

**Energy Efficiency and Housing Advisory Panel
Meeting 4, October 29, 2020**

Attendees

- Commissioner RuthAnne Visnauskas, NYS Homes and Community Renewal (Chair)
- Janet Joseph, NYS Energy Research and Development Authority
- Peggie Neville, NYS Department of Public Service
- Gina Bocra, Chief Sustainability Officer, New York City Department of Buildings
- Amy Sugimori, Director of Policy and Legislation at 32BJ SEIU
- Dan Egan, Senior Vice President of Energy & Sustainability at Vornado Realty Trust
- Bret Garwood, Chief Executive Officer at Home Leasing, LLC
- Jin Jin Huang, Executive Director at Safari Energy, LLC
- Clarke Gocker, Director of Policy and Strategy at PUSH Buffalo
- Jamal Lewis, Senior Policy & Technical Assistance Specialist at Green & Healthy Homes Initiative
- Sadie McKeown, Executive Vice President, Chief Operating Officer at The Community Preservation Corporation
- Bill Nowak, Executive Director of New York Geothermal Energy Organization
- Molly (Dee) Ramasamy, Head of Deep Carbon Reduction at Jaros, Baum & Bolles
- Daphany Sanchez, Executive Director at Kinetic Communities Consulting
- Laura Vulaj, Senior Vice President & Director of Sustainability at SL Green Realty Corp.

Not in Attendance

- Kyle Bragg, President at 32BJ SEIU (represented by Amy Sugimori)
- Elizabeth Jacobs, Acting Executive Director of the Akwesasne Housing Authority

Objective: Align expectations for developing initial recommendations on policy actions

Public Input Process

- We encourage public input through the Webex Q&A, these comments will be provided to the subgroups and incorporated into the work we will be doing. Feedback in between the meetings can be submitted through the email address we have set up for the Panel, eehpanel@nyserda.ny.gov (*Commissioner Visnauskas*)

Agenda

Agenda and objectives (*Commissioner Visnauskas*)

- Today is somewhat of an interim meeting: we're going to do a work plan check-in, round out the discussion we've had in October, and talk about expert engagement via a report-out by the subgroups. And we are joined by Chris Coll from NYSERDA and Rosa Mendez from DEC who are working with the Climate Justice Working Group (CJWG) and

who are going to talk about equity, disadvantaged communities and the CLCPA. We'll then talk about cross cutting work and next steps.

Work Plan check-in (*Janet*)

- This is a quick check in on where we're at. You can see that a goal we set for October was to level set on barriers and challenges and flag where we need additional expert consultation and cross panel work. We're proceeding with good progress on that and expect good discussions happening the first week in November in terms of expert consultation. As we look to November, that's a "rolling up the sleeves" time when we start putting pen to paper to identify recommendations and policies. Our goal is by December to have a first draft of priority policy options and that's what we're working towards, but I want to underscore that the briefing to the Climate Action Council will aim to provide top-level insight on the nature of the discussions. The expectation is not that we have it the policy solution set figured out and mapped out by then.
- As we look towards developing the recommendations, I want to touch on a couple of key terms, which are worth reminding. We are being asked by the panel to identify specific mitigation strategies and enabling initiatives. You can read the definitions there [slide 7]. I think of it as the mitigation strategies will have the direct impact on GHG emissions, but we know there are a whole bunch of things needed in the market that facilitate that. And the third thing is we are going to need to speak to adaptation and resilience strategies, which will need some attention going forward.
- In terms of the parameters, today we'll hear from Rosa and Chris on some of the work associated with the CJWG. This is to support our thinking about how we will address the need to ensure our policies are getting benefits to disadvantaged communities.

Brief subgroup report-outs since last Advisory Panel

- Residential Subgroups (*Jamal*):
 - I think we've done a good job of level setting and uncovering barriers to achieving the goals laid out by the law. Both the single family and multifamily groups, in level setting, agreed that we need more input and feedback from some specific groups.
 - So, we have planned three roundtables for November 10th and 12th. The November 10th sessions will be focused on input from builders, installers, and designers. The goals that we are trying to achieve will require a lot of participation from this sector, so we wanted their insight, e.g., into the technical barriers related to how to put in place the mitigation strategies in both single family and multifamily housing. Our two residential subgroups came together because some of the issues may be very similar, particularly for the affordable housing roundtable on November 12th, so we wanted to do our best to maximize

the time. These are the roundtables we've identified now. It may be that we decide we need input via additional sessions at a later time, on other topics.

- The other mechanism that we've put together is a survey that will be released soon. In this survey, we're looking for top policies or actions that we should consider putting forward in our broad recommendations to the Council and for examples of unintended consequences of some of the policy recommendations that have come forth; we're doing our best to provide space for people to share those concerns. For folks listening, if you'd like to participate in the survey please email eehpanel@nyserda.ny.gov.
- Commercial and Institutional (*Molly*)
 - To start off with we spent some time reviewing background materials that we felt were particularly important, and potential solutions being thought about. In particular we had a great conversation around the Carbon Neutral Buildings Roadmap and separately as homework we reviewed the E3 pathways report in more depth and the NYISO materials to understand what's happening at the grid level and how that will impact buildings.
 - In terms of meetings, we had a very good conversation this morning about electrification of heating and hot water uses, so I think there's probably more discussion to be had around this topic especially as it relates to timelines, technologies and so forth.
 - Our next working session we may spend some time on electrification to button that up and turn our attention to grid interactivity and building operations and operating teams.
 - Similar to what Jamal mentioned, there will be a survey looking for input from outside experts and then the next step will be to engage those experts.

Discussion on equity, disadvantaged communities, and the CLCPA mandate (*Rosa Mendez (DEC), Chair of the Climate Justice Working Group, and Chris Coll (NYSERDA)*)

- CJWG works in consultation with the CAC.

(*Rosa*) [slides 14-18]

- Chris and I wanted to go over very briefly the elements of the Climate Act that are there to help us achieve climate justice. Some of these priorities include identifying measures to reduce emissions of co-pollutants. There are also consultations with the CJWG and the Environmental Justice Advisory Group, as you are aware.
- There are other actions that will be undertaken by DEC, which includes rulemaking to implement the recommendations and prioritizing measures that will reduce emissions in those communities. DEC will also establish a community air monitoring pilot community in at least 4 of these communities.

- The CLCPA establishes a 35 -40% overall minimum for benefits of spending in the areas of clean energy and energy efficiency, housing, workforce development, pollution reduction, low-income energy assistance. 40% is not a ceiling. [Slide 15]
- CJWG began meeting in August and will identify criteria for defining communities and working with agencies to report on barriers and opportunities. Also, there is a permanent Environmental Justice Advisory Group that will develop a model environmental justice policy.
- These are the members of the CJWG and as you'll see there is representation from upstate urban areas, NYC, and rural areas. [Slide 17]
- Developing the criteria for disadvantaged communities will include feedback from at least 6 public hearings and a public comment period. Within those discussions of criteria, the working group is also going to be considering how to operationalize the criteria they identify. We expect that criteria and a definition will be established in about 12 months, there is a goal of summer 2021. Because of that timeframe we understand there needs to be an interim approach in the near term.

(Chris) [slides 19- 25]

- As Rosa said, if we're looking at almost a year from now to have a final definition for disadvantaged communities, that creates a challenge for us all when it comes to figuring out strategies and policies that will impact and benefit those communities. Through the CJWG and coordination with the state agencies, we've pulled together what we feel is a good starting point to start informing program strategies today.
- As we're thinking about the approach here, we know there are a number of initiatives/programs that can be geographically targeted. We want to do something that can be implemented consistently across the state, and to avoid one portfolio or program identifying a disadvantaged community one way while another does so another way. This applies to the utility space as well.
- As we're thinking about this interim approach, we want to use criteria that would be aligned with what is outlined in the CLCPA, with indicators and criteria that have some familiarity right now among the communities and the market (developers, builders, investors). We'll have a definition to build upon.
- Traditional LMI programs will maintain existing eligibility requirements in the interim.
- [Slide 20] Until a final set of criteria to identify disadvantaged communities is developed by the CJWG, the following criteria will be used to identify disadvantaged communities:
 - Census block groups in the top quartile of the HUD 50% Area Median Income threshold; and are a Potential Environmental Justice Area as determined by the Department of Environmental Conservation.
 - Designated New York State Opportunity Zones

- DEC did update the data that helped make up potential EJ areas so that this can be updated for use in this interim definition.
- Opportunity zones are low income tracts that can be part of federal opportunity zone to provide incentives in underserved or traditionally underinvested parts of the state. In NYS, we had somewhere around 1200 census tracts eligible and the state selected around 500. If there is a community or project that falls within an opportunity zone, it would be counted.
- [Slide 21] shows how specific components of the interim definition broke out.
- A common definition used is “qualified census tract,” which is slightly different. The nice thing about using it is anyone can look up any address and requires no new system tracking. *(Bret)*
 - Rationale behind HUD 50% was broader application of income thresholds. So much is community development block grant. We can talk about how we operationalize this. There’s work NYSEDA is doing now to develop an eligibility determination map. *(Chris)*
- Looking at the distribution of where these communities are located, we’re talking about covering around 27% of population, 27% of census block groups, Rockland, Westchester and down. Next few slides [slides 23-25] are visuals of where these communities are located. *(Chris)*
- I know this group was interested in digging in on how we’re thinking right now, and also how we’re thinking about the mitigation plans and policy actions that this plan will be posing and look at those through an EJ or equity lens as well. Rosa and I had some conversations about making sure the working group members can be part of those conversations as well. *(Chris)*
- I had a clarifying question then some more comments. One was you mentioned that at this point you are not looking to review or alter income eligibility guidelines, is that right? *(Jamal)*
 - We’re not changing existing eligibility for programs being implemented today. But that is something up for discussion long term. *(Chris)*
- I’m also curious to know about DOH. Their participation in the group is great considering disadvantaged communities— depending on who we’re talking about— this has a disproportionate impact on their health. I’m interested to know how DOH is considering this, so if we could follow up, I’d love to hear from them about that. My last comment is on the opportunity zones. I know there is some discussion happening about whether those accurately represent what they’re intended to represent, so I’m particularly curious to know if there will be an analysis done of the opportunity zones currently designated and how many actually fit within DEC’s current criteria. I’d be interested to see that break down. *(Jamal)*
- I think in terms of opportunity zones there’s a broader question about how effective the program has been in increasing investment. We’re not in a position to talk through that

at this point, we need to work through with Empire State Development and look at the projects happening across the board. Our inclusion in this interim definition provides a way to ensure some geographic diversity when it comes to communities we are targeting. Given that every REDC has multiple opportunity zones, that helps make sure there's representation. Whereas if we just look at income, race, and ethnicity metrics, there is a heavy downstate skew, even more so than what we see here. We've done some of the overlay and I don't remember that off the top of my head, but we can follow up on that. I know the team did map all of these together. *(Chris)*

- On DOH, as we talked through this interim approach, we talked about what are the other important indicators and metrics, and social determinants of health was one. Health data is or is not available in various levels of granularity, so we wound up kind of putting a pin in that and reserving the work on health and other indicators like environmental impact to the more rigorous analysis that the group has to do. *(Chris)*
- The other thing I'll offer is proximity to Superfund sites and things like that, which we know is also disproportionately sited to communities of color. *(Jamal)*
- I want to point out that I have extreme concern with geo information because it doesn't properly quantify gentrification. For example, I'm looking at this map and the public housing site I'm currently residing at wouldn't qualify. Something to be mindful of is that geocoding is good but not great. It also gives an opportunity for funding to go to areas that have not been gentrified and can accelerate the displacement of communities. *(Daphany)*
- I think that is a concern, that is the question of are we providing resources or otherwise accelerating the transition of communities and members of the working group have acknowledged this. One thing to be clear about is we're not setting forth eligibility for programs. We developed geo-eligibility as a layer that could be additive. *(Chris)*
- In regard to the funding and guidelines, one of the layers you can use is redlining, which is really looking at the housing sector. In regard to program eligibility, I hear you loud and clear, but recent data shows that over a million NYC residents are energy burdened. NYSERDA and utility programs need to move beyond just income as a silo – to consider looking at the energy burden of a New Yorker because someone can be severely energy burdened and that can have ripple effects like food scarcity, health scarcity, foreclosure and homelessness. We're at a point that we need to be more creative and not just use the same thresholds that we've been using that are not as successful. *(Daphany)*
- In terms of design and redesign of NYSERDA and utility income eligibility, that's something we're working on right now. *(Chris)*
- The CJWG criteria will apply economy-wide across the state and industries and sectors, so that's part of the process the working group will be going through. We're working to dig into indicators and start to lay out what data sources and considerations we need to make as we roll out the work on the final definition. *(Chris)*
- I'm really looking at this from the intersection of race and environment. *(Daphany)*

- I would echo a lot of what Daphany said, and if there are instances where even if NYSERDA is targeting geo-eligibility, that there is an awareness and monitoring of any free ridership type issues that could occur. *(Clarke)*
- Where will the 40% benefits goal be tracked and publicized? *(Clarke)*
 - There's work happening now to look at what is the framework for benefits related to these investments. There's going to be a need to look at benefits we can directly measure, and there's going to be some that might be more difficult or nuanced to measure. I can't speak for all the agencies but within NYSERDA at least, we track impacts by program. *(Chris)*
- I wonder if it's possible to try to accelerate this definition. That seems like an awfully long time to try to decide this. I think there's this other tendency to add more and more community definitions to this. If our goal or minimum is to have at least 35%, we're not really concentrating anything. So, we should be careful that we define this strictly on the most disadvantaged or we won't actually be concentrating our investments on the areas that need them the most. *(Bret)*
 - Thank you, that's definitely something the working group is considering. *(Rosa)*
- One great equalizer would be to make the cost of utilities comparable. So, mitigating the cost of electricity in low income communities is as important as making the buildings efficient. *(Sadie)*
- It's important that we're targeting the state's investments but I think what also is powerful is looking at investments in transportation and workforce development across the board to target and benefit these communities, so that will be an important outcome of this work. *(Chris)*
- Bret, the one question you asked that we didn't answer was the issue of too broad of a definition. That's an area where we're working with colleagues in other states (CA is an example) to see how their definition works and how we think of that here. But ultimately the working group has identified a number of criteria that are important, so we're going to have to think of a methodology for layering, combining, or indexing multiple things together. *(Chris)*
- My concern is, if the definition includes more than 35% of communities, then we aren't targeting. *(Bret)*
- We want to make sure that we are addressing the inequities that have historically marginalized immigrants, people of color, so if the definition covers more than 40% that could be reflective of the needs. I would strongly encourage you to engage other economists thinking about this from an equity lens. NJ reference *(Daphany)*
- Someone brought in the chat to be mindful of rural communities. *(Daphany)*
- Chris and Rosa thank you for talking all of this through so we can hear about your work, give input, and use it to guide our work. *(Commissioner Visnauskas)*
- I think this is a good discussion of a lot of the current issues. One concern that's been going through discussion across various clean energy organizations across the state is

the long-term view of how the transition of gas utilities will effect LMI communities. It's clear that if we meet our goals, very few people will heat with natural gas and as the system empties out very few people will be left to pay for these assets. I'm not hearing or seeing where our process looks at this. It seems to me that it's an inter-advisory panel question, and important in terms of long-term environmental justice. There are things we can be doing now relative to depreciation schedules and where people will be hooking up to gas systems. I'm wondering if anybody has input as to where that question can be addressed in the overall process? *(Bill)*

- I'm not sure we have an answer at the moment, but we recognize this.

(Commissioner Visnauskas)

- Going forward, Rosa and I were talking about the best way to interact and engage. We've noticed the nature of your work here is inherently focus on disadvantaged communities and lower income residents and communities. We're open to input on the best way to engage as you're working through the mitigation plans and policy actions that would be proposed. *(Chris)* We also will talk this through with the CJWG members. *(Rosa)*
- The work you do is very near and dear to many folks on this panel and the work we're doing on our recommendations process. *(Commissioner Visnauskas)*
- To put a time sequence on this, in the next 4-6 weeks we'll be outlining policies, and for each of those we have to think through how it will this impact disadvantaged communities. That's another good point for engagement. We should be able to have a more substantive discussion about the policies and getting the input from the CJWG would be really helpful. *(Janet)*

Revisit cross-cutting work and next steps to advance

- We're going to spend a couple minutes talking about how the work on disadvantaged communities integrates with our work. *(Commissioner Visnauskas)*
- To open this up to the panel, how do we want to go about addressing this topic? Should this be for each and every policy, we make sure we are having the adequate discussion? Are there other individuals we want to bring in? How do we make progress on this topic? *(Janet)*
- I would say if there was an opportunity to have an open platform between the panels that would be helpful. And by platform I just mean an open Excel sheet to think about what are the ripple effects on equity. The other thing I wanted to note is our panel is charged with energy efficiency and housing so recommendations we put together don't have to be one and done. I think they can be for market rate and affordable housing, and the regulated and unregulated. *(Daphany)*
- [Across policy options], what we have to think about is how does it attach to the impacts to disadvantaged communities. I've said that before and want to say it again: because affordable housing has government intervention, it's very easy to impose things

on it. We want all this good stuff to be included in affordable housing, so it has become the leader in the space because government wants it, there's well-intentioned developers, and there's the greater good. But what we can't have is for this to happen on the back of affordable housing. Anything we can do to drive demand elsewhere drives it to scale and scale drives down costs. It should really be that affordable housing benefits from this. If there could be a way to impose these requirements elsewhere very rigorously, that would be what's best for the low-income stock. *(Sadie)*

- Can you clarify what you mean when you say that? Do you mean energy code? *(Commissioner Visnauskas)*
- I don't have a good solution to it, but there's not a lot that touches all buildings. It's financing, codes. *(Sadie)*
- That's a good segue into our next topic which is a cross cutting piece on codes and standards. It's highlighted here for a couple of reasons. I think it's come up as an important lever to drive scale. *(Janet)*
- Any connection that we can make to this work and jobs for low- and moderate-income people is a huge win. I'm on a board where they have a deal with NYCHA where they're employing NYCHA residents to do the work. Any policy work we do in disadvantaged communities should be very loud on job creation and employment and workforce development. *(Sadie)*
- On the heels of what Sadie said. In our commercial and institutional group we talked a lot about barriers and constraints to getting this work done and I think there's a theme that runs through several panels on supply chain and that's a good question to bring forward in terms of availability of skilled labor to implement the retrofits. And in terms of the supply chain of energy as it comes from source to site, that brings up a conversation with the Power Generation panel so we are on one another's radar and thinking of what the impacts are on augmenting the source of electricity. I think these come in the form of targeted questions. *(Dan)*
- On the supply chain, is it we need a market signal so the supply chain responds or is it there but not to scale? *(Commissioner Visnauskas)*
- It might be a bit of both. If I can use the example of heat pumps, we know that is a solution, but we don't see a lot of examples of that brought to scale here. Europe has examples. So I think it's how do we do that here, and also some coordination across the various building types to show we need this here but we either have no access or it's just not economically feasible yet. *(Dan)*
- One other significant cross cutting piece of work I don't see captured here is around the resiliency and adaptation piece. I know the local government group will be looking at that, but I welcome input from the other panelists on how we want to tackle that piece of our work. There are some panel members that have done a fair amount of work on this, I'm thinking of NYC. But I welcome some input from other panelists on productive ways for us to tackle that fairly big topic as it relates to buildings. *(Janet)*

- If the solution we're working towards is a fully electrified world I think about the fortification of electrical infrastructure. Do we pair this more thoughtfully with backup power and other distributed energy resources so we're not putting diesel generators on everyone's roof just in case the grid goes out? I think we've seen more localized outages happen. What's the message to our utilities and grid operators? That we have an ever-increasing reliance on their grid for basic quality of life issues? *(Dan)*
- We want to make sure that the resiliency aspect is thinking of all different types of climate disasters. My position is if Power Generation is thinking about this, we can have a conversation with them. If not, we can reach out to experts. *(Daphany)*
- There's this idea that buildings and the grid should be able to bounce back from outages and other issues. But in the sense of housing, think about the impact of non-resilient equipment on the occupants, impacts on bills, health. One of the supplementary goals is no one should be dying of heat stroke or going to the hospital because they're unable to turn on their AC or don't have one. I will also say that I'm really glad we'll be coordinating with the local government panel. It is not just putting in codes and standards but what is the capacity for local governments to enforce it. *(Jamal)*
- In the residential community, what's really lacking is the availability of affordable and qualified installers. In the commercial sector, there's a lot of options but I think as part of that workforce issue we talk about, that has to be in lockstep with that roadmap development. *(Jin Jin)*
- I want to pick up on the point about climate change and need for air conditioning and potential winter peak. I agree that as the climate changes there will be more people need air conditioning that will stress the grid. One of the points my industry makes consistently is that we need tech that doesn't lose its efficiency at the coldest and hottest days. There needs to be a mix on what we're implementing in terms of electrification. Geothermal doesn't lose that efficiency and that really is important. Also, in listening to resiliency, the notion that electrification somehow weakens it I don't think is true. Most heating systems you're connected to an electric thermostat. I agree it needs to be a resilient system and one that is well backed up, but I don't think switching to electrification is something that will necessary hurt that. *(Bill)*
- The building resiliency task force that occurred after Sandy could be a good resource for some of the panels to go back and look at, but I will admit it wasn't looked at through the lens of decarbonization. I think there was a tendency for resiliency to be based on natural gas which was more reliable in some parts of the city; but that being said we woke up to 5 feet of water and didn't have gas for weeks, they had to flush the lines out multiple times. There is some good thinking in the building resiliency task force report that we could take advantage of to think about how decarbonization could harmonize with those recommendations. *(Gina)*
- Touching on that workforce theme, one concern I have with this entire process is that I think the workforce issue has been sequestered into the JTWG. But looking at the

composition of that group, a focus is on organized labor and I think in the work that PUSH has done we're coming at the workforce angle from a grassroots and community-based perspective and have a lot of built up experience doing hands-on training and working with NYSERDA over the years to develop small scale models and mechanisms. So, I just want to hold that up as a glaring need as we make this transition, not to leave communities behind. And I would say NYSERDA and HCR have a role to play in different ways. That's just been a frustration I've had over the years with some of the NYSERDA Workforce Development programs is they create good on-ramps but then leave it up to the individual to hopefully land in a good job; there could be more to force the articulation of industry and the labor force to create a more durable marriage. *(Clarke)*

- While we do have the JTWG, our panel is tasked with addressing workforce development needs and opportunities so that's completely within scope. We should be thinking through this as we're identifying policies and barriers. *(Janet)*
- I know that our primary goal is a GHG emission reduction of which electrification is probably the most cost effective way to do that. But as we're considering impacts on the grid, I want to note the importance of efficiency. *(Jamal)*
- I think in the work that NYSERDA has shared there also is the reminder that there is no way to electrify without efficiency. *(Commissioner Visnauskas)*
- Until word gets out that you can't use fossil fuels, people won't change the way they're doing things and I think this relates to workforce development. There are plenty of HVAC companies in NY that are doing things the way they've always done and will until we tell them otherwise. *(Bill)*
- Going back to impacts on disadvantaged communities, one of the things I know is a headache for many qualifiers of social programming across the state is the need to continuously show that they're low income or that they meet these guidelines. For NYS, do something similar to what NYC has, which is a platform that will either automatically certify and/or enroll people into other programs. This alleviates some of that administrative burden and the burden to have to take off work to visit social service offices. I think that's something that would have a big impact. *(Jamal)*

Wrap up

- I'd like to talk about where we're going to go for November 18th when we get together again. We would like the subgroups to report back on their top 5 recommendations. December 9th is when we'll have our last meeting before the CAC report-out. We'll have more information on that but the staff working group is here for you now to work on this with you. With that I think we can wrap, and we encourage everyone to attend the expert sessions that are scheduled. *(Commissioner Visnauskas)*

Q&A and Chat

- *Adam Flint*: Q: How well does this approach include impoverished rural communities?
- *Adam Flint*: Q: Excellent point. Gentrification upstate, particularly in communities with colleges or universities, is also a serious problem for geo-coding to address, among other things
- *Seth Wiley*: Q: Attendee Comment: It would be valuable for the Panel to evaluate ways to best increase / facilitate community ownership of renewable electric infrastructure - as it relates to economic environmental justice.
- *Seth Wiley*: Attendee Comment: As a Passive House Designer, there would seem to be, in the context of climate justice, special incentives for low income housing construction to higher performance standards such that operational (utility) costs are less of a burden.
- *Daphany Sanchez*: Chris, here's a report on the impacts of electrification on the surrounding areas (i.e. displacement, rents going up from other buildings because there's new buildings charging higher rents)
 - This new working paper from the Center for Urban and Regional Affairs at the University of Minnesota demonstrates there is an effect on existing units when new development takes place in a neighborhood. The authors make 3 main points: Rents in lower-end bldgs nearby went up ~6.6%; Rents in higher-end bldgs went down -3.2%; Importance of housing submarkets.
<https://www.tonydamiano.com/project/new-con/bbb-wp.pdf>
 - Here is ACEEE Data on NYC
https://www.aceee.org/sites/default/files/pdfs/aceee-01_energy_burden_-_new_york_city.pdf
- *Richard Fennelly*: Our recommendation, previously made, of coil cleaning and related servicing of cooling equipment, both refrigeration and AC, will create a nice number of new jobs, especially in regard to commercial units since it is largely not being done now, and it is labor intensive.
 - All cooling equipment, both refrigeration and AC, lose efficiency once put into service in large part because of condenser coil fouling ---- coil cleaning programs are needed for that reason. HVAC and Refrigeration companies largely skip preventative maintenance --- the results: poorly maintained units run much less efficiently than normal but this affords a big opportunity for jobs creation if PM servicing is required or mandated.
- *Kevin Edwards*: Hello, to mentioned something regarding Bill's point about end dates. The industry reaction to NYC's CMA, and how those challenges could be very informative of the effect from setting end dates.