Decarbonization of Affordable Housing

Duration	00:41:32
Speakers	Corey Aber, Vice President of Mission, Policy & Strategy, Freddie Mac Multifamily Luba Kim-Reynolds, Senior Director, Investor Relations & ESG, Freddie Mac Multifamily Claire Kramer-Mills, Assistant Vice President & Director of Development Analysis, Federal Reserve Bank of New York

Corey Aber [00:00:00] Hey, Luba. I think we should play a game of free association. I'll say a number and you say the first word that comes to mind.

Luba Kim-Reynolds [00:00:06] Okay, let's do it.

Corey Aber [00:00:08] 97.

Luba Kim-Reynolds [00:00:10] Decarbonization.

Corey Aber [00:00:11] 84.

Luba Kim-Reynolds [00:00:12] Benchmarking.

Corey Aber [00:00:13] 92.

Luba Kim-Reynolds [00:00:14] Solar. Well, wait. 94 is also solar.

Corey Aber [00:00:18] Wow. You read my mind. So what else am I thinking?

Luba Kim-Reynolds [00:00:21] That on today's show, we are going to talk about New York, local laws, decarbonization, efficiency, and what it means for affordable housing.

Corey Aber [00:00:37] Hello and welcome to this episode of the Freddie Mac Multifamily podcast. I'm Corey Aber.

Luba Kim-Reynolds [00:00:42] And I'm Luba Kim-Reynolds. Our conversation today is going to look at decarbonization for the affordable housing lens, a core component of our business. To join us in this conversation today, we have Claire Kramer-Mills, the assistant vice president and director of community development analysis at the Federal Reserve Bank of New York. She leads a team that promotes economic opportunity by equipping community stakeholders with rigorous data analysis and tools to make impactful investments. Her team has performed research taking a close look at decarbonization in the affordable housing stock in New York City, focusing on the potential impacts and recommendations on how the market can be supported. Most recently, her team published a paper on the particular impacts decarbonization has on small properties in the city. Claire, thank you so much for taking part in this conversation with us today.

Claire Kramer-Mills [00:01:39] Oh, thank you so much for having me. And I'll just begin with a quick disclaimer that the views that I express are my own and do not necessarily reflect those of the Federal Reserve Bank of New York or the Federal Reserve systems.

Luba Kim-Reynolds [00:01:50] You got it. Well, to start us off, could you expand on the work your team does at the New York Federal Reserve Bank, and why decarbonization affordable housing is such a large focus.

Claire Kramer-Mills [00:02:02] Sure. And again, thanks for the for the opportunity to be in dialogue with you today. And I sit in the community development team at the New York Fed, and this is one of 12 offices around the country and as well as a unit in [Washington] D.C. that focus on promoting economic opportunity in underserved communities, communities that have historically been disadvantaged in terms of investment and access to finance. As you well know, housing is such an important part of the community development space. It is a huge component of individual family's budgets, and we are nationally and certainly in New York and in a position where we have a scarcity of of affordable housing and that puts pressure on families and communities. So housing is a big part of my team's focus and portfolio.

But specifically in New York, we're very much concerned with the future of housing, the quality of housing. And, you know, we we sit in a region that has been very focused on improving housing quality, specifically with reduction of greenhouse gases. So New York State passed significant legislation in recent years that sets clean energy targets for the state. And more locally in New York City, Local Law 197, which was passed and signed in 2019, has a very important focus on reducing carbon emissions in buildings. One thing that I'll just flag is that buildings are quite important to broader energy and clean energy goals because they consist of, they're they're attributed to 70% of emissions — of carbon emissions in New York City, and they are 30% of emissions at the state level.

Corey Aber [00:04:06] So that's really great to lay out. And one of the things in the intro, we talked about a few different local laws over the last several years. So Local Law 97 is maybe the most recent, the most prominent one. But tell us a little bit about how we got to this point and how some of the laws came together to lead to this.

Claire Kramer-Mills [00:04:23] Yeah, that's a great question. And, you know, I think that there are there are experts in New York City affairs that can speak more eloquently and in greater depth. But I'll give you the broad brush strokes of kind of the evolution in New York. You know, as noted, I think there there was a growing recognition that building emissions, particularly in a place like New York where, you know, roughly, you know, a significant portion of the population rents their units. People are living in very dense spaces. We've got a lot of concentration of buildings. You know, 66% of New Yorkers live in rental units. People are living kind of packed in close quarters. And, you know, the building, the building density in New York means that, you know, you really can't achieve, you know, broader clean energy goals and decarbonization goals without really addressing the building stock.

Now, one thing that that preceded — an important piece of legislation that preceded Local Law 97 was a local law, I believe it was 84, that that essentially mandated a measurement of of emissions at the building level in New York. And so that that law was was really instrumental in one, kind of just getting, you know, taking stock of, you know, where the biggest emitters, you know, how much are they, are they actually emitting and then, you know, taking an appraisal of, okay, how how might we think about, you know, starting to to address this and and it both incentivize, and then also, you know, in New York's case, it's it's pretty, you know, unique at the national level because what Local Law 97 ultimately did was was to say, you know, we're going to set targets for reducing emissions at the building level and if you don't actually comply with that, we're going to have graduated penalties that will unfold over time.

Luba Kim-Reynolds [00:06:19] So my understanding [is] that Local Law 97 will impact commercial real estate, which will include affordable housing in New York City. And to set the stage, do you mind to give us a little bit of an overview what the affordable housing stock in New York City looks like? What kind of buildings they are, what's the type of properties? Just for the listeners to understand a little bit better what we are dealing with here.

Claire Kramer-Mills [00:06:44] Yeah, you know, I think New York is is sort of an interesting beast, right? You know, we spoke about the density of housing. You know, in total, I think there they're roughly like 3.6 million homes in New York City. You know, we've got everything from rent-stabilized apartments — and those account for roughly 28% of the total housing stock and 44% of rentals. So, you know that, those are our units where, you know, essentially the the appreciation of rents is capped. It's determined by a rent guidelines board. Now, those those prices have been going up and voted on, on increases in recent years, but they're still below below what you would consider a market rate.

You know, we've also got a regulated affordable housing, you know, properties that are under the purview of the New York City Housing Authority. And those are a really important source of, you know, of houses and dwellings for for families in the city. And they, you know, I think with respect to Local Law 97, what what the law ultimately did was one, say we're going to be tackling the biggest, the biggest buildings so that that law sets forth guidelines for for buildings that are over 25,000 square feet in size, as you noted, Luba. So we're talking about, you know, bigger — relatively bigger buildings.

Certainly the multifamily space, which we already discussed, is an important such an important part of the of the housing stock in New York. And what what it says — the local law says — is that those larger buildings are going to need to need to meet efficiency, energy efficiency and greenhouse gas emissions limits by 2024. And then stricter limits are coming in 2030. Now, with respect to regulated and affordable housing, there's a more kind of lenient schedule for for those for those dwellings. They're not kind of looking down as — we're now in the fourth quarter of 2023. You know, those buildings have, you know, a little bit of a longer and more lenient compliance period. But nonetheless, there are a sizable portion of the housing stock and it is specified that they ultimately, you know, do have a compliance pathway and they are incentivized to to begin addressing their their own carbon emissions. And they are doing so.

Corey Aber [00:09:24] So when we think about that, you mentioned starting with larger buildings, right, and a sort of carve out for delayed implementation timeline for affordable housing. Some of the other things that are interesting in New York, though, you think about rent stabilization, you think about the number of properties that are also on the smaller side. How do we see that playing in over time?

Claire Kramer-Mills [00:09:42] Yeah, I think that there are I mean, there are different challenges. I think one thing that's really important to to say in this space is that there there are challenges, period. So if you're in a large a large, you know, a 25,000-plus square foot size building, there are challenges in that space. I think where most experts that we've spoken with in doing our research in our, kind of our market sizing, what they've said is essentially, you know, in those bigger, those bigger kind of market-rate buildings, there's some cushion. There's some cushion for the owners and investors to actually just price, you know, the compliance necessities into into the rents that they charge. Commercial real estate spaces, you know — as you noted, Luba — I think is is a tight market now certainly. And so that that presents its own challenges. But in terms of the residential market-rate buildings, you know I think there's some cushion there.

Where it gets dicey is is as you say in in the affordable space. And that's — it's dicey for for a number of reasons. And first, you know we're talking about in the regulated affordable space, there are kind of strict limits on on essentially kind of the rent, you know, and there's not a lot of, a lot of cushion to to raise to raise rents. In the — what we call the NOAH space, the naturally occurring affordable housing space — say, you know, those those buildings that are multifamily — might come into the initial compliance period because they are sizable. Others might not come in under the the initial compliance period because they don't meet the 25,000 square foot size limit. In either event, these are more challenging — going to be more challenging for for several reasons.

First, the smaller buildings, you know, tend not to be owned by mega conglomerates. They're not — often this is, these these types of buildings are are owned by smaller landlords who do not necessarily have specific kind of dedicated teams to manage an overhaul — decarbonization overhaul. And we can get into kind of what that decarbonization really means in practice. But, you know, that's that's one challenge. A big other challenge that's kind of more on the operations front. But there is there's equally, you know, challenges related to the financing. Undertaking an energy retrofit means significant upfront investment. And these properties, you know, may be highly leveraged to begin with, may not have tremendous capital cushions. And those present, you know, additional challenges.

One thing that our team has been working on your recently — and we we can get into this, too — is that specifically the 5- to 50-unit space in in in both New York City and in New York State. This is an important part of the — specifically the that the affordable housing market because it does house roughly, it it basically comprises roughly 20% of the housing stock in the state. And it is, you know, specifically a type of dwelling — the 5- to 50-unit dwelling is is one that's quite important to to low- and moderate-income tenants. Seventy percent of the people who live in 5- to 50-unit buildings are categorized — these are families who are living with with low or moderate incomes.

Luba Kim-Reynolds [00:13:21] So let's actually stay on 5- and 15-unit properties, because in [the] Freddie Universe we call those small balance loans, and they are an important part of our mission for us. And it sounds like some of those properties can go through the delayed pathways and some of them can go through the regular path because they might not have a rent-stabilized affordable units in place. Do you mind to actually give us some insight if you think the borrowers are even aware that this law is coming their way?

Claire Kramer-Mills [00:13:53] Yeah, Luba that's such a great question. You know, and, you know, we've talked to everyone from folks on the finance side who really kind of just work the numbers. We talked to, you know, developers, and we've talked to property owners and including small property owners and their representative organization in New York. And I would say I think like any universe, you know, there's variability. And in terms of, you know, the awareness of the local law and its implications, I would say I think that the more sophisticated and motivated owners definitely do have an understanding that that both Local Law 97 is is is coming to fruition and and a general awareness of of New York State’s goals. What that means in practice, I think, there's there's a lot of vagueness in the specifics right now. So, you know, there's been a lot of press, increasing press in, you know, regarding Local Law 97. So I think there's a broader awareness and a growing awareness in New York City with respect to the state goals.

What was interesting in our our discussions with with some of the representatives from the small property owners was that they understood that, you know, New York roughly had goals coming down the pike, and they and they were really — I think at this point they recognized that those those mandates were going to ultimately come to them. And and that, I think, provoked a lot of, a lot of concern about the affordability and also a couple of other, I think, important issues. You know, often we will talk about the money part and it's a big looming, you know, how do I finance this? Those are relevant questions. But I think equally important in the minds of the owners — the building owners and the borrowers — is how do I manage this? How do I figure out what I need to do in order to be, to ultimately be compliant?

Corey Aber [00:16:01] That's a really important part of the puzzle here. And so what are some of the things that owners need to think through to answer that question?

Claire Kramer-Mills [00:16:07] Yeah, so I think that there are, there's there's complexity because, you know, the physical plant of these, of these properties, you know, like anything, you know, they they vary depending on the vintage of the building, the age of the equipment. But one thing that I think I would point out — and these are figures related to the state as a whole — but you know, there are roughly 1,000 5- to 50-unit properties across New York State, and those properties contain 1.4 or [1.5] million units, okay. So that's, you know, important because ultimately when you, when you roll up and you think about this in terms of people, you know, 2 million low- and moderate-income (LMI) individuals live in these properties, and so that's roughly 21% of of the LMI individuals across the state living in in one of these 5- to 50-unit properties.

At the owner level — and, you know, some of the considerations, I think they've got to think through, you know, one, how do I understand what I need to do? So, you know, the building audit understanding, you know, okay, what does — how do I understand the full complexity of the project? What needs to be done in order to improve energy efficiency? What needs to be done to, you know, to my building in order to to address, you know, the conversion from fossil fuel energy to to clean energy? And who does that work? Who does the audit? Can I get financing for that audit? And then ultimately — once there's kind of an understanding of essentially the scope of work — who is going to implement it? How am I going to finance it? So that's kind of — I don't think that's even an exhaustive set of questions. But those are some of the considerations that these, that these owners are facing.

Now, one thing that I think is really important to point out, though, is, you know, these aren't you know, in some ways, there's a great opportunity here. You know, the equipment in many of these 5- to 50-unit properties is is aging. So if you look at, you know, what are, what is the heat, what is the vintage of the, of the heating equipment, for example? You know, we found that actually the the heating equipment in in many/most of these properties is over 15 years old. So it's nearing or is beyond its replacement age. So, you know, folks at this moment are kind of putting Band-Aids on that equipment. And the question I think really — and this is the question in some ways — is how do we, you know, figure out the financing and the the operational aspects such that those owners are not replacing those units in kind, but in fact are figuring out a way to convert to cleaner, cleaner sources of energy.

Luba Kim-Reynolds [00:19:10] I like that you mentioned that this is an opportunity because it sounds like you can actually fit some of those improvements into your regular schedule. But I think what's still a big question mark and something you mentioned several times is financing. So, how do you finance those projects? What's out there [that] can help the borrowers to get there?

Claire Kramer-Mills [00:19:33] Yeah, I think so, a couple of things are happening. You know, New York City launched a program earlier this year called the Climate Friendly Homes Fund. And this is, you know, a $250 million allocation and in essence, it's it's really just trying to to deploy heat pumps, you know, into into into properties. You know, that obviously, $250 million is a very small you know, it's a relatively small number. It's a pilot. But what that exercise is intended to do is is really to kind of understand from the borrower perspective, hey — and this is a grant program, so these will be forgiven and, you know, ultimately these these these I think what they're they're being issued, I believe, as loans but but ultimately will be forgiven, so effectively be treated as grants — but the idea is is to really understand how do how do we work with small owners, and how do we work with community groups in order to get to really, you know, get the get the equipment out? What are we learning about the performance of the equipment? So there will be tracking over time. And I think that that in my mind is is a really important, is an important step on the part of the state because they're acknowledging that there's some learning to be done. I think, you know repeatedly folks on the finance side have said to us, we've kind of got to understand how money can be braided together. So I talked earlier about the importance of essentially the property audit and understanding kind of the scope of work. Now, there's money for that, whether it comes from, you know, the state, the state homes in community renewal. Whether in the city it comes from HPD, Housing Preservation and Development Agency. There are programs that exist. I think what people — I think experts in the field are are increasingly appreciating is that there needs to be more kind of templatized solutions. And by that I simply mean really literally kind of off-the-shelf solution. So if you're in a property of X units, you have equipment of, you know, X years old, here are the sources that you can go to. And and making that, kind of demystifying that for owners, kind of bringing it to them almost in sort of a decision tree. I think that's that's going to be really important.

But the other big, big — and this is in some ways a little bit unknown are in early, you know, early development — is the moneys that will be available via the Greenhouse Gas Reduction Fund. You know, as you are all are familiar with major legislation passed, you know, allocating, you know, $27 billion to to help roll out, you know, clean energy solutions in communities. You know, the Biden administration really pushed for this program. And I think, you know, there's a tremendous opportunity on the part of community lenders once the, you know, the awardees are announced, it looks like March 2024 is going to be kind of the magic moment. But, you know, there's going to be a lot of a lot of, I think, you know, opportunity to think about between now and then. And there's there's work being done already to say, hey, you know, how can we we be thinking about existing programs? Whether that's, you know, at moments of refinance, building acquisition. We think that there, that those are the moments when owners are likely — or when a system breaks, right, when it's no longer workable. Those are kind of the moments of truth, the financing moments where there would be need for for products to serve specifically these energy conversions. So I hope, I hope that that answers your question.

Luba Kim-Reynolds [00:23:35] Well, quick follow up. That sounds really great and looks like a lot of different capital is going to come towards decarbonization for various acts, and it feels like it's going to be a great opportunities for lenders and other participants in the market to really get involved and to help to move that process forward. I think it's so important that you're writing about this to make everyone aware who is in the lender position or any other capital markets chain. They can help hopefully facilitate some of this capital delivery.

Claire Kramer-Mills [00:24:07] Yeah, I think I think the reality is, is that it was interesting when we started sizing, you know, and trying to understand, honestly the the the current sources of energy in these these buildings, knowing that the buildings themselves, the 5-to-50 space, this multifamily, small multifamily space is an important part of the housing stock. And then further, you know, realizing, okay, what are they relying on now and is it sort of on its last legs? And I think, you know, no homeowner wants to, you know, fork over considerable amount of money to replace an energy system if they can kind of throw a Band-Aid on it. So, you know, there does have to be something in it for the decision-maker, the property owner or the borrower, as you, as you're saying. I think, you know, as we've noted, you know, there is is going to be capital that's going to be available. There is potentially this moment of truth when you've got, you know, a system, a system replacement situation. And it looks like that, that for many of these properties that's going to happen sometime in the next, say, five to 10 years.

The paper we released on October 26 I think is going to be helpful in — at least for New York State — in illustrating and showing that there is a sizable portion of these properties that are going to meet, have a need in the near term. I think the remaining question, though, is the continuing operation. So if you are an owner and I think the general perception is that, you know, the per unit cost of doing a retrofit is is quite considerable now. It can run from, you know, a five figure or to to a six figure, depending. But, you know, in addition to that initial allocation of capital — which, you know, I think there is going to be subsidized, you know, and and preferential capital that is going to be available to do this — but then there's the operating expense consideration. Like, what are my monthly costs going to be? You can make, certainly I think every expert, you know, agrees that there should be energy-efficiency improvements paired with the electrification to optimize performance of the property. But nonetheless, in a state like New York and in much of the Northeast, the electricity costs are non-trivial and there's uncertainty about the the ongoing operating and electricity costs. And I think that is another thing that I would be remiss if I didn't, if I didn't flag that as sort of another another very important consideration. So I think that's also a big part of this, of this dialogue and kind of, you know, the discussion that that's going to have to be addressed in coming, in the coming months and years.

Corey Aber [00:27:00] Seems there's an interesting sort of complexity with this, right, because you have electrification measures, and you have efficiency measures that may not 100% overlap. And sometimes you can do an efficiency measure that may not be electrification or do an electrification measure that may end up being less efficient than something else that you're doing. So you have that kind of complexity to work through. And the other part of this that's interesting is the grid, right? The grid contributes to a lot of future decarbonization as well. As the grid gets cleaner, so too do the properties on the grid. So how do you balance all of that coming together when thinking about strategies for decarbonizing and strategies for complying with the law?

Claire Kramer-Mills [00:27:39] Yeah, I think, I think that's that's right. And of course, you know, were you to kind of magically convert everything to electricity — I mean, the electrification push, of course, is we want everything to be electric, and the state and the city are pushing toward that as they are, because they want these buildings, you know, to be able to be connected to a grid that itself will be cleaned over time, right? So, you know, concurrent with kind of this micro strategy of how do we incentivize, and, you know — through an interesting combination of carrots and sticks — how do we incentivize property conversions while at the same time making considerable investments in, you know, various clean sources of energy that can that can support, you know, frankly, increased demand and increased pressure on on the electricity system. So, you know, I don't have an answer for that. I just you know, but I think, you know, rather just a recognition that this is sort of in some ways as you're, as you're suggesting, a multilevel chessboard. And these these movements are happening concurrently.

I think the other thing, though, that is very important to to focus on here — and I'm going back to the micro level — that, you know, the building owner, the borrower decision is, you know, the confidence that building owners and operators need to have that, should they make — and here I talked a little bit about kind of productized solutions and kind of packaging, you know, for for folks, so that they kind of have a sense of, oh, if I do X, Y or Z, this is, this is what this project is going to entail. They have to also have a sense of certification or confidence that whatever they adopt is going to be an accepted, accepted standard, that somebody isn't going to change the rules on them in a year or two and say, “No, no, now we have a better unit. That better unit is going to get a more preferential rate, say electricity rate, than yours is.” So repeatedly we heard that as well from the experts that we spoke with. You know, owners and operators saying, “Well, I did a previous efficiency improvement. And my understanding was that if we invest in the capital, that we would get a, we would continue to get a concessionary rate. And and then, and then we were told that no longer qualified, that there was a, there was a new standard that superseded it.” So I think that that is, you know, at the city level, at the state level.

And then, you know, I think ultimately there's going to be a need for sort of, what are our broader building standards, right? What are our broader, you know, building standards? What is, you know, what is optimal, and what what is passable and, you know, and what are the associated costs of these different remedies? And again, while I think it's comforting to say that there is a huge opportunity in the market in the next, say, five to 10 years, as these systems, existing, you know, polluting systems expire at the building level, it also puts a lot of pressure on, you know, collectively as an industry, understanding and kind of getting together, you know, at the policy level to say, these are the standards that that that we're going to set in terms of, you know, efficiency standards, in terms of, you know, electricity conversion standards and certifications. And that that plays out in terms of kind of, you know, rates, in terms of qualifications for particular, you know, being either concessionary capital. And it also, you know, or on the flip side, on the penalty side. So, and that seems to be, you know, some some room — there's room for for clarity there.

Corey Aber [00:31:28] Yeah, it's really interesting. And going back to one of the things that you pointed out about how owners, you know, are looking for off-the-shelf solutions. You know, if you're going to make this change, you're going to get this benefit. And the idea of also thinking about off-the-shelf finance, right? So you you know that if you're going to make this change, this is the type of financing you're going to need to make it.

And there's another component of this that I think matters over time, which is the specific things that you can do at at a property, right? You mentioned some of this already, some of the things that get improved. But are we at a point where, you know, the cost-benefit analysis of that really makes sense, right? There have been a lot of new technologies coming on. Are we seeing economies of scale in these technologies yet? Does it make sense for a borrower to to make these decisions now? Or do we see some of this coming in more economically, feasibly over time? And where are we on that scale? Where it makes it obvious to do a heat pump when you're making your upgrade to the property, you know, not making some kind of economic trade-off between advanced technology and legacy technology.

Claire Kramer-Mills [00:32:38] Yeah, I think, I think that's such a great question. I mean, I think one thing that — you know, just zooming out a little bit — one really important thing to point out is that, you know, New York and California, of course, get, you know, a lot of headlines, you know, related to to greenhouse gas emissions goals, etc., but, you know, they're not the only places. You know, if you look at a map of America, roughly 32 states do have some some movement and legislated or executive, you know, goals related to greenhouse gas reduction. So I think the market more broadly is is developing. I think we're going to see some milestones for sure. So in New York — you know, we've got a timeline in New York City. 2024 is one landmark, then you've got, you've kind of got, you know, graduated ‘25, ‘26, ‘27 with, you know, with penalties that are likely to come into effect or at least on the books are supposed to come into effect. And I think that that is — and similarly, we've got cities that have have made declarations as well about conversion to clean energy.

And so that all creates, you know, I think a market of, of you know, pilots and learning and increased demand. And as you, as you indicated, as you increase demand, you know, and you have some competition in the market too, in terms of performance of different, of different models, you're going to see, I think, an improvement in quality and maybe more confidence, you know, in in the conversion. But I do think that we're still at a stage in terms of performance metrics and understanding, if you convert to this model, this is what your, you know, your electricity costs are going to be, right, in an X-sized property. So if I put these these pumps in, you know, say a 10-unit building, this is, this is what kind of the pre and post looks like in terms of — and you make efficiency upgrades, which is of course what you would want to do at the same time. And you know, you upgrade the electrical system in the property, all of those because they're all those hang together in terms of trying to optimize that performance.

What I think repeatedly, what developers and other experts that we've talked to have said is we need to really start pooling our data. We need to have much more, kind of, sharing of information regarding the performance of these properties and getting a better handle of, you know — and that has to happen regionally because we are facing different weather conditions and different pressures in different markets. So the Northeast is not going to look like the Southwest necessarily, but we do need to understand those nuances because I think then we get a better, you know, a better sense of, this is what it gets you and this is what it costs you. And right now, that's still in early days. One thing I think, that is I would, just you know, I've got to kind of end that comment with a point of optimism. I think one thing that is very promising is that there is definitely, we're seeing an information exchange across municipalities that are that are undertaking some very innovative programs. And we're seeing knowledge sharing across states as well.

Luba Kim-Reynolds [00:36:07] Claire, these are such fantastic points, and especially the point about the increased demand. I know we spend so much time talking about New York City, and oftentimes California gets into the conversation, but all other municipalities who are also trying to become more energy efficient and decarbonize themselves definitely will help with the demand. And the second point that you mention is collecting data. Just understanding where you stand and how you can use it. I think it's so powerful. So fast forward a few years, which in my opinion it probably will take a few years to get there. What do you think will be the first steps in New York City to decarbonize the affordable housing? What should be first on the agenda list?

Claire Kramer-Mills [00:36:54] Yeah, I love that question, Luba, I thank you for it because I think that there is there's kind of it's such an it's an exciting time, actually. I mean it's exciting to see you know, I think very important pilots being launched and as I indicated to, you know, knowledge sharing. So I'll give you, you know, I think what we're likely to see over the next couple of years is — I do think there's an appetite for information sharing and data collection. What that's going to look like and how formalized it's going to be, you know, I think is yet to be seen. I think there's an opportunity for, you know, entities collaborating together formally. We're seeing a little bit of that in the affordable housing space among, you know, community development lenders. So, we saw several applications for the Greenhouse Gas Reduction Fund. Money is, you know, being really collaborative efforts. So, you know, folks kind of joining hands, you know, developing coalitions. And a recognition that, you know — specifically I'm focusing on Greenhouse Gas Reduction [Fund] because it is really intended to be a catalyst in the affordable housing market. And so that's $27 billion meant to kind of energize and activate kind of far more than that, you know, by by incentivizing private money to come in and private investment to come in as well. So I think we are likely to see also, you know, some innovation in terms on on the operation front as well. So I think it's going to be on the financing front. I think we're going to get closer to an understanding and almost a segmentation of different types of properties. This is what their needs are. This is roughly what the cost is going to be. I think we're going to we're going to see, you know, there's going to be a lot of innovation, and it's going to be needed innovation, on how do we actually do the installations and how do we do those most efficiently, meaning make them less likely to to displace folks, to take an extremely long amount of time.

So, one very promising pilot is being launched by the New York City Housing Authority (NYCHA). You know, they were they, they talked to us about a pilot that that they're launching where they put a public bid for, you know, individual-unit heat pumps. These these could be installed in the matter of, you know, a couple of hours in an afternoon. They would not take kind of, you know, days and weeks, you know, which can be very, you know, costly to families that that essentially have to vacate their units. So what they're seeing now is that, you know, one, the installation of these units — there were two big competitors for the bid for these units, and they, you know, two two firms. And they're they're doing the installations. NYCHA is now doing the installations, and what they're seeing is, is that, you know, they can do these in in fairly short order. They're also, you know, learning by doing. And so their ability to kind of train additional workers in the installation and kind of scale that work force, and that is that's building over time. And they're going to be releasing data. They're similar to the Climate Friendly Homes Fund, a part of this program is about data collection and understanding energy usage and kind of what the installation gets you. So I think that that's going to be really important because, again, you kind of have to understand the rate case for the continued maintenance of these units over time. And so I think, you know, I know the New York Housing Authority is speaking to Chicago. I think that there certainly could be applicability to other other housing authorities across the country. And my hope is that there will be continued, you know, information sharing and collaboration. As you know, everyone is going to be grappling with this over the next decade.

Corey Aber [00:40:50] Well, Claire, thank you so much. And look, it's an exciting time. It's a confusing time. And it's and it's a difficult time to work through all of this with so many people involved. But we're really fortunate to have you on the show to help all of us in the industry think through this. So thank you so much.

Luba Kim-Reynolds [00:41:03] Thank you, Claire.

Claire Kramer-Mills [00:41:04] Thanks so much for having me.

Corey Aber [00:41:07] The Freddie Mac podcast is produced and supported by a team of our Freddie Mac colleagues, including our production lead Jenny Nguyen and our audio producer Dalton Okolo. To listen to more and keep up with the latest episodes, be sure to subscribe wherever you get your podcasts and check out our website mf.freddiemac.com/research for the full catalog of podcast episodes and original Freddie Mac Research.