

THE HOUSE WITH NO BILLS

Imagine paying no electricity bills? Hosing developers Mirvac are developing The House with No Bills in the Melbourne suburb of Cheltenham, which - as the name suggests - has no bills!



THE PROBLEM

For young Australia, climate change and housing affordability are some of the biggest concerns. While climate change increasingly threatens our overall quality of life, housing affordability - coupled with rising energy and utility prices - is a growing problem, particularly in our big cities.

HOUSEHOLD UTILITIES ARE THINGS LIKE ELECTRICITY, NATURAL GAS, WATER, AND SEWAGE.

In 2016, Mirvac decided to tackle both issues simultaneously, announcing its plan to create the innovative 'House with No Bills'.



(Image source: <http://www.mirvac.com/Sustainability/House-with-No-Bills/>)

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THE SOLUTION

The House with No Bills is being built in the Melbourne suburb of Cheltenham and will be complete in 2017. It will have three bedrooms, and has been designed to look, feel and operate in the same way as a typical home, with sustainable features having very little impact on how the residents live.

The house will reduce its reliance on electricity in several ways, including increased roof insulation, the use of solar PV panels and batteries, passive solar design, use of LED lighting, and energy efficient appliances. To achieve a zero cost bill, smart meters and monitoring systems will also help the residents keep track of where and how their energy is being used.

FEATURES OF THE HOUSE WITH NO BILLS:

- * INSULATION — IN MANY HOMES INSULATION IS THE MOST PRACTICAL AND COST EFFECTIVE WAY TO MAKE A HOUSE MORE ENERGY EFFICIENT. INSULATION WILL KEEP YOUR HOUSE COOLER IN SUMMER AND WARMER IN WINTER AND CAN SAVE UP TO 40% IN HEATING AND COOLING BILLS.
- * SOLAR PV — PHOTOVOLTAICS (PV) ARE USED AS A WAY OF GENERATING ELECTRICITY BY USING SOLAR CELLS TO CONVERT ENERGY FROM THE SUN INTO A FLOW OF ELECTRONS.
- * PASSIVE SOLAR BUILDING DESIGN REFERS TO DESIGNING WINDOWS, WALLS, AND FLOORS IN A WAY THAT MEANS THEY CAN COLLECT, STORE, AND DISTRIBUTE SOLAR ENERGY AS HEAT IN THE WINTER AND REJECT SOLAR HEAT IN THE SUMMER.
- * LED LIGHTING — LIGHT EMITTING DIODES (LEDs) ARE 4 TO 7 TIMES MORE EFFICIENT THAN THE TYPICAL INCANDESCENT OR HALOGEN EQUIVALENT, AND HAVE A LIFETIME OF 15,000 TO 50,000 HOURS (ABOUT 5 TO 10 TIMES LONGER THAN A STANDARD BULB).
- * SMART METERS — A SMART METER IS AN ELECTRONIC DEVICE THAT RECORDS HOW MUCH ELECTRICAL ENERGY YOU CONSUME COMMUNICATES THAT INFORMATION AT LEAST DAILY BACK TO THE UTILITY FOR MONITORING AND BILLING.

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MORE GOOD NEWS

When complete, this exciting project will set new standards for residential development in Australia. Key elements include:

1. Learning from how people genuinely live

As part of the project, Mirvac will conduct a 12-month study of the residents in The House with No Bills. This will include tracking their energy use and uncovering exactly how average families consume energy, and how the house's design and its sustainable technology relates to this. This information will then be used to determine how Mirvac develops energy efficient homes in the future.

Mirvac is even investigating providing the use of an electric car and bikes for the duration of the study to reduce the homeowners' cost of transport and their associated greenhouse gas emissions.

2. Phase two: zero cost water

Once the initial 12-month study has taken place, phase two of Mirvac's House with No Bills project will focus on opportunities for zero cost water and sewerage in new, greenfield communities.

GREENFIELD — REFERS TO PROJECTS WHERE THERE ARE NO EXISTING BUILDINGS OR INFRASTRUCTURE: IN THE CASE OF THE HOUSE WITH NO BILLS IT MEANS DESIGNING AND BUILDING ON SITES WHERE THERE ARE NO EXISTING HOUSES OR THE ASSOCIATED ENERGY AND WATER INFRASTRUCTURE.

3. Delivering a positive carbon outcome

The House with No Bills is also likely to have a positive carbon outcome, meaning home owners can feed more clean, renewable energy back to the grid than they will consume, to achieve a cost neutral outcome.

THINK NOTHING CAN BE DONE ABOUT CLIMATE CHANGE? THINK AGAIN.

GENERATION YES.