



Australian Government

Department of Resources, Energy and Tourism

TRENDS FROM FIRST ASSESSMENT REPORTS

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TO: EEO WORKSHOPS
WHEN: MAY 2009



National Framework
for Energy Efficiency

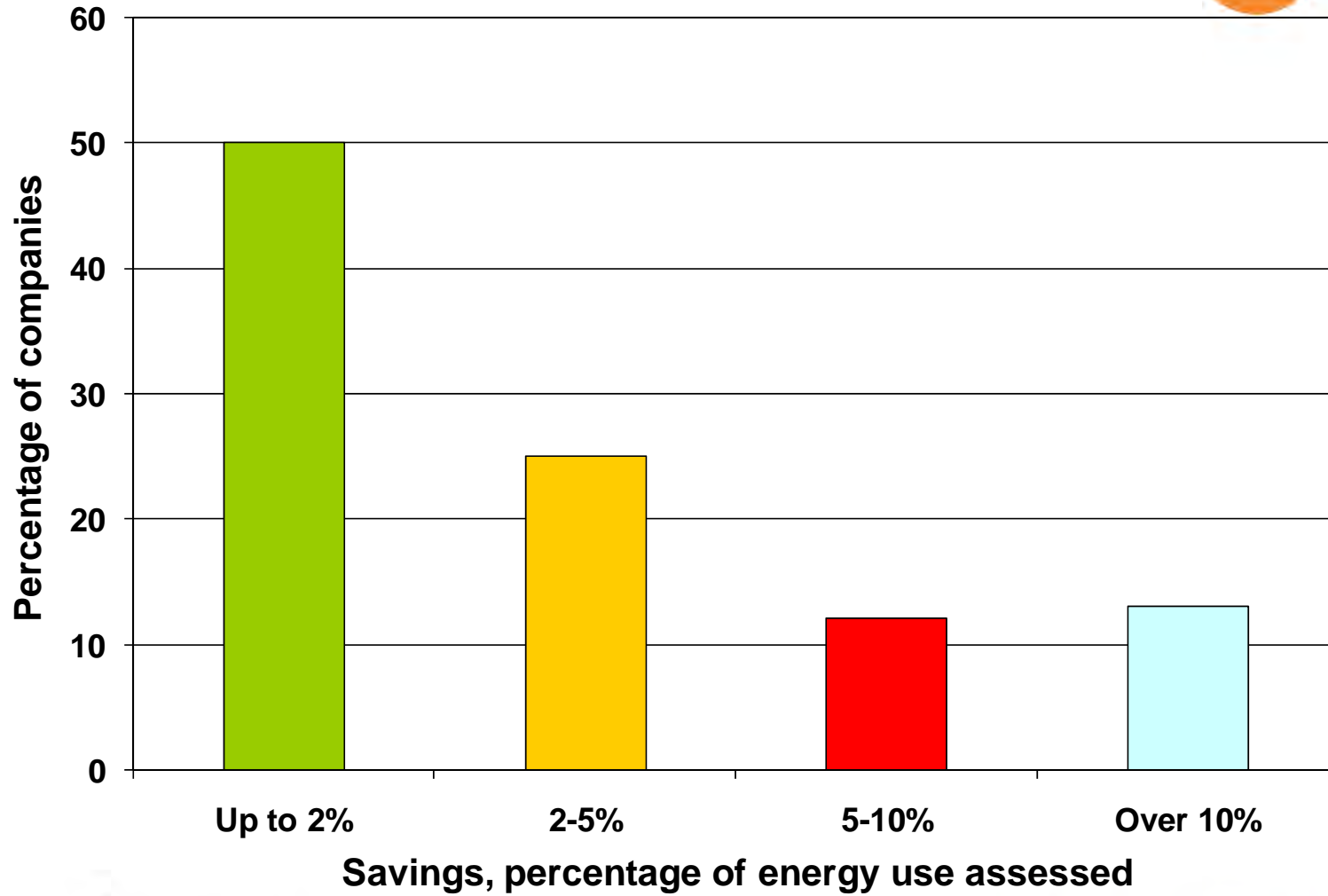
Energy Efficiency
Opportunities

OVERVIEW OF REPORTED OPPORTUNITIES

- Broad overview of the opportunities reported by industry
- Common trends emerging
- Low hanging fruit and future directions

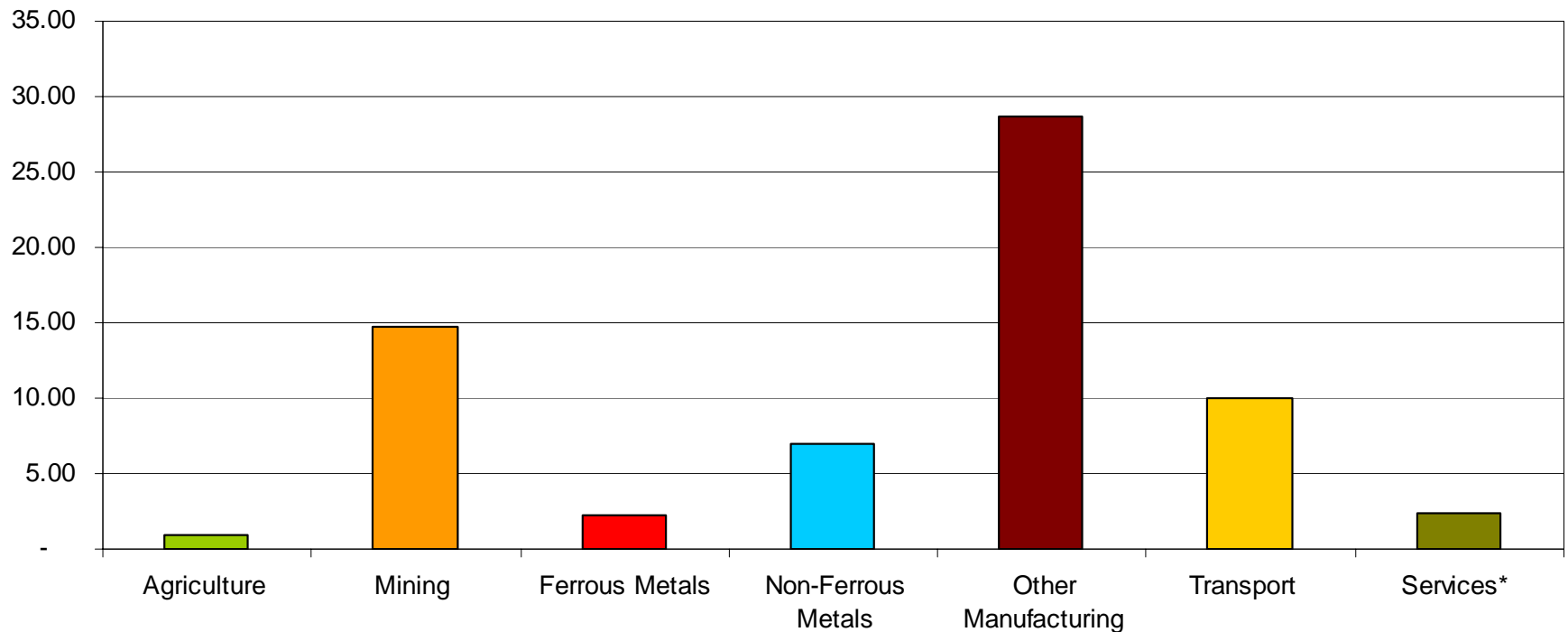


IMPLEMENTED SAVINGS

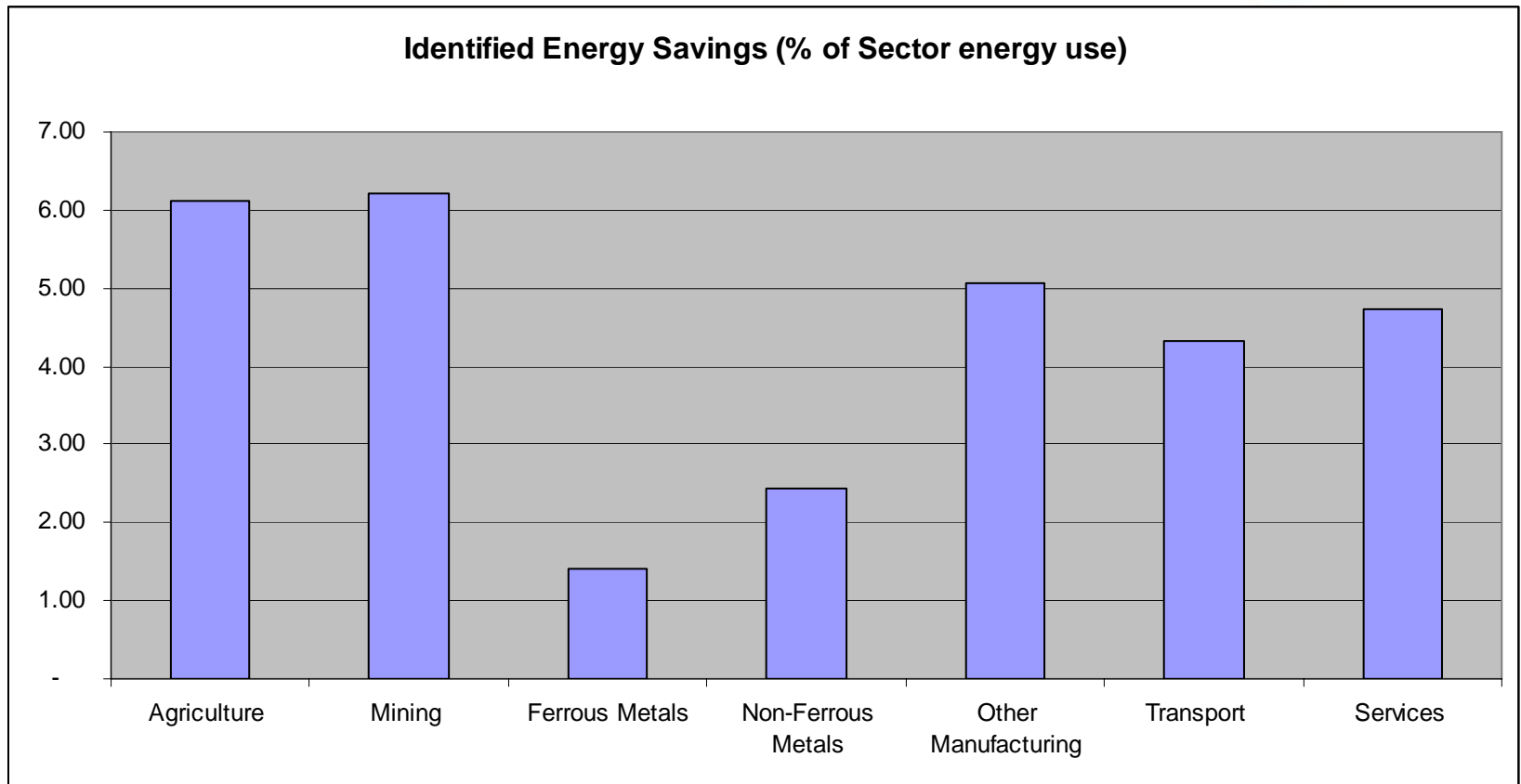


SAVINGS BY SECTOR

Total identified savings by sector (PJ)



PERCENTAGE SAVINGS BY SECTOR



WHAT PRODUCED THE LARGEST SAVINGS?

Up to 0.1 PJ		
<ul style="list-style-type: none">• Behavioural changes• Variable speed drives• Reducing losses• Using waste heat• Process control• Equipment selection systems		



WHAT PRODUCED THE LARGEST SAVINGS?

Up to 0.1 PJ	0.1 – 0.5 PJ	
<ul style="list-style-type: none">• Behavioural changes• Variable speed drives• Reducing losses• Using waste heat• Process control• Equipment selection systems	<ul style="list-style-type: none">• Changing tech/ processes/ configuration• Advanced control systems• Maintenance changes• Scheduling/loads• Waste heat	



WHAT PRODUCED THE LARGEST SAVINGS?

Up to 0.1 PJ	0.1 – 0.5 PJ	More than 0.5 PJ
<ul style="list-style-type: none">• Behavioural changes• Variable speed drives• Reducing losses• Using waste heat• Process control• Equipment selection systems	<ul style="list-style-type: none">• Changing tech/ processes/ configuration• Advanced control systems• Maintenance changes• Scheduling/loads• Waste heat	<ul style="list-style-type: none">• Switching off plant• Heat recovery• Equipment replacement• Maintenance measures• Cogeneration



COMMERCIAL: HVAC & LIGHTING

- HVAC systems
- Lighting systems
- Carbon Monoxide sensors for car parks



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COMMERCIAL: POWER & CONTROL

- Power Factor Correction units
- Occupancy and photoelectric sensors
- Electrical equipment control



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MINING SECTOR

- Increased sub-metering
 - Improved energy measurement
 - Opportunity identification
 - Business cases



MINING SECTOR (CONT'D)

- Analysis of current work processes:
 - Determine current levels of efficiency
 - Re-evaluate current approaches
- Energy costs increase as mines are depleted



RESOURCE PROCESSING SECTOR

- Waste heat
- Variable Speed Drives
- Switching power source



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TRANSPORT SECTOR

- Staff training
- Load management and vehicle scheduling
- Vehicle aerodynamics
- Alternative transport fuels



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MANUFACTURING SECTOR

- Analysis of current work processes
- Compressed air
- Power factor correction
- Control of electrical equipment



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LOW COST, AVAILABLE OPPORTUNITIES

- Common opportunities:
 - Variable Speed Drives
 - Improved metering and control
 - Staff training and awareness
 - Lighting systems
 - HVAC system operation
 - Compressed air leaks



CURRENT ACHIEVEMENTS?

- Rigorous energy assessments produce:
 - Real, quantifiable energy savings
 - Reduced greenhouse gas emissions
 - Sound data for investment projects
- Benefits of implementation



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LESSONS FOR FUTURE ASSESSMENTS

- Potential areas for future opportunities:
 - Changes to current work processes
 - Investment in new & alternative technologies
 - Improved staff training and awareness
 - Culture of energy efficiency



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Questions?



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