



# **DRIVING TRANSFORMATION**

Behavior, Energy & Climate Change (BECC) / November 12-15, 2023 / Sacramento, CA

Co-Convened by

Stanford

Environmental and Energy  
Policy Analysis Center

**ciee**  
California Institute  
for Energy and Environment

 **CITRIS**  
THE **BANATAO**  
INSTITUTE

**ACEEE** ::

# Staying Power: California's Market Transformation Strategy for Lasting Energy Efficiency

November 14, 2022

Stacey Hobart | Moderator, CalMTA (administered by Resource Innovations)

Jeff Mitchell | Panelist, CalMTA (administered by Resource Innovations)

Melinda Lopez | Panelist, The Ortiz Group

Karen Horkitz | Panelist, Consultant

Convened by:

# Today's Panelists



**Stacey Hobart**  
Principal, Stakeholder  
Engagement & Communications



**Jeff Mitchell**  
Principal, Market  
Transformation



**Melinda Lopez**  
Equity Consultant



**Karen Horkitz**  
Market Research & Evaluation  
Lead



# Icebreaker

Q. What energy-efficient technology, product, or practice would you like to see become the “next big thing” in our industry?

#BECC2023



# **Introducing Market Transformation to California**

Overview of CalMTA and our Market Transformation Framework

California has set some of the most ambitious climate goals in the nation. But reaching these targets requires new strategies and market interventions:



California's  
clean energy  
future



How do we accelerate the current rate of energy efficiency adoption?



How can market growth continue without interventions or incentives?



What activities add value in a dense, mature EE program landscape?



What will help innovative technologies become the accepted standard?



# Market Transformation

The strategic  
process of  
intervening in  
a market  
to create  
lasting change

Lasting energy savings

Reduced burden on the energy grid

Lower cost of energy due to higher efficiency

Healthier climate with reduced GHG

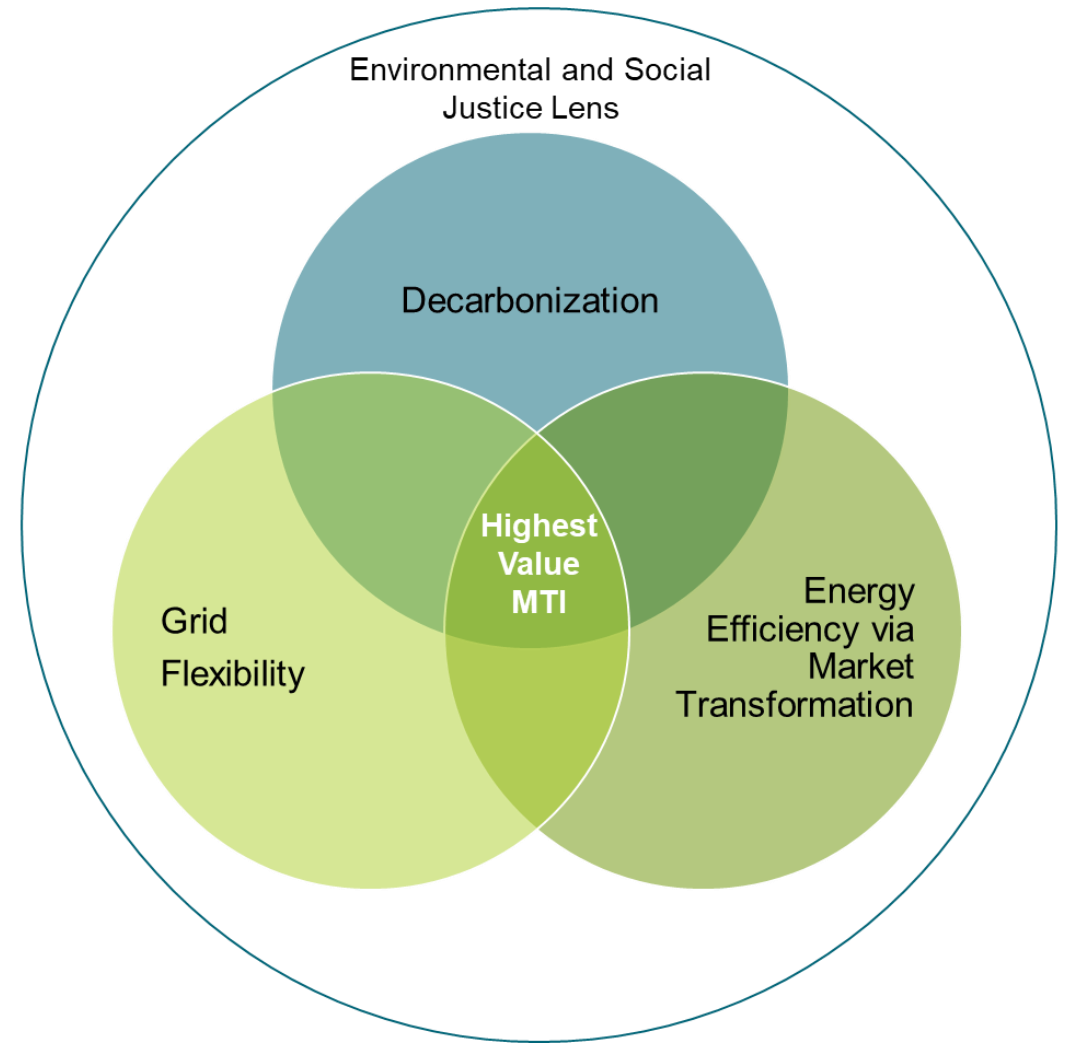
Jobs and economic development opportunities

#BECC2023



# Introducing CalMTA

- CPUC created a Market Transformation Framework (D.19-12-021): \$320M investment over eight years
- Collaborate with existing EE efforts
  - Avoid duplication
  - Faster scale
- Contribute to statewide energy savings
- Advance other state goals:
  - GHG emissions reduction
  - Workforce education & training
  - Environmental and social justice (ESJ)
  - Grid flexibility





# Shaping California's MT Portfolio

- First Request for Ideas (RFI) closed in August
- **117 ideas submitted**
- Top-ranked ideas are developed into MTIs
  - MTAB input and CPUC approval
- Batch 1 MTIs selected for rapid advancement



**Portable heat pumps:** Affordable, self-contained efficient heating and cooling products that are easy to install



**Induction cooktops:** Electric ranges or cooktops that use electromagnetic induction to heat cookware directly



**ERTUs:** Forced-air systems that package evaporator, condenser coils, fans, and heating into one unit



# Applying an Equity Lens

## Building Long-Lasting Relationships

Introductory briefings and focused listening sessions with 60+ ESJ stakeholders/CBOs



## Optimizing MTI Benefits

RFI scoring prioritizes ideas that benefit ESJ communities; equity embedded in MTI design



## MT = Economic Development

WE&T needs to be built into MTI Advancement Plans; workforce development listening sessions



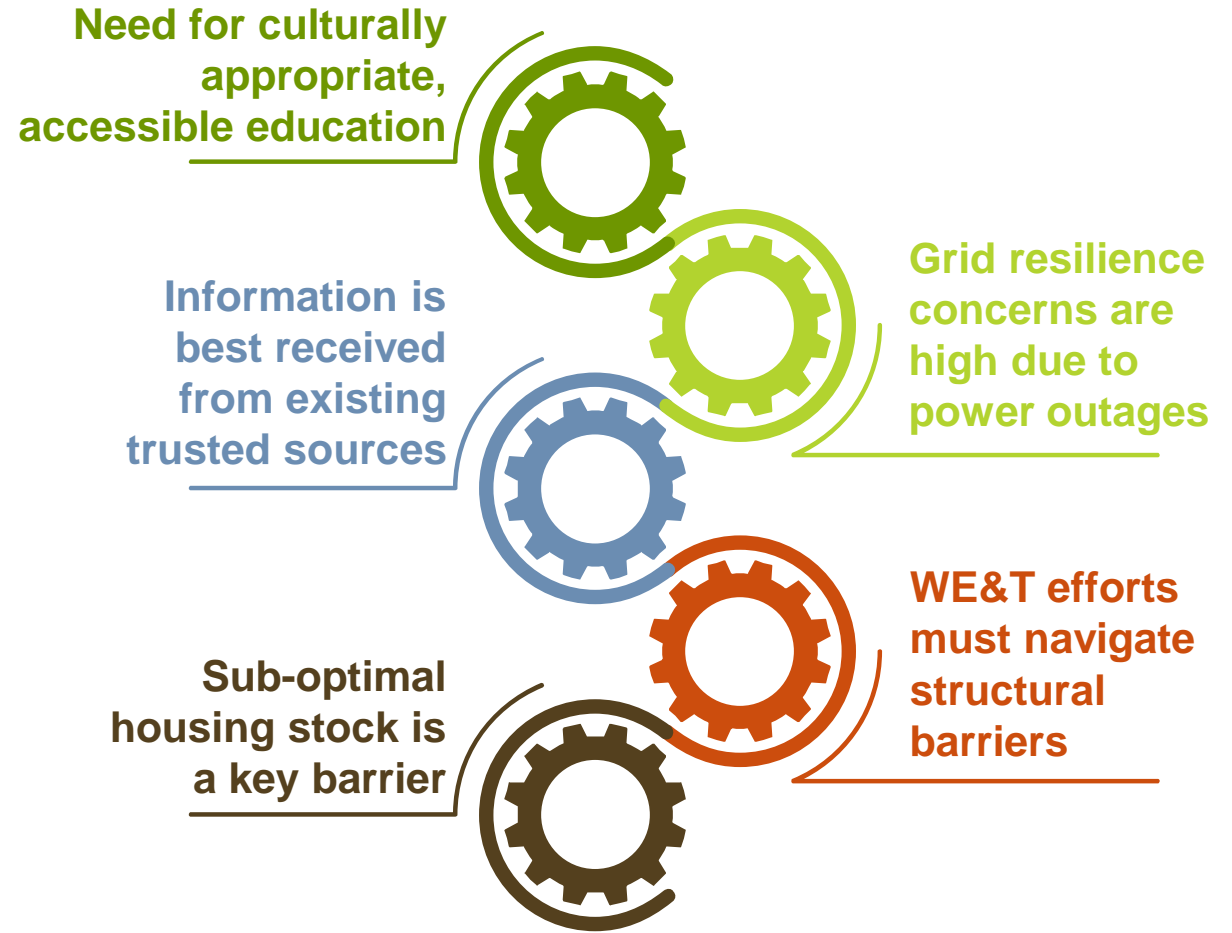
## Ensuring Accountability

Equity metrics for individual MTIs and CalMTA as an organization are defined and reported on



# Listening to ESJ Communities

- Five listening sessions held Nov. 1-8
  - Innovation & technology
  - Workforce development
- Attended by 20+ CA organizations working with ESJ communities
- Cross-cutting insight into EE adoption barriers and opportunities



# **Anatomy of a Market Transformation Initiative (MTI)**

Developing High-Value Initiatives that Drive Lasting Change

# Elements of an MTI

## Market Characterization

Research to understand current market state and key market actors/points of influence

## Logic Model

Systemic visual presentation of how interventions will affect change and can be sustained

## Intervention Strategies

Activities that mitigate market barriers inhibiting adoption of a product, technology, or practice

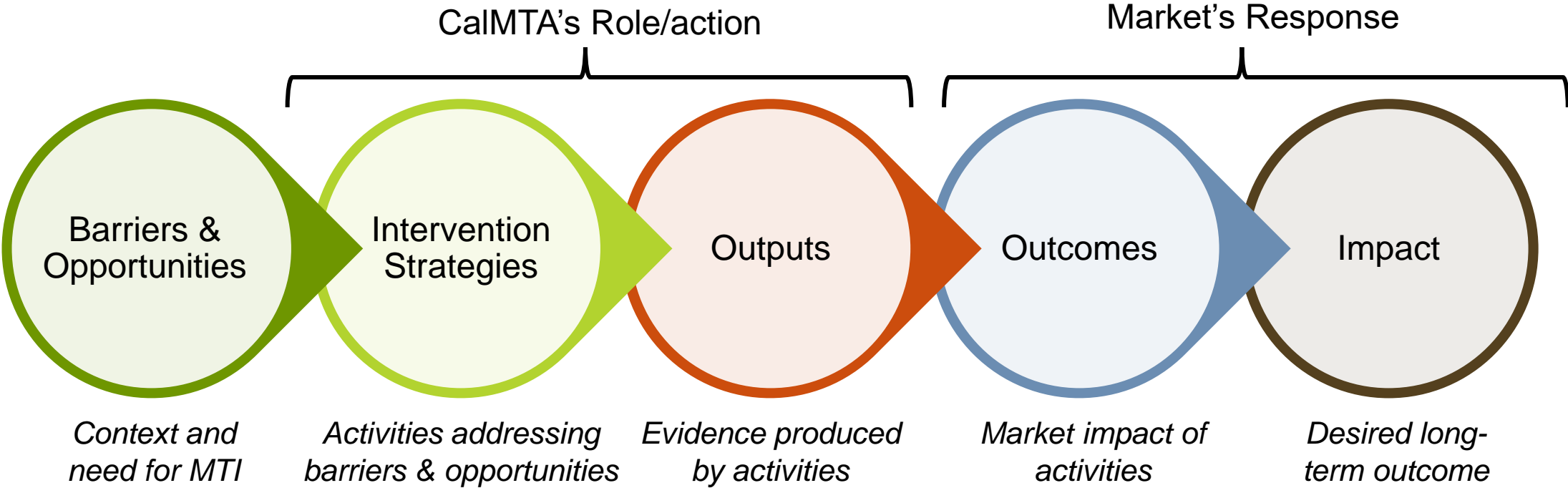
## Data Collection Plan

Data sources and collection methodology to accurately track and report on market progress indicators



# MTI Logic Models

A visualization of the program strategy



#BECC2023



# Research and Evaluation Inform MTI Strategy and Implementation

## Plan (Develop Strategy)

- Characterize Market
- Develop Logic Model
- Develop Evaluation Plan

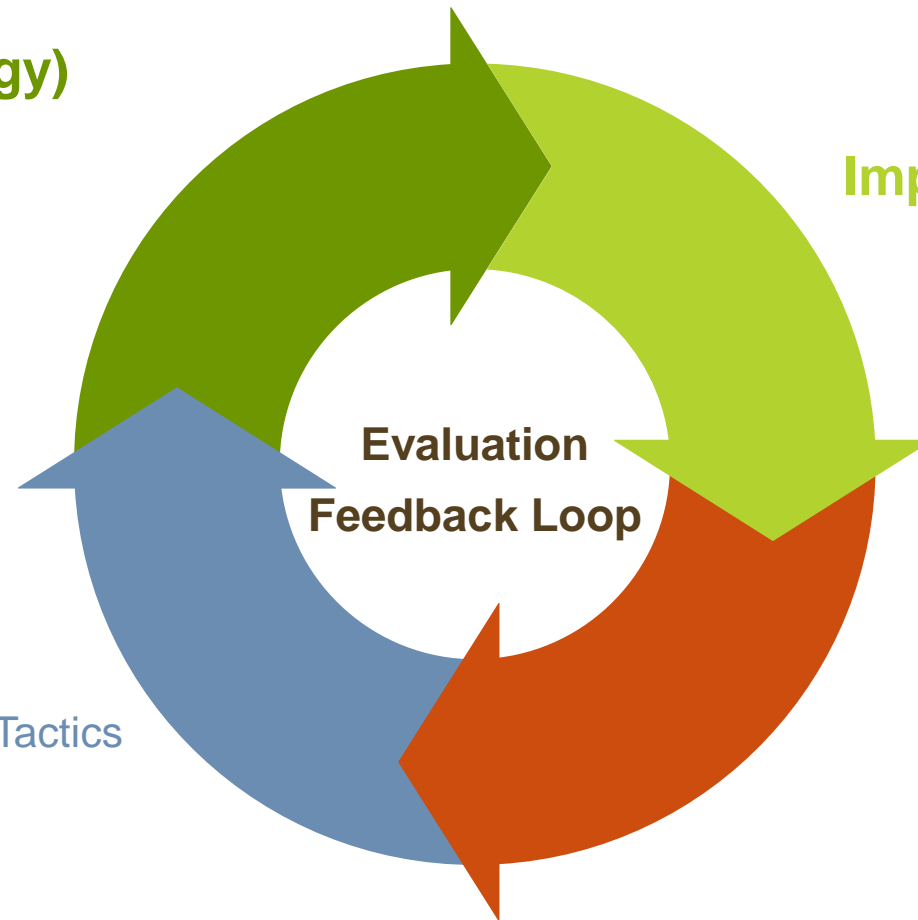
## Implement Strategy

## Evaluate:

- Market Progress
- Causal Influence
- Activities/Process
- Market Estimates and Assumptions

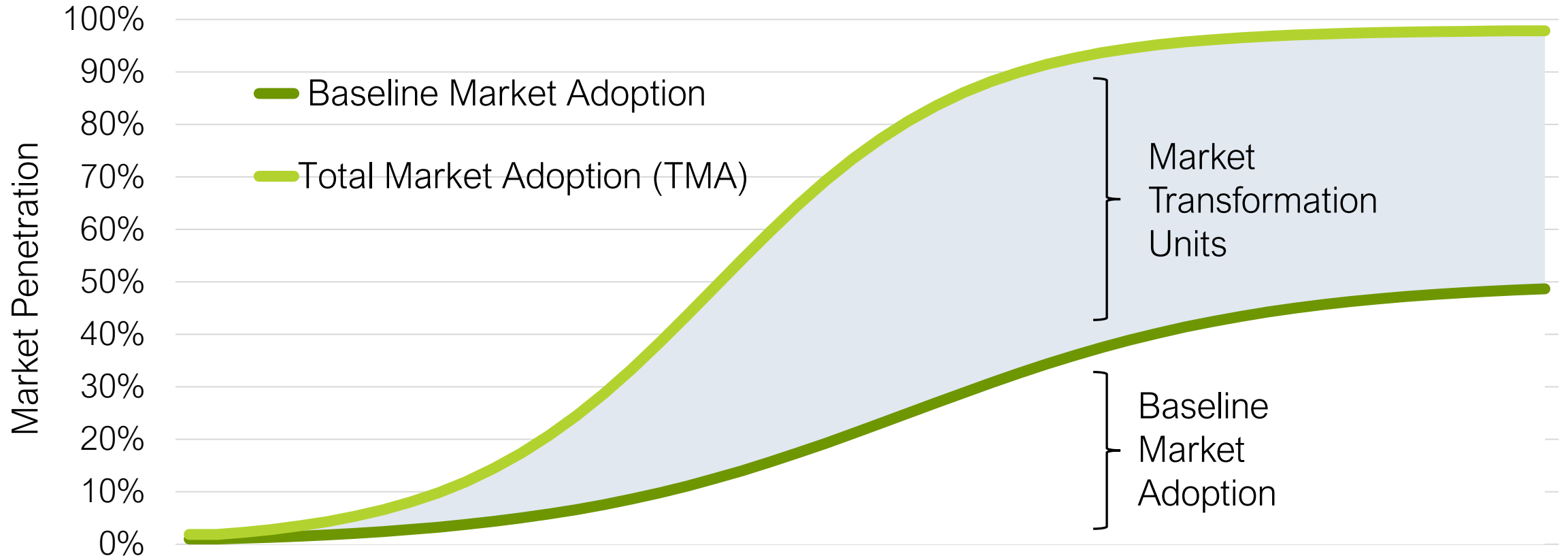
## Refine:

- MTI Strategy and Tactics
- Assumptions





# MT Savings Opportunity





# Case Study: NEEA Ductless Heat Pump Initiative

**2008:** 5% of Pacific Northwest households aware of DHPs

Barrier	Intervention
Limited product availability	Engaged top manufacturers to influence production, distribution
Low customer awareness	Developed and deployed marketing campaigns
Contractors not familiar with DHPs	Launched DHP-focused training and certification program
Higher purchase price	Partnered with utilities to offer and promote incentives



**2018:**

**57%** of NW households aware of DHPs



**93%** of installers recommend DHPs to customers



**150,000+** DHPs installed in residential service territory



# Interactive Activity

MTI Logic Model

# Portable Heat Pumps

- **Affordable**, self-contained efficient **heating and cooling** products that are **easy to install** (like window units)
- **Target market:** Primarily multifamily properties with gas or resistance electric heat
- **Key leverage points:** Retail channel, ENERGY STAR, multifamily and public health programs



# Q. How familiar are consumers with portable (micro/window) heat pumps)?

- A** Very familiar with the technology.
- B** Somewhat familiar with the technology.
- C** Heard about them but know very little.
- D** Never heard of this product.



# Q. What source of information do consumers trust most when it comes to choosing a home heating or cooling system?

- A** Internet research
- B** Retail staff or in-store displays
- C** A preferred contractor
- D** National programs like ENERGY STAR
- E** Friends and peers
- F** The local utility

# Q. What factor would be the most likely to discourage consumers from buying a highly efficient home heating and cooling system?

- A Product purchase price
- B Hard to find in stores
- C Concern about product performance or features
- D Not sure how to find an installation contractor
- E Concerns about electrical panel or bill impacts



# Q. What factor would be the most likely to drive a consumer to buy a highly efficient home heating and cooling system?

- A Heating and cooling in one system
- B Better for the environment
- C Better home comfort and indoor air quality
- D Tax credits or utility rebates
- E Positive word of mouth



## Q. Which strategic interventions would you consider most critical to increasing market adoption?

- A Encourage manufacturers to develop and promote this product
- B Educate retail staff to sell the product to customers
- C Motivate retailers to stock and display the product
- D Partner with research labs to demonstrate and measure performance/savings
- E Launch a marketing campaign to promote product benefits to consumers
- F Work at the federal level to influence a national standard or specification
- G Introduce special product-specific training for HVAC contractors and installers





# Portable Heat Pump Logic Model

Barriers / Opportunities  
Strategic Interventions



# Portable/Window Heat Pumps Preliminary MT Theory

## Problem

- Target market suffers higher energy burdens and greater exposure to poor air quality
- Need an affordable electric alternative to resistance and gas space heat while also providing air conditioning and air filtration
- Market actors purchase inefficient space heaters and window A/C units to supplement HVAC needs and buy separate air filtration products during poor outdoor air quality events

## Opportunity

- Portable and window heat pumps products are available
- Can be self installed
- Some include air filtration and grid-interactive capability

# Portable/Window Heat Pumps Preliminary MT Theory



## Barriers

- Product category availability
- Higher cost
- Lack of awareness
- No efficient product differentiation
- Insufficient models that include air filtration or are grid enabled



## Priority Activity

- Influence product development through manufacturer engagement
- Specification development with aligned regions
- ENERGY STAR and DOE engagement
- Partner with retail platforms to stock and market
- Partner with existing programs (weatherization & air quality)

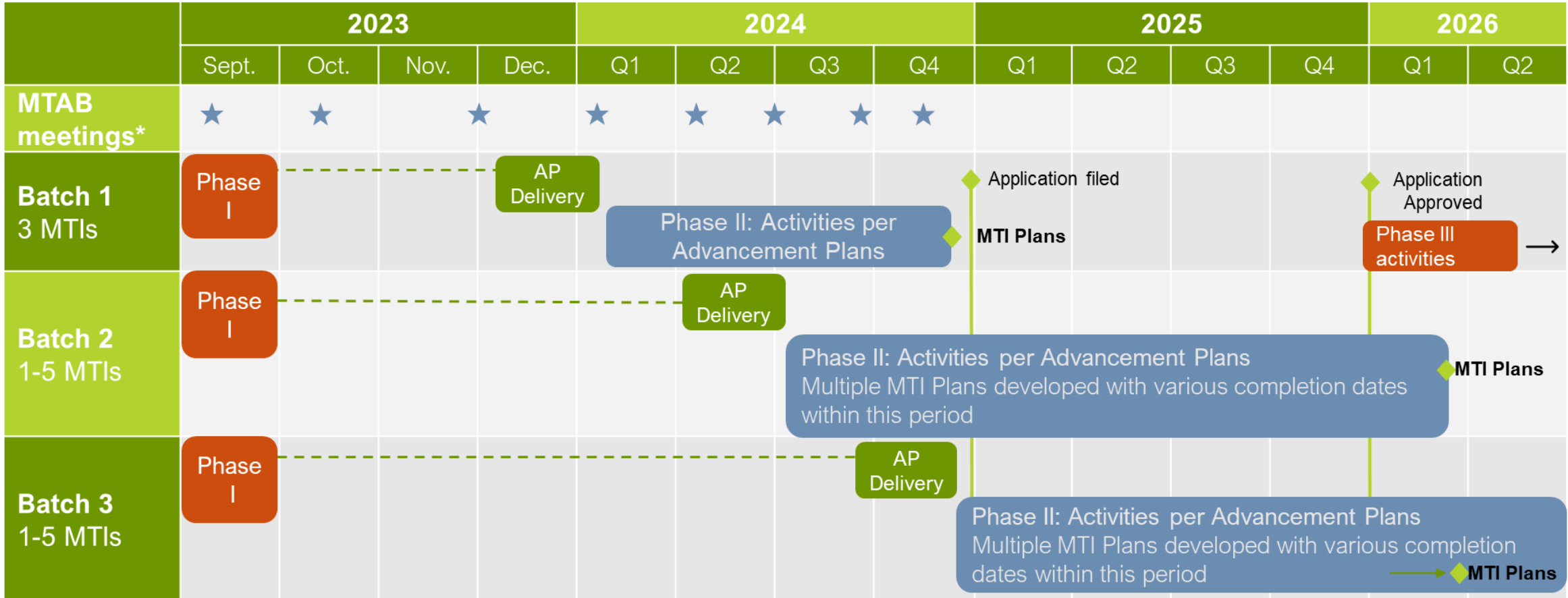


## Outcomes

- National scale will influence retail stocking practices, build product awareness and efficient product differentiation with the ultimate impact of influencing voluntary and federal standards

★	Scheduled or proposed MTAB meeting
◆	Milestone
- - -	Staff activity
AP	Advancement Plans

# Looking Forward






#BECC2023



(Chart is intended to be illustrative. Dates may change slightly)

# Thank you!

-  For more information, contact Stacey Hobart: [shobart@calmta.org](mailto:shobart@calmta.org)
-  Sign up for updates at: [calmta.org/get-in-touch](https://calmta.org/get-in-touch)
-  Follow us at: [linkedin.com/showcase/calmta/](https://linkedin.com/showcase/calmta/)

Convened by: