## Heat Pump Performance Ratings. Why are better ratings so important?

PUBLIC

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Good quality ratings are like glasses

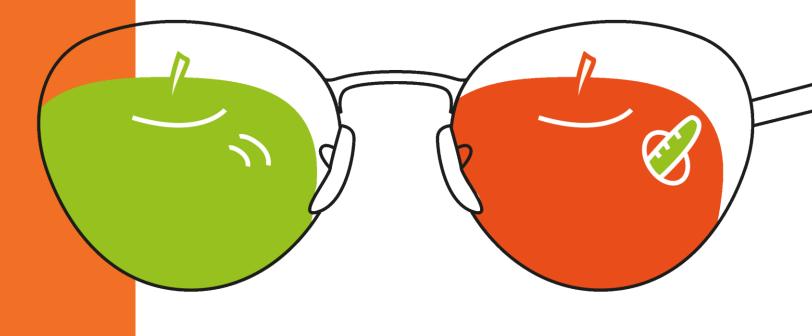
They help you see differences and make informed choices.

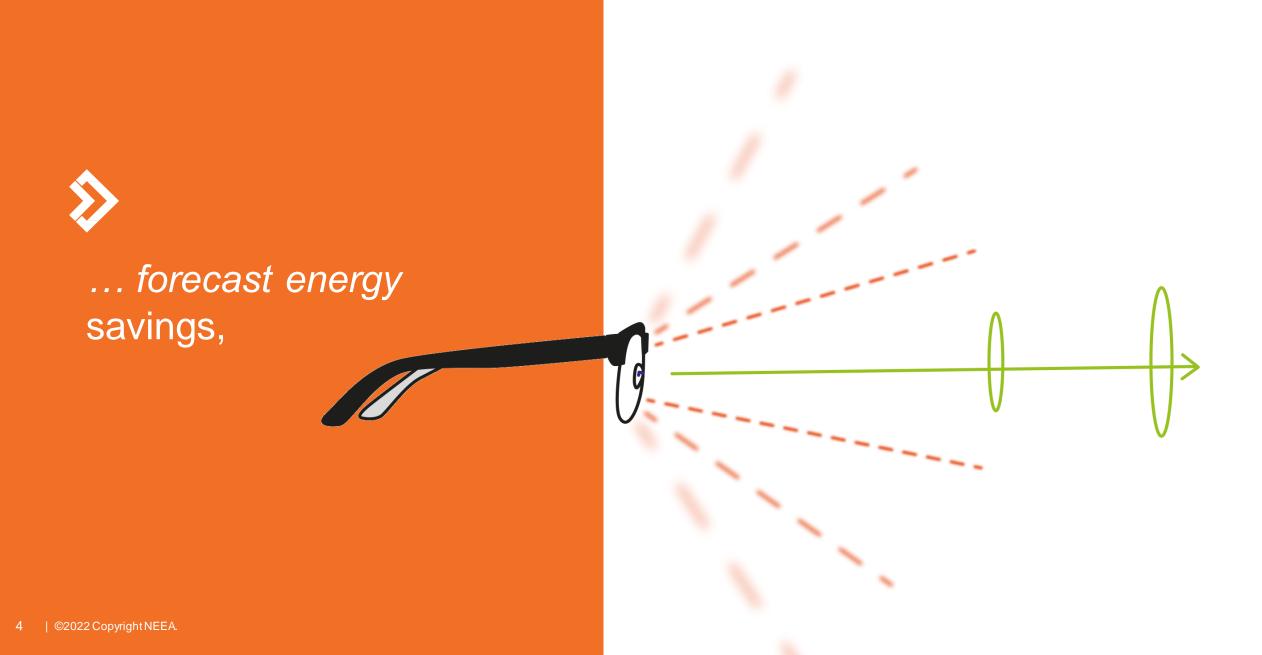




#### Accurate ratings ...

... let us see key details we otherwise might have missed.











...help consumers choose the best product for their home or business,



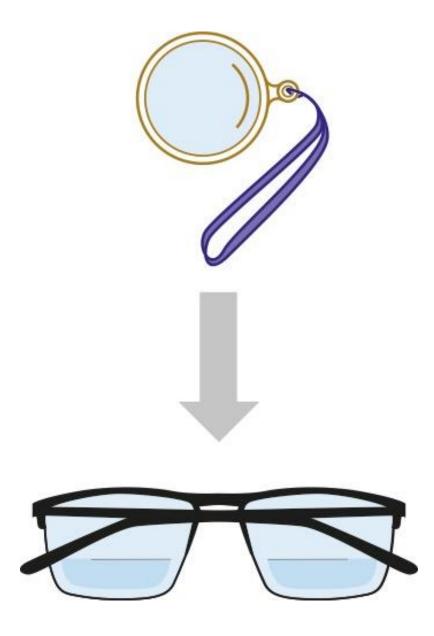








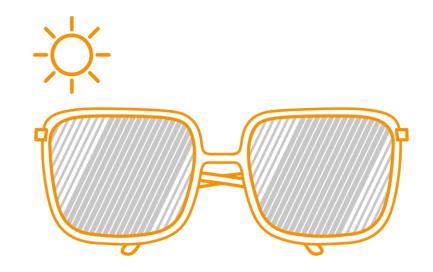
... and encourage manufacturers to improve product performance.

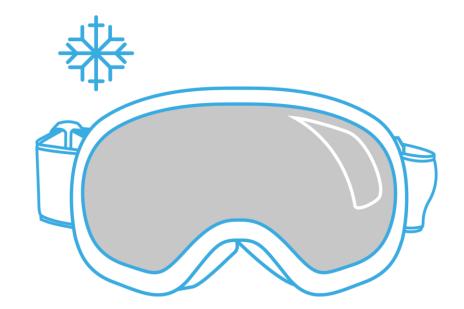


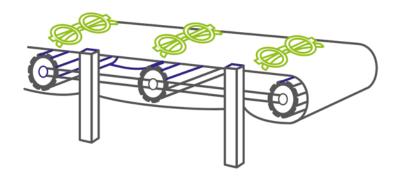
# So, what is a good rating?

It depends who is looking!

Customers, Utilities or Manufacturers A GOOD RATING IS: Easy to understand.

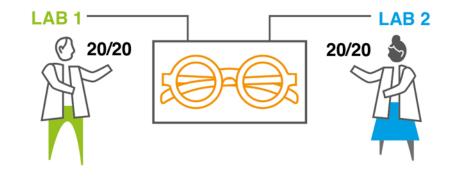






A GOOD RATING IS:

- Repeatable (test to test)
- Reproducible (lab to lab)
- Not too expensive

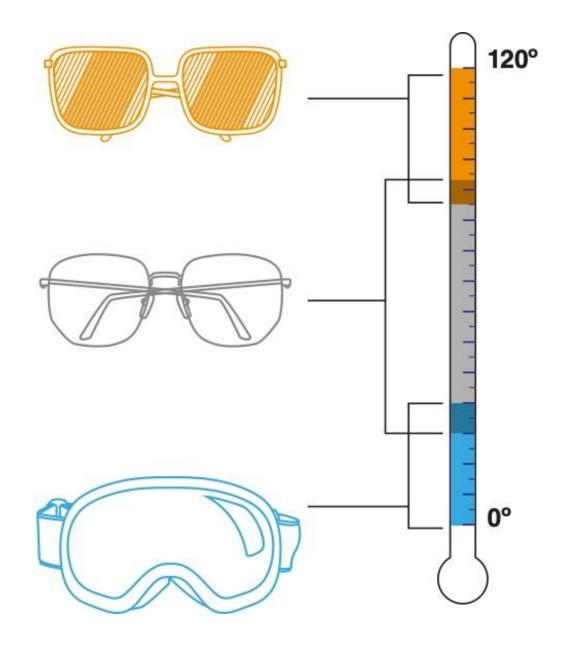




A GOOD RATING IS:

- Representative

This means it is an accurate predictor of in-field performance



## Why change current heat pump rating tests?

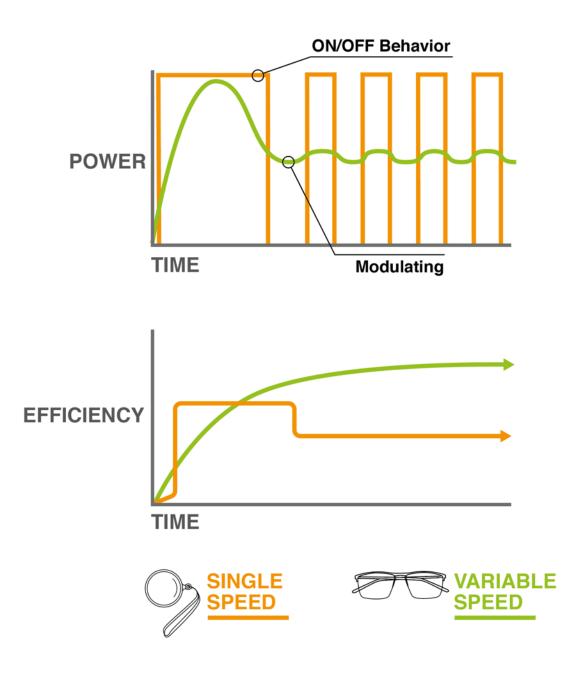
Current ratings do not predict in-field performance accurately

Easy
 Repeatable
 Reproduceable
 Representative

### Old Style vs. New Style

The performance of new style variable speed heat pumps is dynamic

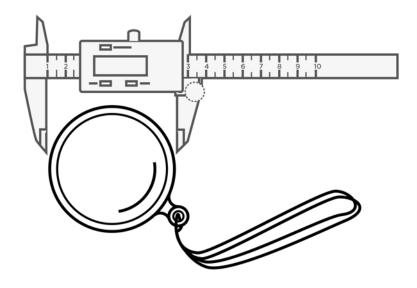
Current tests works well for simple on/off operation

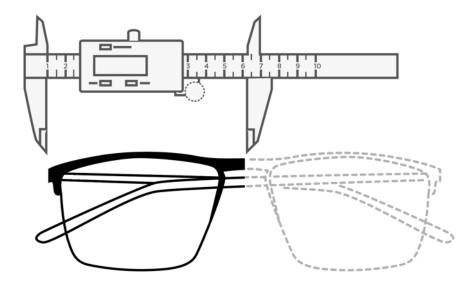




Current tests were designed for old style heat pumps

*...this only measures* part of the heat pump performance

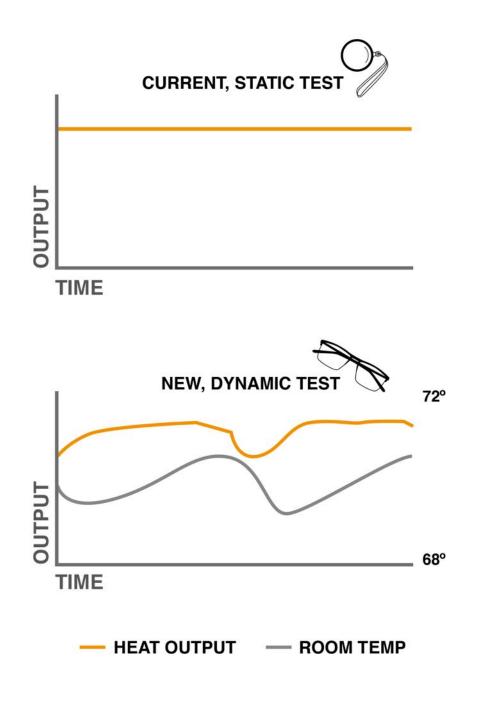




 $\mathbf{\hat{x}}$ 

## Current tests are locked into static test modes

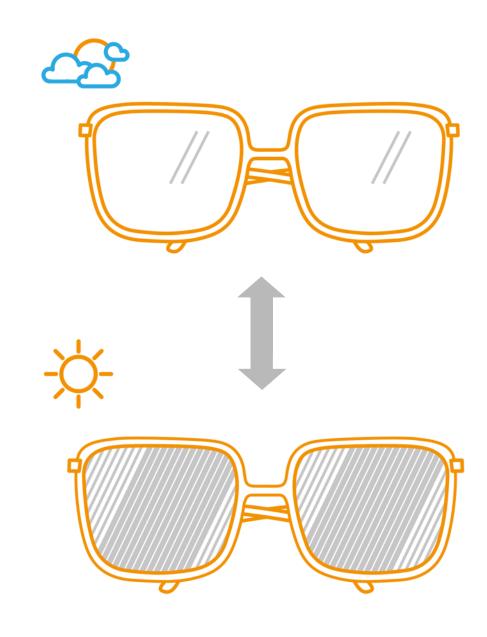
...new test works under realistic, dynamic conditions, using the heat pump's own controls



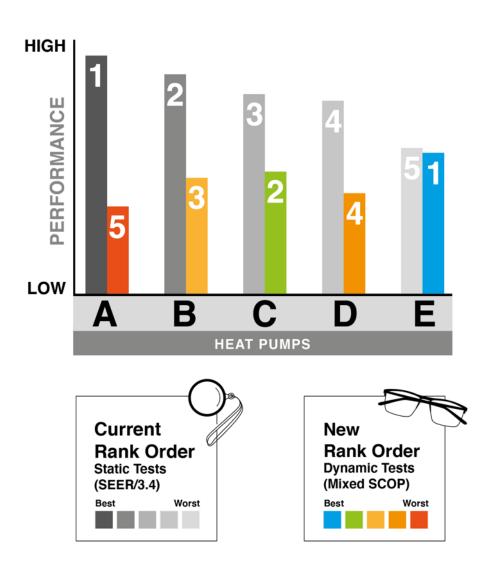
 $\mathbf{\hat{x}}$ 

## Current tests apply to only one climate

...new tests will predict how the heat pump will perform in different climates



RANKING ORDER CHANGED



 $\mathbf{\hat{x}}$ 

### In a lab test comparison (shown here)

...new tests revealed big changes in ranking & performance

(Reference: Why Metrics Matter paper)

#### How does this benefit you?

Good quality ratings help everyone to make better decisions.









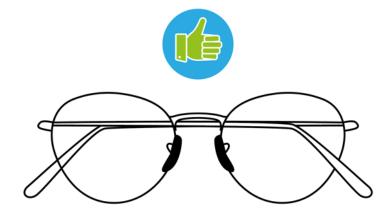
#### Satisfied customers

Machines that are sold are correct for the climate



Low performing manufacturers are encouraged to improve.



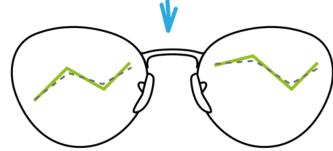


Consumers get the comfort, quality and savings they were expecting.

#### Program Goals are Met

#### More Accurate Carbon and Energy Forecasting





Program Savings are REAL



#### What can you do?

Read "Why Metrics Matter" Full Report

NEEA reports

Use climate specific, representative metrics (don't rely on HSPF and SEER) 3

Join the Advanced Heat Pump Coalition

Click here



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