ITEM NO. CA12

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: March 19, 2024

REGULAR ____ **CONSENT** X **EFFECTIVE DATE** March 20, 2024

DATE: March 11, 2024

TO: Public Utility Commission

FROM: Benedikt Springer

THROUGH: JP Batmale and Sarah Hall **SIGNED**

SUBJECT: IDAHO POWER COMPANY:
(Docket No. UM 1710(7))
Request for cost-effectiveness exception for specific demand-side management electric measure, air-cooled heat pump.

STAFF RECOMMENDATION:

Approve an exception to cost-effectiveness requirements for the air-cooled heat pump measure in Schedule 89 as requested by Idaho Power Company (Idaho Power or Company), through March 31, 2026.

DISCUSSION:

Issue

Whether to approve an exception to cost-effectiveness requirements for the air-cooled heat pump measure in Schedule 89.

Applicable Rule or Law

Under OAR 860-027-0310(2), the Commission encourages energy utilities to acquire cost-effective conservation resources. “Cost-effective” is defined in ORS 469.631(4) and OAR 860-030-0010. The Commission determines cost-effectiveness of a measure through the Total Resource Cost (TRC) test, which is a ratio of utility system benefits and customer benefits to program and customer costs. If the TRC is greater than one, then the measure is considered cost-effective.

With Order No. 94-590 issued in Docket No. UM 551, the Commission provides for the inclusion of non-cost-effective measures in utility Demand-Side Management (DSM) programs if those measures meet specific conditions. The available conditions to qualify for an exception are as follows:

A. The measure produces significant non-quantifiable non-energy benefits. In this case, the incentive payment should be set no greater than the cost-effectiveness limit less the perceived value of bill savings, e.g., two years of bill savings;
B. Inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure;
C. The measure is included for consistency with other DSM programs in the region;
D. Inclusion of the measure helps to increase participation in a cost-effective program;
E. The package of measures cannot be changed frequently, and the measure will be cost-effective during the period the program is offered;
F. The measure or package of measures is included in a pilot or research project intended to be offered to a limited number of customers;
G. The measure is required by law or is consistent with Commission policy and/or direction.

In Order No. 15-200 (June 23, 2015), the Commission required Idaho Power to review its DSM programs annually for cost-effectiveness and file exception requests as appropriate.

Analysis

Background
On September 29, 2023, Idaho Power filed its 2023 Integrated Resource Plan (IRP) with the Commission in LC 84, including updates to Demand-Side Management (DSM) avoided costs. Subsequent review of all DSM measures by the company showed one measure to be no longer cost-effective. On January 31, Idaho Power filed a request for a cost-effectiveness exception in UM 1710 with a proposed effective date of March 31, 2024.

The exception request is for air-cooled heat pumps (“HP”) meeting the Consortium for Energy Efficiency (“CEE”) Tier 2 specification, under Idaho Power’s Schedule 89. This schedule offers incentives to commercial and industrial customers to exceed code in new construction. Idaho Power has in the past and proposes to continue to offer an incentive of $70 per ton of cooling capacity up to 5 tons. Under the new avoided costs, the measure now has a Utility Cost Test (UCT) of 0.81 and a Total Resource Cost (TRC) test of 0.93. As context, without a cost-effectiveness exception, measures that are below a UCT of 1.0 and a TRC of 1.0 fail cost-effectiveness criteria. The

Commission uses the TRC as the primary avoided cost test, and considers the UCT in evaluating exception requests. Air-cooled heat pumps that meet CEE Tier 1 are still cost-effective with a TRC of 1.27. Overall, the commercial and industrial new construction program remains cost-effective with a TRC of 3.42.

In terms of costs, the new construction program represents less than four percent of Idaho Power's commercial and industrial DSM programs in Oregon.[1] In terms of savings, the new construction program represents less than a tenth of a percent of Idaho Power's commercial and industrial energy efficiency in Oregon. In 2022, the last year with comprehensive reporting available, the measure was completed zero times, hence representing zero percent of costs/savings.

In its filing, the Company notes that the measure would be cost-effective with a TRC of 2.21 if electric heat savings were included. However, the company argues "not limiting participation based on the customer's heating source will reduce customer confusion and provide a greater potential for participation because gas heat is prevalent among commercial and industrial customers." Confusingly, the company explains that one major use cases of the measure is commercial common areas in multi-family buildings. Under Schedule 68, Idaho Power offers the same measure for residential units in multi-family buildings. In this case, the measure is cost-effective because heating benefits are counted.[2] In discussions with Staff, the Company explained that not including heating benefits is a consistent approach throughout the commercial and industrial program. The company elects to exclude heating benefits because it is unclear how many savings would accrue to gas heating customers that may or may not use their heat pump for heating purposes.

Conditions for Cost-Effectiveness Exceptions
Idaho Power explains that this measure is an opportunity to increase savings by encouraging the customer to go from CEE Tier 1 to CEE Tier 2. The Company argues that the exception is necessary to maintain consistency in offerings across Oregon and Idaho service territories. Furthermore, the company states that the measure produces significant non-quantifiable non-energy benefits.

Staff is convinced by Idaho Power's argument that the measure qualifies for cost-effectiveness exception under condition C, and that the measure is included for

[1] Idaho Power, Demand-Side Management Report, April 3, 2023, https://docs.idahopower.com/pdfs/EnergyEfficiency/Reports/DSM_2022.pdf.
[2] See Docket No. ADV 1540, Staff Report for the October 31, 2023, Public Meeting. It is important to note that the multi-family program overall is only cost-effective under the UCT and operates under an exception, https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAU&FileName=adv1540hau153941.pdf&DocketID=23870&numSequence=3.

consistency with other DSM programs in the region. Energy Trust of Oregon offers a standard incentive similar to this measure to Portland General Electric and Pacific Power customers in its New Buildings program.[3] Idaho Power also offers this measure to its Idaho Customers. Given the small size of the program, having one consistent offering in Idaho Power's service territory is more efficient.

Staff is not persuaded by Idaho Power's argument that the measure qualifies for a cost-effectiveness exception under condition A, the measure produces significant non-quantifiable non-energy benefits. The company does not cite any specific reasons in its filings, but in informal discussions enumerated increased comfort, bill savings, and carbon emission reductions. Staff believes that some non-energy benefits are quantifiable (e.g. carbon emissions bill savings), while other commonly cited reasons do not apply. For instance, air purification is a non-energy benefit of replacing electric resistance heat with a heat pump, but not of increasing air conditioning efficiency from CEE Tier 1 to CEE Tier 2. Similarly, an increase in efficiency is unlikely to affect comfort.

Staff compared the Company's methodology to that used by Energy Trust of Oregon (Energy Trust). In Order No. 23-442 on November 17, 2023, the Commission approved Staff's recommendation for Energy Trust's use of the UCT to evaluate its New Buildings Program. The order also no longer requires measure-level cost-effectiveness for participants, who are using a whole buildings approach. The background for this change was the adoption of Oregon's 2019 Zero Energy Ready Commercial Code, which in accordance with ASHRAE 90.1-2016, allows performance-based code compliance.[4] Under this new approach, it is not possible to assess the incremental cost or savings of individual measures, because the baseline is now set on the building, not the specific appliance/measure level.

Idaho Power does not use this approach. Benefits and costs for the TRC are assessed in comparison to the 2018 International Energy Conservation Code (IECC) which is in use in Idaho. Small commercial heat pump and air conditioning efficiency standards in the IECC and in the prescriptive portion of ASHRAE 90.1-2016 are roughly similar. Combining this finding with the fact that running two separate calculations (and resulting programs) would be inefficient, suggests to Staff that the company's approach is reasonable.

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[3] Energy Trust of Oregon, New Building Standard Equipment Guide, p.2, 2024, https://www.energytrust.org/wp-content/uploads/2020/03/New-Buildings-Standard-Equipment-Guide.pdf.

[4] Oregon Zero Energy Ready Commercial Code, https://www.oregon.gov/bcd/codes-stand/Documents/19ozercc.pdf.

Staff notes that the reason the measure is no longer cost-effective is a change in energy efficiency avoided costs in Idaho Power's 2023 IRP. One cause of lower avoided costs is that capacity credits are newly split between winter and summer peaks, and air conditioning units are not active during winter peaks, reducing capacity savings.[5] However, Staff believes the primary driver for low avoided costs are forward market prices that do not reflect the increasing costs presented in the IRP. Unfortunately, there is a two-year lag in the avoided cost numbers. As Staff explains in its opening comments in LC 84:

> Idaho Power determined cost-effective EE in the 2023 IRP using the avoided cost data from the Company's 2021 acknowledged IRP in LC 78. In LC 78, Staff observed that IPC's 2021 IRP underestimated the forward market price (FMP). This low FMP estimate results in a low avoided cost in the 2023 IRP. The low avoided cost derived from the 2021 IRP, Idaho Power explained, reduced the cost-effective EE measures in the 2023 IRP compared to the 2021 IRP. Idaho Power recognized the avoided cost lag in informal discussions with Staff but explained that the lag is inherent to their IRP process. Staff is curious whether this process may be adjusted to avoid lag or otherwise use a more reasonable FMP in the avoided cost calculations.[6]

As additional context, Energy Trust of Oregon is subject to processes and thresholds for considering cost effectiveness exceptions established in Docket Nos. UM 1622 and 1696.[7] These orders codified a previous working arrangement in Docket No. UM 1622 whereby Staff could consider "minor" cost effectiveness exceptions under the following circumstances:

> - The measure's TRC score is below 1 and above 0.8;
> - The measure's savings do not comprise more than 5 percent of a program's annual savings; and,
> - The measure's cost does not represent more than 5 percent of the program's annual budget.

If an Energy Trust measure does not meet all of the minor exception criteria above, the request goes through the Commission's major exception request process.

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[5] Personal conversation with Idaho Power.
[6] Docket No. LC 84, Staff Opening Comments, p. 33, Febr. 7, 2024.
[7] *See* Docket No. UM 1622, Order No. 14-332, https://apps.puc.state.or.us/orders/2014ords/14-332.pdf. Also see Docket No. UM 1696, Order Nos. 17-395, https://apps.puc.state.or.us/orders/2017ords/17-395.pdf, and 17-457, https://apps.puc.state.or.us/orders/2017ords/17-457.pdf.

For major exception requests, Energy Trust provides an official filing and requests an exception. OPUC Staff brings forward for Commission adoption Staff's recommendation and a procedural schedule to allow for public comment. Concluding the comment period, Staff then makes formal recommendations to the Commission at a public meeting. Though Idaho Power does not work with Energy Trust, and so is not subject to the same processes and thresholds, the Company did conduct a public review of this exception request in keeping with the practices of a major cost-effectiveness exception.

While the distinction between minor and major does not apply in this case, the measure would fall into the category of minor exception. The company did not present the issue to its Energy Efficiency Advisory Group (EEAG) or solicit stakeholder feedback in other ways because of the minor impacts in terms of program savings and costs. Staff believes that the company needs to change its approach to stakeholder engagement, from keeping stakeholders informed through presentations to facilitating input on offerings and program design. Furthermore, EEAG meetings need to more clearly delineate which issues and programs are applicable to Oregon customers.

Staff notes the exception request aligns with Oregon State policy goals. Oregon House Bill (HB) 3409 (2023) states it is Oregon’s goal to install 500,000 heat pumps by 2030 in order to meet the state’s greenhouse gas emissions reduction goals. Oregon Senate Bill (SB) 1536 (2022) encourages homeowners to install energy efficient air conditioning.

Finally, Staff recommends granting the exception request through March 31, 2026, although the company only requested it through March 31, 2025. The reason for this change is that by 2026, new energy efficiency avoided costs will be available through the newest IRP, necessitating recalculation of cost-effectiveness. Granting the exception for two years is therefore more efficient. In discussion, the company agreed with that reasoning.

Conclusion

Overall, Staff supports the cost-effectiveness exception for this measure through March 31, 2026, for the reasons discussed above.

PROPOSED COMMISSION MOTION:

Approve an exception to cost-effectiveness requirements for the air-cooled heat pump measure in Schedule 89 as requested by Idaho Power Company, through March 31, 2026.