# 2024 Market Research & Evaluation Quarterly Newsletter

### WHAT'S NEW:



Greetings to all of you!

Welcome to the Q4 2024 Market Research & Evaluation (MRE) newsletter. Inside are all the details about what NEEA's MRE team has been up to the past few months, as well as what's planned for the start of the new year.

It's been an eventful year. Nearly 40 studies were launched and/or completed in 2024, each of them endeavoring to support continuous improvement of alliance Market Transformation programs by delivering current and high value market insights and evaluation findings. Throughout December and January, look for ten reports to publish to NEEA's website, covering several portfolio programs, including residential code compliance evaluations for both Montana and Oregon, the first Market Progress Evaluation Report for the Extended Motor Products program, and two market research reports to support efforts to transform the gas water heater market.

Looking ahead to 2025, the team is taking time to reflect on the accomplishments of the past year. Thanks to all of our stakeholders for the continued partnership. Best wishes for happy holidays and a prosperous new year.

~ Amy Webb, Sr. Manager, Market Research & Evaluation ~

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PUBLISH DATE: December 12, 2024

Regional		PLANNING*	FIELDING*	REPORTING*
Studies	Northwest Market Characterization			$\checkmark$
	Efficient Fans: Fan Manufacturer Representative and Specifier Market Research		$\checkmark$	
Integrated Systems Products	Extended Motor Products: Agricultural Pumps Market Research		$\checkmark$	
	Extended Motor Products: Market Progress Evaluation Report #1			$\checkmark$
	Efficient Rooftop Units: Market Progress Evaluation Report #1		$\checkmark$	
	High-Performance HVAC: Market Progress Evaluation Report #1		$\checkmark$	
	Luminaire Level Lighting Controls: Market Progress Evaluation Report #3	1.1.1.1	$\checkmark$	
	Luminaire Level Lighting Controls: Exterior Luminaire Level Lighting Controls in Parking Lots			$\checkmark$
	High-Performance Windows: ENERGY STAR Influence Study			$\checkmark$
	Retail Product Portfolio: Market Progress Evaluation Report #3		$\checkmark$	
	Retail Product Portfolio: Connected Consumer Products Market Research			$\checkmark$
	Advanced Commercial Gas Water Heaters: <i>Market Research on Existing Water Heaters in Select Commercial Buildings</i>	0		$\checkmark$
	Efficient Gas Water Heaters: Condensing Gas Water Heater Qualitative Market Research			$\checkmark$
	DIIAL-FIJEL (Electric & Natural Gas) PROJECTS:			

NATURAL GAS PROJECTS:

\*PLANNING: MRE projects from inception through proposal selection \*FIELDING: MRE projects from kick-off through the completion of field work \*REPORTING: MRE projects in the analysis/synthesis stage through report posting

		Co	odes,
Sta	ndar	ds,	New
(	Cons	tru	ction

Long-Term

Tracking

**Monitoring &** 

Standards: Battery Chargers Standard Evaluation	$\checkmark$	
Standards: Portable AC and Air Compressor Standard Evaluation	$\checkmark$	
Codes: NEEA Codes Baseline and Review	$\checkmark$	
Codes: Market Progress Evaluation Report #6	$\checkmark$	
Residential Codes: Home Energy Raters Market Research		$\checkmark$
Residential Codes: Montana Residential Code Compliance Evaluation		$\checkmark$
Residential Codes: Oregon Residential Code Compliance Evaluation		$\checkmark$
Commercial Codes: Idaho Commercial New Construction Code Compliance Evaluation	$\checkmark$	
Commercial Codes: Montana Commercial New Construction Code Compliance Evaluation		$\checkmark$
Ductless Heat Pump Long-term Monitoring and Tracking, Year 3	$\checkmark$	

DUAL-FUEL (Electric & Natural Gas) PROJECTS:

NATURAL GAS PROJECTS:

\*PLANNING: MRE projects from inception through proposal selection \*FIELDING: MRE projects from kick-off through the completion of field work \*REPORTING: MRE projects in the analysis/synthesis stage through report posting

PLANNING\* FIELDING\* REPORTING\*



# Innovation 🗞 Action

### Northwest Market Characterization

REPORTING

NEEA contracted with LD Consulting to conduct a research project that will contrast and compare characteristics of rural, suburban, and urban markets to identify market transformation strategies that will accelerate the delivery of program benefits to rural markets. The study will use the National Center for Education Statistics (NCES) classification system for geographic locales, which defines areas as either rural, town, suburban, or urban based on population and distance from an urbanized area. The mixed methods study has thus far completed a literature review, interviews with NEEA staff, and a quantitative analysis of existing data sources to compare consumer and supply chain characteristics across four locales. Characteristics examined as part of this analysis include consumer purchasing behaviors, energy burden, building stock, supply chain practices, workforce features, and others.

In Q4 2024, the study initiated a qualitative stage of the research to investigate themes from the data analysis that suggest opportunities to close relative gaps in the delivery of market transformation program benefits. Interviews with residential consumers, supply chain market actors, and community-based organizations involved in energy and energy efficiency began in early Q4. Interview participants were recruited from rural/town county clusters. The county clustering sample design aims to derive insights through comparisons of consumers and supply chain market actors in similar locales across the four-state region. The study will include participatory approaches where research participants are invited to receive, verify and help contextualize findings.

A final report is expected by the end of Q2 2025.

MRE Scientist: Amy Webb awebb@neea.org



# Innovation 🔊 Action

# Fan Manufacturer Representative and Specifier Market Research

**Efficient Fans** 

FIELDING

NEEA is planning a market research study in support of continued refinement of the Efficient Fans program design and intervention strategy. The study will focus specifically on addressing the following objectives:

- Compile a robust list of C&I stand-alone fan manufacturer representatives and specifying engineers active in the four-state region (ID, MT, OR, and WA);
- Identify and document key communication and relationship dynamics between fan system market actors (including particularly influential sources of information);
- Identify and document persistent challenges ("pain points") endemic to the stand-alone fan specification, sale, and installation process as experienced by manufacturer representatives and specifying engineers; and
- Solicit input from regionally active stand-alone fan manufacturer representatives and specifying engineers regarding the clarity, sensibility, and appropriateness of programmatic language and terminology related to in-scope fan systems.

Study methods are likely to include secondary research accompanied by primary data collection (e.g., in-depth interviews, electronically administered surveys) to seek input and insight from regionally active fan specifiers and manufacturer representatives.

The project is expected to begin in Q4 2024.



# Innovation 🔊 Action

### Agricultural Pumps Market Research

Extended Motor Products (XMP)

FIELDING

In order to support ongoing program planning and opportunity assessment, NEEA intends to field a research study exploring the dynamics of the agricultural pump market across NEEA's four-state region. Specific objectives of this study are as follows:

- Identify and prioritize agricultural market barriers to uptake of highly efficient pumps for irrigation purposes.
- Document market actor motivations and agricultural irrigation pump path-to-purchase.
- Assess the accuracy of key market projections documented in NEEA's 2013 Agricultural Irrigation Market Characterization, specifically as pertaining to regional irrigated agricultural acreage and market actor technology usage.

Study methods are likely to include secondary research accompanied by primary data collection (e.g., in-depth interviews, electronically administered surveys) to seek input and insight from professionals active in this market. An RFP is currently under development and is anticipated to be released in Q3 2024; the project kickoff is anticipated for late Q4 2024.



# Innovation 🔊 Action

### Market Progress Evaluation Report #1

Extended Motor Products (XMP)

REPORTING

NEEA contracted with ADM Associates, Inc., to field the inaugural XMP Market Progress Evaluation Report (MPER), which serves as the first evaluation of the program's Market Transformation efforts. The overarching objectives for the study are to:

- Review the XMP Market Transformation Theory, Program Logic Model, and Market Progress Indicators (MPIs) to assess their clarity and alignment in conveying (1) the program's strategy and planned activities to overcome market barriers and drive market changes that will increase efficient clean-water pump and circulator adoption, and (2) NEEA's proposed approach for evaluating XMP market progress; and
- Conduct the first year of tracking MPIs to lay the groundwork for year-over-year evaluation, and report progress on several near-term outcomes.

A project kick-off was held in January 2024, followed by sample development and instrument preparation. Data collection began in late Q1 2024 with interviews with NEEA XMP program staff, implementation contractors, and industry partners, continuing through Q2 and into Q3 2024 with the administration of surveys or interviews across multiple market actor groups (including pump and circulator manufacturers' representatives, distributors, specifiers, contractors and project owners). Data analysis and initial report preparation occurred in early to mid-Q4 2024. A final report is anticipated in Q1 2025.



# Innovation 🔊 Action

### Market Progress Evaluation Report #1

Efficient Rooftop Units (RTU)

FIELDING

As of late 2022, NEEA's Efficient RTU program is actively working to transform the market for efficient RTUs in gas-heated commercial buildings across the region. This study will be the first evaluation of the program's Market Transformation efforts. The program's overarching objectives for the study are to:

- Provide timely and actionable formative evaluation findings and recommendations to enable continuous improvement of the program.
- Assess Market Transformation progress as measured by program MPIs.
- Qualitatively assess program influence on observed market transformation.

NEEA contracted with Apex Analytics and NMR Group to conduct the evaluation. NEEA kicked off the Efficient RTU evaluation in June 2023. The evaluation team conducted focus groups with two small groups of commercial building decision makers (e.g., building owners, operators, and facilities managers); surveyed commercial building decision makers across the region; and interviewed individuals who have or have considered having an efficient RTU on their building. In Q4 2024, the evaluation team plans to conduct focused interviews with a small number of manufacturer representatives active in the Northwest RTU market. The evaluation team is also in the midst of reviewing NEEA documentation and materials related to identified market progress indicators.

This study is being conducted in close coordination with the Market Progress Evaluation Report (MPER) for the High-Performance HVAC program, which is also being completed by Apex Analytics and NMR Group. Coordination between these studies brings about several efficiencies, such as reducing the burden on the market actors recruited to participate in the research and streamlining NEEA staff time and other resources.

The evaluation will continue through winter 2024-2025, with a final report anticipated in Q2 2025.

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# Innovation 🔊 Action

### Market Progress Evaluation Report #1

High-Performance HVAC

FIELDING

As of late 2022, NEEA's High-Performance HVAC program is intervening to transform the market for very high efficiency Dedicated Outside Air Systems (DOAS) for electrically heated commercial buildings across the region. This study will be the first evaluation of the program's Market Transformation efforts. The program's overarching objectives for the study are to:

- Provide timely and actionable formative evaluation findings and recommendations to enable continuous improvement of the program.
- Assess Market Transformation progress as measured by program Market Progress Indicators (MPI).
- Qualitatively assess program influence on observed market transformation.

NEEA contracted with Apex Analytics and NMR Group to conduct the evaluation. NEEA kicked off the High-Performance HVAC evaluation in July 2023. In Q2 2024, the evaluation team completed the analysis of HVAC system designer and manufacturer representative survey data. The evaluation team is also in the midst of reviewing NEEA documentation and materials related to identified market progress indicators. The team is also conducting a webscan of teaching materials that draw on NEEA's VHE DOAS principles.

This study is being conducted in close coordination with the MPER for the Efficient RTU program, which is also being completed by Apex Analytics and NMR Group. Coordination between these studies brings about several efficiencies, such as reducing the burden on the market actors recruited to participate in the research and streamlining NEEA staff time and other resources.

The evaluation will be ongoing through winter 2024-2025, with a final report anticipated in Q2 2025.

MRE Scientist: Kirstin Moreno kmoreno@neea.org



# Innovation 🔊 Action

### Market Progress Evaluation Report #3

Luminaire Level Lighting Controls (LLLC)

FIELDING

NEEA contracted with Cadmus to complete its third MPER for the LLLC Program. This study is crucial for tracking changes in the market that indicate whether the LLLC program is effective in overcoming identified market barriers.

Interviews and surveys will be collected at the end of 2024 and into 2025 with stakeholders, manufacturers, installers, designers, architects, engineers, and decision makers to address the following objectives:

- Review and verify that the LLLC program has conducted the strategic activities described in its quarterly progress tracking documents and outlined in its logic model since the previous MPER;
- Track identified MPIs focused on measuring the reduction of identified market barriers and conduct year-over-year analyses when indicated, in order to report progress on several program outcomes predicted by the logic model; and
- Conduct market research to describe the rationale of buyers and sellers of LLLC that include it in their initial project plans, but do not follow through with the sale.

A final report is anticipated in Q2 2025.

MRE Scientist: Zdanna King zking@neea.org



# Innovation 🔊 Action

### **Exterior Luminaire Level Lighting Controls** in Parking Lots Market Research

Luminaire Level Lighting Controls (LLLC)

REPORTING

NEEA is considering adding exterior LLLC in parking lots to the LLLC program. To support this, NEEA is contracting with Cadmus to conduct interviews with parking lot lighting installers and purchasers in Q3 2024. This study will:

- Determine and describe all items that trigger a parking lot lighting replacement or upgrade decision, as well as what factors go into the upgrade and/or replacement decision, so that NEEA can assess alignment of exterior LLLC with their existing LLLC Program.
- Assess the known and potential benefits of LLLC systems compared with other lighting solutions to assist NEEA in refining the value proposition for installing LLLC in exterior parking lots.

A report is anticipated in Q1 2025.

MRE Scientist: Zdanna King zking@neea.org

### **ENERGY STAR Influence Study**

High-Performance Windows

REPORTING

NEEA has contracted with Apex Analytics, LLC to conduct a study that will explore if and how NEEA's High-Performance Window program activities have influenced the new ENERGY STAR® Version 7.0 rating for windows and doors. Through the program's involvement in the Partnership for Advanced Window Solutions (PAWS), its letters to ENERGY STAR, and other related work, it is possible that NEEA influenced the adoption of the new rating. In order to document these findings, Apex Analytics is reviewed documents and interviewed PAWS members, NEEA staff, and ENERGY STAR representatives in Q3 2024. A final report is anticipated in Q4 2024.

MRE Scientist: Zdanna King zking@neea.org



# Products

# Innovation 🔊 Action

Market Progress Evaluat	ion Report #3	Retail Produc	t Portfolio (RPP)		FIELDING
NEEA is preparing to conduct the third MPER for its RPP initiative. This research is expected to begin in Q1 2025. This study will include an ongoing assessment of key MPIs for each product in the portfolio, including documentation of NEEA and its partners' influence on recent federal standards and secondary research on the value of efficiency labels.					
					MRE Scientist: Zdanna King zking@neea.org
Connected Consumer Pro	oducts Market Research	n	Retail Product Portfolio	(RPP)	REPORTING
NEEA contracted with Level 7 to connected consumer products in the	onduct market research that will s ne program's scope. This study wil	support the RPP ; II:	program as NEEA staff	consider	now and if to incorporate
• Describe consumer awaren	ess, knowledge, and interest rega	rding connected	consumer products		
Describe consumer willing	ness to purchase connected consu	umer products an	d engage with utility pr	ograms d	eveloped for these products
Describe consumers' exper	iences using connected consume	r products			
• Develop consumer profiles	that identify predictors of their in	nterest in and will	ingness to purchase co	nnected c	onsumer products
Primary and secondary research wa	s fielded in Q3 and Q4 2024, and	d consisted of a l	iterature review and da	ta collect	on from end-use customers

Primary and secondary research was fielded in Q3 and Q4 2024, and consisted of a literature review and data collection from end-use customer (including online surveys, discussion boards, and focus groups).

A final report is anticipated in Q1 2025.

MRE Scientist: Zdanna King zking@neea.org



### **Products**

# Innovation 🔊 Action

### Market Research on Existing Water Heaters in Select Commercial Buildings

Advanced Commercial Gas Water Heaters

REPORTING

NEEA contracted with Lieberman Research to conduct research in a select group of buildings regarding current water heating systems, including the decision making and purchase process, value propositions and barriers to their adoption. The researcher conducted twenty-five in-depth telephone interviews with a series of market actors including, but not limited to, building managers, building owners, and engineers.

Data collection, which started in late Q2 2024, will continue through Q3, resulting in a final report which is anticipated in late Q4 2024.

MRE Scientist: Anu Teja ateja@neea.org

### **Condensing Gas Water Heater Qualitative Market Research**

**Efficient Gas Water Heaters** 

REPORTING

NEEA contracted with ILLUME Advising, LLC to conduct research to better understand the purchase motivators among owners of the most efficient currently available gas storage water heaters (condensing gas water heaters) across North America. This qualitative research will inform the Efficient Gas Water Heater program's future efforts and development of the value proposition for commercialization of residential gas heat pump water heaters. The key objectives of the qualitative research effort are to:

- Understand purchaser behaviors and attitudes that result in the actual purchase and installation of highly efficient condensing gas storage units in their homes
- Understand purchasers' overall satisfaction with the unit and interaction with the unit
- Determine purchaser willingness to replace current units with newer, more efficient units and, if willing, under what scenarios (planned replacement, failure, etc.)

Data collection began in Q2 2024, and a final report is anticipated in late Q4 2024.

MRE Scientist: Anu Teja ateja@neea.org



# Innovation 🔊 Action

FIELDING

### **Battery Chargers Standard Evaluation**

Standards

#### FIELDING

**Standards** 

NEEA's Codes and Standards team engaged in efforts to increase the stringency of the battery chargers standard. NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards processes and provide a quantitative estimate of the share of savings resulting from the standards that are the result of NEEA and other efficiency organizations' efforts. The project kicked off in September 2023 but paused in late 2023 due to a change in the U.S. Department of Energy's (U.S. DOE) timeline for publishing the final rule. Michaels Energy re-launched the project in August 2024, at which point they began reviewing NEEA records and publicly available documents and conducting interviews with a small subset of key stakeholders. The project is currently on hold awaiting the publishing of the final rule, at which time data collection will resume.

> MRE Scientist: Meghan Bean mbean@neea.org

### Portable AC and Air Compressor Standard Evaluation

NEEA's Codes and Standards team engaged in efforts to increase the stringency of the federal standards for portable air conditioners and air compressors. NEEA contracted with Michaels Energy to conduct a qualitative assessment of NEEA's influence on the standards processes and provide a quantitative estimate of the share of savings resulting from the standards that are the result of NEEA and other efficiency organizations' efforts. Both evaluations will kick off in November 2024. Michaels Energy will review NEEA records and publicly available documents and will conduct interviews with key stakeholders from NEEA, U.S. DOE and other organizations. Final reports are anticipated in late Q2 2025

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# Innovation 🔊 Action

### **NEEA Codes Baseline Review**

Codes

FIELDING

NEEA is planning for a third-party review of its Naturally Occurring Baselines for commercial and residential energy codes in the Northwest. Specifically, the third-party will:

- Assess whether NEEA's approach of tracking 100% of the Total Regional Savings as Co-Created Savings for 10 years after construction starts without applying an additional adjustment factor is still the most reasonable Natural Market Baseline for codes.
- If not, make recommendations for how NEEA should update its baseline and other assumptions to more accurately capture NEEA and its partners' influence on code changes in the Northwest.
- Assess whether it is appropriate to apply the same approach to all states in the Northwest and to both the residential and commercial sectors.

NEEA anticipates this review to be kicked off in Q4 2024, with a final report published in Q2 2025.

MRE Scientist: Meghan Bean mbean@neea.org



# Innovation 🔊 Action

### Market Progress Evaluation Report #6

Codes

FIELDING

NEEA contracted with NMR Group, Inc., to field the sixth MPER for its commercial and residential codes efforts. This study is intended to build on and complement the learnings generated through the recently completed Codes MPER #5 and will include ongoing assessment of NEEA's progress in the Northwest codes market relative to recently established MPIs. Specific objectives for the study are to:

- Assess NEEA's progress on selected logic model outcomes, including those associated with (a) the Codes team's training and education activities, (b) voluntary certification and above code construction, and (c) jurisdictional goals and state-level code support;
- Conduct a qualitative analysis of NEEA's progress on outcomes associated with its code influence activities conducted during code cycles occurring from 2018 onward, with a particular focus on code influence activities occurring from 2023 onward; and
- Conduct formative evaluation regarding market actor awareness, use, and valuing of key code compliance tools, including the Washington State Energy Code Commercial Technical Support website and webtool, COMcheck, and REScheck.

A project kick-off was held in mid-Q4 2024, with sample development and instrument preparation to follow. Data collection is scheduled to occur during Q1–Q2 2025, including interviews with NEEA Codes program staff and a wide range of code market actors, as well as surveys with individuals who have completed NEEA-sponsored code trainings. Data analysis and initial report preparation are scheduled to occur in Q2 2025, with a final report anticipated in early Q3 2025.

# Innovation 🔊 Action

### Home Energy Raters Market Research

**Residential Codes** 

REPORTING

NEEA contracted with TRC to conduct market research with home energy raters in the Northwest to meet the following objectives: 1) Develop an estimate of the number of home energy raters currently working in the new construction market in each state in the Northwest, and 2) Provide an assessment of:

- Current raters' business practices
- Raters' perceptions of the current market for home energy ratings
- How raters' practices and perceptions differ across urban and rural areas

TRC identified 111 unique raters in the Northwest, most of whom have been working in the field for over five years. Interviews and surveys revealed that both raters and the organizations that certify and support home energy raters believe that the market for home energy rating services will grow due to Inflation Reduction Act (IRA) funds incentivizing above-code homes. While raters report using similar business practices in both urban and rural areas, they perceive less demand for their services in rural areas.

A final is anticipated for late Q4 2024.

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# Innovation 🔊 Action

### Montana Residential Code Compliance Evaluation

**Residential Codes** 

REPORTING

NEEA contracted with IEc to review assumptions underlying its estimation of energy savings resulting from NEEA's and its partners' involvement in the Montana state code processes. Using data collected through permit review, site visits to residential new construction building sites, and interviews with market actors, this research will address the following objectives:

- Assess statewide compliance with selected code requirements among single-family homes built under IECC 2018 with Montana amendments.
- Develop estimates of statewide energy code compliance and compliance within urban and rural jurisdictions separately.
- Provide statewide findings regarding primary space and water heating fuel and above-code elements using data collected on individual code requirements.

This work kicked off in Q1 2023 but paused in mid-2023 due to challenges with collecting permit data. The project re-launched in January 2024 with a new data collection plan that relies on on-site data collection. A final report is expected in Q1 2025.

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# Innovation 🔊 Action

### **Oregon Residential Code Compliance Evaluation**

**Residential Codes** 

REPORTING

NEEA contracted with IEc to review assumptions underlying its estimation of energy savings resulting from NEEA's and its partners' involvement in the Oregon state code processes. This evaluation will:

- Assess statewide compliance among single-family homes built under the 2021 Oregon Residential Specialty Code (ORSC).
- Provide statewide findings regarding primary space and water heating fuel and above-code elements using data collected on individual code requirements.
- Provide an analysis of builders' choices regarding compliance pathways and efficiency level to which the home is built.

IEc will collect data from permits, site visits to residential new construction building sites, and interviews with market actors. In addition, NEEA contracted with NMR Group to collect data on inhabited homes using homeowner self-audits. These data will be provided to IEc for analysis.

This project kicked off in February 2024, and a final report is expected in Q2 2025.

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# Innovation 🔊 Action

### Idaho Commercial New Construction Code Compliance Evaluation

**Commercial Codes** 

FIELDING

The Idaho Commercial New Construction Code Evaluation study focuses on (a) assessing the path(s) by which and degree to which code compliance is achieved with the amended 2018 International Energy Conservation Code (IECC) in newly constructed buildings, and (b) measuring the energy performance of a subset of these buildings as compared with the average energy performance of buildings constructed under previous code. The results of the study will provide direction to the development and implementation efforts of the NEEA Codes team and will provide other regional code stakeholders guidance in targeting their energy efficiency work in the commercial new construction sector.

NEEA contracted with Opinion Dynamics to undertake this study. The study design and methodology selected for this project focuses on permit data and building plans as the primary sources of construction and compliance information, with virtual or in-person site visits planned for a subsample of participating buildings in order to validate the accuracy of permit data. The project kicked off in Q3 2023, with planning and sample development continuing through Q1 2024. Data collection focusing on desk review of permit data began in Q2 2024 and is scheduled to conclude in Q4 2024, with site visits to a subsample of buildings scheduled for Q4 2024 through Q1 2025. This study includes analysis of billing data. Collection of this data is planned to continue through Q1 2025, with analysis and report preparation to follow.

A final report is anticipated in Q2 2025.

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# Codes, Standards, New Construction

# Innovation 🔊 Action

### Montana Commercial New Construction Code Compliance Evaluation

**Commercial Codes** 

REPORTING

The Montana Commercial New Construction Code Evaluation study focuses on (a) assessing the path(s) by which and degree to which code compliance is achieved with the 2018 IECC in newly constructed buildings, and (b) measuring the energy performance of a subset of these buildings as compared with the average energy performance of buildings constructed under previous code. The results of the study will provide direction to the development and implementation efforts of the NEEA Codes team and will provide other regional code stakeholders guidance in targeting their energy efficiency work in the commercial new construction sector.

NEEA contracted with Michaels Energy to undertake this study. The study design and methodology selected for this project focuses on permit data and building plans as the primary sources of construction and compliance information, supplemented by telephone or virtual interviews with building owners and operators to contextualize and enrich the results of permit and plan analysis. The study also includes virtual or in-person site visits planned for a subsample of participating buildings in order to validate the accuracy of permit data. The project kicked off in mid-Q2 2022, with planning and sample development continuing through Q1 2023. Data collection, including interviews with site contacts and desk review of permit data, commenced in Q2 2023 and concluded in Q2 2024, while in-person/virtual site visits commenced in Q4 2023 and concluded in Q2 2024. Billing data collection was attempted for this study but has been excluded from ongoing project activities due to a prohibitively low response rate from eligible building contacts.

Compliance analyses are currently underway; a final report outlining the result of compliance analysis and comparative site visits is anticipated in Q1 2025.



### Long-Term Monitoring & Tracking

### Innovation 🔊 Action

### Ductless Heat Pump Long-Term Monitoring and Tracking, Year 3 FIELDING

NEEA actively worked to accelerate adoption of Ductless Heat Pumps (DHPs) in the Northwest from 2008 to 2020. Once NEEA scales back investments in a Market Transformation program, the organization continues to monitor market diffusion of the energy-efficient product or practice through a series of annual longitudinal evaluations called long-term monitoring and tracking (LTMT) studies. NEEA contracted with OWL Research Partners to conduct the third LTMT study for the DHP program. The study kicked off mid-November 2024. The objective for this evaluation, consistent with the prior two LTMT studies, is to track diffusion of DHPs across the Northwest's residential HVAC market, specifically within the program's three target markets to confirm whether market transformation outcomes are being sustained.

A key activity of the study will be to conduct phone surveys with HVAC installers. The HVAC installer survey seeks to understand trends in DHP installations, the types of homes they are being installed in, the percentage of incented installations, total customer cost, and changes in the DHP market.

The study is targeting 232 installers across the Northwest to complete the survey. Recruiting for the survey will begin in early December 2024, with interviews planned to take place between December 2024 and January 2025.

The final LTMT report is anticipated in Q2 2025.

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### TOGETHER We Are Transforming the Northwest

