



National Framework
for Energy Efficiency

National Framework for Energy Efficiency – Details of proposed Stage Two measures

Alan Millis

Chair

Energy Efficiency Working Group

NFEE Stage 2 – Proposed New Measures

- Strengthened and expanded MEPS
- Incandescent lighting phase-out
- Government leadership through green leases
- Heating, Ventilation and Air Conditioning (HVAC) high efficiency systems strategy
- National water heater strategy

Further work:

- Rating tools for commercial buildings in new sectors
- Additional residential measures



Strengthened and expanded MEPS

- Objective is to expand and strengthen the existing MEPS and Equipment Energy Efficiency Program
- Principal means by which jurisdictions can improve end use-product efficiency
- Removes worst practices, rewards best through labelling

Energy source	Category to be targeted
Electrical Appliances and Equipment	Whitegoods Home entertainment equipment Water heaters Air conditioners (including chillers) Computer equipment Lighting Commercial and industrial equipment One-watt standby power
Gas Appliances and Equipment	Water heaters Ducted / space heating Pools / spas Outdoor heaters

Incandescent lighting phase-out

- Objective is to phase out inefficient lighting in the residential sector
- Residential General Lamp Service lamps contribute around 5.6 million tonnes of CO2 per annum
- Combines a MEPS program and a series of complementary activities
- Complementary activities to include:
 - Information provision to increase understanding of the phase out and address industry and consumer concerns (lamp selection, disposal, design)
 - Educational activities focused on key occupations
 - Demonstration projects to showcase alternative approaches and substitutes, along with innovative technologies
 - Product development to increase domestic and international testing capabilities
 - Research to address specific community and industry concerns
- Outcome – could reduce emissions by 4million tonnes pa, reduced energy cost

Government leadership through green leases

- Objective is to improve operational performance of buildings within the commercial office market
- Addresses split incentives issue, ensures significant demand for efficient commercial buildings, addresses design/build/operate gaps
- Requirement that new and refurbished Government owned/leased commercial office buildings > 2000 m² adopt green leases, including standard principles:
 - An Australian Building Greenhouse Rating (ABGR) energy performance requirement determined by each Government
 - An energy management plan
 - Separate metering for particular building elements
 - A building management committee
 - Remedial action / dispute resolution clauses
- Capacity building activities to facilitate integration of a national energy rating policy and green lease schedule, including:
 - Communication materials on obligations / benefits for Government decision makers;
 - Communication material and activities to inform industry of new requirements; and
 - Development of tools to assist facility managers and tenants to meet green lease requirements.

HVAC high efficiency systems strategy

- Ten year strategy to improve energy performance of HVAC systems
- HVAC systems major contributors to electricity consumption, peak demand and greenhouse gas emissions
- To address non-technical barriers to HVAC energy efficiency while identifying/promoting efficient technical solutions and system optimisation
- Twenty separate measures under four broad strategic initiatives:
 - *Practices* – creating standard cradle-to-grave systems of documentation and data capture.
 - *Systems* – Identifying, demonstrating, analysing and promoting best practice, sustainable efficiency gains and technological advances, systems and tools.
 - *People* – creating standardised, recognised and transferable qualifications and certificates built on effective multi-disciplinary training modules
 - *Standards development* – standards for chillers and close control units.
- Outcome – Approx. 4 million tonnes of CO₂ pa, very significant energy cost savings (reduction of peak demands as well as consumption)



National water heater strategy

- Objectives :
 - To reduce energy use and associated greenhouse gas emissions from domestic hot water systems
 - To transform the water heater market away from conventional electric water heaters towards low emission alternatives
- For most households hot water use is the largest consumer of energy (about 30%) and contributes around 3 per cent of Australia's national greenhouse emissions
- Technology exists to make dramatic cuts in water heating energy use and emissions – solar, gas, heat pump
- Features of strategy:
 - improve the energy efficiency of water heaters;
 - develop a national greenhouse rating methodology to underpin performance standards;
 - establish a national greenhouse gas performance requirement for water heaters installed into new homes and major renovations; and
 - facilitate performance requirements for replacement water heaters.
- Outcome – up to 6 million tonnes CO₂ pa by 2020.



Further work on building measures

- Discussions will be held on two building energy efficiency measures over coming months
- Development of tools for measuring commercial building energy performance in new sectors:
 - expand NABERS Energy (ABGR) to cover retail centres, retail tenancies, hotels and other commercial buildings identified as priorities
- Additional residential measures:
 - assessment of the potential for minimum energy and greenhouse building and planning standards with respect to hot water, fixed appliances and lighting in new residential buildings

Other supporting measures

- Development of capacity in areas such as standards, training etc to support developments in each of the specific initiatives
- Development of new data collections to support decisions on energy efficiency measures and to assist with post-implementation assessments.

Next steps

- Following today's consultation, E2WG will consolidate the information received and consider its implications for the proposed NFEE Stage Two program.
- The refined package will be submitted to the MCE senior officials prior to presentation to MCE at its meeting expected to be in December
- NFEE Stage Two is scheduled to commence in July 2008

Thank you

