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Department of Resources,  
Energy and Tourism

# Energy Management and Energy Efficiency Lessons from the EEO Program



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Energy Efficiency Opportunities (EEO) Program  
Department of Resources, Energy and Tourism



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# Managing Energy – Australian Government Perspective

- Key drivers
  - Rising energy prices
  - Low cost abatement
  - Productivity
  
- Policy Responses
  - Energy White Paper
  - Carbon price fixed for 3 years before moving to an emissions trading scheme
  - Energy Market Reform
  - Demand Side Management
  
- Support Programs
  - Information: Energy Efficiency Opportunities Program (EEO), Energy Efficiency Exchange (EEX)
  - Incentives: Clean Energy Finance Corporation (CEFC), Australian Renewable Energy Agency (ARENA), Clean Technology Innovation Program (CTIP)





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## Energy Efficiency Opportunities (EEO) Program Key Policy Drivers

- Key policy drivers:
  - to address information failures within business that impede prudent and objective decision making on cost effective energy savings opportunities;
  - to build industrial capability and capacity to identify, assess and implement energy saving opportunities,
  - to improve energy productivity and to deliver associated cost savings;
  - to facilitate ongoing / systemic behavioural change in organisations
- Is a unique program in that it sits half way between a voluntary program and a targets based compliance program
  - participation and assessments are mandated, but implementation of identified energy savings is not (that is a business decision for companies)





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## Energy Efficiency Opportunities (EEO) Program Key Levers

- **Mandatory Assessments**
  - Rigorous
  - Verified
- **Quality, evidence based information supported by data**
- **Involvement of decision makers**
  - Technical
  - Financial
  - Senior management

Quality, evidence based information supported by data
- **Reporting to the Board/ Public on assessment outcomes and business response**





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# EEO Assessment Framework

**Rigorous and Comprehensive Assessments**



**Leadership**

**People**

**Information, Data & Analysis**

**Opportunity Identification & Evaluation**

**Decision Making**

**Communicating outcomes**

**Six key elements**





## Effective Approaches for Energy Management

- Energy Mass Balances (EMB) / Energy Material Flows
- Energy Optimisation Tools
- Theoretical Benchmarking
- International Collaboration in the use of ICTs to develop tool to allow for real time data analysis
  - Demand Side Management (government)
  - Demand Side Participation (Industry)



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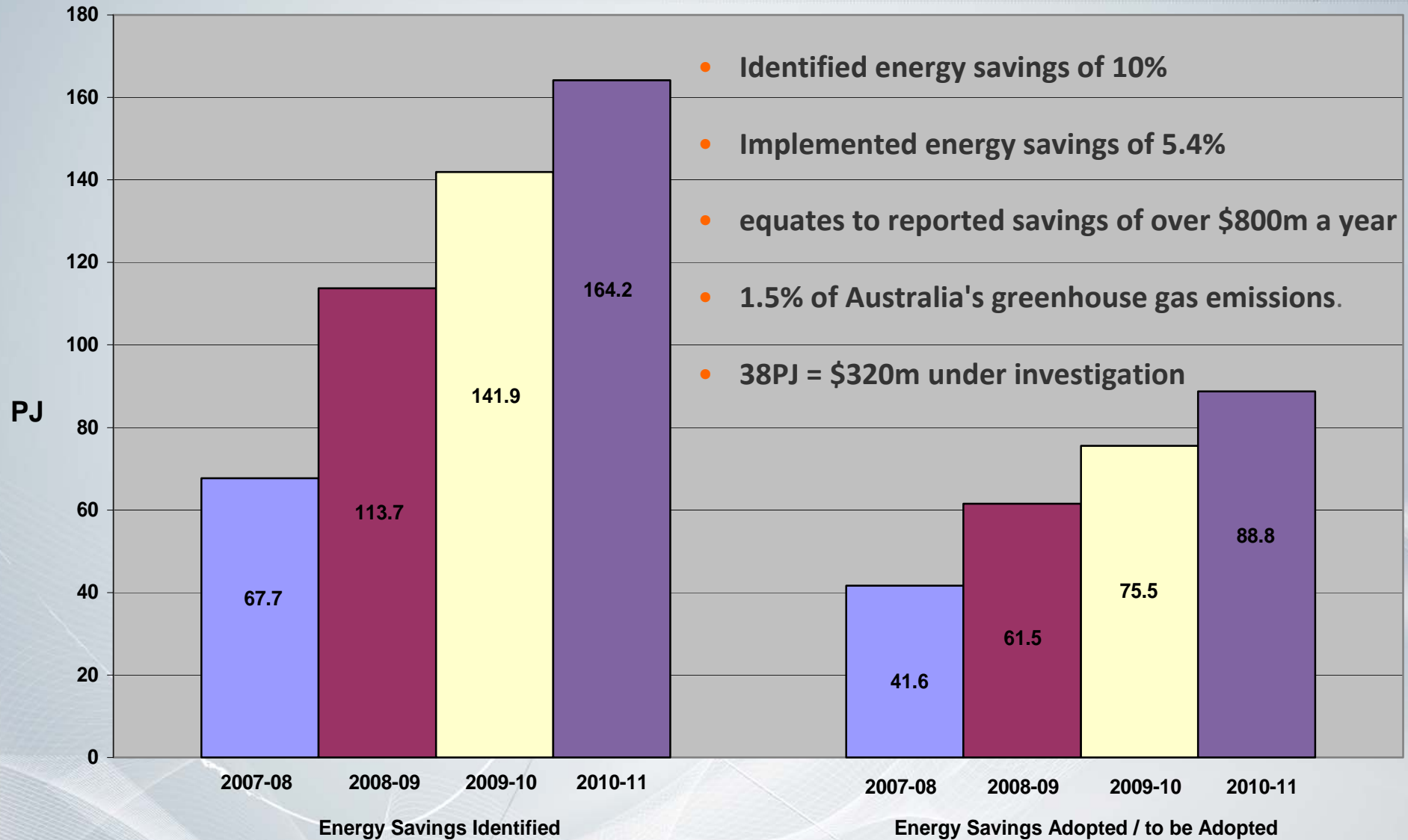
## Energy Efficiency Opportunities (EEO) Program Implementation – Key Insights

- Importance of leadership support at all levels
- Involve people from a range of backgrounds
- Analysis of data key to identifying opportunities
- Link the business case to key business drivers and highlight additional business benefits
- Communication of successful projects to assist in building further support
- Involvement of the Board
- Public Testament of accuracy in reporting



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# EEO Program – Results



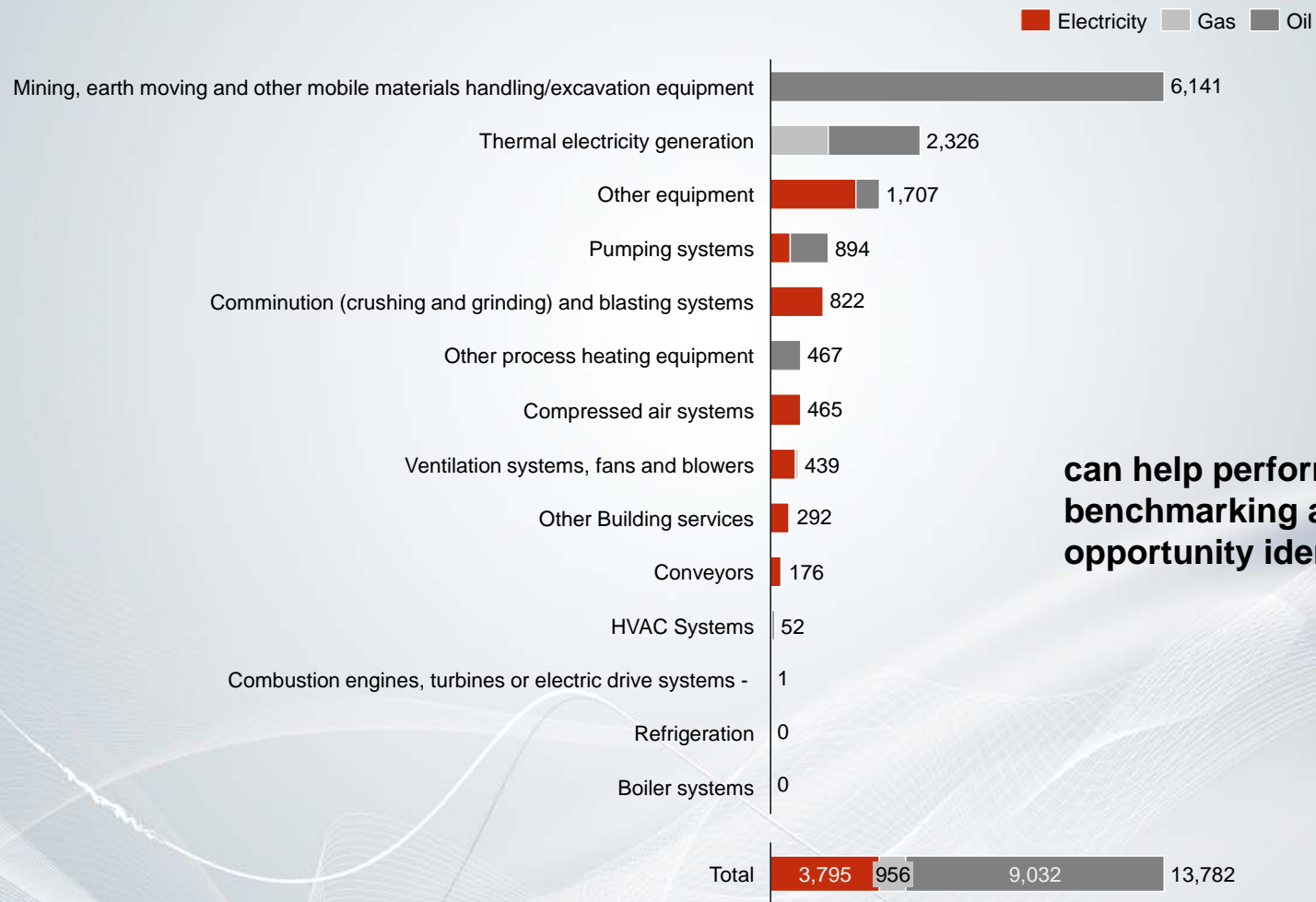




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# Using Data to Improve Decision Making - Industrial Energy Efficiency Data Analysis (IEEDA) Project

## Metal Ore Mining Sector: Identified energy savings by technology/process and fuel category



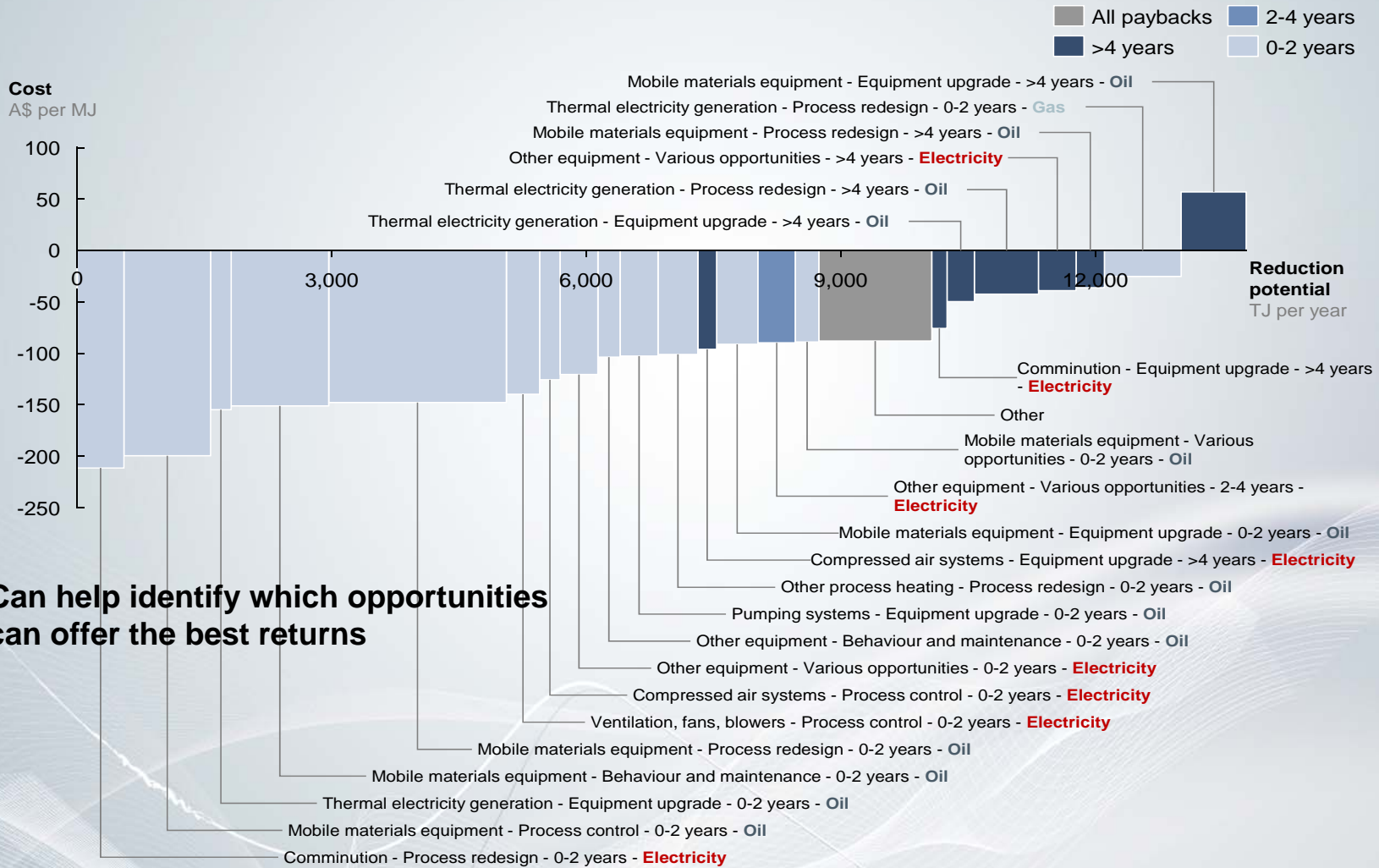
can help performance  
benchmarking and  
opportunity identification





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# Metal Ore Mining Sector: Energy Efficiency Cost Curve

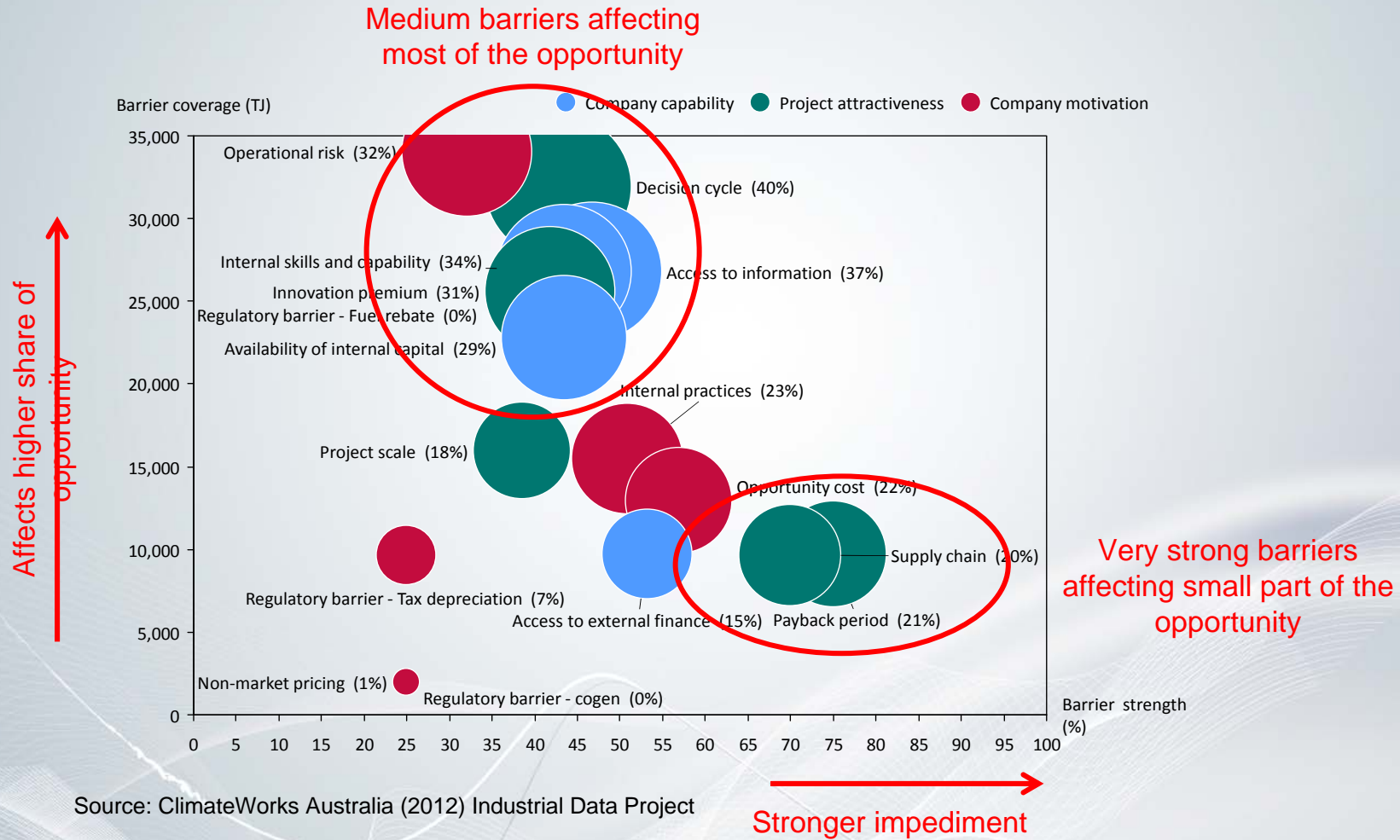


**Can help identify which opportunities can offer the best returns**



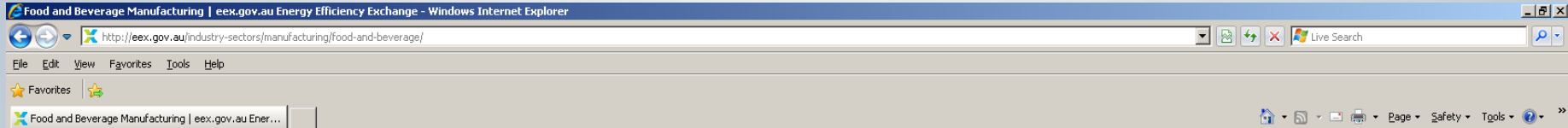


# Barriers Analysis to inform policy





# EEX – Addressing Information Barriers



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The bottom line on energy efficiency  
A joint initiative of Australian, State and Territory Governments

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## Food and Beverage Manufacturing

### Why be energy efficient?

Tight profit margins and rising energy prices create a strong case for energy efficiency in the food and beverage sector. Reducing energy costs through investment in energy efficiency can make a significant difference to the bottom line.<sup>1</sup>

Additional benefits can be delivered through lower water and chemical costs. Increased plant productivity and improved product quality. A focus on energy efficiency can also enhance customer loyalty and a company's reputation for responsible environmental performance.

### Opportunities

Food and beverage processing plants are large users of energy for refrigeration, cooking, heating, boilers and steam generation, sterilising, conveyors, and auxiliary equipment. Significant energy savings can be achieved through the following strategies:



Conveyor belt in a food processing facility. By stu\_spivack, on Flickr

- FOOD AND BEVERAGE MANUFACTURING
- Additional resources – Food & Beverage Manufacturing
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