

National Plumbing Regulators Forum Conference 2008

Driving Plumbing Excellence

*'Sustainability and the Built Environment'*

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# The expanding role of Plumbers

- Previously protecting consumer's health and safety
- Now, includes protection and safety of the environment
- Advances in HVAC technology, need to be energy and water efficient



# Not the time to lose focus

- Financial crisis has raised the question: “Can we still afford to do this”
- EU has restated its commitment to sustainability measures
- World awaits Obama’s confirmation of campaign commitments on sustainability
- Stern urges holding the line
- WGBC and GBCA members committed

# About WorldGBC

- International business-led coalition
- Formed 1999
- 20 nation members, incl:
  - Australia
  - USA
  - China
- Member nations represent
- 50%-plus of global construction activity



WORLD GREEN BUILDING COUNCIL

# About Green Building Council of Australia

- Formed 2002
- Mission:



green building council australia

To develop a sustainable property industry in Australia

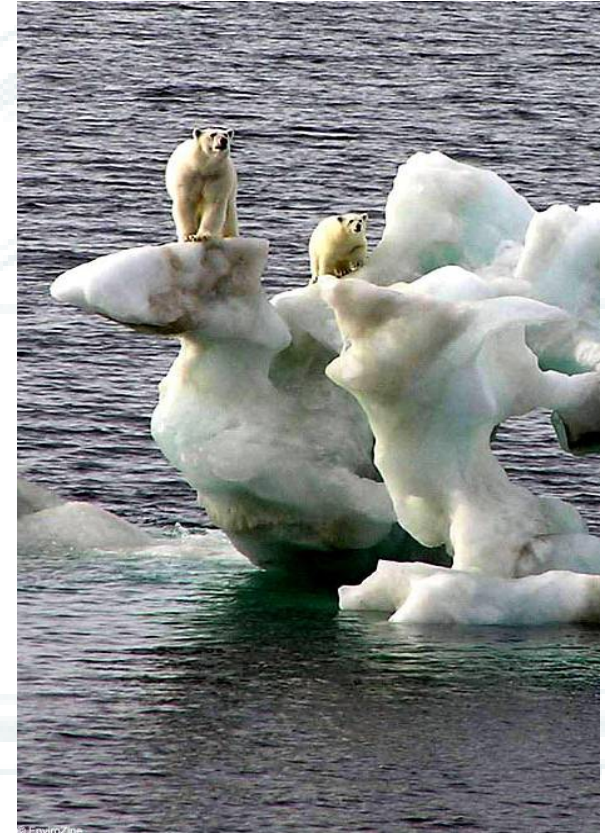
- Now the second largest GBC (after US)
- More than 600 members
- 90-plus Green Star certified buildings

# Sustainability and global warming

- Brundtland Report (1987) defined sustainability as:
  - 'Meeting the needs of the present without compromising the ability of future generations to meet their own needs'*
- Global warming needs a immediate, drastic response

# Effects of climate change

- Loss of Arctic Ice cap devastating for polar bears, seals etc
- Rising seas threaten millions in low-lying countries
- Great Barrier Reef in danger from rising ocean temperatures
- Rivers drying up and dire bushfire warnings



# Role of buildings

- CO2 emissions from buildings = 40%
- The biggest single contributor – but also a big part of the solution
- 80%-plus of population in developed countries live in cities and towns
- Developing countries are experiencing rapid urbanisation



# The role of buildings – the numbers

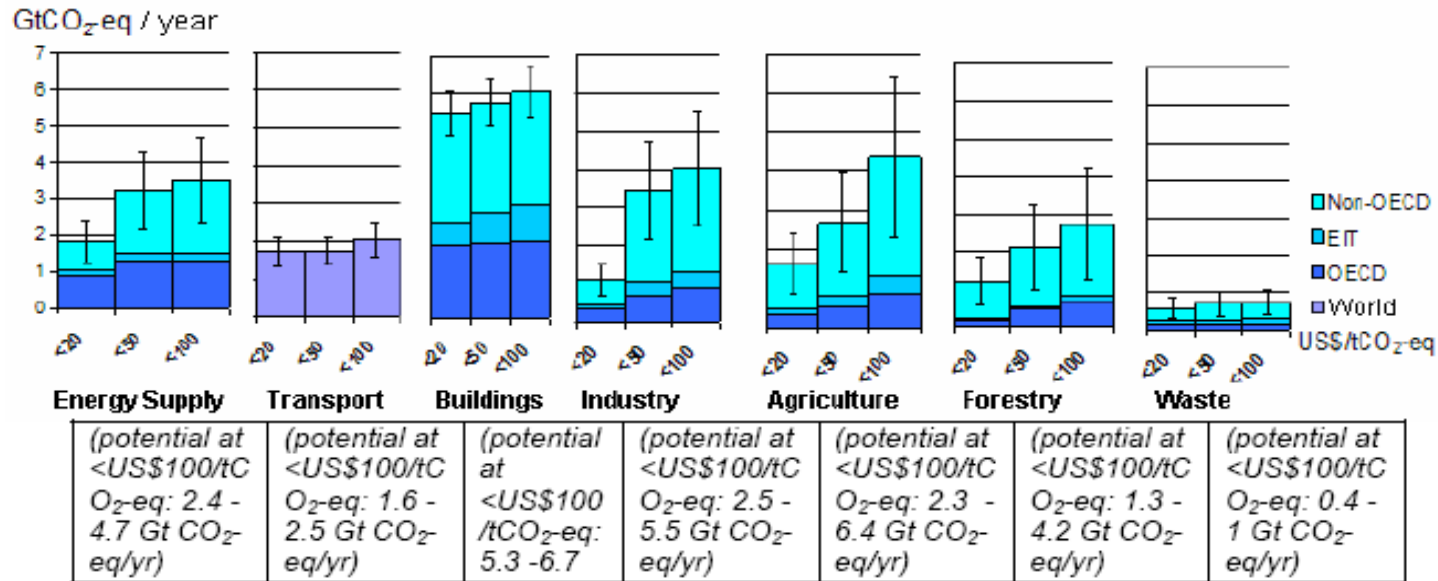
- Use 32% of the world's resources
- Use 40% of global energy (incl embodied)
- Generate 40% of greenhouse gas emissions
- Consume 12% of potable water
- Make up 40% of waste to landfill



# Buildings as part of the solution - 1

Summary for Policymakers

IPCC Fourth Assessment Report, Working Group III



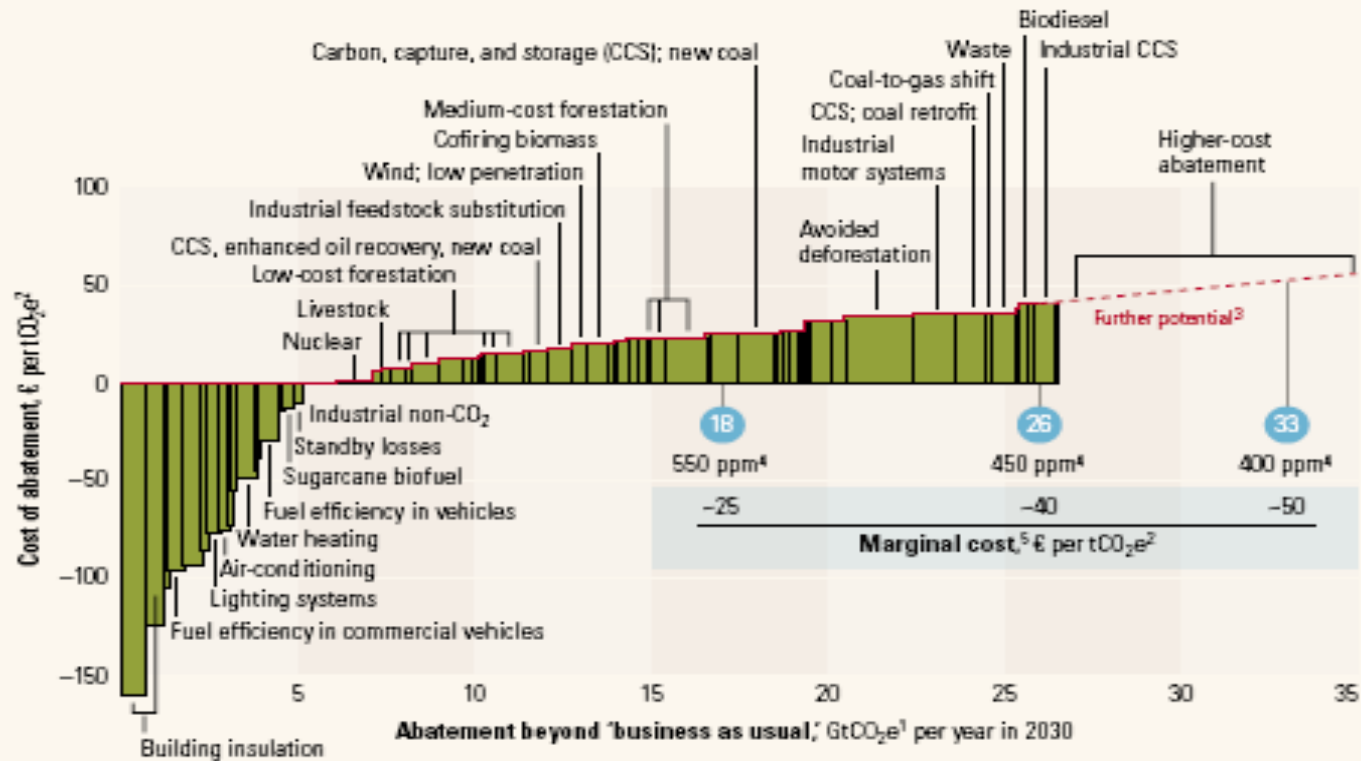
**Figure SPM 6:** Estimated sectoral economic potential for global mitigation for different regions as a function of carbon price in 2030 from bottom-up studies, compared to the respective baselines assumed in the sector assessments. A full explanation of the derivation of this figure is found in 11.3.

# Buildings as part of the solution - 2

## What might it cost?

Global cost curve for greenhouse-gas abatement measures beyond 'business as usual'; greenhouse gases measured in GtCO<sub>2</sub>e<sup>1</sup>

- Approximate abatement required beyond 'business as usual,' 2030



# Buildings as part of the solution - 3

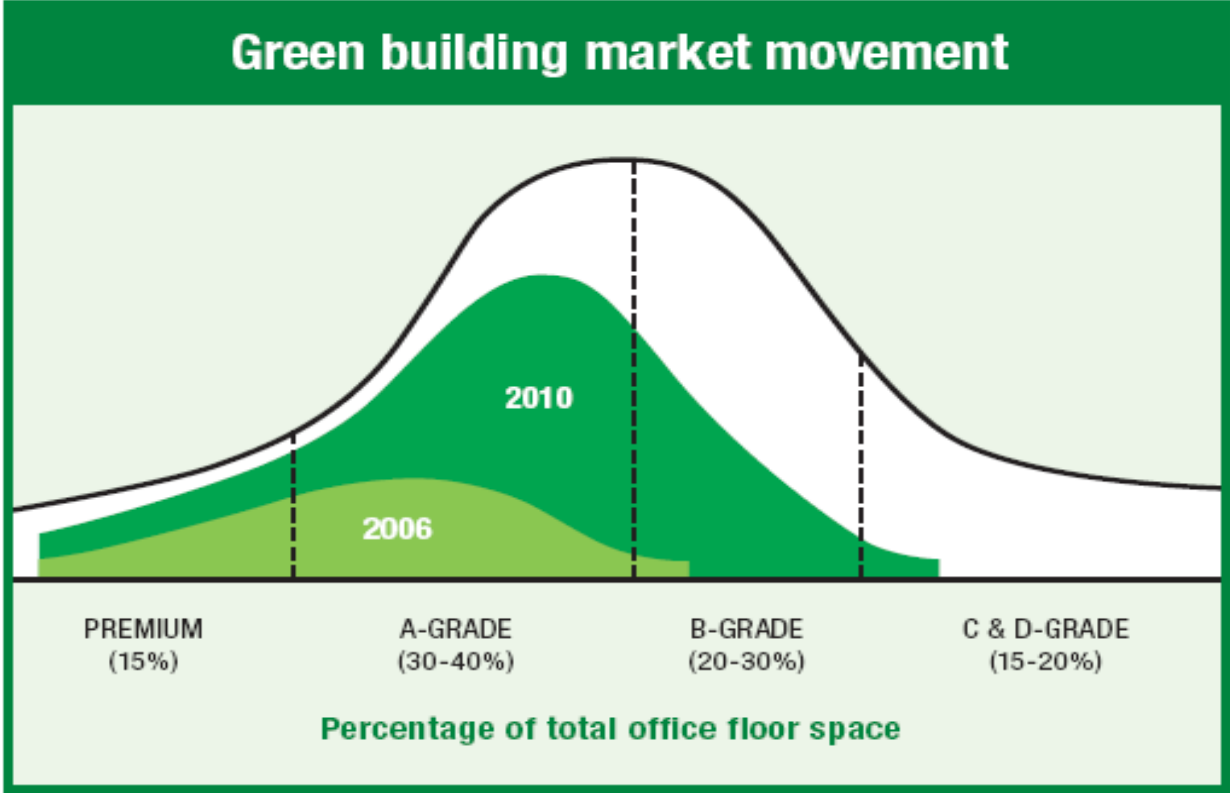
- ASBEC Climate Change Task Force Group
- Significant gains are available now
- Building sector complements CPRS
- Fully realising building's potential to save \$38b per year by 2050



# The 'low-hanging fruit'

- 85% of Australian office stock is more than 10 years old
- Benefits of Green Star are many:
  - Energy savings up to 85%
  - Potable water savings up to 60%
  - Diversion from landfill up to 69%
- Indoor Environment quality improvements, better productivity

# The growth in market movement



# The role of regulation

- It has still be necessary to regulate for sustainability
- According to UNEP that's not a bad thing:
  - The key is a combination of regulation, information and incentives
- Stern echoed these findings



# Australian Government initiatives

- Mandatory disclosure at the point of sale
- A national energy rating system
- The \$90 million Green Building Fund to drive retrofiting



# Green jobs, skilled people

- 250,000 'green collar' jobs by 2025
- Victoria establishing PICAC
  - \$9 million from unions, industry, regulators and government
  - Retraining plumbers in sustainability
  - Developing, demonstrating and testing greenhouse reduction technologies
- Apprentice numbers trebled since 2001

# Consistent operating framework

- Framework must meet today's and future needs
- Victoria's new Plumbing Regulations start 24 November 2008
- PlumbSmarter initiative to involve the industry
- PCA is one of the central pillars of national consistency

# Consistent operating framework

- Energy-efficiency measures provide advantages:
  - The country will gain \$3.4b over 10 years – 5 times the investment required
  - 18 million tonnes of ghg saved over 10 years
  - Healthier, more productive work environments



# History and the Future

- Government regulation leads to innovation
- Striking a balance
- Green buildings DO make a positive contribution
- Long-term focus must be maintained on the sustainability agenda
- The NPRF will continue to lead
- We all have a role in securing the future

# Thank you for your interest

**Tony Arnel**

Chair, World Green Building Council  
and Green Building Council of Australia  
Building Commissioner and Plumbing Industry  
Commissioner (Victoria)

