NYSERDA Heat Pumps Phase 2

Indirect Impact Analysis Memo (2020-2030)

Final Memo

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NYSERDA Record of Revision

Heat Pumps Phase 2
Indirect Benefits Analysis March 2025

Revision Date	Description of Changes	Revision on Page(s)
March 2025	Original Issue	Original Issue

Memorandum

To: Tracey DeSimone and Carley Murray; NYSERDA

From: Mark Janett and Kevin Chaussard; Cadmus

Subject: Air Source Heat Pump (ASHP) Indirect Benefits Forecast Model Review, Q1 2025 Update

Date: March 31, 2025

This memo presents the findings of NYSERDA's ASHP Indirect Benefits forecast model covering ASHP installation and HVAC shipment data from Heating, Air-conditioning, and Refrigeration Distributors International (HARDI) for the period Q1 2024- Q4 2024 conducted by Cadmus, an independent third-party evaluation contractor. The ASHP Indirect Benefit Forecast model was originally developed in Q2 2023 by Cadmus for NYSERDA. Cadmus conducted a review of the model to ensure that the updates were made appropriately, and the model reflects Cadmus's and NYSERDA's understanding of the ASHP market in New York.

Model Revisions for Q1 2025

Since the original creation of the ASHP Indirect Benefits model, NYSERDA incorporated two new data sources into the model calculations:

- **2023 NYS Annual Clean Heat Report**: NYSERDA incorporated utility ASHP installation data from 2022 and 2023. NYSERDA used the same data source in the original version of the model with data going through 2021.
- **CoMetrics 2023 Unit Growth by Product Category, U.S. Total**: NYSERDA incorporated yearly growth rated by heating technology (i.e., furnaces, ASHPs, AC units) to confirm model results. This was originally not used in the model calculations, but Cadmus incorporated it to adjust the total 2023 ASHP shipment data from Heating, Air-conditioning, and Refrigeration Distributors International (HARDI), as newer data were not available. The CoMetrics data showed slower growth among ASHP installations (-11.6% compared to 2022), but they were still stronger than AC units and furnaces. This aligns with what Cadmus has seen in other jurisdictions and is likely a symptom of the increased costs for these technologies.

Model Review Findings

Cadmus reviewed the updated model alongside the original model from 2023 to check for changes and confirm the calculations. Overall, Cadmus found that the new model generally aligns with the original model, using the same calculation methods and approaches to generate a result. Cadmus identified a few discrepancies with the newly incorporated data:

- In 2022 and 2023, the **model erroneously included heat pump water heater (HPWH) installations** in the total for utility ASHP installations. Additionally, in 2023 the model **excluded data from the Long Island Power Authority (LIPA)**. These changes revised the utility ASHP installations in 2022 from 21,473 to 20,526 and in 2023 from 16,211 to 20,802.

- In the 2021 ASHP data, the **calculations omitted 412 commercial ASHPs** from the LIPA data, which revised the total from 19,498 ASHP to 19,910 ASHPs.

The CoMetrics negative growth rate was not applied to ASHP sales in 2023. Instead, the model kept sales flat, whereas the CoMetrics data showed a nationwide decrease in sales volume of 11.6%. In the absence of updated HARDI data, Cadmus revised the total shipment estimate in 2023, which dropped from 151,000 to 134,000. Because this growth rate showed a slowing in the market, it is reasonable to assume a bounce back will occur in the years following the slowdown, as there is a relatively inelastic demand for heating. Thus, Cadmus applied a slight "bounce back" growth rate addition of 3% in 2025 and 2026 to account for this, as it is expected that inflationary pressures will ease.

This analysis resulted in acquired indirect savings as well as revised indirect savings estimates for the periods presented below.

- **Acquired 2023**: 297,990 MMBtu
- **Forecasted 2024-2025 ("Thru 2025")**: 680,000 MMBtu
- **Forecasted 2024-2030 ("Thru 2030")**: 3,010,000 MMBtu