

## Comment Form for Potential Changes to the 2017 Building Code

Indicate change number and make additional copies of this form for each change.

### A. Respondent Information

Name: \_\_\_\_\_ Bryan Purcell \_\_\_\_\_

Title: \_\_\_\_\_ Director of Policy and Programs at the Atmospheric Fund

I am responding on behalf of:  Myself

Organization (specify): Clean Economy Alliance

Function:  Building Official  Builder/Contractor  
 Supplier/Manufacturer  Designer/Code User  
 Property Owner/Public  Sewage Hauler/Installer

### B. Potential Code Change

**Code Change Number:** \_\_\_\_\_ **2-CC-A-01-04-01** \_\_\_\_\_ (e.g.

A2-01-01-01) Mark one of the following with an "X":

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
(provide a reason below)

**Reasons:** \_\_\_\_\_ **Please see attached document for comments.** \_\_\_\_\_

\_\_\_\_\_  
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**Code Change Number: 2-CC-A-01-04-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance (CEA) supports the ability for municipalities to pass by-laws to require green standards, with the following amendments for your consideration:

The CEA recommends that the current proposal should be expanded to go beyond green and reflective roofs to include other building standards that can help reduce energy consumption and greenhouse gas emissions, improve water conservation, and assist construction waste management.

With regards to energy and GHG management, the OBC should develop a structured municipal “energy step code” that would make future updates to energy requirements more predictable, charting a pathway to net-zero. Allowing local governments to adopt these standards or work them into other land use policies would also allow local governments to more rapidly increase standards if they so choose. This stepped approach is a similar framework to that which has recently been adopted in the Province of British Columbia, and to what is currently proposed for the update to the Toronto Green Standard.

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**Code Change Number: 2-CC-A-03-02-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change to enable functional statements on thermal bridging and air leakage.

We further recommend adding a functional statement focused on GHG emissions that will compel designers to consider fuel choice as well as efficiency.

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**Code Change Number2-CC-B-03-01-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the addition of EV charging requirements for apartment buildings required in 2019, in addition to other buildings already planned for 2018.

We would further support provisions to gradually and predictably increase the percentage of EV charging stalls required in 2022 and in future code updates. This would also provide an excellent opportunity to increase the number of options for local governments to put requirements in place that go beyond these minimum requirements.

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**Code Change Number 2-CC-B-04-01-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the addition of structural provisions during construction to facilitate the addition of PV/solar hot water systems at a later date.

However, we feel that this proposal could be improved. Specifically, Section-10 of the proposed change is vague and may change in its meaning according to the interpretation of the clause "dead load of solar panels is counteractive". We are concerned that without further clarification, the full and clear adoption of this proposal could be limited. We recommend that Section-10 should be removed or better defined.

With respect to proposal 2-CC-B-12-05-01, we also support the addition of a solar ready requirement to Part 9 residential buildings, as well as commercial buildings.



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### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-05-10-01**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
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**Code Change Number: 2-CC-B-05-10-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change to establish standards for High-Reflectance and Vegetative Roof Construction, but feels the target should be more aggressive, and set at no lower an SRI than 78. This aligns with LEED V4 and City of Toronto requirements for high reflectance roofs. Several products are currently available on the market that comply with this requirement at no additional cost.

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### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-07-06-01**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
(provide a reason below)

Reasons: \_\_\_\_\_ **Please see attached document for comments.**\_\_\_\_\_

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**Code Change Number: 2-CC-B-07-06-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change to better align with National Building code requirements.

We also ask that the OBC consider prohibiting “once through cooling” systems. While antiquated, there are still some systems (primarily in industrial applications) that use potable water in cooling applications in which water is cycled through the system once before being sent to the sanitary sewer. Other jurisdictions such as the City of Vancouver have prohibited such systems to help conserve potable water.

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### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-07-06-02**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
(provide a reason below)

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**Code Change Number: 2-CC-B-07-06-02**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change that clarifies water-use efficiency requirements for urinals. We recommend that an additional requirement should be added to require that water closets be equipped with devices capable of preventing flush cycles when not in use, for all occupancies.

For occupancies other than Group C, flow rates should be reduced to match the following Group C requirements:

- Toilets 4.8LPF
- Lavatory faucets – 4.8L/min (residential),
- Kitchen Faucets 6.8L/min and
- Commercial faucets 1.9L/min

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### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-09-32-01**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
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**Code Change Number: 2-CC-B-09-32-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change as it is outlined. We recognize, as does the OBC, that as airtightness is increased, it becomes very important to supply fresh air in a controlled manner. Exhaust-only ventilation may not provide the appropriate fresh air levels and can result in significant building durability issues in cold climates. This includes, for example, the formation of interstitial condensation.

We recommend this requirement to take effect in large buildings in 2019.



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**Code Change Number: 2-CC-B-09-32-02**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change as it is outlined. We recognize, as does the OBC, that as airtightness is increased, it becomes very important to supply fresh air in a controlled manner. Exhaust-only ventilation may not provide the appropriate fresh air levels and can result in significant building durability issues in cold climates. This includes, for example, the formation of interstitial condensation.

We recommend this requirement to take effect in large buildings 2019.

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**Code Change Number: 2-CC-B-09-32-03**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change, but recommends providing further clarification on how ERV's should interface with other home ventilation appliances, such as bathroom fans and kitchen range hoods.

Further, Section 9.32.3.11(2) should be clarified. It seems to provide minimum sensible recovery efficiency for HRV systems, but not for ERV systems. One possible interpretation is that the recommendation is the same for both, but this is not clear.

Finally, we recommend that the minimum SRE requirements be aligned with the current requirements for packages in SB-12 (55% to 75%).

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Code Change Number: \_\_\_\_\_ **2-CC-B-09-32-04**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
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(provide a reason below)

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**Code Change Number: 2-CC-B-09-32-04**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance supports the proposed change that harmonizes the building code with SB-12, and requires that ventilation systems coupled with forced air heating systems include a heat or energy recovery ventilator. We additionally suggest the inclusion of a requirement for the use of direct ducting to bedrooms. Other jurisdictions have made this clarification to ensure adequate ventilation in the bedroom where it is most critical to human health.

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Code Change Number: \_\_\_\_\_ **2-CC-B-11-03-01**

- I support the potential requirements.  
(do not provide a reason below)
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**Code Change Number: 2-CC-B-11-03-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance strongly supports the proposed changes to include energy efficiency during building renovations, similar to fire and structural safety requirements.

Further, we suggest the addition of the general statement “material alterations or repairs also to include modifying or replacing a large component of any building system” to Section 11.3.1.1.(1) “Definition of Material Alterations”.

In addition to the above, our general commentary is that the measures outlined here are very prescriptive and that in order to provide a performance path, the OBC should consider offer an alternative compliance route based on “retro-commissioning”. Please see the CEA comments on “Commissioning for Large Buildings” outlined in our submission to Section 4 questionnaire.



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**Code Change Number: 2-CC-B-12-02-02**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance strongly supports the proposed change to add air tightness testing for large buildings.

We further recommend moving mandatory testing to begin in 2020 (with no requirement to pass the test), with a requirement for buildings to pass the test in 2022.

We also request that more explanation as to whether trade-offs will be allowed until 2022 be provided, as this is not currently clear. The trade-offs described in proposal 2-CC-B-12-02-04 for Part 9 buildings could be used as a model. We further recommend clearly limiting trade-offs to 10% (matching Part 9) until 2022, and eliminating them altogether in 2022.

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**Code Change Number: 2-CC-B-12-02-03**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance strongly supports the proposed changes, but suggests that the change come in effect for January 2019, rather than January 2020. This change is not difficult for industry to adapt to.

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Title: \_\_\_\_\_ Director of Policy and Programs at the Atmospheric Fund

I am responding on behalf of:  Myself

Organization (specify): Clean Economy Alliance

Function:  Building Official  Builder/Contractor  
 Supplier/Manufacturer  Designer/Code User  
 Property Owner/Public  Sewage Hauler/Installer

### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-12-02-04**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
(provide a reason below)

Reasons: \_\_\_\_\_ **Please see attached document for comments.** \_\_\_\_\_

\_\_\_\_\_  
(Please attach additional sheets as necessary)

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**Code Change Number: 2-CC-B-12-02-04**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance strongly supports the proposed changes, as well as the continuous insulation requirements. We further support limiting trade-offs to 10% in 2020 and eliminating them by 2022.

We further suggest that in order to reduce confusion, the should OBC match the target dates and requirements/recommendations for large building envelopes. Under this approach, voluntary air tightness testing will be requested for 2019, mandatory testing for 2020 (but with no requirement), and testing with mandatory requirements for 2022.

We further recommend that the minimum continuous insulation level be RSI1.76 (R10), rather than RSI 0.88 (~R5).

Finally, we recommend that the OBC consider banning spray foam insulation with high GHG intensity propellants. Other jurisdictions with GHG functional statements have done this because there are significant fugitive emissions that are greater than the potential operational savings.

## Comment Form for Potential Changes to the 2017 Building Code

Indicate change number and make additional copies of this form for each change.

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Title: \_\_\_\_\_ Director of Policy and Programs at the Atmospheric Fund

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Organization (specify): Clean Economy Alliance

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 Property Owner/Public  Sewage Hauler/Installer

### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-12-02-05**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
(provide a reason below)

Reasons: \_\_\_\_\_ **Please see attached document for comments.**\_\_\_\_\_

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**Code Change Number: 2-CC-B-12-02-05**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance (CEA) supports the proposed changes with the following additions.

We recommend introducing an energy and GHG metrics-based compliance pathway that would be based on EUI and GHGI metrics, similar to what is currently proposed for the update to the Toronto Green Standard. By providing a metrics-based approach, the OBC would set a clear benchmark with regards to where they believe building energy use and greenhouse gas maximums should be.

Similar to our response for proposal 2-CC-A-01-04-01, we feel strongly that a clear pathway to net zero or near-net zero for both SB-10B and SB-12B construction is needed to ensure that industry can adapt and invest in the most effective ways to reduce costs.

Further, while energy modelling is not explicitly part of the Building Code, we recommend that more guidance is necessary with regards to how buildings are simulated. This should include, but not be limited to, explicit guidance on thermal bridging, ventilation rates, and occupancy schedules.



## Comment Form for Potential Changes to the 2017 Building Code

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Organization (specify): Clean Economy Alliance

Function:  Building Official  Builder/Contractor  
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 Property Owner/Public  Sewage Hauler/Installer

### B. Potential Code Change

Code Change Number: \_\_\_\_\_ **2-CC-B-12-05-01**

- I support the potential requirements.  
(do not provide a reason below)
- I would support the potential requirements with modifications.  
(provide a reason below)
- I do not support the potential requirements.  
(provide a reason below)

Reasons: \_\_\_\_\_ **Please see attached document for comments.**\_\_\_\_\_

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**Code Change Number: 2-CC-B-12-05-01**

Organization (specify): **Clean Economy Alliance**

We support the potential requirements with modifications. (provide a reason below):

The Clean Economy Alliance (CEA) supports the proposed changes with the following additions.

With the rapid reduction of prices in the solar energy industry, the CEA recommends that the installation of solar PV or solar hot water should be required by 2022. The CEA acknowledges that not all buildings have suitable solar access and that this term needs to be better defined; however, for roofs that do have solar access, a reasonable target can be established at approximately 25% of the total roof area.

We have also noted our support for solar ready requirements in our response to proposal 2-CC-B-04-01-01.

## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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B. Consultation Discussion Items (Mark only one of the following with an "X")		
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## Section 4 Commissioning of Large Buildings

Organization (specify): **Clean Economy Alliance**

Discussion Question 1 Response:

### **1. What parts of the building should be subject to building commissioning to support the government's energy conservation and GHG emissions goals?**

Note the below provisions are referenced against the Seattle Energy Code which, in the opinion of the Clean Economy Alliance (CEA), has the most rigorous and comprehensive commissioning regulation in North America. All Part 3 buildings should be subject to the commissioning requirement, provided their systems meet the following minimum requirements:

*HVAC and refrigeration:* All HVAC systems with over 70 kW's (240 kBTU/h) cooling or heating, plus all walk-in coolers and freezers and all refrigerated warehouse coolers and freezers.

*Lighting and receptacle controls:* Lighting and controlled receptacles in projects with at least 20 kW installed lighting overall, or more than 10 kW installed lighting with daylight or occupancy controls.

*Water heating:* any system with more than 70 kW's

capacity. *Metering:* All metering and sub-metering systems

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## Section 4 Commissioning of Large Buildings

Organization (specify): **Clean Economy Alliance**

Discussion Question 2 Response:

**2. Should building commissioning apply to all large buildings or a select group of large buildings based on either occupancy type or size (e.g. assembly occupancies that are a minimum 4,645 m<sup>2</sup> (50,000 sq/ft) in size)?**

We recommend that commissioning requirements be based on mechanical and electrical system sizes, rather than floor area or occupancy. This is because occupancy and floor area are not good indicators of system complexity or capacity. We would strongly recommend against a simple floor area or occupancy trigger for the regulation.

## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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## Section 4 Commissioning of Large Buildings

Organization (specify): **Clean Economy Alliance**

Discussion Question 3 Response:

### **3. How regularly should a building commissioning process be reviewed by municipal enforcement officials, and what information should be made available to them?**

We recommend that 'Submittals' be reviewed at Building Permit application and at Occupancy.

At Building Permit, we recommend that applicants provide a Commissioning Plan that contains the following:

- Narrative description of the commissioning proposal
- Commissioning team roles and responsibilities, and contact information.
- Schedule of commissioning activities, listing what systems will be commissioned, functions to be tested, the required test conditions, and performance criteria.

At Occupancy Permit, applicants should provide a Commissioning Report containing the following:

- Deficiencies noted and corrections made
- Test procedures and criteria
- List of deferred tests, and climatic conditions required to perform them
- List of unresolved deficiencies

This report should be signed by both the accredited Commissioning Agent and the owner.



## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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## Section 4 Commissioning of Large Buildings

Organization (specify): **Clean Economy Alliance**

Discussion Question 4 Response:

**4. Beyond any building commissioning process, what remedial actions can building owners/operators be reasonably required to take to ensure that buildings continue to operate as originally designed?**

The City of Seattle has created a Commissioning Permit, which must be applied for prior to occupancy being granted. The Commissioning Permit must be closed within 12 months of its issue. This policy tool allows commissioning requirements to transcend the Occupancy Permit, and extend into the first 12 months of operation in order to allow for testing to occur in all four seasons. This strategy also allows owners to complete all of their other documentation and permits at occupancy, but still allows the Authority Having Jurisdiction to track any outstanding work that needs to be completed post-occupancy.

We recommend that testing be done on all systems and that these tests, including deficiencies listed, to be summarized in a report to be signed-off by the owner. Compelling action after occupancy is problematic without abatement requirements.

## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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## Section 4 Commissioning of Large Buildings

Organization (specify): **Clean Economy Alliance**

Discussion Question 5 Response:

### **5. How can proposed regulations for home energy audits, and large building energy reporting and benchmarking, complement potential future requirements for building commissioning?**

Reporting and benchmarking programs enable the implementation of Building Energy Performance Standards (BEPS). BEPS are abatement requirements that stipulate that a building must achieve certain performance standards or undertake a prescriptive process which is in most cases retro-commissioning. The performance standards that are used could be a Portfolio Manager score or EUI outcome for certain classes of commercial buildings, or an EnerGuide score for homes and residential buildings. The benefit of BEPS programs is that they can target the worst performers where there is potentially the most savings at the most optimal or lowest cost. Cities like Atlanta and Seattle have adopted BEPS for their large commercial buildings.

## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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#### Section 4 Other (General comments)

Organization (specify): Clean Economy Alliance

- Overall no specifics on carbon or emission reductions for large buildings and building retrofits.
- No definition of net zero, near-net zero etc.
- No performance standards
- No predictable pathway for code updates beyond 2022 or long term targets to get us to 2030.

## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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## Section 4 Sub-metering

Organization (specify): **Clean Economy Alliance**

Discussion Question 1 Response:

### **1. Can the Building Code better enable sub-metering for electricity? If so, what amendments could be made to enable sub-metering?**

The purpose of sub-metering is two-fold. The first is to ensure that consumers of energy have the requisite price signals to make energy conservation choices. The second purpose of the sub-metering is to enable the owner of a building to undertake retro-commissioning or other corrective action to reduce energy use. Given this, the recommendation of the Clean Economy Alliance is to require the sub-metering of electrical systems in the following way:

- By major occupancy – e.g., retail units should be sub-metered separately from commercial office space
- By use - e.g., parking, amenity and common spaces should all be sub-metered separately within multifamily buildings.
- Where a building component is expected to consume more than 5% of the buildings total energy - e.g., the central HVAC system.
- In commercial buildings greater than 3 floors for every floor of the building

This level of sub-metering allows owners to diagnose issues better and more quickly than when all loads are grouped together on a single meter.



## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

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	<input checked="" type="checkbox"/> Property Owner/Public	<input type="checkbox"/> Sewage Hauler/Installer
B. Consultation Discussion Items (Mark only one of the following with an "X")		
<b>I. Commissioning of Large Buildings</b> <input type="checkbox"/> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5.	<b>II. Adaptive Thermostats</b> <input type="checkbox"/> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4.	<b>III. Sub-metering</b> <input type="checkbox"/> 1. <input checked="" type="checkbox"/> 2. <input type="checkbox"/> 3. <b>IV. Other</b> <input type="checkbox"/> 1.
<b>Input:</b> (Please attach the corresponding response document)		
<p>Personal information provided in response to Building Code Consultation is collected under the authority of the Ministry of Municipal Affairs and Housing Act for consultative purposes, and for contacting you should we need to clarify your response to this consultation. Responses to the consultation may be shared with provincial and national building and fire code development committees. Questions about the collection of personal information may be submitted to the Ministry of Municipal Affairs, 16th Floor, 777 Bay Street, Toronto, Ontario, M5G 2E5 or by email to <a href="mailto:buildingcode.consultation@ontario.ca">buildingcode.consultation@ontario.ca</a></p>		

## Section 4 Sub-metering

Organization (specify): **Clean Economy Alliance**

Discussion Question 2 Response:

- 2. Should the Building Code simply require the “rough-in” of electrical systems to facilitate sub-metering installation by responsible utilities or authorities? If so, are there products available that would assist in future sub-metering?**

The Clean Economy Alliance does not support the rough-in of meters at this point, given that the future of this technology is likely wireless.

To the second point, there are many sub-metering technologies that can be retro-fitted into buildings, but many of them are not Weights and Measures Canada-certified and therefore are not “utility grade”. This is not an issue provided the motivation of providing sub-metering is educational rather than cost recovery based.

## Comment Form for Consultation Discussion Items: Potential Longer-Term Building Code Act and Building Code Amendments

**Important:** Each topic/question response you prepare needs to be a separate document. Include footers with the topic/question ID number and page number information (e.g. Question II. 3. — Page 1 of 3). Complete one comment form for each response you prepare and attach it to the corresponding response document.

**Hint:** If you are providing input for more than one topic/question, complete the respondent information and then make enough copies for each response document.

A. Respondent Information		
Name: _____ Bryan Purcell _____		
Title: _____ Director of Policy and Programs, the Atmospheric Fund		
I am responding on behalf of:		
		<input type="checkbox"/> Myself
		<input checked="" type="checkbox"/> Organization (specify):
_____ Clean Economy Alliance _____		
Function:	<input type="checkbox"/> Building Official	<input type="checkbox"/> Builder/Contractor
	<input type="checkbox"/> Supplier/Manufacturer	<input type="checkbox"/> Designer/Code User
	<input checked="" type="checkbox"/> Property Owner/Public	<input type="checkbox"/> Sewage Hauler/Installer
B. Consultation Discussion Items (Mark only one of the following with an "X")		
<b>I. Commissioning of Large Buildings</b> <input type="checkbox"/> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5.	<b>II. Adaptive Thermostats</b> <input type="checkbox"/> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4.	<b>III. Sub-metering</b> <input type="checkbox"/> 1. <input type="checkbox"/> 2. <input checked="" type="checkbox"/> 3. <b>IV. Other</b> <input type="checkbox"/> 1.
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## Section 4 Sub-metering

Organization (specify): **Clean Economy Alliance**

Discussion Question 3 Response:

**3. Should the Building Code's requirements for sub-metering be expanded to better enable sub-metering for water and gas supply?**

Yes. The minimum requirements should be that sub-metering should be done for gas and water at least at the building level, so that multiple buildings are not connected to single meter.

The requirements again Yes the regulations should stipulate that separate uses (e.g. Commercial, Retail, Amenity space) within a building should be metered for gas and water separately. All domestic hot water systems over 70 watts should be sub-metered.