

## **ZNC Zoning - Low Carbon Buildings TAG Meeting #1 - November 18, 2020**

**Chat Notes** - as recorded in order of posting:

Shirine:

Are these cities' targets for new construction or do they include adaptive reuse?

John Dalzell:

This is a link to our ZNC Building Zoning webpage Document Center including the DND Guide Book for ZEB: <http://www.bostonplans.org/document-center?program=113>

John Dalzell:

@ Shirine - there are both new construction and existing building carbon targets and policies emerging in municipalities.

Shirine:

Does pathway 3 include embodied carbon?

Chris Schaffner - The Green Engineer, Inc.:

In case you missed it USGBC announced a LEED Zero Energy for design phase.

Lauren Baumann:

Will the focus on an overarching Green Building certification (LEED) be converted to an exclusive carbon focus, or is it in addition to this baseline?

Kate Bubriski:

is the intent to only have one pathway or more than one pathway options for projects to choose from?

Alejandra Menchaca, Thornton Tomasetti (she/her):

Kate - more than one for sure. Potentially all four. Of course, the more pathways, the more we need to focus on make sure they're compatible.

julie klump:

The strength of this path will depend on the actual modeling software for new construction. Rehab projects will have data

Kate Bubriski:

A weakness is that baselines can often be not what we would actually ever build.

John Dalzell:

Thanks Chris - good comment on LEED Zero Energy. It has the potential to better fit municipal permitting processes.

julie klump:  
What about allowing PH as an alternative path.

Colin Schless TT:

Hi Julie- we are considering PH precertification as an acceptable path for #4

00:55:24 julie klump: That is awesome. So much cleaner and actionable than a prescriptive pathway.

Samira A (enviENERGY):

Is there a building area threshold for this pathway?

julie klump:

Modeling is key. So is diagnostic testing and final testing.

Rebecca Hatchadorian Arup:

Have you looked at setting the % reduction on scope 1 emissions only?

Lauren Baumann:

Is that true for new construction? This graph is existing buildings

Alejandra Menchaca, Thornton Tomasetti (she/her):

@Lauren - existing, but this process is looking at trends as well. Which is why we consider that labs, for instance, while not a big emitter to date, we expect them to rise up in terms of overall carbon intensity.

Chris Schaffner - The Green Engineer, Inc.:

This would work well if the target was set as zero!

John Dalzell:

Great commit Chris! Zero is the target; we need to make sure the building efficiency is good.

Vincent Martinez, COO, Architecture 2030 (he/him/his):

Just to note if renewable energy is not considered than a zero emissions target is not possible

Chris Schaffner - The Green Engineer, Inc.:

Unless we expected a lot of cold dark shells

Rebecca Hatchadorian Arup:

that also applies to density of space use will increase the EUI or CUI, e.g. smaller residential units or more occupants/sf in an office

Lauren Baumann:

Does this pathway create potential code conflicts?

John Dalzell:

Thanks Vincent - Low Carbon Buildings are just one of the three elements for achieving ZNC. On-site and Procured Renewable Energy matter!

Peter Zmuidzinas: Yes for small projects

Vincent Martinez, COO, Architecture 2030 (he/him/his):

Yes, very important to have a prescriptive path.

Kristen Fritsch:

Prescriptive Path feels like a back-up path for small projects or projects that don't fall as easily into another path

Chris Schaffner - The Green Engineer, Inc.:

Yes, if you it means you can also comply with code this way. If I have to model anyway, I might as well follow the other paths.

Chris Schaffner - The Green Engineer, Inc.:

Good luck with that - Brookline tried

Vincent Martinez, COO, Architecture 2030 (he/him/his):

Yes. I agree with Shirine's comment

Matthew Fickett:

My main concern as a lab planner is that much of the potential carbon reduction in labs comes from a reduction in quantity, not an improvement of quality, of major carbon uses (e.g. clean rooms or fume hoods). A prescriptive path which mandates high-efficiency but doesn't mandate or reward reduction in use quantity doesn't address this - unless I have missed something about it.

Lauren Baumann:

Be sure to pair any prescriptive requirements around electrification with very high performance building energy load reduction requirements to ensure that there are not adverse impacts around operating cost

Chris Schaffner - The Green Engineer, Inc.:

...and electric demand profile

Norm Lamonde:

YES - I think there should be a prescriptive path option available. I also think there needs to be a focus on connecting the Article 37 for new bldgs. with BEDO. For example: All new building application process should be required to understand what their "exposure" is when considering future BERDO compliance. Just thinking here, If EUI is the measure, should new buildings

have a more stringent EUI requirements day 1 at building completion compared to the EUI for an existing building of the same typology.

Lauren Baumann:

Re: Prescriptive requirements, if this is one pathway where others are available I think it works well. I would not want prescriptive requirements to take away a sophisticated design team's ability to be creative and accommodate unique conditions of large projects.

Chris Schaffner - The Green Engineer, Inc.:

LEED Zero requires overall LEED Cert plus zero energy via renewables. The floor on energy is just the LEED Prereq, which is basically 90.1-2016. So not really a strong efficiency standard.

John Dalzell:

Great points Norm! We need for the projects to understand and interface with BERDO which anticipates utilizing a CEI metric.

Alejandra Menchaca, Thornton Tomasetti (she/her):

Thanks Chris, that has been our impression too.

Chris Schaffner - The Green Engineer, Inc.:

Doesn't PH still favor fossil fuels, since it is based on source energy?

Vincent Martinez, COO, Architecture 2030 (he/him/his):

I agree with Lauren about needing both performance pathways in addition to prescriptive

Norm Lamonde:

Maybe a prescriptive path is only available for building of certain typologies and/or up to a certain SF limit ( ie: smaller buildings )

Colin Schless TT:

Hi Chris- PHIUS 2021 plans to use different source energy factors that focus on future grid emissions. The specific factors aren't finalized yet but the intention is to address this

Rebecca Hatchadorian Arup:

Were Living Building Challenge/ILFI certifications not considered because of the operational aspect? Couldn't you allow it coupled with heavy fines if the Zero Carbon certification isn't achieved. There is precedent for this too.

Chris Schaffner - The Green Engineer, Inc.:

Yes Rebecca - like Somerville

Norm Lamonde:

I think it would be good to take a hypothetical building for a test drive to demonstrate the impacts of the different pathways. May be a good idea but could be a lot of work. However, there will be a lot of questions from the marketplace around this question and may be worthwhile to do.

Chris Schaffner - The Green Engineer, Inc.:

Somerville is using the ILFI Zero Carbon standard. But it has an efficiency loophole - 25% better than 90.1-2010.

Kristen Fritsch:

Agree, that even though ILFI relies on post construction performance, it seems like it should remain an option for 3rd party certifications.

Alejandra Menchaca, Thornton Tomasetti (she/her):

@Norm, we don't see these as necessarily equivalent. We envision "easy" submission pathways as being stricter than pathways that are more intricate. But you're correct that the more pathways the more we need to be very careful of any loopholes

Rebecca Hatchadorian Arup:

Our energy/stretch code will solve the efficiency issue ILFI doesn't solve.

Norm Lamonde:

Great Job everyone and appreciate the collaborative effort by all engaged.

**END**