

Hot Takes and Cool Trends: Evaluating MN's Heat Pump Market Transformation

Maggie Pears, Center for Energy and Environment
Maddie Hansen-Connell, Center for Energy and Environment

ABSTRACT

The MN Air Source Heat Pump (ASHP) Collaborative has been building momentum for 5 years toward increasing the adoption of ASHPs into Minnesota's cold climate. This initiative works across the market to normalize ASHPs as the default replacement for central air conditioners by engaging with contractors, distributors, utilities, and homeowners. The recently published Air Source Heat Pump State of the Market Report shows the impact of that work and progress on market adoption. By tracking change across multiple market actors, the report offers a replicable framework for measuring market change in real time.

Data from over 90 contractors, 130 training participants, 720 recent ASHP customers, 4,000 homeowners, and multiple distributors reveal a shifting market. Metrics such as contractor favorability, sales shares, customer decision pathways, rebate influence, and satisfaction levels demonstrate not only increasing ASHP technology uptake, but also the structural changes enabling sustained adoption. For example, from 2022 to 2024, the percentage of customers that installed a heat pump at contractor suggestion rather than initial intent increased from 26% to 44%, highlighting the importance of contractor training as a transformation lever and validating the efforts of the Collaborative on contractor training.

By combining strategic market support strategies with savvy evaluation techniques, the MN ASHP Collaborative is shaping a more energy efficient HVAC economy while tracking metrics to validate impact. This paper will highlight key program implementation strategies, aimed at overcoming market barriers and building momentum, and key findings from the impact research.

Introduction

Minnesota's climate presents a challenging environment for heat pump market transformation, and a high-stake opportunity for impact. Space heating accounts for the largest share of residential energy use in the state, and an estimated two-thirds of single-family homes have centrally ducted furnaces paired with central air conditioners (EIA, 2020). If even a fraction of those systems were replaced with air source heat pumps (ASHPs) rather than conventional air conditioners, the energy and emissions savings would be substantial: the technical potential for this transition is estimated at 31.4 million net MMBtu annually, representing a 35% reduction in residential heating and cooling energy use (CEE, 2023b).

Yet Minnesota has historically seen multiple structural barriers to the adoption of ASHPs: natural gas heating dominates the Metro area and has been a more economic heating fuel compared to electricity at current rates; contractors have historically had limited familiarity with and confidence in heat pump technology; and consumer awareness of ASHPs is strikingly low. Against this challenging backdrop, market transformation requires more than rebates – it requires deliberate, sustained engagement with supply chain actors simultaneously.

That is the charge of the MN ASHP Collaborative. Founded in 2019 and incorporated as an initiative within Minnesota’s Efficient Technology Accelerator (ETA) in 2023, the MN ASHP Collaborative works to achieve the long-term vision of heat pumps as the standard choice for home heating and cooling. Achieving that vision requires working through a formal theory of change that identifies the key market barriers, maps intervention strategies to those barriers, defines outcomes for the market to shift, and tracks market progress indicators (MPIs) over time to assess whether those outcomes are being achieved, all while continuously assessing effectiveness and adapting to changes in the market. This paper presents both the implementation story of what the data shows is working (Cool Trends), and how findings are being used to adapt strategies in real time (Hot Takes).

Program Context and Theory of Change

Technology Focus

While ASHPs have many potential applications – ductless mini-splits, all-electric systems, ground-source heat pumps – the Collaborative’s primary focus is centrally ducted dual-fuel systems: configurations in which an ASHP replaces the central air conditioner for cooling and provides heating for a portion of the heating season, while an existing gas or propane furnace provides supplemental heat during extreme cold. This focus was deliberate for the Minnesota market: the ducted dual-fuel application represents the largest addressable market in Minnesota (roughly 53% of all households), fits the replace-on-fail dynamics of the HVAC market, and offers a management value proposition given the state’s fuel cost structure (CEE, 2023a).

Two product tiers are defined to simultaneously raise the floor and the ceiling of the market. Tier 1 is an entry-level ASHP, meeting federal minimum specifications, sized for the cooling load, and designed for maximum accessibility, particularly for natural gas customers where the incremental cost must be modest to be viable. Tier 2 is a variable-speed, cold climate ASHP sized to cover most of the heating load, recommended for propane-heated homes where the financial case for heat displacement is stronger, or for customers prioritizing electrification. Tier 1 offers net per-unit savings of approximately 25MMBtu; Tier 2 offers approximately 43 MMBtu (CEE, 2023b).

Market Barriers and Opportunities

The Collaborative’s market engagement strategy is grounded in an analysis of market barriers and opportunities documented in the Market Transformation Plan (CEE, 2023a). Four key barriers shape the program logic:

- **Undefined or weak value proposition:** the cost-benefit case for ASHPs is unclear and variable. Upfront costs are often higher than conventional AC equipment. Operating costs depend heavily on fuel type, electric rates, switchover temperature settings, and equipment sizing. For natural gas customers in particular, operational cost savings may be modest, neutral, or negative at current electric rate structures.
- **Lack of contractor and customer awareness and experience:** many contractors, particularly those with limited installation experience, have been hesitant to recommend ASHPs, especially for cold-climate primary heating or for

natural gas applications. Customers have even lower baseline awareness, with most customers having little or no awareness of the technology.

- **Potential for higher operating costs:** natural gas is substantially cheaper than electricity per energy unit in Minnesota. The dual-fuel approach mitigates this by using the heat pump for shoulder-season heating and the furnace for heating in colder temperatures, but the economics are nuanced and depend on rate structures that many customers and contractors don't fully understand. Dual-fuel and electric space heating rates improve the value proposition but are available only in limited utility territories and sometimes require a second meter; the second meter isolates the energy usage of the reduced rate eligible equipment, in this case the heat pump, to allow energy usage for that equipment to be billed at a lower rate, however, the meters themselves can be expensive to install, which significantly reduces the cost benefits of the rate.
- **Inconsistent incentive designs across utility, state, and federal programs:** the proliferation of rebate and incentive programs with varying specifications creates confusion for contractors and distributors trying to navigate and communicate incentive options to customers.

Against these barriers, several significant opportunities exist: growing motivation among utilities, municipalities, and some customers to reduce carbon emissions; federal incentives through the Inflation Reduction Act (including the 25C tax credit (2023-2025) and HEAR rebate programs (yet to launch in MN)); Minnesota legislation enabling additional rebate dollars for qualifying households; legislation allowing fuel switching in utility rebate programs, fuel flexibility as a utility and customer cost-saving measure, and the potential for future state building code or appliance standard changes.

Market Support Strategies

The Collaborative's Market Transformation Plan defines seven market support strategies designed to overcome the identified barriers and leverage opportunities (CEE, 2023a). These strategies, and the logic connecting them to market outcomes, form the backbone of the program's theory of change:

- **Build Contractor Champions:** Through training, tools, and differentiation via the Preferred Contractor Network (PCN), develop a growing base of HVAC contractors who are qualified, confident, and committed to offering ASHPs.
- **Drive customer awareness through resources and collaboration:** Serve as a hub for coordinating awareness-building among utilities, municipalities, distributors, and state organizations; develop customer tools and resources with articulated value proposition for market partners to use.
- **Facilitate alignment among financing and incentive programs:** reduce market confusion by working with utilities and program administrators to streamline and align rebate requirements, specifications, and customer pathways to reduce upfront customer costs.
- **Work with distributors and manufacturers on stocking and promotion:** ensure that rebate-qualifying ASHP products are available with minimal lead times and that distributors are actively promoting them.

- **Collaborate with utilities and regulators on beneficial heat pump rates:** support utilities in adopting dual-fuel or electric space heating rates that improve the ASHP value proposition for natural gas customers and support demand response program development.
- **Support demand response and load flexibility products and programs:** work with manufacturers, distributors, and utilities to overcome technical barriers to enrolling ASHPs in demand response programs
- **Influence state or federal code of standard:** work toward the 2035 goal of a code or standard making ASHPs the default over conventional air conditioners.

Each strategy is tied to specific outputs (measurable activities) and market progress indicators (measurable market outcomes) in the Evaluation Plan's logic model, creating a clear accountability structure for both implementation and market impact (CEE, 2023b).

Evaluation Framework and Methodology

A Logic Model Approach to Market Transformation Evaluation

Market transformation programs differ fundamentally from traditional resource acquisition programs. Savings do not occur at the same time as program activities – market barriers must be overcome, behaviors must change, and those changes must diffuse through the market before energy savings are fully realized. This means that tracking output metrics alone (trainings held, rebates issued) is insufficient to demonstrate program effectiveness or guide strategy. A complex evaluation framework is required.

The Collaborative's evaluation framework is built around a formal logic model that traces the through-line from current market conditions to program activities to intermediate market outcomes to long-term impacts (CEE, 2023b). Market Progress Indicators (MPIs) are derived directly from the logic model's outcomes; they are the measurable signals that the intended market changes are occurring, even before those changes fully show up in sales or energy savings data. A sample of the MPIs tracked by the Collaborative include:

- Increasing number of contractors reporting familiarity with of heat pumps
- Increasing number of contractors including ASHPs in bids for natural gas and propane heated homes
- Increasing share of customers who report satisfaction with their bids and contractor search
- Indication of expanded trainings and educational materials from manufacturers and distributors
- Increasing number of programs offering ASHP incentives that align with Collaborative recommended specifications
- Increasing ASHP awareness among potential HVAC customers
- Increasing proportion of ASHP sales relative to total HVAC cooling sales
- Increasing number of utilities offering dual-fuel rates or heat pump demand response pilots/programs

By monitoring these indicators over time, the Collaborative can detect structural market changes – shifts in contractor attitudes, improvements in supply chain readiness, growing

consumer awareness – that are leading indicators of future adoption growth, rather than waiting for lagging sales data to confirm what has already happened.

Data Collection Framework

The State of the Market Report draws on five primary data collection efforts designed to give a 360-degree view of the market across all key leverage points (Hansen-Connell, 2025):

- **Contractor Survey (N=91):** A survey of residential mechanical contractors holding a mechanical bond in Minnesota, with representation across all regions of the state. Results were analyzed by geography (metro vs greater MN) and heat pump experience (high vs. low), enabling the Collaborative to track MPI progress and identify subgroup differences that point to targeted intervention opportunities.
- **Contractor Training Survey (N=130):** A post-training evaluation administered to attendees of the spring 2024 training series hosted at 10 locations across Minnesota and North Dakota. In addition to measuring satisfaction and identifying content gaps, this survey captures the attitudes and sales projections of contractors actively engaged in the Collaborative, enabling before/after comparison and benchmarking against the broader contractor population.
- **Recent ASHP Customer Survey (N=721):** A survey of recent ducted heat pump customers in Minnesota, conducted in partnership with six utilities across the state. The survey reached customers who received a utility rebate for a ducted heat pump installation between 2022 and 2024, and was analyzed by year of installation, fuel type, and Collaborative contractor connection status.
- **General Population Homeowner Research (N=4,007 Midwest/ 1,751 MN):** A mixed-methods study including focus groups with 30 MN homeowners without heat pumps and a large survey and randomized controlled trial testing message framing and digging into awareness and perceptions. The study identified four customer market segments and the messaging priorities for future consumer awareness campaigns.
- **Distributor Conversations and Surveys (N=4):** Structured conversations and surveys with four distributors active in the Minnesota market, providing insight into stocking practices, product availability trends, and the trajectory of distributor-led contractor trainings.

Consistent survey questions and segmentation approaches across years are a deliberate design feature, enabling year-over-year trend analysis. This longitudinal comparability is what makes it possible to detect structural market shifts, such as the changing composition of customer decision pathways, that would be invisible in any single year's data.

Program Implementation: Building Market Momentum

The Collaborative's implementation work is organized around seven market support strategies outlined in the section above. The following sections describe the primary activities deployed through 2024 under these strategies, the key findings ("cool trends") related to key strategies from the State of the Market Report published in 2025, and the strategic adaptations ("hot takes") the program is implementing as a reaction to those findings alongside an evolving industry in 2026. Not all market support strategies were a focus on the State of the Market report;

those strategies will be covered briefly. The final strategy, focusing on codes and standards, will be excluded, as work on that strategy is still under development.

Market Support Activities: Contractor Champion Development

Contractors are the single most critical leverage point in the ASHP market. Most homeowners do not come to an HVAC replacement with a strong product preference – they often rely on their contractors recommendations. If contractors don't offer heat pumps, most customers will never consider one. The Collaborative has therefore invested heavily in contractor training and engagement since its formal training program launched in 2021.

In spring of 2024, The Collaborative hosted 10 trainings across Minnesota and North Dakota, with locations selected intentionally to target key market areas and diverse geography. Attendees were recruited through distributor and utility partner channels to maximize reach into contractor populations not yet engaged with the Collaborative. Sessions were structured as three-hour morning events (aligned with expressed contractor preferences for in-person, half-day morning training), and covered a comprehensive curriculum designed directly around the knowledge gaps identified in previous contractor surveys: incentives and financing; customer research and market trends; dual-fuel value propositions; sizing and design; equipment selection; control strategies; and installation best practices. Over 130 contractors attended training in 2024, adding to the cumulative base of Collaborative-trained contractors statewide.

The training program is complemented by the Preferred Contractor Network (PCN), a publicly visible directory of contractors who have completed Collaborative training and committed to offering heat pump options to customers. The PCN serves many functions – it provides customers with a starting point for finding qualified installers, it allows contractors to differentiate their business more qualified for ASHP installations, and it creates an ongoing relationship between the Collaborative and engaged contractors that enables continued communication, additional training opportunities, and market feedback.

Cool Trend: Contractor Market Maturation

Contractor experience and favorability, two of the Collaborative's leading market progress indicators, are both trending in the right direction. Among the 91 contractors surveyed, 89% reported at least some experience with heat pumps, and nearly half said they install them regularly (Hansen-Connell, 2025). Favorable opinions of heat pump technology were held by 70% of respondents overall, with 44% reporting "very favorable" opinions – up from 17% in prior smaller-sample research. Experience plays a significant role in favorability: among contractors who install heat pumps regularly, favorable opinions reach 98%.

Geography matters significantly. Contractors in Greater MN show higher favorability (59% very favorable) and more heat pump activity (42% report more than 25% of business is heat pumps) than their metro area counterparts (29% and 28%, respectively), a pattern consistent with the stronger value proposition in areas served by propane and electric resistance heating. Metro contractors, facing a predominantly natural gas customer base, show systemically lower confidence across all application types. As shown in figure 1 below, contractors beneficial perceptions of the technology grow with experience, inexperienced contractors find the technology less beneficial across all heating fuel scenarios, and even as a cooling solution.

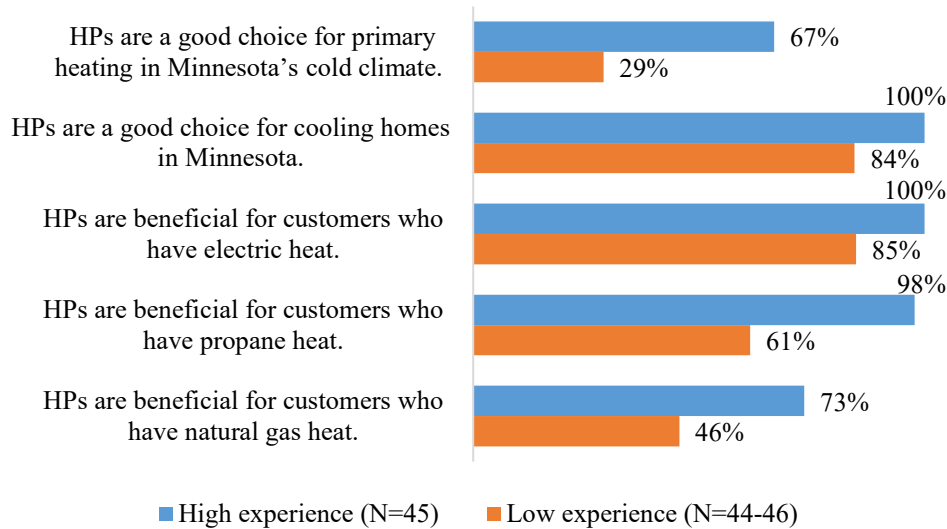


Figure 1: Contractor agreement with heat pump statement by contractor experience. *Source:* State of the Market Report, 2025

Sales trends are also positive: 52% of contractors reported ducted heat pump sales increased over the past few years, and 71% expect further increases over the next five years (Hansen Connell, 2025). Product availability, a significant pain point during the COVID-19 supply chain disruptions, has largely normalized, with 88% of contractors reporting ducted products available within one week or less. Speed of access is critical in a market that is predominately replace-on-fail.

Contractor challenges have also shifted in character. While prior research had smaller sample sizes, concerns about lack of experience (down from 69% to 35% year over year in prior research) and product availability (down from 51% to 27%) seem to be receding (Hansen-Connell, 2025). The dominant challenge now is cost: 85% of contractors cited concerns that heat pumps would cost customers more as a challenge to incorporating them into their business, and 70% cited lack of customer demand. These shifts suggest the market is moving past early supply-side barriers into the harder work of demand generation and cost competitiveness.

Cool Trend: The Contractor as a Decision Lever

One of the most strategically significant findings in the report is a multi-year shift in how customers are arriving at heat pump installations. As shown in figure 2 below, in 2022, 65% of surveyed customers said they were specifically looking for a heat pump when they began their HVAC replacement process; by 2024, that share had declined to 38% (Hansen-Connell, 2025). Over the same period, the share of customers who installed a heat pump because their contractor suggested it, not because they sought one out, grew from 26% to 44%.

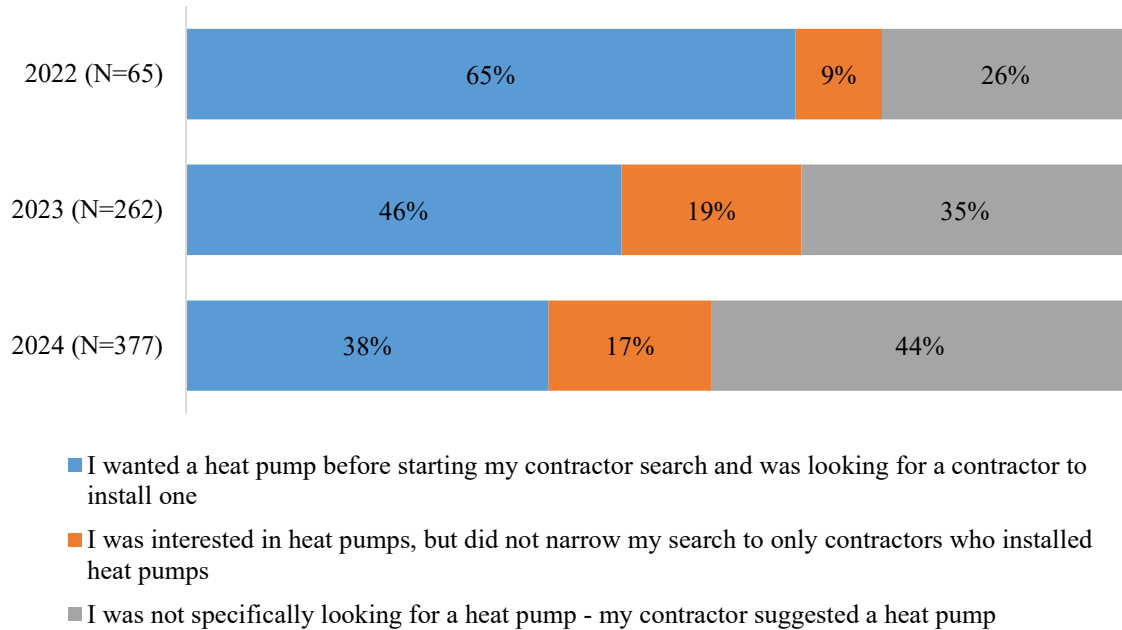


Figure 2: Heat pump interest prior to contractor search, 2022-2024. Source: State of the Market Report, 2025.

This is a sign of market broadening: early heat pump adopters are, by definition, motivated buyers who sought out the technology. As the market matures and contractors become more comfortable recommending ASHPs proactively, the customer base begins to expand to include people who may never have found heat pumps independently. This diffusion from early adopters towards the early majority is a core goal of the Collaborative’s market transformation strategy, and contractor training is a primary mechanism driving it.

The Collaborative’s engagement work appears to be directly supporting this shift. Among customers who installed a heat pump at their contractor’s suggestion, 73% were working with a contractor connected to the Collaborative (Hansen-Connell, 2025), either as a PCN member or through training attendance. Among customers who sought a heat pump independently, only 60% were working with a Collaborative-connected contractor, and for customers that were interested but did not limit their search to heat pumps, 65% worked with a Collaborative-connected contractor. The contractor training offered by the Collaborative focuses on articulation of key customer benefits of ASHPs, from operating economics to home comfort; these conversion metrics show that contractors who have engaged with the Collaborative are more likely to proactively introduce heat pumps to customers who weren’t looking for them, and are able to successfully convert those customers into ASHP adopters.

Cool Trend: Training Efficacy

The contractor training survey provides strong evidence that training changes not just knowledge, but attitudes and behaviors (Hansen-Connell, 2025). Across every application type measured, training attendees showed markedly higher confidence than the general contractor population, and the gaps are largest where general contractor confidence is weakest:

- Natural gas applications: 88% of training attendees agreed heat pumps are beneficial, compared to 59% of general contractors – a 29% gap.

- Primary heating in Minnesota’s cold climate: 78% of training attendees agreed heat pumps are a good choice, compared to 48% of general contractors – a 30% gap.
- Propane applications: 95% of training attendees agreed heat pumps are beneficial, compared to 79% of the general contractors, a 16% gap.

Training also shifts sales projections dramatically (Hansen-Connell, 2025). In 2023, 33% of trainees said heat pumps comprised more than 25% of their sales. For 2025, 62% project they will reach that threshold – nearly double the baseline. And 77% of trainees said they include heat pumps in proposals without customer prompting, compared to 48% of the broader contractor population.

Hot Take: Training Expansion

The findings of the State of the Market report validate the effectiveness of the Collaborative’s approach to contractor training. To continue building contractor ASHP technology champions across the state, the Collaborative has secured an additional funding stream outside of the market transformation work to expand the training delivery through the state. This program includes the continued delivery of the well-established Comfort Advisor training, which covers upfront conversation topics such as system benefits, equipment sizing, operating economics, and incentives, rates, and financing. The training program has also developed a new Installer training, which picks up where the Comfort Advisor training ends, to cover installation and commissioning best practices to maximize the efficiency benefits of the heat pump.

Market Support Activities: Customer Awareness and Messaging

Consumer awareness of ASHPs in Minnesota is another identified market barrier. To develop an evidence-based approach to consumer outreach, CEE contracted the Behavioral Insights Team (BIT) to conduct a large-scale mixed methods study in 2024. The study, including focus groups with 30 Minnesota homeowners without heat pumps and a randomized controlled trial with 4,007 Midwest participants without heat pumps (1,751 from Minnesota), produced several findings that are now shaping the Collaborative’s consumer strategy.

One of the most notable findings of the study was that message framing did not significantly impact purchase intent (CEE & BIT, 2024). Participants exposed to messages emphasizing rebates, durability, social proof, or comfort showed statistically similar interest in purchasing ASHPs as those who received only general information. The most likely explanation is that awareness is so low – 75% of Minnesota participants reported little or no knowledge of ASHPs prior to the survey – that the act of providing any information at all had more impact than the specific framing of that information. This finding has a clear strategic implication: the Collaborative’s consumer-facing investment priority should be breadth of awareness-building, not optimization of message framing.

The study also identified the most trusted messengers for home heating and cooling decisions: friends and family, energy providers and utilities, and contractors. Importantly, 42% of participants said they would turn to their energy provider first if looking to replace HVAC equipment, reinforcing utilities’ role not just as a rebate administrator, but also as a primary awareness-building channel. These findings are guiding the Collaborative’s strategy of equipping utilities and contractors with outreach tools rather than pursuing mass consumer advertising.

Cool Trend: Homeowner Readiness for ASHPs

The general population homeowner study paints a complex picture of consumer readiness for ASHP technology. Among 1,751 Minnesota homeowners surveyed who do not currently have heat pumps, 75% reported little or no awareness of the technology. Additionally, low income participants showed even lower awareness, with 50% reporting they knew “nothing at all” about heat pumps, compared to 45% across the general population, pointing to equity dimensions of the awareness gap (CEE & BIT, 2024).

The customer segment analysis offers a more granular view of the customer engagement opportunities. *Lifetime Value Seekers*, estimated at 47% of Minnesotans, are motivated primarily by cost certainty, ease of maintenance, and longevity (CEE & BIT, 2024). They are a risk-averse customer segment, and unlikely to seek out new technology on their own. Reaching *Lifetime Value Seekers* requires trusted messengers, clear financial information, and social proof that neighbors and peers are making the same choice. *Discerning Investors*, estimated at 32% of Minnesotans, are more open to quality-of-life benefits like comfort and air quality, and may be reachable through a broader value framing. *Eco-Conscious Innovators*, estimated at 21% of Minnesotans, are motivated by the efficiency of ASHPs and already excited about new technologies, with less focus on cost impacts. Lastly, with participants from the other three segments, we formed a fourth segment, *Nearly There Converts*, estimated at 35% of Minnesotans, already have some interest in heat pumps, and represent a near-term opportunity for conversion.

Though the segments of the population have different motivations and considerations in their HVAC decisions, the study found that message framing had no statistically significant impact on purchase intent. Strategically, this implies again that the focus of the Collaboratives outreach should be on widespread awareness, rather than perfectly targeted messaging. The priority of awareness building is ensuring that when a customer’s existing system fails, they have already heard of heat pumps, know their benefits, and can recognize them as an option worth asking about. When considering crafting broad messaging, the study did show however, that customers reported costs (installation and operating) and comfort as the most important factors for selecting home heating and cooling systems, and that messages around efficiency were well received.

Cool Trend: Customer Satisfaction

Among the 721 customers who had installed a ducted ASHP in the past three years, satisfaction is strongly positive across all measured dimensions (Hansen-Connell, 2025). Satisfaction with the contractor, the equipment, and the heating and cooling performance all reached 90% or above, with about 70% of respondents rating each as “very satisfied.” Seventy-seven percent said they liked their heat pump more than their previous system, and 90% said they would recommend one to friends or family.

Perceived energy bill impacts are broadly positive as well: 56% of customers reported a decrease in their utility bills, 29% said bills stayed roughly the same, and 14% reported an increase (Hansen-Connell, 2025). Comfort perceptions are also strong, with 61% of customers reporting their home was more comfortable with the heat pump, and just 4% reporting they were less comfortable. These high satisfaction metrics are meaningful not only as program outcomes, but also as a foundation for word-of-mouth growth, which the BIT study identified as the most trusted pathway for influencing potential customers.

Year-over-year trends within the customer data reveal important nuances. Newer customers (2024 installations) expressed somewhat lower enthusiasm than earlier adopters: fewer

reported their home was “much more” comfortable or that they “much prefer” the heat pump. This is consistent with the ASHP market broadening; as heat pumps reach customers who weren’t initially as enthusiastic about heat pumps, or whose previous system was functioning well, the contrast between the systems lessens. This doesn’t necessarily indicate product dissatisfaction, rather, it indicates the customer base is normalizing.

Hot Take: Customer Engagement

The general population homeowner research (CEE & BIT, 2024) had provided the Collaborative with its first rigorous, large scale picture of the Minnesota consumer landscape. The finding that trusted messengers matter more than message framing is shaping where the Collaborative invests marketing resources. Rather than developing and launching mass consumer campaigns in house, the Collaborative focuses efforts on equipping partners in the market with existing customers relationships, such as utilities, advocacy organizations, local governments, and contractors, with tools for effective conversations at their natural and preexisting touchpoints. The goal is to ensure that ASHPs are part of the conversation at the moment a customer is considering HVAC replacement, before they default to a “like-for-like” replacement.

To accomplish these resource sharing goals, the Collaborative has formed a marketing cohort of staff from various statewide organizations to come together regularly. At these meetings, the Collaborative team shares new homeowner-facing resources, such as a Collaborative hosted stock photo library of heat pump images, and shares upcoming heat pumps efforts or challenges coming from industry partners. The Collaborative can take these challenges back as strategic areas to focus resources on, and partner to make existing ASHP programs more effective.

In response to partner requests for a better way to communicate the utility bill impacts of ASHPs, amidst the concern operating costs, the Collaborative built a homeowner-facing web tool that allows a homeowner to estimate what their utility bill impacts would be under three heat pump scenarios, using rates from their utilities and their home characteristics. This tool helps homeowners, and the contractors they work with, navigate the potential uncertainty around electrifying (part of) their heating load, and offers insights into where their economic switchover temperature may fall.

Market Support Activities: Incentive Alignment and Cost Reduction

The Collaborative works with utility partners to align rebate programs around consistent product specifications with the goal of reducing market confusion. This includes working with six utility partners across the state to advocate for the two-tier product categories, share information on upcoming state and federal program equipment requirements, and engage on special rate programs that appropriately reflect the grid benefits of ASHPs and/or allow for utility load flexibility programs.

The Collaborative also supports contractors and customers in navigating the full incentive stack of utility rebates, federal incentives, state funded rebates, special rates, and optional financing. Knowing that financial incentives are a critical lever for customer decisions makes this work foundational to the Collaborative – as noted in the section above, there is a growing segment of customers that installed ASHPs that claimed rebates were “extremely important” in their decision to install a heat pump.

Cool Trends: Rebate Importance

Rebate influence, as a factor in the customer decision making, was on the rise over the 3-year period surveyed. As shown in figure 3 above, the share of customers rating rebates as “extremely important” to their installation decision jumped from 31% in 2022 to 51% in 2024, a whopping 20% increase over just two years (Hansen-Connell, 2025). This survey timing aligned with a 2024 increase and expansion in incentive amounts for ASHPs from participating utilities, so the 2024 increase can, at least partially, be attributed to the increase value in the rebate programs themselves. This trend reflects the cost sensitivity of a broadening customer base and the increasing salience of financial incentives in an environment of rising equipment costs.

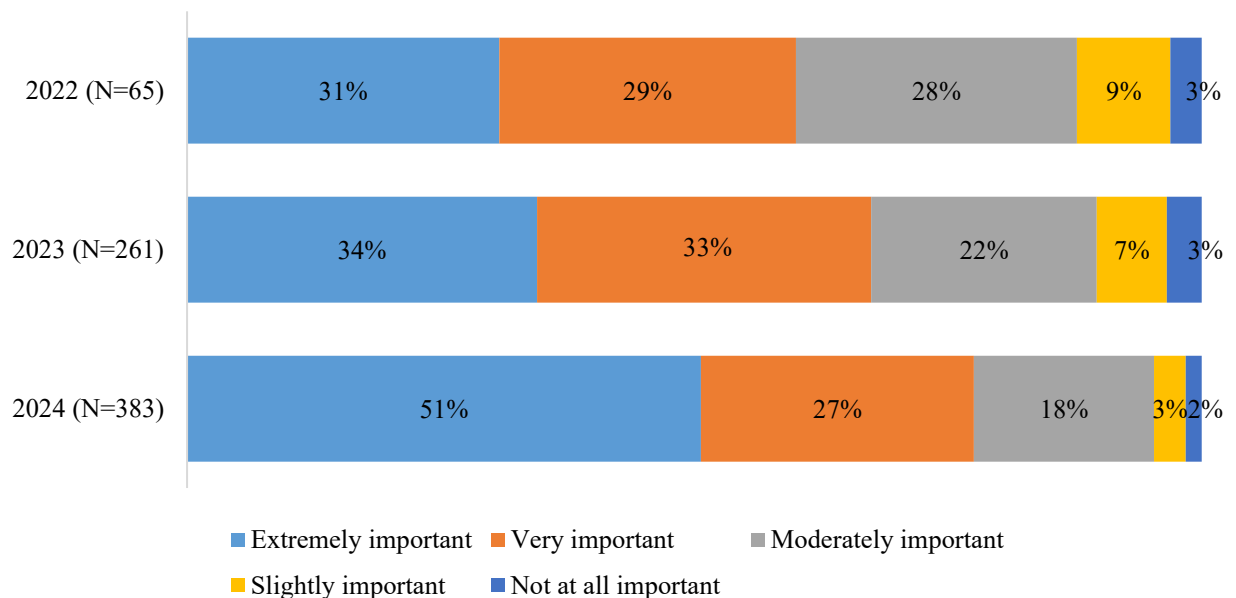


Figure 3: Importance of rebates to customer equipment selection, by year. *Source:* State of the Market Report, 2025

Hot Take: Utility Alignment

While the State of the Market report didn’t focus on the utility engagement elements of the Collaborative’s work, there are still some Hot Takes to note based on changes in the incentive landscape that connect to data in the report. As noted in the section above, the importance of rebates grew over the three years customer installations were surveyed. Over this same time period, there was a particularly beneficial incentive stack for lowering heat pump upfront costs: The 25C tax credit, expanded as part of the Inflation Reduction Act and implemented in 2023, allowed for homeowners to deduct up to \$2,000 on their income taxes for new ASHP installations; in many cases, this additional incentive, stacked with a utility rebate, brought the upfront costs for an ASHP lower than alternative equipment costs. This tax credit was cancelled in 2025. Federally funded HOMES and HEAR programs are still expected in Minnesota, but have yet to be implemented. This leaves a gap in federal incentives for 2026, reducing the stackable components in the value stack. The Collaborative is closely tracking progress on program rollouts, and working to provide accurate, up to date information to its partners.

Market Support Activities: Distributor and Manufacturer Engagement

The Collaborative partners with distributors with a range of goals in mind. Distributor stocking and promotion of heat pumps is a critical supply chain factor for contractors to have access to rebate-eligible products; working with distributors to ensure the products they stock have specifications aligned with utility programs is key. Additionally, the Collaborative sees distributors as a high-leverage channel for reaching contractors not yet engaged directly with the MN ASHP Collaborative. Experienced contractors cite manufacturers and distributors as their primary source of technical information (Hansen-Connell, 2025); building distributor connections to relay evolving information on value propositions and specifications is therefore a force multiplier for contractor engagement.

Lastly, distributor relationships play a key role in collaborating on industry strategies and the ever-evolving technology landscape. The ASHP Collaborative partners with distributors to share information on incentive program changes, technology challenges and evolution, contractor engagement strategies, training, and more. These partnerships form a critical piece in keeping the ASHP Collaborative pulse on the industry.

Cool Trends: Distributor Readiness

Given the replace-on-fail nature of the HVAC market, product availability at the moment of need is essential. The Collaborative works with distributors to promote stocking and promotion of products that meet the specifications of rebate and incentive programs, as well as supporting distributor staff with resources to share with their contractor customers. All four distributors surveyed for the State of the Market Report confirmed they stock both Tier 1 (entry-level) and Tier 2 (advanced/cold-climate) products, and stocking levels have generally increased for both tiers (Hansen-Connell, 2025). Distributor training on ducted heat pumps has also increased substantially, with three of four distributors reporting training offerings increased “a lot” in recent years.

Hot Take: Distributor Strategy

All four surveyed distributors are expanding heat pump training, stocking qualifying products, and seeing demand growth (Hansen Connell, 2025). The Collaborative sees an opportunity to deepen these relationships by sharing market research and continuing to partner on resource development, allowing the distributor staff teams the data and tools to support heat pump conversations with contractors; additionally, the Collaborative takes all distributor feedback on contractor knowledge gaps as priority areas for training additions or resource development in an effort to minimize the impact of those knowledge gaps.

Additionally, the Collaborative is working to directly incorporate Collaborative training resources into onsite trainings at the distributor facilities. The Collaborative has shared unbranded, neutral training materials with distributors, alongside facilitation guides, to allow distributors to incorporate Collaborative materials into their existing training programs. As a complimentary effort, the Collaborative has secured a funding stream outside of market transformation to allow distributors to displace some of their costs for onsite training equipment. These efforts together work to strengthen the capacity and quality of distributor led training to keep contractors well informed of heat pump practices.

Market Support Activities: Rate and Load Flexibility Advocacy

Addressing the operational cost barrier, specifically for natural gas customers, requires changes that go beyond training and rebates. The Collaborative is engaged in ongoing analysis and advocacy around electric rate structure; these rates generally take one of two forms: a dual fuel rate provides a discounted electric rate for heat pumps users in exchange for allowing the utility to control the unit and switch it to the supplemental fuel source during peak load events, or, a space heating rate provides a discounted rate without load control and a supplemental fuel requirement. These rates are currently available in many utility territories, and sometimes require a second meter to separately meter the HVAC equipment that can be prohibitively expensive for many customers. The Collaborative works with utilities to develop and expand cost competitive rate options, and works with manufacturers to overcome the technical barriers that prevent many variable-speed ASHPs from participating in demand response programs.

Cool Trend & Hot Take: Rates and Load Flex

While the State of the Market Report didn't focus on the rates and load flexibility elements of the Collaborative's work, there are some notable Hot Takes that tie into data from the report. Contractor and customer surveys reveal that cost is a top factor in the discussion of transitioning to a heat pumps. As discussed above, the upfront incentive landscape may not stack to bring cost-parity with traditional ACs at this moment in time; this increases the value of beneficial rates to bring down the operating costs of the equipment. While the Collaborative is still working to identify all utilities with space heat rates, within our funding utilities, there has been one exciting shift with Xcel Energy creating a new space heat rate. Their new rate will bridge the gap between the higher cost of electricity and lower cost of natural gas, reducing ASHP operating costs, and increasing the value proposition. CEE and the Collaborative played a considerable role in the docket. The Collaborative is prioritizing this work in 2026 to ensure heat pump operating costs can be leveraged as a benefit of the equipment.

Conclusions

Five years into the MN ASHP Collaborative work, the data tells a story of measured progress, but also highlights remaining opportunities. The contractor market is maturing: experience is growing, favorability is high, sales are rising, and supply chain disruptions have largely resolved. Customers who install heat pumps are highly satisfied and overwhelmingly likely to recommend them. Most significantly, the share of customers who install heat pumps at their contractor's suggestion, rather than their own initiative, is growing steadily, indicating that the market is beginning the transition from early adopters to early majority dynamics.

Contractor training is a validated, effective lever in this transformation. The consistent gap between trained and untrained contractor attitudes, across every application type, provides strong evidence that training changes behavior, not just knowledge. The Collaborative's commitment to contractor engagement as a core initiative strategy is being validated by the data.

At the same time, significant challenges remain. Low contractor confidence in natural gas applications will continue to limit the engagement of the metro markets. Consumer awareness has not yet reached the threshold where organic demand can sustain market momentum. The high importance of rebates in customer decision making is challenging amidst a federal landscape that is continually shifting, requiring contingency planning for the program.

The Collaborative’s approach to these challenges, grounded in a formal theory of change, evaluated through multi-actor MPI tracking, and designed to adapt strategy based on market feedback, offers a model that extends beyond Minnesota. This program model can demonstrate structural market progress, not just rebate volume, and can validate sustained investment, adapt when conditions change, and achieve the long-term goal of heat pumps replacing air conditioners as a standard for home heating and cooling.

References

- CEE (Center for Energy and Environment) 2023a. Air Source Heat Pump Market Transformation Plan. Minneapolis <https://www.etamn.org/sites/default/files/research-papers/ASHP%20Market%20Transformation%20Plan%20FINAL%201.pdf>
- CEE (Center for Energy and Environment). 2023b. ASHP Energy Savings and Market Evaluation Plan. Minneapolis. https://www.etamn.org/sites/default/files/research-papers/ASHP%20Savings%20and%20Eval%20Plan_Committee%20FINAL.pdf
- CEE (Center for Energy and Environment). 2023c. Air Source Heat Pump Market Characterization Report. Minneapolis. https://www.etamn.org/sites/default/files/research-papers/ASHP%20Market%20Characterization%20Report_November%20updates%201%201.pdf
- CEE (Center for Energy and Environment), BIT (Behavioral Insights Team). 2024. Messaging strategies to drive heat pump adoption in Minnesota. <https://www.etamn.org/sites/default/files/research-papers/Communication%20Strategies%20to%20Drive%20Heat%20Pump%20Adoption%20in%20Minnesota%20FINAL.pdf>
- Hansen-Connell, M. 2025. ASHP State of the Market Report. Minneapolis. <https://www.etamn.org/sites/default/files/research-papers/ASHP%20State%20of%20the%20Market%20FINAL.pdf>
- EIA (U.S. Energy Information Administration). 2020. 2020 Residential Energy Consumption Survey. <https://www.eia.gov/consumption/residential/data/2020/>

Disclosure

AI-assisted tools used: Claude AI

Used for: Summarizing reports

Extent: Outlining of overlapping topics areas relevant to this report

Human review: The authors reviewed and verified all content and citations.