



LEARNING FROM THOSE  
WHO CAME BEFORE:  
*HOW UTILITY INCENTIVE  
PROGRAMS CAN ALLEVIATE  
SUPPLY CHAIN FRICTION FOR  
HEAT PUMP WATER HEATERS*

BY: JEN LOOMIS, PHD



# Background

---



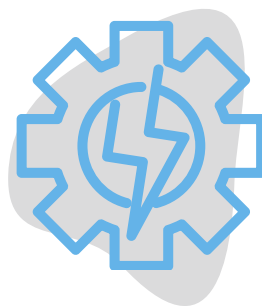
## Climate Goals

Growing numbers of states and jurisdictions are setting climate-related goals



## Reducing GHG Emissions

Transitioning end-uses from natural gas to electricity and using renewable energy is a good way to reduce GHG emissions



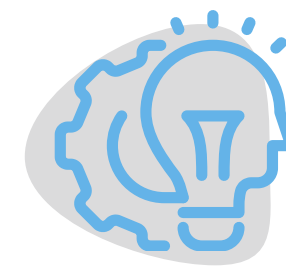
## Heat Pumps

Heat pumps are electric and highly efficient



## Market Sizing

The market for space-heating/cooling heat pumps has grown steadily, while water-heating heat pumps has lagged



## Solution

Let's learn from areas with mature HPWH programs to increase adoption

# Methods

## Interviews with 69 market actors

- 30 Market-rate and low-income new construction professionals in the single-family and multifamily markets
- 20 Installers in single-family retrofit market
- 7 Distributors
- 6 Program staff from mature HPWH programs
- 4 Local government and housing authority staff
- 2 Manufacturers

## Supply chain mapping



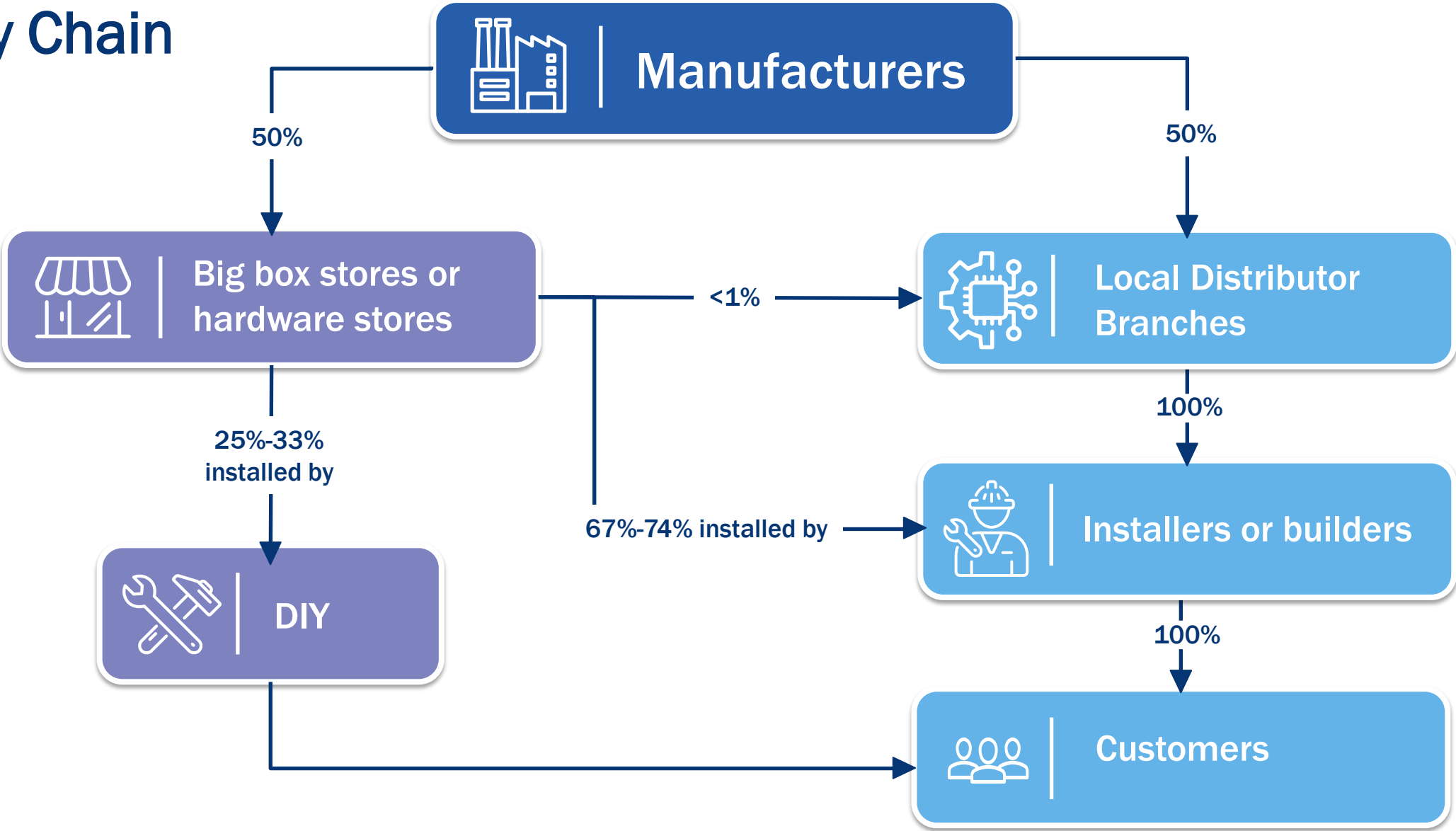


Opinion **Dynamics**



SUPPLY CHAIN

# Supply Chain





Opinion **Dynamics**



FRICTION  
POINTS

# Friction Point #1

---

**Installers** want the job done quickly and avoid customer call-backs

- Preference for like-for-like replacements
- HPWH installation requirements can bring challenges, added materials, and their associated costs
- Misconceptions about HPWH efficiency
- HPWH functionality features seem complex



## Friction Point #2

---

Homeowner cost-consciousness and unfamiliarity with HPWHs makes them reluctant to purchase



- Upfront costs
- Low awareness
- Lack of education of system functionality and its advantages
- Concerns regarding power outages



## Friction Point #3

---

**Distributors** stock what they sell,  
and they do not sell a lot of HPWHs

- Limited space
- Stock only what will sell quickly
- Take cues from contractors



## Friction Point #4:

---

**Multifamily property owners** want a space-saving option

- **In-unit:** HPWHs need to be in larger closets with ventilation. Often not viable because it will take up too much usable square footage.
- **Centralized:** Slower recovery rate means large tanks; limited placement options





Opinion **Dynamics**



# INCENTIVE PROGRAMS

# Smoothing Point #1

---

**Training and education** can improve competency and speed up installation, making installers more likely to recommend HPWHs

- Topics = how it works, installation requirements, efficiencies, modes, warranty, and incentives
- Programs partnered with distributors
- HPWH giveaways to installers to gain first-hand experience



## Smoothing Point #2

---



- Effective incentive programs emphasize **customer education of HPWH** efficiency benefits and available incentives
  - Used targeted marketing
  - Provided homeowner tips at time of installation
- Programs also offered **marketing funds** to contractors

## Smoothing Point #3

---

Programs should **strengthen relationships with distributors** to incentivize stocking and selling more HPWHs

- Suggested to start with small, focused group
- Regular interactions were important
- Tiered bonus strategy with higher incentives for selling more units



# Smoothing Point #4

---

Programs that build relationships with manufacturers can offer **market feedback** and make the case for design changes



- If program staff can develop open lines of communication with HPWH manufacturers, then they can offer observations on market trends and barriers in their service territory
- Mutually beneficial relationships because manufacturer could open up new customer spaces and utility can get more savings



Opinion **Dynamics**



# SUMMARY



# Summary

---

- Widespread HPWH adoption will help meet climate goals; friction points in the supply chain are currently limiting sales
- HPWH programs should:
  - Build relationships with manufacturers to provide feedback on market needs
  - Partner with distributors since they are optimally positioned to influence installers
  - Conduct marketing, education, and awareness campaigns to increase familiarity with HPWHs among installers and end-user



Opinion **Dynamics**

Jen Loomis, PhD

Principal Consultant

[jloomis@opiniondynamics.com](mailto:jloomis@opiniondynamics.com)

503-943-2125

