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Extended Motor Products Pump and Circulator Manufacturers' Representative Pilot: Market Test Assessment

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Executive Summary

The Northwest Energy Efficiency Alliance (NEEA) created the Extended Motor Products (XMP) program to accelerate the adoption of energy efficient pumps and circulators sold in the Commercial and Industrial (C&I) market in the Northwest. As part of XMP, NEEA has partnered with five pump and two circulator manufacturers' representatives.[1] The XMP program focuses on the Northwest, specifically Idaho, Montana, Oregon, and Washington.

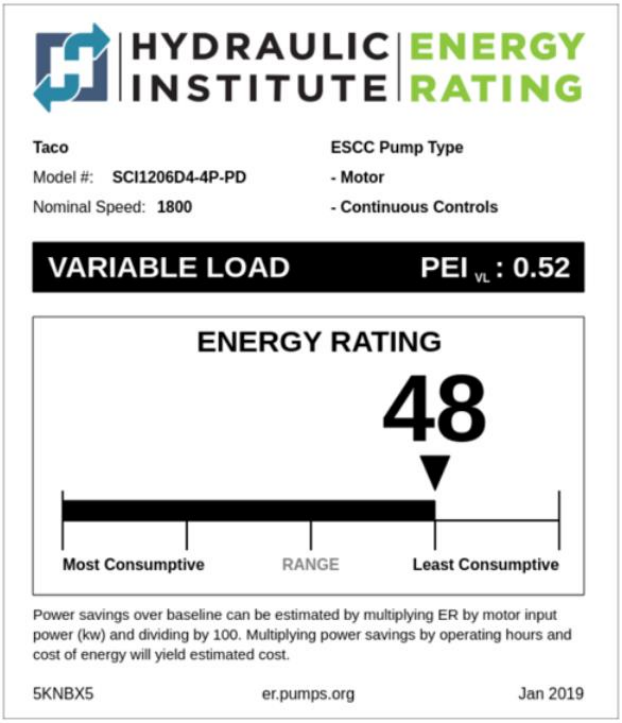
NEEA works closely with participating manufacturers' representatives to encourage them to sell efficient pumps and circulators. Given the unique characteristics of each program participant, NEEA develops tailored offerings for each participating organization. NEEA also provides four types of funding that are intended to motivate the program participants to deploy tactics that best fit their business and appeal to their customers. The Pilot's four funding streams are:

- **Performance Bonuses:** NEEA provides annual bonuses to reward significant changes in sales mix, with multiple bonus tiers for increasing levels of success. These performance bonuses are tailored for each program participant's product line.
- **Per-Unit Incentives:** NEEA provides manufacturers' representatives with per-unit incentives for pumps and circulators that meet a qualifying efficiency level. Efficiency is measured using the Hydraulic Institute's Energy Rating (HI ER) database. Qualifying equipment includes constant load pumps, variable speed pumps, smart pumps, and circulators.
- **Program Support:** NEEA funds a portion of the manufacturers' representatives outreach activities that promote qualifying equipment through sales, marketing, inventory, or training efforts.
- **Data Stipends:** A small quarterly stipend covers the administrative costs of gathering and submitting sales data to NEEA. Program participants provide a year of historical data and monthly data while they are participating. The manufacturers' representatives provide full market data on all pumps sold. NEEA analyzes the data and meets with each manufacturers' representative and shares a monthly report dashboard summarizing program performance, efficiency analysis, and market analytics.

A critical component of the XMP program is promoting ER labels developed for pumps and circulators by the HI (see the pumps label in Figure E-1). This label illustrates quantifiable energy savings available from switching from standard to high efficiency pumps and circulators. Like other labeling programs, the higher the ER, the higher the savings from the pump or circulator.

[1] A manufacturers' representative is an independent business that fulfills sales, marketing, and customer service tasks for manufacturing companies. They represent related but non-competitive products or services in a well-defined and exclusive territory.

Figure E-1: The HI's Pump Rating Label



Source: https://www.chchydro.com/news/doe-new-energy-standards-established-for-pumps/

To assess the overall effectiveness of its manufacturers' representative-focused activities, NEEA contracted with Johnson Consulting Group to conduct a market test assessment (MTA). The goal of an MTA is to assess the likelihood that pilot activities being tested in the market will achieve the outcomes documented in the program's logic model once the program has been rolled out to the full market. This MTA included conducting a process evaluation to assess the overall effectiveness of program operations and to document program progress towards four research objectives:

- Research Objective #1: Assess the degree to which pilot activities are leading to changes in manufacturers' representatives' stocking and sales practices;
- Research Objective #2: Understand the role that HI ER label plays in manufacturers' representatives' sales practices;
- Research Objective #3: Identify opportunities to encourage sales of smart and variable load pumps; and
- Research Objective #4: Identify areas to improve program processes.

This report summarizes the findings from a focused literature review on labeling programs, a review of relevant NEEA reports, mining of sales data collected through the program, and in-depth interviews with participating pump and circulator manufacturers' representatives, the NEEA program staff, and its supporting contractors, Cadeo Group and Summit Conservation Strategies (NEEA Team). These findings are supplemented with a review of the XMP data from the program participants.

Conclusions and Recommendations

Research Objective #1: Assess the degree to which pilot activities are leading to changes in manufacturers' representatives' stocking and sales practices.

Conclusions

- ***The NEEA Team has successfully formulated a value proposition that continues to engage manufacturers' representatives***. The program offers participants tangible benefits, such as market intelligence, and they value NEEA as a partner.

- ***Program satisfaction is high among participants.*** Program participants have developed close relationships with the NEEA Team and are impressed with the team's level of support. The participants are pleased with the various program components including access to a variety of funding sources and the ability to tap into NEEA's expertise in efficient C&I pumps and circulators. Of note, there has been no drop-off among the program participants, and all want to continue participating in XMP.

- ***The MTA identified several examples of early changes in program participants' sales practices and interactions with manufacturers that indicate the program has the potential to achieve its intended outcomes in the short, medium, and long terms.*** Some program participants offered anecdotal examples of changes in stocking practices and evidence that the program is influencing how they discuss efficiency with their manufacturers. Qualitatively, these findings suggest that the XMP Pilot has positively influenced current stocking and sales practices among some, but not all, program participants. The XMP Initiative has also proactively supported both manufacturers and their representatives to develop marketing and outreach tools to encourage long-term changes in customer purchasing decisions.

Recommendations

- ***Continue to encourage innovative uses of program support funds to influence sales and stocking practices to the extent possible given the diversity of participants.*** Going forward, NEEA staff may want to share some examples of successful tactics that led to increased demand for energy efficient pumps and circulators among market actors including specifiers, installation contractors, building owners and installation contractors.

- ***Continue to develop tailored incentive levels and bonus tiers that allow program participants to maximize sales of qualifying pumps and circulators.*** This customized approach has been successful, and this level of customization should continue in future program years.

Research Objective #2: Understand the role the HI ER label plays in the manufacturers' representatives' sales practices.

Conclusions

- ***Energy efficiency is not a key driver in equipment selection and thus the influence of the ER label is minimal based on participant feedback.*** That said, one participant has begun including the ER label on its equipment and sees the label as providing credibility and enabling product differentiation.

- ***The HI ER label is still relatively new in the market and has not yet achieved widespread awareness within the pump and circulator markets.*** The literature review suggests that while labeling programs are a good way to promote energy efficient equipment, they are most successful if energy efficiency or cost savings are a key factor in decision-making.[2]

Recommendation

- ***The NEEA Team should conduct research to determine if the ER label and the accompanying tools influence purchase decisions.*** For example, future research should target decision-makers, including engineers and installation contractors and the auxiliary personnel required in the actual installation, such as commissioning agents, balance consultants, and related trades. NEEA could also conduct research to explore whether the ER label could be included as required procurement specifications in key markets such as the educational and municipal sectors. This approach, which was used extensively to promote the ENERGY STAR® label among state purchasers, could be an effective strategy for the ER label.[3]

Research Objective #3: Identify opportunities to encourage sales of smart and variable load pumps.

Conclusions

- ***Program support funds were effective in reaching market actors to increase the awareness of the benefits of energy efficient pumps and circulators.*** These funds enabled outreach to installation contractors, specifying engineers, and commissioning agents as a part of longer-term strategy to increase overall awareness about the benefits of smart pumps.

- ***Program participants identified four factors that are positively affecting the opportunities for energy efficient pumps and circulators in the HVAC C&I market:***
  - A trend towards smaller pump sizes in commercial applications that are properly sized to optimize equipment operation while reducing overall energy use, thus generating more interest in higher efficiency equipment promoted though the XMP initiative;

[2] Persful, T., Ivanovich, M, Wickes, G. & Rogers, E. 2016. *"A Look at the Extended Product Motor Labelling Initiatives for Fans,"* American Council for an Energy-Efficient Economy, Summer Study on Energy Efficiency in Buildings, p. 6-3.
[3] Weil, S. & McMahon, J., 2001. "Energy Efficiency Labels and Standards: A Guidebook for Appliances, Equipment and Lighting," Collaborative Labeling and Appliance Standards Program (CLASP), Washington, D.C. February. https://www.osti.gov/servlets/purl/836221 <<Accessed 12-27-2021>>

- The opportunity to install higher efficiency equipment in new construction and major remodels, which account for the majority of all pump and circulator installations;
- A continued push for decarbonization in some Northwest markets, such as Seattle; and
- Code changes in Washington that will mandate more energy efficient buildings, which will increase the demand for more efficient pumps and circulators[4].

- ***Most program participants are optimistic about the future of smart pump technology.*** Several represent European manufacturers, which have already experienced success with smart pump product lines. But another participant believes that the industry is "still evolving" and it will take another five years before the software and programming logic for the "smart pump" controls are fully optimized.

Recommendations

- ***The NEEA Team should consider expanding into the industrial or agricultural segment of the pump market, which accounts for a large portion of pumps and circulators not yet rated by the HI.*** This expansion would also increase the visibility of the ER label among critical decision-makers.

- ***The NEEA Team should encourage program participants to continue to engage market actors within the C&I segment, such as installation contractors, specifying engineers and commissioning agents.*** This approach will help break the cycle of like-for-like, "commodity" purchases in which contractors replace the pump or circulator they have with the same model by demonstrating the features and benefits of energy-efficient models.

Research Objective #4: Identify areas to improve program processes.

Conclusions

- ***The NEEA Team provides a high level of customization, which has been critical in recruiting and retaining the seven program participants***. After the first year of the program launch, some participants were unable to maximize the available incentives for promoting and selling qualifying pumps and circulators. To address this issue, the NEEA Team developed tailored incentive programs for each participant. While this customization has helped the program recruit and retain participants, it requires significant investments of time and labor for the NEEA Team and may not be sustainable if the program expands significantly.

- ***Some participants struggled to identify effective projects within the new "RFP" format and thus did not use program support funds in 2021*.** However, five participants were able to develop responsive proposals.

- ***The XMP program database and accompanying data dictionary are difficult for third-party reviewers to navigate***. Further, updating the database is labor-intensive and requires significant effort for the NEEA team and the program participants.

[4] The respondent was referring to House Bill 1157 in Washington State. This bill will fine building owners for non-compliance and will phase in new building energy efficiency requirements by 2026.

Recommendations

- ***The NEEA Team should permanently build in longer-range planning timelines for participants to develop tactics to use the program support funds.*** The NEEA Team could also showcase anonymous examples of some of the more innovative program support activities, as this may help generate ideas for some of the lagging participants to catalyze proposal development. These examples could also become case studies that can be shared with program participants, manufacturers, and program funders.

- ***The XMP program database and supporting documentation could be reorganized and streamlined to capture only data fields that are most relevant for tracking market activities.*** In particular, the "evaluability" of the program database and dictionary would be improved by adding more details and context around the data sources, assumptions, savings algorithms, and data fields.

- ***The NEEA Team should balance the level of effort required to provide customized support for all participants with the actual sales potential of each participant.*** Some participants indicated that pumps or circulators represent a small part of overall their market, and therefore NEEA may be investing in program activities will lead to only incremental sales increases. Going forward, NEEA may want to prioritize the level of customization provided based on the expected market shares of each program participant.

1. Introduction

The Northwest Energy Efficiency Alliance (NEEA) created the Extended Motor Products (XMP) program to accelerate the adoption of energy efficient pumps and circulators sold in Commercial and Industrial (C&I) market in the Northwest. As part of XMP, NEEA has partnered with five pump and two circulator manufacturers' representatives. The XMP program focuses on the Northwest, specifically Idaho, Montana, Oregon, and Washington.

To achieve this objective, NEEA works closely with seven representatives who are directly affiliated with a manufacturer and promote that product line in a defined geographic region. These firms provide a high level of customer service, which is different from wholesale distributors who focus on counter or online sales and stock products from multiple manufacturers for the same product category.

To assess the overall effectiveness of its manufacturers' representatives-focused activities, NEEA contracted with Johnson Consulting Group to conduct a market test assessment (MTA). The goal of an MTA is to assess the likelihood that pilot activities being tested in the market will achieve the outcomes documented in the program's logic model. This MTA included conducting a process evaluation to assess the overall effectiveness of program operations and to document program progress towards four research objectives:

- Research Objective #1: Assess the degree to which pilot activities are leading to changes in manufacturers' representatives' stocking and sales practices;
- Research Objective #2: Understand the role that HI ER label plays in manufacturers' representatives' sales practices;
- Research Objective #3: Identify opportunities to encourage sales of smart and variable load pumps; and,
- Research Objective #4: Identify areas to improve program processes.

This report summarizes the findings from a focused literature review on labeling programs, a review of relevant NEEA reports, and in-depth interviews with participating pump and circulator manufacturers' representatives, the NEEA program staff, and its supporting contractors, Cadeo Group and Summit Conservation Strategies (NEEA Team).

Program Description

Through the XMP program, the NEEA Team works with manufacturers' representatives to encourage them to sell energy efficient pumps and circulators. The NEEA Team develops customized program incentives for each participant to maximize sales of qualifying equipment.

A primary focus of this Pilot is to increase the awareness and installation of "smart pumps" in commercial applications. Smart pumps are packaged pump units consisting of a pump, variable speed drive, internal sensor, and pre-programmed controls. Smart pumps have multiple control modes, operate on either constant flow or variable flow systems, and do not require integration with a building management system (BMS). This packaged approach minimizes the energy use in operation while maintaining performance.[5]

[5] Cadmus, 2019. *"Extended Motor Products Market Characterization Report"* #E19-937, for NEEA, December 10, p. 9.

XMP provides four funding streams to participating manufacturers' representatives:

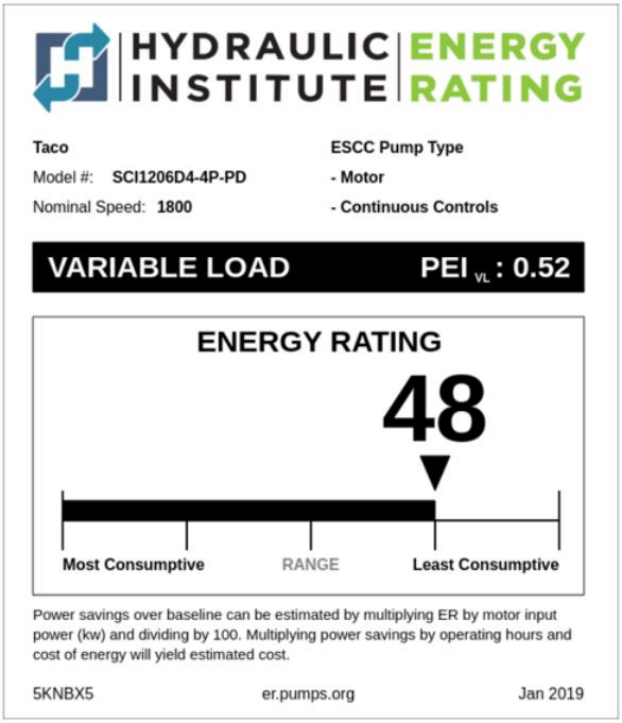
- **Performance Bonuses:** NEEA provides annual bonuses to reward significant changes in sales mix, with multiple bonus tiers for increasing levels of success. These performance bonuses are tailored for each program participant's product line.
- **Per-Unit Incentives:** NEEA provides manufacturers' representatives with per-unit incentives for pumps and circulators that meet a qualifying efficiency level. Efficiency is measured using the Hydraulic Institute's Energy Rating (HI ER) database. Qualifying equipment includes constant load pumps, variable speed pumps, smart pumps, and circulators and are listed below:
  - **Commercial & Industrial (C&I) Pumps**
    - 1-50hp
    - Labeled and listed in the Hydraulic Institute's Energy Rating Database
    - Constant or variable speed with Energy Rating of 12+
  - **Circulator Pumps**
    - Fractional to 5hp
    - Multiple control methods
    - Labeled and listed in Hydraulic Institute's Circulator Energy Rating Database
- **Program Support:** NEEA funds a portion of the manufacturers' representatives' outreach activities that promote qualifying equipment through sales, marketing, inventory, or training efforts.
- **Data Stipends:** A small quarterly stipend covers the administrative costs of gathering and submitting sales data to NEEA. Program participants provide a year of historical data and monthly data while they are participating. The manufacturers' representatives provide full market data on all pumps sold. NEEA analyzes the data and meets with each manufacturer and shares a monthly report dashboard summarizing program performance, efficiency analysis, and market analytics.

The Energy Rating Label

A critical component of the XMP program is promoting the Hydraulic Institute's (HI) Energy Rating (ER) labels for pumps and circulators. The NEEA Team worked with HI staff to develop labels that illustrates the efficiency of pumps and circulators. This label shows the potential dollar savings available from switching from standard equipment to the labeled pump or circulator. The energy savings are calculated over the baseline established by the U.S. Department of Energy according to HI Performance Test Standards.[6] Similar to other labeling programs, the higher the ER, the higher the savings from the pump or circulator. Figure 1 illustrates the HI label for pumps and Figure 2 illustrates the label for circulators.

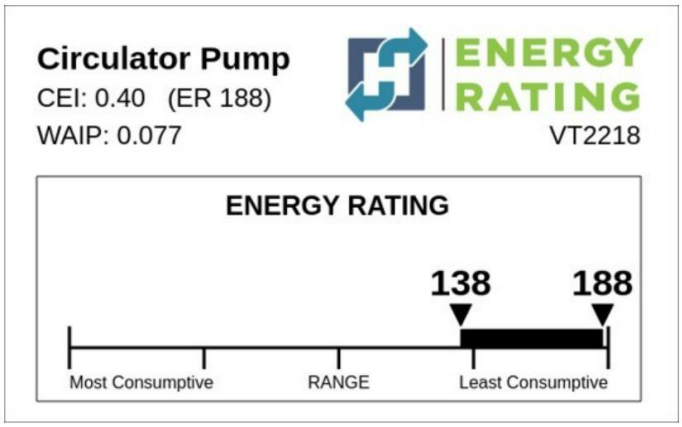
[6] https://pumps.org/EnergyEfficiency/Energy_Rating.aspx <<Accessed 10-28-2021>>

Figure 1: The HI's Pump Rating Label



Source: https://www.chchydro.com/news/doe-new-energy-standards-established-for-pumps/

Figure 2: The HI's Circulator Rating Label



Source: https://hydronicshub.com/hydraulic-institute-circulator-ratings-whats-it-all-about

NEEA's Monthly Dashboards

Each month, the NEEA Team analyzes the sales data from each participating manufacturers' representative and prepares a customized report that provides insights into monthly trends. Dashboards illustrate the geographic breakdown of sales, identify specific purchasing behaviors, and provide additional ad hoc analysis to help participating manufacturers' representatives increase sales of qualifying equipment. The purpose of these monthly dashboards and monthly meetings between the NEEA Team and participants is to help each manufacturers' representative examine monthly trends and identify ways in which each organization can earn the incentive and bonus payments.

2. Methodology

To assess the overall effectiveness of XMP's manufacturers' representative Pilot, NEEA contracted with Johnson Consulting Group to conduct a market test assessment (MTA). The team consisted of three staff members from Johnson Consulting Group and a technical advisor and Professional Engineer (PE) formerly of Sodexo. The goal of an MTA is to assess the effectiveness of market interventions occurring as part of a NEEA pilot, or "market test." Research activities in this MTA included conducting a process evaluation to assess the overall effectiveness of program operations and an assessment of the NEEA Team's four primary research objectives. The study's second component was designed to provide insight into the effectiveness of current program strategies and to identify additional market opportunities. Table 1 summarizes the research activities conducted to address these research objectives.

Table 1: Research Objective Activities

Research Activity	Process Evaluation	Objective #1	Objective #2	Objective #3	Objective #4
Program Document Review					
Review Program Materials	✓	✓			✓
Data Mining		✓		✓	✓
Literature Review			✓		
Data Collection					
In-Depth Interviews with NEEA Team (n=4)	✓		✓	✓	✓
In-Depth Interviews with Participating Manufacturers' Representatives' (n=8)	✓	✓	✓	✓	✓

3. Process Evaluation Findings

Key Drivers of Program Participation

Program participants were eager to work with NEEA in the XMP program for the following reasons:

1. *Compelling value proposition.* The NEEA Team successfully created an engaging offer that resonated with program participants. Several respondents were pleased that NEEA was focusing on pumps and circulators, which they believe are overlooked in the larger C&I HVAC Market.

   "Pumps in the basement are neglected, people don't realize they are using a lot of energy. They really are 'low-hanging fruit.'"

   The midstream program model also appealed to program participants as it supported their efforts to respond to a new federal standard for pumps that was implemented in January 2020. Further, several participants wanted to help their manufacturers work closely with Department of Energy in developing the new energy efficiency standard because it would help them further differentiate their product lines in a competitive market.

2. *Alignment with interests and long-term objectives.* The manufacturers' representatives explained that this midstream program "aligned with their interests" and provided them an opportunity to be part of a larger effort to promote energy-efficient equipment. One program participant explained that smart pumps are the first new product in the pumps market in more than 70 years and the XMP initiative supports the manufacturer's efforts to promote this new application.

3. *Additional tools and program funds.* The XMP initiative provides program funds that participants can use to build awareness about the benefits of energy-efficient pumps and circulators and the ER label that promotes these features.

4. *Opportunity to proactively influence the pumps and circulators market in the Northwest.* Several respondents explained that this program supported their manufacturers' overall goals of promoting energy efficiency in this market.

Key Benefits of Program Participation

The respondents identified the four major benefits of continuing to participate in this program:

1. *Higher profitability.* Focusing efforts on selling higher efficiency equipment leads to higher profits for program participants due to higher price of this equipment. The XMP program provided tools and resources to encourage their end-use customers to opt for higher efficiency equipment.

2. *Strengthened relationships with manufacturers.* Two participants reported that the XMP program has increased their visibility with the pump and circulator manufacturers that they represent. Another respondent indicated that their participation in the program has led their pump manufacturer to be "more proactive" in understanding the market.

3. *Increased awareness about the pump and circulator industry.* Several participants indicated that the XMP program has increased awareness of the benefits of high efficiency pumps and circulators among key market actors, including specifying engineers.

4. *Being informed of emerging market opportunities.* Several respondents mentioned that participating in this program has helped them stay aware of industry changes and adapt to new market conditions. One respondent said the program has given his organization "more awareness of where the market is headed" as the focus shifts to decarbonization activities.

NEEA Team members reported that no participants have dropped out of the program, suggesting that this initiative continues to offer value to its participants.

Effectiveness of Program Operations

Per-Pump Incentives

Participants used incentive funds to motivate their sales teams to sell more qualifying equipment through sales contests or by passing incentives directly onto the designers or building owners who purchased qualifying equipment. Although these activities were well received, promoting energy efficient equipment

is not the driving factor in representatives' sales process. Rather, as several respondents explained, the incentives are a secondary consideration in the overall sales process. The primary focus is "getting the best pump for the application, and (that decision) is not driven by the incentive."

Bonuses

Initially, the XMP program linked performance bonuses directly to sales of qualifying equipment based on overall ER level. Although the NEEA team said the bonus structure was an "effective carrot," this standard format did not work for all the program participants. As the NEEA Team explained, this bonus structure proved to be "unnecessarily complicated." In 2020, the NEEA Team shifted from paying bonuses based on ER levels to focusing on specific models tailored for each program participant based on its product offerings. This approach was designed to maximize the amount of the year-end bonuses for each participant in a fair and equitable manner.

It is important to note that this level of customization is highly labor-intensive as it requires creating individual incentive structures for each program participant. Several NEEA Team members doubted that this customized approach could continue should the program increase the number of participating manufacturers' representatives.

Program Support Funds

The XMP program offers participants additional funds to support marketing and outreach activities. Initially, all participants were provided with the same amount of annual program support funding that they could use to develop marketing materials to promote energy-efficient pumps and circulators. However, use of these funds varied substantially among program participants. As one NEEA Team member explained, "Some knew exactly what they wanted to do; others didn't have a clear approach."

This approach changed in 2020. Instead of guaranteeing the program support funds in each contract, each program participant had to present a proposal describing the specific ways in which the program support funds would be used. This change led to mixed results. Five of the seven participants provided proposals describing how their organizations would use these funds. But two organizations struggled with this new requirement and did not take advantage of the program support funds in 2020.

Program participants have used the funding sources in a variety of ways, including:

- *Building a "learning laboratory"* that provides an easy way to demonstrate the benefits that smart pumps and circulators offer compared to standard equipment.
- *Sponsoring educational activities targeting key market actors*. "Lunch and Learn" programs targeted to installation contractors and specifying engineers. Of note, a few manufacturers' representatives expanded the scope of their outreach activities beyond traditional contractors to include consulting engineers, commissioning agents, and Testing, Adjustment and Balancing (TAB) engineers as those market actors also play a role in influencing the pump selected for an application.
- *Creating* v*ideos highlighting qualifying product lines.* One participant hired a production company to create three videos narrated by one of their well-regarded sales staff members. These videos will be part of a larger marketing and outreach campaign that includes social media posts and email marketing.

The NEEA Team tracks all funded program support activities by each organization in its program database. This database captures the types of activities each organization conducts, the number of attendees at each training session, and topics covered. Two NEEA Team members were unsure whether the program database captured the contact information for program attendees, however. This missing information may make it more difficult for the NEEA team to assess the effectiveness of these program support outreach activities in future evaluations.

Data Analytics and Tracking

Each manufacturers' representative must provide the NEEA Team with its monthly sales data. These data are used to generate the monthly analysis for each program participant describing sales trends in the Northwest. The NEEA team asks for information for six data fields; however, each data field includes information for all equipment sold in the previous month, which could result in hundreds of rows of data for each model sold.

Initially, this requirement was challenging for some respondents, so NEEA established a data portal to facilitate uploading the data via a secure site which streamlined the reporting process for some participants with sophisticated customer management software programs. A few participants, who rely on simpler reporting formats such as Microsoft Excel, still have to dedicate staff time and resources to generate these monthly data reports. For example, some data fields require manual entry from an administrative staff member, which increases the amount of time and effort required to complete these reports.

The NEEA Team spends about 20 hours a month cleaning the data, including manually matching model numbers for each piece of equipment sold. One staff member explained that it takes eight hours a month to match the current pump and circulator models. Note, these analyses are completed for each participant, so each additional participant represents a meaningful increase in the time required for the NEEA Team to manage the program. Given the level of effort involved, several NEEA Team members shared that adding new participants to the program may not be feasible under the current program structure. A few staff are also concerned that if the data requirements become too burdensome, some program participants may drop out.

Stipends for Data Collection

To encourage and support the monthly reporting, NEEA offers a data stipend each quarter to all program participants who successfully submit three on-time and complete data reports. This stipend is designed to help cover the additional labor costs required to produce the monthly data extracts described earlier.

The program participants appreciate the quarterly data collection stipends they receive, as it helps them offset the time and labor associated with complying with NEEA's monthly data requests. Several respondents mentioned that since the data collection process in their organization is "cumbersome and difficult," the stipends encourage them to provide the information every month despite the challenges.

NEEA's Monthly Dashboards

The program participants are impressed with the level of analysis and reporting that the NEEA Team provides to them each month via the program dashboards. A few program participants share the monthly dashboards with their manufacturers directly, as this helps them work together to understand market opportunities. Several participants commented that the level of data analytics and trend analysis was highly detailed, and most participants incorporate this information into their business planning.

One program participant said that although the data analytics provided in the monthly dashboard were "super impressive," he believed that some analysis was based on relatively small sales volumes, and so it was hard to draw any definitive conclusions. This participant also noted that the monthly dashboard meetings can be a "time suck" for their staff and it is challenging to devote so much time to discussing a relatively small part of their overall business.

Program Satisfaction

All program participants are satisfied with the XMP program overall, with one participant providing a rating of "4" and all others providing a rating of "5" on a Likert scale of 1 ("Not at all satisfied") to 5 ("Very satisfied"). Participants are very pleased with the level of support and insights that the NEEA Team provides.

> *"We think it is a good thing and are happy to be a part of it. It can be a hassle, but we look at the big picture benefits. The NEEA folks are impressive and focused on the right mission."*

4. Study Findings

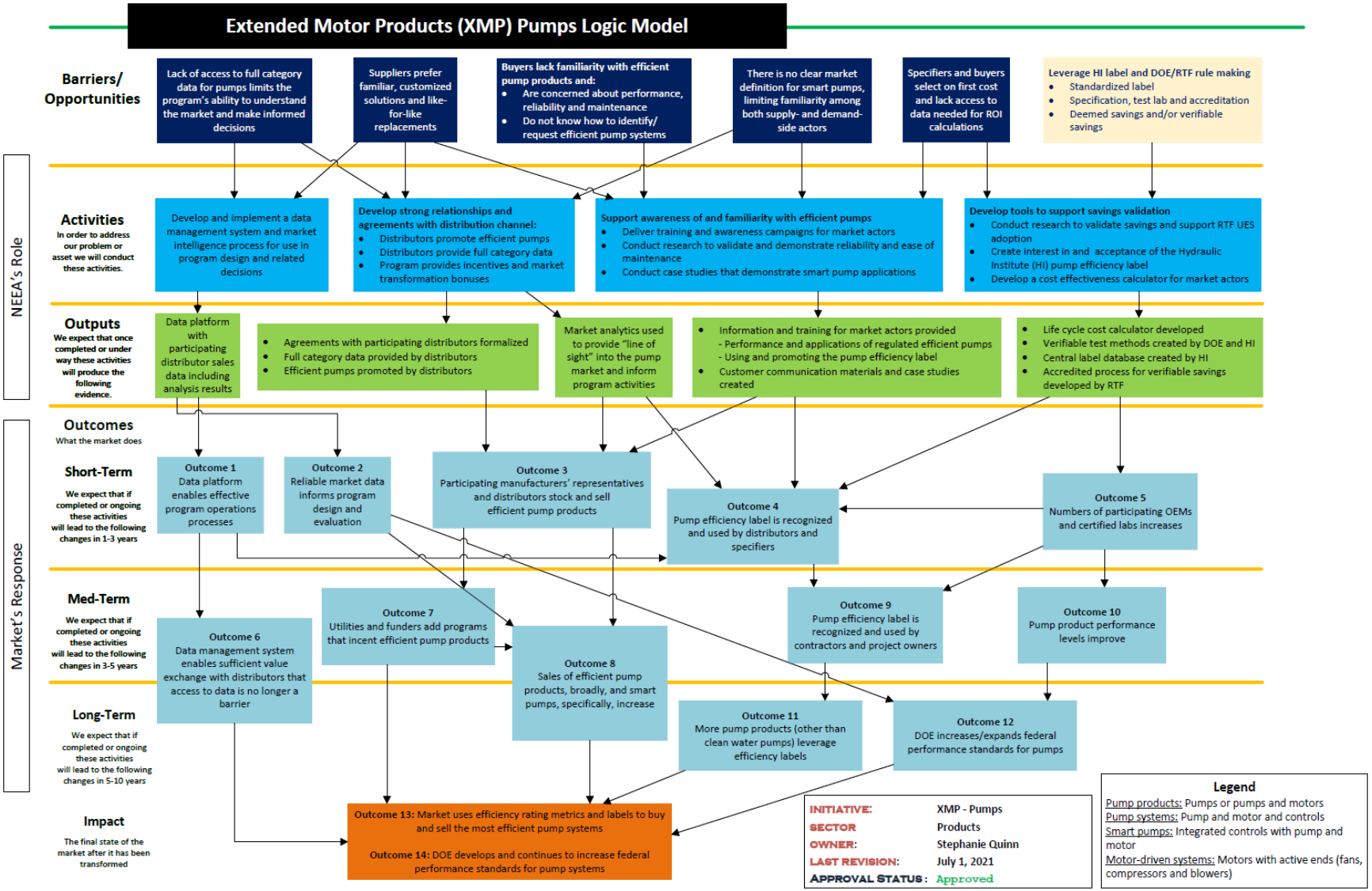
NEEA identified four research objectives intended to help them refine the manufacturers' representative-focused elements of the XMP program and to help the team understand whether the activities are likely to lead to key outcomes identified in the XMP logic model (Figure 3), namely:

- **Outcome 3:** Participating manufacturers' representatives' stock and sell efficient pump products
- **Outcome 4:** Pump efficiency label is recognized and used by distributors[7] and specifiers
- **Outcome 9:** Pump efficiency label is recognized and used by contractors and project owners

Given that this is the first evaluation of the program, the findings provide *qualitative* indicators of the likelihood that XMP will achieve its intended outcomes.

[7] The logic model broadly focuses on the market and uses the term "distributors" while this research focused only on the manufacturers' representatives.

Figure 3: XMP Pumps Logic Model



Source: NEEA 2021

Research Objective #1: Assess the degree to which the program is leading to changes in manufacturers' representatives' stocking and sales practices

The in-depth interviews explored whether program participants have made changes to their stocking and sales practices since joining the program (logic model Outcome 3: *Participating manufacturers' representatives' stock and sell efficient pump products*). Results were mixed, with some participants providing qualitative evidence of shifts in their practices and others emphasizing barriers to selling more efficient pumps and circulators.

Only one program participant provided evidence that they used the incentive funds to influence their *stocking practices*. Specifically, this manufacturers' representative stocked up proactively on qualifying products, which had a significant impact on pump sales. However, this option was not feasible for other program participants due to the large volume of pump and circulator models and the specialized nature of equipment purchases.

Both the NEEA Team and the program participants provided examples of the ways that the program has influenced participants' *sales practices*, primarily by promoting the benefits of ER-labeled equipment downstream to the end-users, including contractors and building owners. These outreach activities focused on educating decision-makers about the value of ER-labeled equipment, which will lead to long-term changes in customer purchasing decisions.

The interviews also identified one example of how the program is influencing manufacturers. Specifically, one manufacturer redesigned its entire line to promote "smart pumps" and cites the XMP program as the primary cause for this decision. The product redesign, complemented by marketing and outreach materials developed using program support funds, were intended to "get building owners comfortable with and demonstrate all of the features of smart pumps."

The challenges participants shared revolved around the fact that the primary focus of their stocking and sales activities is to match their customers' needs with the proper equipment for a specific application. As the manufacturers' representatives explained, the sales process encompasses a variety of factors including equipment dimensions, valve types and system requirements. As one participant acknowledged, "Trying to influence the sales process has been harder than we initially anticipated."

Research Objective #2: Understand the role the HI ER label plays in manufacturers' representatives' sales practices

The in-depth interviews assessed how current program participants view and value the HI ER label. The participants also provided insights regarding the overall effectiveness of the HI ER label in the larger HVAC market. The findings outlined in this section speak to the program's ability to achieve logic model Outcome 4: *Pump efficiency label is recognized and used by distributors and specifiers* and Outcome 9: *Pump efficiency label is recognized and used by contractors and project owners*.

Use of the HI ER Label

The ER label provides information regarding energy savings achieved by a specific pump compared with a baseline product, which is a common approach used in other labeling and certification programs. The ER

label incorporates the "best practices" of energy labeling programs by providing third-party certification of documented energy savings using accepted industry metrics,[8] such as the Pump Efficiency Index (PEI). Energy labels are designed to simplify the decision-making process for end-users by documenting the energy savings available by purchasing the labeled product. The energy label is also designed to encourage a system-based purchase of motor-driven subsystems, like pumps and circulators, to optimize overall performance. Our literature review identified labeling programs as being most successful when (a) energy efficiency or cost savings are a key factor in decision-making, and (b) the labels are part of a larger effort to promote a system approach rather than a component approach.[9]

The XMP program promotes energy-efficient C&I pumps and circulators, which are primarily installed in large and complex HVAC systems in commercial buildings. Because pumps and circulators are just part of the larger HVAC system, they are typically viewed as "commodities" that play a supporting role in a more extensive HVAC system. Participants reported that the typical customer focuses on the whole system purchase, rather than its individual parts and, thus, pumps and circulators "are sometimes an afterthought" for purchasers, making it harder to interest decision makers in newer or improved versions. Therefore, one of the biggest challenges for the XMP program is to increase awareness of ER labeled pumps and circulators among decision-makers, whether they are the building owners, operators or specifying engineers. The other key component of successful labeling programs is to promote energy efficiency, but energy efficiency is not yet a key driver in the purchase decision for the building owners and specifiers.

Perceived Value of the HI ER Label

The participants had mixed reactions regarding the value of the ER label. For example, one representative indicated that the label added credibility and allowed for product differentiation. But four program participants are not convinced that the ER label is particularly meaningful in the product selection process, because efficiency is not a key driver in product selection and because the label is not highly visible or easily accessible to all market actors involved in the selection process.

> "*The people who see the label are at a warehouse or are the installation contractors. The engineer will never see the label and never see the actual product."*

However, one manufacturers' representative fully supports the ER label and includes the ER label on the equipment packaging to differentiate its product line from its competitors.

> *"We have redesigned the pumps and made massive improvements as a result of the DOE standards. The ER label validates that to the engineers."*

Use of HI Tools

The HI developed calculators that provide energy savings estimates for efficient pumps and circulators. However, most participants prefer to use calculators developed specifically for their product lines, rather than use the one developed by HI. One representative did report using the HI calculator, however, explaining that he uses it to provide an independent comparison of his products relative to his competitors.

[8] Rogers, E. 2014. "*Development of a New Extended Motor Product Label for Inclusion in Energy Efficiency Programs,*" American Council for an Energy-Efficient Economy, Summer Study on Energy Efficiency in Buildings, pp. 3-246-3-247.

[9] Persful, T., Ivanovich, M, Wickes, G. & Rogers, E. 2016. *"A Look at the Extended Product Motor Labelling Initiatives for Fans,"* American Council for an Energy-Efficient Economy, Summer Study on Energy Efficiency in Buildings, p. 6-3.

"It's good for business development to have an independent source when going to a client. It's a neutral approach."

The HI also developed an alternative path to qualify pumps and circulators through a certificate program that provides custom labels for pump systems. However, only one of the participants has actively used this feature and the participants viewed this as a "work-around" rather than a marketing opportunity.

ER Label for Commodity Goods

Participants reported that pumps and circulators are primarily viewed as "commodity purchases." The literature review identified a successful purchasing strategy for commodity goods that could provide an opportunity to increase sales of efficient pumps and circulators. By having an energy rating label, the qualifying products can be used successfully to increase purchase volumes of commodity goods, a strategy that was used successfully to encourage sales of ENERGY STAR printers, computers, and monitors in municipal governments.[10]

Research Objective #3: Identify opportunities to encourage sales of smart and variable load pumps

Through the in-depth interviews, program participants provided insights on opportunities to encourage adoption of smart and variable load pumps through changes in sales practices. Some participants believe that the market for advanced technologies will continue to grow, as one observed that the smart pump is the first innovative product in the pump industry in the past 70 to 80 years.

The biggest factors affecting the market growth, according to the manufacturers' representatives are:

- The trend towards smaller pump sizes in commercial applications that are properly sized to optimize equipment operation while reducing overall energy use. The manufacturers' representatives were optimistic that the move to smaller pumps in commercial applications will lead to an increased interest in the products supported through the XMP initiative.
- Opportunities to install higher efficiency equipment in new construction, which accounts for the majority of all pump and circulator installations. The participants were also confident that as demand increases for energy efficient buildings, demand will also increase for smart pumps that can provide additional insights into overall building operations.
- The continued push for decarbonization in some Northwest markets, such as Seattle, which will reduce Green House Gas (GHG) emissions while also creating increased demand for energy efficient pumps and circulators.
- Code changes in Washington that will mandate more energy efficient buildings[11] and will push building owners to invest more quickly in smart pumps to optimize building performance.

[10] Weil, S. & McMahon, J., 2001. "Energy Efficiency Labels and Standards: A Guidebook for Appliances, Equipment and Lighting," Collaborative Labeling and Appliance Standards Program (CLASP), Washington, D.C. February. https://www.osti.gov/servlets/purl/836221 <<Accessed 12-27-2021>>

[11] The respondent was referring to House Bill 1157 in Washington State. This bill will fine building owners for non-compliance and will phase in new building energy efficiency requirements by 2026.

Overall, the program participants are optimistic about the future of smart pump technology. Several represent European manufacturers, which have already experienced success with the smart pump product line.

> *"The trend will continue up. Sales are two or three-fold in Europe and I think the manufacturers would love to have the same efficiency models in all of the global markets."*

But two manufacturers' representatives have a more cautious view. One believes that the industry is "still evolving" and it will take another five years before the programing logic that makes these pumps "smart" is fully optimized. Another participant believes there may be some push back from customers regarding the trend towards smart pumps.

Research Objective #4: Identify areas to improve program processes.

The XMP program has evolved significantly since its launch in 2019. According to both the NEEA Team and the program participants, this initiative has been responsive and flexible in adapting its offers for each participant. However, the respondents identified a few areas for continued refinement of the XMP program elements:

- *Develop a longer planning process to use the program support funds.* Requiring a more formal proposal to use the program support funds created difficulties for two participants. Ultimately, these participants did not use the program support funds in 2020 since their proposals were never fully developed.
- *Consider moving to quarterly meetings for those program participants who sell small volumes of qualifying equipment.* Monthly meetings require a significant investment of time and resources for the program participants and the NEEA Team. However, the value of these monthly meetings varies by organization, and may not provide value to those manufacturers' representatives who sell small volumes of pumps and/or circulators. Shifting to a quarterly meeting format for those participants with relatively low sales volumes may lead to a better allocation of resources for both the participants and the NEEA Team.
- *The XMP program database and accompanying data dictionary are difficult to navigate for third-party reviewers.* Further, updating the database is labor-intensive and requires significant effort for the NEEA Team and the program participants. The review identified specific ways that the program database and documentation could be reorganized and streamlined:
    - *Improve the "evaluability" of the program database and dictionary* by adding more details and context around the data sources, assumptions, savings algorithms, and data fields. Providing additional explanatory notes will assist outside reviewers in future MTAs.
    - *Review the importance of capturing the ship-to zip code in the XMP database.* Several manufacturers' representatives complained that gathering the ship to zip code is challenging, as many contractors will purchase a large shipment for future installations, where the locations are not typically known at the time of purchase. Furthermore, our data review found that less than 800 of over 27,000 records have this field populated.
    - *Consider capturing customer market data* that could assist in market analysis of installation trends, within specific customer groups such as municipalities, commercial buildings, hospitals, or educational institutions.

Conclusions and Recommendations

Research Objective #1: Assess the degree to which pilot activities are leading to changes in manufacturers' representatives' stocking and sales practices.

Conclusions

- ***The NEEA Team has successfully formulated a value proposition that continues to engage manufacturers' representatives***. The program offers participants tangible benefits, such as market intelligence, and they value NEEA as a partner.

- ***Program satisfaction is high among participants.*** Program participants have developed close relationships with the NEEA Team and are impressed with the team's level of support. The participants are pleased with the various program components including access to a variety of funding sources and the ability to tap into NEEA's expertise in efficient C&I pumps and circulators. Of note, there has been no drop-off among the program participants, and all want to continue participating in XMP.

- ***The MTA identified several examples of early changes in program participants' sales practices and interactions with manufacturers that indicate the program has the potential to achieve its intended outcomes in the short, medium, and long terms.*** Some program participants offered anecdotal examples of changes in stocking practices and evidence that the program is influencing how they discuss efficiency with their manufacturers. Qualitatively, these findings suggest that the XMP Pilot has positively influenced current stocking and sales practices among some, but not all, program participants. The XMP Initiative has also proactively supported both manufacturers and their representatives to develop marketing and outreach tools to encourage long-term changes in customer purchasing decisions.

Recommendations

- ***Continue to encourage innovative uses of program support funds to influence sales and stocking practices to the extent possible given the diversity of participants.*** Going forward, NEEA staff may want to share some examples of successful tactics that led to increased demand for energy efficient pumps and circulators among market actors including specifiers, installation contractors, building owners and installation contractors.

- ***Continue to develop tailored incentive levels and bonus tiers that allow program participants to maximize sales of qualifying pumps and circulators.*** This customized approach has been successful, and this level of customization should continue in future program years.

Research Objective #2: Understand the role the HI ER label plays in the manufacturers' representatives' sales practices.

Conclusions

- ***Energy efficiency is not a key driver in equipment selection and thus the influence of the ER label is minimal based on participant feedback.*** That said, one participant has begun including the ER label on its equipment and sees the label as providing credibility and enabling product differentiation.

- ***The HI ER label is still relatively new in the market and has not yet achieved widespread awareness within the pump and circulator markets.*** The literature review suggests that while labeling programs are a good way to promote energy efficient equipment, they are most successful if energy efficiency or cost savings are a key factor in decision-making.[12]

Recommendation

- ***The NEEA Team should conduct research to determine if the ER label and the accompanying tools influence purchase decisions.*** For example, future research should target decision-makers, including engineers and installation contractors and the auxiliary personnel required in the actual installation, such as commissioning agents, balance consultants, and related trades. NEEA could also conduct research to explore whether the ER label could be included as required procurement specifications in key markets such as the educational and municipal sectors. This approach, which was used extensively to promote the ENERGY STAR® label among state purchasers, could be an effective strategy for the ER label.[13]

Research Objective #3: Identify opportunities to encourage sales of smart and variable load pumps.

Conclusions

- ***Program support funds were effective in reaching market actors to increase the awareness of the benefits of energy efficient pumps and circulators.*** These funds enabled outreach to installation contractors, specifying engineers, and commissioning agents as a part of longer-term strategy to increase overall awareness about the benefits of smart pumps.

- ***Program participants identified four factors that are positively affecting the opportunities for energy efficient pumps and circulators in the HVAC C&I market:***
    - A trend towards smaller pump sizes in commercial applications that are properly sized to optimize equipment operation while reducing overall energy use, thus generating more interest in higher efficiency equipment promoted though the XMP initiative;

[12] Persful, T., Ivanovich, M, Wickes, G. & Rogers, E. 2016. *"A Look at the Extended Product Motor Labelling Initiatives for Fans,"* American Council for an Energy-Efficient Economy, Summer Study on Energy Efficiency in Buildings, p. 6-3.
[13] Weil, S. & McMahon, J., 2001. "Energy Efficiency Labels and Standards: A Guidebook for Appliances, Equipment and Lighting," Collaborative Labeling and Appliance Standards Program (CLASP), Washington, D.C. February. https://www.osti.gov/servlets/purl/836221 <<Accessed 12-27-2021>>

- The opportunity to install higher efficiency equipment in new construction and major remodels, which account for the majority of all pump and circulator installations;
- A continued push for decarbonization in some Northwest markets, such as Seattle; and
- Code changes in Washington that will mandate more energy efficient buildings, which will increase the demand for more efficient pumps and circulators[14].

- ***Most program participants are optimistic about the future of smart pump technology.*** Several represent European manufacturers, which have already experienced success with smart pump product lines. But another participant believes that the industry is "still evolving" and it will take another five years before the software and programming logic for the "smart pump" controls are fully optimized.

Recommendations

- ***The NEEA Team should consider expanding into the industrial or agricultural segment of the pump market, which accounts for a large portion of pumps and circulators not yet rated by the HI.*** This expansion would also increase the visibility of the ER label among critical decision-makers.

- ***The NEEA Team should encourage program participants to continue to engage market actors within the C&I segment, such as installation contractors, specifying engineers and commissioning agents.*** This approach will help break the cycle of like-for-like, "commodity" purchases in which contractors replace the pump or circulator they have with the same model by demonstrating the features and benefits of energy-efficient models.

Research Objective #4: Identify areas to improve program processes.

Conclusions

- ***The NEEA Team provides a high level of customization, which has been critical in recruiting and retaining the seven program participants***. After the first year of the program launch, some participants were unable to maximize the available incentives for promoting and selling qualifying pumps and circulators. To address this issue, the NEEA Team developed tailored incentive programs for each participant. While this customization has helped the program recruit and retain participants, it requires significant investments of time and labor for the NEEA Team and may not be sustainable if the program expands significantly.

- ***Some participants struggled to identify effective projects within the new "RFP" format and thus did not use program support funds in 2021*.** However, five participants were able to develop responsive proposals.

- ***The XMP program database and accompanying data dictionary are difficult for third-party reviewers to navigate***. Further, updating the database is labor-intensive and requires significant effort for the NEEA team and the program participants.

[14] The respondent was referring to House Bill 1157 in Washington State. This bill will fine building owners for non-compliance and will phase in new building energy efficiency requirements by 2026.

Recommendations

- ***The NEEA Team should permanently build in longer-range planning timelines for participants to develop tactics to use the program support funds.*** The NEEA Team could also showcase anonymous examples of some of the more innovative program support activities, as this may help generate ideas for some of the lagging participants to catalyze proposal development. These examples could also become case studies that can be shared with program participants, manufacturers, and program funders.

- ***The XMP program database and supporting documentation could be reorganized and streamlined to capture only data fields that are most relevant for tracking market activities.*** In particular, the "evaluability" of the program database and dictionary would be improved by adding more details and context around the data sources, assumptions, savings algorithms, and data fields.

- ***The NEEA Team should balance the level of effort required to provide customized support for all participants with the actual sales potential of each participant.*** Some participants indicated that pumps or circulators represent a small part of overall their market, and therefore NEEA may be investing in program activities will lead to only incremental sales increases. Going forward, NEEA may want to prioritize the level of customization provided based on the expected market shares of each program participant.

Appendix A: NEEA Staff Interview Guide

General Instructions

- Interviewer instructions are in green **[LIKE THIS]**
- Items that should not be read by the interviewer are in parentheses like this ( ).

A. Introduction

*Hello. I'm **[INSERT NAME]**, from Johnson Consulting Group. I'd like to talk with you today about your experiences with NEEA's XMP Program promoting efficient Pumps and Circulators. This interview will last about an hour and your responses will be anonymized. The goal of this interview is to assess the effectiveness of the Pumps and Circulators Pilot Program and to identify additional opportunities for program refinement.*

Name_____Company_____

Date_____

When would be a convenient time to talk? _____

Thank you for participating in this interview.

B. Respondent Roles and Responsibilities

I'd like to begin with understanding your roles and responsibilities within the NEEA's XMP Program.

B1. What are your specific roles and responsibilities for this program?
B2. How long have you been involved in the pump distributor pilot?

C. Factors Driving Participation from Distributors/Mfg. Reps.

C1. How were distributors/manufacturer reps recruited into the program pilot?
   1. What were the major reasons they wanted to participate in the XMP Program?
   2. Which program elements appealed most to these distributors/mfg. reps? Which elements have been less appealing?

C2. What are the challenges associated with recruiting these distributors/mfg. reps? Has the program been modified since to make it easier for distributors/mfg. reps to participate in the pilot? If so, how?

D. Effectiveness of Program Operations

D1. What areas of the XMP pilot are working well?
D2. What areas are still challenging?
D3. How has the incentive structure changed since program launch?
   1. What changes were made in the first year?
   2. What changes have been made subsequently? Have the program participants modified their sales approaches since deploying their Program Support funding? If so, how?
   3. How do you think this process should evolve to better capture sales opportunities?

D4. Based on your experience with the program, has the program participation influenced distributor's interactions with their manufacturers? If so, how?
D5. How are the distributors/mfg. reps. using the HI label to promote high efficiency equipment?
   1. Do the distributors/mfg. reps incorporate the HI label effectively in their sales/specification process?
   2. What feedback have you received regarding the effectiveness of the HI label?
   3. Have you noticed changes in the ways participants use the HI label? How are the distributors/mfg. reps. using the HI label to promote high efficiency equipment?

E. Program Support Activities

E1. How are distributors using the program support funds?
E2. How has this process evolved over time?

E3. How frequently do these activities occur?
E4. Do the distributors/mfg. reps. Document these activities?
E5. If so, what kinds of documentation do they provide? (*Probe)*
    1. Attendance Levels
    2. Topics
    3. Participant Feedback
E6. What kinds of results have you observed from these support activities? (Probe)
    1. Are these the results you expected? Why/why not?
    2. What other types of support activities should distributors/mfg. reps. offer to increase sales of pumps/ circulators?

F. Data Analytics and Tracking

F1. What is the level of effort required for program staff to assist distributors in gathering and collecting the required data? How has the level of effort changed since program launch?
F2. How could the pilot's data submission process improve?
F3. How could the data cleaning process improve?
F4. In what ways could the staff support improve to assist program participants?
F5. How have the data reporting requirements changed since the initial program launch?
F6. Is the quality of the data reporting unique to each program participant or can it be further standardized? If so, how?
F7. How scalable is the current data reporting approach? Will the current approach have to be modified for the program to add new participants?
F8. Do you think the data stipends are sufficient for each program participant? Why or why not?
F9. What other concerns do you have about the timing or frequency of the data reporting, if any? How are the distributors using the data provided to them in the pilot? Is this what you expected? Why/why not?
F10. Which elements of the monthly dashboards, if any, are encouraging the mfgs. reps to change their stocking practices?
F11. What elements have encouraged participants to modify their sales processes, if any?
F12. Has the implementation team made changes to distributors/mfg. reps dashboards based on feedback from distributors during monthly meetings?
F13. Are participants using the HI Pumps Savings Calculator? What types of feedback have you received from the participants regarding using the HI Pumps Savings Calculator?

G. Areas for Improvement

G1. What are other ways, if any, that the XMP Pilot Program should improve?
G2. How should the program be modified to minimize "lost opportunities" such as: (Probe on each one):
    1. Ineligible equipment (especially pumps)
    2. Unrated equipment (especially pumps)
    3. Equipment that is not efficient enough to receive incentives

H. Closing

H1. Do you have anything else to add?

Thank you so much for your time!

Appendix B: Manufacturers' Representative Interview Guide

General Instructions

- Interviewer instructions are in green **[LIKE THIS]**
- Items that should not be read by the interviewer are in parentheses like this ( ).

A. Introduction

*Hello. I'm **[INSERT NAME]**, from Johnson Consulting Group. I'd like to talk with you today about experience with NEEA's XMP Program. This interview will last about 45 minutes and your responses will be anonymized. The goal of this interview is to assess the effectiveness of NEEA's XMP Pilot for Pumps and Circulators and identify additional areas for program improvement.*

*Name*_____*Company*_____

*Date*_____

When would be a convenient time to talk? _____

B. Respondent Roles and Responsibilities

I'd like to begin with learning a little bit more about your background in this industry.

B1. What is your current role at your organization?

B2. How long has your organization participated in the XMP Pilot?

B.3 What are your responsibilities in participating in this program?

C. Firm Operations

C.1 Where is your organization headquartered?

C.2 Please describe the sales territory that you cover for pumps and circulators? Are most sales reps based regionally or are they based out of the headquarters?

C.3 What locations do you have in the Northwest (Oregon, Washington, Idaho & Montana)?

C.4 About what percentage of your pump sales are from 50 hp and below? Circulator sales?

D. Factors Driving Participation from Mfg. Reps.

D.1 Why did your organization decide to participate in this program?

D.2 How important were each of the following program elements in your decision to participate in this program? (*Probe on each)*

1. Tiered bonus payments
2. Per pump incentives
3. Stipends for data collection helps
4. Program support funds
5. Program dashboards
6. Market share insights
7. Access to NEEA's resources
    a) Marketing Resources
    b) Technical Resources
    c) Relationships with HI
    d) Relationships with Manufacturers
8. Others?

E. Effectiveness of the XMP Pilot

E1. What do you see are the primary advantages of participating in the XMP Pilot?

E2. Has the XMP Program influenced your interactions with pumps/circulator manufacturers at all? If so, how?

E3. How has the use of the ER label evolved over time for pumps? For circulators?
E4. How is your firm using the HI ER label in its sales process? *(Probe on each)*
1. Have you incorporated it into your marketing/outreach activities?
2. Does the HI ER label make it easier for you to find and recommended products? If not, why not?
3. Do customers understand the HI ER Label?
   (1) Does this label make it easier to sell high efficiency pumps/circulators?
   (2) Why do you say that?
4. For about what percentage of your pumps/circulators sales was having a relatively good Energy Rating important to the customer or important for your team making the sale?

E5. Do you think that the importance of a good Energy Rating may change over time as customers become more familiar with ER?
1. Why or why not?
2. What other factors motivate customers' purchase decisions?
3. What challenges does your organization face in promoting the HI ER label for pumps? What about for circulators? (if appropriate).
4. Are you familiar with the HI ER Certificate Program? Have you found it useful? Why or why not?

E6. Has the HI Label led to changes in the ways you stock eligible pumps or circulators? If so, what has changed?

F. *Awareness of XMP's Tools*

F1. How is your organization using the HI Pump Savings Calculator?
(1) Is the calculator an effective tool in promoting high efficiency sales of pumps? What about for circulators? Why do you say that?

F2. Are there any ways in which these calculators should be modified or improved for pumps? For circulators? If so, what modifications are needed?

G. *Program Support Activities*

G1. How is your organization using the program support funds?
G2. How frequently do these activities occur?
(1) Are these activities documented?
(2) If so, what kinds of documentation do they provide? (*Probe)*
Attendance Levels
Topics
Participant Feedback

G3. What has been the results from these support activities? (Probe)
(1) Are these the results what you expected? Why/why not?
(2) Are there other types of support activities that your organization should consider in the future? If so, what are they?

G4. As a result of these support activities, has your organization modified its customer outreach approaches? If so, how?

G5. Which funding approach so you prefer? For example, incentives vs. bonuses vs. program support funds? Why do you say that?
G6. Which funding approach seems most effective in influencing customers?
G7. How is your organization using these funds?
G8. How might program support funding further evolve to better capture opportunities?

H. *Data Tracking and Analytics*

NEEA relies on the data you provide them regarding equipment sales. I'd like to ask you a few questions about NEEA's data tracking.

H1. What are the challenges your organization faces in providing these data to NEEA?

H2. What data are particularly difficult to provide to NEEA, if any? Why do you say that?
H3. How could NEEA improve the data collection and submission process?
(1) Are data stipends sufficient for your organization? If not, how should they be adjusted?
H4. Are there any types of information should be *added t*o the NEEA data requests? Are there any types of data should be *eliminated*? Why do you say that?
H5. How do you use the data that NEEA provides on its dashboards? Which elements of these dashboards are particularly helpful? Which elements are not necessary?

I. Market Trends and Opportunities

Now, I'd like to ask a few questions about the pumps/circulators market in general.

I1. Who are the main customers for smart pumps?
I2. When are these pumps typically purchased (i.e., Replace on Burnout New Equipment/Process/ Other?) Is this purchase tied to budget cycles?
I3. Are most smart pump sales due to your recommendations or are the sales driven by customer requests?
I4. Who are the main customers for pumps with drive configurations?
I5. When are these products typically purchased (i.e., Replace on Burnout New Equipment/Process/ Other?) Is this purchase tied to budget cycles?
I6. Are most pumps with drives sales due to your recommendations or are the sales driven by customer requests?
I7. How do building codes influence pumps sales?
I8. How does your organization view the emergence of "Smart Pump" technology?
1. Do you think this will be a growth area for the industry? Why do you say that?
2. What are some of the challenges in selling smart pumps?
(1) Which situations are well-suited to smart pumps?
(2) When is a smart pump not a good fit?
3. How could the XMP pilot better support sales of "smart pumps" and "smart circulators" or pumps with integrated drives?

I9. Where do you see the industry moving regarding variable load pump sales?
1. Do you think this will be a growth area for the industry? Why do you say that?
2. What are some of the challenges in selling variable load pumps?
(1) Which situations are well-suited to variable load pumps?
(2) When is this technology not a good fit?
3. How could the XMP pilot better support sales of pumps with variable speed drives?

J. Program Satisfaction

I'd like to get your overall assessment of the XMP Program.

J1. Overall, how satisfied are you with the XMP program using a scale of 1 to 5, where "1" means "Not at all satisfied" and "5" means "Very Satisfied?" Why do you say that?
J2. What aspects of the XMP program do you like the best?
J3. What aspects of the XMP program do you like least?
J4. How else can NEEA improve the XMP Program?

K. Areas for Improvement

K1. How else can NEEA improve the XMP Program?

L. Closing

L1. Do you have anything else to add?

Thank you so much for your time!