

Decarbonization Download Vlog – Full Interview Transcript

5 Questions with Preservation of Affordable Housing

Maria

Welcome. My name is Maria Vargas. I'm the director of the Better Buildings Initiative at the U.S. Department of Energy. I'm very excited because today we have Julie Klump from the Preservation of Affordable Housing [POAH] joining us as one of our leaders as we look towards not only increasing the efficiency of our buildings, homes, and plants in the United States, but as we look towards decarbonizing those buildings as well. Julie, I'd love for you to introduce yourself, and then we'll get started.

Julie

Thanks, Maria, I appreciate it. I really appreciate the invitation. My name is Julie Klump. This is my 12th year at POAH. POAH has 120+ buildings in 11 states and D.C. with senior properties, family properties, old buildings, and new buildings. So, we're doing rehabs and new construction.

Maria

You've done amazing work so far working with us as part of the Better Buildings Challenge to set, meet, and exceed your energy efficiency goal, which puts you on a great path as we look towards reducing our carbon emissions that are associated with buildings. On that note, let's just dive in. Why is decarbonization important to your organization?

Julie

I consider decarbonization to be the next step in sustainability for POAH. Sustainability is a key word and our mission statement is to provide housing that is safe, comfortable, and healthy for residents, and there's nothing less comforting or less safe than the threat of climate change-induced power outages that could be really disruptive to our residents.

Maria

Awesome, and tell us a little bit about your residents, your customers, your stakeholders. Do they care about decarbonization? Or is this something that your organization is taking on by itself?

Julie

I think it's not that our residents don't care about decarbonization, I think it's more of an understanding. I also think that they have a lot to care about in terms of staying healthy and providing for their kids. I think it's our responsibility to tackle decarbonization, and it's also our responsibility to really educate them. It's not so much about specific measures like recycling, it's what is the impact of climate change to their buildings. It's kind of a long view, but I think we owe it to them to educate them on that.

Maria

Awesome. What projects are you excited about? What excites you when you think about working on the buildings that you own and operate as you look towards reducing your carbon emissions?

Julie

The two that we've submitted for our Low Carbon Pilot projects. One of them is new construction. It's not our first all-electric building, but it's our first all-electric Passive House building that also includes a solar storage system, which means that our backup power is fossil fuel free. We're working with the Boston Building Department and the Boston Fire Department to get that approved. We will be providing Passive House as a robust enclosure, so we'll have the roof covered with PV and with the battery we will be really close to net-zero. Once we do the calculations and see the actual data of what we're using and what we're producing, we can then take a stab at net-zero with providing some off-site renewables.

The other project is maybe more exciting because it's the real rehab of an existing building. It's 281 units and two 10-story towers in Salem, Massachusetts. The exciting thing is that it needs new cladding, so we're removing the brick. We're over cladding with an insulated panel, and then a metal panel cladding, new windows, and lots of insulation on the roof. To contribute to renewables, we're putting renewables actually on the southwest elevations vertically to contribute to some electric production as well as covering the roof. We're using a new technology at this building to provide ventilation. We like to provide ventilation fresh air recovery systems at our buildings because fresh air is key to a healthy house and healthy home. And so this is a heating, cooling, and ventilation in a box piece of equipment. The unit, produced in Canada, that is installed in each unit provides heating, cooling, and ventilation so we can get rid of the through wall sleeves and the enclosure, which is not as efficient or maybe as comfortable. And they're quiet. We had one installed for six months in a unit. They're quiet, they provide nice fresh air, and they're easy to use. Hopefully that will work out and we'll have some really excited, happy residents.

Maria

Well, that's why the Department of Energy is so excited about the Low Carbon Pilot because we get to watch leaders like you really innovate and try new technologies, try new things, and share with the market how they're working. Is there anything in that innovating and trying that scares you at all, or that you worry about as challenges to be faced?

Julie

If it works, it'll be a home run. Right? It's like the perfect system for modular buildings. It's great for rehabs. I think in regards to COVID-19, there's no cross, there's no air that ever crosses. It's strictly unitized, fresh air exhaust into each unit. So I'm pretty excited about the system itself, and I think that they've done a really good job developing it. So fingers crossed that it works. We are trying another new technology in a historic building. Historic buildings come with their own challenges, in that there's so much

historic fabric in an enclosure that you have to maintain for the National Park Service that providing efficient, low carbon, all-electric heating and cooling is really challenging. We have a system that we're going to try out in some historic buildings that we have in Massachusetts. So new technology can be a risk, but I think we'll either learn that it's a home run, or we'll learn things that we need to do differently. But I think it's important.

Maria

Your willingness to share that with not only the Department of Energy, but your peers and colleagues is something we all really appreciate. Just two more quick questions for Julie. You've mentioned some of the additional benefits that come with this work, for example, resilience. You've been talking to us a little bit about doing this so there's a resilience for your residence. Can you talk a little bit about that?

Julie

A year ago, we decided that we wanted to survey our property staff and ask them the simple question about why does your power go out, and when or how long, so that we could really dive in to things like ice storms and hurricanes and utility outages based on a grid, or the grid. We learned a lot and we were able to hone in on 17 to 20 properties and senior properties and provide some backup. We firmly believe that Passive House is the way to build new, and new enclosures are the way to go on rehabs, because in a power outage situation, you're providing a robust enough enclosure that residents can be comfortable in their units without power.

We like to provide an area of refuge, which we refer to as amenity spaces, typically on the first floor, that are connected to maybe the office suite for the management. We power all the plugs, we power the heating, cooling, ventilation, and some domestic hot water, so that residents can refrigerate medication if they need to and they can charge their cell phones. Our staff is typically on-site during situations, so they have a command center that they can use. So not only can residents stay in their units, but they also have a place to go that can provide food or the power to plug their phones in and refrigerate medication.

Maria

As we've seen recently, that power and access to power is really, really important. So it's really exciting that that's become part of the process and part of your thinking as you develop these things. Last question from us: What would you tell other organizations looking to do this kind of work?

Julie

My approach to this has been that I've looked at the last five years of energy and water savings, and I've put it through a calculator through the EPA to see on the electric side what my carbon reductions have been, just through our energy savings measures. I think it's eye opening to see the effect of an energy saving measure that people have always considered a good thing, some because it saves money. But we can really start to look at these energy saving measures to see what role they've had in decarbonization. I think to the extent you can do that, it provides some inspiration, or

maybe the stepping stones to start to think about all-electric buildings, planting more trees, or rehabbing buildings with all-electric systems. If you can do that one of the challenges would be that the grid isn't necessarily clean. But to the extent we can rehab and build buildings that are all-electric, and utilities can build a cleaner grid, then perhaps we'll meet in the middle and we'll all be better off because we'll have created all-electric buildings that use renewable or cleaner grids to produce the energy.

Maria

Well said, Julie. Thank you so much for all the work that you do as a longtime partner with us in the Better Buildings Challenge, and for stepping up not only to participate in the Low Carbon Pilot, but really for sharing today and in the future, the work you're doing. We look forward to seeing great things from POAH. Thanks again for being with us today.

Julie

You're more than welcome. Thank you for having me.

