WEBVTT

1 00:00:03.070 --> 00:00:04.390 <v ->So, hi everyone,</v>

 $2\ 00:00:04.390 \longrightarrow 00:00:05.987$ thank you for coming in person

 $3\ 00:00:05.987 \rightarrow 00:00:09.270$ and also thank you for our online audiences.

4 00:00:09.270 --> 00:00:11.870 So today, it's my great honor

5 00:00:11.870 \rightarrow 00:00:16.510 to have Dr. Diana Hernandez joining us.

6 00:00:16.510 --> 00:00:19.740 Dr. Hernandez is currently Associate Professor

7 00:00:19.740 --> 00:00:23.500 of Social Medical Sciences

8 00:00:23.500 --> 00:00:27.030 in the Columbia University Mailman School of Public Health.

9 00:00:27.030 \rightarrow 00:00:29.920 Her work examines the impacts of policy

 $10\ 00:00:29.920 \longrightarrow 00:00:32.800$ and place-based interventions on the health

11 $00:00:32.800 \rightarrow 00:00:36.530$ and well-being on social economic (mumbles)

 $12\ 00:00:38.086 \longrightarrow 00:00:40.150$ She has an advanced look at the concept

 $13\ 00:00:40.150 \longrightarrow 00:00:42.460$ which (mumbles) today,

 $14\ 00:00:42.460 \longrightarrow 00:00:45.580$ energy insecurity to reflect the changes

 $15\ 00{:}00{:}45{.}580$ --> $00{:}00{:}49{.}170$ associated with meeting basic household energies

 $16\ 00:00:49.170 \longrightarrow 00:00:51.093$ and its links to house.

17 00:00:52.110 --> 00:00:54.920 And Dr. Hernandez is currently a (mumbles) scholar

18 00:00:54.920 --> 00:00:57.260 at the Russell Sage Foundation

 $19\ 00:00:57.260 \longrightarrow 00:00:59.536$ where she is currently writing a book,

20 00:00:59.536 --> 00:01:01.890 "Energy Insecurity in The US."

21 00:01:01.890 --> 00:01:03.580 So while we're very much looking forward

 $22\ 00:01:03.580 \longrightarrow 00:01:05.600$ to her forthcoming book,

23 00:01:05.600 --> 00:01:07.320 we're very fortunate today

 $24\ 00:01:07.320 \longrightarrow 00:01:10.470$ to have a pre-overview over her work.

25 00:01:10.470 --> 00:01:12.613 So without further ado, Dr. Hernandez.

26 00:01:17.121 --> 00:01:17.954 <v ->Of course, I'm muted.</v>

27 00:01:17.954 --> 00:01:20.360 Hi, thank you so much for the introduction.

 $28\ 00:01:20.360 \longrightarrow 00:01:23.050$ I'm really excited to be here today

 $29\ 00:01:24.140 \longrightarrow 00:01:27.690$ to share some of this kind of ongoing work

30 00:01:27.690 --> 00:01:31.120 on energy insecurity as you stated, Kai.

31 00:01:31.120 --> 00:01:33.730 I'm going to share my screen again

 $32\ 00:01:33.730 \longrightarrow 00:01:34.800$ and get started.

33 $00{:}01{:}34.800 \dashrightarrow 00{:}01{:}38.810$ I will warn you that I am a New Yorker

34 00:01:38.810 --> 00:01:40.190 and I speak fast.

35 00:01:40.190 --> 00:01:43.800 I'm also planning on covering quite a bit of material,

36 00:01:43.800 --> 00:01:47.740 but also want to leave time for questions and answers

37 00:01:48.820 --> 00:01:50.430 later on in the session.

 $38\ 00:01:50.430 \longrightarrow 00:01:52.250$ So by all means,

39 00:01:52.250 --> 00:01:55.290 and I'm a little shy on Twitter,

40 00:01:55.290 --> 00:01:56.993 but please do,

41 00:01:58.330 --> 00:02:03.330 you know, tag me on Twitter @DrDiana
Hernandz

42 00:02:03.968 --> 00:02:06.490 without the E, the second E.

43 00:02:06.490 --> 00:02:07.530 So I'm gonna tell you a little bit

44 00:02:07.530 --> 00:02:10.340 about my academic interests.

 $45\ 00:02:10.340 \longrightarrow 00:02:11.410$ I'll kind of give you a sense

 $46\ 00:02:11.410 \longrightarrow 00:02:13.720$ of the four pillars of housing,

 $47\ 00:02:13.720 \longrightarrow 00:02:15.740$ talk about what energy insecurity is,

 $48\ 00:02:15.740 \longrightarrow 00:02:18.720$ as well as housing and policy interventions

49 00:02:18.720 --> 00:02:20.243 to address this issue.

 $50\ 00:02:22.300 \longrightarrow 00:02:23.983$ Let me just kind of say that

51 00:02:23.983 --> 00:02:26.280 I've been doing work on

52 00:02:26.280 --> 00:02:29.030 at the intersection of energy equity, housing and health

53 00:02:29.030 --> 00:02:32.290 for over a decade now.

54 00:02:32.290 --> 00:02:34.230 And there was a time

55 00:02:34.230 --> 00:02:36.660 when the social determinants of health

56 00:02:36.660 --> 00:02:38.460 and environmental determinants of health

 $57\ 00:02:38.460 \longrightarrow 00:02:40.193$ were kind of separate entities.

58 00:02:41.090 --> 00:02:43.970 And there are some of us that are kind of working

 $59\ 00:02:43.970 \longrightarrow 00:02:47.980$ on bringing these two fields together,

60 00:02:47.980 --> 00:02:50.963 because of course, they kind of intersect.

61 00:02:51.870 --> 00:02:53.630 In addition to doing that,

62 00:02:53.630 --> 00:02:55.480 I've been working on, you know,

 $63\ 00:02:55.480 \longrightarrow 00:02:58.320$ kind of these joint concepts of energy insecurity

 $64\ 00:02:58.320 \longrightarrow 00:02:59.900$ and energy justice,

 $65\ 00:02:59.900 \longrightarrow 00:03:02.070$ thinking about housing and robust ways

66 00:03:02.070 --> 00:03:05.170 poverty and community-engaged research,

 $67\ 00{:}03{:}05{.}170 \dashrightarrow 00{:}03{:}08{.}283$ as well as social and public health entrepreneurship.

68 00:03:10.540 --> 00:03:12.770 The bulk of my work has actually been

 $69\ 00:03:12.770 \longrightarrow 00:03:15.770$ about looking at interventions.

70 00:03:15.770 --> 00:03:18.060 I've been fortunate to do

71 00:03:18.060 --> 00:03:23.060 kind of real life-based research projects related to legals,

 $72\ 00:03:24.820 \longrightarrow 00:03:28.380$ the kind of provision of legal services

 $73\ 00:03:28.380 \longrightarrow 00:03:33.130$ to address housing problems, energy efficiency,

 $74\ 00:03:33.130 \longrightarrow 00:03:35.510$ and clean heat interventions,

 $75\ 00{:}03{:}35{.}510$ --> $00{:}03{:}38{.}910$ the privatization or the repositioning of public housing,

76 00:03:38.910 --> 00:03:42.570 thinking about climate change and emergency preparedness,

 $77\ 00:03:42.570 \longrightarrow 00:03:46.830$ housing-based social and health interventions.

78 00:03:46.830 --> 00:03:50.570 So basically, the provision of these kinds of services

 $79\ 00:03:50.570 \longrightarrow 00:03:52.280$ within housing spheres

 $80\ 00{:}03{:}52.280$ --> $00{:}03{:}56.160$ and also smoke-free housing and social impact real estate.

81 00:03:56.160 --> 00:03:59.750 I will cover a lot of those in my talk today,

 $82\ 00:03:59.750 \longrightarrow 00:04:02.140$ but I always like to kind of share this image

 $83\ 00:04:02.140 \longrightarrow 00:04:04.250$ because in some ways,

84 00:04:04.250 --> 00:04:06.370 the real essence of the work that I've been doing

 $85\ 00:04:06.370 \longrightarrow 00:04:09.730$ is about expanding the notion of sick buildings,

 $86\ 00:04:09.730 \longrightarrow 00:04:11.630$ and vulnerable occupants,

 $87\ 00:04:11.630 \longrightarrow 00:04:14.160$ along with intervention strategies.

 $88\ 00:04:14.160 \longrightarrow 00:04:16.740$ Kind of realizing that our housing

 $89\ 00:04:16.740 \longrightarrow 00:04:18.703$ or the people that live in housing,

 $90\ 00{:}04{:}19.660$ --> $00{:}04{:}23.450$ especially those that are kind of more vulnerable,

91 00:04:23.450 --> 00:04:28.450 need to continue to experience that disadvantage

9200:04:28.840 $\operatorname{-->}$ 00:04:32.190 and the kind of health risks they're in.

93 00:04:32.190 --> 00:04:34.390 So I want to really start.

 $94\ 00:04:34.390 \dashrightarrow 00:04:38.880$ You know this conversation will be about house hold energy,

95 00:04:38.880 --> 00:04:43.740 but I'd be remiss not to kind of put household energy

96 00:04:43.740 \rightarrow 00:04:47.920 within the context of a nuanced appreciation

 $97\ 00:04:49.000 \longrightarrow 00:04:51.633$ of what housing actually represents.

98 00:04:52.646 --> 00:04:56.370 And thinking about housing

99 00:04:56.370 --> 00:04:59.400 as having kind of more than one pillar,

 $100\ 00:04:59.400 \longrightarrow 00:05:03.340$ so it is in some ways a physical entity.

 $101 \ 00:05:03.340 \longrightarrow 00:05:05.290$ It's a social entity.

102 00:05:05.290 --> 00:05:10.290 But it is really about these kind of four areas;

 $103 \ 00:05:10.630 \longrightarrow 00:05:15.630$ costs, conditions, consistency and context.

104 00:05:16.020 --> 00:05:19.820 And what I have found over the years is that,

 $105\ 00{:}05{:}19.820$ --> $00{:}05{:}23.760$ many people make trade-offs at these intersections

 $106\ 00:05:23.760$ --> 00:05:27.550 between, let's say, cost and conditions.

 $107\ 00:05:27.550 \longrightarrow 00:05:29.540$ So the poor,

 $108\ 00:05:29.540 \longrightarrow 00:05:31.410$ for instance, might be relegated

 $109\ 00:05:31.410 \longrightarrow 00:05:36.070$ to some of the kind of poorest quality housing.

110 00:05:36.070 --> 00:05:41.070 They are also much more likely to experience displacement,

 $111\ 00:05:44.940 \longrightarrow 00:05:46.740$ sometimes from climate change,

 $112\ 00:05:46.740 \longrightarrow 00:05:49.190$ sometimes from economic forces.

113 $00:05:49.190 \dashrightarrow 00:05:52.990$ So the consistency of their housing is at risk.

 $114\ 00:05:52.990 \longrightarrow 00:05:54.050$ And then also,

 $115\ 00{:}05{:}54.050 \dashrightarrow 00{:}05{:}57.580$ we know so much about the interplay between kind of,

116 $00:05:57.580 \rightarrow 00:05:59.990$ or neighborhood effects, essentially.

117 00:05:59.990 --> 00:06:02.430 But there's an interplay between housing effects

 $118\ 00:06:02.430 \longrightarrow 00:06:03.960$ and neighborhood effects.

119 $00{:}06{:}03.960 \dashrightarrow 00{:}06{:}06.920$ So that what's happening in the outer core

120 00:06:06.920 --> 00:06:07.820 if we're thinking about it

121 00:06:07.820 --> 00:06:10.710 from a social-ecological perspective,

 $122\ 00:06:10.710 \longrightarrow 00:06:12.920$ also has implications for what's happening

123 00:06:12.920 --> 00:06:16.190 inside people's homes, and vice versa.

124 00:06:16.190 --> 00:06:20.860 So, part of my work has been about just laying out

 $125\ 00:06:20.860 \longrightarrow 00:06:23.490$ what the nuances of housing are,

 $126\ 00:06:23.490 \longrightarrow 00:06:27.450$ situating it in the kind of historical policies

127 00:06:27.450 --> 00:06:31.770 and practices that have made housing distribution

 $128\ 00{:}06{:}34{.}300$ --> $00{:}06{:}38{.}320$ quite different and segregated and separate,

 $129\ 00:06:38.320 \longrightarrow 00:06:40.950$ but not equal in the same ways

130 00:06:40.950 --> 00:06:44.640 that education has historically kind of unfolded.

131 00:06:44.640 --> 00:06:48.580 And so this is just kind of a heuristic

 $132\ 00:06:48.580 \longrightarrow 00:06:52.054$ to appreciate the various policies

133 00:06:52.054 --> 00:06:56.890 from Native American displacements to reservations,

134 00:06:56.890 --> 00:07:01.890 to public housing, redlining, exclusionary zoning

135 00:07:02.150 --> 00:07:04.170 as formal policies,

136 $00:07:04.170 \rightarrow 00:07:07.860$ but also the kind of discriminatory practices

 $137\ 00:07:07.860 \longrightarrow 00:07:10.810$ that were materialized through (mumbles)

138 00:07:10.810 --> 00:07:14.980 Sorry, racial residential covenants, predatory lending,

 $139\ 00:07:14.980 \longrightarrow 00:07:17.760$ and more recently, gentrification.

140 00:07:17.760 --> 00:07:21.640 And the impacts of this have everything to do with health.

141 00:07:21.640 --> 00:07:24.500 And health, in its physical forms

 $142\ 00:07:24.500 \longrightarrow 00:07:26.880$ and also in its mental forms,

 $143\ 00:07:26.880 \longrightarrow 00:07:29.350$ the kind of idea around wellbeing.

144 00:07:29.350 --> 00:07:32.750 These pillars of housing that I just described,

145 $00{:}07{:}32.750$ --> $00{:}07{:}37.750$ really kind of reflect larger structures and mechanisms

 $146\ 00:07:37.760 \longrightarrow 00:07:40.780$ through which housing is impacted.

147 00:07:40.780 --> 00:07:45.650 And then also how kind of independently and together,

148 00:07:45.650 --> 00:07:50.340 they ultimately kind of impact overall health,

149 $00{:}07{:}50{.}340 \dashrightarrow 00{:}07{:}52{.}973$ chronic disease, infectious disease,

 $150\ 00:07:53.850$ --> 00:07:57.900 in jury, maternal health, and other dimensions of health.

151 00:07:57.900 --> 00:07:59.923 And so with that,

 $152\ 00:08:00.780 \longrightarrow 00:08:02.460$ I will say that,

153 $00:08:02.460 \dashrightarrow 00:08:07.460$ in some ways, my understanding of housing

 $154\ 00:08:07.930 \longrightarrow 00:08:09.230$ and how nuanced it is,

155 00:08:09.230 --> 00:08:13.220 and also how segregated neighborhoods basically

156 00:08:13.220 --> 00:08:17.410 have implications for life chances came for certain

 $157\ 00:08:18.420 \longrightarrow 00:08:20.810$ in my training as a sociologist,

158 00:08:20.810 --> 00:08:23.590 but also in my lived experience as a New Yorker

159 00:08:23.590 --> 00:08:26.400 and someone who grew up in a disadvantaged neighborhood

 $160\ 00:08:26.400 \longrightarrow 00:08:29.674$ in subsidized housing in the Bronx.

161 00:08:29.674 --> 00:08:31.670 And so I always like to start my talks

162 00:08:31.670 --> 00:08:33.890 just kind of positioning myself

 $163\ 00:08:33.890 \longrightarrow 00:08:36.760$ on what I understand locally.

164 00:08:36.760 --> 00:08:40.290 So this is Manhattan.

165 00:08:40.290 --> 00:08:41.310 Some of you may be familiar,

 $166\ 00:08:41.310 \longrightarrow 00:08:42.220$ this is Central Park,

167 00:08:42.220 --> 00:08:43.370 which is obviously a,

168 00:08:43.370 --> 00:08:47.790 you know, kind of a huge organizing green space

169 00:08:47.790 --> 00:08:49.170 in this city.

170 00:08:49.170 --> 00:08:52.580 This is Staten Island, Brooklyn, Queens and the Bronx,

171 00:08:52.580 --> 00:08:55.220 that makes up the five boroughs of New York City.

 $172\ 00:08:55.220 \longrightarrow 00:08:56.610$ And as you can tell,

 $173\ 00:08:56.610 \longrightarrow 00:08:59.390$ just by the kind of deep blue,

 $174\ 00:08:59.390 \longrightarrow 00:09:01.473$ that the Bronx is pretty poor.

 $175\ 00:09:02.560 \longrightarrow 00:09:06.740$ And that that poverty is pretty concentrated

 $176\ 00:09:06.740 \longrightarrow 00:09:08.020$ at the borough level,

177 00:09:08.020 --> 00:09:10.800 and also in other pockets of the city.

178 00:09:10.800 --> 00:09:15.800 And that actually doesn't just stop at the level of poverty.

179 00:09:17.490 --> 00:09:21.100 It also has implications for things like rent burden.

180 00:09:21.100 --> 00:09:26.100 So how much people pay for housing relative to their income.

181 00:09:26.560 --> 00:09:28.300 So that in the same places

 $182\ 00:09:28.300 \longrightarrow 00:09:31.010$ that are kind of most impoverished,

 $183\ 00:09:31.010$ --> 00:09:34.490 they also tend to have the highest rent burdens

184 00:09:35.550 $\rightarrow 00:09:37.534$ in New York City.

185 00:09:37.534 --> 00:09:41.140 So Bronx residents are more rent burdened,

 $186\ 00:09:41.140 \longrightarrow 00:09:42.713$ for instance, than others.

 $187\ 00:09:43.600 \longrightarrow 00:09:44.530$ This is kind of going.

188 00:09:44.530 --> 00:09:45.610 It has a mind of its own.

189 00:09:45.610 --> 00:09:48.120 I don't know what's going on, but anyway.

 $190\ 00:09:48.120 \longrightarrow 00:09:49.900$ So with rent burden,

191 00:09:49.900 --> 00:09:53.072 you know, kind of a consequence of rent burden

 $192\ 00:09:53.072 \longrightarrow 00:09:55.220$ might be evictions.

193 00:09:55.220 --> 00:09:57.900 And now mind you, obviously in the pandemic,

194 00:09:57.900 --> 00:10:02.900 we've had city, state and federal level policies

 $195\ 00:10:03.570 \longrightarrow 00:10:06.910$ kind of banning evictions.

196 00:10:06.910 --> 00:10:08.350 But prior to that,

 $197\ 00:10:08.350 \longrightarrow 00:10:12.520$ in 2018, the Bronx, an impoverished area,

198 00:10:12.520 --> 00:10:14.630 an area that's highly rent burdened,

 $199\ 00:10:14.630 \longrightarrow 00:10:16.750$ was also probably not surprisingly

 $200\ 00:10:16.750 \longrightarrow 00:10:20.240$ most impacted by evictions.

201 00:10:20.240 --> 00:10:25.240 So, of the 20,000 or so evictions that happened in 2018,

 $202\ 00{:}10{:}26.000 \dashrightarrow 00{:}10{:}29.970$ the bulk of them were happening in the Bronx.

203 00:10:29.970 --> 00:10:31.460 And this is important

204 00:10:31.460 --> 00:10:33.910 because there have been interesting interventions,

 $205\ 00{:}10{:}33{.}910$ --> $00{:}10{:}37{.}350$ including the provision of legal services

206 00:10:37.350 --> 00:10:39.700 for tenants in housing court

 $207\ 00:10:39.700 \longrightarrow 00:10:42.480$ to kind of better balance the relationship

208 00:10:42.480 --> 00:10:46.080 between landlords and tenants in court,

209 00:10:46.080 --> 00:10:50.133 and give tenants a fighting chance around the evictions.

210 00:10:52.470 --> 00:10:54.490 But it doesn't stop there.

211 00:10:54.490 --> 00:10:56.853 So just, you know, we talked about,

212 00:10:57.750 $\rightarrow 00:11:00.730$ the different dimensions of housing rent.

213 00:11:00.730 --> 00:11:05.270 So poverty kind of fits within that context bucket.

 $214\ 00:11:05.270 \longrightarrow 00:11:10.270$ The cost fits within obviously the rent burden,

215 00:11:10.280 --> 00:11:15.280 the consistency of housing is reflected in the evictions.

 $216\ 00:11:15.440 \longrightarrow 00:11:17.470$ And then there's homes,

 $217\ 00:11:17.470 \longrightarrow 00:11:20.030$ access to healthy homes, essentially.

218 00:11:20.030 --> 00:11:22.507 And what you see in this map,

 $219\ 00:11:26.110 \longrightarrow 00:11:29.220$ is essentially that people that live in the Bronx

 $220\ 00:11:30.310 \rightarrow 00:11:33.090$ have the least access to healthy housing,

221 00:11:33.090 --> 00:11:37.710 and the most access is happening in areas that are kind of,

 $222\ 00:11:37.710 \longrightarrow 00:11:39.260$ that are higher (mumbles)

 $223\ 00:11:39.260 \longrightarrow 00:11:40.700$ of people that live,

224 00:11:40.700 --> 00:11:43.163 you know, have higher socio-economic positions.

 $225\ 00:11:44.450 \longrightarrow 00:11:47.403$ And that's also true around heat complaints.

226 00:11:48.430 --> 00:11:52.150 So that residents of the Bronx are much more likely

227 00:11:52.150 --> 00:11:56.640 to call in to the city's 311 line

 $228\ 00:11:56.640 \longrightarrow 00:12:01.640$ to report having no heat or hot water.

 $229\ 00:12:01.720 \longrightarrow 00:12:06.720$ So these are reflections of conditions.

230 00:12:07.070 --> 00:12:11.550 And it's not just in the wintertime when people have issues,

 $231\ 00:12:11.550 \longrightarrow 00:12:13.900$ it's also in the summertime.

 $232\ 00:12:13.900 \longrightarrow 00:12:17.170$ So that the AC penetration rate,

233 00:12:17.170 --> 00:12:20.740 meaning how many air conditioners exists,

234 00:12:20.740 --> 00:12:22.520 is lowest in the Bronx.

235 00:12:22.520 --> 00:12:27.520 So you have almost a third or so of residents in the Bronx

 $236\ 00:12:28.430 \longrightarrow 00:12:32.003$ that do not have access to an air conditioner.

 $237\ 00:12:34.410 \longrightarrow 00:12:37.593$ What I've learned in the time since,

238 00:12:38.720 --> 00:12:41.720 kind of thinking about these pillars of housing,

239 00:12:41.720 --> 00:12:43.490 which I just described,

240 00:12:43.490 --> 00:12:47.973 is that home-based infra
structure actually is public health.

241 00:12:49.060 --> 00:12:52.930 And my insights on this issue,

242 00:12:52.930 --> 00:12:57.910 in some ways stem from the book called "Heat Wave" $\,$

243 00:12:57.910 --> 00:12:59.680 by Eric Klinenberg.

 $244\ 00:12:59.680 \longrightarrow 00:13:00.730$ So in that book,

 $245\ 00:13:00.730 \longrightarrow 00:13:03.840$ obviously, he talks about social resilience,

246 00:13:03.840 --> 00:13:06.640 and the fact that African-Americans

247 00:13:06.640 --> 00:13:11.050 were disproportionately impacted by hospitalizations,

248 00:13:11.050 --> 00:13:15.080 and really by deaths during the 1995 Heatwave.

249 00:13:15.080 --> 00:13:16.920 He's a sociologist.

 $250\ 00{:}13{:}16{.}920$ --> $00{:}13{:}21{.}850$ And that insight was incredibly important for thinking about

251 00:13:21.850 --> 00:13:25.090 who would be on the front lines of climate change.

 $252\ 00:13:25.090 \longrightarrow 00:13:27.150$ And in some ways,

253 00:13:27.150 --> 00:13:31.580 he was really kind of early in his observations

 $254\ 00:13:31.580 \longrightarrow 00:13:34.280$ about this changing climate

 $255\ 00:13:34.280 \longrightarrow 00:13:36.800$ and who would be most vulnerable.

 $256\ 00:13:36.800 \longrightarrow 00:13:39.370$ And he talked a lot about the fact

 $257\ 00:13:39.370 \longrightarrow 00:13:42.340$ that people were dying alone in their homes.

258 00:13:42.340 --> 00:13:44.640 I'm a sociologist too.

259 00:13:44.640 --> 00:13:49.490 But I actually think about the kind of technical aspects

260 00:13:50.710 --> 00:13:55.300 that contributed to the disproportionate deaths

261 00:13:55.300 --> 00:13:59.130 among African-Americans in Chicago.

 $262\ 00:13:59.130 \longrightarrow 00:14:00.960$ And basically, the idea is that,

263 00:14:00.960 --> 00:14:02.930 you know, there were many closed windows,

 $264\ 00:14:02.930 \longrightarrow 00:14:04.830$ there were some fans,

 $265\ 00:14:04.830 \longrightarrow 00:14:07.720$ but there were also very few air conditioners.

266 00:14:07.720 --> 00:14:09.530 And mind you, this is in 1995.

267 00:14:09.530 --> 00:14:11.060 So it's not surprising

268 00:14:11.060 --> 00:14:14.003 that the kind of energy infra
structure might have been,

269 00:14:16.530 --> 00:14:19.390 kind of, that ACs might have been less available.

270 00:14:19.390 --> 00:14:22.470 But I just showed you more recent data from New York City

271 00:14:22.470 --> 00:14:24.330 that shows that in poor neighborhoods

 $272\ 00:14:24.330 \longrightarrow 00:14:26.840$ people are less likely to have air conditioning.

273 00:14:26.840 --> 00:14:29.500 And public housing in New York City,

274 00:14:29.500 --> 00:14:31.440 it was up until very recently,

 $275\ 00:14:31.440 \longrightarrow 00:14:33.460$ only one in two households

 $276\ 00:14:33.460 \longrightarrow 00:14:35.920$ that lived in public housing actually had access

 $277\ 00:14:35.920 \longrightarrow 00:14:37.760$ to an air conditioner.

278 00:14:37.760 --> 00:14:40.500 I was listening to NPR one day,

279 00:14:40.500 --> 00:14:44.410 and I heard a story about Maricopa County.

280 00:14:44.410 --> 00:14:45.800 Maricopa County had been

281 00:14:45.800 --> 00:14:47.890 one of the first Departments of Health

 $282\ 00:14:47.890 \longrightarrow 00:14:50.840$ to actually measure excess heat deaths.

283 00:14:50.840 --> 00:14:53.480 And that's not surprising because this is in Arizona

284 00:14:53.480 --> 00:14:57.120 where you know, I remember going in an Uber,

 $285\ 00{:}14{:}57{.}120$ --> $00{:}15{:}00{.}870$ and the Uber driver said we have three seasons;

286 00:15:00.870 --> 00:15:03.660 pre-infernal, inferno and post-infernal.

 $287\ 00:15:03.660 \longrightarrow 00:15:05.600$ And so really important

288 00:15:05.600 --> 00:15:08.850 for Maricopa County Department of Health

289 00:15:08.850 --> 00:15:10.740 and others on the ground

 $290\ 00{:}15{:}10.740$ --> $00{:}15{:}15.180$ to understand not only the prevalence of excess heat deaths,

291 00:15:15.180 --> 00:15:17.080 but also what was at the root.

292 00:15:17.080 --> 00:15:19.220 And it was their study about what was at the root

 $293\ 00:15:19.220 \longrightarrow 00:15:20.740$ that to me was really interesting

294 00:15:20.740 --> 00:15:23.770 and actually has spurred a further collaboration.

295 00:15:23.770 --> 00:15:26.090 But I just want to walk us through.

296 00:15:26.090 --> 00:15:30.863 So of the people that basically died in their homes,

297 00:15:32.550 --> 00:15:35.480 almost all of them basically died

298 00:15:35.480 --> 00:15:39.190 in a non-cooled indoor environment.

299 00:15:39.190 --> 00:15:40.843 For some of them,

300 00:15:41.727 --> 00:15:43.930 you know, kind of a minority of them,

 $301\ 00:15:43.930 \longrightarrow 00:15:45.980$ they had no AC at all.

 $302\ 00:15:45.980 \longrightarrow 00:15:50.380$ For others, so 92% actually had an AC,

303 00:15:50.380 --> 00:15:53.470 but the majority of the people that died at home

 $304\ 00:15:53.470 \longrightarrow 00:15:55.530$ had no working AC.

 $305\ 00:15:55.530 \longrightarrow 00:15:59.780$ They also had the AC in the off position,

 $306\ 00:15:59.780 \longrightarrow 00:16:02.730$ or their utilities were shut off.

307 00:16:02.730 --> 00:16:06.180 So this really goes to show that there's something

 $308\ 00:16:06.180$ --> 00:16:08.680 other than the fact that they live alone,

309 00:16:08.680 --> 00:16:12.323 kind of contributing to their demise, essentially.

 $310\ 00:16:13.370 \longrightarrow 00:16:14.400$ And one of the things

311 00:16:14.400 --> 00:16:16.850 that I've been doing over the course of my career,

312 00:16:16.850 --> 00:16:18.880 especially more recently,

 $313\ 00:16:18.880 \longrightarrow 00:16:21.440$ is engaging in the public debate

314 00:16:21.440 --> 00:16:24.963 around how public health essentially,

315 00:16:26.180 --> 00:16:28.520 is linked to public policy.

316 00:16:28.520 --> 00:16:29.353 And of course,

 $317\ 00:16:29.353 \longrightarrow 00:16:33.637$ my kind of public policy of reference primarily

318 00:16:36.060 --> 00:16:40.010 is the Low Income Home Energy Assistance Program, LIHEAP.

319 00:16:40.010 --> 00:16:41.940 And just this past summer,

 $320\ 00:16:41.940 \rightarrow 00:16:44.633$ I wrote along with a former student of mine,

321 00:16:46.495 --> 00:16:49.813 Sonal Jessel, who's now working at WE ACT,

322 00:16:50.894 --> 00:16:53.900 a piece in City & amp; State in New York,

 $323\ 00:16:53.900 \longrightarrow 00:16:56.470$ which is basically read by policymakers

 $324\ 00:16:56.470 \longrightarrow 00:16:59.160$ about the need to kind of revisit LIHEAP

325 00:17:00.000 --> 00:17:02.550 in some ways, because in many states,

326 00:17:02.550 --> 00:17:04.303 but especially in New York,

327 00:17:07.240 --> 00:17:11.120 only AC distribution is available.

 $328\ 00:17:11.120 \longrightarrow 00:17:14.980$ So actually acquiring an air conditioning unit.

 $329\ 00:17:14.980 \longrightarrow 00:17:18.190$ But the cost of running the electricity

330 00:17:18.190 --> 00:17:22.240 isn't covered by Low Income Home Energy Assistance Program,

 $331\ 00:17:22.240 \longrightarrow 00:17:25.023$ because it's primarily a heating subsidy.

332 00:17:29.623 --> 00:17:31.270 So basically, we're asking,

333 00:17:31.270 --> 00:17:32.830 you know, kind of policymakers

 $334\ 00:17:32.830 \longrightarrow 00:17:37.020$ to revisit what the kind of stipulations

335 00:17:37.020 --> 00:17:39.970 for receipt of LIHEAP might look like for households.

336 00:17:39.970 --> 00:17:43.440 In fact, to kind of preserve health,

 $337\ 00:17:43.440 \longrightarrow 00:17:45.423$ but also to prevent deaths.

 $338\ 00:17:46.410 \longrightarrow 00:17:48.203$ And then more recently,

339 00:17:49.370 --> 00:17:52.980 I wrote a piece in USA Today,

340 00:17:52.980 --> 00:17:57.980 that talks on the one hand about heating, home heating.

341 00:17:58.270 --> 00:17:59.930 And the fact that,

342 00:17:59.930 --> 00:18:04.330 the cost of heating will actually increase significantly

 $343\ 00:18:04.330 \longrightarrow 00:18:08.030$ this heating season, as in like right now.

 $344\ 00:18:08.030 \longrightarrow 00:18:10.720$ And that that will force people

 $345\ 00:18:10.720 \longrightarrow 00:18:15.720$ to make what to me are really inhumane,

 $346\ 00{:}18{:}15.760$ --> $00{:}18{:}20.310$ and unnecessary trade-offs between other basic needs,

 $347\ 00:18:20.310 \longrightarrow 00:18:23.923$ like food, and or medicine.

348 00:18:25.030 --> 00:18:29.033 It obviously has implications for not just thermal comfort,

349 00:18:30.010 --> 00:18:35.010 but like I said, a healthy and safe indoor temperature.

 $350\ 00:18:36.880 \longrightarrow 00:18:40.710$ Interestingly enough, the heating costs

351 00:18:40.710 --> 00:18:45.070 that are increasing the most are actually also fossil fuels.

352 00:18:45.070 --> 00:18:49.360 So it's natural gas, heating oil, propane.

 $353\ 00:18:49.360 \longrightarrow 00:18:53.270$ And those are also the kind of heating sources

 $354\ 00:18:53.270 \longrightarrow 00:18:57.590$ used primarily by lower income groups.

 $355\ 00:18:57.590 \longrightarrow 00:18:59.090$ You know, there's obviously the connection

 $356\ 00:18:59.090 \longrightarrow 00:19:01.920$ to energy efficiency, to health,

 $357\ 00:19:01.920 \longrightarrow 00:19:03.760$ not just for the elderly,

 $358\ 00:19:03.760 \longrightarrow 00:19:06.100$ but really across the life force,

 $359\ 00:19:06.100 \longrightarrow 00:19:09.450$ including the very young and prenatally.

360 00:19:09.450 --> 00:19:11.300 This obviously, I have driven,

361 00:19:11.300 --> 00:19:14.410 I think the point that this is a matter of survival,

 $362\ 00:19:14.410 \longrightarrow 00:19:17.460$ but also a matter of environmental justice.

 $363\ 00:19:17.460 \longrightarrow 00:19:19.000$ And so with that,

 $364\ 00:19:19.000 \longrightarrow 00:19:20.180$ I'd like to get into

 $365\ 00:19:20.180 \longrightarrow 00:19:22.330$ well, what is energy insecurity?

366 00:19:22.330 --> 00:19:23.643 Because at some point,

367 00:19:24.560 --> 00:19:26.540 you know, all of this backdrop

368 00:19:27.420 --> 00:19:29.700 is important information to know,

369 00:19:29.700 --> 00:19:32.930 but ultimately, kind of naming the phenomenon

 $370\ 00:19:32.930 \longrightarrow 00:19:35.040$ was pretty critical.

371 00:19:35.040 --> 00:19:37.210 And I can't take credit for coining the term

372 00:19:37.210 --> 00:19:39.140 but I certainly (mumbles)

373 00:19:39.140 --> 00:19:40.410 You know, I'm the scholar that kind of operationalized

 $374\ 00:19:44.089 \longrightarrow 00:19:46.490$ the concept of energy insecurity

 $375\ 00:19:46.490 \longrightarrow 00:19:49.020$ and has basically defined

376 00:19:49.020 --> 00:19:54.020 like what the dimensions of this phenomenon happen to be.

377 00:19:56.050 --> 00:19:58.520 And it sits as a,

378 00:19:58.520 --> 00:20:01.120 again, I'm not sure why this is kind of going back on me.

379 00:20:01.120 --> 00:20:06.120 But anyway, it sits as a kind of a basic necessity of life.

380 00:20:06.380 --> 00:20:10.120 So Maslow's Hierarchy of Needs would place household energy

 $381\ 00:20:10.120 \longrightarrow 00:20:13.240$ really as a kind of a base

382 00:20:13.240 --> 00:20:16.440 in the pyramid of physiological needs,

383 00:20:16.440 --> 00:20:20.100 that are warmth or cooling depending on the season.

384 00:20:20.100 --> 00:20:22.560 The World Health Organization a while ago talked

385 00:20:22.560 --> 00:20:26.780 about energy being essential to meeting basic needs,

386 00:20:26.780 --> 00:20:28.620 a prerequisite for health,

 $387\ 00:20:28.620 \longrightarrow 00:20:30.860$ but something also that's ignored.

388 00:20:30.860 --> 00:20:35.860 And I'm really happy to say that that's no longer the case.

389 00:20:36.030 --> 00:20:39.430 I don't think that people are ignoring the issue as much.

390 00:20:39.430 --> 00:20:41.060 They may or may not be kind of paying

391 00:20:41.060 --> 00:20:42.920 as much attention as it merits.

392 $00{:}20{:}42.920 \dashrightarrow 00{:}20{:}45.730$ But it certainly has received more attention

393 00:20:45.730 --> 00:20:46.680 in the decade or so,

 $394\ 00:20:46.680 \longrightarrow 00:20:48.840$ since I've been working in this space.

395 00:20:48.840 --> 00:20:49.870 One of the pieces

396 00:20:49.870 --> 00:20:53.200 that I think is really kind of important to recognize

397 00:20:53.200 --> 00:20:57.000 is that, you know, well, let's just define this.

398 00:20:57.000 --> 00:20:57.950 So it's an inability

399 00:20:57.950 --> 00:21:01.250 to adequately meet basic household energy needs.

 $400\ 00:21:01.250 \longrightarrow 00:21:02.850$ It has three dimensions.

 $401\ 00:21:02.850 \longrightarrow 00:21:06.020$ So there's an economic dimension which,

402 00:21:06.020 --> 00:21:08.300 like rent burden is really about

 $403\ 00:21:08.300 \longrightarrow 00:21:12.450$ how much of household income is distributed

 $404\ 00:21:12.450 \longrightarrow 00:21:15.520$ or allocated to energy expenses.

 $405\ 00:21:15.520 \longrightarrow 00:21:17.050$ There's a physical component,

 $406\ 00:21:17.050 \longrightarrow 00:21:20.420$ which is about the inefficiencies

407 00:21:22.620 --> 00:21:24.930 in the actual, like performance,

408 00:21:24.930 --> 00:21:29.000 the energy performance of buildings, or homes,

 $409\ 00:21:29.000 \longrightarrow 00:21:31.930$ as well as the kind of availability

410 00:21:31.930 --> 00:21:34.540 and performance of appliances

 $411\ 00:21:34.540 \longrightarrow 00:21:36.620$ and other energy infrastructure.

 $412\ 00:21:36.620 \longrightarrow 00:21:39.492$ Plus the fact that people are doing things

 $413\ 00:21:39.492 \longrightarrow 00:21:42.550$ and they're managing as best they can

414 00:21:42.550 --> 00:21:44.750 under different circumstances.

415 00:21:44.750 --> 00:21:49.130 Another kind of way in which I've understood this phenomenon

416 00:21:49.130 --> 00:21:52.820 is that there are acute forms of energy insecurity.

417 00:21:52.820 --> 00:21:56.980 So power outages are really kind of a prime example, right?

418 00:21:56.980 --> 00:22:00.410 So you know, power outages as a result of the wild fires

419 00:22:00.410 --> 00:22:02.920 in California, for instance,

420 00:22:02.920 --> 00:22:06.103 or the hurricane in Puerto Rico.

421 00:22:07.490 --> 00:22:08.903 Also shut offs.

422 00:22:09.770 --> 00:22:12.770 When people are unable to pay their utility bills

 $423\ 00:22:12.770 \longrightarrow 00:22:14.460$ and they're shut off,

 $424\ 00:22:14.460$ --> 00:22:18.050 that kind of represents an acute form of energy insecurity.

 $425\ 00:22:18.050 \longrightarrow 00:22:20.130$ Fuel shortages, in this case,

426 00:22:20.130 --> 00:22:24.530 you know, kind of price increases that are pretty shocking,

 $427\ 00{:}22{:}24.530$ --> 00:22:28.390 might represent an acute form of energy insecurity.

428 00:22:28.390 --> 00:22:31.320 And one of the things that I kind of like to say,

429 00:22:31.320 --> 00:22:34.280 as a distinguishing factor between acute and chronic,

430 00:22:34.280 --> 00:22:38.880 is that acute can actually have a wider spread impact

 $431\ 00:22:38.880 \longrightarrow 00:22:41.980$ across socio-economic position.

432 00:22:41.980 --> 00:22:44.910 Whereas chronic energy insecurity has a lot more

433 00:22:44.910 --> 00:22:48.260 to do with people that might face these challenges

 $434\ 00:22:48.260 \longrightarrow 00:22:50.470$ as a result of being poor,

435 00:22:50.470 --> 00:22:53.360 or as a result of living in a certain housing type.

 $436\ 00:22:53.360 \longrightarrow 00:22:56.640$ For instance, a mobile home or,

437 00:22:56.640 --> 00:23:01.480 you know, sometimes in public or subsidized housing

438 00:23:01.480 --> 00:23:04.810 that hasn't necessarily been kind of upgraded

 $439\ 00{:}23{:}04{.}810 \dashrightarrow 00{:}23{:}07{.}293$ to meet today's energy performance standards.

440 00:23:08.510 --> 00:23:11.730 You know, kind of situating those three dimensions

441 $00{:}23{:}11.730 \dashrightarrow 00{:}23{:}16.650$ so that the financial or economic components,

 $442\ 00:23:16.650 \longrightarrow 00:23:19.163$ the housing conditions component,

443 00:23:20.010 --> 00:23:22.270 and the behavioral piece,

444 00:23:22.270 --> 00:23:24.420 it's also really important to be thinking

 $445\ 00:23:24.420 \longrightarrow 00:23:26.560$ about kind of energy access,

 $446\ 00:23:26.560 \rightarrow 00:23:31.020$ like the acute kind of form of energy insecurity,

447 00:23:31.020 --> 00:23:36.020 climate threats, including extreme weather, cold heat, etc,

448 00:23:37.790 --> 00:23:39.470 and the just transition.

449 00:23:39.470 --> 00:23:41.350 So there's a lot of discussion.

450 00:23:41.350 --> 00:23:44.040 In fact, you know, COP26 is happening right now.

 $451\ 00:23:44.040 \longrightarrow 00:23:47.800$ People are in Glasgow at the moment

452 00:23:47.800 --> 00:23:51.300 discussing what happens in terms of clean heat,

 $453\ 00:23:51.300 \longrightarrow 00:23:53.370$ or clean energy transitions,

 $454\ 00:23:53.370 \longrightarrow 00:23:56.020$ and how do we reduce our carbon footprint.

455 00:23:56.020 --> 00:23:59.140 And a big part of that is also of importance,

 $456\ 00:23:59.140 \longrightarrow 00:24:00.140$ particularly for people

 $457\ 00:24:00.140 \longrightarrow 00:24:04.020$ who are relying on fossil fuels at the moment $458\ 00:24:04.020 \longrightarrow 00:24:07.830$ and are probably least able to make the transition

 $459\ 00:24:08.910 \longrightarrow 00:24:10.383$ on their own.

 $460\ 00:24:10.383 \longrightarrow 00:24:12.780$ So that's the kind of broader context

461 00:24:12.780 --> 00:24:14.863 I wish to understand these dynamics.

462 00:24:16.400 --> 00:24:18.870 So this is now dated.

463 00:24:18.870 --> 00:24:20.490 And I want to say that,

 $464\ 00:24:20.490 \longrightarrow 00:24:21.730$ there are going to be

465 00:24:21.730 --> 00:24:22.563 well, first of all,

466 00:24:22.563 --> 00:24:25.642 there's a new residential energy consumption survey

 $467\ 00:24:25.642 \longrightarrow 00:24:28.680$ that was distributed,

 $468\ 00:24:28.680 \longrightarrow 00:24:31.677$ and the data was collected in 2019 2020.

469 00:24:31.677 --> 00:24:35.560 And I was really happy to support that effort

 $470\ 00:24:35.560 \longrightarrow 00:24:37.430$ as an advisor on some of the questions

471 00:24:37.430 --> 00:24:38.850 around energy insecurity.

472 00:24:38.850 --> 00:24:42.290 But back in 2018,

473 00:24:42.290 --> 00:24:46.300 the Energy Information Administration released a report

 $474\ 00:24:46.300 \longrightarrow 00:24:49.460$ based on their 2015 RECS data that showed $475\ 00:24:49.460 \longrightarrow 00:24:51.580$ that one in three households in The United States

 $476\ 00:24:51.580 \longrightarrow 00:24:53.660$ are actually energy insecure.

 $477\ 00:24:53.660 \longrightarrow 00:24:55.690$ And by their kind of definition,

 $478\ 00:24:55.690 \longrightarrow 00:24:57.580$ at that point, they were thinking about it

 $479\ 00:24:57.580 \longrightarrow 00:24:59.290$ in terms of those trade-offs

 $480\ 00:24:59.290 \longrightarrow 00:25:00.660$ that I've already described,

481 00:25:00.660 --> 00:25:01.770 the heat or eat.

482 00:25:01.770 --> 00:25:03.580 Like the, you know,

 $483\ 00:25:03.580 \longrightarrow 00:25:05.980$ kind of forgoing medicine,

 $484~00{:}25{:}05{.}980 \dashrightarrow > 00{:}25{:}09{.}210$ sometimes transportation, other things, other basic needs

485 00:25:09.210 --> 00:25:14.210 in order to meet their energy kind of cost obligations,

486 00:25:15.140 --> 00:25:16.770 receiving a disconnection notice

487 00:25:16.770 --> 00:25:18.990 or keeping the home at an unhealthy temperature.

488 00:25:18.990 --> 00:25:20.730 So, for some households,

 $489\ 00:25:20.730 \longrightarrow 00:25:22.680$ this is happening chronically right?

490 00:25:22.680 --> 00:25:25.040 The dark blue really kind of suggests

491 00:25:25.040 $\rightarrow 00:25:27.810$ that this is happening almost every month.

492 00:25:27.810 \rightarrow 00:25:29.920 And then the lighter blue is conditional.

493 00:25:29.920 --> 00:25:33.423 So it's happening kind of some months out of the year.

494 00:25:34.970 --> 00:25:38.260 But we also know that energy insecurity is patterned

 $495\ 00:25:38.260 \longrightarrow 00:25:41.280$ by social vulnerabilities.

496 $00{:}25{:}41.280 \dashrightarrow 00{:}25{:}43.520$ So that low-income households are more likely

 $497\ 00:25:43.520 \longrightarrow 00:25:45.040$ to be energy insecure.

 $498\ 00:25:45.040 \longrightarrow 00:25:46.940$ Households with children,

 $499\ 00:25:46.940 \longrightarrow 00:25:49.080$ people living in older homes,

 $500\;00{:}25{:}49.080 \dashrightarrow > 00{:}25{:}53.400$ African-American and Latinx populations are much more likely

 $501\ 00:25:53.400 \longrightarrow 00:25:55.140$ to be energy insecure.

 $502\ 00:25:55.140 \longrightarrow 00:25:56.740$ I'm going to put a pin on the elderly

 $503~00{:}25{:}56{.}740 \dashrightarrow 00{:}25{:}58{.}870$ because I think it's something that we'll come back to.

 $504\ 00:25:58.870 \longrightarrow 00:26:00.230$ But based on this information,

 $505\ 00{:}26{:}00{.}230 \dashrightarrow > 00{:}26{:}02{.}580$ you wouldn't think that the elderly are energy in secure,

 $506\ 00:26:02.580 \longrightarrow 00:26:03.413$ but they are.

507 00:26:04.340 --> 00:26:06.420 We actually use that same data

508 00:26:06.420 --> 00:26:09.110 to measure the national prevalence rate

509 00:26:09.110 --> 00:26:11.120 of disconnection notices,

 $510\ 00:26:11.120 \longrightarrow 00:26:12.760$ and disconnections.

511 00:26:12.760 --> 00:26:15.900 And what we found is that 3% of the population

512 00:26:15.900 --> 00:26:19.640 in The United States has actually received a disconnection.

513 00:26:19.640 --> 00:26:24.270 And just like the other forms of energy insecurity

 $514\ 00:26:24.270 \longrightarrow 00:26:26.320$ that were highlighted before,

 $515\ 00:26:26.320 \longrightarrow 00:26:27.950$ this is also patterned.

516 00:26:27.950 --> 00:26:32.600 So that low-income households, Black and Latinx households,

517 00:26:32.600 --> 00:26:34.990 but especially Black households.

518 00:26:34.990 --> 00:26:37.430 Households with a head of household

519 $00{:}26{:}37{.}430 \dashrightarrow 00{:}26{:}42{.}050$ that has a lower educational attainment rate,

 $520\ 00:26:42.050 \longrightarrow 00:26:43.883$ households with children,

 $521\ 00:26:44.860 \longrightarrow 00:26:47.630$ and also just adult households.

 $522\ 00:26:47.630 \longrightarrow 00:26:49.870$ So not the elderly.

523 00:26:49.870 --> 00:26:52.300 People living in mobile homes,

 $524\ 00:26:52.300 \longrightarrow 00:26:54.640$ and also single detached homes,

 $525\ 00:26:54.640 \longrightarrow 00:26:57.720$ people reporting inadequate insulation,

526 00:26:57.720 --> 00:27:00.460 and living in older homes, renters,

 $527\ 00:27:00.460 \longrightarrow 00:27:02.600$ people living in rural areas,

528 00:27:02.600 --> 00:27:04.880 and those living in the South and the Northeast

 $529\ 00:27:04.880 \longrightarrow 00:27:06.320$ were much more likely

 $530\ 00:27:06.320 \longrightarrow 00:27:09.383$ to have actually received a disconnection.

 $531\ 00:27:10.650 \longrightarrow 00:27:12.000$ Now, what do people do?

 $532\ 00:27:12.000 \longrightarrow 00:27:14.910$ So we talked a lot about coping strategies.

533 00:27:14.910 --> 00:27:19.200 And on the one hand there's the trade-off strategy,

534 00:27:19.200 --> 00:27:22.380 there's also the strategy around thermal discomfort,

535 00:27:22.380 --> 00:27:25.710 and then there's a strategy around energy assistance.

536 00:27:25.710 --> 00:27:27.140 And what we found is that,

 $537\ 00:27:27.140 \longrightarrow 00:27:29.640$ for households that receive no notice,

538 00:27:29.640 --> 00:27:32.950 most of them aren't doing anything really to cope.

 $539\ 00:27:32.950 \longrightarrow 00:27:34.170$ And that makes a lot of sense,

540 00:27:34.170 --> 00:27:37.700 because they may not see the threat as imminent.

541 00:27:37.700 --> 00:27:41.380 Now, once they've received the disconnection notice,

542 00:27:41.380 --> 00:27:45.810 many more families are actually turning to trade-offs,

 $543\ 00:27:46.920 \longrightarrow 00:27:49.193$ like foregoing their basic necessities,

 $544\ 00:27:50.330 \longrightarrow 00:27:52.490$ or doing that in combination

545 $00{:}27{:}52{.}490 \dashrightarrow 00{:}27{:}55{.}310$ with keeping the home at an unhealthy temperature,

 $546\ 00:27:55.310 \longrightarrow 00:28:00.310$ or seeking and receiving energy assistance.

547 00:28:00.670 --> 00:28:03.690 When they've actually experienced a disconnection,

548 00:28:03.690 --> 00:28:07.970 many more of them are turning to a lot of strategies

 $549\ 00:28:09.680 \longrightarrow 00:28:11.283$ to get by, essentially.

550 00:28:12.280 --> 00:28:16.180 And the kind of prevalence of these coping strategies

 $551\ 00:28:16.180 \longrightarrow 00:28:18.310$ just increases substantially.

 $552\ 00:28:18.310 \longrightarrow 00:28:19.890$ So that more people are keeping their homes

 $553\ 00:28:19.890 \longrightarrow 00:28:22.320$ at an unhealthy temperature foregoing,

 $554\ 00:28:22.320 \longrightarrow 00:28:25.170$ and also receiving assistance,

555 00:28:25.170 --> 00:28:27.220 but not as much as you would imagine,

556 00:28:27.220 --> 00:28:31.393 given the kind of crisis at hand with a disconnection.

557 00:28:33.300 --> 00:28:38.300 So obviously, we're kind of a public health crowd

558 00:28:38.570 --> 00:28:41.110 and we care about what this actually means

 $559\ 00:28:43.914 \longrightarrow 00:28:45.960$ in terms of health outcomes.

560 00:28:45.960 --> 00:28:49.210 So earlier, I shared a kind of a pathway or heuristic

561 00:28:49.210 --> 00:28:51.700 around the links between the different

562 00:28:51.700 --> 00:28:54.380 kind of components of housing

 $563\ 00:28:54.380 \longrightarrow 00:28:58.030$ and various health outcomes.

564 00:28:58.030 $\rightarrow 00:29:02.570$ And actually the same is true around energy.

565 00:29:02.570 --> 00:29:04.270 But energy is kind of situated.

 $566\ 00:29:04.270 \longrightarrow 00:29:05.780$ The three dimensions of energy

567 00:29:05.780 --> 00:29:09.410 are kind of situated within those larger processes

568 00:29:09.410 --> 00:29:14.020 of kind of housing and ratio residential segregation,

569 00:29:14.020 --> 00:29:16.090 and some of the other kind of factors

 $570\ 00:29:16.090 \longrightarrow 00:29:18.690$ that are happening at the neighborhood level,

 $571\ 00:29:18.690 \longrightarrow 00:29:21.250$ but also that kind of reflects

572 00:29:21.250 --> 00:29:23.920 the kind of discriminatory policies and practices

573 00:29:23.920 --> 00:29:25.670 that I mentioned before.

574 00:29:25.670 --> 00:29:27.300 And then in terms of outcomes,

 $575\ 00:29:27.300 \longrightarrow 00:29:29.080$ there's a whole host of them,

576 00:29:29.080 --> 00:29:33.170 some of them like really representing direct pathways

 $577\ 00:29:33.170 \longrightarrow 00:29:35.493$ to adverse health outcomes,

578 00:29:36.400 --> 00:29:39.510 as respiratory health, for instance, mental health.

579 $00{:}29{:}39{.}510 \dashrightarrow 00{:}29{:}42{.}630$ But also the ones that are kind of in route

 $580\ 00:29:42.630 \longrightarrow 00:29:43.790$ to these health outcomes,

581 00:29:43.790 --> 00:29:47.310 like environmental consequences and social consequences

582 00:29:47.310 --> 00:29:49.590 that might impact ultimately,

583 00:29:49.590 --> 00:29:51.920 some of the physical and mental health consequences

 $584\ 00:29:51.920 \longrightarrow 00:29:54.290$ that are kind of listed here.

585 00:29:54.290 \rightarrow 00:29:55.980 And we wanted to kind of understand this.

 $586\ 00:29:55.980 \longrightarrow 00:29:57.660$ All of these insights really came

587 00:29:57.660 --> 00:30:00.410 from doing qualitative work,

 $588\ 00:30:00.410 \longrightarrow 00:30:02.080$ asking people about their lives

589 00:30:02.080 --> 00:30:04.330 and about their circumstances.

590 00:30:04.330 --> 00:30:08.690 And ultimately, we did a study in Washington Heights,

591 00:30:08.690 \rightarrow 00:30:11.120 which is across the bridge from the Bronx.

 $592\ 00:30:11.120 \longrightarrow 00:30:12.420$ It's in upper Manhattan.

593 00:30:12.420 --> 00:30:16.390 It's also where the School of Public Health at Columbia is.

 $594\ 00:30:16.390 \longrightarrow 00:30:19.010$ And the local hospital

 $595\ 00:30:19.010 \longrightarrow 00:30:24.010$ as a result of changes in Medicaid,

596 00:30:26.120 --> 00:30:28.870 and the need to kind of reduce acute care visits,

597 00:30:28.870 --> 00:30:31.690 and better understand and serve the community

 $598\ 00:30:31.690 \longrightarrow 00:30:33.910$ asked us in the school of public health,

 $599\ 00:30:33.910 \longrightarrow 00:30:35.810$ to kind of better understand different pieces.

 $600\ 00:30:35.810 \longrightarrow 00:30:37.440$ And because I was on the team,

601 00:30:37.440 --> 00:30:39.810 I added some questions about energy insecurity.

 $602\ 00:30:39.810 \longrightarrow 00:30:42.000$ These are the questions that were asked,

 $603\ 00:30:42.000 \longrightarrow 00:30:47.000$ and it's based on Cook at al 2008 paper

60400:30:49.040 --> 00:30:51.020 where they kind of have a brief indicator

605 00:30:51.020 --> 00:30:52.870 of energy insecurity,

 $606\ 00{:}30{:}52.870$ --> $00{:}30{:}57.040$ based on having received a letter using the stove to heat,

 $607\ 00:30:57.040 \longrightarrow 00:30:58.360$ not having heat,

60800:30:58.360 $\operatorname{-->}$ 00:31:01.760 and also having received a shutoff.

 $609\ 00:31:01.760 \longrightarrow 00:31:03.360$ And what we found in that study is that,

610 00:31:03.360 --> 00:31:06.510 27% of residents in Washington Heights

 $611\ 00:31:06.510 \longrightarrow 00:31:08.200$ were considered moderately

612 00:31:08.200 --> 00:31:12.160 or severely energy insecure about half and half

 $613\ 00:31:12.160 \longrightarrow 00:31:13.970$ as seen here.

 $614\ 00:31:13.970 \longrightarrow 00:31:16.810$ And you know, the social patterning exists.

 $615\ 00:31:16.810 \longrightarrow 00:31:20.200$ We know that households with children

616 00:31:20.200 --> 00:31:23.750 of Black and Latinx in low-income households

 $617\ 00:31:23.750 \longrightarrow 00:31:26.750$ were all more likely to be energy insecure,

 $618\ 00:31:26.750 \longrightarrow 00:31:29.220$ moderately or severely so.

 $619\ 00:31:29.220 \rightarrow 00:31:31.490$ We also thought it was really interesting

 $620\ 00{:}31{:}31{.}490 \dashrightarrow 00{:}31{:}34{.}900$ that one in two households that were energy in secure

621 00:31:34.900 --> 00:31:37.340 were also food insecure.

 $622\ 00:31:37.340 \longrightarrow 00:31:40.550$ But that those that received food-related aid,

623 00:31:40.550 --> 00:31:42.910 so those that received

62400:31:42.910 --> 00:31:45.700 Supplemental Nutritional Assistance Program benefits, SNAP,

625 00:31:45.700 --> 00:31:48.760 and or Women, Infants and Children, WIC benefits $626\ 00:31:48.760 \longrightarrow 00:31:50.963$ were much more likely to be secure. $627\ 00:31:51.910 \rightarrow 00:31:56.910$ Some earlier work had actually shown by Cook et al 628 00:31:58.730 --> 00:32:01.790 at BMC, at Boston Medical Center, $629\ 00:32:01.790 \longrightarrow 00:32:02.720$ that the receipt 630 00:32:02.720 --> 00:32:06.130 of Low Income Home Energy Assistance Program, LIHEAP 631 00:32:06.130 --> 00:32:09.210 actually created opportunities, $632\ 00:32:09.210 \longrightarrow 00:32:13.060$ or was associated with more food security $633\ 00:32:13.060 \longrightarrow 00:32:16.170$ as well as kind of developmental markers for children $634\ 00:32:17.615 \longrightarrow 00:32:20.370$ in the affirmative. $635\ 00:32:20.370 \longrightarrow 00:32:21.840$ And that was hopeful $636\ 00:32:21.840$ --> 00:32:26.840 because these are corresponding uncomplimentary findings. 637 00:32:26.860 --> 00:32:28.300 Essentially, we also found $638\ 00:32:28.300 \longrightarrow 00:32:31.290$ that energy insecurity was associated $639\ 00:32:31.290 \longrightarrow 00:32:34.470$ with respiratory health, asthma and pneumonia, $640\ 00:32:34.470 \rightarrow 00:32:39.000$ as well as self reported anxiety, depression, 641 00:32:39.000 --> 00:32:42.210 and diagnose depressive disorder, $642\ 00:32:42.210 \longrightarrow 00:32:43.800$ as well as sleep quality. 643 00:32:43.800 --> 00:32:46.480 And all of those things kind of make sense, $644 \ 00:32:46.480 \longrightarrow 00:32:49.550$ also makes sense that it wasn't associated with diabetes, $645\ 00:32:49.550 \longrightarrow 00:32:52.850$ for instance, hypertension, or accidental falls. 646 00:32:52.850 --> 00:32:54.540 Although I would say, $647\ 00:32:54.540 \rightarrow 00:32:58.500$ chronic conditions, and energy insecurity 648 00:32:58.500 --> 00:33:01.580 are probably adversely linked. $649\ 00:33:01.580 \longrightarrow 00:33:03.810$ So these days, 650 00:33:03.810 --> 00:33:05.390 I'm writing a book.

651 00:33:05.390 --> 00:33:06.367 And I'm writing a book called,

652 00:33:06.367 --> 00:33:09.550 "Powerless: The People's Struggle for Energy in America."

653 00:33:09.550 --> 00:33:12.970 And my goal in this book is to humanize energy,

 $654\ 00:33:12.970 \longrightarrow 00:33:13.803$ in some ways,

655 00:33:13.803 --> 00:33:16.500 because we haven't really thought enough about this issue

 $656\ 00:33:16.500 \longrightarrow 00:33:18.000$ and we certainly haven't really thought

 $657\ 00:33:18.000 \longrightarrow 00:33:20.800$ about how energy is necessarily

 $658\ 00:33:20.800 \longrightarrow 00:33:23.780$ like affecting our day to day lives.

659 00:33:23.780 --> 00:33:27.080 And I'm going to test out a few of my stories.

660 00:33:27.080 --> 00:33:28.630 This is a story about Edith.

661 00:33:28.630 --> 00:33:29.463 This is the chapter,

 $662\ 00:33:29.463 \longrightarrow 00:33:30.920$ my second chapter in the book

 $663\ 00:33:30.920 -> 00:33:33.670$ and the one that I'm currently working on.

664 00:33:33.670 --> 00:33:38.670 And it's about a woman who basically dedicated herself

 $665\ 00:33:38.870 \longrightarrow 00:33:41.580$ to taking care of her dying father,

 $666\ 00{:}33{:}41.580$ --> $00{:}33{:}46.580$ in a house in Detroit that they bought, and lived in,

667 00:33:47.950 --> 00:33:49.600 you know, basically,

668 00:33:49.600 --> 00:33:53.570 during the kind of great migration of African-Americans

66900:33:53.570 --> 00:33:57.240 from the South to Northern cities for opportunities,

670 00:33:57.240 --> 00:33:58.790 for economic opportunities,

671 00:33:58.790 --> 00:34:00.830 and for upward social mobility.

 $672\ 00{:}34{:}00{.}830$ --> $00{:}34{:}05{.}050$ And this house kind of represented so much of that.

 $673\ 00:34:05.050 \longrightarrow 00:34:07.913$ It also represented the decline of the city.

674 00:34:08.810 --> 00:34:13.113 In fact, not only did her father die in this house,

 $675\ 00:34:15.130 \longrightarrow 00:34:18.313$ this house also was dying by itself.

676 00:34:19.290 --> 00:34:21.100 And its major organs,

 $677\ 00:34:21.100 \longrightarrow 00:34:26.100$ which I consider to be the heating infrastructure $678\ 00:34:26.670 \rightarrow 00:34:30.190$ and the other kind of energy infrastructure $679\ 00:34:30.190 \longrightarrow 00:34:34.540$ were the first signs of its demise. 680 00:34:34.540 --> 00:34:37.710 And so, Edith, basically, $681\ 00:34:37.710 \longrightarrow 00:34:39.770$ at some point the boiler gave up. $682\ 00:34:39.770 \longrightarrow 00:34:41.563$ It was decades old. $683\ 00:34:43.170 \longrightarrow 00:34:48.170$ She had lights that were basically powered by natural gas. $684\ 00:34:48.720 \rightarrow 00:34:51.810$ If you can imagine a time when the lights in our homes $685\ 00:34:51.810 \longrightarrow 00:34:53.743$ were not powered by electricity. $686\ 00:34:55.062 \longrightarrow 00:34:56.220$ Her son became (indistinct) 687 00:34:56.220 --> 00:35:00.770 You know, like he started to kind of work on addressing $688\ 00:35:00.770 \longrightarrow 00:35:03.110$ the light that had gone out, $689\ 00:35:03.110 \longrightarrow 00:35:07.380$ not realizing that it was powered by natural gas. $690\ 00:35:07.380 \longrightarrow 00:35:10.773$ And eventually, that caused a gas leak. $691\ 00:35:11.810 \longrightarrow 00:35:14.270$ She called the local energy provider. 692 00:35:14.270 --> 00:35:16.190 The energy provider, $693\ 00:35:16.190 \longrightarrow 00:35:18.610$ this was during the winter time, $694\ 00:35:18.610 \rightarrow 00:35:22.690$ basically, her heat had already stopped working $695\ 00:35:22.690 \longrightarrow 00:35:27.690$ because the boiler, the furnace gave way. $696\ 00:35:28.080 \longrightarrow 00:35:30.620$ When the representative $697\ 00:35:30.620 \longrightarrow 00:35:33.110$ from the local utility company came by 698 00:35:33.110 --> 00:35:35.360 he's like, "listen, I can't do much for you, $699\ 00:35:35.360 \longrightarrow 00:35:37.580$ I actually have to turn off your gas." $700\ 00:35:37.580 \longrightarrow 00:35:39.840$ So the gas stove that she was using for heat $701\ 00:35:39.840 \longrightarrow 00:35:41.680$ was no longer an option. $702\ 00:35:41.680 \longrightarrow 00:35:42.513$ And at that point,

703 00:35:42.513 --> 00:35:47.277 she was kind of resorting to using a kerosene heater,

704 00:35:48.790 --> 00:35:53.790 which cost her about \$40 to fill every three or four days.

 $705\;00{:}35{:}54.660 \dashrightarrow 00{:}35{:}57.603$ And she could only warm her actual be droom.

706 00:36:01.007 --> 00:36:02.440 In that process,

 $707\ 00{:}36{:}02.440$ --> $00{:}36{:}06.490$ she was not only introducing the risk of fire, for instance,

 $708\ 00:36:06.490 \longrightarrow 00:36:07.960$ but also freezing pipes.

709 00:36:07.960 --> 00:36:08.793 So at some point,

710 00:36:08.793 - 00:36:12.000 she also didn't have running water.

711 00:36:12.000 --> 00:36:14.210 And it was just a cascading effect,

712 00:36:14.210 --> 00:36:19.120 a really bad kind of circumstances in this home.

713 00:36:19.120 --> 00:36:22.000 And these pictures are actually from Zillow,

714 00:36:22.000 --> 00:36:26.440 because she couldn't stay in that house anymore.

715 00:36:26.440 --> 00:36:31.320 And it was actually the person that had recommended that she

716 00:36:33.300 --> 00:36:35.580 well, the HVAC guy,

717 00:36:35.580 --> 00:36:38.130 the heating, ventilation and air conditioning person

718 $00:36:38.130 \rightarrow 00:36:43.130$ that came in to diagnose her dying furnace

719 00:36:43.900 --> 00:36:46.770 told her like, maybe you should actually just move.

 $720\ 00:36:46.770 \longrightarrow 00:36:48.490$ The people from her church

721 00:36:49.960 --> 00:36:51.750 that had provided the kerosene heater

 $722\ 00:36:51.750 \longrightarrow 00:36:53.530$ kind of suggested the same thing.

723 00:36:53.530 --> 00:36:55.600 A month after I interviewed her,

 $724\ 00:36:55.600 \longrightarrow 00:36:58.370$ she did put the house on the market.

725 00:36:58.370 --> 00:37:01.430 Again, you know, those kind of four pillars of housing

 $726\ 00:37:01.430 \longrightarrow 00:37:03.880$ with consistency being important,

 $727\ 00:37:03.880 \longrightarrow 00:37:06.140$ she wasn't able to stay in a home

 $728\ 00{:}37{:}06.140$ --> $00{:}37{:}11.140$ that not only had kind of important memories for her family

729 00:37:11.600 --> 00:37:14.603 and represented so much about their upward mobility.

730 00:37:15.440 --> 00:37:19.120 But she had to basically kind of evacuate

 $731\ 00:37:19.120 \longrightarrow 00:37:21.760$ because the conditions were no longer tenable

 $732\ 00:37:21.760 \longrightarrow 00:37:23.270$ for her to live in.

 $733\ 00:37:23.270 \longrightarrow 00:37:26.250$ And this is not so unique,

734 00:37:26.250 --> 00:37:30.240 in the experience of many people living in different homes

 $735\ 00:37:30.240 \longrightarrow 00:37:32.260$ that are inherited,

 $736\ 00:37:32.260 \longrightarrow 00:37:34.260$ and that have conditions issues

737 00:37:34.260 --> 00:37:36.410 that make it kind of impossible

 $738\ 00:37:36.410 \longrightarrow 00:37:38.190$ for people to actually live in.

739 00:37:38.190 --> 00:37:41.070 I won't get into these stories with as much depth,

740 00:37:41.070 --> 00:37:42.980 but this is a woman that I met in Alabama,

741 $00:37:42.980 \rightarrow 00:37:46.070$ who wrote a letter to her utility provider,

742 00:37:46.070 --> 00:37:49.820 and is like, listen, I know I don't use as much energy

743 $00:37:49.820 \rightarrow 00:37:54.820$ but I've never seen bills that were this high.

744 00:37:56.490 $\rightarrow 00:37:58.430$ But the challenge, of course,

 $745\ 00:37:58.430 \longrightarrow 00:38:00.780$ is that she couldn't finish the,

746 00:38:00.780 --> 00:38:02.240 she couldn't tell her story

747 00:38:02.240 $\rightarrow 00:38:04.900$ because she couldn't finish the letter.

748 $00:38:04.900 \rightarrow 00:38:08.010$ And that has everything to do with literacy,

749 00:38:08.010 --> 00:38:09.700 not just energy literacy,

 $750\ 00:38:09.700 \longrightarrow 00:38:11.630$ but just basic literacy,

 $751\ 00:38:11.630 \longrightarrow 00:38:13.120$ in terms of people's ability

 $752\ 00:38:13.120 \longrightarrow 00:38:15.220$ to really advocate for themselves,

 $753\ 00:38:15.220 \longrightarrow 00:38:19.650$ using the tools of writing a letter.

754 00:38:19.650 --> 00:38:20.670 And while I was with her,

755 00:38:20.670 --> 00:38:23.630 I actually finished writing that letter for her

756 00:38:23.630 --> 00:38:25.450 so that she could submit it.

757 00:38:25.450 --> 00:38:28.440 And another woman that I met here in New York City,

758 00:38:28.440 --> 00:38:31.220 who basically was praying to God,

759 00:38:31.220 --> 00:38:33.310 because she was so worried about her bills,

 $760\ 00:38:33.310 \longrightarrow 00:38:37.500$ she kept her oil tank, you know.

761 00:38:37.500 --> 00:38:41.520 She monitors so closely how much energy she used,

762 00:38:41.520 --> 00:38:45.940 that ultimately, she was always cold in the home.

763 00:38:45.940 --> 00:38:48.830 And she basically says, "I suffer."

764 00:38:48.830 --> 00:38:52.530 This is really kind of the private form of suffering

765 $00:38:52.530 \rightarrow 00:38:55.120$ that makes people not just worry at night

766 $00:38:56.600 \rightarrow 00:38:58.880$ but also kind of be sick

767 00:38:58.880 --> 00:39:01.670 and ultimately sometimes perish in their own homes.

768 00:39:01.670 --> 00:39:03.380 So let's talk about housing interventions.

769 00:39:03.380 --> 00:39:04.700 And I'm gonna go through this quickly.

770 00:39:04.700 --> 00:39:08.320 I want to shout out Daniel Cajon,

771 00:39:08.320 --> 00:39:11.420 who will be joining your faculty and your center

772 00:39:12.500 --> 00:39:13.670 next academic year.

773 00:39:13.670 --> 00:39:16.670 He has been a wonderful colleague,

774 00:39:16.670 --> 00:39:20.880 and first friend and mentee, now colleague,

775 00:39:20.880 --> 00:39:23.140 and we worked on a lot of these

 $776\ 00:39:23.140 \longrightarrow 00:39:25.560$ energy equity issues together.

777 $00:39:25.560 \rightarrow 00:39:30.560$ But he was also a very important partner

 $778\ 00:39:30.650 \longrightarrow 00:39:35.270$ in thinking through the clean heat transitions

779 00:39:35.270 --> 00:39:36.463 here in New York City.

 $780\ 00:39:37.340 \longrightarrow 00:39:38.970$ You know, things have gotten a lot better.

781 00:39:38.970 --> 00:39:40.870 I'm going to go through this very quickly,

782 00:39:40.870 \rightarrow 00:39:43.270 because I want to leave time for questions.

783 00:39:43.270 --> 00:39:46.950 But back in, about 2015,

784 00:39:46.950 --> 00:39:50.810 they had phased out the use of the dirtiest oil number six.

785 00:39:50.810 --> 00:39:52.820 And you can see just by its picture,

786 $00:39:52.820 \longrightarrow 00:39:56.920$ it's super heavy.

787 00:39:56.920 \rightarrow 00:40:00.170 And basically the incomplete combustion

788 00:40:00.170 $\rightarrow 00:40:03.440$ of not just number six,

789 00:40:03.440 --> 00:40:07.830 but it's kind of corresponding more diluted version,

790 00:40:07.830 --> 00:40:11.620 but still dirty version of oil number four,

791 00:40:11.620 $\rightarrow 00:40:14.350$ basically pollute the air.

 $792\ 00{:}40{:}14.350 \dashrightarrow 00{:}40{:}19.210$ So second to vehicular emissions are residential buildings

793 00:40:19.210 --> 00:40:23.590 and other buildings responsible for air conditioning.

794 00:40:23.590 --> 00:40:25.360 I'm sorry, for air pollution.

795 00:40:25.360 --> 00:40:30.360 And in this process, probably not surprisingly,

796 00:40:31.550 --> 00:40:35.850 there were many buildings that were burning dirty fuels,

797 00:40:35.850 --> 00:40:40.850 because, you know, New York City is a relatively old city,

798 00:40:41.800 --> 00:40:46.480 with buildings that were kind of turn of the last century,

799 00:40:46.480 --> 00:40:50.060 and also relying on those kind of energy technologies

 $800\ 00:40:50.060 \longrightarrow 00:40:51.163$ of yesteryear.

801 00:40:52.120 --> 00:40:56.960 Now, you know, this kind of phasing out of dirty fuels

 $802\ 00:40:56.960 \longrightarrow 00:40:59.233$ was an opportunity essentially,

803 00:41:00.079 --> 00:41:03.290 to kind of clean up the air.

80400:41:03.290 --> 00:41:05.650 And this was during the Bloomberg administration.

805 00:41:05.650 --> 00:41:07.620 And, you know, efficient as they were,

 $806\;00{:}41{:}07.620 \dashrightarrow 00{:}41{:}10.210$ they were like, oh, well, you should also may be consider

807 00:41:10.210 --> 00:41:12.370 other energy efficiency upgrades,

 $808\ 00:41:12.370 \longrightarrow 00:41:14.103$ and many buildings actually did.

809 00:41:16.558 --> 00:41:18.860 So there was kind of almost a complete phase out

 $810\ 00:41:18.860 \longrightarrow 00:41:23.707$ of the number six oil by the end of this.

811 00:41:23.707 --> 00:41:25.220 And many actually,

 $812\ 00{:}41{:}25{.}220$ --> $00{:}41{:}29{.}403$ about, over half had actually transitioned to clean fuels.

813 00:41:30.300 --> 00:41:33.373 But as Daniels kind of work suggests,

 $814\ 00:41:34.700 \longrightarrow 00:41:38.180$ this actually was not evenly distributed.

815 00:41:38.180 --> 00:41:43.180 So some of the kind of dirtiest fuels continued to be burned

81600:41:44.600 --> 00:41:49.200 in the lowest income communities in Northern Manhattan,

 $817\ 00:41:49.200 \longrightarrow 00:41:50.930$ and the Bronx primarily.

818 00:41:50.930 --> 00:41:53.740 So these are kind of environmental justice communities

 $819\ 00:41:53.740 \longrightarrow 00:41:55.970$ based on their racial composition,

 $820\ 00{:}41{:}55{.}970$ --> $00{:}41{:}59{.}050$ and the percent of poverty in the neighborhood.

 $821\ 00:41:59.050 \longrightarrow 00:42:01.940$ And they can little afford,

 $822\ 00:42:01.940 \longrightarrow 00:42:04.540$ still burning the dirtiest the fuels

 $823\ 00:42:04.540 \longrightarrow 00:42:08.530$ and yet, that's actually what is still happening

82400:42:08.530 --> 00:42:13.530 since number four oil is not to be phased out until 2030.

825 00:42:13.950 --> 00:42:18.950 And so that's kind of one cautionary tale

 $826\ 00:42:19.180 \longrightarrow 00:42:22.400$ about yes, the kind of large picture

827 00:42:22.400 --> 00:42:25.480 around transitioning to cleaner fuels,

828 00:42:25.480 --> 00:42:29.210 but also who might be left behind in doing so.

829 00:42:29.210 --> 00:42:32.490 Another area of intervention that I've looked at

 $830\ 00:42:32.490 \longrightarrow 00:42:34.773$ is the repositioning of public housing,

831 00:42:35.670 --> 00:42:40.060 known as the Rental Assistance Demonstration Program.

832 00:42:40.060 --> 00:42:43.700 So some of you may remember moving to Opportunity,

833 00:42:43.700 --> 00:42:45.240 or HOPE VI.

 $834\ 00:42:45.240 \longrightarrow 00:42:48.500$ Those were large housing interventions.

 $835\ 00:42:48.500 \longrightarrow 00:42:50.560$ What has happened as a result of,

 $836\ 00:42:50.560 \longrightarrow 00:42:52.630$ in some ways, the insights from like

837 00:42:52.630 --> 00:42:55.440 you can't just move people out of communities

 $838\ 00:42:55.440 \longrightarrow 00:42:57.910$ that they have known and belong to

 $839\ 00:42:57.910 \longrightarrow 00:42:59.950$ and feel connected to.

840 00:42:59.950 --> 00:43:04.950 Also, that decreasing the number of public housing units,

841 00:43:05.140 $\rightarrow 00:43:06.750$ does more in the way of

 $842\ 00:43:06.750 \longrightarrow 00:43:09.940$ actually dispossessing people of their homes,

 $843\ 00:43:09.940 \longrightarrow 00:43:12.600$ and of those beloved communities.

 $844\ 00:43:12.600 \rightarrow 00:43:15.440$ But that conditions issues are significant

845 00:43:15.440 --> 00:43:16.570 in public housing.

846 00:43:16.570 - 00:43:20.240 In fact, there are billions of dollars

847 00:43:20.240 --> 00:43:23.810 of capital backlogs in public housing

 $848\ 00:43:23.810 \longrightarrow 00:43:25.960$ that really cripple the opportunity

849 00:43:25.960 --> 00:43:28.380 for people living in public housing

 $850\ 00:43:28.380 \longrightarrow 00:43:32.710$ to enjoy truly habitable homes.

851 00:43:32.710 --> 00:43:37.527 And I basically looked at this transition

 $852\ 00{:}43{:}38{.}930$ --> $00{:}43{:}42{.}710$ in the first ever RAD site in The United States,

853 00:43:42.710 --> 00:43:45.020 which was in Fresno, California,

854 00:43:45.020 --> 00:43:47.440 as well as the second one in New York City,

 $855\ 00{:}43{:}47{.}440$ --> $00{:}43{:}50{.}870$ which was in Betances Houses in the South Bronx.

 $856~00{:}43{:}50{.}870$ --> $00{:}43{:}55{.}220$ And these are some before pictures of the conditions

 $857\ 00:43:57.960 \longrightarrow 00:43:59.930$ at Betances.

 $858\ 00:43:59.930 \longrightarrow 00:44:02.373$ And just to kind of give you a sense,

859 00:44:03.270 --> 00:44:06.057 I mean, you know, this is outside of the units

860 00:44:06.057 --> 00:44:10.630 and the kind of common stair
wells inside of the units

861 00:44:10.630 --> 00:44:11.740 and a bathroom.

862 00:44:11.740 --> 00:44:14.970 Mold obviously being a huge issue,

863 00:44:14.970 --> 00:44:17.020 water leaks, etc.

864 00:44:17.020 --> 00:44:19.910 At Betances they had, like redone the kitchens,

 $865\ 00:44:19.910 \longrightarrow 00:44:21.930$ the bathrooms, the floors,

 $866\ 00:44:21.930 \longrightarrow 00:44:25.310$ upgraded the windows to energy efficient ones,

867 00:44:25.310 --> 00:44:28.360 included safety measures, like cameras

 $868\ 00{:}44{:}28.360 \dashrightarrow 00{:}44{:}31.920$ and adjusting doors so that they actually shut

869 00:44:32.860 --> 00:44:35.050 and doing a number of kind of upgrades.

 $870\ 00:44:35.050 \longrightarrow 00:44:38.340$ But a big part of it was around the heating

871 00:44:38.340 --> 00:44:40.450 and ventilation systems.

87200:44:40.450 --> 00:44:43.810 When we did this work in Fresno, California, 873 00:44:43.810 --> 00:44:47.210 there they had actually upgraded to mini splits.

 $874\ 00:44:47.210 \longrightarrow 00:44:49.240$ So to heat pumps,

87500:44:49.240 --> 00:44:51.190 which we know are pretty efficient.

876 00:44:51.190 --> 00:44:52.420 In a place like Fresno

 $877\ 00:44:52.420 \longrightarrow 00:44:55.210$ where heating and cooling are both important,

878 00:44:55.210 $\rightarrow 00:44:56.950$ it was critical.

879 00:44:56.950 --> 00:44:58.410 And basically what we found,

 $880\ 00:44:58.410 \longrightarrow 00:45:00.870$ again, kind of consistent with that,

881 00:45:00.870 --> 00:45:03.670 the four pillars of housing kind of framework

 $882\ 00{:}45{:}03.670 \dashrightarrow 00{:}45{:}07.630$ is that these heating and cooling systems were upgraded.

883 00:45:07.630 --> 00:45:10.720 People had reported increased thermal comfort

884 00:45:10.720 --> 00:45:12.413 and temperature control.

885 00:45:13.490 --> 00:45:17.450 You know, having access to appliances

886 $00{:}45{:}17{.}450 \dashrightarrow 00{:}45{:}20{.}403$ that were newer and more efficient.

887 00:45:21.280 $\rightarrow 00:45:25.550$ Also, the kind of, just the aesthetics

 $888\ 00:45:25.550 \longrightarrow 00:45:27.730$ and the layout were better.

889 00:45:27.730 --> 00:45:30.283 People felt better about where they were living,

89000:45:31.690 --> 00:45:35.163 that they had actively done mold abatement, etc.

891 00:45:36.020 --> 00:45:40.430 People felt an increase in pride of place,

 $892\ 00:45:40.430 \longrightarrow 00:45:42.100$ and the fact that they lived in places

 $893\ 00:45:42.100 \longrightarrow 00:45:43.390$ that had been upgraded.

89400:45:43.390 --> 00:45:46.810 And for any of you who have done even minor upgrades

 $895\ 00:45:46.810 \longrightarrow 00:45:48.970$ to your living space, like painting,

 $896\ 00:45:48.970 \longrightarrow 00:45:50.770$ you realize just how important

 $897\ 00:45:51.641 \longrightarrow 00:45:54.420$ a refreshed space actually feels.

 $898\ 00:45:54.420 \longrightarrow 00:45:56.300$ But that didn't necessarily address

 $899\ 00:45:56.300 \longrightarrow 00:45:58.170$ all of the problems in public housing.

900 00:45:58.170 --> 00:45:59.003 I mean, obviously,

901 00:45:59.003 --> 00:46:03.610 when you have a complex system of providing housing

 $902\ 00:46:03.610 \longrightarrow 00:46:07.500$ with oftentimes, that external context,

903 00:46:07.500 --> 00:46:11.410 like the neighborhood conditions not being optimal,

 $904\ 00:46:11.410 \longrightarrow 00:46:14.350$ it continues to be felt among residents,

 $905\ 00:46:14.350 \longrightarrow 00:46:17.590$ and that we actually found in our work.

906 00:46:17.590 --> 00:46:21.300 At Betances, there was an interesting other component,

 $907\ 00:46:21.300 \longrightarrow 00:46:23.610$ which was about providing opportunities

 $908\ 00:46:23.610 \longrightarrow 00:46:25.410$ for people to come together.

909 00:46:25.410 --> 00:46:28.410 For them to come together to talk to actually like,

910 00:46:28.410 --> 00:46:32.810 you know, basically engage in very, very local forms

 $911\ 00:46:32.810 \longrightarrow 00:46:35.400$ of governance and democracy.

 $912\;00{:}46{:}35{.}400 \dashrightarrow> 00{:}46{:}40{.}400$ This is a woman who was basically at Catholic Charities,

913 00:46:41.100 --> 00:46:44.700 Paula Martinez, who was ushering the tenant.

 $914\ 00:46:44.700 \longrightarrow 00:46:45.630$ She was a community,

 $915\ 00:46:45.630 \longrightarrow 00:46:48.040$ like basically a resident organizer.

916 00:46:48.040 --> 00:46:52.810 And the whole point was to basically empower residents

917 00:46:52.810 --> 00:46:55.070 to come together to talk about a number of things,

91800:46:55.070 --> 00:46:58.480 not the least of which was a smoke free housing project

 $919\ 00:46:58.480 \longrightarrow 00:47:02.620$ that we were working with them to implement.

920 00:47:02.620 --> 00:47:06.980 And then in the two minutes that (mumbles)

921 00:47:06.980 --> 00:47:08.300 I want to kind of end in two minutes.

922 00:47:08.300 --> 00:47:12.900 So basically, it's not just housing level interventions

 $923\ 00:47:12.900 \longrightarrow 00:47:13.733$ that are important.

924 00:47:13.733 --> 00:47:16.840 Obviously, energy interventions are also important.

 $925\ 00:47:16.840 \longrightarrow 00:47:18.683$ Some of that is about framing.

926 00:47:20.140 --> 00:47:21.340 I wrote a paper a while ago

 $927\ 00:47:21.340 \rightarrow 00:47:25.230$ that basically linked energy sacrifice zones,

 $928\ 00:47:25.230 \longrightarrow 00:47:30.010$ to communities that are essentially sacrificing

929 00:47:30.010 --> 00:47:31.930 on a day to day basis,

930 00:47:31.930 --> 00:47:36.510 and provided ways of thinking about energy justice

931 00:47:36.510 --> 00:47:38.690 as a rights-based framework.

932 00:47:38.690 --> 00:47:40.383 Sorry, this is really annoying.

 $933\ 00:47:41.360 \longrightarrow 00:47:45.380$ So the right to healthy, sustainable energy,

934 00:47:45.380 --> 00:47:47.670 the right to the best available energy infrastructure,

 $935\ 00:47:47.670 \longrightarrow 00:47:49.130$ the right to affordable energy, $936\ 00:47:49.130 \longrightarrow 00:47:53.000$ and the right to uninterrupted energy service. 937 00:47:53.000 --> 00:47:55.370 This is Cecil Corbin-Mark, $938\ 00:47:55.370 \longrightarrow 00:47:57.950$ who we lost last year, really sadly. 939 00:47:57.950 --> 00:48:01.350 So he was a pioneer and a visionary $940\ 00:48:01.350 \longrightarrow 00:48:05.460$ in thinking about ways of providing access 941 00:48:05.460 -> 00:48:09.140 to clean energy and renewable energy 942 00:48:09.140 --> 00:48:11.393 in communities like Harlem, 943 00:48:13.375 $\rightarrow 00:48:14.860$ and upper Manhattan. 944 00:48:14.860 --> 00:48:16.670 And we need more of that, right? $945\ 00:48:16.670 \rightarrow 00:48:20.130$ That's part of what energy justice is about. 946 00:48:20.130 --> 00:48:21.560 As well as thinking about, 947 00:48:21.560 --> 00:48:23.560 is it really actually necessary for us 948 00:48:23.560 --> 00:48:24.730 to be shutting people off $949\ 00:48:24.730 \longrightarrow 00:48:28.233$ as a way of kind of collecting on payments? 950 00:48:30.850 --> 00:48:33.000 In California, they've actually passed $951\ 00:48:33.000 \longrightarrow 00:48:35.410$ the Disconnection Reform Act $952\ 00:48:35.410 \longrightarrow 00:48:37.685$ to reduce the number of disconnections $953\ 00:48:37.685$ --> 00:48:42.520 and enroll more people in medical baseline programs $954\ 00:48:42.520 \longrightarrow 00:48:45.840$ and other shutoff protection services $955\ 00:48:45.840 \rightarrow 00:48:50.590$ so that less households are impacted by disconnections. $956\ 00:48:50.590 \longrightarrow 00:48:52.883$ And then there's a LIHEAP piece. 957 00:48:53.780 --> 00:48:56.880 You know, in New York State, $958 \ 00:48:56.880 \longrightarrow 00:49:01.880$ there's only protections around the holiday season, $959\ 00:49:02.030 \longrightarrow 00:49:05.620$ and also for people that are of a certain age $960\ 00:49:05.620 \longrightarrow 00:49:09.083$ and have medical conditions. 961 00:49:10.660 --> 00:49:12.410 But deferred payments, $962\ 00:49:12.410 \longrightarrow 00:49:16.200$ so like a payment plan is actually the usual, 963 00:49:16.200 --> 00:49:18.570 sorry, I don't know what's going on.

964 00:49:18.570 --> 00:49:22.170 The usual kind of way in which people try

965 00:49:22.170 --> 00:49:25.760 to manage whatever outstanding bills they have

 $966\ 00:49:25.760 \longrightarrow 00:49:27.030$ with their utility companies,

967 00:49:27.030 --> 00:49:31.540 but often
times, these are promises that can't be kept.

968 00:49:31.540 \rightarrow 00:49:34.470 And so I'm gonna (mumbles)

969 00:49:34.470 --> 00:49:38.930 This is a kind of a rundown of energy justice solutions,

970 00:49:38.930 --> 00:49:42.543 rethinking energy utility rate structures,

 $971\ 00:49:43.720 \longrightarrow 00:49:45.920$ the shut off moratoriums,

972 00:49:45.920 --> 00:49:47.010 not just seasonally,

973 00:49:47.010 --> 00:49:49.800 but obviously COVID opened up the idea

 $974\ 00:49:49.800 \longrightarrow 00:49:52.020$ that maybe we don't have to turn people off,

975 00:49:52.020 --> 00:49:55.810 and we should find other ways of ensuring

976 00:49:55.810 --> 00:49:58.530 that people have access to energy assistance benefits,

977 00:49:58.530 --> 00:50:00.113 like the ones that I've mentioned before,

978 00:50:00.113 --> 00:50:01.970 kind of improving housing codes

 $979\ 00:50:01.970 \longrightarrow 00:50:04.210$ and energy standards and buildings,

 $980\ 00{:}50{:}04{.}210$ --> $00{:}50{:}08{.}650$ and also kind of clean energy policies that are inclusive,

981 00:50:08.650 \rightarrow 00:50:10.980 and that are intentional about ensuring

982 00:50:10.980 --> 00:50:14.380 that people of color and low-income folks

 $983\ 00:50:14.380 \longrightarrow 00:50:16.580$ are able to do their part.

 $984\ 00:50:16.580 \longrightarrow 00:50:19.310$ And this is this little story about me

985 00:50:19.310 --> 00:50:22.650 and basically, the fact that I do this kind of thing called

986 $00:50:22.650 \rightarrow 00:50:24.400$ social impact real estate

 $987\ 00:50:24.400 \longrightarrow 00:50:27.630$ where I have totally rehab buildings,

988 00:50:27.630 \rightarrow 00:50:30.240 and in the South Bronx where I grew up.

989 00:50:30.240 --> 00:50:33.030 And incorporated solar, for instance,

 $990\ 00:50:33.030 \longrightarrow 00:50:34.760$ and energy efficiency

991 00:50:34.760 --> 00:50:38.800 has been a really kind of interesting proof of concept,

992 00:50:38.800 --> 00:50:42.325 opportunity to think about reinvesting

 $993\ 00:50:42.325 \longrightarrow 00:50:45.330$ in low-income communities from within.

994 00:50:45.330 --> 00:50:48.030 And so with that, I will stop sharing,

 $995\ 00:50:48.030 \longrightarrow 00:50:51.360$ and invite all of you to ask questions.

996 00:50:51.360 -> 00:50:53.590 Sorry that I didn't need more time.

997 00:50:53.590 --> 00:50:57.130 It was may
be more than I could do in 40 minutes.

998 00:51:00.000 --> 00:51:02.346 And I also wanna just (mumbles)

999 00:51:02.346 --> 00:51:04.770 So Danya Keene, I know,

1000 00:51:04.770 --> 00:51:06.370 I'm here with our Arline Geronimus

1001 00:51:06.370 --> 00:51:08.170 at the Russell Sage Foundation,

1002 00:51:08.170 --> 00:51:09.650 and I'm a big fan of your work,

1003 00:51:09.650 --> 00:51:11.393 and I'm happy to see that you're here.

1004 00:51:13.236 --> 00:51:14.203 <v ->Thank you Diana.</v>

 $1005 \ 00:51:14.203 \longrightarrow 00:51:16.754$ I think this is very fascinating.

 $1006\ 00:51:16.754 \longrightarrow 00:51:19.627$ (indistinct)

1007 00:51:19.627 --> 00:51:21.390 I'm sure the students are enjoying

 $1008 \ 00:51:21.390 \longrightarrow 00:51:24.310$ this real world examples and experiences.

1009 00:51:24.310 --> 00:51:27.150 And actually, we have gathered a lot of questions for you

 $1010 \ 00:51:27.150 \longrightarrow 00:51:28.640$ from students already.

1011 00:51:28.640 --> 00:51:30.040 And I just want to remind you

1012 00:51:30.040 --> 00:51:32.550 that although we only have seven minutes left

1013 00:51:32.550 --> 00:51:35.360 but for our own audience online,

 $1014 \ 00:51:35.360 \longrightarrow 00:51:36.530$ if you do have a question,

 $1015 \ 00:51:36.530 \longrightarrow 00:51:38.813$ please post them in the chat box.

 $1016\ 00:51:39.830 \longrightarrow 00:51:43.120$ The first question is actually related to your,

 $1017 \ 00:51:43.120 \longrightarrow 00:51:44.370$ showing the examples

1018 00:51:44.370 --> 00:51:47.730 and also you mentioned a very interesting perspective

 $1019 \ 00:51:47.730 \longrightarrow 00:51:50.543$ of increasing the energy standard.

 $1020\ 00:51:53.360 \longrightarrow 00:51:55.670$ Several students have been interested in like,

 $1021 \ 00:51:57.720 \longrightarrow 00:52:00.520$ how feasible or beneficial with policies

 $1022 \ 00:52:00.520 \longrightarrow 00:52:03.770$ focused on the energy efficiency

 $1023 \ 00:52:03.770 \longrightarrow 00:52:07.100$ that can be used to protect the low-income

 $1024\ 00:52:07.100 \longrightarrow 00:52:10.210$ and people of color families

 $1025 \ 00:52:10.210 \longrightarrow 00:52:11.933$ from the energy security.

1026 00:52:13.670 --> 00:52:18.670 <v ->I mean, I think that from the energy performance</v>

1027 00:52:19.230 --> 00:52:21.813 and building standard perspective,

 $1028 \ 00:52:23.390 \longrightarrow 00:52:26.810$ as it intersects with those that are living

1029 00:52:26.810 --> 00:52:29.190 in subsidized housing,

1030 00:52:29.190 --> 00:52:32.770 or in rent-stabilized housing,

 $1031 \ 00:52:32.770 \longrightarrow 00:52:35.490$ there's always the kind of need to,

 $1032\ 00{:}52{:}35{.}490 \dashrightarrow 00{:}52{:}40{.}490$ of course, provide access to the kind of best performance.

1033 00:52:42.210 --> 00:52:45.060 I mean, a lot of the 311 no heat complaints

1034 00:52:45.060 --> 00:52:48.830 are actually coming from people

 $1035 \ 00:52:48.830 \longrightarrow 00:52:51.363$ that are living in those very same buildings.

1036 00:52:52.410 --> 00:52:56.630 But we also need to couple that with tenant protections.

 $1037\ 00:52:56.630 \longrightarrow 00:52:58.110$ And that was a recognition

1038 00:52:58.110 --> 00:53:03.110 that really came as a result of the clean heat work.

1039 00:53:03.770 --> 00:53:05.690 So before they started to do

 $1040\ 00:53:06.672 \longrightarrow 00:53:09.773$ the kind of grading system for buildings,

1041 00:53:10.820 --> 00:53:12.580 in New York City, first commercially,

1042 00:53:12.580 --> 00:53:16.683 and now, increasingly, in residential buildings,

1043 00:53:17.553 --> 00:53:20.660 it was so clear that some landlords were using that

 $1044\ 00:53:20.660 \longrightarrow 00:53:22.700$ as an opportunity, essentially,

 $1045 \ 00:53:22.700 \longrightarrow 00:53:25.030$ to kick long-term tenants out.

 $1046\ 00:53:25.030$ --> 00:53:29.190 The ones that were living in gentrifying neighborhoods,

 $1047 \ 00:53:29.190 \longrightarrow 00:53:32.130$ where they could command more rents.

1048 00:53:32.130 --> 00:53:35.640 And they use these kinds of capital improvement,

1049 00:53:35.640 --> 00:53:37.490 of course, I'm just using a New York City example.

1050 00:53:37.490 --> 00:53:40.950 But they use the capital improvement assessments,

 $1051\ 00:53:40.950 \longrightarrow 00:53:43.230$ essentially, to make it almost impossible

 $1052 \ 00:53:43.230 \longrightarrow 00:53:45.900$ for those long-term residents to stay

 $1053 \ 00:53:45.900 \longrightarrow 00:53:48.660$ and to afford to be able to stay.

1054 00:53:48.660 --> 00:53:52.930 And what I have concluded in,

1055 00:53:52.930 --> 00:53:55.290 kind of assessing what this ultimately looks like,

 $1056\ 00{:}53{:}55{.}290$ --> $00{:}54{:}00{.}120$ is that there has to be a much more kind of concerted effort

 $1057 \ 00:54:00.120 \longrightarrow 00:54:03.002$ to support those landlords

 $1058\ 00:54:03.002 \longrightarrow 00:54:07.270$ and even possibly subsidizing,

1059 00:54:07.270 --> 00:54:12.270 or kind of completely providing grants to those landlords

1060 00:54:15.660 --> 00:54:19.130 in exchange for allowing people to stay in those buildings.

1061 00:54:19.130 --> 00:54:24.130 Because it doesn't do much for people to actually like,

 $1062\ 00:54:25.781 \longrightarrow 00:54:26.614$ (mumbles)

1063 00:54:26.614 --> 00:54:30.880 for the physical conditions of the buildings to improve

1064 00:54:30.880 --> 00:54:33.430 if the people that have been living there forever

 $1065\ 00{:}54{:}33{.}430$ --> $00{:}54{:}36{.}230$ and sometimes suffering in significant ways

106600:54:36.230 --> 00:54:38.190 to not be able to benefit essentially.

 $1067 \ 00:54:38.190 \longrightarrow 00:54:40.053$ So I think this is,

1068 00:54:41.470 --> 00:54:44.950 it's an area for kind of more consideration,

 $1069\ 00:54:44.950 \longrightarrow 00:54:46.770$ but it's not going to be,

 $1070\ 00:54:46.770 \longrightarrow 00:54:48.360$ it won't go away,

 $1071 \ 00:54:48.360 \longrightarrow 00:54:49.330$ especially as we think

 $1072 \ 00:54:49.330 \longrightarrow 00:54:53.100$ about the electrification of buildings,

1073 00:54:53.100 --> 00:54:58.100 both in the introduction of kind of clean cooking options

 $1074\ 00:54:58.230 \longrightarrow 00:55:01.470$ as well as clean eating options and cooling,

 $1075 \ 00:55:01.470 \longrightarrow 00:55:02.830$ absolutely, we have to think

 $1076 \ 00:55:02.830 \longrightarrow 00:55:05.250$ about the tenant protection aspects.

1077 00:55:05.250 --> 00:55:07.100 And I don't know that we have it all figured out,

 $1078\ 00:55:07.100 \longrightarrow 00:55:09.090$ but it's definitely something

 $1079\ 00:55:09.090$ --> 00:55:11.833 that I think has to be more front of mind for policy makers.

1080 00:55:13.479 --> 00:55:14.312 <v ->Thank you Diana.</v>

1081 00:55:14.312 --> 00:55:15.990 We're having some background noise.

 $1082 \ 00:55:15.990 \longrightarrow 00:55:17.288$ Sorry about that.

1083 00:55:17.288 --> 00:55:20.560 But we do have a question from actually Susie Row.

1084 00:55:20.560 --> 00:55:21.530 She's wondering like,

 $1085\ 00:55:21.530 \dashrightarrow 00:55:26.530$ do you think that HHS selection of the (mumbles)

1086 00:55:27.105 --> 00:55:31.370 to Justice
40 Initiative pilots

1087 00:55:31.370 --> 00:55:34.673 will provide an opportunity for policy reforms?

1088 00:55:36.240 --> 00:55:41.240 <v ->Yeah, I mean, so Justice
40 is definitely an opportunity</v>

 $1089\ 00:55:42.800 \dashrightarrow 00:55:47.800$ to essentially do what we did in public health, right?

 $1090\ 00:55:48.610 \longrightarrow 00:55:51.200$ Health in all policies.

 $1091\ 00:55:51.200 \longrightarrow 00:55:52.250$ You know, in this case,

1092 00:55:52.250 --> 00:55:55.573 it's basically thinking about, you know,

 $1093\ 00:55:57.120 \longrightarrow 00:56:01.103$ low-income people of color,

1094 00:56:02.140 --> 00:56:04.250 the need to transition

1095 00:56:04.250 --> 00:56:08.900 and have kind of climate considerations,

 $1096\ 00:56:08.900 \longrightarrow 00:56:11.350$ be front of mind together.

 $1097 \ 00:56:11.350 \longrightarrow 00:56:14.233$ I do think it has a huge,

 $1098\ 00:56:16.010 \longrightarrow 00:56:18.690$ it presents a huge opportunity.

1099 00:56:18.690 --> 00:56:23.690 I think the implementation of this is yet to be seen.

1100 00:56:25.170 --> 00:56:29.380 Dr. Tony Reames, who used to be at University of Michigan,

1101 00:56:29.380 --> 00:56:33.957 and is now basically heading up Justice 40 at the DOE

 $1102\ 00:56:34.820 \longrightarrow 00:56:36.020$ will basically (mumbles)

1103 00:56:36.020 --> 00:56:40.180 I believe that he kind of has all of those intentions

1104 00:56:40.180 --> 00:56:41.633 and will do his best.

1105 00:56:42.790 --> 00:56:47.360 But I think the policy situation in Congress right now

1106 00:56:47.360 --> 00:56:48.870 is challenging,

 $1107 \ 00:56:48.870 \longrightarrow 00:56:50.950$ and it's a little hard to predict,

 $1108 \ 00:56:50.950 \longrightarrow 00:56:54.543$ essentially what will be coming.

1109 00:56:56.070 --> 00:56:58.420 So, I think in its spirit,

 $1110\ 00:56:58.420 \longrightarrow 00:57:01.690$ it's right in its implementation.

1111 00:57:01.690 $\rightarrow 00:57:02.750$ It's yet to be seen,

1112 00:57:02.750 --> 00:57:05.890 but I think that in the same way that we made big strides

 $1113\ 00:57:05.890 \longrightarrow 00:57:07.920$ in thinking about health in all policies,

 $1114 \ 00:57:07.920 \longrightarrow 00:57:09.140$ the Justice 40 piece,

1115 00:57:09.140 --> 00:57:12.590 and supporting environmental justice organizations,

1116 00:57:12.590 --> 00:57:13.940 community-based organizations,

 $1117 \ 00:57:13.940 \longrightarrow 00:57:18.460$ all of those kind of elements of Justice40

1118 00:57:18.460 --> 00:57:20.370 will hopefully make it successful

1119 $00:57:20.370 \rightarrow 00:57:22.763$ in addressing many of these challenges.

1120 00:57:25.100 --> 00:57:25.933 <v ->Thank you Diana.</v>

1121 00:57:25.933 --> 00:57:27.310 I think that,

1122 00:57:27.310 --> 00:57:30.500 although there are many questions students would ask,

1123 00:57:30.500 - 00:57:32.460 but we are running out of time.

 $1124\ 00:57:32.460 \longrightarrow 00:57:34.970$ And it's a great pleasure to have you here,

1125 00:57:34.970 --> 00:57:37.800 and thank you so much for this amazing

1126 00:57:37.800 --> 00:57:39.560 and fantastic talk.

1127 00:57:39.560 --> 00:57:40.526 <v ->Thank you.</v>

1128 00:57:40.526 --> 00:57:41.590 Thank you so much for the invitation.

1129 00:57:41.590 --> 00:57:42.790 I wish you all the best.