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AusZEH – Reducing the Energy & Carbon Footprint of Housing

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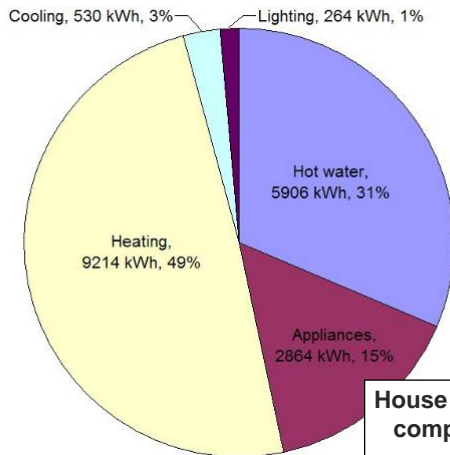
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AusZEH is reducing the carbon emissions in ...

- **New** housing
 - ZEH demo house(s)
 - Design guide & tool for low-carbon & ZEH
- **All** housing to 2020 ... 2050
 - Housing stock carbon foot-printing & 'intervention' options assessment

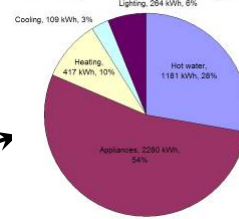
Potential energy demand & GHG emissions reduction of a typical house in Melbourne – now!

Total: 18,779 kWh (7,908 kg CO₂)



Average

Total: 4,251 kWh (4,265 kg CO₂)



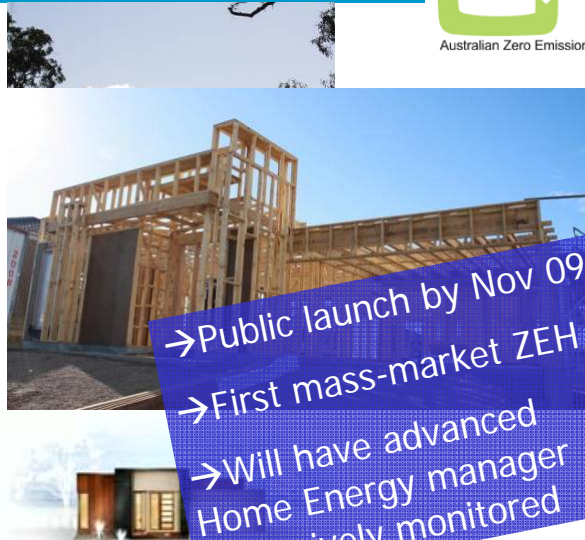
Best

House scenario comparisons	% Energy Demand Reduction	% CO ₂ Emission Reduction
Average to Best	77%	46%

ZEH Demonstration House 1 Melbourne

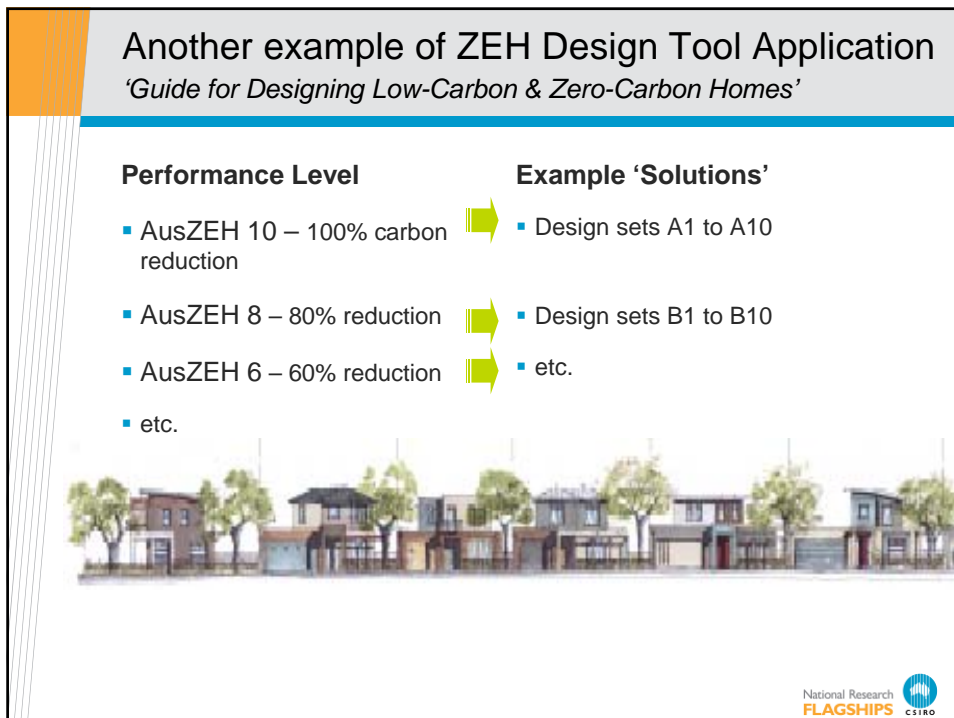
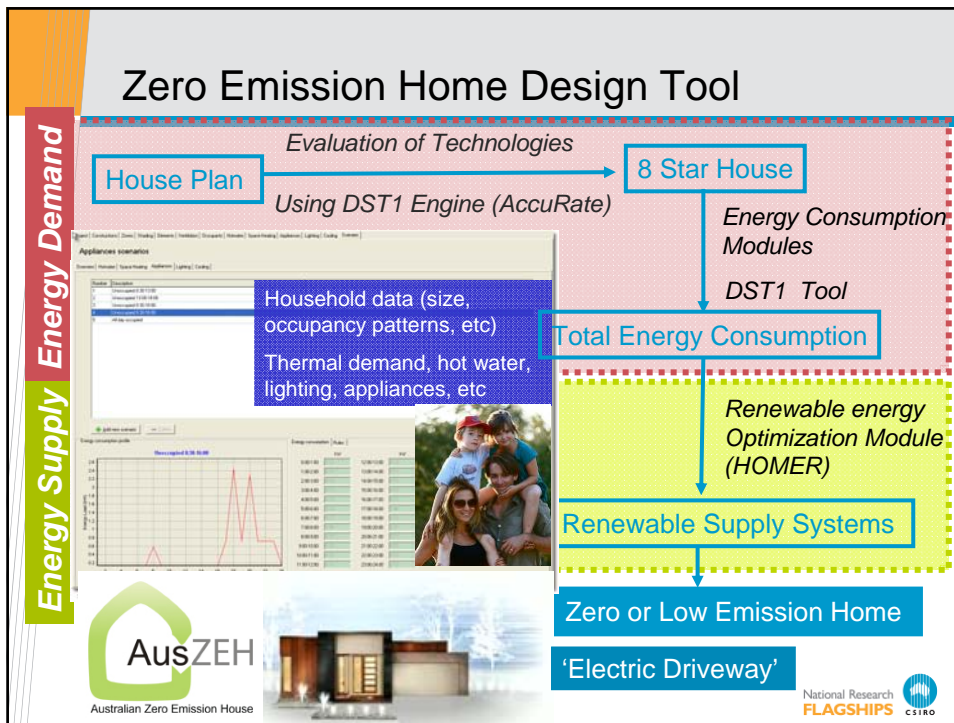


One word, **Delfin**



→ Public launch by Nov 09
 → First mass-market ZEH
 → Will have advanced Home Energy manager + extensively monitored

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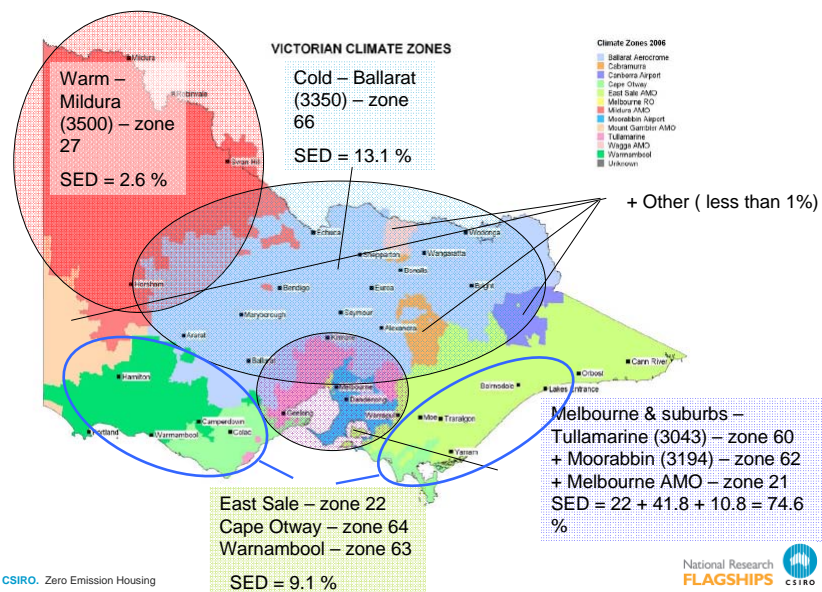


Housing Stock Level – *What ifs*

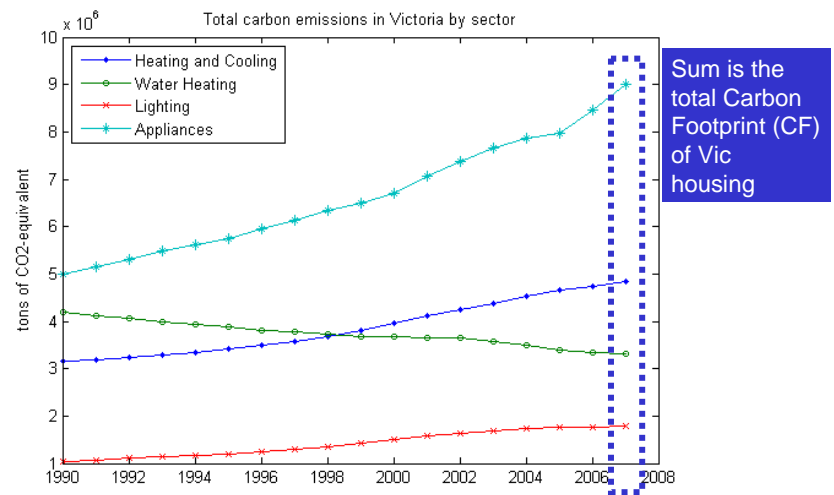
- *What if* we introduced regulations, policies, incentives & technologies over different time frames?
- *What* would be required to bring down Australia's housing stock's carbon footprint to be 5% of 2000 levels in 2020? 60% by 2050?



Overview of residential housing in Victoria

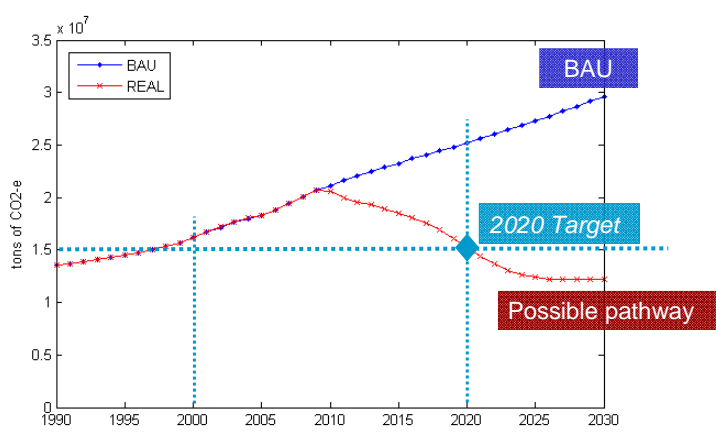


Evolution of carbon emissions by use in Vic housing (to present)



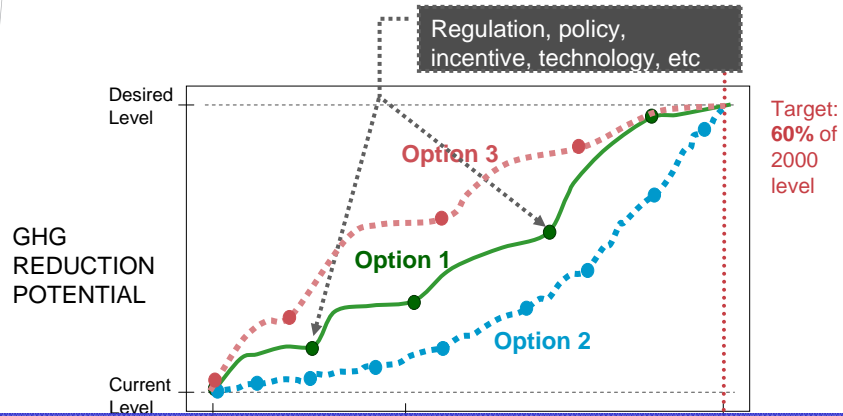
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Scenarios of total carbon emissions in Vic housing BAU vs requirements to meet 2020 target



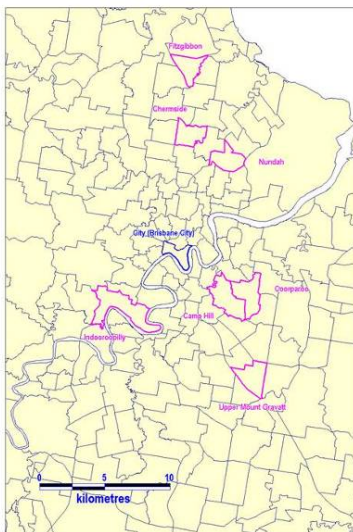
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GHG reduction scenarios using AusZEH Policy Options Tool – Residential housing stock



Assessment → Planning & evaluating GHG emissions reduction schemes for housing stock over time

Case Study: Brisbane City Council and Queensland Government



- Seven Brisbane Suburbs – 25000 houses of varying demographics and house types

Suburb	Separate house	Semi-detached	Units/apartments
Camp Hill	3198	213	323
Chermide	1319	505	1066
Coorparoo	2956	342	2777
Fitzgibbon	889	157	30
Indooroopilly	2278	416	1457
Nundah	1474	508	2007
Upper Mount Gravatt	2422	240	337

- Three Options

- \$1500 rebate for solar hot water
- \$8000 rebate for solar 1.5kw pv, including means test \$100,000 pa

Compared to Business as Usual (BAU) – adoption of technologies w/o the rebates

FLAGSHIP!

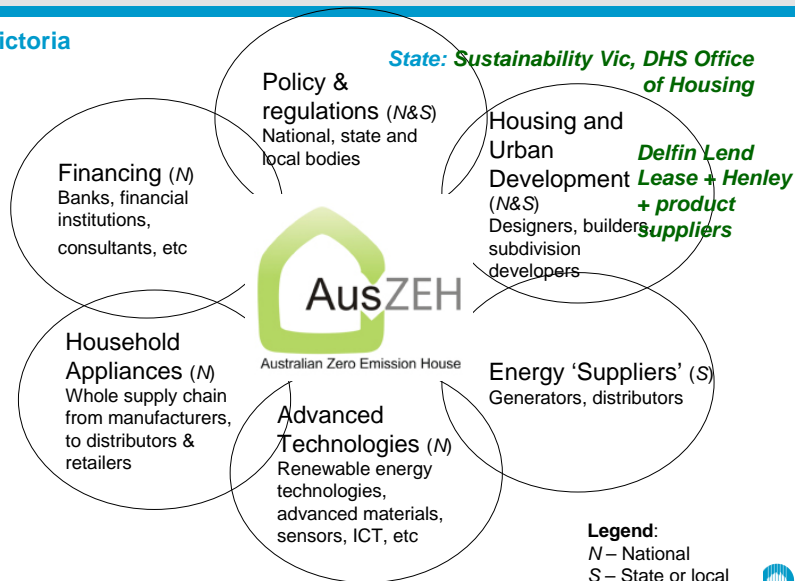
AusZEH Policy Options Tool – Analysis Capability

- **Regulatory & policy options**, e.g. new minimum star ratings for new houses
- **Technology options**, e.g. housing retrofit, efficient appliances, and energy sources such as solar power
- **Incentive schemes**, e.g. rebates introduced at different times
- **Optimisation of policy and technology combinations** that best meet GHG or budget targets at key dates
- Predict the CO2 impacts of different types of **urban development or re-development options**



Consortium to Support a ZEH Ecosystem

Victoria



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