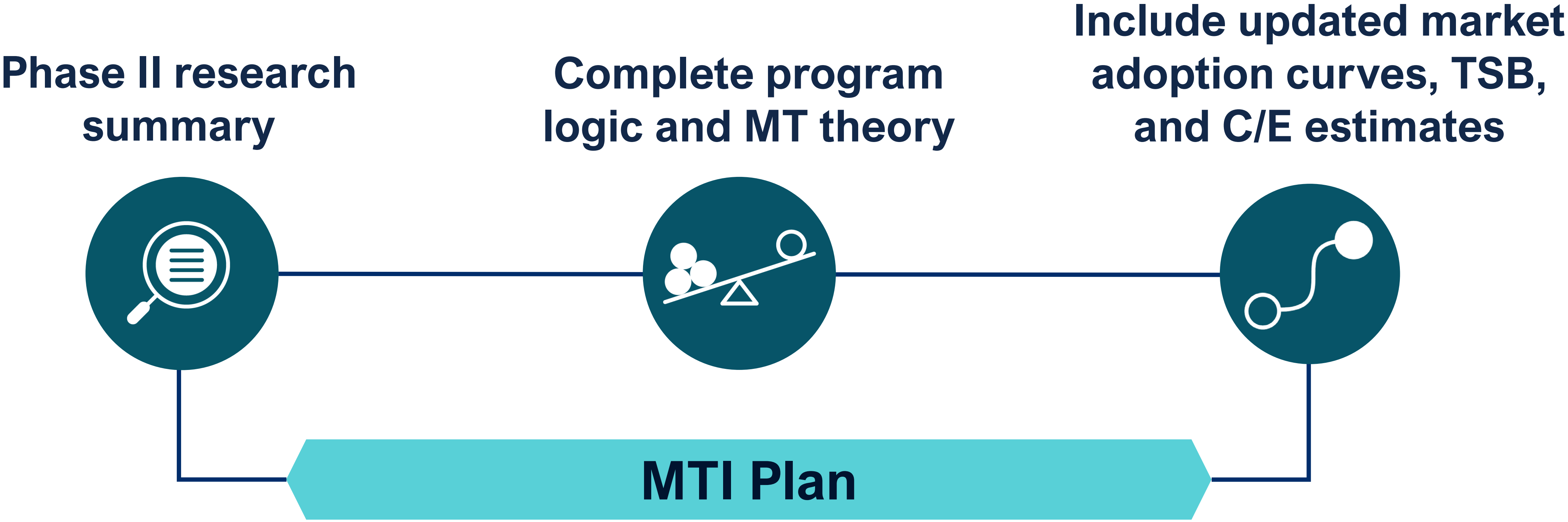
Break (10 min)
We will be back soon.

10
MTI Plan Template Feedback

Jeff Mitchell
Principal, Market Transformation

MTI Plan

The MTI Plan describes the business case supporting the MTI and the market development and evaluation activities that will be implemented during Phase III: Market Deployment.



MTI Development/Deployment Process

PHASE I
Concept Development

STAGES 1 & 2
Identify & Score Ideas

Advancement Plan

Do we commit resources to develop top ideas?

PHASE II
Program Development

STAGES 3 & 4
Strategy Development & Testing

MTI Plan

Do we deploy this MT Initiative in the market?

PHASE III
Market Deployment

STAGES 5 & 6
Market Deployment & Long-Term Monitoring

Market Progress Reports

Is this market transformed?

The MTI Plan is a collection of documents

MTI Plan Template = Summary Document

a. Logic Model Packet
b. Market Forecasting & Cost Effectiveness Modeling Approach
c. Product Assessment Report
d. Market Characterization Report
e. Stakeholder Engagement Plan
f. Evaluation Plan
g. Risk Management Plan
h. Budget

MTAB Review Process

- MTAB review period ended **5/2/2024**
- 3 MTAB members provided feedback

Section 10: Budget

- The budget table in section 10 is broken out by activity. Will budget by time period be provided elsewhere?

Response:

- Yes, the budget table provided in the MTI Plan is intended to give the reader a snapshot of cost across Phase III
- A more detailed budget that includes estimation of time will be included as an appendix

Section 4: Product Definition & Assessment

- Where is the description of how the product or service must change to reach the stated needs of a broader market?
- How are section 4.4 Baseline Assumptions and section 4.5 Key Baseline Assumptions different?

Response:

- Key product update requirements will be summarized in section 4.5
- Consolidated section 4.4 and 4.5

Section 8: Evaluation & Market Research

- It would be good to have a bullet summary of the most important evaluation goals before listing activities

Response:

- Added language for authors to identify key evaluation goals

MTI Plan Rollout Schedule

1

Preliminary Market Characterization Study (Appendix D)

MTAB meeting: August 26

2

Logic Model & MT Theory (Appendices A, C, D)

MTAB meeting: September 23

Sept: Formation of Eval Advisory Group

Oct: Finalized market characterization studies

3

BMA/TMA, CE, Budget & Timelines (Appendices B, H)

MTAB meeting: October 25

Nov: Delivery of final draft MTI Plans

4

Evaluation (Appendices B, F)

MTAB meeting: Nov 20 & 21

11
Phase I Disposition Report Comment Summary

Jennifer Barnes
Contractor, 2050 Partners

Comment themes

- Clarifying language added related to:
  - Scoring teams
  - Combined ideas
- Corrected sector for Residential HPWH
  - Single-family, existing & new construction
- Questions related to MT costs (next slides)

MT costs

- Preliminary cost estimates were developed to support Stage 2 score development (as an input to the cost-effectiveness tool)
- Estimates based on team knowledge and experience
- Costs will continue to be refined for those ideas advancing to Phase II

MT Cost comments – cost categories

- Does the category for customer incentive costs include incentives from other entities?

Response:

- The customer incentives estimates include incentives that could be provided by CalMTA or by other entities
- Clarifying language added to report

Technology testing

- Report does not appear to include technology testing and refinement. Does MTAB assume that other California agencies will cover all this and no technology validation is required?

Response:

- Research and evaluation costs may include lab testing and test procedure development, etc.
- Clarifying language added to report

“Other” costs

- ”Other” costs are sometimes significant. Please elaborate on what these costs are.

Response:

- Given the preliminary nature of these estimates, we believe breaking them down further would imply false precision
- Have added additional categories of “other” costs in the general description

12

Chefluencer Strategy Pilot: Induction Cooktops & Ranges

Jeff Mitchell
Principal, Market Transformation

Targeted barriers and interventions

Key barriers identified:

Consumers' attachment to gas cooking

Low awareness of induction's benefits

Draft interventions this test will inform:

Change public opinion and build awareness

Build retailer induction stocking and sales practices

What is a “Chefluencer?”

Photo Credit: The Building Decarbonization Coalition

- An intervention to change public opinion, build awareness of the benefits of induction cooking, and ultimately grow demand for induction cooking
- Professional chefs demonstrate the benefits and functionality of induction cooking
- Engage potential consumers through interactive presentations
- Train sales staff so they can fully champion induction technologies

Strategy Pilot research objectives

Learn

- Can Chefluencer events change public opinion?
- Which messages regarding the benefits of induction cooking resonate the most with retail customers?
- Are participants motivated to purchase induction technology if the event is coupled with a coupon for the purchase of a product?
- How does the retailer and their target product manufacturer support and react to these kinds of events?
- Do these events help retail sales associates improve their knowledge about induction for more effective retail sales?

Comment Theme 1: Chefluencer in retail

- If BDC has already deployed Chefluencer events, why is this pilot needed?
- Testing messages already deployed in CA
- Testing only in underserved markets

Response:

- These have not widely been deployed in retail environments
- We want to learn how these events and their messages influence customers in the retail environment and how retailers themselves react to the events
- Clarification: these are not just focused on underserved markets

Comment Theme 2: Testing messaging

- What BDC messaging are you testing?
- Can you segment the data?
- What are the sample design details?

Response:

- We're testing BDC's consumer messaging in the retail environment
- This is mostly a qualitative study with a convenience sample design
- We are planning on a minimum of 150 responses. Where the sample sizes allow, we will conduct cross tabulation of results to explore relationships

Comment Theme 3: Incentive approach

- Decouple incentives from message testing
- Test multiple levels of incentives
- Consider providing coupons for plug-in induction cooktops

Response:

- We believe we can test both the effectiveness of Chefluencer messages and the incentives themselves
- It is an interesting idea to test multiple incentive levels but does add complexity; we will consider this approach
- A coupon for a plug-in induction cooktop is a good idea and we will consider how to add this to the pilot

Comment Theme 4: Change in retailer stocking practices

- How will you measure retailer changes in stocking and sales practices in the both short and long term?

Response:

- In the near term via sales associate and store manager interviews
- Through national contacts, we will also learn how product merchants respond
- Long-term, we will build a data mechanism through our retailer relationships to track this

Comment Theme 5: Role of retail sales associates

- How many sales associates do you expect to reach?
- How will you involve sales associates into events?
- Plans for trainings sales associates

Response:

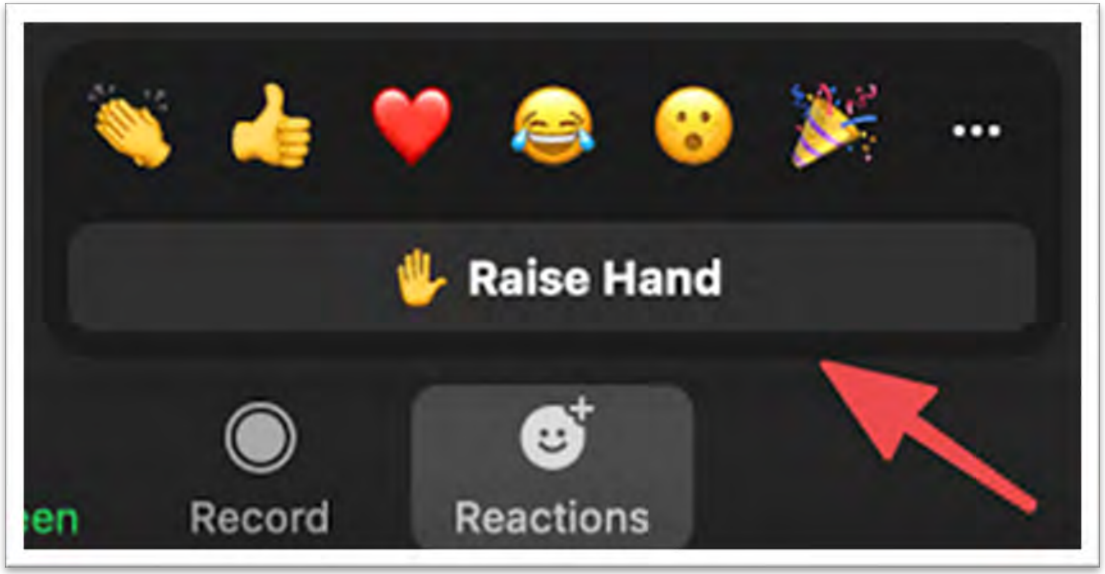
- Store associate participation in the events will vary by each location and be at the discretion of each store manager
- We do believe we will be able to determine if Chefluencer events can overcome biases with sales associates

Implementation strategy and timeline

Activity	Timeline (Months)					
	June	July	Aug	Sept	Oct	Nov
Task 1. Scope Agreement, Project Kickoff, Program Management	■					
Task 2. Retailer & Induction Manufacturer Engagement	■	■	■	■	■	
Task 3. Planning & Design of Chefluencer Events		■	■			
Task 4. Implementation of Chefluencer Events			■	■		
Task 5. Program Strategy Pilot Assessment				■	■	■

13. Public Comment

Raise your hand using the “Reactions” feature and we will allow you to unmute yourself.



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Next Meeting & Next Steps

Stacey Hobart
Principal, Stakeholder Engagement & Communications

MTAB Review Timeline

MTAB Meetings

	May	June Packet posted: 6/10 MTAB meeting: 6/14	July Packet posted: 7/3 MTAB meeting: 7/12
MTI Template	• Written comments due	• Final shared with MTAB with comments addressed as possible	
Phase I Disposition Report	• Draft report sent to MTAB for review • MTAB comments collected via form	• Comment summary review at MTAB meeting • Final Phase I Disposition Report posted	
Advancement Plans & Strategy Pilots • **HPWHs** • **CRAWS**		• Draft Adv. Plans (2) review & discussion • Public Comment Period	
Advancement Plans & Strategy Pilots • **Efficient Streetlighting** • **Foodservice Water Heating Systems**			• Draft Adv. Plans (2) review & discussion • Public Comment Period
2025 ABAL		• Draft 2025 ABAL review & discussion • 2025 ABAL comment form to MTAB	• Final recommended 2025 ABAL shared

Evaluation Workgroup timeline

2024			
July	August	September	October
• Develop Charter and Application • Announce Opportunity	• Application Period	• Select Workgroup Members	• Inaugural Meeting • Review Batch 1 Evaluation Plans

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for the public good

CalMTA

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