



## Energy in Design Calculator Instructions

AIA Seattle is excited to be in the third year of its inclusion of the Energy in Design Award, meant to celebrate projects which balance exceptional design and forward thinking energy performance. This award is not just about one exemplary project; it is about our community's commitment to innovative, sustainable architecture and leadership among our design peers.

**Regardless of intent to achieve Architecture 2030 targets, we ask all entrants in the BUILT category to submit energy use data** in consideration of the Energy in Design Award. We provide an easy-to-use tool, the Energy in Design Calculator, to capture standard information and compare results against the Architecture 2030 targets. Each BUILT project is required to submit a completed Energy Calculator spreadsheet and related output 'Results' page.

- Energy data should be drawn from actual energy use measurements, such as utility bills.
- If actual usage data is not available, modeled performance may be submitted.
- If neither are available, submissions may be entered with code level targets.

The purpose of using the Energy in Design Calculator is to provide a straightforward and educational way to determine the operational CO2 emissions related to your project while maintaining consistency and accuracy for comparison with other projects.

Building Climate Impact data submitted for individual projects may be utilized and/or shared to promote further reductions of building climate impacts. If you would like your project name to be anonymous in any data sharing, please indicate as such on your application (Tab 1. Instructions & General Info).

### What Data Do You Need On Hand?

Besides general project information, you will need one of the following items on hand:

- 12 months of actual energy bills
- Modeled energy use (annual) if actual energy usage data is not available
- Relevant energy code at completion of design if neither actual nor modeled data is available

## Download the Calculator

[https://www.aiaseattle.org/wp-content/uploads/2018\\_AIA-Seattle\\_Energy-In-Design-Calculator\\_v1.xls](https://www.aiaseattle.org/wp-content/uploads/2018_AIA-Seattle_Energy-In-Design-Calculator_v1.xls)

## Calculator Step by Step Instructions

### Calculator Tab 1: Instructions & General Information

1. Project Name
2. Project Address
3. Built or Unbuilt? (Select from dropdown menu)
4. Total Square Footage (GSF)
5. Permit Date or Anticipated Permit Date
6. Project Summary (Short paragraph to describe project and any highlights)

### Calculator Tab 2: Energy Usage Information

1. Select **Relevant Energy Code\*** from drop down menu. *\*Use the code in place at Permit date. If your code is not listed, select "Other" and provide narrative.*
2. Choose **Calculation Method** from drop down menu
  - o *If "Project made no improvement beyond energy code", proceed to SPACE TYPE inputs. This method requires no additional energy performance data entry.*
3. Enter **Energy Use**: Enter Actual Energy Usage or Modeled Annual Energy Use per energy sources. *If actual, most recent data is preferred.*
4. Select Up to Four **Space Types\*** from drop down menu (e.g. Office, Retail, etc.) *\*Select up to four to approximate your project*
  - o *If required to look up Architecture 2030 baseline EUIs from EPA Targetfinder or from the Architecture 2030 website, use these resources:*
  - o For commercial building types:  
[http://www.energystar.gov/index.cfm?fuseaction=target\\_finder](http://www.energystar.gov/index.cfm?fuseaction=target_finder)
5. Enter **Square Footage** for each space type. The total square footage must match your building total shared in Tab 1.

### Calculator Tab 3: Emission Factor Selection

1. Enter the "eGRID subregion" from the provided US map. *For International projects, enter the most appropriate for your international location. If unsure, enter NWPP.*

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### Calculator Tab 4: Results

1. Your results will be displayed on the "Results" Tab.
2. Paste photograph from Project Submission PDF on Results page.
3. Results include:
  - Project Data
  - 2030 Challenge Benchmark:
    - Estimated Percent CO2 Emissions reduction from Baseline (CBECS, 2003)
    - Reduction of CO2 in tonnage
    - CO2 emissions reduction relative to the Architecture 2030 Targets
    - Estimated/Actual Project Energy Use Intensity/Index (EUI)

### Submittal and File Formatting Requirements

- Energy in Design Calculator Excel sheet (all input cells to be completed) + a PDF output of the results page
- File Naming Convention: ProjectNameco2calc (Example: "TheHouseco2calc.xls" and "TheHouseco2calc.pdf")

### Questions?

- **August 30, 2018, 4:00-5:00 PM** | Attend a one hour info session + tutorial at the Center for Architecture and Design (1010 Western Ave, Seattle). [RSVP here.](#)
- **E-mail or call during office hours** | Technical assistance "Office Hours" will be available from the Integrated Design Lab between 8:00am Tuesday, September 18 - 5:00pm Friday, September 21. During this technical assistance window, please e-mail Chris Meek [cmeek@uw.edu](mailto:cmeek@uw.edu) or Michael Gilbride [chabride@uw.edu](mailto:chabride@uw.edu) or call (206) 616-6566.

*For general questions about submitting to the AIA Seattle Honor Awards, contact Professional Programs Manager Cassie Blair [cassieb@aiaseattle.org](mailto:cassieb@aiaseattle.org).*