



Meeting Agenda

MEETING PURPOSE	Monthly Maryland Green Building Council Meeting					
MEETING DATE	March 19, 2026					
MEETING TIME	10:30 to noon					
VIRTUAL MEETING	Maryland Green Building Council Virtual Meeting Thursday, February 19 · 10:30am – 12:00pm Time zone: America/New_York Google Meet joining info Video call link: https://meet.google.com/ocp-upjg-qtf Or dial: (US) +1 530-994-2092 PIN: 734 095 806# More phone numbers: https://tel.meet/ocp-upjg-qtf?pin=7045196103735					
MEETING NUMBER	2026-3					
ATTENDEES	Mark "P" as present, "O" as out. Vote by Yay "Y" or Nay "N" or Abstained "A" Quorum = 9					
<i>COUNCIL APPOINTEE</i>		<i>AGENCY MEMBER OR DESIGNEE</i>				<i>REGULAR PARTICIPANTS</i>
Paul Clary (5/31/2023) (seat 1)	P	Stephanie Tuckfield (DNR)	O	Hannah Debelius (DGS) Designee: David St. Jean	P	Martha Shrader (USM)
Vacant (5/31/2025) (seat 2)		Ashley Van Stone (MDE)	P	Bill Hersch (MDP)	P	Atif Chaudhry, Secretary (DGS)
Ben Roush (5/31/2025) (seat 3)	P	Mark Beck (USM)	P	Eddie Lukemire (MDOT)	P	
Ryan Schwabenbauer (5/31/2026) (seat 4)	P	Alex Donahue (IAC) Designee: Melissa Wilfong	P	Rebecca Price (MEA) Megan Lackay	O	
Marisa Britton (5/31/2025) (seat 5)	P	David Koenigsburg (DBM)	P	Mischelle Vanreusel (DLR)	O	
Michael Daly (5/31/2026) (seat 6)	P					
YAY						
NAY						
ABSTAIN						

	Agenda Item	Discussion	Time
1	Call to Order	Greetings - All attendees please sign in using the chat box.	10:36
2	Meeting Record	Motion: approve prior Meeting Record Discussion: Adjustments? Vote: Approval or Table approve with 12	10:37
4	Old Business	<ul style="list-style-type: none"> HPGBP online Ben presented HPGBP to 80 state and local stakeholders at DGS-hosted EPC workshop 	
5	Ongoing Business	<ul style="list-style-type: none"> Legislative session updates and discussion 	
6	New Business	<ul style="list-style-type: none"> Ben Roush: whole building LCA presentation 	11:03



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		<ul style="list-style-type: none"> ● Council 2026 meeting schedule for Q2/Q3 <ul style="list-style-type: none"> ○ April meeting? ○ July 16 in-person meeting in Crownsville (NOT May 21) 	
7	Announcements and Updates (Members)	Good and welfare	11:44
8	Adjourn until Next Meeting		11:47
9	Adjourn		

Minutes

- Vote to approve the 2/19 Minutes - approved with 12 yays
- HPGBP online
- Ben presented HPGBP to 80 state and local stakeholders at DGS-hosted EPC workshop
 - Good audience questions
 - Good follow-up
 - Specific to exceptions
 - Good questions from Health
 - Lots of questions around which version to use, which is clarified in HPGBP
- Legislative session updates and discussion
 - Program impacting
 - Exemption bill SB479 - occupancy before June 1, 2022 to be not BEPS compliant unless change any systems
 - HB614 - school building energy use reporting - what is the mechanism for schools? Currently schools get to determine that but IAC has asked follow-up questions and reference ENERGYSTAR; LEAs already working with MEA - hearing today
 - HB870 - not program impacting, but new buildings must be built to meet BEPS. However, may need to look back at central plants; potential for program impacting depending on where it lands
 - HB1532 omnibus energy bill - Maryland Matters article <https://marylandmatters.org/2026/03/17/energy-bill-passes-house/>
 - Require PSC to have keyword source on website
 - Electric utilities must notify customers before rate increase
 - Muck around with tariff for large load customers - reducing from 100 to 25 MW demand
 - New data centers restrictions



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- Utilities and grid enhancing technologies
 - Reducing GHG emissions reduction targets for utilities and removing gas utilities entirely, impacting EmPOWER; will reduce cost on customers and benefits of EmPOWER
 - Allow PSC to change net metering rules, impacting what residential solar owners are paid
 - Clause which would allow DGS secretary to request waiver from BPW to eliminate 2 termination clauses for PPAs
- Ben Roush: whole building LCCA presentation - lifecycle cost assessment
 - Typically part of energy audits in ASHRAE Level III for major capital improvements
 - What does it cost to replace and how long does it last
 - How much energy will I save over status quo
 - Maintenance cost & BEPS compliance payments
 - All state buildings have to do life cycle cost analysis
- From David:
 - §4-808.
 - (a) To determine life-cycle costs, the Department, in cooperation with the Maryland Energy Administration, shall establish standards that require at least:
 - (1) an evaluation of:
 - (i) the amount and type of glass used in the building and the directions of exposure;
 - (ii) the effect of insulation incorporated into the design of the building;
 - (iii) the effect of the use of active and passive solar energy systems;
 - (iv) if wind or solar energy is used, the orientation and integration of the building with respect to its site; and
 - (v) the variable occupancy and operating conditions of the building and its parts;
 - (2) an energy consumption analysis of each major piece of equipment in any of the following systems serving the building:
 - (i) the cooling system;
 - (ii) the heating system;
 - (iii) the hot water system;
 - (iv) the lighting system;
 - (v) the ventilation system; and
 - (vi) any other major energy-using system; and
 - (3) a comparison of possible alternative energy systems:
 - (i) that would use the most plentiful and available energy resources in combinations that would result in maximum energy efficiency, both in the building and at the source; and
 - (ii) with respect to the projected annual energy consumption of the major energy-using equipment of each system over the life of the building.
 - (b) To evaluate life-cycle costs, the Department shall:
 - (1) adopt and uniformly apply a definition of the “life of the building”; and



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- (2) provide defending criteria for the definition adopted.
- Council 2026 meeting schedule for Q2/Q3
 - April meeting? Yes, to go over legislative
 - **July 16 in-person meeting in Crownsville (NOT May 21)**
 - After session, move to every-other-month for Summer/Fall
- Good and welfare
 - David: will share the Executive Summary of DGS decarbonization study, but will be delayed in posting on website because it is awaiting ADA compliance

Maryland Green Building Council Virtual Meeting - 2026/03/19 10:25 EDT - Transcript

Attendees

Aaron Fisher, Adam VanGorder -DGS-, Ashley Vanstone -MDE-, Ben Roush, Bill Hersch -MDP-, Cassandra Viscarra -IAC-, David Hollens, David Koenigsburg -DBM-, David St.Jean -DGS-, Eddie Lukemire -MDOT-, Hannah Debelius -DGS-, JOANNA FREEMAN -MEA-, Maria Prawirodihardjo -MSDE-, Marisa Britton, Mark Beck, Martha Shrader, Melissa Wilfong -IAC-, Michael Daly, Michael's Notetaker, Paul Clary, Ryan Schwabenbauer, Scott Moore -DGS-, Sustainable Design Consulting, Victoria Nellis -DGS-

Transcript

Hannah Debelius -DGS-: All right, we should now be transcribing. So, for those who are on the council, I'm going to go through and if you could speak up to let me know you're present, that would be really helpful until I get faster at folks's names. and for everyone, if you could also in the chat dropped drop your name organization, that would be great. So, ...

Ben Roush: I am here. Yes.

Hannah Debelius -DGS-: Paul, are you on stage?

Paul Clary: I am here.

Hannah Debelius -DGS-: Ben, I see you. Hello, Ryan.

Michael Daly: I'm here.

Hannah Debelius -DGS-: Marissa Britain,...

Mark Beck: Yes, I'm here.

Marisa Britton: Present.

Hannah Debelius -DGS-: right? Michael Dailyaly, Stephanie Tuckfield,...



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Hannah Debelius -DGS-: Ashley Stone,...

Ashley Vanstone -MDE-: Good morning.

Ashley Vanstone -MDE-: I'm here.

Hannah Debelius -DGS-: hello Mark Beck.

Hannah Debelius -DGS-: And Alex from the IA is out today. So ssa Wilfong is his official designate. Melissa, are you on today?

Melissa Wilfong -IAC-: Yes, I'm here.

Melissa Wilfong -IAC-: Thank you.

Hannah Debelius -DGS-: Great. David Coningsburg.

David Koenigsburg -DBM-: Present.

Bill Hersch -MDP-: I am here.

Hannah Debelius -DGS-: I am here. Bill Hirs. Eddie Luke Meyer. Okay. Becky Price.

JOANNA FREEMAN -MEA-: Becky and Megan aren't here. Joanna Freeman here on behalf of them for MEA.

Hannah Debelius -DGS-: Miclle. All right. So, we have Cororum then,...

Hannah Debelius -DGS-: Ben, and I will turn it over to you for greetings.

Ben Roush: Perfect. Hey everybody.

Ben Roush: Everybody signed in. if you're here from the public, great. Also put yourself in there just so that we are tracking that. do a call to order. and move on to the meeting record. would anyone like to make a motion to approve the previous meeting minutes? Has anyone reviewed the previous meeting minutes? Should we take a minute to do that? No. Yes. Silence.

Marisa Britton: I can make a motion to approve.

Ben Roush: And I can second.

Hannah Debelius -DGS-: I Right.

Ben Roush: Does anyone We can do this by just a show of hands. Does anybody wish to abstain to vote against? then meetings approved. so let's Let's talk about a couple things in the old business. we was crossover this week? No, it's next week.

Ben Roush: expecting a fair number of bills to just go away. We'll have more clarity in our next meeting in a month. We'll have quite a lot more clarity in a month, but even as of next week, if you're sitting in on the MCEC calls, a bunch of bills will go red because they haven't made crossover and they're presumed to be



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not going anywhere. have died in their chamber of origin. other than that, if you were at the DGS energy service performance contracting event that Hannah put together last week, I got to speak at that about the high performance green building program, both the 2025 and 2020 changes and a little bit about lead v5 and very dry content.

Ben Roush: content. I apologize for that if you were there, but got after really good audience questions and then got a lot of followup that I think we've got language to clarify based on questions. We've got specific to the gas and electric exceptions, we got quite a lot from ...

00:05:00

David St.Jean -DGS-: It was completely Will and Laura.

Ben Roush: Do either of you remember what their name was? Maryland Hospital Systems. What was that?

Hannah Debelius -DGS-: this I don't remember the name someone from NDH

Ben Roush: There you go. Thank you. which was great. So as people look at how am I going to apply particularly their questions were all about central plants and the exception is you can use existing central plant capacity but you can't build new and then use it after the February cut off it was great questions and it'll make our program questions and to clarify language if we do a version

Ben Roush: language to make it clear for other than that, any old business to talk about? The newest version of the program's online. I've gotten a couple of sidebar questions. I didn't go to everybody about the schedule, that table that we put together, and what does it mean for me, what my RP does whenever. so that's been good.

Ben Roush: It's added clarity about what program actually Okay.

Hannah Debelius -DGS-: Ben, it's going in and out, but your sound is just a smidge gargled. So, I don't know if it's Wi-Fi or your headset. Every time I unmute to tell you, it gets a little bit better. But just a heads up that I might interrupt you if that continues.

Ben Roush: Yeah. let me shut down my VPN.

Marisa Britton: It seems better.

Ben Roush: I'll bet you it's that. And if not, I will call I will log in on my phone as well so it's more clear. Hopefully that fixes it. Yeah, we'll see. It could be in and out. I blame Comcast because that's what you do in these scenarios. don't know who the internet provider is. I probably shouldn't blame Comcast. that's not fair. at the office.

Hannah Debelius -DGS-: Transcription is needed.

Ben Roush: If there's no other old business, ongoing legislative updates. again, I testify on a couple and I get to now start every testimony with Ben Roush and this chair. I am not here in that capacity. I am a private citizen. it's super fun when you have two minutes to spend the first 10 seconds doing that. But



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there's a couple bills I've been tracking that would be high performance green or sorry that would be program impacting. the first would be an Senate Bill 479 that also had a House Bill 1217 that would exempt buildings built before they got an occupancy permit before June 1st, 2022.

Ben Roush: from being beeps complying or paying fees until they upgraded any of their systems if they changed lighting the way the bill was worded. I went and testified to ask for clarity. I don't know It didn't move last year when it had a similar Melissa, I don't know if you can speak to this one. House Bill 614 that did the school building energy use reporting. I know it had a hearing, but I don't know if it's gone anywhere.

Ben Roush: It doesn't say it's gone anywhere or had a vote since.

Melissa Wilfong -IAC-: where it is in the progression.

Ben Roush: Yeah, I didn't go testify on this. One of my big questions was what is the mechanism for schools? in Energy Star portfolio manager? Do they report to David's database?

Melissa Wilfong -IAC-: Yeah. ...

Ben Roush: What's the reporting mechanism if they choose to, clarify that?

Melissa Wilfong -IAC-: I think it currently says that we get to determine that reporting mechanism,...

Melissa Wilfong -IAC-: but we've also provided some followup to questions that say what we will determine will be used is energy star.

00:10:00

Melissa Wilfong -IAC-: So, we're already working with MEA to use some of that Energy Star data from the ELEAs who have it and MEA is already working to give grants for eleas to put projects into Energy Star. So, knowing that...

Ben Roush: Got it.

Melissa Wilfong -IAC-: if it's defunded, we'll have to regroup it. We've still decided that that would be the way we would go about it.

Ben Roush: Yeah. ...

Ben Roush: yeah, it's an interesting one. I, okay, House Bill 870 it would not be program impacting because we already did it, but it's the Large Buildings for Tomorrow Act. So basically beeps complying buildings would have to build to meet BEPs. We've already mostly covered that in the standard. we might have to look at central plants specifically if dep depending on the wording of the bill. It did just pass out of its environment and transportation committee with with amendments. They have not posted the text yet.

Ben Roush: I had heard that there are substantial amendments. I am interested to see what they are, but until we have text,...



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Ben Roush: we won't know. It may be program impacting though. There might be something we need to address. the effective date of the bill is October 2026. Are there any other bills that folks are tracking?

David St.Jean -DGS-: There's the big omnibus build HP 1532.

Ben Roush: Which will you say more?

David St.Jean -DGS-: It does a lot. it's the one ring to rule them all bill.

Ben Roush: Got it.

David St.Jean -DGS-: So I put a link in the chat to Maryland matters article about it. I mean I can run through a few of the things if you want that I think were kind of some of the more important things.

Ben Roush: Yeah, I think that'd be useful.

David St.Jean -DGS-: Yeah.

Ben Roush: That's part of what this is for.

David St.Jean -DGS-: So I made a sort of a cheat sheet a cliff notes and I've got probably 50 bullet points.

David St.Jean -DGS-: So, let me just see if I can pare that down a little bit.

Ben Roush: I have heard about this bill in the MCEC.

David St.Jean -DGS-: It is.

Ben Roush: Does it's like a kitchen sink bill.

David St.Jean -DGS-: And it passed the House. so it's on its way to the Senate.

Ben Roush: Yep. Yeah.

David St.Jean -DGS-: Some of it, I mean, this is not an important thing, but I applaud them for this. It's going to require the PSC to create keyword search functionality on their website. Their website is notoriously bad. So, somebody's finally addressing that and forcing the PSC to do something with their website, which I applaud. electric utilities must notify customers before they request a rate increase. That's going to be interesting. let's see. They're going to muck around with the tariff for large load customers.

David St.Jean -DGS-: So they're reducing it from 100 to 25 megawatts. They don't say what the tariff is. They're just saying the PSC has to change the definition of a large load customer, which will affect some state accounts, I think. Of course, new rules for data centers. I won't go through those. and then something about utilities and transmission enhancements like grid enhancing technologies. They identified several of those. grid level energy storage the PSC to report on it.



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David St.Jean -DGS-: Probably one of the bigger aspects of this bill, which is not stated directly, I had to read that article to realize, I see what's going on here, is that it's reducing or lowering the greenhouse gas emissions reduction targets for electric utilities and...

David St.Jean -DGS-: removing gas utilities entirely from any greenhouse gas reduction targets. And so what that does effectively is it impacts empower. So essentially if they have a lower target there will be less empower programs which will reduce the cost of empower on folks electric bills.

Ben Roush: And last year the rebates changed to a carbon metric instead of a kilowatt saved,...

David St.Jean -DGS-: So for those of us who actually take advantage of the rebates which the state definitely does that's going to be an issue. Yeah. Yeah.

Ben Roush: a demand savings metric.

David St.Jean -DGS-: retweet. We were having a lot of back and...

Ben Roush: And at least in year one, it was financially beneficial when you did furnace replacements with heat pumps. it was real money to projects.

00:15:00

David St.Jean -DGS-: forth with the utilities about that and with ICF and we never I think ended up in a place where we agreed on what all that meant. and they were still trying to figure it out. So, I don't think we really took advantage of that as much as maybe we thought we could have.

David St.Jean -DGS-: Let's see. Of course, there's nuclear powers in there. yeah,...

Ben Roush: It seemed like there were several studies.

Ben Roush: You will study this.

David St.Jean -DGS-: as usual. Yep.

Ben Roush: It's not any legislative change. It's just look at the future.

David St.Jean -DGS-: And then of course there were several pages on the allocation of SE funds defining the percentages and what it's to be used for state agencies for some of the folks in this call. It's hard to tell how that's going to impact us. I mean my office is half of our funding or more comes from MEA. So, we'll keep an eye on this for ourselves. but it defines in percentages and dollar amounts how the funds are to be spent.

David St.Jean -DGS-: And including importantly the alternative compliance fees that have been paid under the utilities which is right now the lion share of SE and they've set aside \$und00 million of those compliance fees and they're asking MEA to run some auctions with renewable energy companies using these compliance fees to essentially pay renewable companies for capacity.



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David St.Jean -DGS-: What exactly that means and how that's going to look I'm not sure because they didn't talk about energy they talked about capacity so I mean in my mind it's paying a for instance solar company to install 100 megawatt facility and paying them through this auction lowest price like a solar company will say we can install a megawatt of solar for X dollars okay you were the lowest bid we're going give you this money to install your system and then what happens with the energy at Rex I suppose are still owned by that developer and...

Ben Roush: Right.

David St.Jean -DGS-: they will then be selling the energy at Rex on top of getting paid to install the system. So it's wonderful for developers I think. So we'll have to see how that plays out.

David St.Jean -DGS-: And then new rules for net energy metering, which for someone who has almost 20 kilowatts of solar at his house, this is a little disturbing to me, is that they're allowing the PSC to play around with the net metering rules and...

Ben Roush:

David St.Jean -DGS-: with the concept that us bad actors who have renewable energy at our home, solar, are basically being subsidized by everyone else paying their electric bill. so they want to make sure that that's no longer the case. So they'll work it out in what we get paid essentially for the solar that we're generating.

David St.Jean -DGS-: So that's going to be an interesting one as well. I mean, a lot of states have messed around with net metering over time. so we'll see how that turns out.

Ben Roush: Yeah. I mean,...

Ben Roush: you're already not incentivized to overgenerate compared to your on a yearly basis overgenerate. Right.

David St.Jean -DGS-: Yeah, at my house, I'm trying to reach that sweet spot where I'm net zero money at the end of the year where I don't know them and they don't owe me and I'm done. so yeah, so I don't know for folks who have installed solar and have worked out financial calculations based on current net metering. this could change and could be a negative impact and frankly my own personal thought is that think that's pretty unfair, but we'll see what this ends up being. so keep your eye on that as well.

Ben Roush: Yes. Yep.

David St.Jean -DGS-: And that's about it.

Hannah Debelius -DGS-: Yeah, it does look like Joanna's had her hand up for a while to weigh on

David St.Jean -DGS-: That's basically most

JOANNA FREEMAN -MEA-: I was just going to say, David, you have a pretty good interpretation of the auction as I've, had discussions internally at MEA about it. it is a low bid auction for the utilities. obviously there's quite a few details still to work out as the bill works through the Senate as well. and then we



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actually get it going, but it will be an annual auction for the low bid to, as you said, install a set number of megawatts. so, the bill is an omnibus. There's a lot going on to it. there's stuff going on with empower, some SE money to buy down some of the empower interest. That's why you might see some empower credits to your utility bill. So, instead of the \$40 rate or credit, there'll be different savings for every utility payer. So, there's a lot going on, but we still have to see how it's going to go through the Senate side.

00:20:00

David St.Jean -DGS-: And just to be clear,...

David St.Jean -DGS-: so utilities are not allowed to submit bids for those auctions, Because they're not allowed to own and operate their own generation. So it probably just private developers.

JOANNA FREEMAN -MEA-: as far as No,...

JOANNA FREEMAN -MEA-: but I'd have to talk to Ebie and the other side of MEA. Yep.

David St.Jean -DGS-: And then the last thing actually which is important for DGS and really for the whole state is that there is a clause in there now that we were able to get introduced at the last minute which would allow DGS's secretary to request a waiver from the board of public works for two separate termination clauses which are in all state contracts termination for convenience and non-appropriation of funds. So the secretary would be allowed to ask the BPW for a waiver for those clauses for renewable energy projects for instance we solicited for renewable energy last year. We've been negotiating with the developer of a solar facility in western Maryland on an abandoned coal field which is a wonderful project.

David St.Jean -DGS-: It's a huge amount of energy for the state to be buying at a really good price, but we're absolutely stuck in the road over this clause of termination for convenience. which sounds awful. If you want to put a clause in a state contract and...

David St.Jean -DGS-: makes people think twice, call it termination for convenience. In other words, if the state wakes up in the morning and feels grumpy, they have the right to terminate this contract. And it's not even the developers.

Ben Roush: And for somebody about to think a lot of money into a big solar field,...

Ben Roush: I see why that would make them concerned.

David St.Jean -DGS-: I mean, they're concerned about it, but when they take these projects to the market, they're using that PPA as collateral. And if the PPA has a clause like that in it, they're not going to be able to get any money to support their project. Looks like David has his hand up.

David Koenigsburg -DBM-: Is this a clause that would allow the DJS secretary to request those waivers?

David Koenigsburg -DBM-: That's within that big HB still 1532.

David St.Jean -DGS-: 1532. Yes.



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David St.Jean -DGS-: And one of the clauses already exists. DJS secretary can request a waiver for non-appropriations. This adds a request to waiver for termination for convenience.

David St.Jean -DGS-: And then of course in the end it's still the board of public works thumbs down the contract, but at least he can request a waiver and let them make the decision.

Ben Roush: David, do you want to speak?

Ben Roush: that bill has died in its committee about forcing the disclosure or the requirement of reviewing environmental and energy requirements of projects for public works.

David St.Jean -DGS-: Yeah.

David St.Jean -DGS-: So, I mean, there's a history to that, too. so a couple years ago, the controllers's office asked my office through the green purchasing committee to work with them on a voluntary reporting to the board of all contracts. So, basically, you would report sustainability aspects of any contract going to the board of public works. We worked on that than for different reasons which I won't get into. We weren't able to get anywhere voluntarily and so a legislator decided okay we're going to stick it in a bill this year and that created a lot of consternation on the part of the administration and so that bill was dropped and instead we're right back to the voluntary aspect of it which looks like now is moving forward.

David St.Jean -DGS-: So after a certain date, yeah, any contracts going to the board will have to report on any sustainability aspects of that contract, including whether or not it's using the high performance green building program, whether it's compliant with green purchasing specifications by clean, all of the things. July 1. That's what I thought. Vicki, thank you. And so Vicki has made this wonderful worksheet or template that project managers can use to fill out to help them come up with the information that's needed for the board. So I don't frankly think this is a hugely heavy lift for project managers. Not nearly what it is to get through MBE and veterans and small business and all the rest of the requirements that we have through our procurement.

00:25:00

David St.Jean -DGS-: processes. This I think should be much lighter lift. Martha has a question.

Martha Shrader: Just a comment. I thought we were already doing that. I think all of our projects it has a section on sustainability that anything that goes to polar public works.

David St.Jean -DGS-: Some folks are but yeah some as Vicki says USM is doing a great job.

Martha Shrader: I was surprised when I saw that in the bill. I was like, don't we do that?

David St.Jean -DGS-: So you'll not notice any change whatsoever but the rest of everyone else is being now forced to do it essentially.

Martha Shrader: Okay. Okay. Thanks.



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Ben Roush: All right. way up there, Joanna pointed out, the school energy reporting bill has its hearing today. So we'll know more in our next meeting. We'll know if it made it out of its vote and made it for crossover in the next week.

Ben Roush: Any other bills anybody's tracking that are high performance green building program impacting or agency impacting at large. This is also just good information sharing.

David St.Jean -DGS-: So, I have a non bill.

David St.Jean -DGS-: There was a bill that was being drafted that was essentially going to instruct I never saw the bill but the concept was it was going to instruct state agencies to enter demand response programs. So again the governor's office wasn't crazy about being told what to do.

David St.Jean -DGS-: So we started talking to a curtailment service provider separ that's available to all state agencies that will allow us to use their services kind demand response aggregators, I guess.

David St.Jean -DGS-: So the concept would be and I've talked to them several times about this over the past few years is that at least for DGS supported agencies I would provide them with a list of contacts at facilities who cower would then reach out to and explain the program to them kind of train them on how to respond to it and then manage the whole process over time and there is no possible penalty to the state for doing this. We're never going to get charged a penalty by J This is a PJM demand response program, but we will have an opportunity for credits. there are a few facilities that end facilities that are already taking advantage of it.

David St.Jean -DGS-: BWI they make ice and they're involved in the demand response program and they have some other facilities that are doing something with their equipment and...

David St.Jean -DGS-: I saw some of the numbers and it's not going to make anyone's budget but it's thousands of dollars which are free so sort of free I mean it does require some effort on the part of facility staff unfortunately most state buildings don't have the technological capacity to automatically respond to these

Ben Roush: Yeah. it can take some BAS upgrade,...

David St.Jean -DGS-: things. So, it's going to require some taking our equipment in hand and adjusting BAS systems and doing what we need to do to reduce our load during those emergency days.

Ben Roush: but it might also fund building automation system BAS up upgrade, but it might also fund that BAS upgrade. So, it's an interesting one. David, you say they make thermal storage ice, just to be clear.

David St.Jean -DGS-: Yes. No.

Ben Roush: Yeah. Yep.

David St.Jean -DGS-: for slushies primarily.

Ben Roush: I mean, that is what you're making a giant blue fleshy, but you can't drink it. It's propane glycol.

David St.Jean -DGS-: I wouldn't want to drink it.



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Ben Roush: Yeah. Yeah.

David St.Jean -DGS-: We also make ice across the street from our office here. Store it under the parking lot during the summer.

Ben Roush: Okay. So, We're going to go into new business. I promised I'd talk about life cycle cost analysis. I just caught this now. It says LCA which in our buildings industry means life cycle analysis which would be bon based. You do embodied carbon would be another way to say so we're missing a C. It' be LCCA and it's entirely different Same basic idea about how much does it cost to run a building over its life cycle. In LCA you're talking about carbon.

00:30:00

Ben Roush: In life cycle cost analysis, obviously we're talking about operational cost, not carbon. Although we sometimes project carbon on the side now because we have to talk about beep's compliance payments and what we're doing and it helps to do that in the realm of carbon direct carbon emissions. these are typically as part of energy audits. It is required in a ashray level three audit you will do life cycle costing. Ashray level three audit also known as an investment grade audit also typically for major capital improvements only because it involves deep energy modeling and quite a lot of fanciness.

Ben Roush: But at their core, life cycle costing. You only need a couple things to project cost into the future. You need to know what does it cost to replace this equipment and how long does it last. You need to know how much energy am I going to save over some status In new buildings, the status quo is usually code minimum. In existing buildings, it if I just keep doing what I'm doing now. So, when you're doing life cycle cost analysis, that's your basic. You can also add in maintenance cost. We've been doing all this for BEPS a lot for building energy performance standards and we add in BEP's compliance payments as they stage in 2030 35 and 40. I'm going to show you a spreadsheet version and I'm gonna a simple spreadsheet version like I built it in less than two hours.

Ben Roush: And I am going to show you a complicated version that I have to give credit for the Washington Office of Financial Management who started that spreadsheet and then we have adapted it for beep's compliance and for our own uses. I'm also going to show you some of the inputs. What does it look like to do a spreadsheetbased savings calc? And I think you'll find that underwhelming because it's much simpler than anybody thinks. And then what does it look like to do a energy modeling? I'll show you the outputs. We're not going to it take a whole one of these. we take half an hour to walk through energy models and what does it mean? But let's start with the spreadsheet version. I'm going to share my screen.

Ben Roush: I'm going to turn off my camera if I'm having bandwidth issues and feel free to stick questions into the chat. I'll still be able to see share Give me a second. Should be screen two. Yeah. All right. Let me know when you can see that.

David St.Jean -DGS-: It's up there.

Ben Roush: ...

David St.Jean -DGS-: There's two of them.



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Ben Roush:

Ben Roush: I know. Yeah, we'll actually come back to that. So, I pulled up an envelope savings and an energy and a HVA Here's HVAC savings. And I've anonymized these. I'm not talking about specific clients. These are primarily for examples. So, there is a amazing resource for the Mid-Atlantic manual that has calculations for many savings potentials that you might run into. Lighting, envelope, there are a few others.

Ben Roush: you get yourself into interesting places in the TRM manual when you aren't doing a replacement. But we see that all the time in decarbonization in Beth's work where we're replacing this air handler furnace whatever boiler with this pumpbased heating alternative. But you can work your way through the calculations to get to an annual energy savings. And the annual energy savings is always somewhat underwhelming. So you get to save therms and you pay for it in kilowatts kilowatt hours. Your kilowatt hours cost is two and a half times three times. It depends right now what natural gas prices do given current political events.

Ben Roush: But right this moment you work out to where natural gas is a little bit more expensive if you include equipment efficiency or a little bit less efficient if you don't include the hit you take for a furnace a boiler which are only at their best 93 or 94% efficient in using that thermal energy. So you end up with savings that if you look at it on a project cost basis, it is somewhat underwhelming because you end up with a huge efficiency gain of a heat pump, but then your utility rates take it right back again and you end up at almost neutral. I just did ground source in my own house and I'm seeing this.

00:35:00

Ben Roush: If I weather normalize, I saved \$80 in winter heating over my comparative to my condensing furnace that I had a year ago. even though it is substantially more efficient. So, that's TRM manual based. let me show you an envelope based one. So you still need to know the efficiency of your HVAC equipment and your heat loss. And this is a little bit technical, but your heat loss from an envelope is just the temperature difference between the two divided by the R value. if you're R30 insulation, you're continuous like you're above deck.

Ben Roush: If you take it's just $u \Delta t$. So u is one over r your area times your temperature delta. And you can do that for every hour of the year and end up with a savings. It's really straightforward. how you do that and then you can convert it to what energy is needed based on the equipment you've got gas or heat pumps and that equipment efficiency so that you can spreadsheet base and you get in the ballpark. All of these are ROM costs rough order magnitude costs and savings. So we got to say that but you get there and it's pretty good. yeah, I'm not going to go into cooling degree and heat degree days.

Ben Roush: If you want to ask questions, we should have a beer sometime. it gets real dry real fast. The beer would help. on the cost side, here is a detailed cost estimate again anonymized. that gives equipment costs from suppliers, labor costs, overhead and profit markups, tries to accom account for general contractor markups and insurance and crane costs and all that.

Ben Roush: You can do this. this is the more complicated of cost estimating. These are still ROM costs, but they're a lot more accurate than if you're doing a simple energy audit. You take equipment cost and



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multiply it by three and you end up in the ballpark. it's different between \$10 and \$20 or 10,000 and 20,000 are the same answer in that version. it's still the same ballpark. It's like is it 10,000 or 100,000? you get in that ballpark. again, order of magnitude. it's exponential. all right. So, that's the inputs. You've got for complex. I'm going to go back to this one where it's doubled. You actually do energy modeling for the energy savings. So, this again is anonymized, but you can see the building type.

Ben Roush: And it does a end use and it does a 8760 every hour of the year calculation on energy loss. What lights are on? You set schedule HVAC exact efficiencies at that temperature outside. So efficiency changes over the colder it gets the less efficient although it is still substantially more efficient than electric resistance down to very cold temperatures. which means it's even Electric resistance is a little bit more efficient than a gas boiler. you can see energy use intensity comes out of this. the spreadsheet version we don't end up with a picture on whole building. It's measure by Put in this insulation Put in this heat pump it saves that much. You can't say put in the insulation and the heat pump and you save this much together. You can't easily do that on a spreadsheet.

Ben Roush: Although we did have an engineer who built out essentially an energy spreadsheet. It was impressive and very difficult to ever change for another project. so they look like And this is a mostly electric building. the baseline has more gas heating because of the way that the energy code delineates fuel source when you're doing baseline and proposed.

Ben Roush: So on that envelope version, let me go back to that. wrong spreadsheet. Here you go. You've got a baseline status quo. This was an existing building and what you're comparing against in the energy model version. This is for a new building. And it's the only way we can baseline a new building. there wasn't an existing building that we can say, that existing building, we've got three years of data on what energy it actually uses. You can't do it. So when you're doing new buildings, you're sort of stuck into this more complicated or you baseline against energy code with a spreadsheet, but baseline against energy code great, I was on R30 above roof, now I'm going to go to R40 above roof. it probably doesn't pencil on payback unless you do a comprehensive all things accounted for.

00:40:00

Ben Roush: All right, let me show you the simple spreadsheet version of a life cycle cost analysis. So this is for senior living. We do a summary tab that just says if you're doing again all has been anonymized. If you do a single measure, if you do here's your code minimum in light gray every time every way down.

Ben Roush: This is basic energy auditing. it's like a level two audit but with level three energy modeling data. because when you're doing this many measures at energy conservation measures, it is actually easier to run an energy model than try and spreadsheet them all. anyways, so you've got different options that you can do. And here's the downer about insulation. we got on this one the measure cost. we actually got from a cost estimator which grand and you can see the simple payback is not so great on most envelope measures and is not even that great on most down here HBAC options. it depends on your timeline. These are simple paybacks. I want to make that distinction. So they one cost divided by year one savings.

Ben Roush: And then you get a number of years from that. so it takes the payback on year one values. I'm going to show you a spreadsheet shortly that's a fancier version that tries to project. we did that on the



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combos here. And then I'm going to show you an even fancier version that tries to take fuel escalation and all sorts of fanciness. So when we're doing these, we also build combos. And here's the good news story part of this. When you're building combos, you start getting into simple paybacks that better than code, you actually start saving things. And if you compare against what was in the design already, you might give up, R36 instead, R50 roofing didn't have a payback, you might give up that cost and choose to spend that money somewhere else. That's the benefit.

Ben Roush: That's what this spreadsheet really shows you where should I spend my money? What is most important? Do I get the highest efficiency? Do I get the best payback? We always build every time as design, the best payback, and then start playing with those based on what options do we really want to think about? And it's usually around HVAC that you really start swinging things around.

Ben Roush: And this was the first time for this owner that we had added a beep's cost columns. I'm going to show you how those get built out in another tab, but you can see on most efficient your EUI drops by a third. You have to spend \$7 million to get there and it has a 70ear payback on a simple cost basis. so all right, let's show you this output sheet. So this is the background data of all of that. you've got carbon outputs, you've got electricity and gas outputs, and that's what builds out that spreadsheet we were just looking at. And for the first time ever, we built out this projection. It's a 25 year life cycle cost. So it says the net present value.

Ben Roush: So everything gets calculated on a life cycle cost analysis. This is straight out of your finance class if you one and if you didn't you should be glad because at least in engineering our finance class was more confusing than useful. so it's basically like a finance rate. What do we assume the escalation future cost of money and then how do we get back to today's dollars? The electric escalation and the natural gas escalation. I'll show you a graph of this in the fancier version. We had your whole analysis can swing on these escalation rates. if you assume that natural gas will escalate at the same rate as electric, you get drastically different answers than if you assume they'll diverge. And there are several reports from several trusted sources that say they should diverge.

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Ben Roush: and future forecasting it's sort of a fool's errand because we have no idea what will actually happen. BAPS escalation \$4 a year ends up being about 2%. and that's straight out of legislation. And then equipment escalation, how much will equipment cost in the future? we have said equipment will get more expensive slightly faster than the standard inflation rate and that's based on historical data.

Ben Roush: David Yeah. Yeah.

David St.Jean -DGS-: Yeah, first of all,...

David St.Jean -DGS-: I love these spreadsheets. We made some of these in grad school. They're wonderful to play with. But your electric escalation at 3%. I've used that as well. just it's pretty conservative because I had seammens go back and look at the average annual escalation for the BG& service territory for the last 20 years. It averaged 4.8% a year, believe it or not. It's pretty extreme, and some years it would be flat, some years it go down a little bit and then other years it would go up 15 16 18%. So it jumps around a lot.



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Ben Roush: And it's also, customer charge really impacts this and customer charges are regulated, but have jumped quite a lot in the last few years, particularly in natural gas. Customer charges are way up for Maryland. So, it's a little bit of a fool's eron trying to take this. If you made this 4.5% so it's going faster than escalation that all trickles down into these net present value numbers and they all get more expensive. Every single one of them gets more expensive though. So the cost to operate over time for 10 year 20 year and this is just an addup of every year what's the net present value this year's dollars how much does it cost to operate this building go up.

Ben Roush: But if you're looking at what's the best it will tend to stay the same, because they all go up together. So if I make that back to 3%, it'll go back down a little, but it doesn't really particularly in the 25 year because it's, into the future. but it doesn't actually change which one is your best option. So there's some nuance to this about exactly what you choose. The trends matter more than the exact numbers you choose for these escalation rates or equipment costs or things like that. All right. you project that out 25 years. You do a net present value calc which is built into Excel and you can say 10 years which a lot of developers that's their timeline. For the state we want you to look at 25 or maybe even 50 years.

Ben Roush: I'll show you a 50-year in a second because you're going to be a long-term owner who incurs that cost over all of this time and then you go back and you get this is what adds up in total for what it costs to operate that building. What's interesting is even when you get a substantial energy efficiency gain, if you had too big of a first cost, that also shows back up in year 20 when you're replacing major mechanical equipment, or year 30 if you're doing a 50-year version, year 25 to 30 for envelope measures have to show up again as a capital cost.

Ben Roush: And oftentimes that first cost of doing something much more efficient won't actually pay out in energy savings over these timelines. Certainly not over a Over a 50- that starts to flip. So over a 50-year timeline, doing something much much more efficient tends to pay for itself. particularly if it gives you longer equipment life. So instead of replacing it at 20 years or a heat pump to a ground source loop, you're replacing the water source part at 25 and the ground loop at 50. so if you can change when those capital cost expenditures occur because of different equipment, different life, you can really make those work out on a long-term basis.

Ben Roush: question. So far, this is a lot of and...

00:50:00

Ben Roush: sorry, I'm looking at the chat. David, you said AC in his calculations.

David St.Jean -DGS-: Yeah, I was curious.

David St.Jean -DGS-: I was looking at when you're going through that portion of the spreadsheet. right.

David St.Jean -DGS-: Energy loss through velope. How do you account for infiltration?

Ben Roush: It's in the energy model as electric and...

Ben Roush: gas cost. That's from an energy model. so the energy model has an assumed air exchange based on past data of this client's particular building and some of their asbuilt testing. And it does have a



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different air barrier options. So it has fluid applied air barrier and vapor barrier. The baseline is air barrier sheet membrane peel and stick waterproofing or airtight drywall and you've got cost for that. And we also have in the energy model what savings you get for it. And you can see we don't actually have energy costs for the first two here.

Ben Roush: weird, but the savings it's okay, but it's not amazing compared to other options. a lot of times, your architect baseline fluid applied and Tyvec might save you a little money, but you're giving up long-term performance. And on a first cost basis or what's my payback? You might say, "Great, I want that money back." And on a 45 year basis is less clear.

Ben Roush: It's better to have that energy savings of exch of lower outdoor air exchange and infiltration. That answer your question,...

David St.Jean -DGS-: Okay. Yes.

Ben Roush: I think.

David St.Jean -DGS-: Reading couple articles recently about German practice of house burping got me curious about ...

Ben Roush: I will have to go look up that term to see what that means.

David St.Jean -DGS-: so the Germans culturally and even in their rental agreements when you're renting a house primarily require you to open your windows a couple times a day for 10 minutes throughout the year.

David St.Jean -DGS-: Interestingly,

Ben Roush:

Ben Roush: Yeah, if you can do particularly on a wind day that does wind driven infiltration, a little bit of window opening does a great deal of benefit for your overall indoor air quality, your very small particulate concentration. Yeah. that is interesting. okay, I'm going to show you the more complicated life cycle cost analysis spreadsheet. And again, the Washington OFM has been anonymized. this was a large office and admin and is a comp complicated example. It does 50-year life cycle costing, but you do it actually compared to our homebuilt version I was just showing you, it has a relatively straightforward input.

Ben Roush: So you say, "I've got these things I'm considering." And in this case, it was primarily decarbonization focused. So what we're looking at is only mechanical equipment, even though these buildings often when you're doing a decarbonization effort, it'd be money well spent to do a window replacement while you're there. We're focused solely on what will it cost to decarbonize this building. And these were all based on energy models as well. So the installed costs, the annual maintenance, the annual electric and natural gas costs. those annual electric and natural gas costs come from energy model data. There is a whole fuel escalation tab here. I promised I'd show you a graph.

Ben Roush: So, this particular client wanted us to use the E3 report from the Maryland Commission on Climate Change that showed what happens when many people pull off the gas grid and you have customer charges that spike up. and that's what it looks like an exponential growth in that chart. And



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again, what you choose for utility cost And in that same E3 report, the electric cost in the 2045, they go back up by a factor of two, a 2% or two and a half% escalation. And gas prices do this exponential growth as people pull off of the network. and we just continued it beyond that.

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Ben Roush: because the 2045 is where that study cut off. but we continued the same exponential escalation into the future to give our 50year look ahead. if we had chosen a more conservative gas rate, I'll show you back on this main page. Your utility costs would have gone down. your gasbased system. So the baseline replacing kind is gas heated, your total utility cost would have gone down drastically.

Ben Roush: and that total life cycle could have come down. And this is again a 50-year look ahead. you can see on EUI we know they would have been paying some compliance payment. We don't know what that structure looks like because it's not in the legislation or the regulation yet for MEA. But this building had a target that it can't reach even if it does its most efficient systems doing heat pumps. it's not going to reach it alone. It's going to need to address its lighting, so on and so forth to actually get to the EUI target that were published in the original regulation for NEA. We'll see what targets look like after this 2026 data is released in 2027. I hope offices have a target that's a little more permissive for existing buildings. Well we also did savings to investment ratio.

Ben Roush: So if you do this on total life cycle cost or if you do do this on a first costbased payback it doesn't make a lot of sense over a 50-year term but savings to investment ratio so that is exactly what it says how much money do I save over the baseline this first line and how much do I pay over this baseline the savings to investment ratio if it's one or less it paid for itself. So none of these pay for themselves because of capital cost but if you pick the lowest one you are picking overall even if it has a higher total cost of life cycle cost you are likely doing yourself a favor to spend the money up front to get the higher savings. Questions so far?

Ben Roush: Okay, I'll show you quickly how this thing projects. it's quite complic it's like I showed you with the previous one, but it does it over a 50-year projection and instead of trying to do just, lines that trickle down, it does it per option and it does it for any financing and keep going. any utility cost, maintenance, there's your maintenance, and it changes it all back into present value again. The beep's fines. And this was our primary change to this already built tool to add in what happens in 20 30 35 and 40 moving out.

Ben Roush: utility cost and again your assumed escalation makes a big difference. And then there is a carbon tab that does a carbon projection that we brought back in that carbon projection and is great for burning something for propane, natural fuel oil, whatever, pretty industry standard what your multip for carbon for electricity. What your multiplier is dependent on the grid you're in and it varies by year depending on how much electricity you bring from another grid that might be less carbon or more carbon intensive.

Ben Roush: So it's exactly what you use for electricity and what utility rate escalation we use is one of our upfront discussions because those can matter particularly the fuel escalation but also carbon for beep's compliance is only direct so the electricity doesn't matter as much but a lot of clients want to be talking about total carbon as well and you can make that pretty different depending on if you were



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Ben Roush: a gas or a heat pump baseline and what escalation and how you assume our grid is going to decarbonize. Are we actually going to meet 2040 targets to be carbon neutral? All that was a highlevel gloss through of life cycle cost analysis. of that was because it's a thing we as the council get to say what we think is best building practice what we recommend what we require I don't necessarily know if a requirement is there schools already have to do this to an extent and Melissa could speak to that I know you've got to do it's three HVAC options and early in your design I think

01:00:00

Ben Roush: D or DD level. I'm gonna let me just look real quick. Yes, We did go through all these. I want to make sure I didn't skip anything. but other jurisdictions things not schools it's by it you don't always have to do life cycle costing early studies and particularly for large projects or large capital improvements you might get a benefit from that. Okay questions.

Ben Roush: Okay, simple enough.

David St.Jean -DGS-: I do have one thing,...

David St.Jean -DGS-: Ben, is that in statute in state finance or procurement section 4-81, there's a whole section in there that requires all state funded buildings to perform life cycle cost analysis.

Ben Roush: Is it actually enforced? Because Okay.

David St.Jean -DGS-: No. All right.

Ben Roush: Because state projects we've been on haven't put as an option or we should talk about timing. If you're designing a new building, you need to know enough to know what your baseline system is. What are you comparing against? This is but you need to be early enough that you can change it if you figure out, it'd be hugely beneficial to do whatever change. so this is an SD level effort. You've written a narrative. what the intent is enough to and the shape of the building.

Ben Roush: You can actually do quite a lot of work on what is the shape of the building. I want an all glass atrium, but if I slide it around to the north, I get a huge benefit. That is earlier study, but for the purpose of life cycle costing, it tends to be SD level study. I know sort of what I'm doing and I fairly well know the shape of the building and then I can get accurate results.

Ben Roush: David, if it's required, are there thresholds? Are there new construction only or...

David St.Jean -DGS-: Let's see it says to save both cost and...

Ben Roush: major capital renovations over whatever construction?

David St.Jean -DGS-: energy the department meaning DGS shall project life cycle costs and perform an energy consumption analysis during the preliminary design phase of the construction or renovation of any constru construction or renovation of any building. yeah.

Ben Roush: This might be a future program write in to say look over there.



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David St.Jean -DGS-: And then there's one. Yeah. Yeah. I mean,...

Ben Roush: Yeah,...

David St.Jean -DGS-: it's a speed limit sign that no one really pays much attention to.

Ben Roush: and does it say what you're analyzing? Is it So, schools have to do HVAC systems. I think Melissa can jump in if I've got that wrong,...

Melissa Wilfong -IAC-: Yes, that's true. It's an energy analysis of multiple HVAC systems. Yeah. It's Yeah.

Ben Roush: and that's grand. There's a lot of savings there.

David St.Jean -DGS-: Thank you.

Ben Roush: It's probably the biggest benefit you could shift a life cycle cost analysis but if you start putting in lighting and envelope and then doing combo measures, you also derive a great deal of benefit from that exercise of trying to put together combos in a lot of cases you can both save money and energy, right?

Melissa Wilfong -IAC-: No, it's a full energy analysis. So, it's got the envelope, it's got all the penetrations, it's got the area volumes.

Ben Roush: But they don't have to analyze different roof assembly possibilities.

Melissa Wilfong -IAC-: Right. Correct.

Ben Roush: It's HVAC focus.

Melissa Wilfong -IAC-: And we do have requirement in the feasibility study phase to also do an energy analysis and then also identify alternative options in the different feasibility study options and life cycle cost changes of those options. So we're assuming the options are all the same in both the DD phase because all of those decisions have been made by the DD phase. So that model assumes all those options are the same between the HBAC options.

01:05:00

Melissa Wilfong -IAC-: In the feasibility study phase, we're including a request to provide details on any of the different building systems that impact the life cycle cost of the project in the feasibility study. So it's a very very high level look like if you've got Terzo in an existing building and your replacement is going to have be BCT then identify that in the feasibility study phase as a life cycle cost for the replacement building to continue to maintain and replace the V B VCT every 10 15 years. So it's some high level stuff like that.

Ben Roush: Yeah, but worthwhile to project,...

Ben Roush: when you're going to be a long-term building holder.



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Melissa Wilfong -IAC-: Yes. No,...

Ben Roush: David, I'm reading this on the side. I didn't know this was in statute and we probably have we asked this in the last meeting. what do we work on this year? this might be a thing we work on this year. Melissa, sorry, coming back. do you have a standardized spreadsheet tool, something built out that does your standardized assumptions on escalation and the format you like to see for schools?

Melissa Wilfong -IAC-: we don't prescribe any of those standard assumptions.

Melissa Wilfong -IAC-: We do have a feasibility study cost estimate format that really is sort of the early deciding what the scope of the project's going to be point at which we're asking those details.

Ben Roush: got it. So it's each consultant brings their own life cycle costs in the spreadsheet.

Melissa Wilfong -IAC-: Yeah, they Yes.

Ben Roush: You have a form to do any early feasibility.

Melissa Wilfong -IAC-: Nope. No,...

Ben Roush: I got it.

Melissa Wilfong -IAC-: I mean DGS manual has some requirements for the DD life cycle cost estimate submission. so the expectation is for them to follow the DGS manual on that. but for the feasibility study,...

Melissa Wilfong -IAC-: they're determining their parameters. Excuse me.

Ben Roush: Got it.

Ben Roush: There a possibility we could dictate those in the program. We could say these are your assumed cost of capital escalation rates and again those somewhat predetermine the outcome of they've already said except for small exception lists you can't build a gas fired heated or water heated building you get to keep your gas stoves so yeah that bears I'm thinking on the fly. I'll stop doing that and I will go think in my own time and come back next month for a discussion. all right, Hannah, do you want to put the agenda back up?

Hannah Debelius -DGS-: One moment.

Ben Roush: We moved when we are going to meet in person and it is my fault but I promise to make it up to everybody by bringing ice cream. I will accept flavor requests but I will not promise any flavors. it will be summer fruit season so that'll be great. so we are not meeting in two months. We're meeting July in person. same invite. and we want to talk about meeting schedule at large. we don't have a prescribed we don't have a required meeting schedule. so we can choose to skip months. or we can choose the right frequency is every other month.

Ben Roush: Do folks have an opinion on how often we should be meeting post- legislative season? We will meet next month to talk about what if anything are we charged to get into the program this year. but then



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we could move to every other month format if we care to. Thoughts on that? We will figure out the SK a proposed schedule and...

01:10:00

Marisa Britton: Every other month sounds good.

Ben Roush: adjust the meeting invites accordingly for the rest of the year. any objections? I guess I'm not formally making a motion.

Ben Roush: This doesn't take a motion to change, but in the Robert's rule style, any objections abstentions? Maybe not an abstention. Okay, then I think we move on to the good and welfare. We will do an April meeting just as a recap. we may pull it. We could decide to if nothing that we're tracking gave the green building council anything to do, we can say great, we're all going to take that time back. or it may be a short one. all right, good and welfare. Any announcements?

David St.Jean -DGS-: I've probably mentioned this before, but we have our decarbonization plan for 17.5 million square feet is complete, but then when we went to post it, we found out that there is a new rule about accessibility. So, before we post it, we need to make it accessible, I guess,...

Ben Roush: You mean the formatting of the document needs to be accessible?

David St.Jean -DGS-: ADA compliant or something. I haven't read the actual accessibility rules, but it's now being held out for a little while until we get that complete. Hannah, you probably know more about that than I do.

Hannah Debelius -DGS-: So, it's actually from the federal department of justice that beginning in April for every state, everything that is posted on the web has to follow an ADA regulation for accessibility, which includes things like color contrast, descriptions on pictures and that sort of thing. So, we're hopeful we'll be able to share the executive summary soon directly, but it won't be posted on the website until it meets the accessibility requirements.

Ben Roush: This sounds like it will also impact the program meeting minutes like Eddie said this is a lot that they're going through it too. Yeah.

Hannah Debelius -DGS-: It will impact truly but something like meeting minutes actually I already have switched to it being accessible.

Hannah Debelius -DGS-: But for any other documents and...

David St.Jean -DGS-: It is a lot.

Hannah Debelius -DGS-: we'll probably have to take a look at the high performance screen building program too for any images we have in there. But it's a huge undertaking. that every state everywhere is going and it's retroactive. So, anything that's been posted on a website will either have to be archived or...

Hannah Debelius -DGS-: taken down or updated with this. So, yeah, it's a big undertaking.



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David St.Jean -DGS-: This seems like a good business opportunity for someone...

Ben Roush: who it's past program impacting also now that we've finally got them up.

Hannah Debelius -DGS-: Yes, it's inclusive of everything.

Ben Roush: What you can do in your retirement.

David St.Jean -DGS-: who understands AI to create a program that you can just upload documents to it, formats them and sends them back to you. So, that's a million-dollar idea. Somebody needs to get a hold of it. Yeah. Thank you.

Ben Roush: Good.

David St.Jean -DGS-: Not my gig.

Ben Roush: Anything else for the good and welfare? All right. with that, I'm going to make a motion to adjourn. Will anyone second?

David St.Jean -DGS-: Thank you, ma'am.

Ryan Schwabenbauer: I second.

Ben Roush: Hey, any objections? abstentions would be a weird abstension also. All right, then we'll adjourn and be in touch.

Paul Clary: Thank you.

Ben Roush: Thank you all.

Meeting ended after 01:15:05 🙌

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