

# ECA Housing Summit 2018

CSIRO housing and energy research and data

Anthony Wright | Research Lead, Building Simulation Assessment and Communication  
5 September 2018

ENERGY  
[www.csiro.au](http://www.csiro.au)



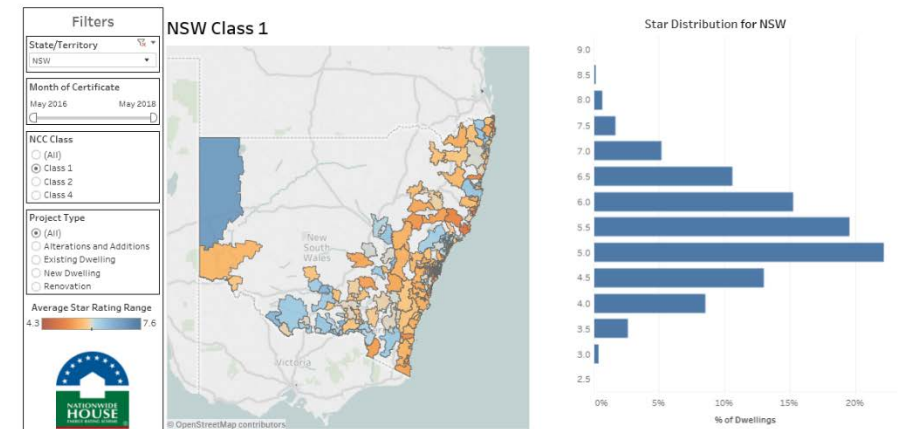
# CSIRO research into Energy & Housing

- Building physics research
- House energy rating software development
- National Residential Property Database
- Liveability Real Estate
- Energy Use Data Model (EUDM)
- CRCLCL Research
  - Online training for real estate agents
  - Energy Fit Homes
  - Housing Industry Roadmap
  - Build4Life
  
  - And a set of steak knives



The energy efficiency requirements within the NCC is given legal effect by relevant legislation in each state and territory, which essentially 'call-up' the NCC to fulfill certain technical requirements for new buildings and new building work, such as alterations or additions. More information is available from state or territory building regulators.

In New South Wales, the online [Building Sustainability Index \(BASIX\)](#) system replaces the NCC energy efficiency requirements and adds other aspects of sustainable development. BASIX accepts NatHERS software results as one way of meeting its separate targets for the heating and cooling performance of the building.

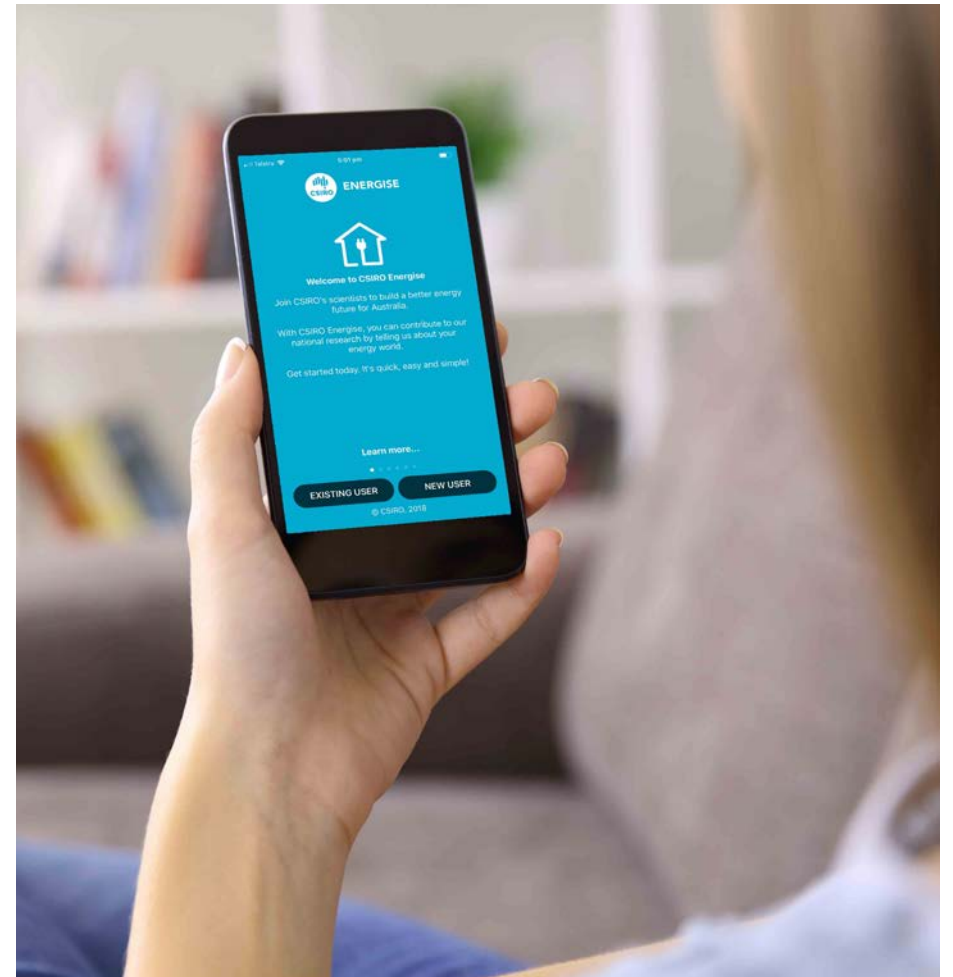


# What do we know (that no-one else knows)?

- Big picture, predictive information on new housing (what will be built in the next 6 -24 months)
- View of what has been built recently (last year or so)
- View of how much energy households have used over recent years
- Residential consumption archetypes (soon)
- Access to on-the-spot-insights via Energise

## What's next?

- Predictive demand modelling
- 'As-built' building stock model
- Design optimisation via machine learning
- More research on occupant behaviour



# New Insights

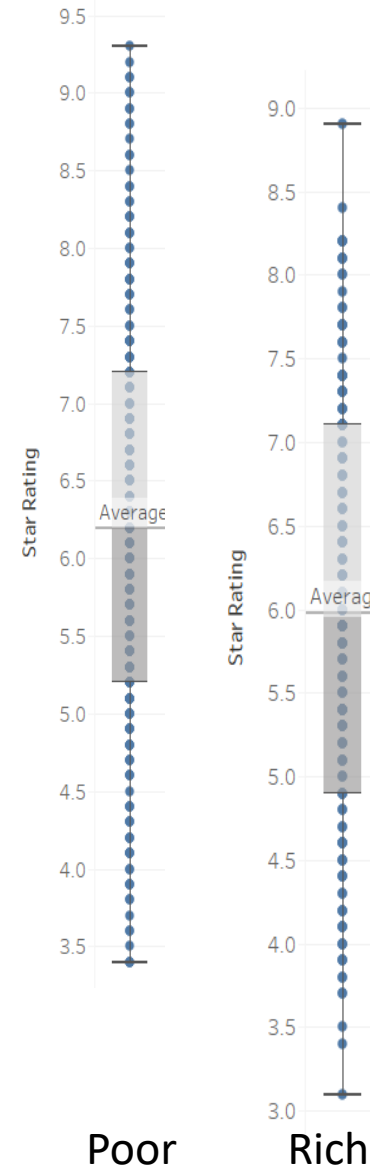
Question.

Is new housing in low-socioeconomic areas likely to perform worse (thermally) than housing new housing in richer areas?

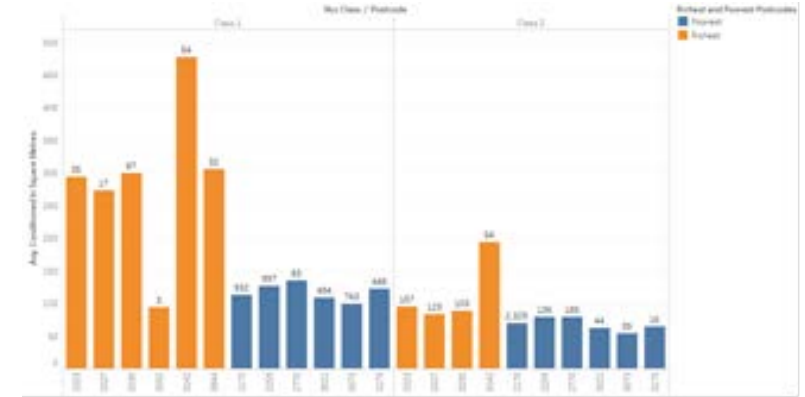
Answer.

Unexpectedly, it seems at first glance that poorer areas might benefit disproportionately from energy efficiency standards, primarily because richer areas push glazing to the limits of compliance.

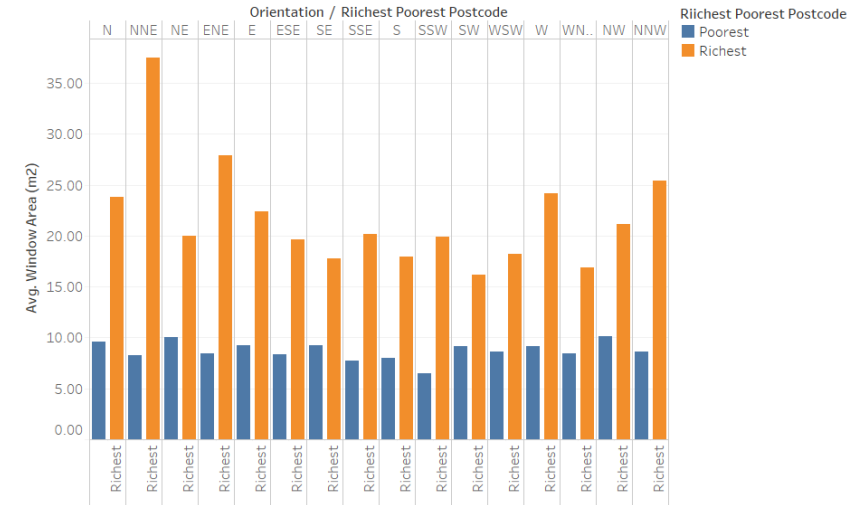
## Star Rating Spread



## Dwelling Size



## Window m<sup>2</sup>



# Thank you

## ENERGY

Anthony Wright  
Research Lead, Building Simulation Assessment &  
Communication

t +61 3 9662 7349

e [Anthony.wright@csiro.au](mailto:Anthony.wright@csiro.au)

w [www.csiro.au/lorem](http://www.csiro.au/lorem)

ADD BUSINESS UNIT/FLAGSHIP NAME

[www.csiro.au](http://www.csiro.au)

