





#### Energy efficiency in buildings: An industry perspective

#### Dr Philip Alviano Sustainable Building Advisor



Master Builders<sup>®</sup>

ASSOCIATION

#### **Master Builders**



- Industry Association with 9000 members in Victoria, nationally 25,000
- Federation of state bodies
- Range from small residential builders to largest commercial builders

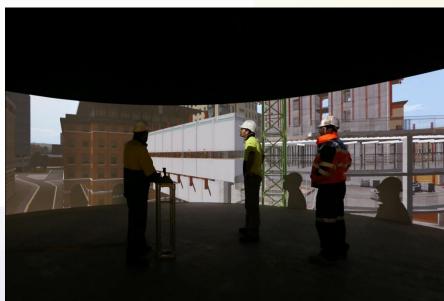




#### **Services**



- Nationally accredited training
- Building Leadership Simulation Centre
- Legal/insurance/safety advice/industrial relations
- Communications
- Awards
- Government Lobbying



### **Political framework**



- National Strategy on Energy Efficiency (2010)
- Increase energy efficiency of commercial and residential buildings
  - Commercial
    - » Building code, Section J (2010)
    - » Mandatory disclosure (2010)
  - Residential
    - » NatHERS, 6 Star (2011)

### **Political framework**



- Government Office Accommodation/design requirements
- Federal and State Governments
  - Minimum 4 star NABERS (National Australian Built Environment Rating System) rating for energy and water
  - Office environments should be "safe, sustainable, healthy and assist productivity."

#### **Political framework**



- Minister for Cities and the Built Environment
- Industry futures paper
  - -BIM,
  - Prefab,
  - Sustainability
- Future Industries Fund



#### Support programmes and loans for industry



- Federal Emissions reduction fund
  - Businesses investing in new technology.
  - Renewable Energy Target (RET): 23.5% by 2020
- States
  - Victoria
    - VEET scheme
    - Energy Efficient Office Buildings program
    - Sustainable Melbourne Fund
    - RET 20% by 2020

## Support programmes and loans for industry (cont.)



#### NSW

- Office of Environment and Heritage
  - Various grants and assistance
  - Environmental upgrade agreements
    - Energy saver scheme
- RET 20% by 2020

ACT

- 90% renewable energy target by 2020
- Energy Efficiency Improvement Scheme (EEIS)

## Support programmes and loans for industry (cont.)

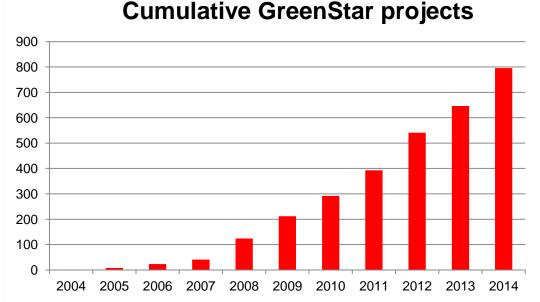


- Queensland
  - ecoBiz
  - RET 50% by 2030
- South Australia
  - Strategic plan
    - 15% reduction of residential energy use by 2020
    - 30% reduction of energy use from government buildings by 2020.
    - RET 50% by 2025

#### Green building in Australia



- Overview of Green Building in Australia
  - Green Building Council of Australia
    - Greenstar
    - Equivalent to German Sustainable Building Council
    - LEED, BREEAM



#### **Case studies**



- Best Sustainable Project 2014
  - Melton Library and Learning Hub
  - 5 Star GreenStar as built
  - 14 Kw photovoltaics
  - Timber and concrete hybrid structure
  - Geo polymer based concrete



#### **Case studies**



- Pixel (by Grocon)
  - Winner best sustainable project 2011
  - 6 Star GreenStar as built
  - Carbon positive
  - Second skin
  - Night purge
  - Wind turbine, photovoltaics
  - Pixelcrete
  - Water reduction



#### **Case studies**



- Forte (by Lend Lease)
- Completed 2012
- Cross Laminated Timber (CLT)
- 10 Storey
- 23 residential apartments
- 5 Star GreenStar as built.



#### **Case Studies**



- Government Services Office (by Grocon)
- Winner best sustainable project 2012
- 6 Star GreenStar as built.
- NABERS 4.5 Star
- 40,000 litre rainwater tank



### **Residential case studies**



- AusZEH (Australian Zero Emission Home)
  - Henley, CSIRO, La Trobe University partnership
  - -8 Star
  - -6 Kw photovoltaics
  - Energy monitoring system





### **Residential case studies**



- Best Sustainable Home winner 2015
- 6.8 Stars
- Off grid
- 12Kw photovoltaics
- 48 Kw battery
- Rammed earth walls







- Services
  - Training
    - Develop industry specific training programs
  - Building Leadership Simulation Centre
    - www.blsc.com.au





#### • Events

- Exposure for your products and services
- Member information nights
- Awards
- Green Living Conference
- Communications
  - Enews letters
  - Website
  - Magazine





- MM&S Committee
- Opportunities as a member and supplier
  - Sponsorship
  - Exposure to companies, estimators, specifiers, tailored training programs,





- Other avenues of exposure
  - Ecospecifier (<u>www.ecospecifier.com.au</u>) and Global GreenTag
  - Institute of Architects (architecture.com.au)
  - Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH)
  - Air Conditioning and Mechanical Contractors' Association (AMCA)
    - BIM-MEPAUS





Thank you

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