

**Proposal:**

ACC proposes that on-site renewable power generation only be included in the 6<sup>th</sup> Edition of the Florida Building Code **IF** the building thermal envelope is adequately protected as it is crucial that the envelope with its long service life and costly retrofit potential be done right at time of initial construction. Therefore, we propose the allowance of unlimited on-site renewable power generation be allowed in the ERI calculation only **IF** the envelope backstop including Solar Heat Gain Coefficient is set at the prescriptive envelope level of the currently enacted Florida Building Code (per Tables R402.1.1 and R402.1.3\*). We further propose that homes that do not utilize on-site renewable power generation to continue to use the 2009 IECC prescriptive backstop for the envelope (as currently required under Section R406.2 of the 2015 International Energy Conservation Code).

*\*Table references to be correlated by Florida Building Commission staff.*

*Modify R406.2 of the 2015 IECC to read as follows for the 6<sup>th</sup> Edition of the FBC:*

**R406.2 Mandatory requirements.** Compliance with this Section requires that the mandatory provisions identified in Section R401.2 and R403.5.3 be met. When on-site renewable power generation is used to comply with Section R406, the building thermal envelope shall meet or exceed the efficiency levels including Solar Heat Gain Coefficient in Tables R402.1.2 or R402.1.4\* of this code. When on-site renewable power generation is not used to comply with Section R406, the building thermal envelope shall meet or exceed the efficiency levels including Solar Heat Gain Coefficient in Tables R402.1.1 or R402.1.3 of the 2009 International Energy Conservation Code.

**Exception:** Supply and return ducts not completely inside the building thermal envelope shall be insulated to an R-value of not less than R-6.

*\*Table references to be correlated by Florida Building Commission staff.*

**Reasoning statement:**

First, the use of onsite renewable power generation in the calculation of an ERI score is not (and has never previously been) recognized as part of the current residential energy code in Florida. This fact is obvious because the Florida Legislature has directed the Florida Building Commission, in continuing its current adoption process of the 2015 IECC for the 6<sup>th</sup> Edition Code, to consider whether the building code should allow for the use of onsite renewable power generation for some period going forward. Allowing onsite renewable power generation under the ERI compliance alternative pathway is a fundamental change in the scope of the state's residential energy conservation code, which has previously never recognized power generation. Such a change should be made cautiously and responsibly. The proper way to implement a scoping change of that magnitude is to do so in the context of a complete code update process,

where all potentially connected issues can be openly addressed for the next version of the code. Therefore, consistent with the Legislature’s directive to “continue its current adoption process of the 2015 IECC, and determine by October 1, 2016, whether onsite renewable power generation may be used for compliance,” the use of onsite renewable power generation should only be considered for the 6<sup>th</sup> Edition of the Florida Building Code.

The development of the 5<sup>th</sup> Edition of the Florida Building Code was concluded several years ago. ACC believes that the use of onsite renewable power generation was not proposed, discussed or contemplated during this development process. Therefore, it is inappropriate to retroactively amend the 5<sup>th</sup> Edition without the benefit of a full rulemaking process.

Second, the use of onsite renewable power generation under the ERI compliance pathway can cannibalize energy efficiency of the building envelope. Energy efficient building envelopes deliver energy savings, comfort and durability to Florida homeowners. Energy efficiency should not be sacrificed just because the power used in the home may be generated from an on-site source, renewable or not. Moreover, energy efficient building envelopes deliver reliable performance over the lifetime of the building. Therefore, efficiency requirements must be protected and the use of onsite renewable power generation which has a shorter service life must be limited. The use of any energy resource should be limited regardless of its source. Without acknowledging this fact there will be no path to future net zero buildings.

Third, the proper way to implement the use of onsite renewable power generation into future code editions and protect the thermal envelope is to require that homes using onsite power generation in the ERI score calculation also have a reasonably efficient building thermal envelope. This commonsense approach provides an easily enforceable method of allowing solar and requiring that homes be built with building envelopes that will stand the test of time. This proposal would continue to apply the 2009 IECC prescriptive requirements as a trade-off backstop for homes built to the ERI; however, for homes that use onsite renewable power generation as part of the ERI calculation, an enhanced envelope backstop – based on the current code’s Tables R402.1.2 and R402.1.4\* should apply, to ensure that whatever decisions are made by future owners of the home, the home will continue to perform with a reasonable level of efficiency.

*\*Table references to be correlated by Florida Building Commission staff.*