Energy Efficiency in Government Operations

Andrew Smith
Department of Finance and Deregulation
Introduction

- The Australian Government’s policies have helped to reduce greenhouse gas emissions from owned and occupied buildings.
- The new 2006 Energy Efficiency in Government Operations (EEGO) policy aims to reduce emissions by a further 20 to 25% by improving efficiency of buildings.
Previous Policy

- Greenhouse Challenge – voluntary participation and voluntary targets – but good results
- 1997 Portfolio targets and Whole of Government Reporting of Energy use
- Overall energy consumption rose by just 2.7% from 1997 to 2006 despite public service growing 32%
The 1997 targets became too easy to achieve as technology improved efficiencies of buildings and awareness of the importance of reducing greenhouse gas emissions increased.

The Howard Government introduced the EEGO policy in 2006 to move Government Operations to the next level.

The Government lost the election in late 2007 but the policy remains in place and continues to challenge building owners and operators.
The EEGO Policy

- Administered by the Department of Environment, Water, Heritage and the Arts
- EEGO requires Agencies to report annually on their energy performance via the Australian Government’s online energy database.
- EEGO establishes best practice energy targets for Government office buildings:
  - the target for tenant light & power is a 25% reduction on the 1997 target;
  - the target for central services is a 20% reduction on the 1997 target.
The EEGO Policy (cont)

- Uses the Australian Building Greenhouse Rating tool (ABGR) to measure performance annually
- Requires new building to achieve 4.5 star ABGR
- Requires new leases to be for 4.5 star ABGR buildings
- Requires portfolio average energy intensity levels to be achieved by 2011
Australian Building Greenhouse Rating (ACT)

- ABGR Base Building kg CO2/m2 pa
- ABGR Tenancy kg CO2/m2 pa
- ABGR Whole Building kg CO2/m2 pa

Average Portfolio Performance in 2006 = 2.5 stars
Average Portfolio Performance required in 2011 = 3.5 stars (25% less emissions)

All new buildings and leases required to be 4.5 stars
Australian Building Greenhouse Rating scheme
What the stars mean...

- **Poor**: Average building performance. This building has some elements of energy efficiency in place and reflects the current market average. There is still scope for cost-effective improvements, and minor changes may improve on this building's energy and operating costs.

- **Good**: Very Good. Current market best practice. This building offers very good systems and management practices and reflects an awareness of the financial and environmental benefits of optimising energy use.

- **Excellent**: Strong performance. This building demonstrates excellent energy performance due to design and management practices or high-efficiency systems and equipment, or low greenhouse intensive fuel supply.

- **Exceptional**: Best building performance. This building is exceptional due to integrated design, operation, management and fuel choice.
Green Leases

- The EEGO policy requires standard form Green Leases to be used for all new leases.
- Green leases require an Energy Management Plan (EMP).
- Green Leases require a Building Management Committee (BMC) to meet at least quarterly to monitor performance against targets and implement the EMP.
Adoption of EEGO Policy

- Policy adoption has been slow due to extremely low vacancy rates of 0.5% in most major capitals despite a building boom.
- Most new buildings are aiming for 4.5 star ABGR levels to ensure potential of leasing to government.
- Green leases are rolling out.
- State governments and many major businesses are adopting part or all of the policy (an unintended benefit).
Existing Building Challenges

- The vast majority of the buildings government owns or operates are existing buildings.
- Performance varies but average 2.5 stars.
- Significant costs to upgrade.
- Cost effective solutions being sought.
Case Study # 1

- Treasury Building is 1960s Building
- Heritage listed
- 25,000 m² NLA
- Last refurbished in late 1990s
- 3 Tenants including Finance Department
- Currently operates as a 2 Star ABGR building
- Can easily be made 3 Stars but cost escalates as targets increase beyond that
Approximate costing for ABGR improvements (Treasury Building)

Options

Approximate ABGR stars rating (base building)

$Million plus (approx)
Case Study #2

- **Major Agency with over 450 leases**
- **Only 60 leases are big enough to fit ABGR criteria** (over 2000 m² NLA)
- **Difficult to get green leases in place due to**
  - Landlords not understanding how they work
  - Landlords control the market due to low vacancy rates
  - Landlords not willing to spend money upgrading buildings or participating in BMCs
  - Agency needs to be in specific places and there are few options available
Case Study #2 (continued)

- Agency has focused on increasing tenancy energy efficiencies
- To date, in 3 years for minimum expense they have increased portfolio from an average 2.7 stars to 3.2 stars
- Upgraded sites are now averaging 3.7 stars.
- Next phase is a focus on smaller sites and an improved facility management contract focusing on energy efficiencies
Conclusion

- Australia has achieved good progress on improving energy efficiency in buildings
- EEGO policy aims to reduce energy consumption by a further 25% by 2011
- Green Leases are a major element to achieve this target
- Case studies point way to large improvements in the next few years
References

Australian Building Greenhouse Rating Tools
- www.abgr.com.au

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