



CITY OF
BAINBRIDGE ISLAND

**Green Building Task Force
Regularly Scheduled Meeting
Tuesday, August 18, 2020
3:00 – 5:00 PM
Online meeting via Zoom**

The Green Building Task Force (GBTF) will hold this meeting using a virtual, Zoom webinar platform, per Governor Inslee's "Stay Home, Stay Healthy" orders.

Members of the public will be able to call in to the Zoom meeting.
Please click the link below to join the webinar: <https://bainbridgewa.zoom.us/j/96334207203>

Or iPhone one-tap : US: +12532158782,,96334207203# or +16699009128,,96334207203#

Or Telephone: Dial(for higher quality, dial a number based on your current location):
US: +1 253 215 8782 or +1 669 900 9128 or +1 346 248 7799 or +1 301 715 8592 or +1 312
626 6799 or +1 646 558 8656

Webinar ID: 963 3420 7203
International numbers available: <https://bainbridgewa.zoom.us/j/96334207203>

AGENDA

- | | |
|---------|---|
| 3:00 PM | Call to Order (Attendance, Agenda, Ethics)
Disclosure of Potential Conflicts of Interest
Review & Adoption of Minutes: August 4, 2020 |
| 3:10 PM | Finalize Road Map & First Steps |
| 5:00 PM | Adjourn |

**For special accommodations, please contact Planning & Community Development
206-780-3750 or at pcd@bainbridgewa.gov**

Green Building Task Force
Disclosure of Potential Conflicts of Interests

Updated July 2020

*To be read at the beginning of **each** meeting.*

As an initial note for the record, this Green Building Task Force consists of individuals with specific professional expertise in green building programs.

Members of the Task Force have provided, or will soon provide, the City with “Conflict of Interest Statements” that will be available via the Task Force’s webpage.

In the interests of full disclosure and transparency, we will begin this meeting by asking each member of the Task Force to disclose whether they, or a member of their immediate family, have any direct or indirect contractual employment, financial or private interests, or other potential conflicts of interest in, or related to, any of the green building programs or other agenda items scheduled to be discussed at today’s meeting.

[Each Task Force member must verbally state their disclosure(s)]

Having heard the disclosure(s) of your colleagues, are there any objections to the members of the Task Force in attendance proceeding with the agenda for today’s meeting?

[Pause for objections]

[If no objection] Hearing no objection, by unanimous consent all members of the Task Force in attendance will fully participate in today’s agenda.

[If objection, the members should discuss their concerns. Individual members could agree to recuse themselves from discussion of specific agenda items, as may be warranted.] Having discussed the objection(s) raised, all those in favor of proceeding in the manner discussed please signify by saying “aye.” All those opposed?

Call to Order (Attendance, Agenda, Ethics)
Review Minutes – July 21, 2020
Refine Road Map & First Steps
Assess Feasibility of Completing Phase 1 as Scheduled
Next Steps & Homework
Adjourn

Call to Order (Attendance, Agenda, Ethics)

Senior Planner Peter Best called the meeting to order at 3:08 PM. Task Force members in attendance were Kathleen O'Brien, Kathleen Smith, Richard Perlot, Julie Kriegh, Jason Wilkinson, Russ Hamlet and Marty Sievertson. Jonathan Davis was absent and excused. City Council Liaison Joe Deets and Michael Pollock were present. City Staff present were Building Inspector Blake Holmes and Administrative Specialist Marlene Schubert who monitored the remote meeting and prepared minutes.

The agenda was reviewed and approved.

Disclosure of Potential Conflicts of Interest – Read aloud by Senior Planner Peter Best

Review and Adoption of Minutes – July 21, 2020

Motion: I move to adopt the minutes as presented.

Smith/Sievertson: Passed Unanimously

Refine Road Map & First Steps

Discussion only

Assess Feasibility of Completing Phase 1 as Scheduled

Discuss Next Steps & Homework

Discussion only

Adjourn

The meeting was adjourned at 5:05 PM.

8/4/2020 Green Building Task Force Meeting

Ambitious Schedule

Today: Refine ideas for “Road Map” and interim “First Steps”

- Feasibility report for City Council update tonight

8/18: Finalize recommendations for “Road Map” and interim “First Steps”

Interim Objective

Recommend an interim “off the shelf” green building program (or components of a program) to be implemented by October [3], 2020 (before the current development moratorium expires) to help with the City’s greenhouse gas (GHG) emission reduction goals while a full Bainbridge Island program is developed.

Cannot include: Amendments to Comp Plan or BIMC Title 2, 16, 17, 18

Consider how this interim program will build into a full program.

Plan for Recommending Interim GB Program (7/21/2020)

Next Steps

- Refine ideas for “Road Map” and interim “First Steps”

Homework for Next Meeting

- Julie – Share: DOE study, World Building Council for Sustainable Development framework
- Kathleen O. – BuiltGreen mandatory implementation examples
- Blake – IGBC summary
- Peter – Code collaborative model codes
- TF Members
 - Review materials from the above homework
 - Independently review road map and come to next meeting with your idea of a highly refined version
 - Independently apply review criteria to initial ideas and come to next meeting with refinement ideas

Preliminary "Road Map"

Phase 1 (Interim by Oct)	Phase 2 (Oct - ?)	Phase 3?
<ul style="list-style-type: none"> Principles (e.g. City of Shoreline) <ul style="list-style-type: none"> Lead by example Optimize materials/emissions Wholistic approach/mutual benefits (people, environment, & economy) Future ready (e.g. solar, EV, internet-based system controls/smart grid, battery storage, etc) Equity/Justice 		
<p>Role of GB in GHG reduction</p> <ul style="list-style-type: none"> Conservation/reduce demand Solar ready/local production Reduce peak demand? <p>Theme: "Carbon reduction"</p> <p>Baseline mandatory programs?</p> <ul style="list-style-type: none"> Operational carbon? Embodied carbon (e.g. concrete – Marin County)? Covers all building types? Offer choices (off the shelf)? All electric (no gas)? – new/remodel? 	<p>Theme: "Carbon neutral"</p> <p>Community/Stakeholder/Industry engagement</p> <p>Economics & incentives</p> <p>Program evaluation process</p> <p>Site</p> <p>Building</p> <ul style="list-style-type: none"> Baseline requirements for SFR and MF (4 units of less) Scaled level of performance to building size/type/other? More ambitious/stretch programs Measure performance 	<p>Theme: "Carbon Storage"</p> <p>Adaptive Management: Next steps based on program performance</p> <p>Others: Community Solar ?</p> <ul style="list-style-type: none"> GBTF: Roofs should be solar ready (roof design, solar access/orientation) <p>Others: Microgrid ?</p> <p>Others: High Speed Internet Access</p>

Preliminary Interim "First Steps"

Initial Ideas →	Evaluation Criteria/Considerations	→ Phase 1 Ideas to Refine
<ul style="list-style-type: none"> • BuiltGreen King/Snohomish (5-star?) • LEED (non-residential = gold+?) <ul style="list-style-type: none"> • State funding nexus = Silver • Living building challenge (core GB program, net zero?) • Passive house principles • Incentives (expedited permitting, permit fees, performance-based grants, PSE grant for >3-star)? <ul style="list-style-type: none"> • Some incentive programs set baseline on existing code • Incentives change/phase out over time • Size & scale • Seattle Code? 	<ul style="list-style-type: none"> • Ongoing support to keep standards up to date • Benefit more than just buildings • Education & tools to support education, evaluation, and decision making • Barriers <ul style="list-style-type: none"> • Ease of use; industry learning curve; burden of certification/documentation (should certification be required?) • Performance (when=at least 1 year after occupancy?) • Equity <ul style="list-style-type: none"> • impact on affordable housing (size versus certification level) • Applicability thresholds 	<ul style="list-style-type: none"> • → Phase 1 Ideas to Refine • (Jason, K.Smith, Marty) Baseline Programs <ul style="list-style-type: none"> • Make IgCC mandatory (currently voluntary in COBI) • Built Green (5 star, SFR/MF) • Core GB Certification Program (SFR, MF, MU) • Optional <ul style="list-style-type: none"> • Passive House • LEED (Platinum for commercial, institutional) • Public projects <ul style="list-style-type: none"> • Retroactive to Police/Court? • King County Green Building Ordinance (requires alternatives analysis w/ LEED Platinum as baseline) • (Julie, K.O'Brien) Net zero operational carbon offsets • Embodied carbon (buy your way into carbon reduction) <ul style="list-style-type: none"> • Concrete code (Marin County) • Use EC3 tool: pick top 3 to reduce & offset remaining top 3 items (related: Buy Clean WA and others on embodied carbon forum) • (Richard, Russ) Solar and EV ready <ul style="list-style-type: none"> • V2G = elec. vehicle to grid • Ban combustible fuel sources in new construction (phase out in renovations) <ul style="list-style-type: none"> • Exceptions: Wood stoves and generators for emergency use • Issues: Elderly and health limitations may make wood a challenging backup heat source

Plan for Recommending Interim GB Program (8/4/2020)

Draft Next Steps

Homework for Next Meeting

- Jason: Share King County Green Building Ordinance
- Blake: Amendments to building code limits (just energy code or all SFR areas?)
- Carbon group: Research concrete suppliers with low embodied carbon concrete

Peter Best

From: Kathleen O'Brien
Sent: Thursday, August 13, 2020 5:44 PM
To: Peter Best
Subject: Program Wide Considerations

Peter,

I sent this previously, but realized it may be lost in the thread of emails, as I was also responding regarding the carbon calculations approach. I want to make sure you see this and get it out to the group as it reflects the considerations I will be bringing to the Task Force's final meeting prior to the Council deliberation. I want to make clear that I very much support the Task Force's general thrust, but have serious concerns. I have had a significant role in developing the green building programs and concepts that are now under consideration, and offer my comments from a place of wanting this initiative to succeed.

Here it is:

I appreciate the need for working on subtopics in subcommittees, but there are some topics that really cross the board... and I'll note my thoughts about them here. (In a couple of cases I am repeating what I verbally offered during our last meeting, but since we are not recording those meetings, I wanted to memorialize those here.)

To wit:

1. Size Matters. If we can incentivize building smaller homes, we can significantly reduce all of the resources used to build, operate, and maintain those homes. I do believe all of the programs we identified incentivize size/scale reduction...but I think this is important enough to be called out and rewarded with some of the incentives I mentioned in my first memo on the Built Green Program. In addition to the super-sized new homes that we've been seeing, I'm wondering if we can reduce the tendency when "remodeling" to double the size of the existing home! Can we "reward" efficient and smart-scaled buildings?
2. It's not about being strict, it's about being effective. Whatever we end up with, we are asking businesses and citizens (prospective and current) to change their behavior. Behavioral science tells us that this doesn't "just happen" because someone says it's the right thing to do -- even if that someone is highly respected or has the weight of the law behind them. It has to be right for the person who is being asked to change. They have to believe a) the benefits outweigh the downsides; b) the "ask" is for something they can achieve successfully, and c) the result is in line with their values and identity. Education, advocacy, and incentives (carrot/stick) should be a part of any ordinance asking for a major change in behavior. Because I believe that knowledgeable third-party certification should be part of any green building program requirement, financial incentives should be offered to defray the cost of certification, especially for lower-cost housing and non-profit building projects.
3. Allow for growth and innovation. Can we modulate the level in the program requirement to the climate change goal? In other words, if Built Green 3-star (for residential buildings) achieves the climate change/energy reduction, etc. we are hoping for initially, (for residential buildings) can we set the bar there for now with updates tuned to the carbon reduction the City's Climate Plan is asking for in the future? A similar approach can be made for non-residential buildings with appropriate green building standards. By setting the bar lower than the ultimate goal, we give some room for growth and innovation in recognition of the actual way the construction industry operates. In my experience, competitive and respected builders respond to requirements by seeing if they can do a little bit better, *if they are incentivized to do so*. By setting the bar at the highest point, we set a ceiling, rather than the floor. (This was exactly what happened when the residential energy code was

created in 1991. Instead of using the performance and/or systems paths, most builders used the prescriptive path, calculating how much energy loss (in particular from glazing) they could allow and still "pass" the code. As far as I recall, there was no incentive to use the more complicated pathways, which required calculations, etc.)

4. Finally, because the council is deferring the public participation element of this effort, we could be jeopardizing the buy-in we so badly need if this will be truly successful. (See #2, and #3) We are skipping some very important steps. Most (if not all) of the municipal programs referenced in our Task Force conversations had the virtue of having used education, advocacy, incentives (to volunteer) to get where they are today. All of the green building programs we are referencing stand on the shoulders of earlier renditions. The municipal efforts referenced, unfortunately, are just further along than COBI. (This is not to say there has been no efforts to educate. I facilitated sustainable building education associated with COBI's City Hall, as well as with school district buildings.) I therefore reaffirm my suggestion to make the already COBI-approved and voluntary International Green Building Code a requirement; to specifically require the City to use it on its own building (in particular the police station), and to create incentives, deliver education in collaboration with the design and construction industry, and advocate publicly for *goals set through the public participation process*. In general, I think what the Task Force was designing for the Interim Ordinance, would be a great start for longer-term legislation, but I would like to see it vetted through the normal civic process.

Kathleen O'Brien

→ Phase 1 Ideas to Refine

- (Jason, K.Smith, Marty) Baseline Programs
 - ~~Make IgCC mandatory (currently voluntary in COBI)~~
 - Does not appear to be adopted in any locality [link](#)
 - Recommend this is not adopted for the interim requirements
 - We are not experts – need to do more research
 - Would the City provide project review and enforcement? Or would there be a third-party permit reviewer? Path for self review?
 - Built Green (4 star)
 - Applies to ADUs of any size and remodels and additions under 1,500 SF
 - Built Green (5 star)
 - Applies to new SFR up to 4,000 SF, MF for 4 units or less, Subdivisions of 4 units or less, remodels and additions over 1,500 SF
 - Meaningful for the developer (52% of new homes in Seattle)
 - Optional pathways (instead of Built Green 5 Star):
 - Passive House
 - Zero Energy Certification
 - LEED for Homes Platinum
 - Core GB Certification Program (SFR +4,000 SF, MF and Subdivisions of 5 units or more, MU and commercial)
 - Optional LEED (Platinum for commercial, institutional)
- Public projects
 - Retroactive to Police/Court – yes – city needs to lead by example
 - Green Building Task Force to do an evaluation? Recommend opening it up to a public process
 - City Buildings or city funded buildings (municipal commitment)
 - Core Green Building Certification for all new construction and all renovation projects (above \$x or Xsf)
 - Zero Carbon for all city buildings existing, new construction and all renovation projects (above \$x or x SF)
 - Commit to doing at least one Living Building
 - Example program: King County Green Building Ordinance (requires alternatives analysis w/ LEED Platinum as baseline, evaluate Zero Energy, CORE and LBC Petal and Full)
- Shoreline Study comparing different levels of certification: <http://www.shorelinewa.gov/home/showdocument?id=39438>

Expand Green Building - Attach. A - Comparative Analysis of LEED, Built Green, & Passive House

Protocol Comparison: Climate, Ecology & Health

One Star (★) if protocol does not go beyond code requirements. Maximum five stars (★★★★★) awarded if protocol provides opportunity to greatly exceed code or typical practices. Note: The sample building used in this study may not take advantage of all opportunities to incorporate these comprehensive environmental benefits, based on credits selected to achieve certification threshold.

Benefit	Code Compliance	LEED for Homes Gold	Built Green 4-Star	Passive House
Land Management (Preservation of land)	★	★★	★★★	★
Energy (CO ₂ emissions reduction)	★	★ 0-10% CO ₂ emissions reduced / year	★★★ 75-85% CO ₂ emissions reduced / year	★★★★★ 85-95% CO ₂ emissions reduced / year
Water (Potable water reduction)	★	★★ 1.55 million gallons reduced / year	★★★ 2.08 million gallons reduced / year	★
Transportation (CO ₂ reduction)	★	★★	★★★	★
Habitat (Developing sites that support ecosystems)	★	★	★	★
Building Materials (Improve indoor air quality & reduce exposure to toxins)	★	★★★★	★★★	★★
Building Materials (Local & recycled)	★	★★★★★	★★★	★
Equity & Inclusion (Ensure all are welcome & have a voice)	★	★★	★★	★
Health & Wellness (Physical & mental health)	★	★★	★★★	★★
Food Access (Access to healthy food)	-	-	-	-
Operations & Maintenance (Education & stewardship)	★	★★	★★	★
Emergency & Disaster Preparation (Resilience)	★	★	★	★
Aesthetic (Beauty)	★	★	★	★

<http://www.shorelinewa.gov/home/showdocument?id=39438>

Peter Best

From: Peter Best
Sent: Thursday, July 23, 2020 12:09 PM
To: Peter Best
Cc: Joe Deets; Michael Pollock; Heather Wright (hwright@bainbridgewa.gov); Blake Holmes; Carla Lundgren
Subject: GBTF: Info Email #1

GBTF Members:

This is the first of likely several messages from me this week and next as I will be receiving and distributing information related to our homework assignments and other relevant information or questions in advance of our next meeting on 8/4. I will be numbering these emails for ease of material management and reference. I will also BCCing GBTF members in these emails to avoid accidentally starting an email discussion through "reply all" emails in violation of the OPMA. GBTF members and staff who wish to share information with the GBTF should send it to me for redistribution.

The following webpage from the Municipal Research and Services Center (MRSC) may provide useful resources for our work.

<http://mrsc.org/Home/Explore-Topics/Planning/Development-Types-and-Land-Uses/Green-Communities-and-Building-Design.aspx>

From that MRSC webpage, I found the following [2011 study comparing the cost of standard vs. green buildings in the City of Seattle](#). This only studied 4-7 floor buildings, so it is not directly applicable to COBI. I was wondering if any GBTF member was aware of other studies regarding cost that would be more applicable to COBI and the types of programs the GBTF is considering. In particular, I am interested in knowing if there is good studies to inform our discussion comparing building size with carbon footprint and cost.

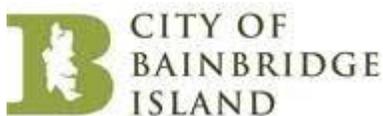
Some other resources related to discussion topics during our last meeting include:

- [State requirements](#) for public facility projects funded in the state capital budget.
- [Evergreen Sustainable Development Standards](#) for projects funded by the State Housing Trust Fund

Sincerely,

Peter Best, MMA
Senior Planner
o.206.780.3719 | c.206.498.4126
pbest@bainbridgewa.gov

 [Contact me on Teams](#)



Due to the City's COVID-19 response, the Planning and Community Development Department (PCD) has modified its operations. Please see the PCD webpage (<https://www.bainbridgewa.gov/154/Planning-Community-Development>) for current information.

Peter Best

From: Peter Best
Sent: Monday, August 3, 2020 9:37 AM
To: Peter Best
Cc: Julie Kriegh; Joe Deets; Michael Pollock; Heather Wright (hwright@bainbridgewa.gov); Blake Holmes; Carla Lundgren
Subject: GBTF: Info Email #2

GBTF Members:

Please see the information below from Julie Kriegh.

Sincerely,

Peter Best, MMA
Senior Planner
o.206.780.3719 | c.206.498.4126
pbest@bainbridgewa.gov

 [Contact me on Teams](#)



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From: Julie Kriegh <julie@kriegharchitects.com>
Sent: Sunday, August 2, 2020 11:19 AM
To: Peter Best <pbest@bainbridgewa.gov>
Cc: Julie Kriegh <julie@kriegharchitects.com>; Julie Kriegh <julie.kriegh@cobicommittee.email>
Subject: Re: GBTF: Info Email #1

CAUTION: This email originated from outside the City of Bainbridge Island organization. DO NOT click links or open attachments unless you recognize the sender and know the content is safe.

Hi Peter-

Here are the organizations that are leaders in the low carbon world.

- C40 Clean Construction Forum, supporting cities globally in the transition to resource-efficient, zero-emission construction, <https://www.c40.org/networks/clean-construction-forum>
- Carbon Neutral Cities Alliance, a collaboration of leading global cities working to cut greenhouse gas emissions, <https://carbonneutralcities.org/>

- World Green Building Council and its “Net Zero Carbon Buildings Commitment” challenging companies, cities, states and regions to be net zero in embodied carbon by 2050, <https://www.worldgbc.org/>
- World Business Council for Sustainable Development and its “Building System Carbon Framework”, <https://www.wbcd.org/>
- Global Alliance for Buildings and Construction – UN Environmental Programme, <https://globalabc.org/>
- Carbon Leadership Forum- University of Washington, <http://carbonleadershipforum.org/>

Please distribute to the group.

Thank you,

Julie

Dr. Julia Ann Kriegh, AIA, Research Scientist
Certified Passive House Designer, LEED AP

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Peter Best

From: Peter Best
Sent: Tuesday, August 4, 2020 2:32 PM
To: Peter Best
Cc: Joe Deets; Michael Pollock; Heather Wright (hwright@bainbridgewa.gov); Blake Holmes; Carla Lundgren; Julie Kriegh
Subject: GBTF: Info Email #3

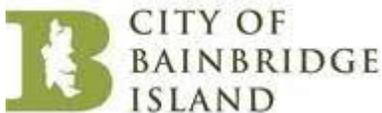
GBTF Members:

Distributing additional information below from Julie Kriegh.

Sincerely,

Peter Best, MMA
Senior Planner
o.206.780.3719 | c.206.498.4126
pbest@bainbridgewa.gov

 [Contact me on Teams](#)



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From: Julie Kriegh <julie@kriegharchitects.com>
Sent: Tuesday, August 4, 2020 2:24 PM
To: Peter Best <pbest@bainbridgewa.gov>
Cc: Julie Kriegh <julie@kriegharchitects.com>; Julie Kriegh <julie.kriegh@cobicommittee.email>
Subject: Re: GBTF: Info Email #1

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AND two more-

<https://www.buildingtransparency.org/en/materialscan/>

<https://architecture2030.org/>

Dr. Julia Ann Kriegh, AIA, Research Scientist

Certified Passive House Designer, LEED AP

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On Aug 4, 2020, at 2:19 PM, Julie Kriegh <julie@kriegharchitects.com> wrote:

Hi Peter,

Here are some resources that may address some of your questions below:

1. University of Washington has an operational carbon footprint calculator program that has been developed by Professor Jan Whittington in the Department of Urban Design and Planning. She may have other papers, this is one that I found. She may be willing to come zoom talk to the group.

Climate-informed decisions: the capital investment plan as a mechanism for lowering carbon emissions

J Whittington, C Lynch

World Bank Policy Research Working Paper, 34

2. University of Washington has an embodied carbon benchmark calculator program (EC3 tool) that has been developed by Professor Kate Simonen in the Department of Architecture <http://carbonleadershipforum.org/projects/embodied-carbon-benchmark-study-data-visualization/>. She may be willing to come zoom talk to the group.

Here is the website for Buy Clean Washington. <http://carbonleadershipforum.org/projects/buy-clean-washington-study/>

3. You can see in this report that in addition to this paper, there are past white papers / reports that might be useful.

<Building-System-Carbon-Framework.pdf>

Thanks

Julie

Dr. Julia Ann Kriegh, AIA, Research Scientist

Certified Passive House Designer, LEED AP

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jak33@uw.edu

Peter Best

From: Peter Best
Sent: Wednesday, August 5, 2020 12:43 PM
To: Peter Best
Cc: Joe Deets; Michael Pollock; Heather Wright; Blake Holmes; Carla Lundgren; Julie Kriegh
Subject: GBTF: Info Email #4
Attachments: Berkeley Energy Reach Code for Electrification and Natural Gas Prohibition 9-27-19.pdf; 2019-07-23 Item C Prohibiting Natural Gas Infrastructure.pdf

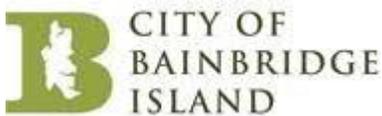
GBTF Members:

Sharing information from Jason for Russ and Richard - but also sharing with everyone.

Sincerely,

Peter Best, MMA
Senior Planner
o.206.780.3719 | c.206.498.4126
pbest@bainbridgewa.gov

 [Contact me on Teams](#)



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From: Jason Wilkinson <jason.wilkinson@cobicommittee.email>
Sent: Tuesday, August 4, 2020 5:32 PM
To: Peter Best <pbest@bainbridgewa.gov>
Subject: For Russ and Richard - Cities with electrication / combustion bans

Hi Peter,

Thanks for passing this along to the group.

There are 32 total California cities with natural gas bans, or transitions requirements to all electric buildings listed here:

<https://www.sierraclub.org/articles/2020/07/californias-cities-lead-way-gas-free-future>



California's Cities Lead the Way to a Gas-Free Future | Sierra Club

Cities and counties in California serve as the North Star as the state navigates a transition from gas to clean-energy buildings. Motivated by the climate crisis, worsening air pollution, escalating gas rates, and safety risks from gas, a new cohort of local government leaders is emerging in California. Over 50 cities and counties across the state are considering policies to

www.sierraclub.org

Below are some links to the reach codes for some of these cities:

Berkeley, CA [link](#)

Berkeley Passes Nation's 1st All-Electric Building Ordinance

In a first for California and the nation, the Berkeley, CA, City Council passed a historic ordinance last night requiring that new buildings be built all-electric beginning Jan. 1, 2020. This new law means no gas hook-ups will be installed in new houses, apartments, and commercial buildings. Existing buildings are not affected.

Menlo Park, CA [link](#)

The City of Menlo Park adopted groundbreaking local amendments to the State Building Code that would require electricity as the only fuel source for new buildings (not natural gas). This ordinance only applies to newly constructed buildings from the ground up, and does not include additions or remodels.

Morgan Hill, CA, [link](#)

Introduce Ordinance Adding Chapter 15.63 (Prohibition of Natural Gas Infrastructure in New Buildings) to the Morgan Hill Municipal Code Reducing Climate Impacts by Requiring New Buildings to Be All-Electric

San Jose, CA [link](#)

In September 2019, San José City Council approved a building reach code ordinance that encourages building electrification and energy efficiency, requires solar-readiness on nonresidential buildings, and requires electric vehicle (EV)-readiness and EV equipment installation.

ORDINANCE NO. 7,672–N.S.

ADDING A NEW CHAPTER 12.80 TO THE BERKELEY MUNICIPAL CODE PROHIBITING NATURAL GAS INFRASTRUCTURE IN NEW BUILDINGS EFFECTIVE JANUARY 1, 2020

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Chapter 12.80 of the Berkeley Municipal Code is added to read as follows:

Chapter 12.80

PROHIBITION OF NATURAL GAS INFRASTRUCTURE IN NEW BUILDINGS

Sections:

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12.80.010 Findings and Purpose.

In addition to the findings set forth in Resolution No. 67,736-N.S., the Council finds and expressly declares as follows:

- A. Scientific evidence has established that natural gas combustion, procurement and transportation produce significant greenhouse gas emissions that contribute to global warming and climate change.
- B. The following addition to the Berkeley Municipal Code is reasonably necessary because of local climatic, geologic and topographical conditions as listed below:
 - (1) As a coastal city located on the San Francisco Bay, Berkeley is vulnerable to sea level rise, and human activities releasing greenhouse gases into the atmosphere cause increases in worldwide average temperature, which contribute to melting of glaciers and thermal expansion of ocean water—resulting in rising sea levels.
 - (2) Berkeley is already experiencing the repercussions of excessive greenhouse gas emissions as rising sea levels threaten the City’s shoreline and infrastructure, have caused significant erosion, have increased impacts to infrastructure during extreme tides, and have caused the City to expend funds to modify the sewer system.
 - (3) Berkeley is situated along a wildland-urban interface and is extremely vulnerable to wildfires and firestorms, and human activities releasing greenhouse gases into the atmosphere cause increases in worldwide average temperature, drought conditions, vegetative fuel, and length of fire seasons.
 - (4) Structures in Berkeley are located along or near the Hayward fault, which is likely to produce a large earthquake in the Bay Area.
- C. The following addition to the Berkeley Municipal Code is also reasonably necessary because of health and safety concerns as Berkeley residents suffer from asthma and other health conditions associated with poor indoor and outdoor air quality exacerbated by the combustion of natural gas.
- D. The people of Berkeley, as codified through Measure G (Resolution No. 63,518-N.S.), the City of Berkeley Climate Action Plan (Resolution No. 64,480-N.S.), and Berkeley Climate Emergency Declaration (Resolution No. 68,486-N.S.) all recognize that rapid, far-reaching and unprecedented changes in all aspects of society are required to limit global warming and the resulting environmental threat posed by climate change, including the prompt phasing out of natural gas as a fuel for heating and cooling infrastructure in new buildings.
- E. Substitute electric heating and cooling infrastructure in new buildings fueled by less greenhouse gas intensive electricity is linked to significantly lower greenhouse gas emissions and is cost competitive because of the cost savings associated with all-electric designs that avoid new gas infrastructure.
- F. All-electric building design benefits the health, welfare, and resiliency of Berkeley and its residents.
- G. The most cost-effective time to integrate electrical infrastructure is in the design phase of a building project because building systems and spaces can be designed to optimize the performance of electrical systems and the project can take full advantage of avoided costs and space requirements from the elimination of natural gas piping and venting for combustion air safety.

- H. It is the intent of the council to eliminate obsolete natural gas infrastructure and associated greenhouse gas emissions in new buildings where all-electric infrastructure can be most practicably integrated, thereby reducing the environmental and health hazards produced by the consumption and transportation of natural gas.

12.80.020 Applicability.

- A. The requirements of this Chapter shall apply to Use Permit or Zoning Certificate applications submitted on or after the effective date of this Chapter for all Newly Constructed Buildings proposed to be located in whole or in part within the City.
- B. The requirements of this Chapter shall not apply to the use of portable propane appliances for outdoor cooking and heating.
- C. This chapter shall in no way be construed as amending California Energy Code requirements under California Code of Regulations, Title 24, Part 6, nor as requiring the use or installation of any specific appliance or system as a condition of approval.
- D. The requirements of this Chapter shall be incorporated into conditions of approval for Use Permits or Zoning Certificates under BMC Chapter 23.B.

12.80.030 Definitions.

- A. "Applicant" shall mean an applicant for a Use Permit or Zoning Certification under Chapter 23B,
- B. "Energy Code" shall mean the California Energy Code as amended and adopted in BMC Chapter 19.36.
- C. "Greenhouse Gas Emissions" mean gases that trap heat in the atmosphere.
- D. "Natural Gas" shall have the same meaning as "Fuel Gas" as defined in California Plumbing Code and Mechanical Code.
- E. "Natural Gas Infrastructure" shall be defined as fuel gas piping, other than service pipe, in or in connection with a building, structure or within the property lines of premises, extending from the point of delivery at the gas meter as specified in the California Mechanical Code and Plumbing Code.
- F. "Newly Constructed Building" shall be defined as a building that has never before been used or occupied for any purpose.
- G. "Use Permit" shall have the same meaning as specified in Chapter 23B.32.
- H. "Zoning Certificate" shall have the same meaning as specified in Chapter 23B.20.

12.80.040 Prohibited Natural Gas Infrastructure in Newly Constructed Buildings.

- A. Natural Gas Infrastructure shall be prohibited in Newly Constructed Buildings.
 - 1. Exception: Natural Gas Infrastructure may be permitted in a Newly Constructed Building if the Applicant establishes that it is not physically feasible to construct the building without Natural Gas Infrastructure. For purposes of this exception, "physically feasible" to construct the building means either an all-electric prescriptive compliance approach is available for the building under the Energy Code or the building is able to achieve the performance compliance standards under the Energy Code using commercially available technology and an approved calculation method.

- B. To the extent that Natural Gas Infrastructure is permitted, it shall be permitted to extend to any system, device, or appliance within a building for which an equivalent all-electric system or design is not available.
- C. Newly Constructed Buildings shall nonetheless be required at a minimum to have sufficient electric capacity, wiring and conduit to facilitate future full building electrification.
- D. The requirements of this section shall be deemed objective planning standards under Government Code section 65913.4 and objective development standards under Government Code section 65589.5.

12.80.050 Public Interest Exemption.

- A. Notwithstanding the requirements of this Chapter and the Greenhouse Gas Emissions and other public health and safety hazards associated with Natural Gas Infrastructure, minimally necessary and specifically tailored Natural Gas Infrastructure may be allowed in a Newly Constructed Building provided that the entitling body establishes that the use serves the public interest. In determining whether the construction of Natural Gas Infrastructure is in the public interest, the City may consider:
 - 1. The availability of alternative technologies or systems that do not use natural gas;
 - 2. Any other impacts that the decision to allow Natural Gas Infrastructure may have on the health, safety, or welfare of the public.
- B. If the installation of Natural Gas Infrastructure is granted under a public interest exemption, the Newly Constructed Buildings shall nonetheless be required at the minimum to have sufficient electric capacity, wiring and conduit to facilitate future full building electrification.

12.80.060 Periodic Review of Ordinance.

The City shall review the requirements of this ordinance every 18 months for consistency with the California Energy Code and the Energy Commission's mid-cycle amendments and triennial code adoption cycle as applicable.

12.80.070 Severability.

If any word, phrase, sentence, part, section, subsection, or other portion of this Chapter, or any application thereof to any person or circumstance is declared void, unconstitutional, or invalid for any reason, then such word, phrase, sentence, part, section, subsection, or other portion, or the prescribed application thereof, shall be severable, and the remaining provisions of this Chapter, and all applications thereof, not having been declared void, unconstitutional or invalid, shall remain in full force and effect. The City Council hereby declares that it would have passed this title, and each section, subsection, sentence, clause and phrase of this Chapter, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases is declared invalid or unconstitutional.

12.80.080 Effective Date.

The provisions of this chapter shall become effective on January 1, 2020.

Section 2. This Ordinance shall be submitted to the California Building Standards Commission following adoption as consistent with state law.

Section 3. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

At a regular meeting of the Council of the City of Berkeley held on July 16, 2019, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Bartlett, Davila, Droste, Hahn, Harrison, Kesarwani, Robinson, Wengraf, and Arreguin.

Noes: None.

Absent: None.



City of Berkeley Natural Gas Prohibition & Reach Code for Electrification

Planning and Development Department
Office of Energy and Sustainability

Building Electrification is the substitution of gas appliances (furnaces, water heaters, cooking ranges and stoves, dryers, etc.) with clean, safe, and highly efficient all-electric alternatives.

Through electrification we can eliminate the use of fossil fuels in the home, tackling climate change, while improving the quality of our homes and buildings. By transitioning off natural gas we can also reduce the tremendous amount of methane leakage that happens all along the natural gas infrastructure – from extraction to pipelines.

Benefits of Electrification

- **Better indoor air quality:** All-electric buildings improve indoor air quality and health, by eliminating natural gas combustion inside homes. Burning gas in household appliances produces harmful indoor air pollution.
- **Safety:** Major gas leaks and explosion such as Aliso Canyon and San Bruno can be devastating and capture headlines, but natural gas use in homes is also responsible for almost half of residential house fires.
- **Savings:** All-electric new buildings do not require the installation of gas infrastructure, saving these capital costs. When paired with rooftop solar, new and existing all-electric buildings can benefit from reduced operating costs.
- **Equity:** All-electric new construction can reduce affordable housing costs. For disadvantaged populations that spend a disproportionate amount of their income on energy, and who are more likely to suffer from asthma due to poor indoor air quality, zero emission homes are an important opportunity to deliver social equity benefits.
- **Smaller carbon footprint:** As electricity from the grid gets cleaner, all-electric buildings will eventually stop producing greenhouse gas emissions. All-electric buildings that have rooftop solar or purchase 100% renewable electricity are already zero-emission.

Natural Gas Prohibition: This [ordinance](#) passed by Berkeley City Council prohibits natural gas infrastructure (i.e. gas hookups) in new buildings by amending the City of Berkeley Municipal Code (BMC Title 12). The ordinance prohibits natural gas infrastructure, typically used to provide water and space heating, cooking, and other uses, in new buildings of all types, residential and nonresidential. This ordinance is the first in the nation to prohibit the use of natural gas in new buildings.

The ordinance applies to new buildings that apply for land use permits or zoning certificates after January 1, 2020. It is implemented as a condition of approval in land use permits. It does not impact existing buildings, additions, or alterations, including accessory dwelling units that are built inside an existing home. It allows for specific exceptions when it is not feasible to construct a new building completely without natural gas. Some of these exceptions will diminish with time as the California Energy Commission incorporates more all-electric systems into the California Energy Code and verifies that their use can comply with Code requirements.

In addition, the ordinance includes a public interest exemption. This exemption will be determined on a case-by-case basis and will take into account the use, availability of alternative technologies, and other impacts on health, safety, and welfare. It could allow for specific, minimal, use of natural gas infrastructure in a new building. In cases where natural gas infrastructure is used, electric capacity, conduit, and wiring will also be included to allow for full building electrification in the future.

Reach Code: A “reach code” refers to a local amendment to the Berkeley Energy Code, which exceeds the energy efficiency standards of the California Energy Code. A reach code must be shown to be cost effective, via a cost effectiveness analysis, and the California Energy Commission (CEC) must formally approve it. The Berkeley City Council adopted a reach code for new construction in December 2019. It applies to new buildings that apply for building permits after January 1, 2020. The reach code includes pathways for either all-electric construction or mixed-fuel construction that exceeds the efficiency requirements of the Energy Code. It also extends solar photovoltaic system requirements for single-family and low-rise residential buildings to nonresidential buildings, high-rise residential and hotels/motels. Electric readiness for future electrification is required of systems that use natural gas. Reach code requirements are enforced through the building permit review, issuance, and inspection process.

Why Both? The Natural Gas Prohibition and the Electrification Reach Code complement each other. Together they provide integrated compliance pathways to all types of newly constructed buildings in Berkeley. All-electric building construction is relatively new to this region. The reach code will allow designers and builders to gain experience with all-electric building design before projects subject to the natural gas prohibition begin construction. They work in tandem to support building electrification and its health, safety, and climate benefits.

How do they differ?

	Natural Gas Prohibition Ordinance	Reach Code for Electrification
Requirements	Prohibits natural gas infrastructure in new buildings.	Provides two compliance pathways: All-electric or more efficient mixed-fuel.
Covered Buildings	Applies to newly constructed buildings* that submit a Use Permit or Zoning Certificate after January 1, 2020.	Applies to newly constructed buildings* that submit a Building Permit application after January 1, 2020.
Exceptions and Qualifications	Determined on a case-by-case basis when all-electric not feasible or project determined to be in public interest. Requirements for future electrification when natural gas is used.	Efficiency requirements beyond the Energy Code for mixed-fuel vary by building type based on cost-effectiveness. All-electric buildings are cost-effective. Requirements for future electrification when natural gas is used.
Status	Adopted by City Council on July 23, 2019 as Ordinance No. 7,672-N.S. to add a new Chapter 12.80 to the Berkeley Municipal Code	Adopted by City Council on December 3, 2019 as Ordinance No. 7,678-N.S. to reenact Chapter 19.36 of the Berkeley Municipal Code

* Newly constructed building refers to a building that has never been used or occupied for another purpose, and excludes remodels and converted buildings. This applies to both residential and nonresidential buildings.

Peter Best

From: Peter Best
Sent: Tuesday, August 4, 2020 2:59 PM
To: Peter Best
Cc: Joe Deets; Michael Pollock; Heather Wright (hwright@bainbridgewa.gov); Blake Holmes; Carla Lundgren; Julie Kriegh
Subject: GBTF: Draft Idea from Kathleen Smith

GBTF members:

Forwarding this information from Kathleen Smith.

Sincerely,

Peter Best, MMA
Senior Planner
o.206.780.3719 | c.206.498.4126
pbest@bainbridgewa.gov

 [Contact me on Teams](#)



Due to the City's COVID-19 response, the Planning and Community Development Department (PCD) has modified its operations. Please see the PCD webpage (<https://www.bainbridgewa.gov/154/Planning-Community-Development>) for current information.

From: Kathleen Smith <kathleen.smith@cobicommittee.email>
Sent: Tuesday, August 4, 2020 2:52 PM
To: Peter Best <pbest@bainbridgewa.gov>
Subject: Draft Idea

Hi Peter,

Here is one idea to share:

Proposal for Consideration by City of BI Green Building Task Force

Kathleen Smith

August 4, 2020

- Require Core Green Building Certification for all new construction and all renovation projects (above \$x or x SF)
 - And/or Require Zero Carbon for all new construction and all renovation projects (above \$x or x SF)
- No new propane hook-ups and renovation projects (above \$x or x SF) must eliminate propane use
- Zero ready (including battery ready) for all new construction and all renovation projects (above \$x or x SF)
- City Buildings or city funded buildings (municipal commitment)
 - Core Green Building Certification for all new construction and all renovation projects (above \$x or x SF)
 - Zero Carbon for all city buildings existing, new construction and all renovation projects (above \$x or x SF)
 - Commit to doing at least one Living Building

Zero Carbon Certification <https://living-future.org/zero-carbon-certification/>

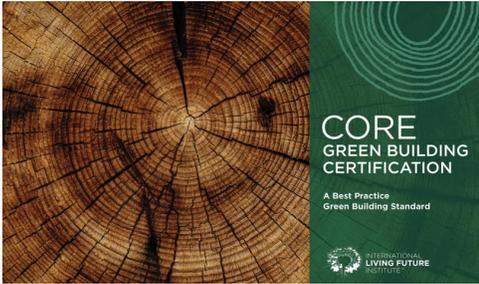


Zero Carbon Certification | Living-Future.org

The ILFI Zero Carbon Certification is the first worldwide Zero Carbon third-party certified standard. This program recognizes the growing interest and focus on a broad-based tool for highlighting highly energy efficient buildings which are designed and operated to fully account for their carbon emissions impacts.

living-future.org

Core Green Building Certification <https://living-future.org/core/>



Core Green Building Certification | Living-Future.org

The Core Green Building CertificationSM (Core) is a simple framework that outlines the 10 best practice achievements that a building must obtain to be considered a green or sustainable building.

living-future.org

Thank you,
Kathleen Smith