

## INGENIA GREEN STAR HOMES RESEARCH

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### WHAT IS THE RESEARCH ABOUT?

- Ingenia Lifestyle commissioned climate technology consultancy Kinesis to analyse the financial and environmental benefits of a Green Star Home compared to an original 30 year old home with a gas connection for heating, cooking and hot water.
- To provide a like-for-like comparison, both houses are single storey, standalone homes designed for 2 people, with 3 bedrooms and a total floor area of 175.5 sqm. The 30 year old home is assumed to have a 5-star NatHERS thermal performance rating while the Green Star Home has a minimum 7.5-star NatHERS rating.
- This approach controls any physical differences in the homes and allows for effective sustainability performance comparison.
- The analysis, *'Green Star Home Sustainability Analysis Report,' October 2024*, was undertaken using CCAP Precinct, a strategic infrastructure and sustainability design tool of key performance metrics of precincts.

### WHAT ARE THE KEY FINDINGS?

#### Cost Savings for Residents

- Residents can save \$2,066–\$2,218 a year on energy and water bills in a Green Star Home when compared to an original 30-year-old home with gas. Over 10 years, this equates to \$23,684–\$25,423 in savings.\*\*

#### Net Zero Achievement

- The Green Star Homes achieve a 100% reduction in operational greenhouse gas emissions compared to an original 30-year old home with gas, making the Green Star Home Net Zero. This is equivalent to avoiding over 3,100 car trips annually for each home.\*
- A Net Zero home generates enough renewable energy to power all estimated regulated loads as well as estimated appliance and plug loads. It does not use gas.

#### Sustainability Benefits

- Green Star Homes achieve a 7.5–8-star NatHERS rating, exceeding current minimum energy efficiency standards in the latest National Construction Code (2022).
- 22% reduction in electricity use (from the grid) due to solar power generation and optimum thermal design that reduces the need to use heating or cooling.
- 44% of a Green Star Home's energy demand is met by local solar generation.
- 48% reduction in water consumption from efficient water fixtures and recycled water use.

*\*Based on an average 12.4 km car trip distance of residents in the Whittlesea local government area.*

*\*\*The analysis assumes 3% inflation per annum for 10 years based on RBA projections.*

The full Kinesis analysis is not publicly available due to commercial-in-confidence information contained in the report.