BDC Presents: NESCAUM

July 18, 2024

Summary:

Earlier this year, nine states plus Washington, DC, signed an agreement to meet ambitious heat pump targets and reduce emissions from buildings. Hear from Emily Levin of the Northeast States for Coordinated Air Use Management (NESCAUM), who drafted the agreement, on how it came to be and what the states are now doing to meet the commitment. Also, hear from Zach Berzolla of the Maryland Department of the Environment about the specific steps his state is taking to accelerate heat pump deployment and decarbonize buildings.

Resources:

- Recording
- BDC newsletter sign up
- NESCAUM MOU and press release on Feb 7, 2024
- Maryland Climate Pollution Reduction Act
- Clean Heat Standard in MD

Events

- California Policy Call**:** Aug 20th, 10am PT / 1pm ET

Summary

NESCAUM MOU (Emily Levin, NESCAUM)

- Current Heat Pump Market
  - Currently, air source heat pumps (ASHPs) make up 20-25% of the HVAC market nationally.
  - On September 23, 2023, U.S. Climate Alliance member states committed to reach 20 million heat pump installations by 2030 (see more on slide 11).
- NESCAUM MOU
  - The NESCAUM MOU is a multistate collaboration to accelerate the adoption of zero-emission heat pumps and 10 jurisdictions have committed to the MOU, including Maryland.
  - NESCAUM MOU Target: Across Signatory States, at least 65% of residential-scale heating, air conditioning, and water heating equipment shipments will be zero-emission heat pump equipment by 2030 and 90% by 2040.
- What are the next steps?
  - Getting solid data on heat pump sales and shipments: A current challenge is that states do not have great data on heat pump sales and shipments. NESCAUM and BDC are working with industry partners to get this information.
  - Fostering collaboration between state environmental agencies and energy offices: The ideal is to get both agencies more engaged and coordinate their efforts.
  - Developing a multi-state action plan (to be released in 2025): It will highlight the actions NESCAUM would recommend states to take to support heat pump adoption.

- What will be in the action plan?
    - The action plan will not be prescriptive. It will draw from the 'four-legged' table for building decarbonization policy (see slide 15) and will recommend different policies for states to explore.
        - E.g. exploring zero-emission standards for building equipment (see slide 16). From there model rule and supporting technical analyses will be accessible for states to use
    - To meet the MOU target, it will require a suite of policies and actions on the part of the state and federal funding to carry out.

Maryland and Meeting the MOU target (Dr. Zach Berzolla, Maryland Department of the Environment)

- With the NESCAUM MOU, having states come together encourages collaboration, enforceability, and creates a market signal to push adoption of zero emissions heating equipment. It also allows other states to learn from each other and identify best practices.
- Maryland's Climate Action Plan
    - By 2031, aims to reduce statewide greenhouse gas emissions by 60% (from 2006 levels)
        - Direct fuel use in buildings accounted for 16% of Maryland's greenhouse gas (GHG) emissions in 2020
    - High Impact Building Sector Policies to meet Maryland's Climate Action Plan (see slide 23)
        - Building Energy Performance Standards (proposed, to be adopted in 2024)
            - Focuses on covered buildings (>35,000 square feet) to achieve zero net direct greenhouse gas emissions and improvements to energy efficiency by 2040
            - Plan: in 2025, start benchmarking using the Energy Star Portfolio Manager to track annual energy use and GHG emissions. Starting in 2030, if building owners are not achieving the standards, they can make an alternative compliance payment and achieve partial compliance.
        - Zero-Emission Heating Equipment (new)
            - Require new heating systems installed in Maryland buildings to produce zero on-site emissions beginning later this decade
        - Clean Heat Standard (new)
            - A performance standard that requires heating fuel providers to reduce the GHG emissions associated with their businesses by 2045 (see Meeting the Thermal Challenge: A Clean Heat Standard for Maryland).
        - EmPOWER (current, modified)
            - EmPOWER is Maryland's rate-payer funded energy efficiency program. In 2024, HB864 passed and now also requires reduction of GHG emissions. This opens up many new opportunities for rate payer funding for fuel switching, installing heat pumps and other ways to reduce GHG emissions.
            - Outside of EmPOWER, there are rebates for low to middle income households (see slide 32) and federal tax credits to take advantage of to help address upfront cost concerns.

Q & A

1. **Emily, have you taken a moment to reflect on how significant what you've been able to do here is AND what you think the biggest opportunity coming out of this process is?**

- **Emily:** Thank you so much for the kind words. One of the things that makes me excited is getting to work with ambitious states that's willing to take bold action. In terms of the biggest opportunities, I know one of the things states are most excited about is actually having visibility into the state of their market. However, states are lacking visibility into how they were performing and really want to gain those insights. We're working hard to figure out how to get this data, so I'm really hopeful that by 2025, states will have access to better data, and we'll be able to shine a light on that data to check our progress and see if we're on track and make adjustments.

2. **How replicable is what you're doing in Maryland in other states? Have you also thought about how what you do could influence what happens in other states?**

- **Zach:** That's a great question, and it's definitely something on our minds because Maryland has a little over 6 million people in the state. The only way that we're actually going to see change at the scale of the country or the world, is if we can replicate these policies in many states and in many countries. And so, by participating in this collaborative that NESCAUM is running, we're getting to adopt a key policy for decarbonization, but also put it out as a model rule that others can follow. And as an example, with our upcoming BEPS, a piece of that comes from other groups like Institute for Market Transformation. They have a model rule for building performance standards. You can see how Maryland's maybe adjusted it to our specific context, but using things that are off the shelf that we can then hopefully go and successfully implement to show that it can be done.
- **Emily:** I also want to add that making it so states are not standing alone is another piece of the puzzle. To the extent states can feel like they're among a group of states that are doing really similar things, that gives them confidence. That makes them much more likely to move forward. Another thing we are trying to accomplish is just normalizing these policies. They will be acting as part of a coalition of states taking similar action. And that will give them some cover politically and just make it more likely that states can take the action that we need.

3. **Will the NESCAUM MOU include HPWHs as well, or just heat pump HVAC?**

- **Emily:** Yes! It does.

4. **About the BEPS Policy, what does the alternative compliance payment go towards?**

- **Zach:** That's a great question. It is set at the EPA's social cost of greenhouse gases and the benchmark price is around $230 a ton starting in 2030. And what that goes to is a great open question. It's something that we're working towards. The ideal is that it goes back into investment in efficiency improvements to meet our goals, but we are still figuring out the details.

5. **Is there any potential or hope for expanding the number of states signed on to the MOU. And is there anything state advocates can do to help?**

- **Emily:** We are definitely open to adding states. This is actually a great time for additional states to join because we are still working on the action plan. If states were to join soon, they would have the

opportunity to contribute to that action plan as our next step under the MOU. We are more focused on action plan development than recruiting additional states at this point, so we don't have a ton of bandwidths to do outreach, but if an advocate wants to bring an interested state to our attention, we're happy to talk to them.

- **Matt:** And we'd be happy to talk to any advocates who are interested in potentially pursuing some work in their state as well. Feel free to reach out to me as well.

6. **I know the language is still in development, but will the development of zero emission heating standards include optional policy language for replacement heating systems like retrofits, or will it be limited to new construction only?**

- **Zach**: We're definitely still in development of the model rule, but I'll go back to the kind of language both Emily and I had on our slides about it, which is that this is for all new equipment installed later this day by the end of this decade. So it's all new equipment, not necessarily based on construction.
- **Emily**: Just to add to that to make sure that's clear. We do anticipate the model rule will cover installations of new equipment in existing buildings and in new buildings. For the covered types of equipment which we're starting with smaller equipment more residential scale equipment. It will not require anybody to remove their functional furnace or water heater early just at the time that they're shopping for a new piece of equipment, they would need to choose a zero emission option.

7. **Has there been any work on either model legislation, or is there some thinking on policy to encourage or subsidize the training of heat pump installers or technicians?**

- **Zach:** The workforce is a key challenge to achieving our goals. In the Maryland context, we currently have a working group called the Just Transition Employment and Retraining Working Group to develop policy recommendations to ensure we are developing a workforce that can help us achieve our goals and make sure it is truly a just transition. We are trying to figure it out, but I don't think anyone has necessarily found a silver bullet to solve this issue.
- **Emily**: Also, I think one of the values of multi -state collaboration is quickly learning from states that are doing well in this area. For example, Vermont and Maine have really successful heat pump networks and websites where you can easily find a qualified technician. They have built a virtuous cycle where those qualified technicians then get more referrals from the efficiency programs and so forth and I think we can learn from those. I know there are successes in California with Tech Clean California, working with local high schools and colleges to incorporate heat pump content into their curricula and create a pipeline for people to be placed from those schools and jobs. There's a lot of models we can learn from and hopefully like help share with states more rapidly by working together.

8. **What best practices can local governments advance state decarb strategies?**

- **Emily**: Local governments are a critical partner. Cities such as Washington DC and New York City have spearheaded building performance standards, such as local law 97 in NYC, and are taking the lead in adopting these policies. States are learning from these cities as they explore statewide building performance standards such as how Maryland is now working on policies such as the zero emissions standard. Though emissions standards might not make sense for cities since it requires state level

authority, they can work on stretch codes and there's definitely a lot of opportunity for cities to be a part of the transition.

- **Zach**: To build on that, I think another piece is the enforcement side of codes as well as permitting and getting people educated. For example, with Maryland's Building Energy Performance Standard, if a building owner is starting to permit now, they would go to their local county and pull a permit for a really big boiler in your 40 ,000 square foot building. Since it falls under Maryland's BEPS, perhaps the local county could tell the building owner about BEPS and help them meet the standards. There's opportunities for engagement at that local level to help push things forward and educate the broader public.

9. **Are there any legal concerns for the air quality approach to a zero emission standards?**

- **Emily**: In the current context with the Supreme Court, there are concerns for legal challenges about just about every environmental regulation and policy of any sort at this point. I won't say there is no legal risk, but nothing has been overturned in respect to air pollution authority. There's nothing really new here and there's a lot of precedent for these standards.