



## BUILDING PERFORMANCE IMPROVEMENT BOARD MEETING NOTES

December 21, 11 am to 1 pm

In attendance:

Name	In-Person	Virtual	Role
Emily Curley	X		DEP staff liaison
Stan Edwards	X		DEP staff support
Cuiyin Wu	X		DEP staff support
Rhett Tatum	X	X	Member
Daniel Cleverdon	X		Member
Amanda MacVey	X		Member
Andrew Rivas		X	Member
Lawrence Carroll		X	Member
Sheena Oliver	X		Member
Jill Goodrich		X	Member
Luke Lanciano	X		Member
Adam Landsman		X	Member
Mike Dieterich	X		Member
Julie Wolfington		X	Member
Josh McClelland	X		Member, Deputy Chair
Edward Musz			Member
Kevin Walton	X		Member, Chair
Gregory Goldstein		X	Member
Lindsey Shaw	X		Ex officio member (DEP)
Bryan Bomer		X	Ex officio member (DPS)
Dan McHugh	(has retired as of 11/30)		Ex officio member (DHCA)
Michael Yambrach			Ex officio member (DGS)
Henry Jordan		X	Member of the public
Sean Soboloski		X	Member of the public

### Administrative items

Quorum present; meeting notes from 12/7 meeting approved.

## Recap any actions from previous meeting

- At the last meeting on 12/7, the board discussed state BEPS requirements and alignment of County site EUI targets. State BEPS requires:
  - 20% reduction in net-direct GHGs by 2030 (vs 2025 average buildings of similar construction)
  - Net-zero direct GHGs by 2040
  - To-be-determined site EUI targets
- General agreement on at least “some alignment” with state goals such that County EUI targets put buildings on the path to achieve 2040 net-direct GHG emissions

## Site EUI Target setting discussion – focus on Zero Net Carbon Compatible target

Following discussion about alignment with the state BEPS, the board opted to further discuss the Zero Net Carbon Compatible (ZNC) target, as the option from the BEPS Technical Report that is most aligned with spurring net-direct GHG reductions.

DEP presented how ZNC target can lead to a reduction in site EUI through efficiency and electrification, therefore, resulting in the largest direct (scope 1) emission reduction and total carbon reduction as the grid decarbonizes.

Discussion on the ZNC target initially focused on its potential challenges and opportunities. These could be separated in three general areas: technical feasibility, cost and practical considerations.

### Potential challenges

#### Technical Feasibility

- Projections for energy use following implementation of energy efficient upgrades might be different than the real-world experience, potentially not resulting in the expected reductions and therefore miss the ZNC target
- The challenge of what is technically versus economically feasible
- Buildings that are already all-electric but still not meeting the proposed ZNC targets. In the case referenced here, this is a residential building with unitized HVAC systems.

#### Cost

- Multifamily or leased buildings where tenant behavior is often difficult to predict and control and there is no payback to the owner for efficiency upgrades when tenants pay utility bills.
- Buildings where HVAC equipment has been replaced recently, making electrification or replacement technically and economically unlikely.
- Completing energy audits with estimated pricing that doesn't reflect actual costs once the projects are bid. Often actual costs are higher than predicted in audit reports, especially right now with workforce and supply chain constraints.
- Project economics for smaller buildings.
- The additional costs that may be needed to upgrade electrical systems to support additional electric equipment in a building.

#### Practical considerations

- Situations where equipment fails and a replacement is needed to immediately provide heating/cooling/hot water/etc to tenants. Ideally this would be a key time to look to electrify, but many buildings could require additional electric capacity, which can take significant lead time.
- The difference between the costs to reach a ZNC target and the penalty amounts – both at the state and local level. If it is cheaper to pay a penalty, owners may opt to pay a penalty rather than invest in their buildings. Similarly, other owners may simply choose to divest of their assets rather than invest in upgrades.
- Some efficiency projects – electrical upgrades, HVAC replacements, window replacements, etc – can be very disruptive to tenants, and for condos moving people out of the building is not an option.

### **Potential Opportunities:**

#### Technical Feasibility

- Using new ways to address building envelope efficiency in more cost-effective ways.
- Installing additional controls in tenant spaces, like smart thermostats.
- Use of energy models and energy audits that can uncover both capital projects as well as operations and maintenance measures.
- More advanced technology to collect occupancy data and modeling, though cost, access to a service provider, and owner willingness are factors that will greatly impact feasibility.
- Heat pump technology is continuing to advance rapidly and becoming more efficient.
- Energy efficiency can make electrification more affordable. Efficiency can help free up electrical capacity and may allow owners to avoid electrical upgrades.

#### Cost

- Many cost and payback estimates are based on current rates, but gas prices are expected to rise in the future.
- When building owners save energy, they also save money. Many buildings have huge opportunities in energy efficiency that can be bundled with more expensive projects to create an overall more cost-effective package of measures.

#### Practical Considerations

- HVAC equipment can have a 20-to-30-year lifespan and if building owners are not required to consider efficiency and environmental impact, they will lock the system in use for another generation. Not requiring an upgrade now will just kick the can down the road.
- Though sometimes disruptive, efficiency projects can provide real benefits to tenants, both from reduced utility bills and from improved comfort and reliability.
- The BPIP is designed to deal with unique challenges for individual buildings.

### **Electrification and Site EUI**

DEP reviewed how electrification results in one of the largest ways to reduce site EUI as electric equipment operate at higher efficiency.

- A member noted that price of gas per kBtu is much lower than the price of electric per kBtu.
- As a counterpoint, another member noted that long-term, electric equipment is more cost effective in many cases as electric equipment uses fewer kBtus than gas equipment, gas prices

have and are expected to rise significantly in the coming years, and heat pump technology continues to improve.

- Members discussed that site EUI target should be ambitious yet achievable considering current technology with hopes for technology improvement
- Targets should be designed to promote the avoidance of replacement with electric resistance heat.

#### Action Items

- Members asked to look at the current site EUI of a sample of buildings in the county, for instance DEP's headquarters and other, newer buildings to see how close they are to the ZNC target.
- Members asked to see if there is any alignment of LEED ratings with ZNC target compliance
- A member asked for more information on the definition of "technically feasible" – who made that determination and how was it done?
- Once the BPIB agrees to a methodology for determining site EUI, DEP will calculate targets and share with the board.

For additional information, please visit the Building Energy Performance Standards website at <https://www.montgomerycountymd.gov/green/energy/beps.html> or contact DEP at [energy@montgomerycountymd.gov](mailto:energy@montgomerycountymd.gov).