So, hi everyone,

thank you for coming in person and also thank you for our online audiences.

So today, it’s my great honor to have Dr. Diana Hernandez joining us.

Dr. Hernandez is currently Associate Professor of Social Medical Sciences in the Columbia University Mailman School of Public Health.

Her work examines the impacts of policy and place-based interventions on the health and well-being on social economic (mumbles) today.

She has an advanced look at the concept which (mumbles) today, energy insecurity to reflect the changes associated with meeting basic household energies and its links to house.

And Dr. Hernandez is currently a scholar at the Russell Sage Foundation where she is currently writing a book, “Energy Insecurity in The US.”

So while we’re very much looking forward to her forthcoming book, we’re very fortunate today to have a pre-overview over her work.

Without further ado, Dr. Hernandez.

Of course, I’m muted.

Hi, thank you so much for the introduction. I’m really excited to be here today to share some of this kind of ongoing work on energy insecurity as you stated, Kai.
I’m going to share my screen again and get started. I will warn you that I am a New Yorker and I speak fast. I’m also planning on covering quite a bit of material, but also want to leave time for questions and answers later on in the session. So by all means, and I’m a little shy on Twitter, but please do, you know, tag me on Twitter @DrDianaHernandez without the E, the second E. So I’m gonna tell you a little bit about my academic interests. I’ll kind of give you a sense of the four pillars of housing, talk about what energy insecurity is, as well as housing and policy interventions to address this issue. Let me just kind of say that I’ve been doing work on the intersection of energy equity, housing and health for over a decade now. And there was a time when the social determinants of health and environmental determinants of health were kind of separate entities. And there are some of us that are kind of working on bringing these two fields together, because of course, they kind of intersect. In addition to doing that,
I've been working on, you know, kind of these joint concepts of energy insecurity and energy justice, thinking about housing and robust ways poverty and community-engaged research, as well as social and public health entrepreneurship. The bulk of my work has actually been about looking at interventions. I've been fortunate to do kind of real life-based research projects related to legals, the kind of provision of legal services to address housing problems, energy efficiency, and clean heat interventions, the privatization or the repositioning of public housing, thinking about climate change and emergency preparedness, housing-based social and health interventions. So basically, the provision of these kinds of services within housing spheres and also smoke-free housing and social impact real estate. I will cover a lot of those in my talk today, but I always like to kind of share this image because in some ways, the real essence of the work that I've been doing is about expanding the notion of sick buildings, and vulnerable occupants, along with intervention strategies. Kind of realizing that our housing or the people that live in housing, especially those that are kind of more vulnerable,
need to continue to experience that disadvantage and the kind of health risks they’re in. So I want to really start. You know this conversation will be about household energy, but I’d be remiss not to kind of put household energy within the context of a nuanced appreciation of what housing actually represents. And thinking about housing as having kind of more than one pillar, so it is in some ways a physical entity. It’s a social entity. But it is really about these kind of four areas; costs, conditions, consistency and context. And what I have found over the years is that, many people make trade-offs at these intersections between, let’s say, cost and conditions. So the poor, for instance, might be relegated to some of the kind of poorest quality housing. They are also much more likely to experience displacement, sometimes from climate change, sometimes from economic forces. The consistency of their housing is at risk. And then also, we know so much about the interplay between kind of, or neighborhood effects, essentially. But there’s an interplay between housing effects and neighborhood effects. So that’s happening in the outer core
if we’re thinking about it from a social-ecological perspective, also has implications for what’s happening inside people’s homes, and vice versa. So, part of my work has been about just laying out what the nuances of housing are, situating it in the kind of historical policies and practices that have made housing distribution quite different and segregated and separate, but not equal in the same ways that education has historically kind of unfolded. And so this is just kind of a heuristic to appreciate the various policies from Native American displacements to reservations, to public housing, redlining, exclusionary zoning as formal policies, but also the kind of discriminatory practices that were materialized through (mumbles) Sorry, racial residential covenants, predatory lending, and more recently, gentrification. And the impacts of this have everything to do with health. And health, in its physical forms and also in its mental forms, the kind of idea around wellbeing. These pillars of housing that I just described really kind of reflect larger structures and mechanisms through which housing is impacted. And then also how kind of independently and together, they ultimately kind of impact overall health, chronic disease, infectious disease,
injury, maternal health, and other dimensions of health.
And so with that,
I will say that,
in some ways, my understanding of housing
and how nuanced it is,
and also how segregated neighborhoods basically
have implications for life chances came for certain
in my training as a sociologist,
but also in my lived experience as a New Yorker
and someone who grew up in a disadvantaged neighborhood
in subsidized housing in the Bronx.
And so I always like to start my talks
just kind of positioning myself
on what I understand locally.
So this is Manhattan.
Some of you may be familiar,
this is Central Park,
which is obviously a
kind of a huge organizing green space
in this city.
This is Staten Island, Brooklyn, Queens and the Bronx,
that makes up the five boroughs of New York City.
And as you can tell,
just by the kind of deep blue,
that the Bronx is pretty poor.
And that that poverty is pretty concentrated
at the borough level,
and also in other pockets of the city.
And that actually doesn’t just stop at the level of poverty.
It also has implications for things like rent burden.
So how much people pay for housing relative to their income.

So that in the same places that are kind of most impoverished, they also tend to have the highest rent burdens in New York City.

So Bronx residents are more rent burdened, for instance, than others.

This is kind of going. It has a mind of its own. I don’t know what’s going on, but anyway.

With rent burden, you know, kind of a consequence of rent burden might be evictions.

And now mind you, obviously in the pandemic, we’ve had city, state and federal level policies kind of banning evictions.

But prior to that, in 2018, the Bronx, an impoverished area, an area that’s highly rent burdened, was also probably not surprisingly most impacted by evictions.

So, of the 20,000 or so evictions that happened in 2018, the bulk of them were happening in the Bronx.

And this is important because there have been interesting interventions, including the provision of legal services for tenants in housing court to kind of better balance the relationship between landlords and tenants in court,
and give tenants a fighting chance around the evictions.

But it doesn’t stop there.

So just, you know, we talked about,

the different dimensions of housing rent.

So poverty kind of fits within that context bucket.

The cost fits within obviously the rent burden,

the consistency of housing is reflected in the evictions.

And then there’s homes,

access to healthy homes, essentially.

And what you see in this map,

is essentially that people that live in the Bronx

have the least access to healthy housing,

and the most access is happening in areas that are kind of,

are higher (mumbles)

due to high socio-economic positions.

And that’s also true around heat complaints.

So that residents of the Bronx are much more likely

to report having no heat or hot water.

So these are reflections of conditions.

And it’s not just in the wintertime when people have issues,

it’s also in the summertime.

So that the AC penetration rate,

meaning how many air conditioners exists,

is lowest in the Bronx.

So you have almost a third or so of residents in the Bronx

that do not have access to an air conditioner.
What I've learned in the time since, kind of thinking about these pillars of housing, which I just described, is that home-based infrastructure actually is public health.

And my insights on this issue, in some ways stem from the book called “Heat Wave” by Eric Klinenberg. So in that book, obviously, he talks about social resilience, and the fact that African-Americans were disproportionately impacted by hospitalizations, and really by deaths during the 1995 Heatwave. He’s a sociologist.

And that insight was incredibly important for thinking about who would be on the front lines of climate change. And in some ways, he was really kind of early in his observations about this changing climate and who would be most vulnerable. And he talked a lot about the fact that people were dying alone in their homes. I’m a sociologist too.

But I actually think about the kind of technical aspects that contributed to the disproportionate deaths among African-Americans in Chicago. And basically, the idea is that, you know, there were many closed windows, there were some fans, but there were also very few air conditioners.
And mind you, this is in 1995.

So it’s not surprising that the kind of energy infrastructure might have been, kind of, that ACs might have been less available.

But I just showed you more recent data from New York City that shows that in poor neighborhoods people are less likely to have air conditioning.

And public housing in New York City, it was up until very recently, only one in two households that lived in public housing actually had access to an air conditioner.

I was listening to NPR one day, and I heard a story about Maricopa County. Maricopa County had been one of the first Departments of Health to actually measure excess heat deaths. And that’s not surprising because this is in Arizona where you know, I remember going in an Uber, the Uber driver said we have three seasons; pre-infernal, inferno and post-infernal.

And so really important for Maricopa County Department of Health and others on the ground to understand not only the prevalence of excess heat deaths, but also what was at the root.

And it was their study about what was at the root that to me was really interesting and actually has spurred a further collaboration.
But I just want to walk us through.

So of the people that basically died in their homes, almost all of them basically died in a non-cooled indoor environment.

For some of them, kind of a minority of them, they had no AC at all.

For others, so 92% actually had an AC, but the majority of the people that died at home had no working AC.

They also had the AC in the off position, or their utilities were shut off. So this really goes to show that there’s something other than the fact that they live alone, kind of contributing to their demise, essentially.

And one of the things that I’ve been doing over the course of my career, especially more recently, is engaging in the public debate around how public health essentially is linked to public policy.

And of course, my kind of public policy of reference primarily is the Low Income Home Energy Assistance Program, LIHEAP.

And just this past summer, I wrote along with a former student of mine, Sonal Jessel, who’s now working at WE ACT, a piece in City & State in New York, which is basically read by policymakers about the need to kind of revisit LIHEAP.
in some ways, because in many states, but especially in New York, only AC distribution is available. So actually acquiring an air conditioning unit. But the cost of running the electricity isn’t covered by Low Income Home Energy Assistance Program, because it’s primarily a heating subsidy. So basically, we’re asking, you know, kind of policymakers to revisit what the kind of stipulations for receipt of LIHEAP might look like for households. In fact, to kind of preserve health, but also to prevent deaths. And then more recently, I wrote a piece in USA Today that talks on the one hand about heating, home heating. And the fact that, the cost of heating will actually increase significantly this heating season, as in like right now. And that that will force people to make what to me are really inhumane, and unnecessary trade-offs between other basic needs, like food, and or medicine. It obviously has implications for not just thermal comfort, but like I said, a healthy and safe indoor temperature. Interestingly enough, the heating costs that are increasing the most are actually also fossil fuels. So it’s natural gas, heating oil, propane.
And those are also the kind of heating sources used primarily by lower income groups. You know, there's obviously the connection to energy efficiency, to health, not just for the elderly, but really across the life force, including the very young and prenatally. This obviously, I have driven, I think the point that this is a matter of survival, but also a matter of environmental justice. And so with that, I'd like to get into well, what is energy insecurity? Because at some point, you know, all of this backdrop is important information to know, but ultimately, kind of naming the phenomenon was pretty critical. And I can't take credit for coining the term but I certainly (mumbles) You know, I'm the scholar that kind of operationalized the concept of energy insecurity and has basically defined what the dimensions of this phenomenon happen to be. And it sits as a,

again, I'm not sure why this is kind of going back on me. But anyway, it sits as a kind of a basic necessity of life. So Maslow’s Hierarchy of Needs would place household energy really as a kind of a base
in the pyramid of physiological needs, that are warmth or cooling depending on the season. The World Health Organization a while ago talked about energy being essential to meeting basic needs, a prerequisite for health, but something also that’s ignored. And I’m really happy to say that that’s no longer the case. I don’t think that people are ignoring the issue as much. They may or may not be kind of paying as much attention as it merits. But it certainly has received more attention in the decade or so, since I’ve been working in this space. One of the pieces that I think is really kind of important to recognize is that, you know, well, let’s just define this. So it’s an inability to adequately meet basic household energy needs. It has three dimensions. So there’s an economic dimension which, like rent burden is really about how much of household income is distributed or allocated to energy expenses. There’s a physical component, which is about the inefficiencies in the actual, like performance, the energy performance of buildings, or homes, as well as the kind of availability and performance of appliances. and other energy infrastructure.
Plus the fact that people are doing things and they’re managing as best they can under different circumstances. Another kind of way in which I’ve understood this phenomenon is that there are acute forms of energy insecurity. So power outages are really kind of a prime example, right? So you know, power outages as a result of the wildfires in California, for instance, or the hurricane in Puerto Rico. Also shut offs. When people are unable to pay their utility bills and they’re shut off, that kind of represents an acute form of energy insecurity. Fuel shortages, in this case, you know, kind of price increases that are pretty shocking, might represent an acute form of energy insecurity. And one of the things that I kind of like to say, as a distinguishing factor between acute and chronic, is that acute can actually have a wider spread impact across socio-economic position. Whereas chronic energy insecurity has a lot more to do with people that might face these challenges as a result of being poor, or as a result of living in a certain housing type. For instance, a mobile home or, sometimes in public or subsidized housing that hasn’t necessarily been kind of upgraded to meet today’s energy performance standards.
You know, kind of situating those three dimensions so that the financial or economic components, the housing conditions component, and the behavioral piece, it’s also really important to be thinking about kind of energy access, like the acute kind of form of energy insecurity, climate threats, including extreme weather, cold heat, etc, and the just transition. So there’s a lot of discussion. In fact, you know, COP26 is happening right now. People are in Glasgow at the moment discussing what happens in terms of clean heat, or clean energy transitions, and how do we reduce our carbon footprint. And a big part of that is also of importance, particularly for people who are relying on fossil fuels at the moment and are probably least able to make the transition on their own. So that’s the kind of broader context I wish to understand these dynamics. So this is now dated. And I want to say that, there are going to be well, first of all, there’s a new residential energy consumption survey that was distributed, and the data was collected in 2019 2020. And I was really happy to support that effort.
0:24:35.66 –> 0:24:37.43 as an advisor on some of the questions
0:24:37.43 –> 0:24:38.85 around energy insecurity.
0:24:38.85 –> 0:24:42.29 But back in 2018,
0:24:42.29 –> 0:24:46.3 the Energy Information Administration released a report
0:24:46.3 –> 0:24:49.46 based on their 2015 RECS data that showed
0:24:49.46 –> 0:24:51.58 that one in three households in The United States
0:24:51.58 –> 0:24:53.66 are actually energy insecure.
0:24:53.66 –> 0:24:55.69 And by their kind of definition,
0:24:55.69 –> 0:24:57.58 at that point, they were thinking about it
0:24:57.58 –> 0:24:59.29 in terms of those trade-offs
0:24:59.29 –> 0:25:00.66 that I’ve already described,
0:25:00.66 –> 0:25:01.77 the heat or eat.
0:25:01.77 –> 0:25:03.58 Like the, you know,
0:25:03.58 –> 0:25:05.98 kind of forgoing medicine,
0:25:05.98 –> 0:25:09.21 sometimes transportation, other things, other basic
needs
0:25:09.21 –> 0:25:14.21 in order to meet their energy kind of cost obligations,
0:25:15.14 –> 0:25:16.77 receiving a disconnection notice
0:25:16.77 –> 0:25:18.99 or keeping the home at an unhealthy temperature.
0:25:18.99 –> 0:25:20.73 So, for some households,
0:25:20.73 –> 0:25:22.68 this is happening chronically right?
0:25:22.68 –> 0:25:25.04 The dark blue really kind of suggests
0:25:25.04 –> 0:25:27.81 that this is happening almost every month.
0:25:27.81 –> 0:25:29.92 And then the lighter blue is conditional.
0:25:29.92 –> 0:25:33.423 So it’s happening kind of some months out of the
year.
0:25:34.97 –> 0:25:38.26 But we also know that energy insecurity is patterned
0:25:38.26 –> 0:25:41.28 by social vulnerabilities.
0:25:41.28 –> 0:25:43.52 So that low-income households are more likely
0:25:43.52 –> 0:25:45.04 to be energy insecure.
0:25:45.04 –> 0:25:46.94 Households with children,
people living in older homes,

African-American and Latinx populations are much more likely to be energy insecure.

I’m going to put a pin on the elderly because I think it’s something that we’ll come back to. But based on this information, you wouldn’t think that the elderly are energy insecure, but they are.

We actually use that same data to measure the national prevalence rate of disconnection notices, and disconnections. And what we found is that 3% of the population in The United States has actually received a disconnection.

And just like the other forms of energy insecurity that were highlighted before, this is also patterned.

So that low-income households, Black and Latinx households, but especially Black households.

Households with a head of household that has a lower educational attainment rate, households with children, and also just adult households.

So not the elderly.

People living in mobile homes, and also single detached homes, people reporting inadequate insulation, and living in older homes, renters, people living in rural areas,
0:27:02.6 –> 0:27:04.88 and those living in the South and the Northeast
0:27:04.88 –> 0:27:06.32 were much more likely
0:27:06.32 –> 0:27:09.383 to have actually received a disconnection.
0:27:10.65 –> 0:27:12 Now, what do people do?
0:27:12 –> 0:27:14.91 So we talked a lot about coping strategies.
0:27:14.91 –> 0:27:19.2 And on the one hand there’s the trade-off strategy,
0:27:19.2 –> 0:27:22.38 there’s also the strategy around thermal discomfort,
0:27:22.38 –> 0:27:25.71 and then there’s a strategy around energy assistance.
0:27:25.71 –> 0:27:27.14 And what we found is that,
0:27:27.14 –> 0:27:29.64 for households that receive no notice,
0:27:29.64 –> 0:27:32.95 most of them aren’t doing anything really to cope.
0:27:32.95 –> 0:27:34.17 And that makes a lot of sense,
0:27:34.17 –> 0:27:37.7 because they may not see the threat as imminent.
0:27:37.7 –> 0:27:41.38 Now, once they’ve received the disconnection notice,
0:27:41.38 –> 0:27:45.81 many more families are actually turning to trade-offs,
0:27:46.92 –> 0:27:49.193 like foregoing their basic necessities,
0:27:50.33 –> 0:27:52.49 or doing that in combination
0:27:52.49 –> 0:27:55.31 with keeping the home at an unhealthy temperature,
0:27:55.31 –> 0:28:00.31 or seeking and receiving energy assistance.
0:28:00.67 –> 0:28:03.69 When they’ve actually experienced a disconnection,
0:28:03.69 –> 0:28:07.97 many more of them are turning to a lot of strategies
0:28:09.68 –> 0:28:11.283 to get by, essentially.
0:28:12.28 –> 0:28:16.18 And the kind of prevalence of these coping strategies
0:28:16.18 –> 0:28:18.31 just increases substantially.
0:28:18.31 –> 0:28:19.89 So that more people are keeping their homes
0:28:19.89 –> 0:28:22.32 at an unhealthy temperature foregoing,
0:28:22.32 –> 0:28:25.17 and also receiving assistance,
0:28:25.17 –> 0:28:27.22 but not as much as you would imagine,
0:28:27.22 –> 0:28:31.393 given the kind of crisis at hand with a disconnection.
0:28:33.3 –> 0:28:38.3 So obviously, we’re kind of a public health crowd
0:28:38.57 –> 0:28:41.11 and we care about what this actually means
0:28:43.914 –> 0:28:45.96 in terms of health outcomes.
0:28:45.96 –> 0:28:49.21 So earlier, I shared a kind of a pathway or heuristic
0:28:49.21 –> 0:28:51.7 around the links between the different
0:28:51.7 –> 0:28:54.38 kind of components of housing
0:28:54.38 –> 0:28:58.03 and various health outcomes.
0:28:58.03 –> 0:29:02.57 And actually the same is true around energy.
0:29:02.57 –> 0:29:04.27 But energy is kind of situated.
0:29:04.27 –> 0:29:05.78 The three dimensions of energy
0:29:05.78 –> 0:29:09.41 are kind of situated within those larger processes
0:29:09.41 –> 0:29:14.02 of kind of housing and ratio residential segregation,
0:29:14.02 –> 0:29:16.09 and some of the other kind of factors
0:29:16.09 –> 0:29:18.69 that are happening at the neighborhood level,
0:29:18.69 –> 0:29:21.25 but also that kind of reflects
0:29:21.25 –> 0:29:23.92 the kind of discriminatory policies and practices
0:29:23.92 –> 0:29:25.67 that I mentioned before.
0:29:25.67 –> 0:29:27.3 And then in terms of outcomes,
0:29:27.3 –> 0:29:29.08 there’s a whole host of them,
0:29:29.08 –> 0:29:33.17 some of them like really representing direct pathways
0:29:33.17 –> 0:29:35.493 to adverse health outcomes,
0:29:36.4 –> 0:29:39.51 as respiratory health, for instance, mental health.
0:29:39.51 –> 0:29:42.63 But also the ones that are kind of in route
0:29:42.63 –> 0:29:43.79 to these health outcomes,
0:29:43.79 –> 0:29:47.31 like environmental consequences and social conse-
sequences
0:29:47.31 –> 0:29:49.59 that might impact ultimately,
0:29:49.59 –> 0:29:51.92 some of the physical and mental health consequences
0:29:51.92 –> 0:29:54.29 that are kind of listed here.
0:29:54.29 –> 0:29:55.98 And we wanted to kind of understand this.
0:29:55.98 –> 0:29:57.66 All of these insights really came
0:29:57.66 –> 0:30:00.41 from doing qualitative work,
0:30:00.41 –> 0:30:02.08 asking people about their lives
and about their circumstances.
And ultimately, we did a study in Washington Heights, which is across the bridge from the Bronx. It’s in upper Manhattan.
It’s also where the School of Public Health at Columbia is.
And the local hospital
as a result of changes in Medicaid,
and the need to kind of reduce acute care visits,
and better understand and serve the community
asked us in the school of public health,
to kind of better understand different pieces.
And because I was on the team,
I added some questions about energy insecurity.
These are the questions that were asked,
and it’s based on Cook at al 2008 paper
where they kind of have a brief indicator
of energy insecurity,
based on having received a letter using the stove to heat,
not having heat,
also having received a shutoff.
And what we found in that study is that,
27% of residents in Washington Heights
were considered moderately
or severely energy insecure about half and half
as seen here.
And you know, the social patterning exists.
We know that households with children
of Black and Latinx in low-income households
were all more likely to be energy insecure,
We also thought it was really interesting that one in two households that were energy insecure were also food insecure. But that those that received food-related aid, so those that received Supplemental Nutritional Assistance Program benefits, SNAP, and or Women, Infants and Children, WIC benefits were much more likely to be secure. Some earlier work had actually shown by Cook et al at BMC, at Boston Medical Center, the receipt of Low Income Home Energy Assistance Program, LI-HEAP actually created opportunities, or was associated with more food security as well as kind of developmental markers for children in the affirmative. And that was hopeful because these are corresponding uncomplimentary findings. Essentially, we also found that energy insecurity was associated with respiratory health, asthma and pneumonia, as well as self reported anxiety, depression, and diagnose depressive disorder, as well as sleep quality. And all of those things kind of make sense, also makes sense that it wasn’t associated with diabetes, for instance, hypertension, or accidental falls.
Although I would say, chronic conditions, and energy insecurity are probably adversely linked. So these days, I’m writing a book called, “Powerless: The People’s Struggle for Energy in America.” And my goal in this book is to humanize energy, in some ways, because we haven’t really thought enough about this issue and we certainly haven’t really thought about how energy is necessarily like affecting our day to day lives. And I’m going to test out a few of my stories. This is a story about Edith. This is the chapter, my second chapter in the book and the one that I’m currently working on. And it’s about a woman who basically dedicated herself to taking care of her dying father, in a house in Detroit that they bought, and lived in, during the kind of great migration of African-Americans from the South to Northern cities for opportunities, for economic opportunities, and for upward social mobility. And this house kind of represented so much of that. It also represented the decline of the city, in fact, not only did her father die in this house,
this house also was dying by itself.
And its major organs,
which I consider to be the heating infrastructure
and the other kind of energy infrastructure
were the first signs of its demise.
And so, Edith, basically,
basically, at some point the boiler gave up.
It was decades old.
She had lights that were basically powered by natural gas.
If you can imagine a time when the lights in our homes
were not powered by electricity.
Her son became (indistinct)
You know, like he started to kind of work on addressing
the light that had gone out,
not realizing that it was powered by natural gas.
And eventually, that caused a gas leak.
She called the local energy provider.
The energy provider,
this was during the winter time,
basically, her heat had already stopped working
because the boiler, the furnace gave way.
When the representative
from the local utility company came by
he’s like, "listen, I can’t do much for you,
I actually have to turn off your gas."
So the gas stove that she was using for heat
was no longer an option.
And at that point,
she was kind of resorting to using a kerosene heater,
which cost her about $40 to fill every three or four days. And she could only warm her actual bedroom. In that process, she was not only introducing the risk of fire, for instance, but also freezing pipes. So at some point, she also didn’t have running water. And it was just a cascading effect, a really bad kind of circumstances in this home. And these pictures are actually from Zillow, because she couldn’t stay in that house anymore. And it was actually the person that had recommended that she well, the HVAC guy, the heating, ventilation and air conditioning person that came in to diagnose her dying furnace told her like, maybe you should actually just move. The people from her church that had provided the kerosene heater kind of suggested the same thing. A month after I interviewed her, she did put the house on the market. Again, you know, those kind of four pillars of housing with consistency being important, she wasn’t able to stay in a home that not only had kind of important memories for her family and represented so much about their upward mobility. But she had to basically kind of evacuate because the conditions were no longer tenable.
for her to live in. And this is not so unique, in the experience of many people living in different homes that are inherited, and that have conditions issues that make it kind of impossible for people to actually live in. I won’t get into these stories with as much depth, but this is a woman that I met in Alabama, who wrote a letter to her utility provider, and is like, listen, I know I don’t use as much energy but I’ve never seen bills that were this high. But the challenge, of course, is that she couldn’t finish the, she couldn’t tell her story because she couldn’t finish the letter. And that has everything to do with literacy, not just energy literacy, but just basic literacy, in terms of people’s ability to really advocate for themselves, using the tools of writing a letter. And while I was with her, I actually finished writing that letter for her so that she could submit it. And another woman that I met here in New York City, who basically was praying to God, because she was so worried about her bills, she kept her oil tank, you know. She monitors so closely how much energy she used,
that ultimately, she was always cold in the home. And she basically says, “I suffer.” This is really kind of the private form of suffering that makes people not just worry at night but also kind of be sick and ultimately sometimes perish in their own homes. So let’s talk about housing interventions. And I’m gonna go through this quickly. I want to shout out Daniel Cajon, who will be joining your faculty and your center next academic year. He has been a wonderful colleague, and first friend and mentee, now colleague, and we worked on a lot of these energy equity issues together. But he was also a very important partner in thinking through the clean heat transitions here in New York City. You know, things have gotten a lot better. I’m going to go through this very quickly, because I want to leave time for questions. But back in, about 2015, they had phased out the use of the dirtiest oil number six. And you can see just by its picture, it’s super heavy. And basically the incomplete combustion of not just number six, but it’s kind of corresponding more diluted version, but still dirty version of oil number four, basically pollute the air.
So second to vehicular emissions are residential buildings and other buildings responsible for air conditioning. I'm sorry, for air pollution. And in this process, probably not surprisingly, there were many buildings that were burning dirty fuels, because, you know, New York City is a relatively old city, with buildings that were kind of turn of the last century, and also relying on those kind of energy technologies of yesteryear. Now, you know, this kind of phasing out of dirty fuels was an opportunity essentially, to kind of clean up the air. And this was during the Bloomberg administration. And, you know, efficient as they were, they were like, oh, well, you should also maybe consider other energy efficiency upgrades, and many buildings actually did. So there was kind of almost a complete phase out of the number six oil by the end of this. And many actually, about, over half had actually transitioned to clean fuels. But as Daniels kind of work suggests, this actually was not evenly distributed. So some of the kind of dirtiest fuels continued to be burned in the lowest income communities in Northern Manhattan, and the Bronx primarily. So these are kind of environmental justice communities.
based on their racial composition, and the percent of poverty in the neighborhood. And they can little afford, still burning the dirtiest the fuels and yet, that’s actually what is still happening since number four oil is not to be phased out until 2030. And so that’s kind of one cautionary tale about yes, the kind of large picture around transitioning to cleaner fuels, but also who might be left behind in doing so. Another area of intervention that I’ve looked at is the repositioning of public housing, known as the Rental Assistance Demonstration Program. So some of you may remember moving to Opportunity, or HOPE VI. Those were large housing interventions. What has happened as a result of, in some ways, the insights from like you can’t just move people out of communities that have known and belong to and feel connected to. Also, that decreasing the number of public housing units, does more in the way of actually dispossessing people of their homes, and of those beloved communities. But that conditions issues are significant in public housing. In fact, there are billions of dollars of capital backlogs in public housing.
that really cripple the opportunity to enjoy truly habitable homes.

And I basically looked at this transition in the first ever RAD site in The United States, which was in Fresno, California, as well as the second one in New York City, which was in Betances Houses in the South Bronx.

And these are some before pictures of the conditions at Betances. And just to kind of give you a sense, I mean, you know, this is outside of the units and the kind of common stairwells inside of the units and a bathroom.

Mold obviously being a huge issue, water leaks, etc. At Betances they had, like redone the kitchens, the bathrooms, the floors, upgraded the windows to energy efficient ones, included safety measures, like cameras and adjusting doors so that they actually shut and doing a number of kind of upgrades. But a big part of it was around the heating and ventilation systems.

When we did this work in Fresno, California, there they had actually upgraded to mini splits. So to heat pumps, which we know are pretty efficient. In a place like Fresno where heating and cooling are both important, it was critical.
And basically what we found, again, kind of consistent with that, the four pillars of housing kind of framework is that these heating and cooling systems were upgraded.

People had reported increased thermal comfort and temperature control. You know, having access to appliances that were newer and more efficient. Also, the kind of, just the aesthetics and the layout were better.

People felt better about where they were living, that they had actively done mold abatement, etc. People felt an increase in pride of place, and the fact that they lived in places that had been upgraded.

And for any of you who have done even minor upgrades to your living space, like painting, you realize just how important a refreshed space actually feels.

But that didn’t necessarily address all of the problems in public housing. I mean, obviously, when you have a complex system of providing housing with oftentimes, that external context, like the neighborhood conditions not being optimal, it continues to be felt among residents, and that we actually found in our work. At Betances, there was an interesting other component, which was about providing opportunities for people to come together.
For them to come together to talk to actually like, you know, basically engage in very, very local forms of governance and democracy. This is a woman who was basically at Catholic Charities, Paula Martinez, who was ushering the tenant. She was a community resident organizer. And the whole point was to basically empower residents to come together to talk about a number of things, not the least of which was a smoke free housing project that we were working with them to implement. And then in the two minutes that I want to kind of end in two minutes. So basically, it’s not just housing level interventions that are important. Obviously, energy interventions are also important. Some of that is about framing. I wrote a paper a while ago that basically linked energy sacrifice zones to communities that are essentially sacrificing on a day to day basis, and provided ways of thinking about energy justice as a rights-based framework. Sorry, this is really annoying. So the right to healthy, sustainable energy, the right to the best available energy infrastructure, the right to affordable energy, and the right to uninterrupted energy service. This is Cecil Corbin-Mark, who we lost last year, really sadly. So he was a pioneer and a visionary.
think about ways of providing access to clean energy and renewable energy in communities like Harlem, and upper Manhattan. And we need more of that, right? That’s part of what energy justice is about. As well as thinking about, is it really actually necessary for us to be shutting people off as a way of kind of collecting on payments? In California, they’ve actually passed the Disconnection Reform Act to reduce the number of disconnections and enroll more people in medical baseline programs and other shutoff protection services so that less households are impacted by disconnections. And then there’s a LIHEAP piece. You know, in New York State, there’s only protections around the holiday season, and also for people that are of a certain age and have medical conditions. But deferred payments, so like a payment plan is actually the usual, sorry, I don’t know what’s going on. The usual kind of way in which people try to manage whatever outstanding bills they have with their utility companies, but oftentimes, these are promises that can’t be kept. And so I’m gonna (mumbles) This is a kind of a rundown of energy justice solutions, rethinking energy utility rate structures,
the shut off moratoriums, not just seasonally, but obviously COVID opened up the idea that maybe we don’t have to turn people off, and we should find other ways of ensuring that people have access to energy assistance benefits, like the ones that I’ve mentioned before, kind of improving housing codes and energy standards and buildings, and also kind of clean energy policies that are inclusive, and that are intentional about ensuring that people of color and low-income folks are able to do their part. And this is this little story about me, basically, the fact that I do this kind of thing called social impact real estate where I have totally rehab buildings, and in the South Bronx where I grew up. And incorporated solar, for instance, has been a really kind of interesting proof of concept, opportunity to think about reinvesting in low-income communities from within. And so with that, I will stop sharing, and invite all of you to ask questions. Sorry that I didn’t need more time. It was maybe more than I could do in 40 minutes. And I also wanna just (mumbles) So Danya Keene, I know, I’m here with our Arline Geronimus at the Russell Sage Foundation,
0:51:08.17 –> 0:51:09.65 and I’m a big fan of your work,
0:51:09.65 –> 0:51:11.393 and I’m happy to see that you’re here.
0:51:14.203 –> 0:51:16.754 I think this is very fascinating.
0:51:16.754 –> 0:51:19.627 (indistinct)
0:51:19.627 –> 0:51:21.39 I’m sure the students are enjoying
0:51:21.39 –> 0:51:24.31 this real world examples and experiences.
0:51:24.31 –> 0:51:27.15 And actually, we have gathered a lot of questions for you
0:51:27.15 –> 0:51:28.64 from students already.
0:51:28.64 –> 0:51:30.04 And I just want to remind you
0:51:30.04 –> 0:51:32.55 that although we only have seven minutes left
0:51:32.55 –> 0:51:35.36 but for our own audience online,
0:51:35.36 –> 0:51:36.53 if you do have a question,
0:51:36.53 –> 0:51:38.813 please post them in the chat box.
0:51:39.83 –> 0:51:43.12 The first question is actually related to your,
0:51:43.12 –> 0:51:44.37 showing the examples
0:51:44.37 –> 0:51:47.73 and also you mentioned a very interesting perspective
0:51:47.73 –> 0:51:50.543 of increasing the energy standard.
0:51:53.36 –> 0:51:55.67 Several students have been interested in like,
0:51:55.67 –> 0:52:00.52 how feasible or beneficial with policies
0:52:00.52 –> 0:52:03.77 focused on the energy efficiency
0:52:03.77 –> 0:52:07.1 that can be used to protect the low-income
0:52:07.1 –> 0:52:10.21 and people of color families
0:52:10.21 –> 0:52:11.933 from the energy security.
0:52:13.67 –> 0:52:18.67 I mean, I think that from the energy performance
0:52:19.23 –> 0:52:21.813 and building standard perspective,
0:52:23.39 –> 0:52:26.81 as it intersects with those that are living
0:52:26.81 –> 0:52:29.19 in subsidized housing,
0:52:29.19 –> 0:52:32.77 or in rent-stabilized housing,
0:52:32.77 –> 0:52:35.49 there’s always the kind of need to,
0:52:35.49 –> 0:52:40.49 of course, provide access to the kind of best performance.
0:52:42.21 –> 0:52:45.06 I mean, a lot of the 311 no heat complaints
0:52:45.06 –> 0:52:48.83 are actually coming from people
0:52:48.83 –> 0:52:51.363 that are living in those very same buildings.
0:52:52.41 –> 0:52:56.63 But we also need to couple that with tenant protections.
0:52:56.63 –> 0:52:58.11 And that was a recognition
0:52:58.11 –> 0:53:03.11 that really came as a result of the clean heat work.
0:53:03.77 –> 0:53:05.69 So before they started to do
0:53:06.672 –> 0:53:09.773 the kind of grading system for buildings,
0:53:10.82 –> 0:53:12.58 in New York City, first commercially,
0:53:12.58 –> 0:53:16.683 and now, increasingly, in residential buildings,
0:53:17.553 –> 0:53:20.66 it was so clear that some landlords were using that
0:53:20.66 –> 0:53:22.7 as an opportunity, essentially,
0:53:22.7 –> 0:53:25.03 to kick long-term tenants out.
0:53:25.03 –> 0:53:29.19 The ones that were living in gentrifying neighborhoods,
0:53:29.19 –> 0:53:32.13 where they could command more rents.
0:53:32.13 –> 0:53:35.64 And they use these kinds of capital improvement,
0:53:35.64 –> 0:53:37.49 of course, I’m just using a New York City example.
0:53:37.49 –> 0:53:40.95 But they use the capital improvement assessments,
0:53:40.95 –> 0:53:43.23 essentially, to make it almost impossible
0:53:43.23 –> 0:53:45.9 for those long-term residents to stay
0:53:45.9 –> 0:53:48.66 and to afford to be able to stay.
0:53:48.66 –> 0:53:52.93 And what I have concluded in,
0:53:52.93 –> 0:53:55.29 kind of assessing what this ultimately looks like,
0:53:55.29 –> 0:54:00.12 is that there has to be a much more kind of concerted effort
0:54:00.12 –> 0:54:03.002 to support those landlords
0:54:03.002 –> 0:54:07.27 and even possibly subsidizing,
0:54:07.27 –> 0:54:12.27 or kind of completely providing grants to those land-
lords
0:54:15.66 –> 0:54:19.13 in exchange for allowing people to stay in those buildings.

0:54:19.13 –> 0:54:24.13 Because it doesn’t do much for people to actually like,

0:54:25.781 –> 0:54:26.614 (mumbles)

0:54:26.614 –> 0:54:30.88 for the physical conditions of the buildings to improve

0:54:30.88 –> 0:54:33.43 if the people that have been living there forever

0:54:33.43 –> 0:54:36.23 and sometimes suffering in significant ways

0:54:36.23 –> 0:54:38.19 to not be able to benefit essentially.

0:54:38.19 –> 0:54:40.053 So I think this is,

0:54:41.47 –> 0:54:44.95 it’s an area for kind of more consideration,

0:54:44.95 –> 0:54:46.77 but it’s not going to be,

0:54:46.77 –> 0:54:48.36 it won’t go away,

0:54:48.36 –> 0:54:49.33 especially as we think

0:54:49.33 –> 0:54:53.1 about the electrification of buildings,

0:54:53.1 –> 0:54:58.1 both in the introduction of kind of clean cooking options

0:54:58.23 –> 0:55:01.47 as well as clean eating options and cooling,

0:55:01.47 –> 0:55:02.83 absolutely, we have to think

0:55:02.83 –> 0:55:05.25 about the tenant protection aspects.

0:55:05.25 –> 0:55:07.1 And I don’t know that we have it all figured out,

0:55:07.1 –> 0:55:09.09 but it’s definitely something

0:55:09.09 –> 0:55:11.833 that I think has to be more front of mind for policy-makers.


0:55:14.312 –> 0:55:15.99 We’re having some background noise.


0:55:17.288 –> 0:55:20.56 But we do have a question from actually Susie Row.

0:55:20.56 –> 0:55:21.53 She’s wondering like,

0:55:21.53 –> 0:55:26.53 do you think that HHS selection of the (mumbles)


0:55:31.37 –> 0:55:34.673 will provide an opportunity for policy reforms?

0:55:36.24 –> 0:55:41.24 <v ->Yeah, I mean, so Justice40 is definitely an opportunity
0:55:42.8 -> 0:55:47.8 to essentially do what we did in public health, right?
0:55:48.61 -> 0:55:51.2 Health in all policies.
0:55:51.2 -> 0:55:52.25 You know, in this case,
0:55:52.25 -> 0:55:55.573 it’s basically thinking about, you know,
0:55:57.12 -> 0:56:01.103 low-income people of color,
0:56:02.14 -> 0:56:04.25 the need to transition
0:56:04.25 -> 0:56:08.9 and have kind of climate considerations,
0:56:08.9 -> 0:56:11.35 be front of mind together.
0:56:11.35 -> 0:56:14.233 I do think it has a huge,
0:56:16.01 -> 0:56:18.69 it presents a huge opportunity.
0:56:18.69 -> 0:56:23.69 I think the implementation of this is yet to be seen.
0:56:25.17 -> 0:56:29.38 Dr. Tony Reames, who used to be at University of Michigan,
0:56:29.38 -> 0:56:33.957 and is now basically heading up Justice40 at the DOE
0:56:34.82 -> 0:56:36.02 will basically (mumbles)
0:56:36.02 -> 0:56:40.18 I believe that he kind of has all of those intentions
0:56:40.18 -> 0:56:41.633 and will do his best.
0:56:42.79 -> 0:56:47.36 But I think the policy situation in Congress right now
0:56:47.36 -> 0:56:48.87 is challenging,
0:56:48.87 -> 0:56:50.95 and it’s a little hard to predict,
0:56:50.95 -> 0:56:54.543 essentially what will be coming.
0:56:56.07 -> 0:56:58.42 So, I think in its spirit,
0:56:58.42 -> 0:57:01.69 it’s right in its implementation.
0:57:01.69 -> 0:57:02.75 It’s yet to be seen,
0:57:02.75 -> 0:57:05.89 but I think that in the same way that we made big strides
0:57:05.89 -> 0:57:07.92 in thinking about health in all policies,
0:57:07.92 -> 0:57:09.14 the Justice40 piece,
0:57:09.14 -> 0:57:12.59 and supporting environmental justice organizations,
0:57:12.59 -> 0:57:13.94 community-based organizations,
0:57:13.94 -> 0:57:18.46 all of those kind of elements of Justice40
0:57:18.46 –> 0:57:20.37 will hopefully make it successful
0:57:20.37 –> 0:57:22.763 in addressing many of these challenges.
0:57:25.1 –> 0:57:25.933 <v ->Thank you Diana.
0:57:25.933 –> 0:57:27.31 I think that,
0:57:27.31 –> 0:57:30.5 although there are many questions students would ask,
0:57:30.5 –> 0:57:32.46 but we are running out of time.
0:57:32.46 –> 0:57:34.97 And it’s a great pleasure to have you here,
0:57:34.97 –> 0:57:37.8 and thank you so much for this amazing
0:57:37.8 –> 0:57:39.56 and fantastic talk.
0:57:39.56 –> 0:57:40.526 <v ->Thank you.
0:57:40.526 –> 0:57:41.59 Thank you so much for the invitation.
0:57:41.59 –> 0:57:42.79 I wish you all the best.