Webinar

ULI Colorado: Getting to Net Zero Energy

Date: July 15, 2021

00:00:00 --> 00:00:02: Start recording this so people can watch it later.
00:00:02 --> 00:00:05: I'm marrying a big. I'm a director with you like
00:00:05 --> 00:00:08: Colorado and we have an amazing panel plan for you
00:00:08 --> 00:00:09: today,
00:00:09 --> 00:00:13: followed by Q&A. Just before we get started,
00:00:13 --> 00:00:16: the audience will be muted throughout the session.
00:00:16 --> 00:00:18: Please submit your questions and comments throughout the session.
00:00:18 --> 00:00:21: You're allowed to submit those through the chat box,
00:00:21 --> 00:00:25: and then we'll address them at the end through the
00:00:25 --> 00:00:29: Q&A and we are currently recording and this recording will
00:00:29 --> 00:00:31: be available after the event.
00:00:31 --> 00:00:34: I'd like to turn it over to Michael Cheesy Executive
00:00:34 --> 00:00:35: director of ULI Colorado.
00:00:36 --> 00:00:40: Hey everybody welcome so glad to see you all here
00:00:40 --> 00:00:40: on zoom.
00:00:40 --> 00:00:44: We are transitioning to more in person events and I'll
00:00:44 --> 00:00:46: talk about this in a moment.
00:00:46 --> 00:00:47: I'm excited about today's program.
00:00:47 --> 00:00:50: This is really what you'll I does best in many
00:00:51 --> 00:00:51: regards.
00:00:51 --> 00:00:54: Kind of looking ahead to what's coming next and interpreting
00:00:55 --> 00:00:57: it for our Members so they can be prepared from
00:00:57 --> 00:00:59: the business and philosophical sense.
00:00:59 --> 00:01:03: And we have a lot of changes coming ahead in
00:01:03 --> 00:01:03: Denver.
00:01:03 --> 00:01:06: This program will help you read the tea leaves and
00:01:06 --> 00:01:08: move forward as needed.
00:01:08 --> 00:01:11: So next week we have a really great program with

00:01:11 --> 00:01:13: a leader in the field on diversity,
00:01:13 --> 00:01:17: equity inclusion. It's a training program and we've talked about
00:01:17 --> 00:01:19: this quite a bit in the last year.
00:01:19 --> 00:01:21: It's become a number one priority.
00:01:21 --> 00:01:24: Our guest leader of this program is Doctor Kyra Banks,
00:01:24 --> 00:01:27: who is a nationally known expert on Addyi prominent African
00:01:27 --> 00:01:29: American scholar as well.
00:01:29 --> 00:01:32: So there's still opportunity to sign up for that.
00:01:32 --> 00:01:34: I hope you'll be able to do that.
00:01:34 --> 00:01:38: It's a virtual in two parts on July 21st and
00:01:38 --> 00:01:38: 22nd.
00:01:38 --> 00:01:41: Also related to DI, we've been doing book groups on
00:01:41 --> 00:01:44: line in virtual for Massive in very successful,
00:01:44 --> 00:01:48: very well attended person we did with the color of
00:01:48 --> 00:01:48: law.
00:01:48 --> 00:01:52: The notable book about the history of zoning and how
00:01:52 --> 00:01:53: it's discrimina Tori.
00:01:53 --> 00:01:57: Next one is about access to capital for people of
00:01:57 --> 00:01:57: color,
00:01:57 --> 00:02:00: and there is an opportunity to read to watch a
00:02:00 --> 00:02:04: video and to inform yourself before joining that discussion.
00:02:04 --> 00:02:06: So that's coming up on August 5th,
00:02:06 --> 00:02:09: a combination virtual live event.
00:02:09 --> 00:02:10: Is on Thursday, August 19th,
00:02:10 --> 00:02:14: it's called Unmasked economic recovery in real estate in Colorado.
00:02:14 --> 00:02:17: Will start with a panel in the morning that will
00:02:17 --> 00:02:20: cover various the whole state and economic trends in the
00:02:20 --> 00:02:21: post pandemic era,
00:02:21 --> 00:02:25: including the mountain regions, and that'll be a morning 8:30
00:02:25 --> 00:02:29: to 9:30 and then the afternoon there was the option
00:02:29 --> 00:02:31: to do a live tour of one of two prominent
00:02:31 --> 00:02:34: new projects. When is the 9th and Colorado redevelopment by
00:02:34 --> 00:02:35: Continuum Partners?
00:02:35 --> 00:02:37: Which is pretty well done.
00:02:37 --> 00:02:39: Another is more in progress.
00:02:39 --> 00:02:41: 100 acre redevelopment of downtown Westminster,
00:02:41 --> 00:02:44: which is a former dying mall re being redone as
00:02:44 --> 00:02:45: a high density todds.
00:02:45 --> 00:02:47: So hope you'll be able to join that.
00:02:47 --> 00:02:50: Both tours will be led by experts who worked on

00:02:50 --> 00:02:51: those projects.
00:02:51 --> 00:02:54: You'll learn all about them and will follow them up
00:02:54 --> 00:02:54: with networking.
00:02:54 --> 00:02:57: Happy hour. We're going back to live new member copies,
00:02:57 --> 00:03:00: so it's been virtual for the last year and a
00:03:00 --> 00:03:01: half.
00:03:01 --> 00:03:02: If you're new to you,
00:03:02 --> 00:03:05: lie and want to learn what it means to be
00:03:05 --> 00:03:06: a member,
00:03:06 --> 00:03:07: how it can benefit you,
00:03:07 --> 00:03:09: how you can get involved.
00:03:09 --> 00:03:13: Personally, you should be attending this my colleague Atlanta pageant
00:03:13 --> 00:03:16: is posting links to registering for these events in the
00:03:16 --> 00:03:19: chat box as we go along and then super excited
00:03:19 --> 00:03:22: about the impact awards. It's our big banquet that we
00:03:22 --> 00:03:26: put off for six months and the hope we could
00:03:26 --> 00:03:28: do it as a live event and we are.
00:03:28 --> 00:03:30: It'll be held on Thursday,
00:03:30 --> 00:03:33: September 23rd at the Super Ballroom at the Denver Center
00:03:33 --> 00:03:34: for the Performing Arts.
00:03:34 --> 00:03:36: We've got 15 fantastic finalists.
00:03:36 --> 00:03:39: You can read about him in a blog on our
00:03:39 --> 00:03:39: website.
00:03:39 --> 00:03:43: Will also be. Published in several real estate publications and
00:03:43 --> 00:03:46: really excited that this year's entries were incredibly robust and
00:03:46 --> 00:03:49: a lot of them did address the most pressing social
00:03:49 --> 00:03:52: and environmental issues that, in addition to being really interesting
00:03:53 --> 00:03:55: examples of real estate projects fall meeting this year,
00:03:55 --> 00:03:58: is in Chicago, and that will also be a live
00:03:58 --> 00:04:01: event will be the first time that you alliance hosted
00:04:02 --> 00:04:04: a live national meeting in almost two years.
00:04:04 --> 00:04:06: We hope to see you there.
00:04:06 --> 00:04:09: You can follow us on our website as well,
00:04:09 --> 00:04:12: and if you missed. Any of the virtual events in
00:04:12 --> 00:04:15: the last year and a half they are posted for
00:04:15 --> 00:04:19: members on the knowledge Finder website and you lie and
00:04:19 --> 00:04:22: you can you see the link there in your box.
00:04:22 --> 00:04:26: So next slide please. Annual sponsors or how?
00:04:26 --> 00:04:28: Mainly how we support ourselves.
00:04:28 --> 00:04:30: We do support ourselves in Colorado.

00:04:30 --> 00:04:32: We are part of the global organization.
00:04:32 --> 00:04:34: We have more than 50 this year.
00:04:34 --> 00:04:37: Very grateful for that. We're about to add a new
00:04:37 --> 00:04:41: summit level sponsor a Norwood development of Colorado Springs,
00:04:41 --> 00:04:43: so we're grateful for their support.
00:04:43 --> 00:04:46: And if you'd like to know more about sponsoring an
00:04:46 --> 00:04:49: event or becoming an annual sponsor of you like Colorado,
00:04:49 --> 00:04:52: please contact me. I want to thank my colleague,
00:04:52 --> 00:04:55: my colleague Mary and Epic who took the lead in
00:04:55 --> 00:04:56: this program.
00:04:56 --> 00:04:58: Our new colleague Madeline Groin and Atlanta Paget,
00:04:58 --> 00:05:01: who just do a great job of getting these programs
00:05:01 --> 00:05:02: organized for our Members.
00:05:02 --> 00:05:05: So I think I'm going to turn it back to
00:05:05 --> 00:05:07: Mary Ann and listen along with rescue.
00:05:07 --> 00:05:10: Have a fantastic panel today and we look forward to
00:05:10 --> 00:05:12: going about their projects and their insights.
00:05:13 --> 00:05:14: Thank you so much Michael.
00:05:14 --> 00:05:17: Everyone here so excited for the panel.
00:05:17 --> 00:05:20: We have lined up for you today and we're starting
00:05:20 --> 00:05:23: out with Courtney Anderson with the city and County of
00:05:23 --> 00:05:26: Denver who will discuss their new code,
00:05:26 --> 00:05:29: regulations coming and building electrification requirements that are related to
00:05:29 --> 00:05:30: their climate change goals.
00:05:30 --> 00:05:32: We're really excited about that.
00:05:32 --> 00:05:35: She'll be followed by Emily Pierce of utilized Green Print
00:05:35 --> 00:05:38: Center for building performance and they're going to be talking
00:05:38 --> 00:05:42: about lessons learned from their new report on building electrification.
00:05:42 --> 00:05:46: And then we're going to hear it from two different
00:05:46 --> 00:05:46: case studies.
00:05:46 --> 00:05:50: In Colorado, one is going to be spoken about by
00:05:50 --> 00:05:51: Elin McCready,
00:05:51 --> 00:05:54: of East West Partners. She'll be talking about Electric Pass
00:05:54 --> 00:05:57: Lodge in Snowmass and Andy Bush of Morgan Creek Ventures
00:05:57 --> 00:06:01: will discuss both new development and retrofits for building electrification
00:06:01 --> 00:06:03: and then at the end,
00:06:03 --> 00:06:06: we'll have your questions that you put in the chat

00:06:06 --> 00:06:09: box moderated by John Berkey of Urban Villages.
00:06:09 --> 00:06:14: So with that, let's get started by Courtney.
00:06:14 --> 00:06:16: Hi, thank you Maryann UM so
00:06:16 --> 00:06:20: I'm just gonna briefly walk us through some of these
00:06:20 --> 00:06:24: pieces today so the first one being the net zero
00:06:24 --> 00:06:25: energy plan.
00:06:25 --> 00:06:29: The code adoption process and electrification within the city and
00:06:29 --> 00:06:30: County of Denver.
00:06:36 --> 00:06:39: So to put it in context,
00:06:39 --> 00:06:42: Denver Denver's greenhouse gas emissions are 64%
00:06:42 --> 00:06:44: come from homes and buildings,
00:06:44 --> 00:06:47: so 15% of that is from homes and then the
00:06:47 --> 00:06:51: 49 percent is from multifamily commercial industrial.
00:06:51 --> 00:06:54: So just it really helps to kind of get in
00:06:54 --> 00:06:59: context what we're talking about and what our work does
00:06:59 --> 00:07:01: and what are the facts.
00:07:04 --> 00:07:09: So our goal for new construction is to beat that
00:07:09 --> 00:07:10: zero energy by 2030,
00:07:10 --> 00:07:13: and that's because by 20 fifty 40%
00:07:13 --> 00:07:17: of our building stock will be new construction.
00:07:22 --> 00:07:24: And taking all of that into consideration,
00:07:24 --> 00:07:27: we developed with a net zero energy implementation plan.
00:07:28 --> 00:07:32: So I'll step through some some pieces of that.
00:07:32 --> 00:07:36: The definition for net zero in Denver is a new
00:07:36 --> 00:07:40: building or home that is highly energy efficient,
00:07:40 --> 00:07:44: fully powered from on site or and or offsite renewable
00:07:44 --> 00:07:44: energy.
00:07:44 --> 00:07:48: And there's four foundation so that the first one being
00:07:48 --> 00:07:51: having a highly energy efficient building.
00:07:51 --> 00:07:53: Second one is all electric,
00:07:53 --> 00:07:57: so no gas third is powered by renewable energy and
00:07:57 --> 00:08:01: electricity and the 4th one is being providers.
00:08:01 --> 00:08:03: Captain man flexibility for the grid.
00:08:03 --> 00:08:06: So all four of those make up the definition for.
00:08:06 --> 00:08:08: Net zero Energy and Denver.
00:08:11 --> 00:08:15: The principles we use to develop the net zero energy
00:08:15 --> 00:08:19: plan is we made sure there were looking at incentives
00:08:19 --> 00:08:24: to equitably support construction and that we're achieving net zero
00:08:24 --> 00:08:28: energy as a whole community because we know it might
00:08:28 --> 00:08:32: be unfair to ask them buildings to all due meds.
00:08:32 --> 00:08:37: 0 So we're looking at it from a community perspective.

00:08:37 --> 00:08:39: Similar item, you know, different solutions.
00:08:39 --> 00:08:42: So different building types, every building is different,
00:08:42 --> 00:08:46: so uhm, how does how does each building get as
00:08:46 --> 00:08:47: far as they can?
00:08:47 --> 00:08:52: And I'm using stakeholders and their expertise to advise us
00:08:52 --> 00:08:54: as we go through this process.
00:08:57 --> 00:09:00: The support for net zero energy,
00:09:00 --> 00:09:04: UM, definitely include resources and staff within the City of
00:09:04 --> 00:09:05: Denver,
00:09:05 --> 00:09:07: but also for community support.
00:09:07 --> 00:09:11: You know, including marketing, training incentives and financing educations,
00:09:11 --> 00:09:16: huge programs, advocacy so that you know there's a lot
00:09:16 --> 00:09:20: to get to that step of supporting the community and
00:09:20 --> 00:09:25: and having Denver being able to support what they need.
00:09:28 --> 00:09:30: Uhm, so as I mentioned,
00:09:30 --> 00:09:33: this is the net zero energy newbuildings implementation plan,
00:09:33 --> 00:09:35: so you can find that on our website and it's
00:09:36 --> 00:09:38: it's a fairly lengthy document,
00:09:38 --> 00:09:41: but there's a lot of good items in there and
00:09:41 --> 00:09:44: so it was in collaboration with come.
00:09:44 --> 00:09:47: Kassirer, which is the office I work for so climb
00:09:47 --> 00:09:48: in action,
00:09:48 --> 00:09:52: sustainability and resiliency and CPD which is community planning and
00:09:52 --> 00:09:55: development and it's a plan for getting new buildings and
00:09:55 --> 00:09:58: homes to net zero by building type and looking at
00:09:58 --> 00:10:02: each code cycle to determine those appropriate targets to get
00:10:02 --> 00:10:05: there and then also looking at the cost of net,
00:10:05 --> 00:10:07: zero energy and all electric.
00:10:10 --> 00:10:14: It's really helpful to see you know where where we're
00:10:14 --> 00:10:14: at,
00:10:14 --> 00:10:17: so you can see the Denver Energy Code in Denver
00:10:18 --> 00:10:18: Green Code,
00:10:18 --> 00:10:22: and then that green dashed line for both commercial.
00:10:22 --> 00:10:25: I'm also family in residential to see where we need
00:10:25 --> 00:10:28: to go and those steps we need to take to
00:10:29 --> 00:10:29: get there,
00:10:29 --> 00:10:35: pretty. Pretty steep. Thanks also we need to break that
00:10:35 --> 00:10:38: out between our code cycles.
00:10:38 --> 00:10:42: And that's what brings me into the 2021 code adoption
00:10:42 --> 00:10:44: process that I'll just touch on.

00:10:44 --> 00:10:47: So we're currently, UM, working through that.
00:10:47 --> 00:10:51: Right now we just completed our code working groups in
00:10:51 --> 00:10:52: June,
00:10:52 --> 00:10:55: and those were a series of six meetings,
00:10:55 --> 00:10:58: a focus around energy efficiency and sustainability.
00:10:58 --> 00:11:02: So they were meetings to bring concepts and ideas to
00:11:02 --> 00:11:04: the table from community members,
00:11:04 --> 00:11:10: stakeholders, subject matter experts to really help define what the
00:11:10 --> 00:11:11: vision for Denver is.
00:11:11 --> 00:11:13: Currently we're accepting public proposal.
00:11:13 --> 00:11:17: Also, if you have a really good idea that you
00:11:17 --> 00:11:18: wanted to submit,
00:11:18 --> 00:11:22: we're extremely happy to review that and bring it to
00:11:22 --> 00:11:25: the code committees and then the code committees will be
00:11:26 --> 00:11:27: starting in January 2020,
00:11:27 --> 00:11:31: so anyone can apply to Unicode Committee as well,
00:11:31 --> 00:11:35: and those will review the concepts that were helping out
00:11:35 --> 00:11:40: a formal proposals as well as the public proposals that
00:11:40 --> 00:11:41: will be submitted.
00:11:41 --> 00:11:45: So this is kind of that typical timeline of,
00:11:45 --> 00:11:47: UM, what the code adoption process is.
00:11:47 --> 00:11:51: So as I mentioned, you know we're we are developing
00:11:51 --> 00:11:53: public proposals right now,
00:11:53 --> 00:11:57: or I'm sorry. Developing proposals from the working group idea
00:11:57 --> 00:12:02: is right now we're also collecting those public proposal amendments
00:12:02 --> 00:12:04: from July 23rd to that deadline.
00:12:04 --> 00:12:08: So next Friday, and then those go to the Technical
00:12:08 --> 00:12:12: Advisory Committee and anything that proceeds forward from the.
00:12:12 --> 00:12:17: The committees will then go forward to City Council.
00:12:17 --> 00:12:20: But, uh. And this is the same for,
00:12:20 --> 00:12:22: UM, all the I codes as well as the Denver
00:12:22 --> 00:12:23: for income.
00:12:26 --> 00:12:29: So this is, uhm, you know,
00:12:29 --> 00:12:33: a pretty pretty dense chart of the different code cycle.
00:12:33 --> 00:12:37: So the code cycles every three years.
00:12:37 --> 00:12:39: So you can see that across the top and then
00:12:40 --> 00:12:44: it's broken down by highly energy efficient electric renewable energy
00:12:44 --> 00:12:46: and grid grid flexibility.

00:12:46 --> 00:12:49: And those are the the four pillars for net zero
00:12:49 --> 00:12:51: energy and and Denver,
00:12:51 --> 00:12:56: so you can see the targets for this Commercial Code
00:12:56 --> 00:12:58: timeline as well as.
00:12:58 --> 00:13:02: The residential code timeline, so these are from the implementation
00:13:02 --> 00:13:02: plan,
00:13:02 --> 00:13:05: and that plan is is that it's a plan.
00:13:05 --> 00:13:09: So now we're going through the code adoption process with
00:13:09 --> 00:13:13: these targets in mind and developing proposals to meet those
00:13:13 --> 00:13:14: those targets.
00:13:14 --> 00:13:17: So if you know you can see in here,
00:13:17 --> 00:13:21: for example 2024, we're targeting that all electric for residential,
00:13:21 --> 00:13:24: so all abstract equipment. And this can be found in
00:13:25 --> 00:13:27: that cereal energy implementation plan.
00:13:27 --> 00:13:29: A few words like to look a little further.
00:13:32 --> 00:13:35: So I'll touch again on the renewable heating and cooling
00:13:35 --> 00:13:35: plan.
00:13:35 --> 00:13:38: It just came out in June of this year and
00:13:38 --> 00:13:41: it's four existing building things,
00:13:41 --> 00:13:43: so it's electrification for existing buildings,
00:13:43 --> 00:13:47: and I'll I'll go through some some peas here.
00:13:47 --> 00:13:51: So gas, uhm, it's helpful to see what where gas
00:13:51 --> 00:13:52: is actually utilized.
00:13:52 --> 00:13:55: You know, space heating accounts for 67%
00:13:55 --> 00:13:58: water heating 30. I'm cooking clothes,
00:13:58 --> 00:14:06: drying is only 3%. So electrification has high impact climate
00:14:06 --> 00:14:07: benefits,
00:14:07 --> 00:14:12: so methane, which is the main component in natural gas,
00:14:12 --> 00:14:16: causes 80 times the amount of climate change as standard
00:14:16 --> 00:14:18: carbon dioxide emissions does.
00:14:18 --> 00:14:22: So it's a group grade is moving to 100%
00:14:22 --> 00:14:26: renewable power. Electric heating and cooling is that path to
00:14:26 --> 00:14:31: reduce the emissions generated by buildings and homes.
00:14:31 --> 00:14:34: And the Denver target is to be 80%
00:14:34 --> 00:14:36: renewal on renewable grid by 2030,
00:14:36 --> 00:14:38: so that kind of, you know,
00:14:38 --> 00:14:42: it helps us put into perspective why it's so important
00:14:42 --> 00:14:46: to go electric because the grid is also going to
00:14:46 --> 00:14:47: be targeting renewable.
00:14:50 --> 00:14:54: Heat pumps are certainly a great way to get there,

00:14:54 --> 00:14:58: so he comes move heat instead of creating it.
00:14:58 --> 00:15:00: So there are 2200 to 300%
00:15:00 --> 00:15:05: efficient and. To kind of help understand why that seems
00:15:05 --> 00:15:06: almost magical,
00:15:06 --> 00:15:09: 100% efficiency is based on a source creating heat,
00:15:09 --> 00:15:11: so heat pumps are moving heat,
00:15:11 --> 00:15:15: not necessarily creating it, which is why they're so efficient.
00:15:18 --> 00:15:22: Uh, he uh going out electric two promotes equity,
00:15:22 --> 00:15:24: so especially for AC, UM,
00:15:24 --> 00:15:27: for homes that don't have it today,
00:15:27 --> 00:15:31: so about 30% of Denver homes do not have air
00:15:31 --> 00:15:32: conditioning,
00:15:32 --> 00:15:35: which is really critical as temperatures are rising.
00:15:38 --> 00:15:40: Can improve equity and safety,
00:15:40 --> 00:15:44: so electrification, certainly. That is one of our main main
00:15:44 --> 00:15:44: factors.
00:15:44 --> 00:15:46: Uhm, you know. Like 30%
00:15:46 --> 00:15:50: of low income homes in Denver today the gas equipment
00:15:50 --> 00:15:51: fails.
00:15:51 --> 00:15:55: The carbon monoxide test. And that's comparing to the market
00:15:55 --> 00:15:57: rate homes that only 5%
00:15:57 --> 00:16:00: do so, making sure we improve that safety in all
00:16:00 --> 00:16:01: columns.
00:16:05 --> 00:16:08: There is electrification. It has lower exposure to indoor air
00:16:08 --> 00:16:09: pollutants,
00:16:09 --> 00:16:12: so residents of homes with gas have nearly three times
00:16:12 --> 00:16:15: the rate of asthma compared to the ones with all
00:16:15 --> 00:16:16: electric homes.
00:16:20 --> 00:16:24: Other better outcomes based on everything that we just went
00:16:24 --> 00:16:24: through,
00:16:24 --> 00:16:28: but they have the same or similar cost,
00:16:28 --> 00:16:31: so especially for this this portion here we're talking about
00:16:31 --> 00:16:32: existing buildings,
00:16:32 --> 00:16:36: so we wouldn't recommend someone to take their new gas
00:16:36 --> 00:16:36: furnace.
00:16:36 --> 00:16:40: I got yesterday and go replace it today with electric.
00:16:40 --> 00:16:43: We're looking at when that life cycle of the the
00:16:44 --> 00:16:44: furnace,
00:16:44 --> 00:16:46: the hot water, he your end.
00:16:46 --> 00:16:49: So when that ends most buildings.
00:16:49 --> 00:16:52: At homes can replace it with electric clip equivalent at

00:16:52 --> 00:16:55: a similar cost as they would pay for that new
00:16:55 --> 00:16:56: gas system.
00:17:00 --> 00:17:05: It increases credit utilization. Umso Denver SIS electric system already
00:17:06 --> 00:17:10: built for the summer loan for the air conditioning,
00:17:10 --> 00:17:14: so winter heating needs can shift to renewable electricity without
00:17:14 --> 00:17:16: significant infrastructure buildout.
00:17:20 --> 00:17:24: And this is all within the Danvers of renewable heating
00:17:24 --> 00:17:25: and cooling plan.
00:17:25 --> 00:17:28: Again, that was published last month,
00:17:28 --> 00:17:32: so that's online or on site and it goes through
00:17:32 --> 00:17:34: how we engage the community.
00:17:34 --> 00:17:36: Why look at renewable heating?
00:17:36 --> 00:17:39: Cooling the electric grid? Those major.
00:17:39 --> 00:17:41: There's major plans for the parts?
00:17:41 --> 00:17:45: Are there plans for the major heating technologies so it
00:17:45 --> 00:17:49: breaks down your your typical systems and what those approaches
00:17:49 --> 00:17:51: are for electrification?
00:17:51 --> 00:17:54: And also goes through the implementation strategy.
00:17:56 --> 00:18:00: So the energized Denver task Force is taking what we've
00:18:00 --> 00:18:04: learned from the renewable heating cooling plan and helping the
00:18:04 --> 00:18:09: city design a building performance policy for existing buildings,
00:18:09 --> 00:18:11: and that will improve health inequity,
00:18:11 --> 00:18:14: create jobs, and drive climate solutions.
00:18:14 --> 00:18:18: To achieve net zero energy in existing buildings by 2040.
00:18:21 --> 00:18:24: So this is the road map for the energize Denver
00:18:24 --> 00:18:24: task force.
00:18:24 --> 00:18:27: UM, the green in the meeting six and seven.
00:18:27 --> 00:18:29: It's where we're at right now,
00:18:29 --> 00:18:32: and they're actually currently in their meeting 7 right now,
00:18:32 --> 00:18:35: so they're getting close to.
00:18:35 --> 00:18:39: Having recommendations that will move forward to to City Council
00:18:39 --> 00:18:40: shortly.
00:18:43 --> 00:18:52: That's it, thank you. Thank you,
00:18:52 --> 00:18:53: Courtney. Not
00:18:53 --> 00:18:56: with that. We're going to introduce our next speaker,
00:18:56 --> 00:18:59: Emily Pierce. Hi Emily, thanks Mary
00:18:59 --> 00:19:05: Anne thank you everybody. Me.

00:19:05 --> 00:19:08: So, uh, my name is Emily Pearson,
00:19:08 --> 00:19:11: director on utilise Greenprint Center for building performance,
00:19:11 --> 00:19:14: and I don't know how many of you all are
00:19:14 --> 00:19:17: familiar with green print.
00:19:19 --> 00:19:21: I don't know how many of you all are,
00:19:21 --> 00:19:21: I am.
00:19:24 --> 00:19:27: Oh geez, I had to do some zoom controls.
00:19:27 --> 00:19:27: Go
00:19:27 --> 00:19:30: ahead, Emily. Thank you so I don't know how many
00:19:30 --> 00:19:34: of you guys are familiar with utilized greenprint center.
00:19:34 --> 00:19:36: But Greenprint lives at UI headquarters.
00:19:36 --> 00:19:39: I am based in Washington DC name actually sitting here
00:19:39 --> 00:19:42: in my in in my house outside of Washington DC.
00:19:42 --> 00:19:46: Actually looking at a heat pump at my house so
00:19:46 --> 00:19:50: I appreciate Courtney kind of teeing up all of that.
00:19:50 --> 00:19:53: And green print is one of the three arms of
00:19:53 --> 00:19:56: sustainability work at US headquarters.
00:19:56 --> 00:20:00: So the other teams are the Urban resilience team and
00:20:00 --> 00:20:02: are building healthy places.
00:20:02 --> 00:20:06: Team, but GREENPRINT specifically is focused on carbon emissions reduction.
00:20:06 --> 00:20:08: So decarbonization reducing carbon emissions,
00:20:08 --> 00:20:11: energy efficiency. All of that good stuff.
00:20:11 --> 00:20:15: And we do that through a cohort of about 45
00:20:15 --> 00:20:15: members,
00:20:15 --> 00:20:20: company members, owners, investors, real estate owners and investors who.
00:20:20 --> 00:20:24: Collectively commit to a couple goals and we we help
00:20:24 --> 00:20:27: them strive that way and push that way on their
00:20:27 --> 00:20:29: ESG and sustainability journey.
00:20:29 --> 00:20:31: And so those goals are 50%
00:20:31 --> 00:20:35: carbon emissions by 2030 carbon emissions reduction by 2030.
00:20:35 --> 00:20:39: And then we actually just added last year in honor
00:20:39 --> 00:20:42: of not only a 10 year anniversary for Green prank,
00:20:42 --> 00:20:44: Rembrandt was founded in 2009,
00:20:44 --> 00:20:48: but also with an acknowledgement that this is really where
00:20:48 --> 00:20:50: the market and the industry and.
00:20:50 --> 00:20:52: The country in the world are headed,
00:20:52 --> 00:20:55: and that's net zero carbon operations by 2050,
00:20:55 --> 00:20:58: and so you know, we've heard from Courtney about net
00:20:58 --> 00:20:58: zero,
00:20:58 --> 00:21:01: and you know, bringing that down home to Denver and

00:21:01 --> 00:21:03: we really wanted this this second goal,
00:21:03 --> 00:21:06: this this collective push to be an acknowledgement that you
00:21:06 --> 00:21:07: know this is this,
00:21:07 --> 00:21:10: is really where the industry is headed.
00:21:10 --> 00:21:14: So this is just a quick snapshot of who green
00:21:14 --> 00:21:15: part numbers are.
00:21:15 --> 00:21:17: I wouldn't spend too much time here,
00:21:17 --> 00:21:20: but what I really want you to take away is
00:21:20 --> 00:21:24: just that greenprint spans a lot of different countries.
00:21:24 --> 00:21:26: A lot of different asset types,
00:21:26 --> 00:21:28: geographic regions, sizes, portfolio types,
00:21:28 --> 00:21:31: really, you name it, and these you know.
00:21:31 --> 00:21:34: 4045 Plus real estate owners and investors have all committed
00:21:34 --> 00:21:38: and made that acknowledgement that they are pushing ahead on
00:21:38 --> 00:21:39: not only carbon emissions,
00:21:39 --> 00:21:41: but now increasingly. At zero as well.
00:21:44 --> 00:21:47: So what I'm here to talk to you today about
00:21:47 --> 00:21:53: is is this whole electrification or electrifying commercial real estate
00:21:53 --> 00:21:54: writ large?
00:21:54 --> 00:21:58: So we just put out a recent report on exactly
00:21:58 --> 00:21:59: that.
00:21:59 --> 00:22:03: It's actually called electrify. And and it really dives into
00:22:03 --> 00:22:03: 101,
00:22:03 --> 00:22:07: maybe 201 of electrifying commercial real estate,
00:22:07 --> 00:22:10: so this is. Not necessarily a new topic.
00:22:10 --> 00:22:13: I mean, the electric technology is for a lot of
00:22:13 --> 00:22:17: these building equipments and you know machinery have been around
00:22:17 --> 00:22:20: for some time and but as far as scaling it
00:22:20 --> 00:22:23: as far as cities making it a priority as far
00:22:23 --> 00:22:26: as commercial real estate owners pushing it out to their
00:22:26 --> 00:22:27: portfolio.
00:22:27 --> 00:22:30: That's what's the new part and understanding how this how
00:22:30 --> 00:22:32: this fits into the bigger perspective.
00:22:32 --> 00:22:35: I think Michael had a Greek Greek quote and I'm
00:22:35 --> 00:22:39: totally going to steal this next time I'm talking about.
00:22:39 --> 00:22:42: This topic about reading the tea leaves on on what's
00:22:42 --> 00:22:44: coming and and it's so true because,
00:22:44 --> 00:22:47: you know, electrification in and of itself is not new,
00:22:47 --> 00:22:49: and but what it means for real estate is something

00:22:49 --> 00:22:52: that for many companies and for many stakeholders,
00:22:52 --> 00:22:54: you know whether or not in a designer or architect
00:22:54 --> 00:22:55: engineer,
00:22:55 --> 00:22:59: that's what's new. So what this looks like for us
00:22:59 --> 00:23:00: is it was,
00:23:00 --> 00:23:03: you know, about a year or so long of research,
00:23:03 --> 00:23:05: analysis and interviews with stakeholders.
00:23:05 --> 00:23:08: All that good stuff. We boiled this down into really
00:23:08 --> 00:23:12: four points for what the business case for electrifying commercial
00:23:12 --> 00:23:13: real estate are.
00:23:13 --> 00:23:14: So so out of those records,
00:23:14 --> 00:23:17: we've got financial benefits. We've got impending regulations,
00:23:17 --> 00:23:18: technical benefits, and environmental benefits.
00:23:18 --> 00:23:22: And I could probably take the remaining hours so that
00:23:22 --> 00:23:24: we have here left on this event to really dive
00:23:24 --> 00:23:26: into every single one of these.
00:23:26 --> 00:23:28: But I'm not going to do that,
00:23:28 --> 00:23:31: and I I wouldn't do that to my fellow speakers
00:23:31 --> 00:23:34: or attendees to have to listen to that.
00:23:34 --> 00:23:36: So if you really want to dive into any of
00:23:37 --> 00:23:38: these Pacific bullets,
00:23:38 --> 00:23:41: I definitely encourage you to read the full report and
00:23:41 --> 00:23:42: you know it's an.
00:23:42 --> 00:23:44: It's an in depth report,
00:23:44 --> 00:23:46: but it's not meant to be super wonky.
00:23:46 --> 00:23:50: Super, super confusing. We meant it to be an introduction
00:23:50 --> 00:23:53: to the topic and but but while I'm on this
00:23:53 --> 00:23:56: item to give you a snapshot of of these pieces.
00:23:56 --> 00:23:58: And a few things I want to call out.
00:23:58 --> 00:24:02: So when you're looking at the financial benefits side.
00:24:02 --> 00:24:05: You know it right now that I guess the elephant
00:24:05 --> 00:24:09: in the room is that some electric technology and some
00:24:09 --> 00:24:10: electric you know,
00:24:10 --> 00:24:14: retrofits and construction are going to have a higher upfront
00:24:14 --> 00:24:15: premium.
00:24:15 --> 00:24:17: It's not necessarily a given.
00:24:17 --> 00:24:21: That's not, you know. When all is said and done,
00:24:21 --> 00:24:23: that that's what it is.
00:24:23 --> 00:24:26: But you know, in many cases there is a premium
00:24:26 --> 00:24:28: and what I will say is there there's been a

00:24:28 --> 00:24:32: number of studies done and one particularly out of Colorado
00:24:32 --> 00:24:35: is it was based out of Colorado study and it
00:24:35 --> 00:24:38: looked at the cost of replacing or retrofitting a piece
00:24:38 --> 00:24:41: of equipment at the end of its useful life.
00:24:41 --> 00:24:43: So taking a fossil fuel?
00:24:43 --> 00:24:46: A piece of equipment and at the end of its
00:24:46 --> 00:24:46: life,
00:24:46 --> 00:24:49: replacing it with an electric alternative and what they found
00:24:49 --> 00:24:51: was there was actually only a 2%
00:24:51 --> 00:24:54: premium to do that versus swapping it out for,
00:24:54 --> 00:24:55: you know their fossil fuel.
00:24:55 --> 00:24:59: So while there may still be some level of premium.
00:24:59 --> 00:25:01: And at the end of the day,
00:25:01 --> 00:25:05: it's it's not huge and it's getting smaller and smaller
00:25:05 --> 00:25:06: as the technology grows.
00:25:06 --> 00:25:09: So the other thing on the financial benefits side too,
00:25:09 --> 00:25:12: is that you have to look at this as an
00:25:12 --> 00:25:15: aggregate and as a long term so you know you've
00:25:15 --> 00:25:18: got the premium for the upfront that you may have
00:25:18 --> 00:25:21: to overcome. But when you look at it over over
00:25:21 --> 00:25:24: the long term and over the operational life of a
00:25:24 --> 00:25:24: building,
00:25:24 --> 00:25:28: the cost there are going to be significant for you
00:25:28 --> 00:25:30: as a building owner and investor.
00:25:30 --> 00:25:33: Gas infrastructure is fluid and I no pun intended,
00:25:33 --> 00:25:37: uh, you know it. Gas utilities prices are fluctuating.
00:25:37 --> 00:25:40: That's a very unknown territory right now.
00:25:40 --> 00:25:43: And when you think of the unknowns there,
00:25:43 --> 00:25:47: you have a much different scenario that you're looking at
00:25:47 --> 00:25:51: when you're looking at the longer term operating expenses and
00:25:52 --> 00:25:54: costs of an electric folding.
00:25:54 --> 00:25:56: I'm on the regulation side so you know this is
00:25:56 --> 00:25:59: obviously Denver focused as specific conversation,
00:25:59 --> 00:26:02: and Courtney is obviously done a great job of teeing
00:26:02 --> 00:26:03: up all of that.
00:26:03 --> 00:26:06: So I'm not gonna spend a whole ton of time
00:26:06 --> 00:26:07: here.
00:26:07 --> 00:26:10: But you know, I would definitely encourage anybody who's on
00:26:10 --> 00:26:12: the line who has either clients.
00:26:12 --> 00:26:13: If you're, you know, architect,
00:26:13 --> 00:26:15: designer, you know something on that level,

00:26:15 --> 00:26:18: or if you're an owner or investor and you have
00:26:18 --> 00:26:21: a portfolio in a lot of cities in California.
00:26:21 --> 00:26:23: Increasingly in New England, these regulations.
00:26:23 --> 00:26:25: Whether they be gas bands,
00:26:25 --> 00:26:27: whether they be carbon emissions reductions,
00:26:27 --> 00:26:29: you know, however, a city or state is is structuring
00:26:29 --> 00:26:30: them.
00:26:30 --> 00:26:31: They're coming. They're already here,
00:26:31 --> 00:26:33: and they're definitely not going away.
00:26:33 --> 00:26:36: And while there are some cities that are kind of
00:26:36 --> 00:26:37: pushing against them,
00:26:37 --> 00:26:39: these regulations are are not going anywhere,
00:26:39 --> 00:26:41: and so you know matter if you sit on a
00:26:42 --> 00:26:45: design side or if you sit on an owner side,
00:26:45 --> 00:26:47: it's in your best interest to be factoring that in
00:26:48 --> 00:26:50: and analyzing that and how is this going to affect
00:26:50 --> 00:26:51: my bottom line,
00:26:51 --> 00:26:54: both now and down the line now?
00:26:54 --> 00:26:58: Versus having this debate and discussion internally when it's too
00:26:58 --> 00:26:58: late,
00:26:58 --> 00:27:02: frankly. Uh, so moving on to the technical side,
00:27:02 --> 00:27:07: the technical side of electric equipment versus fossil fuel equipment
00:27:07 --> 00:27:08: can get super wonky.
00:27:08 --> 00:27:12: Super detailed, so I I won't dive two too deeply
00:27:12 --> 00:27:13: into that.
00:27:13 --> 00:27:15: But one thing I do want to call out and
00:27:16 --> 00:27:19: this kind of segues into that last bullet here with
00:27:19 --> 00:27:24: the environmental benefits nicely is that it's been proven most
00:27:24 --> 00:27:28: recently by by NBI, the new Buildings Institute that,
00:27:28 --> 00:27:31: per unit of energy. Energy or per unit of energy
00:27:31 --> 00:27:34: energy produced by electricity versus fossil fuels is the more
00:27:34 --> 00:27:35: efficient choice.
00:27:35 --> 00:27:38: So not only do you have the technology options that
00:27:38 --> 00:27:39: are increasing,
00:27:39 --> 00:27:42: so you know I mentioned the heat pump that's sitting
00:27:43 --> 00:27:44: in the corner of my room here.
00:27:44 --> 00:27:47: I mean, that's not an option that necessarily would have
00:27:47 --> 00:27:48: been available.
00:27:48 --> 00:27:51: You know, in years past you have the technology that's
00:27:51 --> 00:27:52: improving.

00:27:52 --> 00:27:54: You had costs as supply and demand.
00:27:54 --> 00:27:56: Does you have the costs coming down?
00:27:56 --> 00:27:59: But you also have the more efficient option when you're
00:27:59 --> 00:28:00: looking at.
00:28:00 --> 00:28:04: Electric buildings versus fossil fuel combustion and this kind of
00:28:05 --> 00:28:09: segues into my last point here about the environmental benefits.
00:28:09 --> 00:28:11: Frequently when you hear this conversation,
00:28:11 --> 00:28:13: or when you think about this,
00:28:13 --> 00:28:16: you might think about pure energy efficiency sustainability,
00:28:16 --> 00:28:19: that sort of type of debate and conversation.
00:28:19 --> 00:28:23: And there are huge and tremendous benefits on that level.
00:28:23 --> 00:28:26: But something to that I want to highlight,
00:28:26 --> 00:28:28: and especially in the last 18 months,
00:28:28 --> 00:28:30: is the health and Wellness conversation.
00:28:30 --> 00:28:34: When you're thinking of fossil fuel combustion equipment is tremendous,
00:28:34 --> 00:28:37: this can be as simple as a gas stove in
00:28:37 --> 00:28:40: your apartment or in your.
00:28:40 --> 00:28:43: Home or all the way up to commercial level?
00:28:43 --> 00:28:48: You know, commercial scale kitchens where you have multiple gas
00:28:48 --> 00:28:51: stoves and commercial chefs who are having having to.
00:28:51 --> 00:28:55: You know, juggle all of this.
00:28:55 --> 00:28:59: The studies are increasingly showing that having those appliances or
00:28:59 --> 00:29:00: pieces of equipment,
00:29:00 --> 00:29:05: so the gas stoves or or what have you.
00:29:05 --> 00:29:08: Actually have a detriment on your help and there's plenty
00:29:08 --> 00:29:11: of anecdotal examples that I've I've heard from.
00:29:11 --> 00:29:13: You know, various GREENPRINT members and others,
00:29:13 --> 00:29:16: but there's also some very real statistics out there that
00:29:16 --> 00:29:20: they've done citywide analysis and shown that the incidence of
00:29:20 --> 00:29:23: asthma in those cities and areas that they have higher
00:29:23 --> 00:29:26: levels of fossil fuel combustion are higher.
00:29:26 --> 00:29:29: So there's a very real health and Wellness consideration that
00:29:29 --> 00:29:32: that needs to be factored in on top of the
00:29:32 --> 00:29:35: efficiency and environmental benefits of the.
00:29:35 --> 00:29:38: Decarbonizing your building writ large.
00:29:38 --> 00:29:41: And one last point, before I go on here to
00:29:41 --> 00:29:43: my next slide I I wanna make two,

00:29:43 --> 00:29:46: you know, Courtney tied up the net zero conversation and
00:29:46 --> 00:29:48: you know my my fellow speakers gonna be talking a
00:29:48 --> 00:29:50: lot about that as well.
00:29:50 --> 00:29:52: But you know one thing I wanna make really,
00:29:52 --> 00:29:55: really clear too is that if you're having a net
00:29:55 --> 00:29:59: zero conversation and you haven't already had the electric conversation,
00:29:59 --> 00:30:02: you haven't already had a conversation about electrifying your asset.
00:30:02 --> 00:30:04: Whether or not you're in Denver,
00:30:04 --> 00:30:07: or whether or not you're in a different city where
00:30:07 --> 00:30:09: they don't have any sort of,
00:30:09 --> 00:30:12: you know regulations electric needs to come first before the
00:30:12 --> 00:30:13: net zero conversation.
00:30:13 --> 00:30:16: Net zero I think, is getting a you know a
00:30:16 --> 00:30:16: sexy,
00:30:16 --> 00:30:20: attractive conversation appeal in the sustainability space as it absolutely
00:30:20 --> 00:30:20: should.
00:30:20 --> 00:30:22: It's very difficult. It's very terrifying,
00:30:22 --> 00:30:24: but it's kind of the new concept,
00:30:24 --> 00:30:27: but electrification and energy efficiency or the the pillars and
00:30:27 --> 00:30:29: the building blocks of that conversation,
00:30:29 --> 00:30:32: that we have to be talking about now versus versus
00:30:32 --> 00:30:33: later,
00:30:33 --> 00:30:36: when it's too late. So just a couple more slides
00:30:37 --> 00:30:40: here for me and what I'm gonna what I'm gonna
00:30:40 --> 00:30:41: breakdown for.
00:30:41 --> 00:30:44: You guys are both the challenges and then some of
00:30:44 --> 00:30:45: the successes.
00:30:45 --> 00:30:50: Some of the ways to overcome those challenges on electrification
00:30:50 --> 00:30:50: writ large.
00:30:50 --> 00:30:54: So the challenges that I have listed here are by
00:30:54 --> 00:30:58: and large only retrofit concerns when you think of new
00:30:58 --> 00:30:59: construction,
00:30:59 --> 00:31:02: new construction, electrifying a new construction is easy.
00:31:02 --> 00:31:06: I'm obviously using air quotes because everything is relative,
00:31:06 --> 00:31:10: but electrifying a piece of new construction and asset that
00:31:10 --> 00:31:12: you're building from the ground up.
00:31:12 --> 00:31:16: The technology is there. The costs have by and large
00:31:16 --> 00:31:17: come down,
00:31:17 --> 00:31:21: you know, new construction? Electrification is is not.

00:31:21 --> 00:31:23: Where we need to focus the bulk of our how
00:31:23 --> 00:31:25: do we overcome these barriers?
00:31:25 --> 00:31:28: So a lot of these are specifically aimed at retrofits
00:31:28 --> 00:31:31: and you know Andy Andy has a lot of anti
00:31:31 --> 00:31:34: Bush has a lot of experience with with retrofitting and
00:31:34 --> 00:31:36: you know very high energy,
00:31:36 --> 00:31:38: energy efficient buildings and so I won't.
00:31:38 --> 00:31:40: I won't steal his Thunder too much,
00:31:40 --> 00:31:42: but but this list right here are some of the
00:31:42 --> 00:31:46: biggest challenges that you're going to come across when you're
00:31:46 --> 00:31:47: thinking of a retrofit.
00:31:47 --> 00:31:51: Moving from a fossil fuel all the way to electrification.
00:31:51 --> 00:31:54: Which is unfortunately something or fortunately what we really need
00:31:54 --> 00:31:55: to be focused on,
00:31:55 --> 00:31:58: because all of our building stock is not going to
00:31:58 --> 00:32:00: be newly constructed in every city.
00:32:00 --> 00:32:03: Every city is going to have its own makeup of
00:32:03 --> 00:32:05: new construction or retrofit,
00:32:05 --> 00:32:08: so the timing is really important to consider when you
00:32:08 --> 00:32:11: think of how many occupants are in the building,
00:32:11 --> 00:32:13: how many tenants are in the building,
00:32:13 --> 00:32:15: when do their leases turn over?
00:32:15 --> 00:32:17: Is it single tenant? That's really hard.
00:32:17 --> 00:32:20: That's really something that you have to factor in.
00:32:22 --> 00:32:25: Much, much longer term. It's a much,
00:32:25 --> 00:32:29: much longer term discussion. So ensuring there's enough space and
00:32:29 --> 00:32:33: making sure that your electric equivalents to your fossil fuel
00:32:33 --> 00:32:34: so you've got a boiler,
00:32:34 --> 00:32:37: for example, and you're looking at a heat pump or
00:32:37 --> 00:32:40: or whatever your swap out is going to be.
00:32:40 --> 00:32:42: It can't be an apples to apples comparison.
00:32:42 --> 00:32:45: It's not. It's not a one to one when you
00:32:45 --> 00:32:48: think about the other nuts and bolts of what,
00:32:48 --> 00:32:49: what, the technology pieces need,
00:32:49 --> 00:32:53: it needs to be on a much larger scale.
00:32:53 --> 00:32:56: Apples to oranges, almost unfortunately because it might involve rearranging
00:32:56 --> 00:32:57: your central plan.
00:32:57 --> 00:33:00: It might involve you know duck work that wasn't there.
00:33:00 --> 00:33:03: You know there there's a lot of a lot of

00:33:03 --> 00:33:05: pieces that you have to factor in,
00:33:05 --> 00:33:07: so it can't just be a one to one footprint
00:33:07 --> 00:33:09: to footprint conversation,
00:33:09 --> 00:33:12: it has to be a holistic building.
00:33:12 --> 00:33:14: I'm on the weather consideration side,
00:33:14 --> 00:33:17: you know I I don't even tell you guys living
00:33:17 --> 00:33:18: living in Denver.
00:33:18 --> 00:33:20: Cold weather certainly has considerations.
00:33:20 --> 00:33:23: Heat pump technology has significantly improved over the last decade.
00:33:23 --> 00:33:26: You know it used to be that you couldn't really
00:33:27 --> 00:33:27: go below.
00:33:27 --> 00:33:31: 35 or so degrees Fahrenheit with your heat pump technology
00:33:31 --> 00:33:33: and that is no rapidly improving,
00:33:33 --> 00:33:37: so those barriers are coming down as technology improves and
00:33:38 --> 00:33:40: supply and demand and costs improve.
00:33:40 --> 00:33:43: Uh, so upfront costs. I've already talked about that.
00:33:43 --> 00:33:46: I'll kind of skip over that for the sake of
00:33:46 --> 00:33:50: time and social equity is something that I I do
00:33:50 --> 00:33:51: want to highlight.
00:33:51 --> 00:33:55: It's not necessarily something that we have time to dive
00:33:55 --> 00:33:56: into tonight about,
00:33:56 --> 00:33:59: but social equity is something that's a very real consideration
00:34:00 --> 00:34:01: when we look at electrification.
00:34:01 --> 00:34:05: If you look at the number of gas utility customers
00:34:05 --> 00:34:09: and you decrease that number of gas utility customers because
00:34:09 --> 00:34:12: a subsection of that bucket has moved to an electric
00:34:12 --> 00:34:16: building or their building has been rates of Class A
00:34:16 --> 00:34:17: trophy asset,
00:34:17 --> 00:34:20: and it's been renovated to electric,
00:34:20 --> 00:34:24: suddenly the burden and the cost of gas utilities and
00:34:24 --> 00:34:28: gas costs are spread out over a smaller group of
00:34:28 --> 00:34:31: people and of residents and tenants.
00:34:31 --> 00:34:34: I'm simplifying the social equity piece here.
00:34:34 --> 00:34:36: There's many, many other facets of that conversation,
00:34:36 --> 00:34:39: but it is a very real consideration,
00:34:39 --> 00:34:42: not something that real estate can and should be the
00:34:42 --> 00:34:45: only ones to be aware of and solving,
00:34:45 --> 00:34:48: but at the bare minimum it's something that real estate
00:34:48 --> 00:34:49: stakeholders,
00:34:49 --> 00:34:50: no matter where you sit,

00:34:50 --> 00:34:54: should at least be aware of.
00:34:54 --> 00:35:01: And so occupant preference. Occupant preference is really rapidly increasing
00:35:01 --> 00:35:05: as far as their desires for sustainability.
00:35:05 --> 00:35:08: So you know, that's not to say that you're going
00:35:08 --> 00:35:09: to have a tenant come in.
00:35:09 --> 00:35:12: That necessarily knows they want an electric building,
00:35:12 --> 00:35:14: but they may be coming in and saying,
00:35:14 --> 00:35:16: you know, we want to net zero building,
00:35:16 --> 00:35:19: or we want to leave platinum building and it's up
00:35:19 --> 00:35:22: to you as the real estate practitioner and stakeholder to
00:35:22 --> 00:35:23: be able to say,
00:35:23 --> 00:35:26: OK, this is how it's going to translate to to
00:35:26 --> 00:35:30: an electric building versus a different type of building.
00:35:30 --> 00:35:32: So utility infrastructure and you know The Dirty,
00:35:32 --> 00:35:33: dirty little secret major always.
00:35:33 --> 00:35:35: Unfortunately, you know electric utility infrastructure.
00:35:35 --> 00:35:37: We can all go to electric buildings overnight.
00:35:37 --> 00:35:40: I mean, I'm not. I'm not going to try to
00:35:40 --> 00:35:41: argue otherwise.
00:35:41 --> 00:35:44: You know, here this afternoon or or any other time.
00:35:44 --> 00:35:47: But you know, we can't just snap our fingers and
00:35:47 --> 00:35:48: go to 100%
00:35:48 --> 00:35:50: electric buildings. There does need to be a much more
00:35:50 --> 00:35:51: progressive Flo,
00:35:51 --> 00:35:54: but this is really where the public private partnership is
00:35:54 --> 00:35:56: going to have to come in.
00:35:56 --> 00:35:58: It's not going to solely be up to the utilities.
00:35:58 --> 00:36:00: It's not going to be.
00:36:00 --> 00:36:03: Really, up to the real estate is going to be
00:36:03 --> 00:36:04: solely up to any industry,
00:36:04 --> 00:36:07: but just being aware of the of the progress of
00:36:07 --> 00:36:07: it.
00:36:07 --> 00:36:10: And also if you're a real estate developer owner,
00:36:10 --> 00:36:12: I'm involving your utility. If that's not a conversation that
00:36:12 --> 00:36:15: you're that you're used to having make sure you're having
00:36:15 --> 00:36:16: conversations with the utility.
00:36:16 --> 00:36:19: I it's always surprising for some folks what what their
00:36:19 --> 00:36:20: utility has to say.
00:36:20 --> 00:36:22: If they haven't, haven't chatted with them,
00:36:22 --> 00:36:25: and what incentives they might be missing too.
00:36:25 --> 00:36:28: OK, so this is this is my last real content

00:36:28 --> 00:36:28: slide here,
00:36:28 --> 00:36:31: but I did wanna want to kind of take some
00:36:31 --> 00:36:34: of the you know that was a lot of negative
00:36:34 --> 00:36:37: and I wanna I wanna take some of the negatives
00:36:37 --> 00:36:39: and talk about where some of the solutions lie and
00:36:39 --> 00:36:42: what the stakeholders that we interviewed for the electrify report
00:36:43 --> 00:36:45: what what some of them shared with us are ways
00:36:45 --> 00:36:49: to overcome those barriers. So making sure that you're optimizing
00:36:49 --> 00:36:51: those vacancies and occupant turnover.
00:36:51 --> 00:36:54: So even though occupancy can be a barrier to electrifying
00:36:55 --> 00:36:55: your building,
00:36:55 --> 00:36:59: making sure that you're looking at it now long term
00:36:59 --> 00:37:03: and you're optimizing those points of turnover versus kind of
00:37:03 --> 00:37:07: letting them pass by and not factoring in turnover from
00:37:07 --> 00:37:10: the perspective of how am I electrifying my building and
00:37:11 --> 00:37:11: and same?
00:37:11 --> 00:37:14: You know the same thing as as far as scheduling
00:37:14 --> 00:37:17: and planning for equipment turnover.
00:37:17 --> 00:37:20: Those are plans, their schedules that happen now versus down
00:37:20 --> 00:37:20: the line,
00:37:20 --> 00:37:23: so making sure that you're that you're really on top
00:37:23 --> 00:37:24: of it.
00:37:24 --> 00:37:27: Perhaps before you would necessarily be thinking of what's going
00:37:27 --> 00:37:29: to happen at that tenant turnover and and then you
00:37:30 --> 00:37:32: know second to last point here is is really making
00:37:32 --> 00:37:35: sure that that you've got the case for buy in.
00:37:35 --> 00:37:38: Now is the time to be having those conversations that
00:37:38 --> 00:37:39: only would see sweet,
00:37:39 --> 00:37:41: making sure that communication is is sound and going,
00:37:41 --> 00:37:44: and but also making sure you're communicating with your property
00:37:44 --> 00:37:45: teams and again,
00:37:45 --> 00:37:48: utility. You know I've I've brought up the utility.
00:37:48 --> 00:37:49: He's a number of times,
00:37:49 --> 00:37:52: but all of these stakeholders have to be involved in
00:37:52 --> 00:37:53: the conversation,
00:37:53 --> 00:37:56: even if it's not a group that you would necessarily
00:37:56 --> 00:37:57: bring to the table.
00:37:57 --> 00:38:01: For a typical retrofit or a typical tenant turnover.

00:38:01 --> 00:38:03: And then lastly, you know really,
00:38:03 --> 00:38:06: the only way that we're going to make net zero
00:38:06 --> 00:38:08: goals or gas bans or electrification,
00:38:08 --> 00:38:10: or carbon emissions, whatever it is,
00:38:10 --> 00:38:12: is to scale this across portfolios.
00:38:12 --> 00:38:15: It's really great that we're hearing right now.
00:38:15 --> 00:38:18: One off examples and. And that's that's fantastic.
00:38:18 --> 00:38:21: And I think we should continue to do some of
00:38:21 --> 00:38:22: that.
00:38:22 --> 00:38:25: But we really need to be scaling this and thinking
00:38:26 --> 00:38:29: of it as a as a wider solution for portfolios,
00:38:29 --> 00:38:31: supply and demand, you know.
00:38:31 --> 00:38:33: At the end of the day,
00:38:33 --> 00:38:36: if you're starting to do it over a wider number
00:38:36 --> 00:38:37: of of a assets,
00:38:37 --> 00:38:39: it's going better off for everybody in the end,
00:38:39 --> 00:38:41: and so so just last.
00:38:41 --> 00:38:44: Last point here. And if you want to take a
00:38:44 --> 00:38:45: look at the full report,
00:38:45 --> 00:38:47: I would definitely encourage you to.
00:38:47 --> 00:38:49: It's it's free and openly available.
00:38:49 --> 00:38:51: You can find it at ui.org/electrify.
00:38:51 --> 00:38:54: It's also on utilized knowledge Finder platform or feel free
00:38:54 --> 00:38:57: to to reach out to me after this webinar if
00:38:57 --> 00:38:59: you have any specific questions.
00:38:59 --> 00:39:01: So Mary and I won't hit it back
00:39:01 --> 00:39:02: over to you. Thank you so much,
00:39:02 --> 00:39:05: Emily. And I'm going to turn it over to our
00:39:05 --> 00:39:06: next speaker,
00:39:06 --> 00:39:09: Ellen. Mccreadie with East West Partners.
00:39:13 --> 00:39:16: See thank you Maryann, can you can you hear me?
00:39:16 --> 00:39:19: Yep, one second while I mute myself before you take
00:39:19 --> 00:39:19: control.
00:39:19 --> 00:39:20: Thank
00:39:20 --> 00:39:25: you, OK? Alright, well I'm gonna guess that she's muted
00:39:25 --> 00:39:31: so thank you for having me really great presentation so
00:39:31 --> 00:39:31: far,
00:39:31 --> 00:39:34: so I'm going to talk about our project here in
00:39:35 --> 00:39:37: Snowmass called Electric Pass Lodge.
00:39:37 --> 00:39:42: See. OK, so first for context,
00:39:42 --> 00:39:46: for context. So Snowmass is one of the four ski
00:39:46 --> 00:39:49: areas and the Aspen Snowmass collection.

00:39:49 --> 00:39:53: Snowmass Base Village sits at the base of the resort,
00:39:53 --> 00:39:56: you can see it highlighted in yellow.
00:39:56 --> 00:40:00: There it's about 19 acres just over a million entitled
00:40:00 --> 00:40:01: square feet,
00:40:01 --> 00:40:05: residential, commercial and hotel across 17 buildings.
00:40:05 --> 00:40:08: So it was originally approved back in 2004.
00:40:08 --> 00:40:11: The first six buildings were completed around 2009,
00:40:11 --> 00:40:14: but the project stalled as part of the recession,
00:40:14 --> 00:40:18: and it sat essentially dormant and partially built for about
00:40:18 --> 00:40:19: a decade.
00:40:19 --> 00:40:23: Uhm, so it was acquired by the partner partnership of
00:40:23 --> 00:40:28: KSL Capital Aspen Skiing company in East West Partners in
00:40:28 --> 00:40:28: 2016.
00:40:28 --> 00:40:32: We focused on the core of the village 1st and
00:40:32 --> 00:40:34: since then we've built,
00:40:34 --> 00:40:38: sold or leased roughly 300,000 square feet in five buildings.
00:40:38 --> 00:40:42: In addition to closing out real estate sales at the
00:40:42 --> 00:40:43: Viceroy Snowmass,
00:40:43 --> 00:40:47: so today the village includes more than 20 restaurants and
00:40:47 --> 00:40:50: retail tenants expanded guest services.
00:40:50 --> 00:40:52: Related to transit and skiers.
00:40:52 --> 00:40:55: Public amenities. The ice rink you see here in this
00:40:55 --> 00:40:56: screen,
00:40:56 --> 00:40:59: a game lounge you see in the lower right and
00:40:59 --> 00:41:01: a climbing wall,
00:41:01 --> 00:41:04: the Limelight Hotel. So we've now turned our attention to
00:41:04 --> 00:41:06: the future phases,
00:41:06 --> 00:41:09: and so there's another 500,000 square feet still to be
00:41:09 --> 00:41:11: developed on the remaining parcels.
00:41:11 --> 00:41:13: Kind of what you see.
00:41:13 --> 00:41:16: I don't know if you can see my cursor,
00:41:16 --> 00:41:20: but the vacant land there and.
00:41:20 --> 00:41:26: So the first of which is Electric path Lodge and
00:41:26 --> 00:41:28: let's see.
00:41:28 --> 00:41:31: Uh, and so this you can see on the map
00:41:31 --> 00:41:35: there is the first building to expand the village from
00:41:35 --> 00:41:38: the existing core on the right of the screen over
00:41:38 --> 00:41:42: towards the Viceroy Snowmass on the site you can see
00:41:42 --> 00:41:43: here is shown.
00:41:43 --> 00:41:47: It's rounding out, sort of the most visible front facade.
00:41:47 --> 00:41:50: If you're approaching the village by car up Brush Creek
00:41:50 --> 00:41:51: Rd.

00:41:51 --> 00:41:53: And So what is Electric pass lodge?
00:41:53 --> 00:41:56: So the project is 52 for sale condominiums and one
00:41:56 --> 00:41:58: employee housing unit.
00:41:58 --> 00:42:01: It's ski in ski out the face of Snowmass.
00:42:01 --> 00:42:03: It has an adjacent village pool,
00:42:03 --> 00:42:07: so I'll touch a little bit more on that later,
00:42:07 --> 00:42:10: but that's an amenity that's open to the entire base
00:42:10 --> 00:42:11: village.
00:42:11 --> 00:42:13: And then in terms of amenities,
00:42:13 --> 00:42:15: the building itself really the main amenity,
00:42:15 --> 00:42:18: is the village and everything surrounding it.
00:42:18 --> 00:42:20: But there's an owners lounge,
00:42:20 --> 00:42:23: both interior and interior and exterior as well as ski
00:42:23 --> 00:42:26: locker room and underground parking with this building,
00:42:26 --> 00:42:29: so it's about 101 total.
00:42:29 --> 00:42:33: Gross square feet. So the mission when we set out
00:42:33 --> 00:42:37: this on this project is to offer approachable,
00:42:37 --> 00:42:41: responsible and healthy skin scale residences and the hardest comma
00:42:41 --> 00:42:42: space village.
00:42:42 --> 00:42:46: For seekers of adventure and an enlightened mountain living.
00:42:46 --> 00:42:50: So from the beginning really leading with responsibility and sustainability
00:42:50 --> 00:42:52: in all of our messaging.
00:42:52 --> 00:42:55: So what does sustainability mean for this project?
00:42:55 --> 00:42:58: We've really tried to push the envelope here.
00:42:58 --> 00:43:01: We've used both passive strategies and technology.
00:43:01 --> 00:43:06: To do so, an energy efficient powered by 100%
00:43:06 --> 00:43:12: renewable energy both on site solar but also off site
00:43:12 --> 00:43:16: through Holy Cross is pure energy program.
00:43:16 --> 00:43:18: Uh, and also high performing.
00:43:18 --> 00:43:21: So what we found to be seemingly the biggest benefit
00:43:21 --> 00:43:22: of our design.
00:43:22 --> 00:43:25: Designing a building like this is that you end up
00:43:25 --> 00:43:29: with just again a really high performing and healthy building
00:43:29 --> 00:43:31: in terms of indoor air quality.
00:43:31 --> 00:43:35: So. These sorry, there's a little delay here,
00:43:35 --> 00:43:39: but these were the pillars that sort of drove our
00:43:39 --> 00:43:42: marketing and I won't dive into them fully.
00:43:42 --> 00:43:43: But as you can see,
00:43:43 --> 00:43:48: leading with responsible and sustainable healthy development from from the
00:43:48 --> 00:43:49: beginning.

00:43:49 --> 00:43:53: So the building includes basically 3 unit types,
00:43:53 --> 00:43:57: split between two and three bedroom configurations,
00:43:57 --> 00:44:04: and priced from just under $1.4 million to just over
00:44:04 --> 00:44:05: $3 million.
00:44:05 --> 00:44:07: I've included a few renderings,
00:44:07 --> 00:44:09: all roll through them pretty quickly,
00:44:09 --> 00:44:12: but this is from looking at the building from the
00:44:12 --> 00:44:13: North looking South,
00:44:13 --> 00:44:18: so this is as you're approaching base village on Brush
00:44:18 --> 00:44:18: Creek Rd.
00:44:18 --> 00:44:21: This is the other side of the building.
00:44:21 --> 00:44:23: The South side of the building,
00:44:23 --> 00:44:26: and to get back to the village pool.
00:44:26 --> 00:44:30: A big caveat here of this building is that the
00:44:30 --> 00:44:31: pool is a separate,
00:44:31 --> 00:44:35: basically amenity. It again serves up Eudy requirement that serves
00:44:35 --> 00:44:38: the entire village and so it is actually not all
00:44:38 --> 00:44:39: electric.
00:44:39 --> 00:44:42: It's heated and the snow melt around the pool deck
00:44:42 --> 00:44:45: itself is gas is provided by gas fired boiler.
00:44:45 --> 00:44:49: We just couldn't find a way to do that efficiently.
00:44:49 --> 00:44:51: Without incorporating geothermal into the project,
00:44:51 --> 00:44:55: which we couldn't do due to a number of constraints
00:44:55 --> 00:44:56: and so,
00:44:56 --> 00:45:01: then here's just an interior rendering to get an idea
00:45:01 --> 00:45:02: of the design.
00:45:02 --> 00:45:05: And so basically, you know we've had a lot of
00:45:05 --> 00:45:06: talking about.
00:45:06 --> 00:45:08: Sort of. Why did we go this path?
00:45:08 --> 00:45:11: And one thing that kind of.
00:45:11 --> 00:45:14: Uh, anchors back to is Aspen skiing company.
00:45:14 --> 00:45:18: A couple years ago, had a really robust campaign.
00:45:18 --> 00:45:20: They called give a flake,
00:45:20 --> 00:45:23: and I think that really is applicable here.
00:45:23 --> 00:45:26: Our local economy depends on snow and therefore reducing carbon
00:45:27 --> 00:45:27: emissions.
00:45:27 --> 00:45:30: And so as developers in the ski resort,
00:45:30 --> 00:45:34: we feel like we have an obligation to care about
00:45:34 --> 00:45:35: what we're building.
00:45:35 --> 00:45:39: We also think that sustainability is a luxury value which

00:45:39 --> 00:45:42: is really evident in the automobile industry.
00:45:42 --> 00:45:47: Uhm, and we're probably and obviously really applicable to our
00:45:47 --> 00:45:48: buyers here and then.
00:45:48 --> 00:45:53: Probably preaching to the choir here or definitely but that
00:45:53 --> 00:45:57: net zero and electrification are not just a trend today,
00:45:57 --> 00:46:02: but they're seemingly the future of real estate development.
00:46:02 --> 00:46:06: So our approach for this building is a carbon free
00:46:06 --> 00:46:11: strategy and it starts by building a really efficient building
00:46:11 --> 00:46:14: past some strategies in orientation,
00:46:14 --> 00:46:19: but also just in building a really robust envelope with
00:46:19 --> 00:46:20: enhanced insulation,
00:46:20 --> 00:46:23: insulation and triple pane windows,
00:46:23 --> 00:46:28: and then using those things to control belodon the mechanical
00:46:28 --> 00:46:28: systems.
00:46:28 --> 00:46:33: And then from there installing really efficient systems.
00:46:33 --> 00:46:36: So then and then taking that and powering it all
00:46:36 --> 00:46:41: electrically and then sourcing that electricity through 100%
00:46:41 --> 00:46:45: renewable energy. And again, that's through onsite solar panels,
00:46:45 --> 00:46:48: but also through fully crossed here has a pure energy
00:46:48 --> 00:46:52: program which is completely renewable power.
00:46:54 --> 00:46:58: So sustainability features and I'll get into some of these
00:46:58 --> 00:47:00: details in the following slides.
00:47:00 --> 00:47:02: Again, it hinges on a really robust envelope,
00:47:02 --> 00:47:05: so with enhanced insulation and triple pane windows,
00:47:05 --> 00:47:09: and then I'll look at some of the other things
00:47:09 --> 00:47:10: on the following slides.
00:47:10 --> 00:47:14: So there's a lot of things that are hidden sort
00:47:14 --> 00:47:15: of behind the scenes,
00:47:15 --> 00:47:17: and what those things are,
00:47:17 --> 00:47:21: or phase change materials. We have phase change material in
00:47:21 --> 00:47:22: the living room,
00:47:22 --> 00:47:26: ceilings and bedroom ceilings, and that's basically a passive material.
00:47:26 --> 00:47:30: That absorbs and stores excess heat and then releases it
00:47:30 --> 00:47:31: is space is cool,
00:47:31 --> 00:47:35: so it's a passive way to maintain temperature in a
00:47:35 --> 00:47:36: space.
00:47:36 --> 00:47:41: We have 100% natural ventilation where preconditioned air comes through

00:47:41 --> 00:47:44: an earth tube system and then goes to an RV
00:47:44 --> 00:47:48: in each unit that provides both natural ventilation and also
00:47:48 --> 00:47:52: bypass cooling. So I already spoke to the insulation and
00:47:52 --> 00:47:54: then I guess it's visible,
00:47:54 --> 00:47:57: but the but the. Rooftop solar.
00:47:57 --> 00:48:00: So then there are the things that our buyers will
00:48:00 --> 00:48:00: see,
00:48:00 --> 00:48:02: touch and feel on a daily basis.
00:48:02 --> 00:48:05: So one of those is an induction cook top.
00:48:05 --> 00:48:09: A lot of people are used to cooking with gas,
00:48:09 --> 00:48:11: so I'm getting buyers used to induction.
00:48:11 --> 00:48:13: The other is a fireplace.
00:48:13 --> 00:48:16: So up here in the mountains a fireplace sort of
00:48:16 --> 00:48:17: a must have,
00:48:17 --> 00:48:21: so we're using it's from dimplex there optimist technology and
00:48:21 --> 00:48:24: I should have included a video of it's really cool.
00:48:24 --> 00:48:27: If you have a chance to look it up.
00:48:27 --> 00:48:29: But it's a steam technology.
00:48:29 --> 00:48:31: Basically that dumb, but it's a,
00:48:31 --> 00:48:34: but it's electric, so it's water vapor.
00:48:34 --> 00:48:39: It's lights on water vapor instead of a gas fireplace.
00:48:39 --> 00:48:42: We have electric heat. We have ceiling fans as part
00:48:42 --> 00:48:47: of our passive cooling and high performance triple pane European
00:48:47 --> 00:48:48: style windows.
00:48:48 --> 00:48:53: And then another thing is that people can't have gas
00:48:53 --> 00:48:55: grills and so we have.
00:48:55 --> 00:48:58: We've been testing here. Some electric grills to try to
00:48:58 --> 00:49:02: figure out something that's a good solution for those that
00:49:02 --> 00:49:05: want to make use of of their out of outdoor
00:49:05 --> 00:49:08: cooking. And so I'm going to circle back to this
00:49:09 --> 00:49:12: only if there's a few minutes at the end.
00:49:12 --> 00:49:14: But one key aspect was that we had to educate
00:49:15 --> 00:49:17: our buyers and really just tell them why are we
00:49:17 --> 00:49:18: doing what,
00:49:18 --> 00:49:21: we're what we're doing, and what are we doing in
00:49:21 --> 00:49:23: a way that that they would understand.
00:49:23 --> 00:49:26: So if there's time we'll circle back to this video,
00:49:26 --> 00:49:28: but on the sales and marketing front,
00:49:28 --> 00:49:31: oh, ah, hold on. Go to the next slide.
00:49:31 --> 00:49:35: There we go. So in the sales and marketing front
00:49:35 --> 00:49:38: we let heavily with sustainability.

00:49:38 --> 00:49:39: We did some test advertisements.
00:49:39 --> 00:49:42: In fact when we lead with a sustainability message in
00:49:42 --> 00:49:46: a lifestyle message and the sustainability message actually resonated.
00:49:46 --> 00:49:51: Most meaning it got the most kind of clicks in
00:49:51 --> 00:49:51: action.
00:49:51 --> 00:49:55: But we also went to an all digital sales process,
00:49:55 --> 00:49:59: so our kind of discussion was at a next generation
00:49:59 --> 00:50:02: building deserves a next generation sales process,
00:50:02 --> 00:50:06: and that was driven by what you see with the
00:50:06 --> 00:50:07: automobile industry.
00:50:07 --> 00:50:11: Meaning you can go online and put down a deposit
00:50:11 --> 00:50:16: for the next latest and greatest Tesla or electric Hummer
00:50:16 --> 00:50:17: or whatever it is.
00:50:17 --> 00:50:22: And it's just a really seamless and easy purchasing process.
00:50:22 --> 00:50:26: So we had just really high level teaser type advertising
00:50:26 --> 00:50:30: last winter and then later in the winter we announced
00:50:30 --> 00:50:34: sort of our all digital sales campaign which turned out
00:50:34 --> 00:50:38: with COVID and having less kind of travelers and market
00:50:39 --> 00:50:42: turned to be how to be really effective.
00:50:42 --> 00:50:46: So we had this process where you could make a
00:50:46 --> 00:50:51: reservation to purchase a unit with a fully refundable just
00:50:51 --> 00:50:53: $1000 down and then.
00:50:53 --> 00:50:56: Uhm later, so you just simply kind of clicked forms
00:50:56 --> 00:51:00: online on the website and paid with a credit card
00:51:00 --> 00:51:02: and then so we had reservations.
00:51:02 --> 00:51:04: So we open reservations January 26th.
00:51:04 --> 00:51:08: We got 20 reservations in the first half hour and
00:51:08 --> 00:51:10: ended up with 75 total.
00:51:10 --> 00:51:13: It was just $1000. It was fully refundable so we
00:51:14 --> 00:51:17: knew there would be a fair bit of fallout resulted
00:51:17 --> 00:51:21: in 16 contracts and so we would call that as
00:51:21 --> 00:51:24: success on our end. But once you made a reservation,
00:51:24 --> 00:51:28: you could go online, similar to picking the interior color
00:51:28 --> 00:51:29: of your car.
00:51:29 --> 00:51:32: You could pick your residences that you liked and what
00:51:32 --> 00:51:33: you were,
00:51:33 --> 00:51:35: what you were looking for,
00:51:35 --> 00:51:38: and actually our sales team could kind of see what
00:51:38 --> 00:51:39: you were,
00:51:39 --> 00:51:40: what you were shopping for.
00:51:40 --> 00:51:42: You could do your due diligence.

00:51:42 --> 00:51:45: Look at all of the finished books.
00:51:45 --> 00:51:47: All of the purchase and sale agreement,
00:51:47 --> 00:51:50: and then you would convert to an actual contract.
00:51:50 --> 00:51:52: We did that starting in March,
00:51:52 --> 00:51:54: so. Uhm, I can go,
00:51:54 --> 00:51:56: you know, deeper into that,
00:51:56 --> 00:51:59: but we would definitely call it a success.
00:51:59 --> 00:52:02: We've been out in the market since March and we
00:52:03 --> 00:52:05: now have 45 residences under contract,
00:52:05 --> 00:52:09: so only 7 units remaining in the building for sale
00:52:09 --> 00:52:12: and see if the next slide shows where we are
00:52:12 --> 00:52:13: today.
00:52:13 --> 00:52:17: So we started construction. On the 1st week of April
00:52:17 --> 00:52:21: we broke ground and so we're just in sort of
00:52:21 --> 00:52:24: site work and foundation work.
00:52:24 --> 00:52:27: Right now it's about a two year build,
00:52:27 --> 00:52:32: so projected to be done in the spring of 2023.
00:52:32 --> 00:52:34: Uhm, and so that's what I have.
00:52:34 --> 00:52:37: An electric pass lodge in terms of what's next here
00:52:37 --> 00:52:38: in Batesville.
00:52:38 --> 00:52:40: Age render design on project called Cora,
00:52:40 --> 00:52:42: which we haven't released information on,
00:52:42 --> 00:52:45: but I'll say that we are carrying forward the electrification
00:52:45 --> 00:52:47: strategy and exploring even more enhanced,
00:52:47 --> 00:52:49: sustainable design that's being vetted as we speak.
00:52:49 --> 00:52:51: So that's all I have.
00:52:51 --> 00:52:54: I don't know Marianne where we are with time for
00:52:54 --> 00:52:54: the video,
00:52:54 --> 00:52:57: I think we might be out of it,
00:52:57 --> 00:53:00: but it's on our website if people want to check
00:53:00 --> 00:53:01: it out.
00:53:01 --> 00:53:05: That's exactly right, and we can actually play it after
00:53:05 --> 00:53:05: Q&A.
00:53:05 --> 00:53:07: But thank you so much Emily.
00:53:07 --> 00:53:11: Really a pleasure to see what you've been working on.
00:53:11 --> 00:53:15: And now I'll turn it over to our next speaker,
00:53:15 --> 00:53:16: Andy Bush with Morgan Creek Ventures.
00:53:16 --> 00:53:18: Hi Andy. Hi, how are you?
00:53:18 --> 00:53:20: Can you hear me? Yes.
00:53:23 --> 00:53:24: So I'm going to talk.
00:53:24 --> 00:53:27: You can go to the next slide just about kind
00:53:27 --> 00:53:28: of our focus.

00:53:28 --> 00:53:31: We at the moment or about a little bit between
00:53:31 --> 00:53:34: the 3rd and halfway done with about a half million
00:53:34 --> 00:53:36: square feet of all electric buildings.
00:53:36 --> 00:53:38: We built half a dozen.
00:53:38 --> 00:53:41: We have another half dozen in the works and I
00:53:41 --> 00:53:44: would say that just for us as a company,
00:53:44 --> 00:53:47: we're essentially focused on all electric buildings I think is
00:53:47 --> 00:53:48: Ellen said.
00:53:48 --> 00:53:51: It's really all about great building envelopes that make it
00:53:52 --> 00:53:52: work.
00:53:52 --> 00:53:55: I'll talk a little bit about how we use PV,
00:53:55 --> 00:53:58: including vertical walls, but one of the cooler things we're
00:53:58 --> 00:54:01: doing right now is we're actually doing some testing.
00:54:01 --> 00:54:04: Some windows that actually just have a window film that
00:54:04 --> 00:54:06: is about right now.
00:54:06 --> 00:54:08: 6% efficient solar panels that are 24%
00:54:08 --> 00:54:11: efficient, but they're thinking these windows might get to 12
00:54:11 --> 00:54:12: or 14%.
00:54:12 --> 00:54:15: Think if every building could have windows that were half
00:54:15 --> 00:54:17: as efficient as solar panels,
00:54:17 --> 00:54:20: and you can still see through.
00:54:20 --> 00:54:22: And so it's really high performance design.
00:54:22 --> 00:54:25: We're starting to look at all of our operations with
00:54:25 --> 00:54:29: a focus on sustainability in both new buildings as well
00:54:29 --> 00:54:31: as existing retrofits next time.
00:54:34 --> 00:54:37: We're also starting to build for others because we're finding
00:54:37 --> 00:54:40: there's a demand by other people to have full electric
00:54:40 --> 00:54:40: buildings.
00:54:40 --> 00:54:42: Kind of built to suit,
00:54:42 --> 00:54:46: so we just finished a modest sized North American headquarters
00:54:46 --> 00:54:47: for VHISOLA.
00:54:47 --> 00:54:49: Manufacturer of environmental instruments, that's essentially.
00:54:49 --> 00:54:53: Net there already, and that we haven't put the solar
00:54:53 --> 00:54:54: panels on yet,
00:54:54 --> 00:54:57: but it's all electric. Great building envelope there.
00:54:57 --> 00:54:59: We actually did composite steel with CLT,
00:54:59 --> 00:55:01: cross laminated timber for the floors,
00:55:01 --> 00:55:04: actually becomes ceilings in this case,
00:55:04 --> 00:55:07: and so there's a growing demand for this kind of
00:55:07 --> 00:55:08: product.
00:55:08 --> 00:55:13: Next slide. And for me it still has to be,

00:55:13 --> 00:55:16: you know, as good or better than the competition.
00:55:16 --> 00:55:19: I think Ellen talked about that it's got to be
00:55:19 --> 00:55:21: really great product.
00:55:21 --> 00:55:24: Next slide. I mean for us whether it's office or
00:55:24 --> 00:55:28: next slide residential people really have to want to live
00:55:28 --> 00:55:28: in it.
00:55:28 --> 00:55:30: I mean, so for us,
00:55:30 --> 00:55:35: it's this kind of combination between design and sustainability that
00:55:35 --> 00:55:35: slide.
00:55:35 --> 00:55:38: And we're also really focused on not just electrification,
00:55:38 --> 00:55:40: although that's a really big part of it.
00:55:40 --> 00:55:43: But this is a water treatment facility in one of
00:55:43 --> 00:55:45: the projects that we did,
00:55:45 --> 00:55:48: so all the water from the roof comes down,
00:55:48 --> 00:55:49: drains through this roof garden.
00:55:49 --> 00:55:52: It was actually a condominium project in this unit was
00:55:52 --> 00:55:54: on the 1st floor,
00:55:54 --> 00:55:56: but it's sold for more than the units on the
00:55:56 --> 00:55:59: 4th floor because of the water garden.
00:55:59 --> 00:56:02: So it's about blending all of this together in today's
00:56:02 --> 00:56:02: world.
00:56:02 --> 00:56:07: Next slide. So for me I'm starting I'm I'm kind
00:56:07 --> 00:56:07: of.
00:56:07 --> 00:56:11: I would say I'm a reformed net zero energy person
00:56:11 --> 00:56:13: or the other way to say it is kind of.
00:56:13 --> 00:56:16: Net Zero 1.0 is done and I think it's time
00:56:16 --> 00:56:19: for us to start breaking it down into the components.
00:56:19 --> 00:56:22: And as Emily said, net zero energy is great,
00:56:22 --> 00:56:25: but really only a certain kind of building type can
00:56:25 --> 00:56:28: get to that on site and so it's also combining
00:56:28 --> 00:56:30: it with offsite power that's clean.
00:56:30 --> 00:56:33: But the biggest thing for me is starting to break
00:56:33 --> 00:56:34: it into these.
00:56:34 --> 00:56:37: Component Parts 1st is how much energy do these buildings
00:56:37 --> 00:56:38: consume?
00:56:38 --> 00:56:42: The second is what's reasonable to produce on the buildings
00:56:42 --> 00:56:45: on site and then how do we procure the right
00:56:45 --> 00:56:46: offsite power?
00:56:46 --> 00:56:49: And then finally how do we manage these long term
00:56:49 --> 00:56:53: basis so that they stay sustainability sustainable and optimized.
00:56:53 --> 00:56:56: So the first part is and this is a slide.

00:56:56 --> 00:56:58: I spoke from someone else.
00:56:58 --> 00:57:02: I'm not sure exactly who but the biggest point is
00:57:02 --> 00:57:04: you take the left hand side.
00:57:04 --> 00:57:06: Which is existing buildings consumed somewhere between,
00:57:06 --> 00:57:10: let's say, 70 and 80 E wise per square foot
00:57:10 --> 00:57:14: per year and don't worry about what that really means,
00:57:14 --> 00:57:17: it's it's KB Btus per square foot per year.
00:57:17 --> 00:57:20: But just think of it in relative terms,
00:57:20 --> 00:57:23: they consume 80 new buildings and retrofit buildings.
00:57:23 --> 00:57:25: Need to consume somewhere between 25 and 35.
00:57:25 --> 00:57:28: If we're really going to make this work.
00:57:28 --> 00:57:32: So we need to go from 80 on the consumption
00:57:32 --> 00:57:35: side 70 to 80 to 25 or 35.
00:57:35 --> 00:57:37: So just think of it in those relative terms.
00:57:37 --> 00:57:42: Next fight. And this is one that nobody can see,
00:57:42 --> 00:57:45: and it's actually a piece of a much bigger spreadsheet.
00:57:45 --> 00:57:48: But the point that I would make is while this
00:57:48 --> 00:57:50: is inevitable and honestly,
00:57:50 --> 00:57:52: it's not rocket science, it's complicated.
00:57:52 --> 00:57:55: If you go to the next slide.
00:57:55 --> 00:57:58: I would say that in designing a net zero energy
00:57:58 --> 00:58:02: building or or really forgetting that their energy and high
00:58:02 --> 00:58:06: performance building a good building that consumes somewhere between 25
00:58:06 --> 00:58:09: and 30 per year instead of 80,
00:58:09 --> 00:58:12: that there's probably 50 core decisions that you need to
00:58:13 --> 00:58:13: make and,
00:58:13 --> 00:58:16: and there's enough good professionals out there now.
00:58:16 --> 00:58:20: And the consulting side, whether it's architects or sustainability consultants,
00:58:20 --> 00:58:22: it's not that hard to do,
00:58:22 --> 00:58:25: but it's important that you think of it as a
00:58:26 --> 00:58:26: process.
00:58:26 --> 00:58:29: And don't just jump into electrifying building.
00:58:29 --> 00:58:31: You need to understand why you're doing it,
00:58:31 --> 00:58:36: what the components are, and the decisions you're making to
00:58:36 --> 00:58:38: go to the next slide.
00:58:38 --> 00:58:41: So here in the left is that kind of average
00:58:42 --> 00:58:45: new building which might be 57 and if you look
00:58:45 --> 00:58:48: at the slide on the right in the case of
00:58:48 --> 00:58:51: one of the first couple buildings we did,
00:58:51 --> 00:58:54: the 25 was what we thought we could produce in

00:58:54 --> 00:58:56: terms of on site power.
00:58:56 --> 00:58:59: So then those kind of graded pieces in the middle
00:58:59 --> 00:59:01: are the different decisions you make.
00:59:01 --> 00:59:05: Really good windows mean a difference between out of that
00:59:05 --> 00:59:08: 25 May mean a difference of one when it comes
00:59:08 --> 00:59:10: down to a residential.
00:59:10 --> 00:59:13: Building about a little bit more than 1/3 of the
00:59:13 --> 00:59:14: energy gets used,
00:59:14 --> 00:59:17: producing hot water, so that's really big decision.
00:59:17 --> 00:59:20: As part of it, windows was a one.
00:59:20 --> 00:59:22: Hot water is a 7th.
00:59:22 --> 00:59:25: If you think of elevators in a commercial building,
00:59:25 --> 00:59:30: they're a .5. If you think of something like.
00:59:30 --> 00:59:33: Plug loads in a residential building at the very important
00:59:33 --> 00:59:33: decision.
00:59:33 --> 00:59:36: It's about a third or a little less.
00:59:36 --> 00:59:37: Same way in a commercial building.
00:59:37 --> 00:59:40: Plug loads or about a third of the load.
00:59:40 --> 00:59:42: There can be a lot more,
00:59:42 --> 00:59:45: so you start getting into these kind of little decisions
00:59:45 --> 00:59:48: that all add up to make it good building next
00:59:48 --> 00:59:48: slide.
00:59:51 --> 00:59:53: I think this one will play,
00:59:53 --> 00:59:55: so these are four buildings that we've done.
00:59:55 --> 00:59:58: All electric. You know they look like normal buildings.
00:59:58 --> 01:00:00: Hopefully they're good. Design the shade.
01:00:00 --> 01:00:04: Their structure is designed to provide additional area for solar,
01:00:04 --> 01:00:06: but it also creates a really cool outdoor deck.
01:00:06 --> 01:00:09: But I think that the point I'm trying to make
01:00:10 --> 01:00:12: is when we used to think about the early net
01:00:13 --> 01:00:14: zero buildings,
01:00:14 --> 01:00:16: they were these kind of chromatically sealed boxes.
01:00:16 --> 01:00:19: Now they're just really good buildings and they can be
01:00:19 --> 01:00:22: just about anything from a design standpoint.
01:00:22 --> 01:00:25: To kind of respect those core principles next line.
01:00:28 --> 01:00:32: So is element said building envelopes are kind of the
01:00:32 --> 01:00:35: key to all electric buildings we have to make sure
01:00:35 --> 01:00:39: that we have really good insulation and that we have
01:00:39 --> 01:00:43: really good windows that usually are crippled painter quad pain.
01:00:43 --> 01:00:46: They're filled with either argon or Krypton gas and then
01:00:46 --> 01:00:49: try didn't even know Krypton existed in reality.

01:00:49 --> 01:00:53: But it's a gas in our temperatures and and then
01:00:53 --> 01:00:54: we use things.
01:00:54 --> 01:00:58: We've used a product that everybody should know about called
01:00:58 --> 01:00:58: Aero Barrier.
01:00:58 --> 01:01:02: That's essentially released almost like a bug bomb and what
01:01:02 --> 01:01:05: it does is it goes out and it fills all
01:01:05 --> 01:01:08: the cracks and it can reduce air infiltration by 25
01:01:08 --> 01:01:11: to 50%. So we do that for all our residential
01:01:11 --> 01:01:12: units.
01:01:12 --> 01:01:15: We also do it for the commercial and then it
01:01:15 --> 01:01:16: becomes kind of easy.
01:01:16 --> 01:01:19: Right? LED lighting makes all the sense in the world
01:01:20 --> 01:01:22: right now and it's pretty darn cheap.
01:01:22 --> 01:01:25: Commercial heat pumps are becoming more and more efficient as
01:01:25 --> 01:01:29: Emily talked about and Ellen talked about and they get
01:01:29 --> 01:01:29: it.
01:01:29 --> 01:01:31: More efficient by sometimes 5 to 10%
01:01:31 --> 01:01:34: a year, or at least with each generation every couple
01:01:34 --> 01:01:34: of years.
01:01:34 --> 01:01:37: So we're getting to where all the component parts are
01:01:37 --> 01:01:38: there.
01:01:38 --> 01:01:41: It's really just about how we put it together next
01:01:41 --> 01:01:41: time.
01:01:44 --> 01:01:46: So on the mechanical electrical side,
01:01:46 --> 01:01:50: once you've built a really good building envelope again,
01:01:50 --> 01:01:53: commercial heat pumps are kind of the way to go
01:01:54 --> 01:01:58: for both residential and office and indoor air quality.
01:01:58 --> 01:02:00: We really focus a lot,
01:02:00 --> 01:02:04: obviously given COVID on air infiltration as well as air
01:02:04 --> 01:02:05: filtration.
01:02:05 --> 01:02:09: Merv 13 filters and more hot water systems for commercial
01:02:09 --> 01:02:12: use all kind of instant hot out butter systems for
01:02:13 --> 01:02:14: residential use,
01:02:14 --> 01:02:18: period decentral. Plant as part of it and sometimes will
01:02:18 --> 01:02:21: capture the waste heat coming off of some of the
01:02:21 --> 01:02:24: sewer and other things to kind of pre warm the
01:02:24 --> 01:02:28: water and then electric. You know lead is kind of
01:02:28 --> 01:02:29: a no brainer.
01:02:29 --> 01:02:32: Similar to Ellen. We're doing induction ranges and we're educating

01:02:32 --> 01:02:34: people as part of that,
01:02:34 --> 01:02:37: but when we think about things like social justice and
01:02:37 --> 01:02:37: equity,
01:02:37 --> 01:02:41: kind of the the worst air quality component of any
01:02:41 --> 01:02:44: home is usually the gas range and they don't work
01:02:44 --> 01:02:45: very well.
01:02:45 --> 01:02:48: The those and how water heaters tend to have leakage
01:02:48 --> 01:02:49: of gas and they fail.
01:02:49 --> 01:02:52: But the other thing is when we look at gas
01:02:52 --> 01:02:56: ranges we think of the air quality or measure it.
01:02:56 --> 01:02:59: Assuming people used events and they don't really use events
01:02:59 --> 01:03:02: unless it's smoking and you think you're going to say
01:03:02 --> 01:03:03: you're smart climbs off,
01:03:03 --> 01:03:06: so there are starting to be some really important kind
01:03:06 --> 01:03:09: of air quality equity issues as we look at these
01:03:09 --> 01:03:10: conversions that point.
01:03:13 --> 01:03:15: So then we get to production and for all of
01:03:15 --> 01:03:17: our projects we do solar analysis.
01:03:17 --> 01:03:20: This is kind of an interesting one because we found
01:03:20 --> 01:03:23: that on that slide in the lower left hand side
01:03:23 --> 01:03:25: that was a SE facing wall,
01:03:25 --> 01:03:26: but it's not really good sign.
01:03:26 --> 01:03:29: And what happens is in Boulder it gets really good
01:03:29 --> 01:03:32: son early in the morning up until about noon or
01:03:32 --> 01:03:34: one where we lose this on east facing wall.
01:03:34 --> 01:03:37: But that's the best son of the day.
01:03:37 --> 01:03:39: So we ended up if you go to the next
01:03:39 --> 01:03:42: slide kind of looking at a little kind of draped
01:03:42 --> 01:03:44: solar side so we did all the.
01:03:44 --> 01:03:46: Roof as well as the vertical side.
01:03:46 --> 01:03:49: We go to the next slide.
01:03:49 --> 01:03:53: What that's done is you can't be utility here in
01:03:53 --> 01:03:56: the sense that I can't charge for power,
01:03:56 --> 01:03:59: but what I can do is include power as part
01:03:59 --> 01:04:00: of it,
01:04:00 --> 01:04:03: and what we found was if we were able to
01:04:03 --> 01:04:07: negotiate increased rents of a couple dollars of feet foot,
01:04:07 --> 01:04:10: which was about the cost of utilities in that area,
01:04:10 --> 01:04:13: we actually got a really good cash on cash return
01:04:14 --> 01:04:16: for solar before financing before tax credits.
01:04:16 --> 01:04:20: There are demand rates here in Colorado because of Excel.

01:04:20 --> 01:04:23: That anyone who goes over a certain level needs to
01:04:23 --> 01:04:23: pay,
01:04:23 --> 01:04:26: and so that reduces the return a little bit.
01:04:26 --> 01:04:28: But it's a pretty exciting way to start looking at
01:04:28 --> 01:04:29: solar next time.
01:04:32 --> 01:04:34: The other thing that you find is it's a little
01:04:34 --> 01:04:38: complicated to attach when you build a vertical solar wall,
01:04:38 --> 01:04:40: as we found out next slide,
01:04:40 --> 01:04:43: but you have to put something on a wall and
01:04:43 --> 01:04:46: so when you actually take away the cost of a
01:04:46 --> 01:04:47: brick walls,
01:04:47 --> 01:04:50: about $40 a square foot metal panel might be $30
01:04:50 --> 01:04:51: a square foot,
01:04:51 --> 01:04:54: and that it actually improves the return on investment because
01:04:54 --> 01:04:56: your siding it was something that spot.
01:04:59 --> 01:05:01: And then finally we start looking at operations.
01:05:01 --> 01:05:04: You know for us, plug loads are a really big
01:05:04 --> 01:05:04: thing.
01:05:04 --> 01:05:07: How much do people use with things they plug in
01:05:07 --> 01:05:10: an average plug load in an office building?
01:05:10 --> 01:05:13: It's about 22. Again, EU eyes,
01:05:13 --> 01:05:15: but forget the the details.
01:05:15 --> 01:05:20: It's 22, we needed people to consume more like 7
01:05:20 --> 01:05:23: so you really have to work on.
01:05:23 --> 01:05:26: How people use laptops. How people use monitors,
01:05:26 --> 01:05:30: how they do power strips with timers and sensors.
01:05:30 --> 01:05:34: All that is important. So it becomes an important part
01:05:34 --> 01:05:36: of how you design buildings,
01:05:36 --> 01:05:38: but it becomes more important in terms of how you
01:05:38 --> 01:05:39: manage with people.
01:05:39 --> 01:05:44: Next slide. So we've created a green lease for office.
01:05:44 --> 01:05:47: We're doing the same thing for residential.
01:05:47 --> 01:05:50: It has certain requirements, but it also gives certain incentives
01:05:50 --> 01:05:50: for tenants,
01:05:50 --> 01:05:53: and it allows people to kind of work together on
01:05:53 --> 01:05:54: that next time.
01:05:57 --> 01:05:59: So if you're a tenant,
01:05:59 --> 01:06:01: you know what you find is dependable,
01:06:01 --> 01:06:05: and energy costs you are part of a place that
01:06:05 --> 01:06:07: people are excited to work in.
01:06:07 --> 01:06:12: An increase productivity through everything from thermal

comfort to just
01:06:12 --> 01:06:15: perception and and it really has paid off for both
01:06:15 --> 01:06:17: us and our tenants next slide.
01:06:20 --> 01:06:22: We also look at renovating buildings,
01:06:22 --> 01:06:24: and that's gotten to be a big part of what
01:06:24 --> 01:06:26: we're starting to focus on,
01:06:26 --> 01:06:28: and so on. The renovation side.
01:06:28 --> 01:06:29: It's a little bit different,
01:06:29 --> 01:06:30: a little bit more difficult.
01:06:30 --> 01:06:35: Next slide. You know the problem with existing buildings is
01:06:35 --> 01:06:39: usually they don't have very good envelopes.
01:06:39 --> 01:06:42: Did you convert them to heat pump technology?
01:06:42 --> 01:06:45: It's really difficult sometimes to do with people in the
01:06:45 --> 01:06:46: space.
01:06:46 --> 01:06:49: Now, things like LED lighting or converting hot water is
01:06:49 --> 01:06:50: pretty easy,
01:06:50 --> 01:06:53: and honestly single family residential is a pretty straightforward conversion.
01:06:53 --> 01:06:56: It's something you can do over a weekend,
01:06:56 --> 01:06:58: whereas offices have to be done over.
01:06:58 --> 01:07:02: You know, sometimes weeks. It's not just a weekend project,
01:07:02 --> 01:07:07: but. So the issue that I see when we look
01:07:07 --> 01:07:10: at these conversions is again,
01:07:10 --> 01:07:14: a typical office might utilize 80 USD per square foot
01:07:14 --> 01:07:14: per year.
01:07:14 --> 01:07:18: We need to get it down into the 30 or
01:07:18 --> 01:07:19: 35.
01:07:19 --> 01:07:22: Range if we're going to make these conversions and not
01:07:22 --> 01:07:25: create kind of clogging on the grid and deal with
01:07:25 --> 01:07:26: peak load problems,
01:07:26 --> 01:07:29: so that's our big challenge in terms of conversion.
01:07:29 --> 01:07:35: Next slide. So on the envelope side,
01:07:35 --> 01:07:37: I think Windows are the key we were doing.
01:07:37 --> 01:07:41: Some studies with Sandyland, Sandia Labs and we were working
01:07:41 --> 01:07:43: on north facing windows in Colorado to kind of keep
01:07:43 --> 01:07:44: the heat in.
01:07:44 --> 01:07:47: We've also worked on some window inserts and conversions to
01:07:48 --> 01:07:50: keep the heat out and and windows are going to
01:07:50 --> 01:07:52: be really big part of it.
01:07:52 --> 01:07:55: There's also some new technology that you can use on
01:07:55 --> 01:07:58: the inside of walls and you really only lose about

01:07:58 --> 01:08:00: half an inch and you can add it and you
01:08:00 --> 01:08:03: can get some really good additional insulated values on walls.
01:08:03 --> 01:08:06: From the inside as part of it,
01:08:06 --> 01:08:08: and again as I said,
01:08:08 --> 01:08:11: it's pretty straightforward to convert water systems,
01:08:11 --> 01:08:14: LED lighting. It really comes down to converting the heating
01:08:14 --> 01:08:16: and cooling system,
01:08:16 --> 01:08:19: which is an issue in a fully occupied building where
01:08:19 --> 01:08:23: tenants have rights not to be disturbed next time.
01:08:26 --> 01:08:29: I think the other thing though is we have to
01:08:29 --> 01:08:33: remember that we get sometimes a little too technical on
01:08:33 --> 01:08:37: this and think of it as a process of electrification
01:08:37 --> 01:08:41: about EU eyes and about regulatory structure like this.
01:08:41 --> 01:08:43: Remember that buildings are really for people.
01:08:43 --> 01:08:47: People live in people working and people shopping and eating
01:08:47 --> 01:08:51: and and it's really this is another slide I stole
01:08:51 --> 01:08:52: from somebody.
01:08:52 --> 01:08:56: But what we're finding is that really good buildings they
01:08:56 --> 01:08:57: improve.
01:08:57 --> 01:09:00: The health of people. They improve productivity for companies.
01:09:00 --> 01:09:03: They improve the way that people work and relate to
01:09:03 --> 01:09:07: each other and and buildings are really just something to
01:09:07 --> 01:09:09: create a cover around people.
01:09:09 --> 01:09:12: And let's not forget that as we go through this
01:09:12 --> 01:09:13: whole process.
01:09:17 --> 01:09:19: So do we wait for cities to do it?
01:09:19 --> 01:09:21: And we do it ourselves.
01:09:21 --> 01:09:22: You know, as I said,
01:09:22 --> 01:09:24: we've done half a dozen.
01:09:24 --> 01:09:26: We have another half a dozen to go,
01:09:26 --> 01:09:28: and it's really a process of where we have to
01:09:28 --> 01:09:29: come together.
01:09:29 --> 01:09:32: And I think we could create some problems,
01:09:32 --> 01:09:35: some unintended consequences if we create a regulatory structure that
01:09:35 --> 01:09:37: landlords put off upgrades as long as possible.
01:09:37 --> 01:09:39: If we don't have the right incentives.
01:09:39 --> 01:09:41: If we don't realize the fact that tenants in buildings
01:09:41 --> 01:09:42: have rights,
01:09:42 --> 01:09:45: whether it's a residential building or an office building,

01:09:45 --> 01:09:46: residential converts a little bit easier.
01:09:46 --> 01:09:48: And there's more of a turnover.
01:09:48 --> 01:09:50: Office is a little bit more difficult,
01:09:50 --> 01:09:53: but we need to partner with cities and create some
01:09:53 --> 01:09:54: really great examples.
01:09:54 --> 01:09:57: Get great data and make sure that we know what
01:09:57 --> 01:10:01: we're doing and we understand the potential unintended consequences effects
01:10:01 --> 01:10:01: side.
01:10:03 --> 01:10:05: So where do we go from here?
01:10:05 --> 01:10:09: You know, just experiment. Take the things that we've done
01:10:09 --> 01:10:10: that work and do them again.
01:10:10 --> 01:10:13: And really, this isn't a question of should we do
01:10:13 --> 01:10:13: it?
01:10:13 --> 01:10:16: You know this is a can we do what we
01:10:16 --> 01:10:17: must?
01:10:17 --> 01:10:18: We don't have a choice.
01:10:18 --> 01:10:20: We're in the process of electrification,
01:10:20 --> 01:10:22: even British petroleum's in the process of electrification,
01:10:22 --> 01:10:24: so we should be realistic about that.
01:10:24 --> 01:10:27: And I was at a talk in Denver like a
01:10:27 --> 01:10:28: year ago,
01:10:28 --> 01:10:30: and I forget who actually said it.
01:10:30 --> 01:10:33: But if you go to the next slide.
01:10:33 --> 01:10:36: We were talking about these kinds of issues and we
01:10:36 --> 01:10:39: were saying the comment was this is a great opportunity
01:10:40 --> 01:10:42: disguised as an unstoppable problem,
01:10:42 --> 01:10:45: and I think that's where we are right now.
01:10:45 --> 01:10:46: This is a must do,
01:10:46 --> 01:10:48: and it's something that's inevitable.
01:10:48 --> 01:10:50: The question is really just how do we create an
01:10:51 --> 01:10:54: opportunity from this both economically and in terms of people's
01:10:54 --> 01:10:56: livelihoods and well being.
01:10:56 --> 01:10:57: So thank you very much.
01:11:00 --> 01:11:02: Thank you so much Andy.
01:11:02 --> 01:11:04: With that, we're going to start our Q&A.
01:11:04 --> 01:11:07: Come I'm going to turn it over to John Burgee
01:11:07 --> 01:11:10: who's the Chief Feldman officer of Urban Villages.
01:11:10 --> 01:11:13: And he's also the Co chair of you like Colorado,
01:11:13 --> 01:11:16: building Healthy Places Committee. And he's also on the energized
01:11:16 --> 01:11:17: Denver task Force.

01:11:17 --> 01:11:20: Uhm, so John will be moderating the Q&A from the
01:11:20 --> 01:11:21: chat box.
01:11:21 --> 01:11:23: So if you have questions for the panelists,
01:11:23 --> 01:11:26: please add them to the chat box and we'll try
01:11:26 --> 01:11:28: to address as many as we can.
01:11:30 --> 01:11:32: Alright thanks, Mary Ann and thank you to all of
01:11:32 --> 01:11:35: our speakers that was fascinating and I loved how you
01:11:35 --> 01:11:37: all talked about it from a different angle and so
01:11:37 --> 01:11:39: I think it was really robust to be able to
01:11:39 --> 01:11:41: have each of you present.
01:11:41 --> 01:11:43: So thank you. I'm going to go through and ask
01:11:43 --> 01:11:46: each of you one of the questions that were asked
01:11:46 --> 01:11:48: in the chat box and I will continue to monitor
01:11:48 --> 01:11:50: the chat box so anybody else that has extra questions,
01:11:50 --> 01:11:53: please ask them. I'd also ask if it feels comfortable
01:11:53 --> 01:11:55: with it to turn on your camera so we can
01:11:55 --> 01:11:57: have a little bit more of a dialogue with our
01:11:57 --> 01:12:01: guest speakers. Alright, so the first question is for Courtney
01:12:02 --> 01:12:05: Anderson in in order to achieve the long term goals
01:12:05 --> 01:12:08: that we've been talking about that you presented on,
01:12:08 --> 01:12:11: is there any risk of political change and future city
01:12:11 --> 01:12:14: officials undoing some of the work that you are doing
01:12:14 --> 01:12:16: that you're implementing today?
01:12:18 --> 01:12:22: That's a great question, so you know everything.
01:12:22 --> 01:12:26: Just go through this City Council process and.
01:12:26 --> 01:12:30: What really is critical before it gets to the City
01:12:30 --> 01:12:33: Council is it has the support of the community.
01:12:33 --> 01:12:36: So without the support of the Community it's it's hard
01:12:36 --> 01:12:36: to,
01:12:36 --> 01:12:38: you know, get something totally threw up,
01:12:38 --> 01:12:40: but once it once it,
01:12:40 --> 01:12:43: once it gets there and once City Council understands that
01:12:43 --> 01:12:46: this is what the vision is from the community,
01:12:46 --> 01:12:48: not just from city staff but for everybody,
01:12:48 --> 01:12:50: this is what we want.
01:12:50 --> 01:12:52: And if it gets past,
01:12:52 --> 01:12:56: it's already had that, you know that support behind it
01:12:56 --> 01:12:57: for so then.
01:12:57 --> 01:12:59: And then it becomes policy.
01:12:59 --> 01:13:02: So for someone to come in.
01:13:02 --> 01:13:07: I would find it a little difficult because the Community
01:13:07 --> 01:13:09: is already spoken up.

01:13:09 --> 01:13:11: So I think that's why we're really,
01:13:11 --> 01:13:15: uhm, we really work hard to make sure we're engaging
01:13:15 --> 01:13:16: our stakeholders,
01:13:16 --> 01:13:20: community participants, experts to really to build that vision.
01:13:20 --> 01:13:22: So it's not. I said this,
01:13:22 --> 01:13:26: and you know, my manager said the so it's no.
01:13:26 --> 01:13:29: This is what the the committee is looking
01:13:29 --> 01:13:32: for. Great thank you, Courtney.
01:13:32 --> 01:13:34: Next question is for Emily.
01:13:34 --> 01:13:37: You talked about how technology is leveling the playing field
01:13:37 --> 01:13:39: between fossil fuels and renewables.
01:13:39 --> 01:13:42: What are the areas you think will see the most
01:13:42 --> 01:13:46: change in technology over the coming decades?
01:13:46 --> 01:13:47: Right
01:13:47 --> 01:13:48: question? Uhm. Well
01:13:48 --> 01:13:50: I think. I mean I think the first the first
01:13:50 --> 01:13:54: pieces we're gonna see the technologies that already exist continue
01:13:54 --> 01:13:57: to improve and thus the costs come down.
01:13:57 --> 01:13:59: I mean I, I keep,
01:13:59 --> 01:14:02: I keep thinking of the heat pump example and perhaps
01:14:02 --> 01:14:05: the reason that my mind keeps going back there not
01:14:05 --> 01:14:07: only because of Courtney and Andy's presentations,
01:14:07 --> 01:14:10: but I just had to have my whole HV AC
01:14:10 --> 01:14:13: system replaced in my house yesterday.
01:14:13 --> 01:14:14: And and I live on.
01:14:14 --> 01:14:17: If anybody is familiar with the DC area.
01:14:17 --> 01:14:20: I live, I live in Arlington which is just outside
01:14:20 --> 01:14:20: DC.
01:14:20 --> 01:14:22: A lot of old homes.
01:14:22 --> 01:14:25: My home is very very very old and there's no
01:14:25 --> 01:14:28: duct work that was that was built with it initially.
01:14:28 --> 01:14:30: And so heat pumps are really really fantastic option.
01:14:30 --> 01:14:33: I mean, I'm I'm sitting in the lower level of
01:14:33 --> 01:14:36: my house and you know my husband can be upstairs
01:14:36 --> 01:14:39: two floors and we can have completely different temperatures and
01:14:39 --> 01:14:42: so I think I think that wasn't possible a few
01:14:42 --> 01:14:45: years ago and it certainly questions it wasn't possible.
01:14:45 --> 01:14:48: It was possible, but the costs are coming down.
01:14:48 --> 01:14:51: The logistics. Are much easier and the technology is getting
01:14:51 --> 01:14:52: much more widespread,

01:14:52 --> 01:14:55: so I think the first you know the first answer
01:14:56 --> 01:14:59: to that question really is you're going to see some
01:14:59 --> 01:15:02: of the technologies that were niche before.
01:15:02 --> 01:15:06: Be much more mainstream and and I think on top
01:15:07 --> 01:15:07: of that I.
01:15:07 --> 01:15:11: This is perhaps a little bit optimistic of me,
01:15:11 --> 01:15:14: but I'm gonna I'm gonna throw it out anyway.
01:15:14 --> 01:15:18: I I hope I think we're going to see some
01:15:18 --> 01:15:21: of the passive technologies at be more prevalent,
01:15:21 --> 01:15:25: and you know, when you there's some really cool net
01:15:25 --> 01:15:29: zero buildings across the country that have utilized passive technologies
01:15:29 --> 01:15:33: so you know passive technology being something as simple as
01:15:33 --> 01:15:35: operable windows that are, you know,
01:15:35 --> 01:15:38: situated at very strategic positions and and.
01:15:38 --> 01:15:41: Opening so that you can cool the building,
01:15:41 --> 01:15:43: cool or heat the building depending on the temperature.
01:15:43 --> 01:15:45: UM, by using that tech,
01:15:45 --> 01:15:47: not natural technology or that natural,
01:15:47 --> 01:15:50: those natural influences rather than having to lean on technology.
01:15:50 --> 01:15:53: And I wouldn't necessarily say that you know Earth tubing
01:15:53 --> 01:15:56: and you know East West Partners has some awesome stuff
01:15:56 --> 01:15:56: there.
01:15:56 --> 01:15:58: Wouldn't necessarily say if that's totally,
01:15:58 --> 01:16:01: totally passive. I don't know what the terminology would be,
01:16:01 --> 01:16:03: but I think technology is like that.
01:16:03 --> 01:16:06: That's a little bit more cohesive with the natural environment.
01:16:06 --> 01:16:09: I really hope that's where we're going to see.
01:16:09 --> 01:16:10: More, uh, more of a focus.
01:16:10 --> 01:16:13: I don't know if that will be something that we'll
01:16:13 --> 01:16:14: see in everybody's home,
01:16:14 --> 01:16:15: you know, in five years,
01:16:15 --> 01:16:18: but I think you know two things we're going to
01:16:18 --> 01:16:20: see the the technologies that are niche right now,
01:16:20 --> 01:16:21: and that are more expensive.
01:16:21 --> 01:16:25: Come down and then I think some of those passive
01:16:25 --> 01:16:27: technologies are going to be.
01:16:27 --> 01:16:27: Utilized more.
01:16:29 --> 01:16:32: Great, thank you. It's been fun to see how much
01:16:32 --> 01:16:35: the technology has changed over the last decade,
01:16:35 --> 01:16:37: so hopefully that momentum keeps up.

01:16:37 --> 01:16:39: Next question is, for Alan,
01:16:39 --> 01:16:42: a lot of comments about how beautiful electric pass as
01:16:42 --> 01:16:45: a building is one of the questions was what was
01:16:45 --> 01:16:49: embodied carbon emissions considered when materials were selected to create
01:16:49 --> 01:16:50: the structure.
01:16:52 --> 01:16:56: So yeah, we did not study embodied carbon for this
01:16:56 --> 01:16:57: building,
01:16:57 --> 01:17:01: and but when I said in our next building,
01:17:01 --> 01:17:05: we're exploring sort of even more enhanced initiatives.
01:17:05 --> 01:17:11: We are exploring CLT as our primary structure.
01:17:11 --> 01:17:13: And that obviously has embodied carbon benefits.
01:17:13 --> 01:17:16: We also, though these are high-rise buildings,
01:17:16 --> 01:17:21: so and the building code here in Snowmass hasn't caught
01:17:21 --> 01:17:24: up to some of the things that you see in
01:17:24 --> 01:17:28: Denver that allow for CLT in a high rise application.
01:17:28 --> 01:17:32: But we have worked with the fire department and so
01:17:32 --> 01:17:36: we're able to potentially explore that here for our next
01:17:36 --> 01:17:36: building,
01:17:36 --> 01:17:40: and that's just obviously a portion of embodied carbon,
01:17:40 --> 01:17:43: but. Giving us a little bit down that that path.
01:17:44 --> 01:17:48: Thanks, I love the branding and how you brought it
01:17:48 --> 01:17:50: into such a big part of the sales of the
01:17:50 --> 01:17:51: units.
01:17:51 --> 01:17:54: I'm curious if you think that it obviously resonated and
01:17:54 --> 01:17:57: asked in a market like Aspen and Snowmass does that
01:17:57 --> 01:17:58: same type of branding?
01:17:58 --> 01:18:01: Do you think resonate in other markets that are maybe
01:18:01 --> 01:18:03: not be as high end luxury markets?
01:18:05 --> 01:18:07: Uhm, you know, I think so.
01:18:07 --> 01:18:11: We we also we had some concerns about going heavy.
01:18:11 --> 01:18:14: You know, in the all electric branding,
01:18:14 --> 01:18:17: because we have a huge Texas contingency here.
01:18:17 --> 01:18:19: And you know, I mean not to say that there
01:18:19 --> 01:18:23: aren't people there that really like appreciate this type of
01:18:23 --> 01:18:25: responsible development.
01:18:25 --> 01:18:28: But it's probably not for some of those buyers their
01:18:28 --> 01:18:29: top priority.
01:18:29 --> 01:18:33: I think one thing that made it successful here was
01:18:33 --> 01:18:36: we were at the right intersection of.
01:18:36 --> 01:18:40: Uhm, sort of. Uh, the market and price point,
01:18:40 --> 01:18:43: and sort of where we were trying to land and

01:18:43 --> 01:18:45: so I think we hit a market in terms of
01:18:45 --> 01:18:47: the product that you know.
01:18:47 --> 01:18:50: I mean, you can sell a lot of things in
01:18:50 --> 01:18:52: a really good market and you know,
01:18:52 --> 01:18:54: we've we've definitely had people who have.
01:18:54 --> 01:18:57: We had a person that made a reservation only so
01:18:57 --> 01:19:01: that they could tell us that the future of buildings
01:19:01 --> 01:19:03: is gas and so that they could have like a
01:19:03 --> 01:19:06: venue to do so. But I think it really has
01:19:06 --> 01:19:07: resonated with buyers from,
01:19:07 --> 01:19:10: you know, from all over and.
01:19:10 --> 01:19:12: We're definitely interested. I mean,
01:19:12 --> 01:19:16: our next project will be even more luxury than this
01:19:16 --> 01:19:17: and that,
01:19:17 --> 01:19:20: to me, seems like a bigger potential stretch.
01:19:20 --> 01:19:24: Just you know, people used to their gas fireplaces and
01:19:24 --> 01:19:25: things like that,
01:19:25 --> 01:19:27: but so far it's been,
01:19:27 --> 01:19:31: you know, really good feedback on the marketing side.
01:19:31 --> 01:19:35: Yeah I would. I would imagine gas ranges and gas
01:19:35 --> 01:19:39: fireplaces would probably be some of the more difficult ones
01:19:39 --> 01:19:40: to get
01:19:40 --> 01:19:43: buyers around and we've actually had the most questions about
01:19:43 --> 01:19:44: you.
01:19:44 --> 01:19:46: We've had very few questions about that,
01:19:46 --> 01:19:51: but we've had the most questions just about the cooling
01:19:51 --> 01:19:54: passive cooling and earth tube in the RV's.
01:19:54 --> 01:19:55: Alright,
01:19:55 --> 01:19:59: thank you on next question is for Andy.
01:19:59 --> 01:20:02: Have you had any difficult difficulty financing both from debt
01:20:02 --> 01:20:03: and equity?
01:20:03 --> 01:20:06: Your portfolio as you move towards all electric and start
01:20:06 --> 01:20:09: to implement a lot of these technologies that maybe are
01:20:09 --> 01:20:11: a little less widespread,
01:20:11 --> 01:20:13: less known. Yeah,
01:20:13 --> 01:20:16: I mean, I was honestly pretty frightened about it two
01:20:16 --> 01:20:18: or three years ago,
01:20:18 --> 01:20:21: and what we've actually found is there's competition for it.
01:20:21 --> 01:20:24: I'm guardian. Life Insurance Company has been one of our
01:20:24 --> 01:20:28: bigger lenders and what we're finding is lenders wanna high
01:20:28 --> 01:20:31: performance portfolio and I think I used to think the

01:20:31 --> 01:20:34: change in this industry was going to come from little
01:20:34 --> 01:20:37: people on the fringes like us and I think the
01:20:37 --> 01:20:41: change is really going to come from institutional lenders and
01:20:41 --> 01:20:44: developers who are. Focused on ESG requirements and who also
01:20:44 --> 01:20:47: look at the fact that I just had a conversation
01:20:47 --> 01:20:50: with Guardian last week and so it's kind of fresh
01:20:50 --> 01:20:52: in my mind. We have a 12 year loan.
01:20:52 --> 01:20:56: It's a construction firm and they were saying we used
01:20:56 --> 01:20:59: to not think about the value of a building at
01:20:59 --> 01:21:01: the end of that 12 years and who was going
01:21:01 --> 01:21:04: to refinance it and whether there was a risk at
01:21:04 --> 01:21:07: the end of the term for us and all of
01:21:07 --> 01:21:09: a sudden 12 years from now,
01:21:09 --> 01:21:12: it's starting to be a little frightening for lenders to
01:21:12 --> 01:21:13: think about a fossil fuel.
01:21:13 --> 01:21:16: Our building versus an all electric building,
01:21:16 --> 01:21:19: so I think we're at this really interesting kind of
01:21:19 --> 01:21:21: cusp of change in the lending world.
01:21:21 --> 01:21:25: In the institutional world where you can already see institutional
01:21:25 --> 01:21:27: owners and lenders kind of day,
01:21:27 --> 01:21:30: risking from a resiliency and environmental risk from floods and
01:21:30 --> 01:21:31: hurricanes,
01:21:31 --> 01:21:33: I think you start to see the same thing in
01:21:33 --> 01:21:37: terms of buildings that are fossil fuel powered.
01:21:37 --> 01:21:40: It's going to happen over the next 5 to 10
01:21:40 --> 01:21:40: years.
01:21:42 --> 01:21:44: That's me, that's music to my ears,
01:21:44 --> 01:21:47: and probably most of us on the call,
01:21:47 --> 01:21:50: you know, ESG investing was something that was of lesser
01:21:50 --> 01:21:52: known and even a couple of years ago.
01:21:52 --> 01:21:55: Can you explain that nomenclature and and why?
01:21:55 --> 01:21:56: Potentially there are more investors,
01:21:56 --> 01:21:59: more lenders that are focused on it.
01:22:00 --> 01:22:01: Yeah, I think
01:22:01 --> 01:22:04: I mean I've been around long enough to have conversations
01:22:04 --> 01:22:07: with lenders where as we talked about solar panels,
01:22:07 --> 01:22:09: or you know an electric building.
01:22:09 --> 01:22:11: They were pretty frightened about it.
01:22:11 --> 01:22:14: I think that investors now have,
01:22:14 --> 01:22:17: you know, environmental and social responsibilities and

goals as part
01:22:17 --> 01:22:18: of their investing portfolios,
01:22:18 --> 01:22:21: so they have a requirement to do that the same
01:22:21 --> 01:22:25: way that utilities have a requirement to start converting certain
01:22:25 --> 01:22:27: percentages to clean power.
01:22:27 --> 01:22:30: So these are kind of the under the hood.
01:22:30 --> 01:22:33: Things that are happening in the institutional world.
01:22:33 --> 01:22:36: And then I think you also see institutional investors.
01:22:36 --> 01:22:39: There's a fear factor. One side is the good to
01:22:39 --> 01:22:40: do good factor.
01:22:40 --> 01:22:43: The other side is what if we get holding the
01:22:43 --> 01:22:46: bag on a lot of buildings that are impacted by
01:22:46 --> 01:22:48: hurricanes or sea level change.
01:22:48 --> 01:22:51: So there's both positive and negative forces that are impacting
01:22:51 --> 01:22:54: both institutional lenders and institutional investors.
01:22:54 --> 01:22:55: And and as I said,
01:22:55 --> 01:22:59: I used to think you know change would come from
01:22:59 --> 01:22:59: the fringe,
01:22:59 --> 01:23:01: but the big change. I think it's going to come
01:23:01 --> 01:23:03: from the center here in the next 10 years.
01:23:05 --> 01:23:08: Very encouraging. Thank you. I'm gonna go back to Courtney
01:23:08 --> 01:23:08: now.
01:23:08 --> 01:23:11: Courtney, as as you are implementing the cities implementing these
01:23:11 --> 01:23:12: different programs,
01:23:12 --> 01:23:16: how are you ensuring that the real estate industry and
01:23:16 --> 01:23:19: other various experts are being consulted and so that the
01:23:19 --> 01:23:22: policies are are well set up for success?
01:23:23 --> 01:23:27: Yeah, that's a great question and I don't need to
01:23:27 --> 01:23:30: repeat myself from my first answer.
01:23:30 --> 01:23:34: UM, but really we have a lot of stakeholder engagement.
01:23:34 --> 01:23:38: UM, for making sure there's really everybody that that cares
01:23:38 --> 01:23:42: about this or so affected by this is has the
01:23:42 --> 01:23:44: ability to be on these task force.
01:23:44 --> 01:23:48: You know, John sound like you just came from the
01:23:48 --> 01:23:50: energize Denver task force,
01:23:50 --> 01:23:54: so you're pretty familiar with that involvement level.
01:23:54 --> 01:23:56: But really, before we develop policy,
01:23:56 --> 01:23:59: even as we're going through the code adoption process,
01:23:59 --> 01:24:03: we are asking everybody and anyone that wants to

participate
01:24:03 --> 01:24:06: in the working groups to come and give us their
01:24:06 --> 01:24:07: ideas,
01:24:07 --> 01:24:10: you know, or their ideas that let us know what
01:24:10 --> 01:24:13: ideas you don't like and we're reaching out to all
01:24:13 --> 01:24:17: communities that we can really have like an equity focus.
01:24:17 --> 01:24:21: So every every step of the way we're using a
01:24:21 --> 01:24:23: racial equity loan fund.
01:24:23 --> 01:24:28: And and evaluating it from really every perspective that that
01:24:28 --> 01:24:31: we can bring in the people to help guide us
01:24:31 --> 01:24:32: do that,
01:24:32 --> 01:24:34: but from the stakeholder standpoint,
01:24:34 --> 01:24:37: yeah, everyone has an opportunity to be involved and we
01:24:37 --> 01:24:38: always encourage that.
01:24:38 --> 01:24:43: And the more support we get from.
01:24:43 --> 01:24:46: From everyone, I mean we're heavily involved with working with
01:24:46 --> 01:24:47: XLS well,
01:24:47 --> 01:24:50: so we're not just developing policy and hoping that they
01:24:50 --> 01:24:51: come along with us.
01:24:51 --> 01:24:54: It's really, you know, it's not just a two way
01:24:55 --> 01:24:55: St.
01:24:55 --> 01:24:57: It's like a 1001 St so.
01:24:59 --> 01:25:02: Yeah, thanks Cortana and I will confer or agree with
01:25:02 --> 01:25:02: you.
01:25:02 --> 01:25:05: I think that it's been incredible to see how actively
01:25:05 --> 01:25:08: the city has really been reaching out to various stakeholders
01:25:09 --> 01:25:12: and experts in different fields just to continue to make
01:25:12 --> 01:25:16: sure that the policies are implementable and that they try
01:25:16 --> 01:25:19: to understand how the market will respond to it.
01:25:19 --> 01:25:22: Question for Emily, how do you address energy resiliency?
01:25:22 --> 01:25:26: We see you know the power outages in Texas and
01:25:26 --> 01:25:29: in various things as we move to fully electric.
01:25:29 --> 01:25:33: How do you address that when you're going to 1
01:25:33 --> 01:25:35: energy source?
01:25:35 --> 01:25:35: Yeah,
01:25:35 --> 01:25:37: it's it's $1,000,000 question right now.
01:25:37 --> 01:25:40: Uh, we actually do. Have we have a break out
01:25:40 --> 01:25:44: a piece in the report that I would definitely encourage.
01:25:44 --> 01:25:47: Encourage whoever asked this question to go and and read
01:25:47 --> 01:25:49: in more depth that I can do.
01:25:49 --> 01:25:51: And you know 60 seconds here.

01:25:51 --> 01:25:53: But you know right now,
01:25:53 --> 01:25:54: utility infrastructure is, you know,
01:25:54 --> 01:25:57: a serious consideration. I don't know that it's a real
01:25:58 --> 01:25:59: estate problem to solve,
01:25:59 --> 01:26:02: it's it's not a real estate problem to solve.
01:26:02 --> 01:26:05: It's a real estate problem to be aware to be
01:26:05 --> 01:26:06: Cognizant.
01:26:06 --> 01:26:08: Of you know where the potential breakdown is and you
01:26:09 --> 01:26:11: know electric utilities are not are not risky.
01:26:11 --> 01:26:14: You know you don't need to be concerned as a
01:26:14 --> 01:26:16: real estate practitioner for or you know,
01:26:16 --> 01:26:19: hooking your building up to an electric utility.
01:26:19 --> 01:26:21: That's not, you know, we're we're many,
01:26:21 --> 01:26:22: many, many decades past that,
01:26:22 --> 01:26:24: and so as far as you know,
01:26:24 --> 01:26:27: the utility perspective. I think it's just a matter of
01:26:27 --> 01:26:30: being Cognizant right now and and you know,
01:26:30 --> 01:26:33: being aware of your building and engaging in a conversation
01:26:33 --> 01:26:34: with the utility.
01:26:34 --> 01:26:37: Unfortunately, I know it's a little bit of a cop
01:26:37 --> 01:26:37: out.
01:26:37 --> 01:26:39: Answer, But I think it's.
01:26:39 --> 01:26:42: You know, not not a real estate problem to tackle,
01:26:42 --> 01:26:43: just quite yet.
01:26:45 --> 01:26:46: Yeah, great thank you. I will.
01:26:46 --> 01:26:49: I know we are running out of time or we
01:26:49 --> 01:26:50: are out of time.
01:26:50 --> 01:26:52: One of the questions that was asked is can we
01:26:52 --> 01:26:54: get the speakers contact information.
01:26:54 --> 01:26:56: So I would suggest maybe that Mary Ann or somebody
01:26:57 --> 01:26:59: can maybe send out your all contact information if you're
01:26:59 --> 01:27:02: OK with it to the attendees rather than trying to
01:27:02 --> 01:27:04: put in the chat box right now.
01:27:07 --> 01:27:11: Will share the recording and will circulate with the panelists
01:27:11 --> 01:27:13: later to see if they're comfortable with that.
01:27:18 --> 01:27:19: Alright, I'll hand it back to you.
01:27:19 --> 01:27:20: Mary
01:27:20 --> 01:27:22: Ann great well, thank you so much before you all
01:27:22 --> 01:27:23: leave.
01:27:23 --> 01:27:25: I wanted to play ellens video if you have to
01:27:25 --> 01:27:26: jump off.
01:27:26 --> 01:27:28: Thank you so much for joining us today.

01:27:28 --> 01:27:31: But if you can say for I think the video
01:27:31 --> 01:27:33: is only a couple minutes raelyn if you can stay
01:27:33 --> 01:27:34: for this.
01:27:34 --> 01:27:35: Yeah I think it's
01:27:35 --> 01:27:37: like a minute and a half great.
01:27:37 --> 01:27:37: OK,
01:27:37 --> 01:27:39: well I'll go ahead and play it.
01:27:47 --> 01:27:49: I don't hear the volume though.
01:27:59 --> 01:28:03: Did you know that inefficient buildings powered by fossil fuels,
01:28:03 --> 01:28:06: including szumski homes, contribute up to 40%
01:28:06 --> 01:28:11: of the carbon emissions that are causing climate change and
01:28:11 --> 01:28:12: shrinking our winters,
01:28:12 --> 01:28:17: but not this one? Electric Pass Lodge is powered by
01:28:17 --> 01:28:17: 100%
01:28:17 --> 01:28:21: renewable electricity with no ongoing carbon footprint.
01:28:21 --> 01:28:27: We started by orienting the building to maximize solar exposure.
01:28:27 --> 01:28:31: Then we designed an incredibly efficient shell with state of
01:28:31 --> 01:28:32: the art insulation,
01:28:32 --> 01:28:38: triple pane windows and phase change material that traps heat
01:28:38 --> 01:28:41: or cold to use it when you need it.
01:28:41 --> 01:28:46: Everything in the building runs on electricity through a combination
01:28:46 --> 01:28:49: of rooftop solar and off site renewable power.
01:28:49 --> 01:28:53: It's an extremely healthy building for the planet and for
01:28:53 --> 01:28:54: you,
01:28:54 --> 01:28:58: thanks to plenty of natural light and operable windows.
01:28:58 --> 01:29:02: No toxic materials, no gas being burned inside the home,
01:29:02 --> 01:29:04: and our continuous airflow system,
01:29:04 --> 01:29:09: which circulates fresh air throughout each residence which is preheated
01:29:09 --> 01:29:11: or precooled by a series of.
01:29:11 --> 01:29:16: Underground earth tubes. It's a ski home.
01:29:16 --> 01:29:20: You can feel good about owning that's doing everything in
01:29:20 --> 01:29:23: its power to protect the snow you love to play
01:29:23 --> 01:29:23: on.
01:29:23 --> 01:29:27: The future is here at Electric Pass Lodge.
01:29:27 --> 01:29:30: Pure responsible mountain living for your family.
01:29:42 --> 01:29:44: With that I would just like to thank all of
01:29:44 --> 01:29:46: you for participating in the event today and a huge
01:29:46 --> 01:29:50: thank you to our panelists for these excellent presentations,

01:29:50 --> 01:29:52: which we hope to share after the event via recording
01:29:52 --> 01:29:54: and then also with the slides.
01:29:54 --> 01:29:57: With that, I'll turn it over to my boss,
01:29:57 --> 01:29:57: Michael.
01:30:00 --> 01:30:03: Just adding my thanks. It was an excellent program.
01:30:03 --> 01:30:05: He got some of the best people in ULIA on
01:30:05 --> 01:30:07: our panel and fantastic information.
01:30:07 --> 01:30:11: So please catch up with the recording if you couldn't
01:30:11 --> 01:30:14: catch the whole session and we will see you at
01:30:14 --> 01:30:16: one of our live events very soon.
01:30:16 --> 01:30:19: And thank you Maryann for organizing a great program.
01:30:20 --> 01:30:23: Thank you guys, hope you have a great evening and
01:30:23 --> 01:30:24: will see you soon.
01:30:24 --> 01:30:24: Yeah,
01:30:24 --> 01:30:25: thank you.
01:30:27 --> 01:30:27: Thank you.

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