

Feb 23, 2021



RE: NEEA comments on ENERGYSTAR v6.0 Final Draft

Dear Abi,

Thank you for the opportunity to review and comment on the Final Draft Version 6.0 ENERGYSTAR requirements product specification for Air Source Heat Pump and Central Air Conditioning Equipment. The new specification is a strong improvement to the current version and NEEA supports the new version.

Our comments/suggestions are as follows (in order as they appear in the doc):

- Training – add reference to manual D as ductwork design, air sealing and insulation can profoundly change the distribution and delivered air temperature for a CAC/HP system.
- Definitions should include heating season turn down ratio. These provide valuable information to programs and contractors needed to make informed design and site adaptation decisions. Field and performance simulations have shown these metrics are at least as important to annual energy use and comfort as HSPF as they capture the ability of the unit to avoid cycling losses. TDR = Maximum heating capacity at 17 degrees divided by minimum heating capacity at 47F
- Cold Climate designation should require  $\geq 80\%$  capacity at 5F. The proposed criteria of 70% is not aggressive enough to differentiate products that use flash injection technology to improve cold climate capacity.
- Products with staged or variable capacity designation should be reported. This will improve market awareness of this technology distinction and can be used to determine if future specifications should require this capability.
- Is there a Table 1? The first table shown is Table 2.
- Loss of refrigerant charge sensor should be encouraged (not sure where this should be placed). While this increases cost, A LOC sensor can avoid failure of hardware and complete loss of refrigerant by sending an alert that can be conveyed in connected systems.
- Gas/Electric Packaged Units – future updates to specification should enable these units to achieve cold climate heat pump label. This will require a clearer definition of when gas can be used and perhaps a requirement for simultaneous gas and heat pump operation.
- CCS – NEEA strongly supports including product capabilities to transmit instantaneous power draw as this enables both fault detection as well as estimating achieved energy performance.
- Add definition of SGD (operational state codes table)

If you have any questions, please do not hesitate to call me.

Best Regards,

A handwritten signature in black ink, appearing to read "Christopher Dymond".

**Christopher Dymond**  
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