MINNESOTA

SB 2030 ENERGY STANDARD®

Small Building Compliance Path,

Passive Building (Phius or PHI) Compliance Path,

DOE Efficient New Homes Compliance Path,

Alternative Baseline Method: ASHRAE 90.1 Appendix G

Alternative Baseline Method: ASHRAE 90.1 Energy Cost Budget (ECB)

Center for Sustainable Building Research
College of Design · University of Minnesota

November 2026

All rights reserved.

Contents

Introduction 3
SB 2030 Process Overview 3
Small Building Compliance Path 7
Passive Building (Phius or PHI) Compliance Path 11
DOE Efficient New Homes Compliance Path 15
Alternative Baseline Method: ASHRAE 90.1 Appendix G 18
Alternative Baseline Method: Energy Cost Budget (ECB) 20

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Introduction

This document provides guidance for several pathways under the SB 2030 program. It outlines the standard SB 2030 process and describes alternative modeling and compliance paths that may be used, depending on the project type and scope.

These alternative paths and methods are intended to maintain the SB 2030 program's focus on energy and carbon reduction while reducing unnecessary modeling, analysis, and documentation when an alternative method can appropriately demonstrate compliance.

Under the standard SB 2030 process, project teams use the SB 2030 Energy Standard Tool (EST) to establish project-specific Energy and Carbon Standards and evaluate the proposed design through whole-building energy modeling. Projects evaluate energy efficiency and renewable energy measures according to the SB 2030 energy hierarchy and applicable cost-effectiveness requirements and document compliance through the B3 Guidelines Tracking Tool. During operation, actual building energy consumption is reported and compared with the applicable SB 2030 Standard.

Alternative paths described in this document modify portions of the standard process where appropriate. These include compliance approaches for small buildings, Passive Buildings certified through Phius or PHI, and projects using the U.S. Department of Energy (DOE) Efficient New Homes Program. The document also provides alternative baseline methods for eligible projects using ASHRAE Standard 90.1 Appendix G or the Energy Cost Budget (ECB) method. Each section identifies the applicability, modeling, documentation, renewable energy, and other requirements specific to the applicable path or method.

The three alternative compliance paths modify selected modeling, cost-effectiveness, and documentation requirements, while the Appendix G and ECB alternative baseline methods modify only the calculation of the SB 2030 Energy and Carbon Standards. Unless otherwise specified, all other SB 2030 requirements continue to apply.

As this guidance may be updated please ensure you are using the most recent version published at http://www.b3mn.org/2030energystandard/.

SB 2030 Process Overview

The following is a description of the standard SB 2030 process.

During the predesign phase (or equivalent), an initial Energy Standard (i.e., energy target) is set for the project. This standard is in the form of an EUI (energy use intensity, kBtu/sf/yr). It helps communicate the required energy savings for the project and assists in setting parameters for budgeting and initial design efforts.

The Energy Standard is established using the SB 2030 Energy Standard Tool (EST), which estimates the EUI of a comparable building in 2003 and then applies the required percentage reduction based on the project's schematic design start date. The tool uses program-specific inputs such as space types, occupancy, operating schedules, ventilation rates, and other characteristics that influence building energy use.

The tool also includes preset defaults for typical building types and occupancy patterns, which can be particularly useful during early design before detailed project information is available. This modeled-baseline approach permits flexibility in accommodating various building types and operational parameters. The SB 2030 Energy Standard Tool can be accessed online through the B3 Guidelines Tracking Tool as an online project file accessible by the design team and reviewers.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

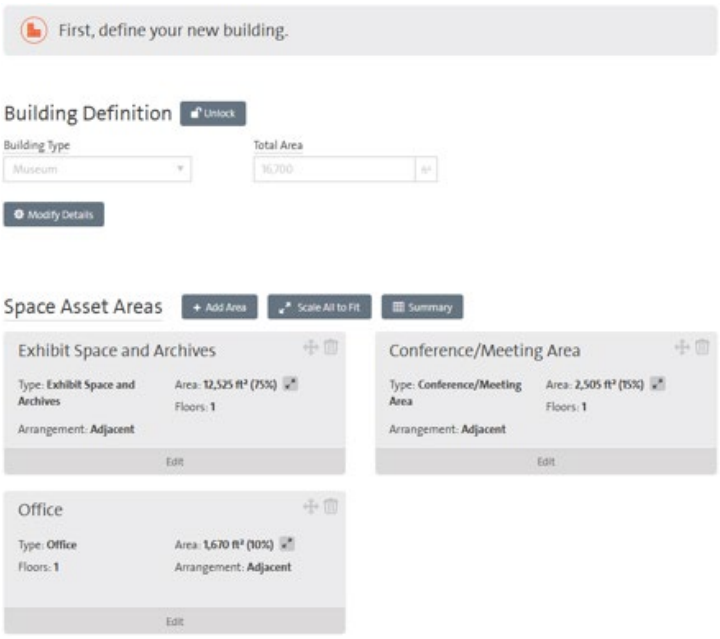


Figure 1: SB 2030 Energy Standard Tool interface

Through the schematic and design development phases, the design team develops whole-building energy models of their project and compares the modeled building performance to the Energy Standard, ensuring that the energy efficiency and renewable energy generation designed into the project meet program requirements. At the end of design development (at the Design phase submission), the project team submits an initial energy model and supporting documentation demonstrating that the proposed design is expected to meet the SB 2030 Energy and Carbon Standards. The SB 2030 review team reviews this submission and provides comments while meaningful design changes remain possible.

At the Final Design submission, the design team submits the final energy model, construction documents, supporting documentation, and a metering plan describing how building energy consumption will be measured during operation. The SB 2030 review team verifies that the energy model, Energy Standard Tool inputs, and construction documents are consistent and demonstrate compliance with the SB 2030 requirements. Note that if a design team begins its participation in the SB 2030 program after the predesign phase, the design team may need to revisit earlier design decisions to ensure that the final constructed project will meet the SB 2030 Energy and Carbon Standards.

During operations, projects submit annual energy consumption through the B3 Benchmarking and B3 Guidelines Tracking Tools, and update or confirm inputs to the Energy Standard Tool to ensure the building continues to operate according to the SB 2030 Energy Standard. If a project does not meet the standard, the accuracy of the inputs to the SB 2030 Energy Standard Tool must be verified and a plan for corrective action must be established.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Cost-Effectiveness Considerations

The SB 2030 program establishes progressively more stringent energy performance requirements over time. Many projects may not be able to fully meet the SB 2030 Energy and Carbon Standards through energy efficiency measures alone; the program permits qualifying renewable energy resources to contribute toward achieving compliance with the standards.

The legislation creating the SB 2030 program requires consideration of cost-effectiveness when establishing goals and developing the program. To maximize long-term reductions in building energy use while prioritizing on-site and in-portfolio resources, projects are required to implement the following hierarchy, proceeding to the next level only after the previous level has been exhausted due to cost-effectiveness and/or technical feasibility.

1. On-site/campus measures. Reduce site energy use through energy efficiency and utilize renewable energy resources located within the building footprint, project site, or project campus.
2. In-portfolio measures. Use renewable energy sources available off-site, within the building owner's portfolio of sites.
3. Off-site renewable energy procurement options. The remaining balance of energy needed to meet the SB 2030 Energy and Carbon Standards shall be supplied through one or more qualifying off-site renewable energy procurement options. Eligible procurement options include community renewable energy facilities, Renewable Energy Investment Funds (REIFs), physical renewable energy power purchase agreements (PPAs), financial (virtual) renewable energy power purchase agreements (VPPAs), green retail pricing products, and unbundled renewable energy certificates (RECs), provided they meet the applicable SB 2030 eligibility requirements.

On-Site Target

Projects that cannot fully meet the SB 2030 Standard using on-site/campus measures establish an On-Site Target that represents the maximum cost-effective performance achievable using those resources. To set this On-Site Target, the project team meets with the SB 2030 review team during early design to reach agreement on which on-site measures must be evaluated for cost-effectiveness. The project team then evaluates each measure using the program's cost-effectiveness methodology by comparing its up-front costs to its annual operational savings. All measures that meet the program's cost-effectiveness criteria are then incorporated into an energy model and the resulting energy use intensity is used as the On-Site Target. Once set, the On-Site Target must be met using on-site measures (including cost-effective on-site renewable energy), though these are not limited to the specific measures used to set the target. Any gap between the On-Site Target and the SB 2030 Standard may then be addressed using qualifying in-portfolio resources (level 2) followed by qualifying off-site renewable energy procurement options (level 3).

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Figure 2 shows an example application of the SB 2030 energy hierarchy. The first bar on the left shows a typical building of the project's type in existence in 2003, which is used to calculate the SB 2030 Standard. Minnesota's current energy code requirements achieve a substantial reduction from typical 2003 building performance. This example project then uses a combination of beyond-code efficiency measures and on-site renewables to get as close to the SB 2030 Standard as is possible cost-effectively, which is represented by the SB 2030 On-Site Target. It then uses off-site renewables to get the rest of the way to the SB 2030 Standard. Some projects may have less opportunity to leverage on-site resources to meet their target and may need to use more off-site resources. The example shown below uses a combination of on-site efficiency, on-site renewables, off-site in-portfolio, and green power pricing to meet the SB 2030 target.

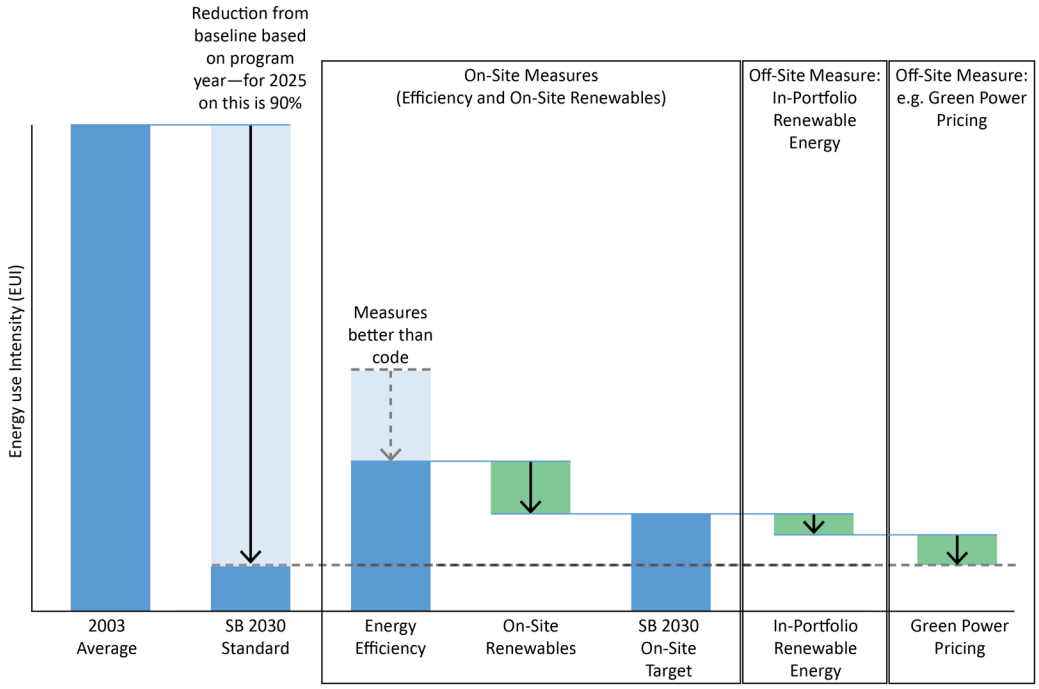


Figure 2. Energy hierarchy for a sample SB 2030 project

Renewable Energy Resource Requirements

Renewable energy resources contributing toward compliance with the SB 2030 Standard are subject to the following requirements:

1. RECs associated with renewable energy used for compliance must be retained and retired by or on behalf of the project.
2. Third-party ownership of a renewable energy system is permitted if the associated RECs are retained and retired by or on behalf of the project and a power purchase agreement is entered into for a period of at least 10 years.
3. Bulk purchases of unbundled RECs may be used to meet the renewable energy obligation but only after on-site and off-site options are found not cost-effective. Unbundled RECs are subject to a 5:1 procurement factor for projects subject to the 90% reduction requirement.
4. In all cases, the renewable energy generating source must meet the definition of renewable energy established in Minnesota Statutes, section 216B.1691.

Additional guidance on renewable energy evaluation is in development and will be posted on the SB 2030 website when available.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Small Building Compliance Path

Small buildings face different design and economic constraints than larger projects. Although they typically have fewer building systems and lower overall energy consumption, the effort required to perform project-specific cost-effectiveness analyses can represent a disproportionately large project cost. The Small Building Compliance Path provides an alternative approach that demonstrates compliance with the SB 2030 program while reducing the cost-effectiveness analysis burden for these smaller projects.

Projects using this compliance path demonstrate compliance by meeting a prescriptive energy efficiency standard, estimating project energy performance, and evaluating renewable energy resources consistent with the SB 2030 energy hierarchy. This approach permits smaller project teams to forgo the project-specific measure-by-measure cost-effectiveness evaluation required of larger projects while maintaining the intent of the SB 2030 program.

The method outlined here is applicable for projects meeting the size requirements outlined below. Projects may continue to use the version of the Small Building Compliance Path in effect when schematic design (or equivalent) began, even if subsequent versions are later published.

Applicability: Small Building Definition

Projects with less than 20,000 gross square feet (gsf) of space included in the SB 2030 area calculation, as identified below, are considered Small Buildings under the SB 2030 program. The SB 2030 Small Building definition differs from the B3 Guidelines Small Building definition. The table below identifies which spaces are included when determining applicability under each program.

Which spaces need to be included in the building area calculations to determine applicability of the B3 Guidelines Small Building Path and the SB 2030 Small Building Compliance Path?			
	Regularly occupied	**Not regularly occupied**	**Not regularly occupied, and primarily inactive storage/industrial process**
Conditioned space	Include for both B3, SB 2030	Include for both B3, SB 2030	Include for SB 2030, potentially excluded from B3
Indirectly conditioned	Include for both B3, SB 2030	Include for SB 2030, potentially excluded from B3	Include for SB 2030, potentially excluded from B3
Semiheated space	Include for both B3, SB 2030	Include for SB 2030, potentially excluded from B3	Include for SB 2030, potentially excluded from B3
Unconditioned space	Do not include for B3, SB 2030	Do not include for B3, SB 2030	Do not include for B3, SB 2030

Table 1: Spaces included in Small Building definitions—differences between SB 2030 and B3 Guidelines programs

Project teams electing to use the Small Building Compliance Path must meet all requirements of this compliance path. The project team must also indicate which of the available options in Step 2 they will be using. Use of the compliance path and selected option must be documented in Guidelines E1A&B in the B3 Guidelines Tracking Tool.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Compliance Overview

The SB 2030 Small Building Compliance Path consists of four steps:

1. Establish the SB 2030 Standard.
2. Demonstrate compliance with a prescriptive energy efficiency standard.
3. Estimate project energy performance.
4. Evaluate and implement renewable energy.

Establishing the SB 2030 Standard

Project teams using the Small Building Compliance Path must complete the online Energy Standard Tool at the Predesign, Design, and Final Design phases in the B3 Guidelines Tracking Tool. More information on the use of the Energy Standard Tool can be found in the Building Performance Evaluation Guide.

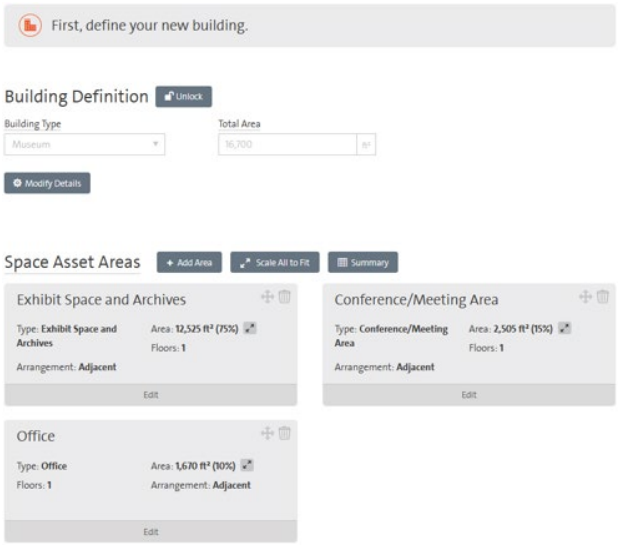


Figure 3: Energy Standard Tool space area inputs and detailed inputs

Buildings are characterized using "Space Asset Areas" which represent programmatic functions of a building and include associated spaces such as corridors. These space asset areas have default characteristics that can be updated as the design progresses. Further training resources can be found in the Net Energy Optimizer training materials (the Energy Standard Tool uses the same modeling engine and space characterization as Willdan's Net Energy Optimizer tool).

Prescriptive Standards for Energy Efficiency

The SB 2030 Small Building Compliance Path includes two energy-efficiency components:

1. Projects shall comply with the approved prescriptive energy efficiency standard listed below. Additional prescriptive compliance standards may be added in future versions of this guidance.

2. All projects shall meet the equipment and fixture requirements identified in this section. These requirements apply regardless of which prescriptive compliance option is selected.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Prescriptive Energy Standard – ASHRAE 90.1

Projects selecting this option shall comply with the mandatory and prescriptive requirements of the most recent published edition of ASHRAE 90.1 available at the project's schematic design start (or equivalent) using the Prescriptive Path (Energy Cost Budget and Performance Rating Method compliance paths are not permitted). Documentation shall identify compliance with all applicable mandatory provisions and prescriptive requirements. For Section 11.5, project teams shall identify the number of additional efficiency package options required based on the project climate zone and building type, document the credits being claimed, and demonstrate that the required threshold has been met. Credit R01 shall not be claimed, as renewable energy is addressed separately (see below) under the SB 2030 Small Building Path. Note that this version of ASHRAE 90.1 may be a newer version of this standard than is referenced in the Minnesota Energy Code.

Equipment and Fixture Requirements (all Prescriptive Energy Standard Options)

Regardless of the prescriptive compliance option selected, projects shall meet the following requirements:

- ENERGY STAR-certified products shall be specified whenever certified products are available for the intended application. Examples include, but are not limited to appliances, clothes washers, dishwashers, refrigerators and freezers, room air cleaners, ceiling fans, dehumidifiers, commercial food service equipment, commercial dishwashers, vending machines, commercial refrigerators and freezers, computers and displays, imaging equipment, televisions, electric vehicle supply equipment (EVSE), and heat pump water heaters.
- Where plumbing fixtures are included in the project scope, showerheads and kitchen faucets shall not exceed 1.75 gpm and lavatory faucets shall not exceed 1.5 gpm.

Estimate Project Energy Performance

Projects shall estimate annual building energy performance by modeling the proposed design in the SB 2030 Energy Standard Tool (or other approved modeling software) using the documented prescriptive design and any additional energy efficiency measures incorporated into the project. The resulting model establishes the project's performance relative to the applicable SB 2030 Energy and Carbon Standards. The project must provide sufficient qualifying renewable energy to meet both standards.

Renewable Energy

Renewable energy shall be evaluated and implemented using the same hierarchy required for all SB 2030 projects: first on-site renewable energy resources, followed by renewable energy resources within the building owner's portfolio, and finally qualifying off-site renewable energy procurement options.

On-site renewable energy must be evaluated/implemented pursuant to the following intent:

1. Meet the SB 2030 Energy Standard with on-site resources.
2. Evaluate the maximum potential energy production of the site using commercially available technology.
3. Establish the largest system considered cost-effective and available on the project site.

Renewable energy resources contributing toward compliance with the SB 2030 Standard shall meet the following requirements:

1. RECs associated with renewable energy used for compliance must be retained and retired by or on behalf of the project.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

2. Third-party ownership of a renewable energy system is permitted if the associated RECs are retained and retired by or on behalf of the project and a power purchase agreement is entered into for a period of at least 10 years.
3. Bulk purchases of unbundled RECs may be used to meet the renewable energy obligation but only after on-site and off-site options are found not cost-effective. Unbundled RECs are subject to a 5:1 procurement factor for projects subject to the 90% reduction requirement.
4. In all cases, the renewable energy generating source must meet the definition of renewable energy established in Minnesota Statutes, section 216B.1691.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Passive Building (Phius or PHI) Compliance Path

Passive buildings are typically designed and engineered to achieve high levels of energy efficiency and may go beyond the strategies or performance levels considered cost-effective under the SB 2030 program. However, even at these high levels of efficiency, projects subject to the 90% reduction requirement may still not achieve the SB 2030 Energy Standard without renewable energy. This is particularly the case when considering additional energy consumption from spaces that may sometimes be excluded from the passive building certification, such as commercial spaces and parking garages.

The Passive Building Compliance Path provides an alternative approach that allows projects pursuing PHI or Phius certification to demonstrate SB 2030 compliance while reducing duplicative modeling and cost-effectiveness analysis. Projects using this path establish the SB 2030 Energy Standard without the Energy Standard Tool (EST), use the applicable passive building certification model to estimate project energy performance, and evaluate renewable energy resources consistent with the SB 2030 energy hierarchy. Project-specific measure-by-measure cost-effectiveness analysis is not required, except for the evaluation of on-site renewable energy.

Projects using this path must demonstrate compliance at multiple points in the development process. By the end of the design phase, compliance must be demonstrated by achieving passive design-stage certification or pre-certification as verified by a PHI Certifier or Phius, respectively. Projects must use the current certification program and software applicable for their building type and scale as determined by PHI or Phius. The design must meet all applicable corollary program requirements such as additional building certifications (e.g. DOE Efficient New Homes, EPA Indoor airPLUS, etc) and performance requirements (e.g. comfort and moisture safety requirements for construction details and windows, and efficiency requirements for mechanical components). During and following construction, projects must complete passive certification activities including construction verification, airtightness testing, ventilation system balancing, and any other required commissioning activities. Results from these and final certification activities must be submitted, along with a record of all remediation steps taken if final certification is not achieved. Projects must also evaluate renewable energy resources and, for projects subject to the 90% reduction requirement (2025 and later), provide qualifying renewable energy equal to at least 50% of the project's modeled annual energy consumption, consistent with the SB 2030 energy hierarchy and renewable energy requirements. If off-site renewable energy or RECs are purchased for compliance, the procurement must cover a period of at least 10 years. More information on renewable energy requirements can be found below.

Applicability

The method outlined here is applicable to projects eligible for and pursuing certification through PHI or Phius, regardless of project size. Projects may continue to use the version of the Passive Building Compliance Path in effect when schematic design (or equivalent) began, even if subsequent versions are later published.

Project Areas Excluded from Certification

In some cases, certain space types may be excluded from passive building certification programs. However, the SB 2030 program requires that all conditioned space (including semiheated and indirectly conditioned space) be included in energy modeling and consumption estimates. This includes semiheated underground parking garages and commercial space that may be controlled by other entities.

If these types of spaces are excluded from passive certification energy models, an estimate of their energy consumption must be provided and added to the energy use of the rest of the project. This estimate can be generated by additional

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

energy modeling or accepted calculation methodologies. In some cases, Phius or PHI will provide calculators for estimating such energy use. In all cases, these calculations or energy models must be approved by the SB 2030 review team. The energy consumption from these spaces must be added to the passive project's energy consumption before calculating the building's EUI, SB 2030 Energy Standard, and renewable energy requirement.

Floor Area and EUI Calculations

The floor area used by PHI and Phius energy models to calculate their program-required energy targets is typically not gross square feet. When calculating the project's EUI for SB 2030 purposes, the energy consumption estimated by certification software must be divided by conventionally calculated gross floor area (using exterior dimensions), rather than the "Treated Floor Area" (TFA) or "interior conditioned floor area" (iCFA) used by PHI and Phius, respectively. Because these floor area definitions differ, the EUI calculated directly by the certification software must not be used for SB 2030 compliance.

Compliance Overview

The Passive Building Compliance Path consists of five steps:

1. Establish the SB 2030 Standard
2. Achieve passive building design-stage certification or pre-certification through PHI or Phius.
3. Estimate project energy performance and calculate an EUI using gross floor area.
4. Evaluate and implement the renewable energy needed to meet the SB 2030 Energy Standard.
5. Document final certification with PHI or Phius, and document applicable remediation measures if final certification is not achieved.

Establishing the SB 2030 Standard

The final SB 2030 Energy Standard for buildings following this path that are subject to the 90% reduction requirement is calculated as 50% of the project's calculated, certified EUI. The EUI can be calculated using the annual energy consumption estimate from the final PHI or Phius-approved energy model (plus the annual energy consumption of any additional SB 2030-required spaces), divided by the gross SB 2030 floor area. For this path, establishing the SB 2030 Energy Standard does not require the use of the EST. Note that early estimates of the Energy Standard can be obtained from early energy models, but updates will likely be necessary as building design and energy modeling progress.

Achieve Passive Building Certification at the Design Stage

SB 2030 compliance is typically determined at the Final Design phase, before construction begins. This is well before passive buildings are awarded final certification from PHI or Phius – which typically follows successful completion of post-construction testing, verification, and commissioning activities. In some cases, final passive certification is not awarded if the completed project fails to achieve certain performance benchmarks, such as airtightness. SB 2030 compliance using this path requires passive building projects to achieve a design-stage certification.

For PHI projects, this is typically demonstrated by a PHI-accredited Certifier, who can provide a design-stage assurance letter. This letter signifies that the building (as designed) can meet the requirements of PHI certification. For Phius projects, design-stage certification is awarded by Phius reviewers through official "pre-certification". Phius pre-certification similarly confirms that the project, as designed, meets applicable certification requirements.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Estimate Project Energy Performance

PHI or Phius certification software may be used to estimate a project's annual energy consumption. However, this calculation must include all SB 2030 project areas. In some cases, a supplemental calculation will need to be provided for any spaces that are not included in the passive building energy model. This supplemental calculation or energy model must be approved by the SB 2030 review team. "Prescriptive path" passive certifications (without an energy model) are also acceptable, but in these cases an estimate of annual energy consumption must be obtained from another source, such as an SB 2030-approved modeling software.

Once an estimate of annual energy consumption is generated for the complete SB 2030 project, calculate an EUI by dividing this number by the building's gross square feet. TFA or iCFA measurements must not be used as the floor area for this calculation. This EUI is used to establish the SB 2030 Energy Standard and determine the renewable energy required for compliance.

Renewable Energy

For projects subject to the 90% reduction requirement (2025 and later), qualifying renewable energy equal to at least 50% of the project's estimated annual energy consumption must be provided. Renewable energy shall be evaluated and implemented using the same hierarchy required for all SB 2030 projects: first on-site renewable energy resources, followed by renewable energy resources within the building owner's portfolio, and finally qualifying off-site renewable energy procurement options.

On-site renewable energy must be evaluated/implemented pursuant to the following intent:

1. Meet the SB 2030 Energy Standard with on-site resources.
2. Evaluate the maximum potential energy production of the site using commercially available technology.
3. Establish the largest system considered cost-effective and available on the project site.

Off-site renewable energy or resources shall meet the following requirements:

1. RECs associated with renewable energy used for compliance must be retained and retired by or on behalf of the project.
2. Third-party ownership of a renewable energy system is permitted if the associated RECs are retained and retired by or on behalf of the project and a power purchase agreement is entered into for a period of at least 10 years.
3. Bulk purchases of unbundled RECs may be used to meet the renewable energy obligation but only after on-site and off-site options are found not cost-effective. Unbundled RECs are subject to a 5:1 procurement factor for projects subject to the 90% reduction requirement.
4. In all cases, the renewable energy generating source must meet the definition of renewable energy established in Minnesota Statutes, section 216B.1691.

Document Final Passive Certification

The project must pursue final certification with PHI or Phius, and documentation of all final certification activities and results must be provided to the SB 2030 review team. These include, but are not limited to, airtightness test results, construction verification reports, HVAC system balancing and commissioning reports, corollary program compliance reports (e.g. DOE Efficient New Homes, EPA Indoor airPLUS, etc) and a final certification determination from PHI or Phius.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

If certification is not achieved, cost-effective, non-destructive remediation steps for non-compliant items must be taken and documented for the SB 2030 review team as well. If non-compliant items affect the energy consumption of the building, the passive certification model must be updated and a new annual energy consumption value must be calculated. If the building's annual energy consumption changes by more than 10%, the renewable energy requirement must be recalculated using the updated annual energy consumption. If annual energy consumption increases, any additional renewable energy required for compliance must be provided. For projects subject to the 90% reduction requirement (2025 and later), 50% of any increase in annual energy consumption must be added to the project's renewable energy requirement.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

DOE Efficient New Homes Compliance Path

Projects pursuing DOE Efficient New Homes certification follow a comprehensive set of energy-efficiency, building-performance, and third-party verification requirements. Requiring these projects to also perform additional project-specific SB 2030 cost-effectiveness analyses can duplicate analysis and documentation already incorporated into the DOE Efficient New Homes process. The DOE Efficient New Homes Compliance Path provides an alternative approach that demonstrates compliance with the SB 2030 program while reducing this additional effort.

Projects using this compliance path demonstrate compliance by estimating project energy performance, achieving certification under the applicable DOE Efficient New Homes program, and evaluating renewable energy resources consistent with the SB 2030 energy hierarchy. This approach permits project teams pursuing DOE Efficient New Homes certification to forgo the project-specific measure-by-measure cost-effectiveness evaluation required of projects using the standard SB 2030 process while maintaining the intent of the SB 2030 program.

The method outlined here is applicable to projects eligible for certification under an applicable DOE Efficient New Homes program. Eligibility for this SB 2030 compliance path is not limited by building gross square footage. Projects may continue to use the version of the DOE Efficient New Homes Compliance Path in effect when schematic design (or equivalent) began, even if subsequent versions are later published.

Applicability

Projects using this path must be eligible for and pursue certification under the DOE Efficient New Homes program applicable to the project. Where portions of the SB 2030 project are not included within the scope of DOE Efficient New Homes certification, all conditioned, indirectly conditioned, and semiheated spaces required by SB 2030 must still be included when estimating project energy performance and must demonstrate compliance through an approved SB 2030 compliance method. One common example of this is a multifamily building with commercial space. If the commercial space is less than 20,000 gsf, the commercial portion of the building may demonstrate SB 2030 compliance using either the Small Building Compliance Path or standard cost-effectiveness modeling. If the commercial space is 20,000 gsf or greater, it must demonstrate SB 2030 compliance using standard cost-effectiveness modeling. In both cases, the rest of the building (the residential portion) shall be certified under the Efficient New Homes Program. In all cases, energy consumption associated with spaces outside the certification scope, such as commercial spaces and parking garages, shall be estimated using supplemental energy modeling or another calculation methodology approved by the SB 2030 review team.

Project teams electing to use the DOE Efficient New Homes Compliance Path must meet all requirements outlined in this section and indicate use of this compliance path in Guidelines E1A&B in the B3 Guidelines Tracking Tool.

Compliance Overview

The SB 2030 DOE Efficient New Homes Compliance Path consists of four steps:

1. Establish the SB 2030 Standard.
2. Achieve DOE Efficient New Homes certification.
3. Estimate project energy performance.
4. Evaluate and implement renewable energy.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Establishing the SB 2030 Standard

Project teams using the DOE Efficient New Homes Compliance Path must complete the online Energy Standard Tool at the Predesign, Design, and Final Design phases in the B3 Guidelines Tracking Tool. More information on the use of the Energy Standard Tool can be found in the Building Performance Evaluation Guide.

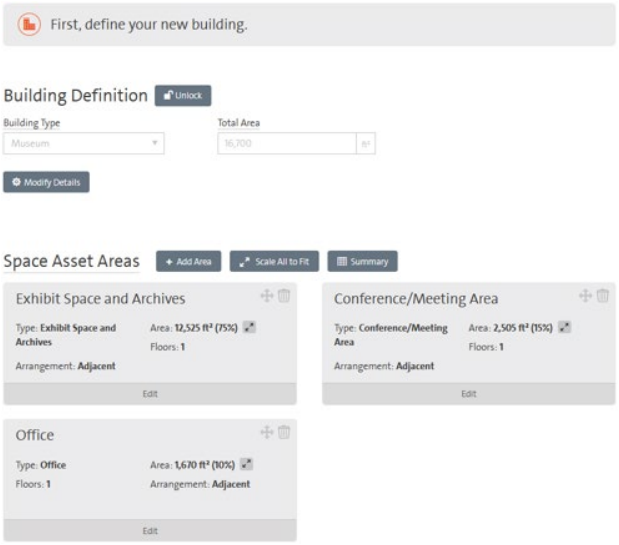


Figure 4: Energy Standard Tool space area inputs and detailed inputs

Buildings are characterized using “Space Asset Areas” which represent programmatic functions of a building and include associated spaces such as corridors. These space asset areas have default characteristics that can be updated as the design progresses. Further training resources can be found in the Net Energy Optimizer training materials (the Energy Standard Tool uses the same modeling engine and space characterization as Willdan’s Net Energy Optimizer tool).

Use at the Predesign phase should be based on preliminary modeling work. Use at the Design phase should align with the official "Projected Report" and finished construction drawings and specifications. Finally, use at the Final Design phase should correspond to results from the "Final Report" and completed certification. In this case, this entails that the Final Design phase of the tracking tool may not be completed until after construction is finished, and final verification and blower door tests have been completed. Note that the Energy Standard Tool (EST) model used to establish the SB 2030 Energy and Carbon standards must represent the entire SB 2030 project, including any indirectly conditioned or semi-heated spaces, as well as any commercial spaces not represented in the DOE Efficient New Homes models.

Estimate Project Energy Performance

Projects shall estimate annual building energy performance by modeling the proposed design using the energy model developed for DOE Efficient New Homes certification or other approved modeling software.

The energy model shall represent the complete SB 2030 project. Where conditioned, indirectly conditioned, or semiheated spaces required to be included under SB 2030 are not represented in the DOE Efficient New Homes model, supplemental modeling or calculations shall be provided and added to the modeled project energy consumption.

The resulting model (or model plus auxiliary calculations) establishes project performance relative to the applicable SB 2030 Energy and Carbon Standards. The project must provide sufficient qualifying renewable energy to meet both standards.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Renewable Energy

Renewable energy shall be evaluated and implemented using the same hierarchy required for all SB 2030 projects: first on-site renewable energy resources, followed by renewable energy resources within the building owner's portfolio, and finally qualifying off-site renewable energy procurement options.

On-site renewable energy must be evaluated/implemented pursuant to the following intent:

1. Meet the SB 2030 Energy Standard with on-site resources.
2. Evaluate the maximum potential energy production of the site using commercially available technology.
3. Establish the largest system considered cost-effective and available on the project site.

Renewable energy resources contributing toward compliance with the SB 2030 Standard shall meet the following requirements:

1. RECs associated with renewable energy used for compliance must be retained and retired by or on behalf of the project.
2. Third-party ownership of a renewable energy system is permitted if the associated RECs are retained and retired by or on behalf of the project and a power purchase agreement is entered into for a period of at least 10 years.
3. Bulk purchases of unbundled RECs may be used to meet the renewable energy obligation but only after on-site and off-site options are found not cost-effective. Unbundled RECs are subject to a 5:1 procurement factor for projects subject to the 90% reduction requirement.
4. In all cases, the renewable energy generating source must meet the definition of renewable energy established in Minnesota Statutes, section 216B.1691.

Document Final DOE Efficient New Homes Certification

Projects shall pursue final certification under the applicable DOE Efficient New Homes program and meet all requirements associated with the applicable program version including any corollary program certifications such as EPA Indoor airPLUS or WaterSense. The documentation provided must demonstrate compliance with applicable mandatory, performance testing, on-site verification, and certification requirements. Documentation demonstrating progress toward certification shall be provided at applicable B3 Guidelines submissions. Final certification documentation shall be submitted to the SB 2030 review team when available.

Equipment and Fixture Requirements

Projects using this path shall meet the equipment and fixture requirements of the applicable DOE Efficient New Homes program. In addition, where the SB 2030 program establishes requirements that are more stringent than or are not addressed by the DOE Efficient New Homes program, the applicable SB 2030 requirements shall also be met.

DOE Efficient New Homes certification serves as the energy-efficiency compliance requirement for this SB 2030 path. Projects using this path are not required to complete the project-specific, measure-by-measure energy-efficiency cost-effectiveness analysis required under the standard SB 2030 process. If certification is not achieved, cost-effective, non-destructive remediation steps for non-compliant items must be taken and documented for the SB 2030 review team as well. If non-compliant items affect the energy consumption of the building, the energy model(s) must be updated and a new annual energy consumption value must be calculated. If the building's annual energy consumption changes by more than 10%, the renewable energy requirement must be recalculated using the updated annual energy consumption. If annual energy consumption increases, any additional renewable energy required for compliance must be provided.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Alternative Baseline Method: ASHRAE 90.1 Appendix G

For eligible building types, project teams may use an ASHRAE Standard 90.1 Appendix G Performance Rating Method (PRM) energy model as the basis for demonstrating compliance with the SB 2030 Energy and Carbon Standards. This method is intended to reduce duplicate modeling effort for projects that are already developing Appendix G models for code compliance, utility programs, or green building certification. This method modifies only the baseline methodology used to establish and demonstrate compliance with the SB 2030 Energy and Carbon Standards. Projects remain subject to all other applicable SB 2030 requirements, including cost-effectiveness evaluation, the SB 2030 energy hierarchy, renewable energy requirements, metering, documentation, and operational energy reporting.

Eligibility for this method is limited to the building types for which translation factors are provided in Tables 2 and 3.

Compliance Process

1. Develop the proposed building model.
   The project team shall develop the proposed (as-designed) building energy model in accordance with the applicable SB 2030 modeling requirements.
2. Develop the Appendix G baseline model.
   Using the same proposed building model, the project team shall develop the Appendix G baseline model in accordance with the ASHRAE Standard 90.1 edition identified under Applicable Appendix G Version below. The model shall establish the proposed building and baseline Energy Use Intensity (EUI) and annual carbon emissions.
3. Translate the Appendix G baseline to an SB 2030 baseline.
   The Appendix G baseline shall be converted to an equivalent SB 2030 baseline by multiplying the Appendix G baseline EUI and annual carbon emissions by the applicable Energy Use Intensity and carbon translation factors, respectively, provided in Tables 2 and 3.
4. Determine compliance.
   The translated SB 2030 baseline shall be reduced by the applicable SB 2030 performance requirement (80% for projects beginning schematic design before January 1, 2025, or 90% for projects beginning schematic design on or after January 1, 2025) to establish the project's SB 2030 Energy and Carbon Standards. Compliance shall be determined by comparing the proposed building performance to the resulting SB 2030 Energy and Carbon Standards.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Translation Factors

The SB 2030 program has developed translation factors using equivalent building models created in the SB 2030 Energy Standard Tool (EST). These factors convert Appendix G baseline performance to equivalent SB 2030 baseline performance and are intended solely for use with the eligible building types identified in Tables 2 and 3. These translation factors are relative to ASHRAE 90.1-2019 and will be updated with newer code changes.

Building Type	**Appendix G to SB 2030 Energy Use Intensity Translation Factors**
High-Rise Apartment	1.46
Hospital	1.40
Large Hotel	1.53
Large Office	1.79
Low-Rise Apartment	1.40
Medium Office	1.77
Mid-Rise Apartment	1.43
Outpatient Healthcare	1.42
Primary School	1.61
Secondary School	1.54
Small Office	1.55
Stand-alone Retail	1.50
Warehouse (non-refrigerated)	1.31

Table 2: Appendix G to SB 2030 Energy Use Intensity Translation Factors

Building Type	**Appendix G to SB 2030 Carbon Translation Factors**
High-Rise Apartment	1.05
Hospital	1.02
Large Hotel	1.02
Large Office	0.95
Low-Rise Apartment	1.04
Medium Office	0.96
Mid-Rise Apartment	1.05
Outpatient Healthcare	0.91
Primary School	1.15
Secondary School	1.11
Small Office	0.92
Stand-alone Retail	0.84
Warehouse (non-refrigerated)	0.76

Table 3: Appendix G to SB 2030 Carbon Translation Factors

Applicable Appendix G Version

Projects shall use the stable baseline methodology contained in the most recently published edition of ASHRAE Standard 90.1 available at the project's schematic design start (or equivalent).

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Alternative Baseline Method: Energy Cost Budget (ECB)

For eligible building types, project teams may use an Energy Cost Budget (ECB) model as the basis for demonstrating compliance with the SB 2030 Energy and Carbon Standards. This method is intended to reduce duplicate modeling effort for projects that are already developing ECB models for compliance with the Minnesota Energy Code. This method modifies only the baseline methodology used to establish and demonstrate compliance with the SB 2030 Energy and Carbon Standards. Projects remain subject to all other applicable SB 2030 requirements, including cost-effectiveness evaluation, the SB 2030 energy hierarchy, renewable energy requirements, metering, documentation, and operational energy reporting.

Eligibility for this method is limited to the building types for which translation factors are provided in Tables 4 and 5.

Compliance Process

1. Develop the proposed building model.
   The project team shall develop the proposed (as-designed) building energy model in accordance with the applicable SB 2030 modeling requirements.
2. Develop the ECB baseline model.
   Using the same proposed building model, the project team shall develop the ECB baseline model in accordance with the applicable Minnesota Energy Code. The model shall establish the proposed building and baseline Energy Use Intensity (EUI) and annual carbon emissions.
3. Translate the ECB baseline to an SB 2030 baseline.
   The ECB baseline shall be converted to an equivalent SB 2030 baseline by multiplying the ECB baseline EUI and annual carbon emissions by the applicable Energy Use Intensity and carbon translation factors, respectively, provided in Tables 4 and 5.
4. Determine compliance.
   The translated SB 2030 baseline shall be reduced by the applicable SB 2030 performance requirement (80% for projects beginning schematic design before January 1, 2025, or 90% for projects beginning schematic design on or after January 1, 2025) to establish the project's SB 2030 Energy and Carbon Standards. Compliance shall be determined by comparing the proposed building performance to the resulting SB 2030 Energy and Carbon Standards.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026

Translation Factors

The SB 2030 Program has developed translation factors using equivalent building models created in the SB 2030 Energy Standard Tool (EST). These factors convert ECB baseline performance to equivalent SB 2030 baseline performance and are intended solely for use with the eligible building types identified in Tables 4 and 5. These translation factors are relative to ASHRAE 90.1-2019 and will be updated with newer code changes.

Building Type	**ECB to SB 2030 Energy Use Intensity Translation Factors**
High-Rise Apartment	2.49
Hospital	2.68
Large Hotel	3.27
Large Office	2.69
Low-Rise Apartment	2.33
Medium Office	2.71
Mid-Rise Apartment	2.45
Outpatient Healthcare	2.58
Primary School	3.40
Secondary School	3.45
Small Office	2.46
Stand-alone Retail	3.22
Warehouse (non-refrigerated)	2.08

Table 4: ECB to SB 2030 Energy Use Intensity Translation Factors

Building Type	**ECB to SB 2030 Carbon Translation Factors**
High-Rise Apartment	1.77
Hospital	1.93
Large Hotel	2.18
Large Office	1.44
Low-Rise Apartment	1.70
Medium Office	1.47
Mid-Rise Apartment	1.77
Outpatient Healthcare	1.62
Primary School	2.41
Secondary School	2.46
Small Office	1.46
Stand-alone Retail	1.81
Warehouse (non-refrigerated)	1.21

Table 5: ECB to SB 2030 Carbon Translation Factors

Applicable Energy Code

Projects shall develop the ECB baseline using the edition of the Minnesota Energy Code applicable to the project.

© Regents of the University of Minnesota, Twin Cities Campus, College of Design. All rights reserved. 2026