

# Green Building Policies in Australia

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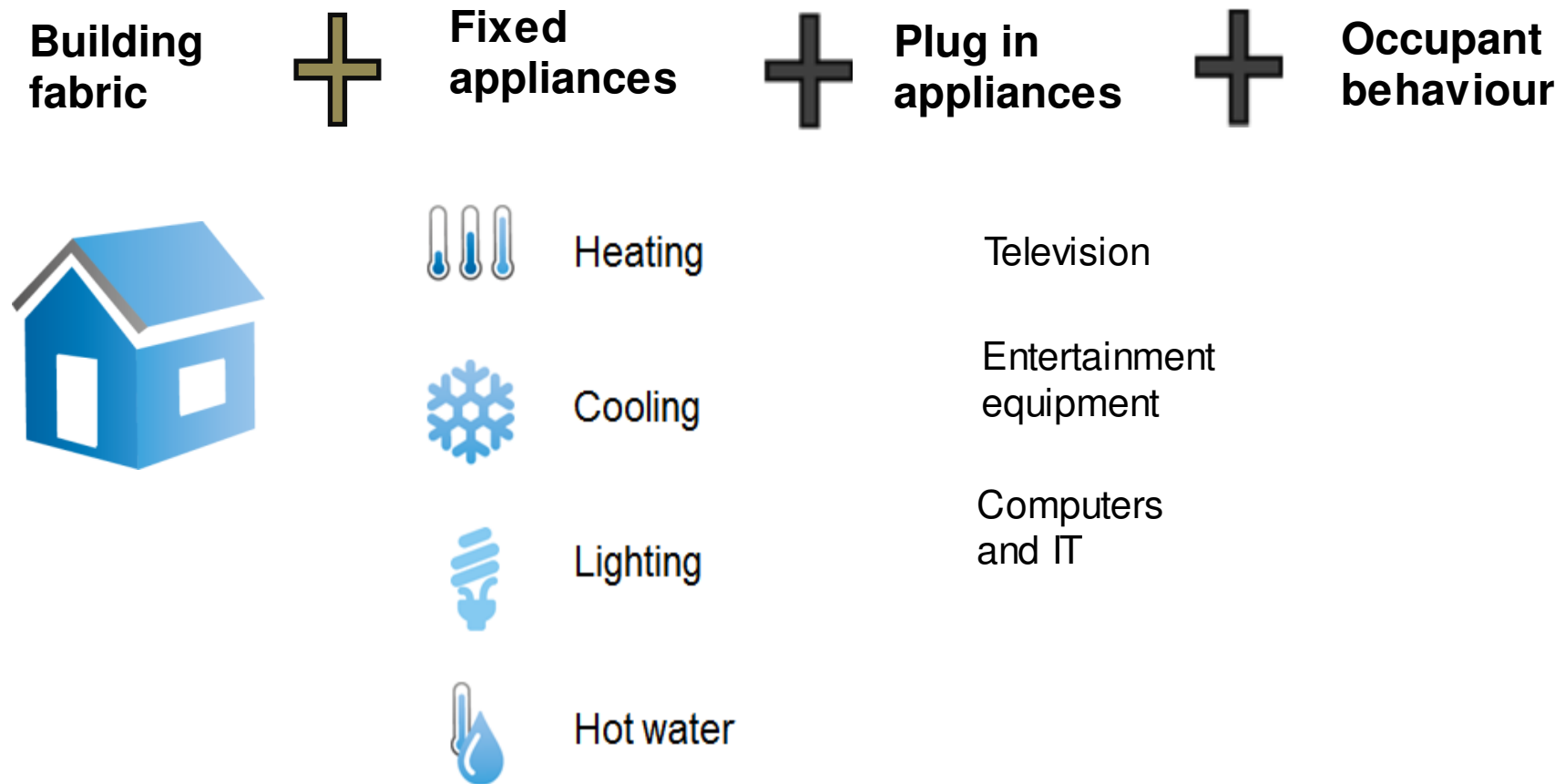
# Why Buildings Matter

- 20% of Australia's GHG emissions
  - Projected to increase 75-150% from 2010-2020
  - Many low-cost abatement options available
  - Numerous barriers to carbon price impact
- Buildings are a huge part of the economy
  - More than \$100 billion per year on construction, renovation and maintenance (7-8% of GDP)
  - Around 1 million employed in the construction sector (around 9% of workforce)
- Long-term perspective needed
  - Homes constructed today will mostly still be around in 2050
  - Only 1-2% of building stock is added each year, so rapid change is difficult
- People live and work here
  - Strong personal connections with buildings
  - Saving energy saves money

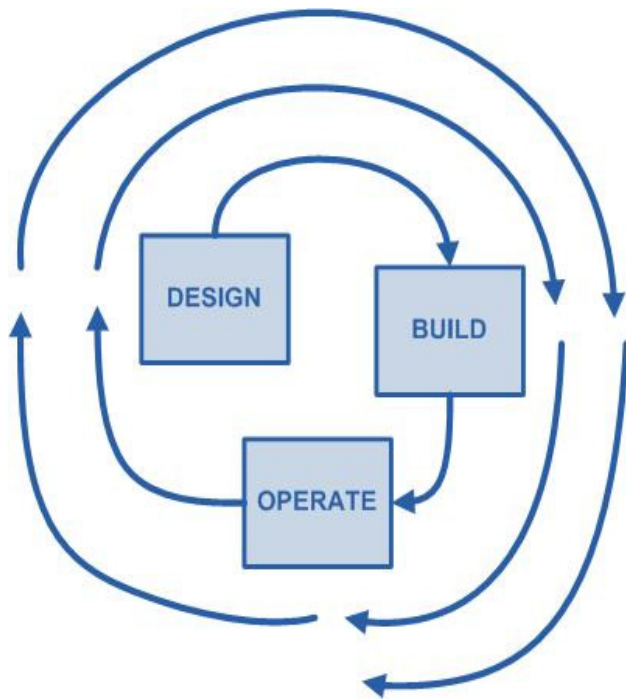
# Most of us live and work in buildings



# How do we address energy efficiency?



# Design – Build – Operate



- The Design-Build-Operate cycle doesn't end, it repeats.
- Buildings often exist for 50-100 or more years.
- Most need a renovation or refurbishment.

# Barriers to Energy Efficiency in Buildings

- Externalities/Pricing
- Split Incentives (Tenant/Landlord)
- Information
- Culture/Practice
- Public vs Private Time Frames
- Utility Incentives

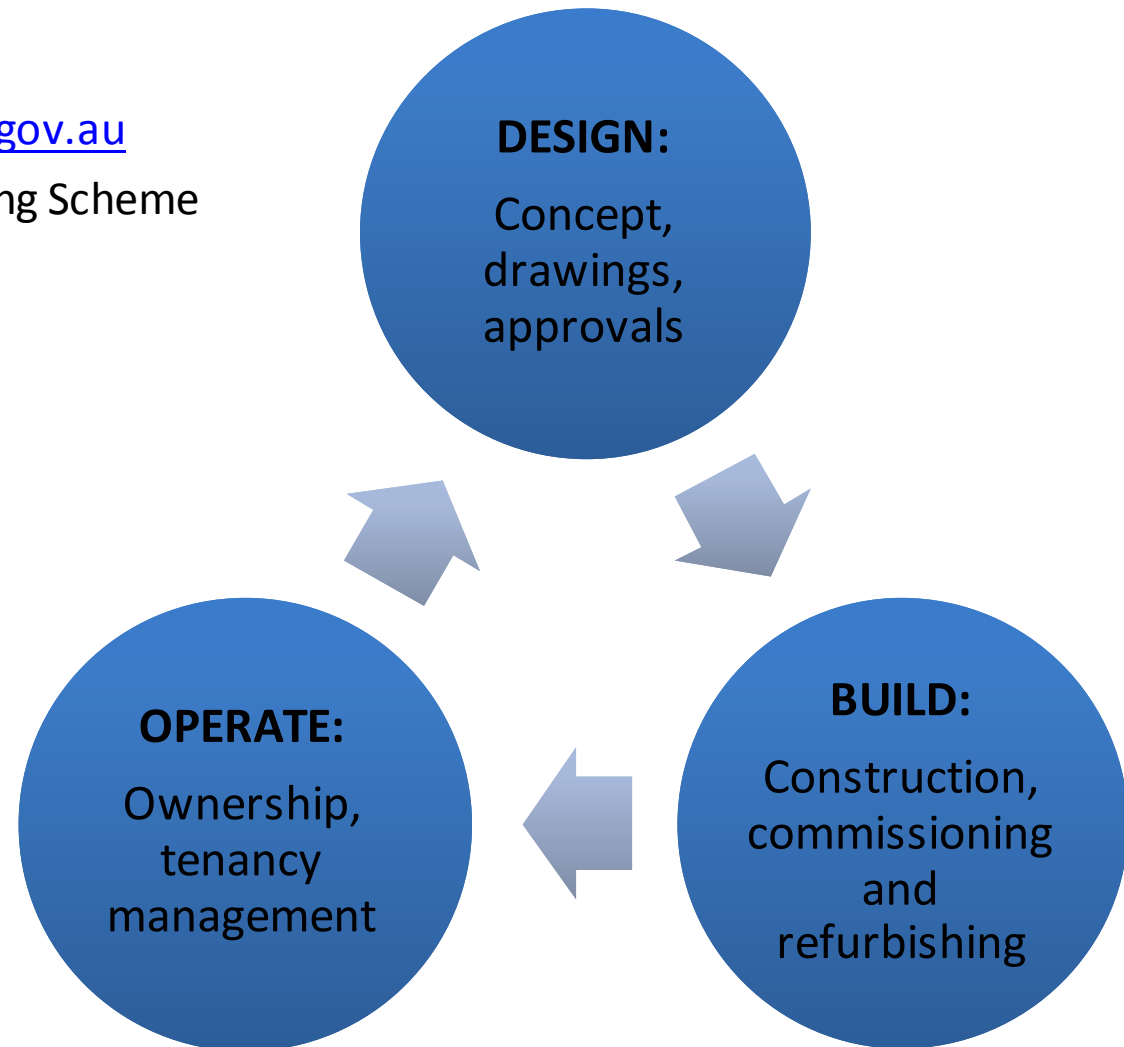
# EE in Buildings – Key Australian Government Policies

	Commercial Sector	Residential Sector
<b>Minimum Standards (avoid bad practice)</b>	<ul style="list-style-type: none"> <li>• Building Standards updated in 2006, 2010.</li> <li>• Minimum Energy Performance Standards (MEPS) for commercial equipment.</li> <li>• 4.5-star Green Lease requirements in Energy Efficiency in Government Operations (EEGO) Policy.</li> <li>• National Building Framework for more consistent, predictable standard-setting.</li> </ul>	<ul style="list-style-type: none"> <li>• Building Standards updated in 2003, 2006, 2010. Now at 6 stars. DRET manages National Home Energy Rating System (NatHERS) tool that underpins standards.</li> <li>• MEPS for household appliances, equipment.</li> <li>• National Building Framework for more consistent, predictable standard-setting.</li> </ul>
<b>Information Disclosure (ensure good information)</b>	<ul style="list-style-type: none"> <li>• Commercial Building Disclosure Program. Most offices &gt; 2000 square metres must disclose energy performance when sold or leased.</li> <li>• Annual report of Government Energy Use (EEGO).</li> <li>• Work with NABERS to develop new tools (eg data centres, HVAC), improve governance, increase use.</li> <li>• Energy Efficiency Opportunities Program managed by DRET requires disclosure of some large commercial owners.</li> <li>• EEIP – info on EE possibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Living Greener and Your Home provide information for households on sustainable options</li> <li>• EE labelling for household appliances, equipment.</li> <li>• Residential Disclosure – NSEE committed to disclosing household performance at sale.</li> <li>• EEIP, LIEEP – info on EE possibilities</li> </ul>
<b>Financing (incentives to demonstrate new technology or overcome barriers)</b>	<ul style="list-style-type: none"> <li>• Demonstration support for co-/tri-generation in CEEP, LGEEP.</li> <li>• Low Carbon Australia and Clean Energy Finance Corporation do/will support EE in commercial buildings</li> </ul>	

# Design – Build – Operate policy responses

- Your Home – [www.yourhome.gov.au](http://www.yourhome.gov.au)
- Nationwide House Energy Rating Scheme (NatHERS)

- Commercial Building Disclosure
- Green Lease Schedules
- Energy Efficiency in Government Operations (EEGO)
- Heating, Ventilation and Air Conditioning (HVAC)





# Energy Efficiency in Government Operations (EEGO) policy

## EEGO key components

- Annual energy targets for Government offices
- Minimum energy performance standards, including green leasing requirements for most new leases
- Annual energy reporting requirements.



Management and advisory support

## DRET responsibilities

- providing advice and support to agencies;
- monitoring agencies' compliance;
- collecting and collating government energy use data;
- implementing green leasing requirements, including processing exception applications;
- promoting energy efficiency in Government;
- ongoing policy development;
- advising the Joint Standing Parliamentary Public Works Committee (PWC) on major capital work proposals
- co-ordinating participation in Earth Hour by Australian Government agencies.

# Commercial Building Disclosure (CBD)

- Legislative program requiring the mandatory disclosure of energy efficiency information
  - Applies when a large office building (2,000m<sup>2</sup> or more) is offered for sale or lease
  - Provides clear and credible information to office building market
  - Overcomes non-price barriers
- DRET administers the CBD Program
  - Trains & accredits CBD Assessors
  - Issues Building Energy Efficiency Certificates (BEECs)
  - Monitors compliance

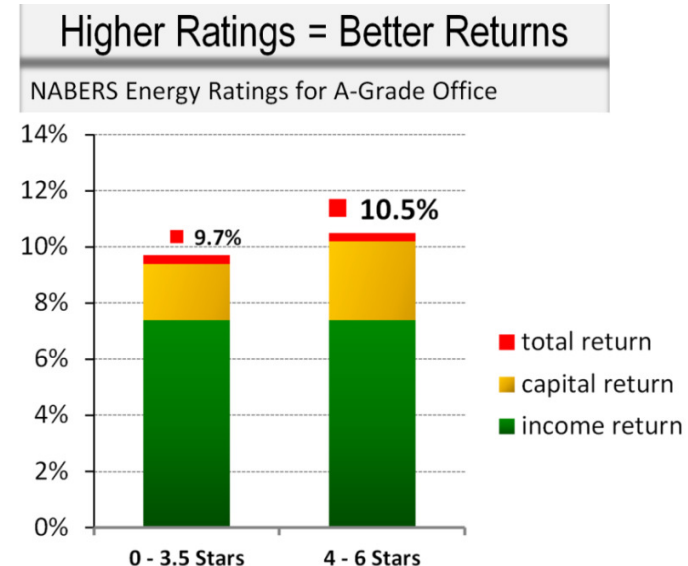


# CBD – a more informed property market

In the first year of operation, the CBD Program:

- Became well established and accepted by the commercial office market
- Had about 1/3<sup>rd</sup> of large office buildings register a BEEC (874 buildings)
- Recorded an average building energy efficiency of 3 NABERS stars (out of 6 stars)
- Had a high level of compliance
- Had some issues identified with the enabling legislation
- Investigated expansion to other building types, such as shopping centres and hotels

First year of CBD mandatory disclosure  
(1 November 2011 - 1 November 2012)



Source: "Two year annualised results to September 2012", IPD Index Snapshot - Australian Green Property Index September 2012

# National Australian Built Environment Rating System (NABERS)

- National rating system that measures the environmental performance of Australian commercial buildings (there is also a residential tool)
- Widely accepted as an industry and government standard for measuring building energy performance, in particular for offices.
- Regulatory and non-regulatory functions. Within industry, this includes setting of portfolio targets for major property owners
- *Building Energy Efficiency Disclosure Act 2010* (Commercial Building Disclosure), EEGO, Green Leases, the Green Buildings Fund and the *Clean Building Managed Investment Trust Act 2012* rely on NABERS
- The NSW Office of Environment and Heritage (OEH) is the owner and the National Administrator of NABERS. OEH manages the program in partnership with the Australian, State and Territory governments and reports to the NABERS National Steering Committee (NSC)

# The Nationwide House Energy Rating Scheme (NatHERS)

- Provides the tools under which Energy Efficiency of new home designs are assessed.
- NatHERS Governance
  - State and territory adoption of the National Construction Code (NCC) into Regulations
  - Administration of NatHERS by DRET
- NatHERS energy performance assessment tools
  - CheNath, Accurate, FirstRate5, BERSPro
- NatHERS Assessors
  - 2000 assessors, 100,000+ assessments annually

# Your Home

- Your Home provides information on how to design, build and operate an environmentally sustainable home
- It explains :
  - Sustainable communities (choosing a site, how to deal with challenging sites, landscaping)
  - Design for life (adaptable houses, healthy homes)
  - Passive design
  - Material use
  - Energy use
  - Water use
  - Case studies
- Your Home is a hardcopy publication and a website ([yourhome.gov.au](http://yourhome.gov.au))



# Energy Efficiency Compliance

- DRET takes compliance very seriously
- Responsible for ensuring the relevant regulated communities comply with their obligations under the *Building Energy Efficiency Disclosure Act 2010* (BEED Act 2010) or the *Greenhouse and Energy Minimum Energy Standards Act 2012* (GEMS Act 2012)
- Our approach to ensuring compliance focuses on:
  - assisting the regulated community to understand their rights and obligations
  - monitoring the regulated community's compliance with the obligations
  - actively pursuing those who opportunistically or deliberately contravene the law
- Our framework for delivering this function is based on:
  - understanding the context and building the foundation
  - engagement and education
  - monitoring compliance
  - addressing non-compliance
  - reviewing and improving our performance