



Australian Government

Department of Resources, Energy and Tourism

ENERGY EFFICIENCY OPPORTUNITIES

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TO: Energy Management Action network (EMAK)
workshop

26-27 January 2010

Item 1-5



National Framework
for Energy Efficiency

Energy Efficiency
Opportunities

OVERVIEW

- Energy policy in Australia
- Barriers to energy efficiency
- Legislation and requirements for Energy Efficiency Opportunities
- Program structure and delivery
- Results so far
- Program successes



ENERGY POLICY OBJECTIVE

Achieving energy security that delivers economic prosperity in a lower carbon economy.

"Energy efficiency is a key element in tackling the challenges of climate change and energy security. Businesses, governments and individuals must fundamentally change the way they understand and manage energy".

Hon Martin Ferguson AM MP, Minister for Resources and Energy



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ENERGY EFFICIENCY OPPORTUNITIES

- EEO announced in 2004 in response to:
 - market failures in the industrial sector
 - perceived poor performance in improving energy intensity compared to other OECD countries
 - organisational and cultural barriers



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BARRIERS TO ENERGY EFFICIENCY

Energy is **important** but not **urgent**

- Core business – growing the business is the priority for resources and capital followed by licence to operate
- Operational cost cutting – focus on visible
- Energy is potentially complex
- Lack of metered data and analysis skills
- Audit mentality insufficient
- Lack of knowledge – perceived risk
- Poor data = poor business case = poor results



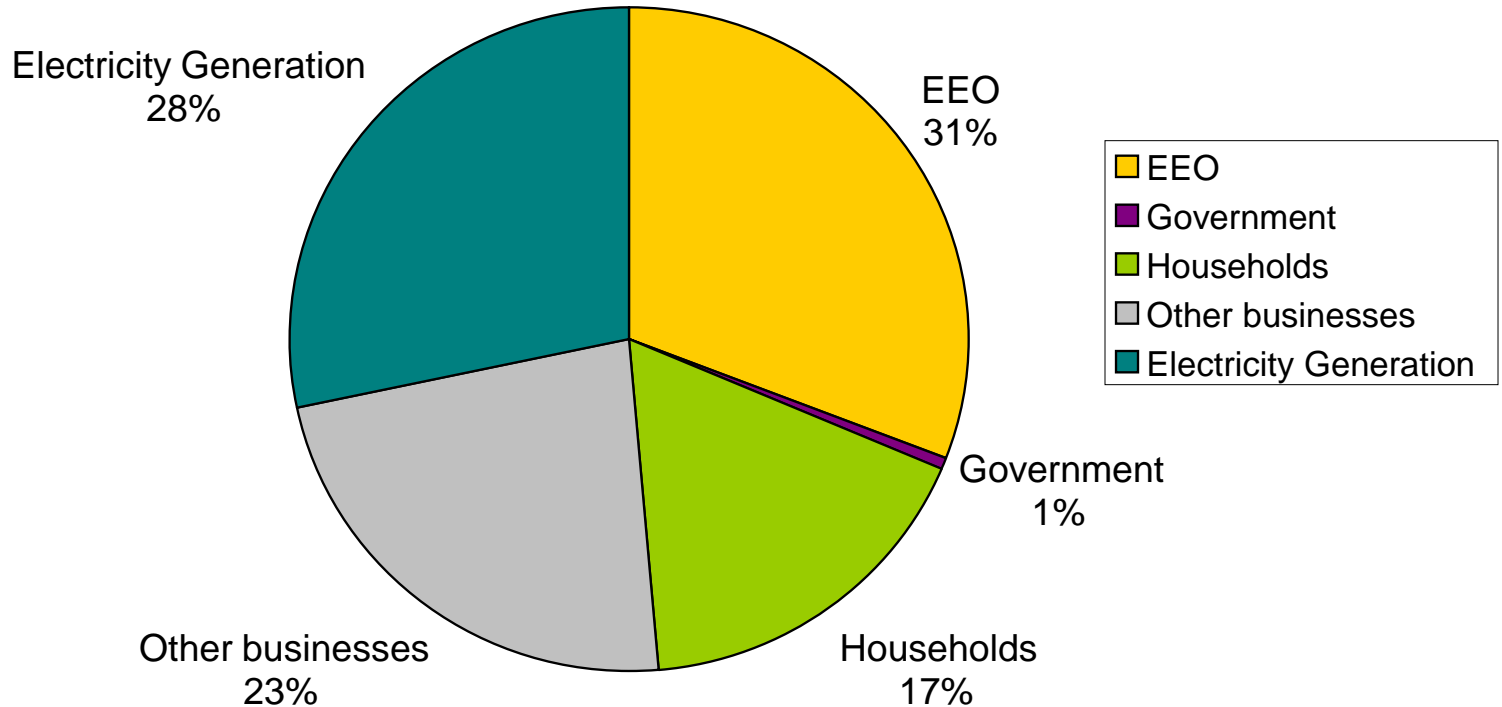
EEO PROGRAM OVERVIEW

- Legislation mandates largest energy using corporations assess energy use and report on opportunities
- Does not mandate implementation
- Rigorous and comprehensive assessment
- 6 Key Elements and 19 Key Requirements
- Full verification of compliance + penalties
- Reports must be made public



EEO PROGRAM ENERGY USE

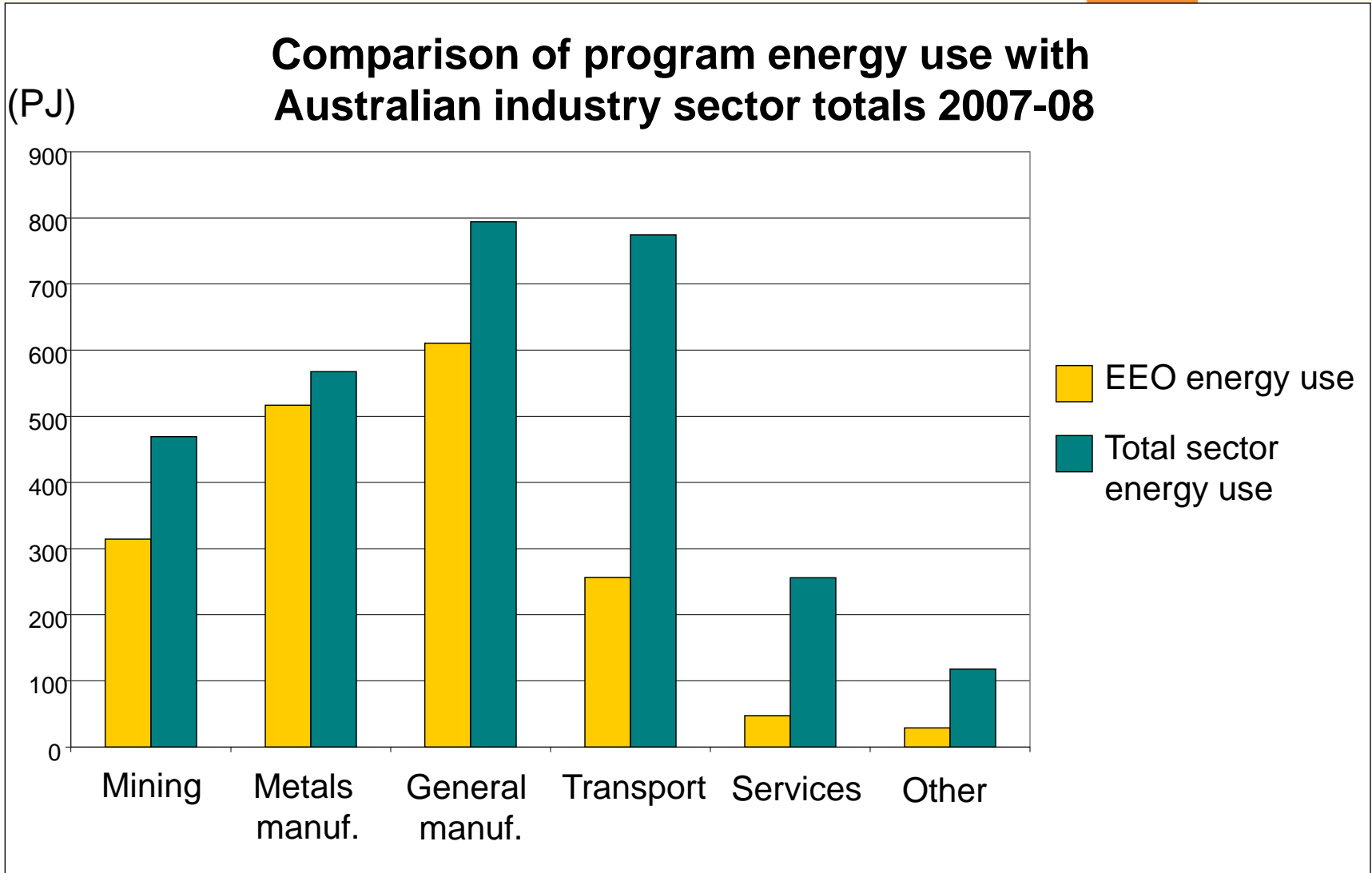
Australian total energy use shares - 2007-08 (PJ)



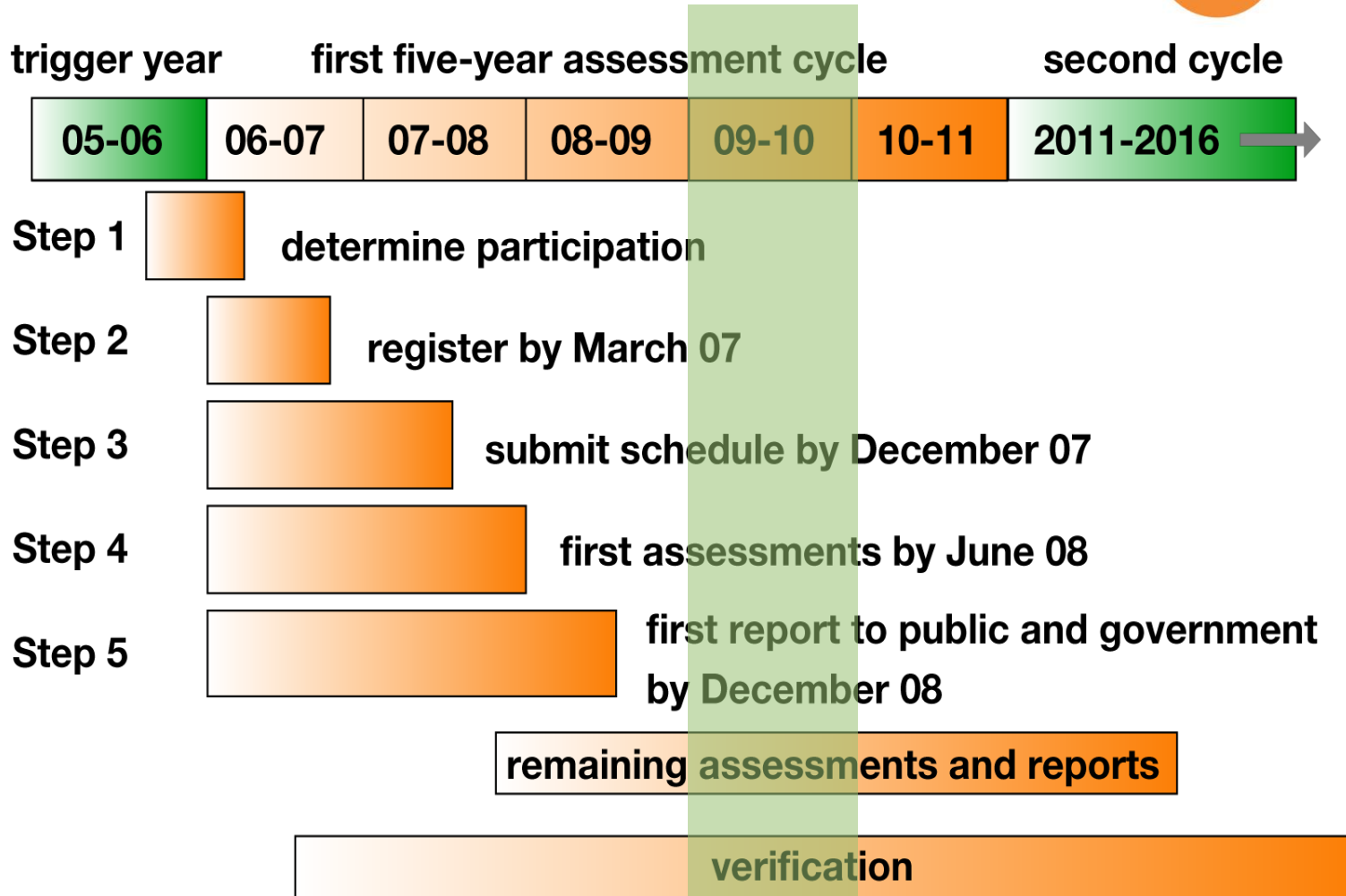
**All corporations that use more than 0.5 PJ
are required to participate.**

230 or so participating corporations use 60% of business energy end use and around 45% of Australian energy end use

EEO PROGRAM ENERGY USE



TIMELINE



PROGRAM REQUIREMENTS

Rigorous and Comprehensive Assessments



Leadership

People

Information, Data & Analysis

Opportunity Identification & Evaluation

Decision Making

Communicating outcomes

Six key elements



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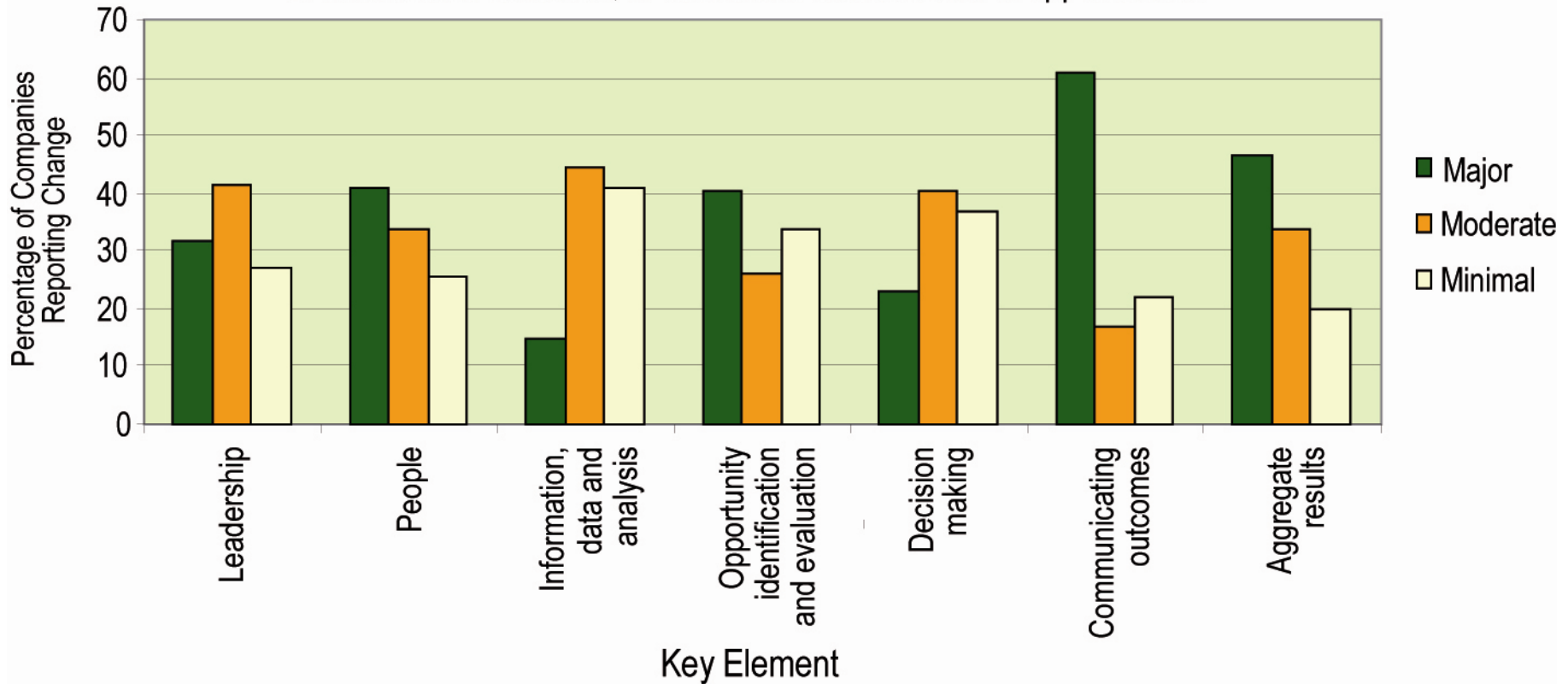
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19 KEY REQUIREMENTS - EXAMPLES

Key element	Key requirement example
1 – Leadership	<ul style="list-style-type: none">- Senior management establish energy improvement objectives- Resources made available
2 – People	<ul style="list-style-type: none">- Appropriate personnel – internal influence on energy use and external expertise
3 – Information, Data & Analysis	<ul style="list-style-type: none">- Energy use 24 months and 5% accuracy- Energy mass balance or similar
4 – Opportunity Identification & Evaluation	<ul style="list-style-type: none">- All opportunities with 4 year payback or less are evaluated
5 – Decision making	<ul style="list-style-type: none">- Information presented to management
6 – Communicating outcomes	<ul style="list-style-type: none">- Board reviews and notes public report

INTENDED CHANGES TO SYSTEMS

Percentage of EEO businesses that intend to modify existing systems and practices, or initiate new activities, to undertake assessment of opportunities



BUILDING CAPACITY

- Encourage rather than censure
- Dedicated client liaison officers
- Resource materials
- Workshops
- Verification – identify further knowledge gaps



WHERE ARE WE UP TO?

- Halfway through first 5 year cycle
- 227 corporations registered
- 199 initial reports completed – 1099 reporting entities (subsidiaries)
- All public & government reports received
- 57% of energy assessed



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RESULTS SO FAR

Opportunities identified by corporations	Savings as % of energy assessed	Energy savings per year (PJ)	Net financial savings per year (\$m)
Opportunities to be adopted*	4.1%	41.6	\$503
Opportunities under investigation	2.4%	24.2	\$218
Opportunities not to be implemented	0.2%	1.8	\$15
Total identified opportunities	6.6%	67.7	\$736

* includes business responses: implemented, implementation commenced and to be implemented.



RESULTS SO FAR

Identified energy savings	Number of corporations	Identified savings (PJ)
0%	14	0.0
0-2%	34	2.3
2-5%	41	20.3
5-10%	40	6.0
10-20%	38	15.0
20% +	32	24.1
Total	199	67.7



LARGE ENERGY SAVINGS

- Reconfiguring plant and operations
- Large scale heat recovery
- Major equipment replacements or upgrades
- Improved plant maintenance & measurement systems
- Large scale cogeneration projects



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PROGRAM SUCCESSES

- Raising the profile of energy efficiency
- Boosting energy assessment capabilities
- Engagement of site personnel
- Improving measurement & metering
- Project evaluation and tracking



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Thank you

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