



NATIONAL FRAMEWORK FOR
ENERGY EFFICIENCY

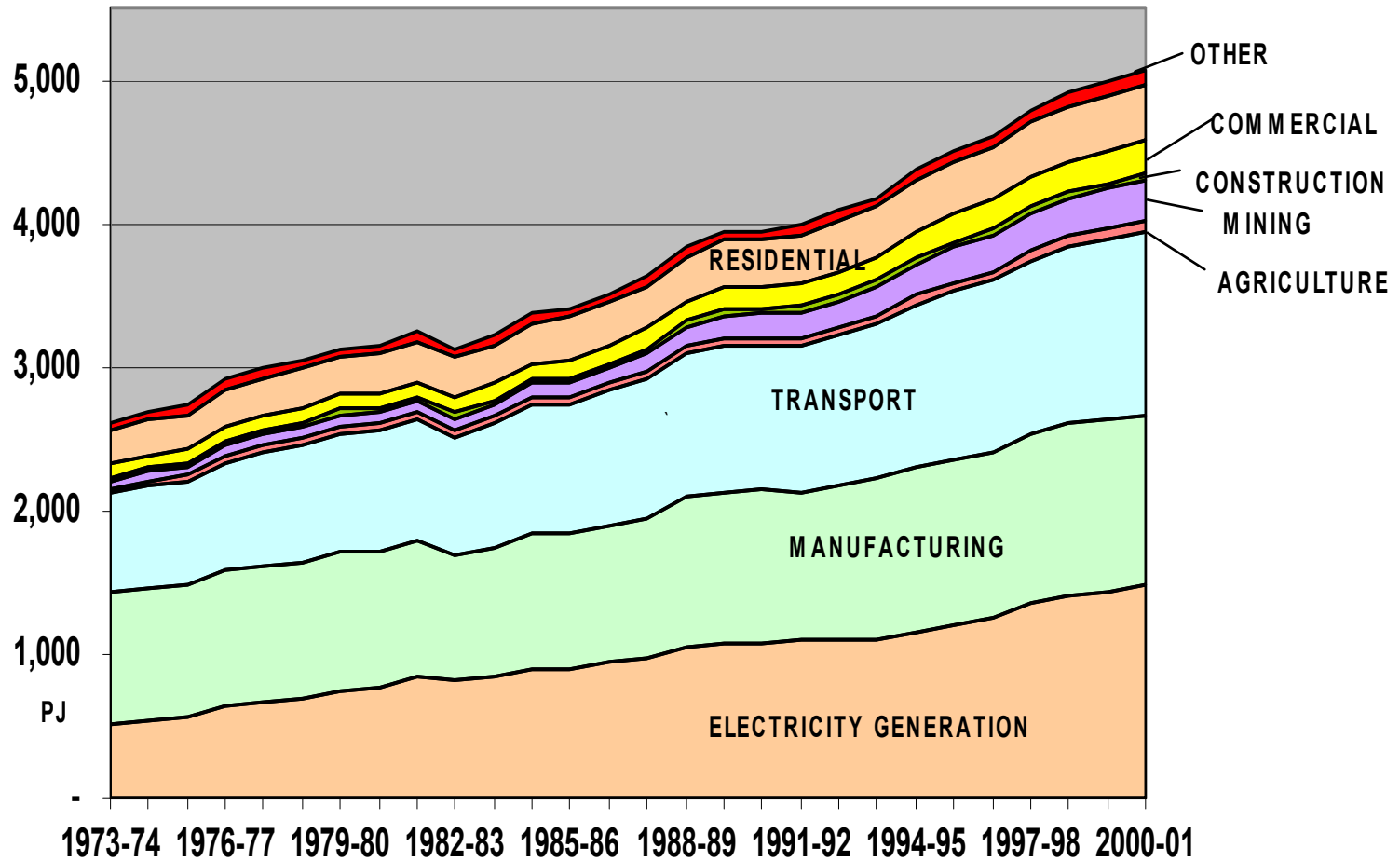
Towards a National Framework for Energy Efficiency

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Chief Executive
Sustainable Energy Authority
Monday, 7th April 2003**

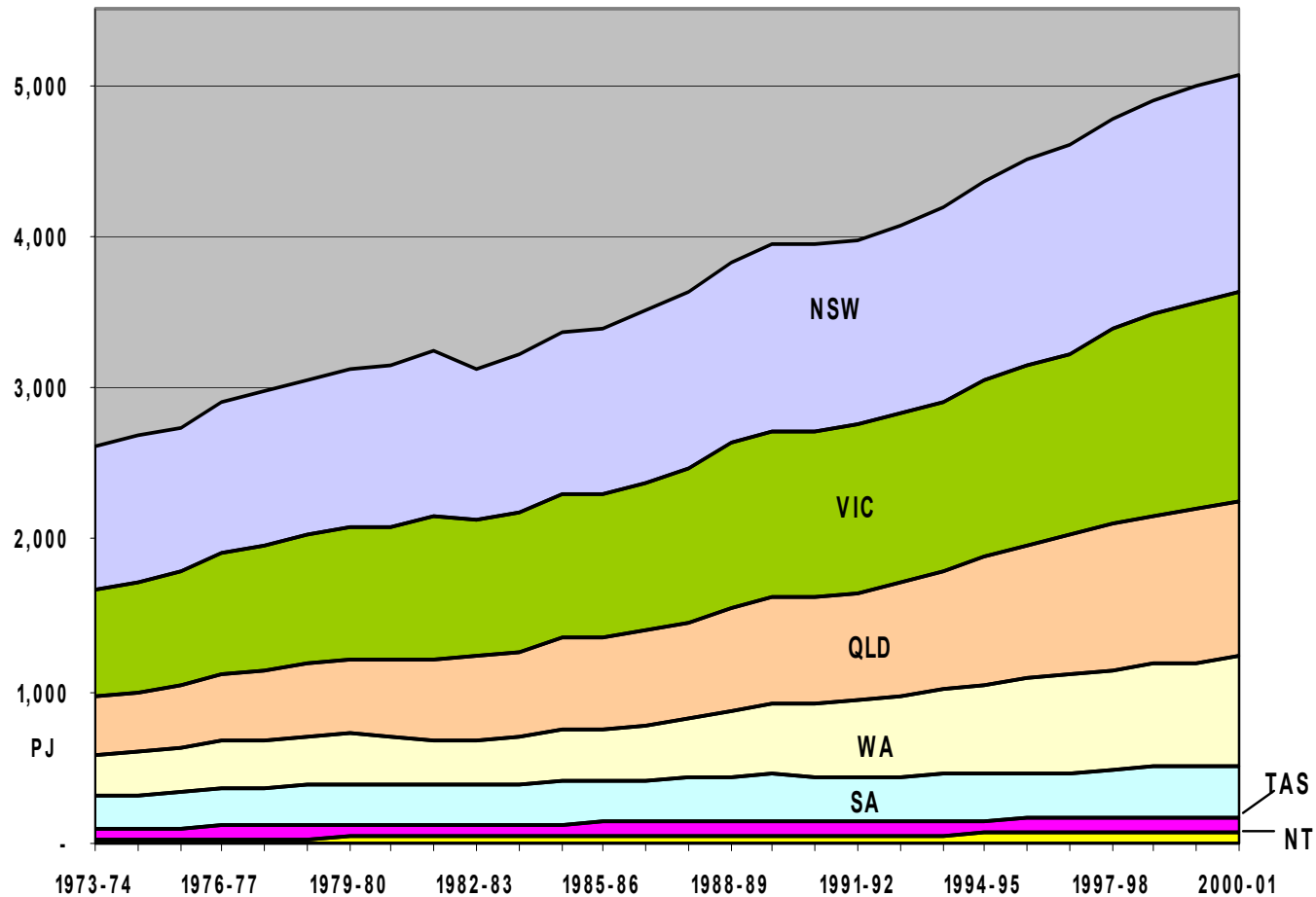
Overview

- To outline why Australia needs a step change in energy efficiency
 - historical energy consumption and intensity
 - barriers to energy efficiency
- To explain the work being done towards the development of a National Framework for Energy Efficiency.
 - the economic benefits of a step change in energy efficiency

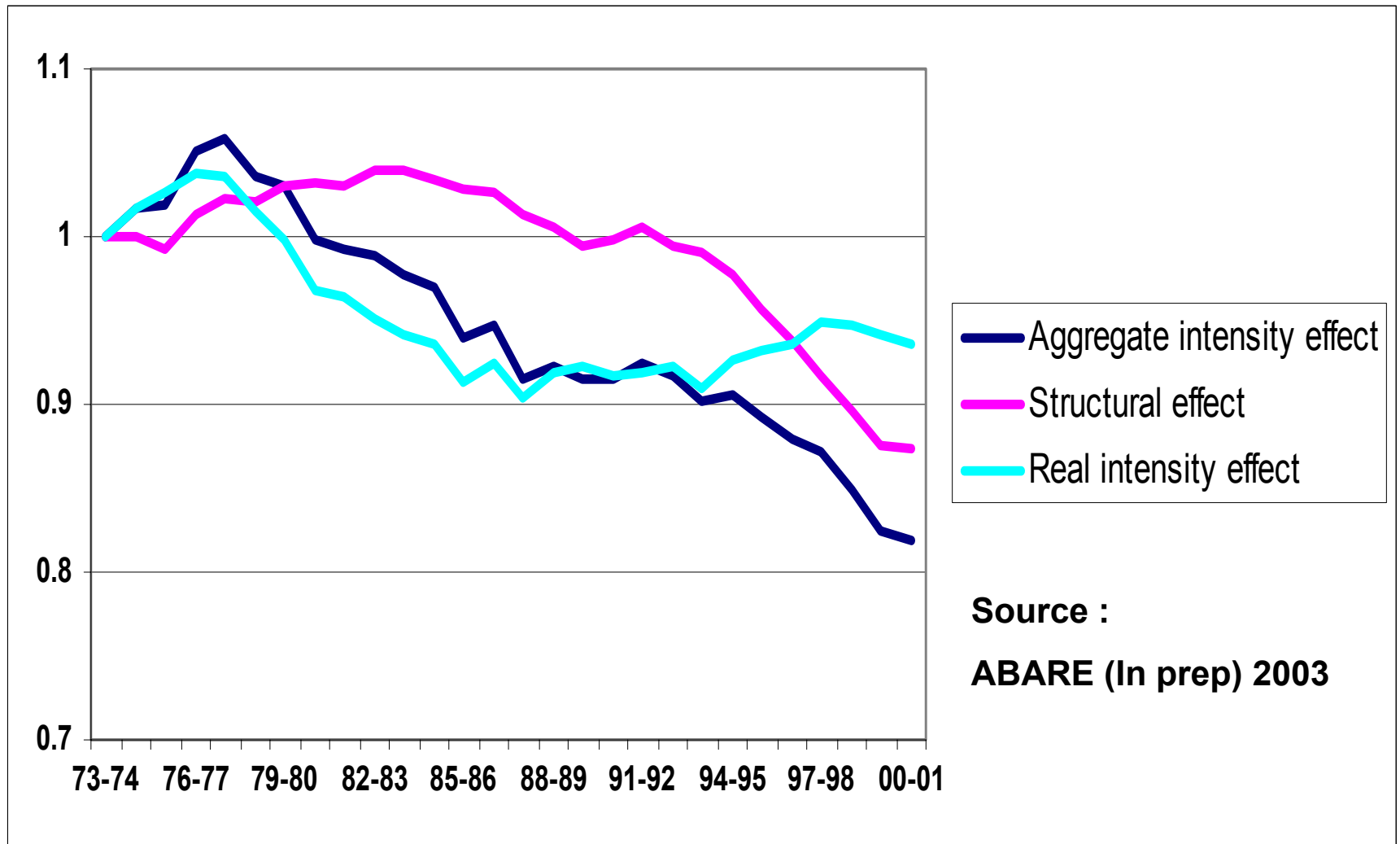
Australian Total Energy Consumption, by Sector, 1973/74 – 2000/01



Australian Total Energy Consumption, by State, 1973/74 – 2000/01

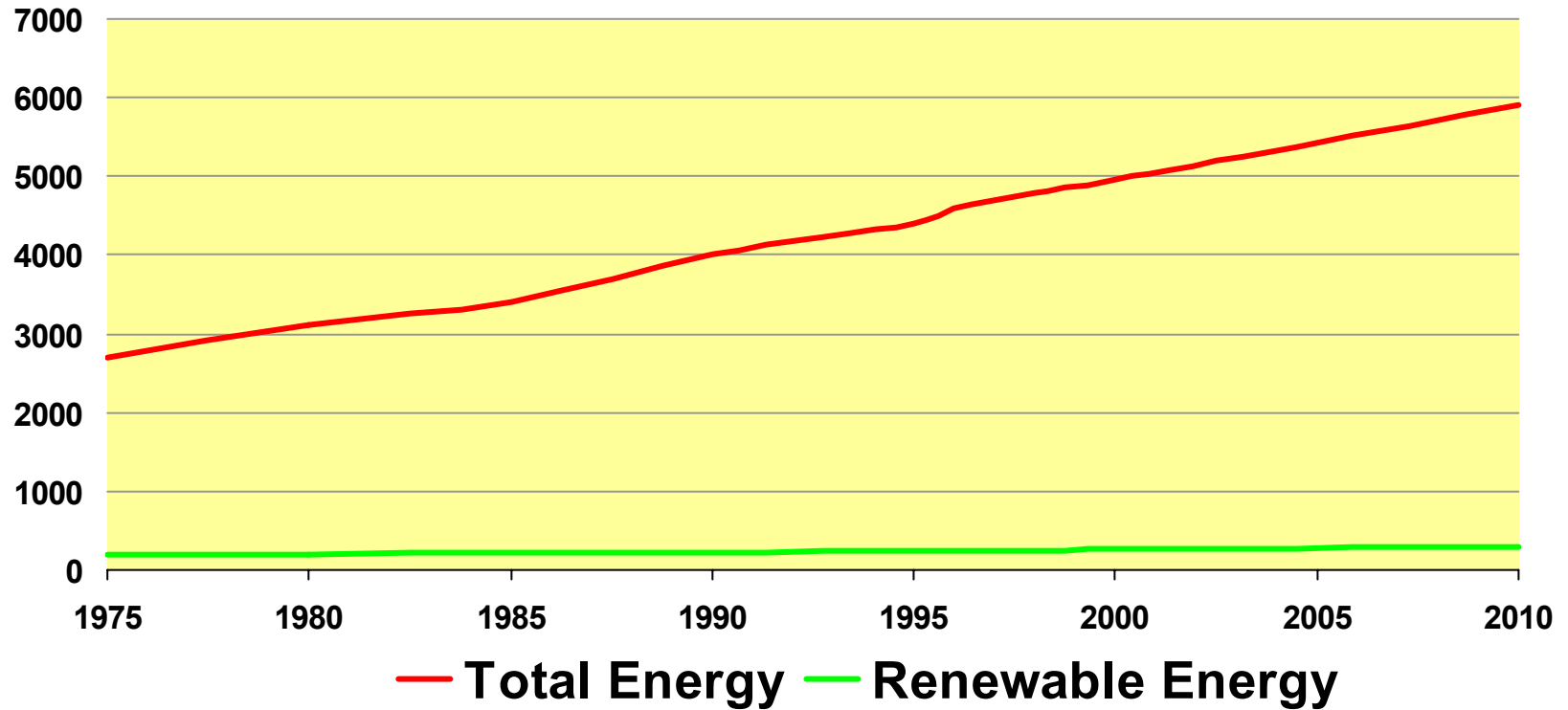


Energy Intensity of the Australian Economy 1973/74 – 2000/01



Why Energy Efficiency?

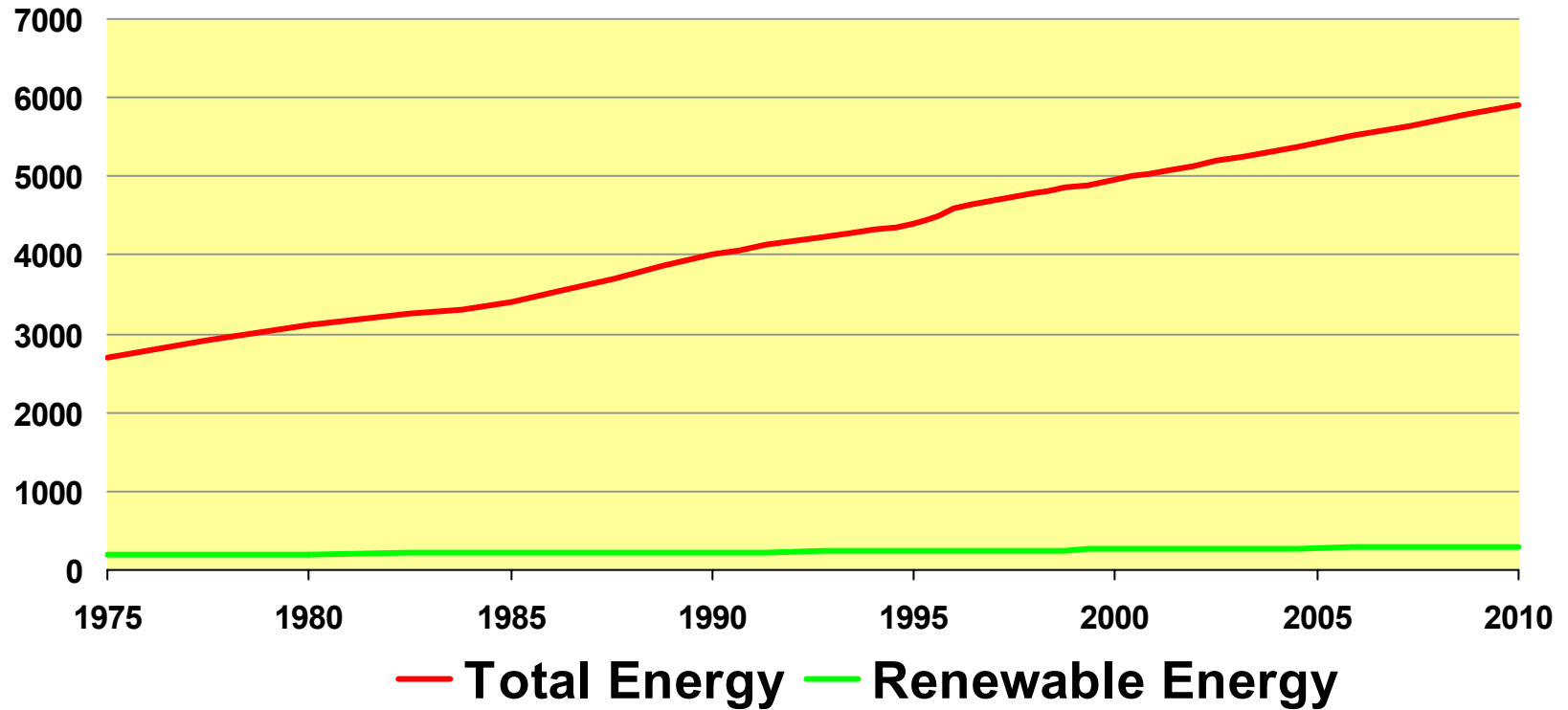
Energy (PJ)



Why Energy Efficiency?

**More energy consumed
from less sustainable
sources**

Energy (PJ)





Reduced environmental flows – Murray River



Changed fire regimes – Major impacts on biodiversity

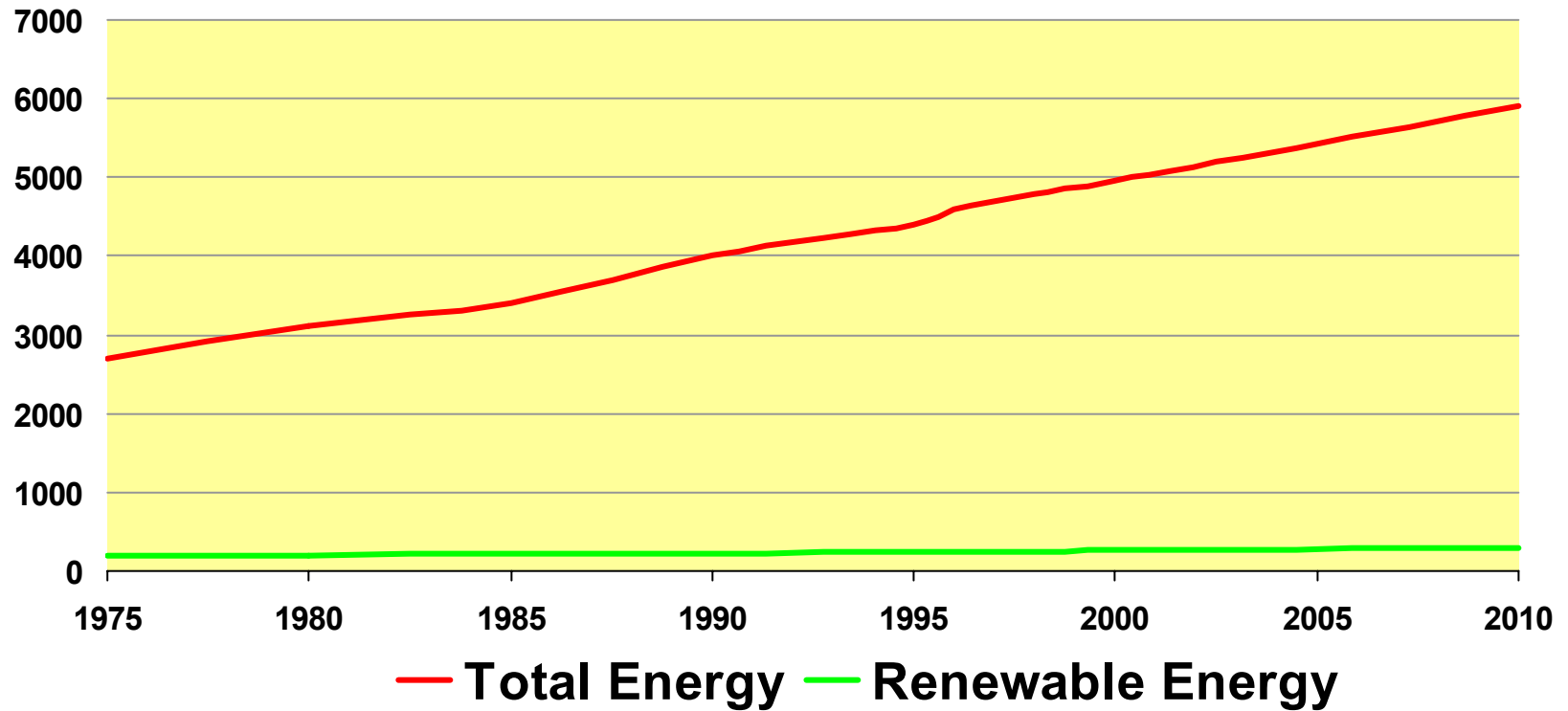


Reduced frequency of snow seasons – Economic & Environmental Impacts



Bridging the Gap

Energy (PJ)



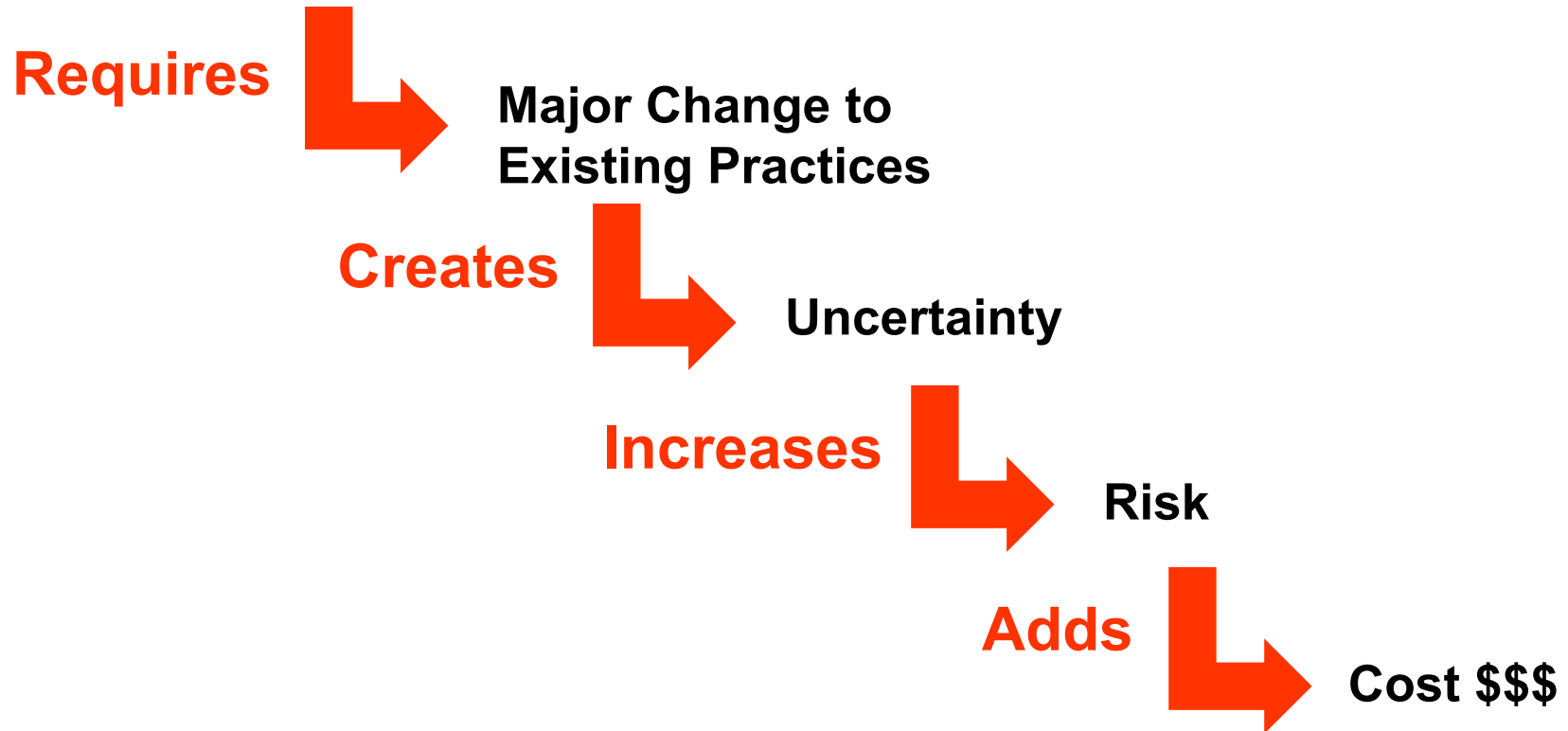
Options for Bridging the Gap

- Renewable Energy
- Clean Energy Technologies
- More efficient use of energy system
- Energy Efficiency

It is NOT either/or

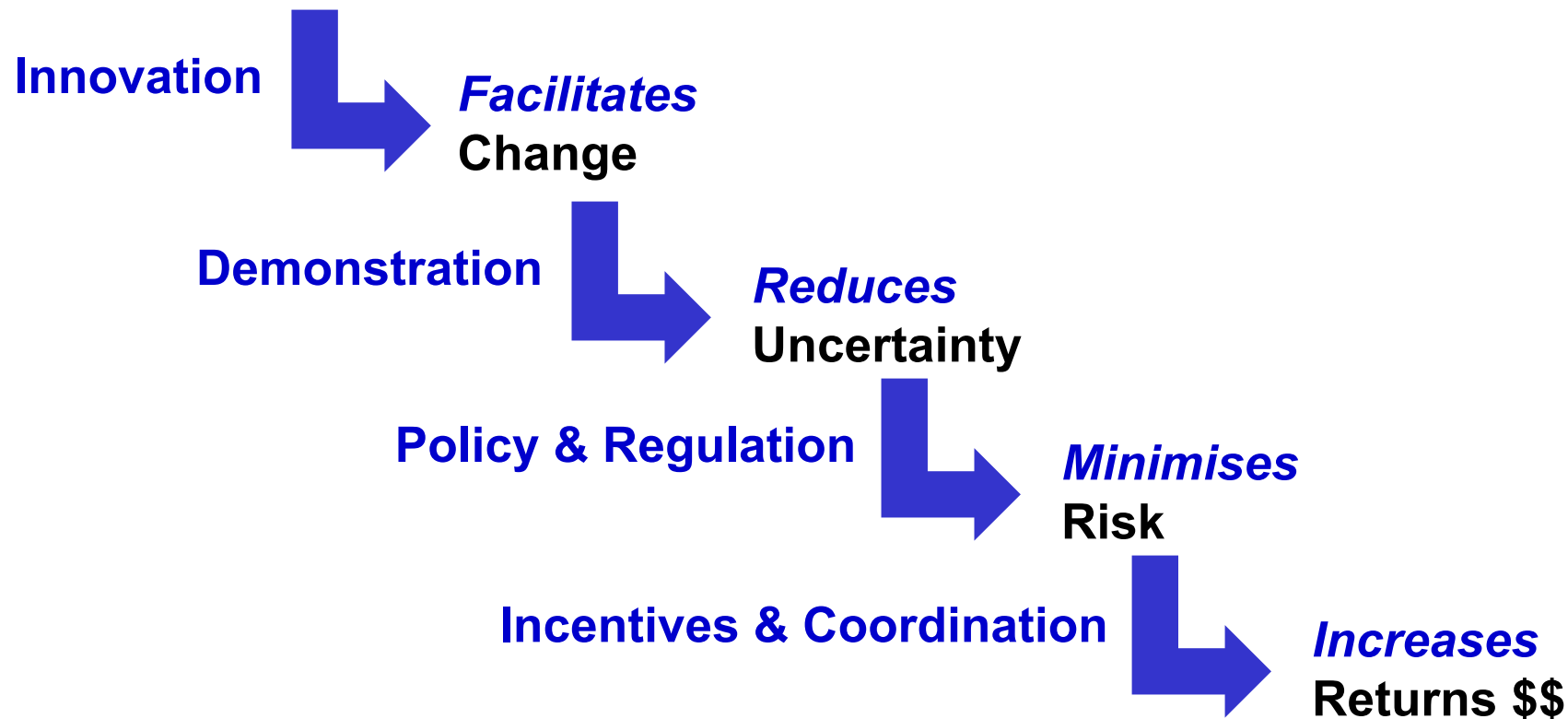
Barriers to Energy Efficiency

STEP CHANGE IN ENERGY EFFICIENCY



Overcoming Barriers

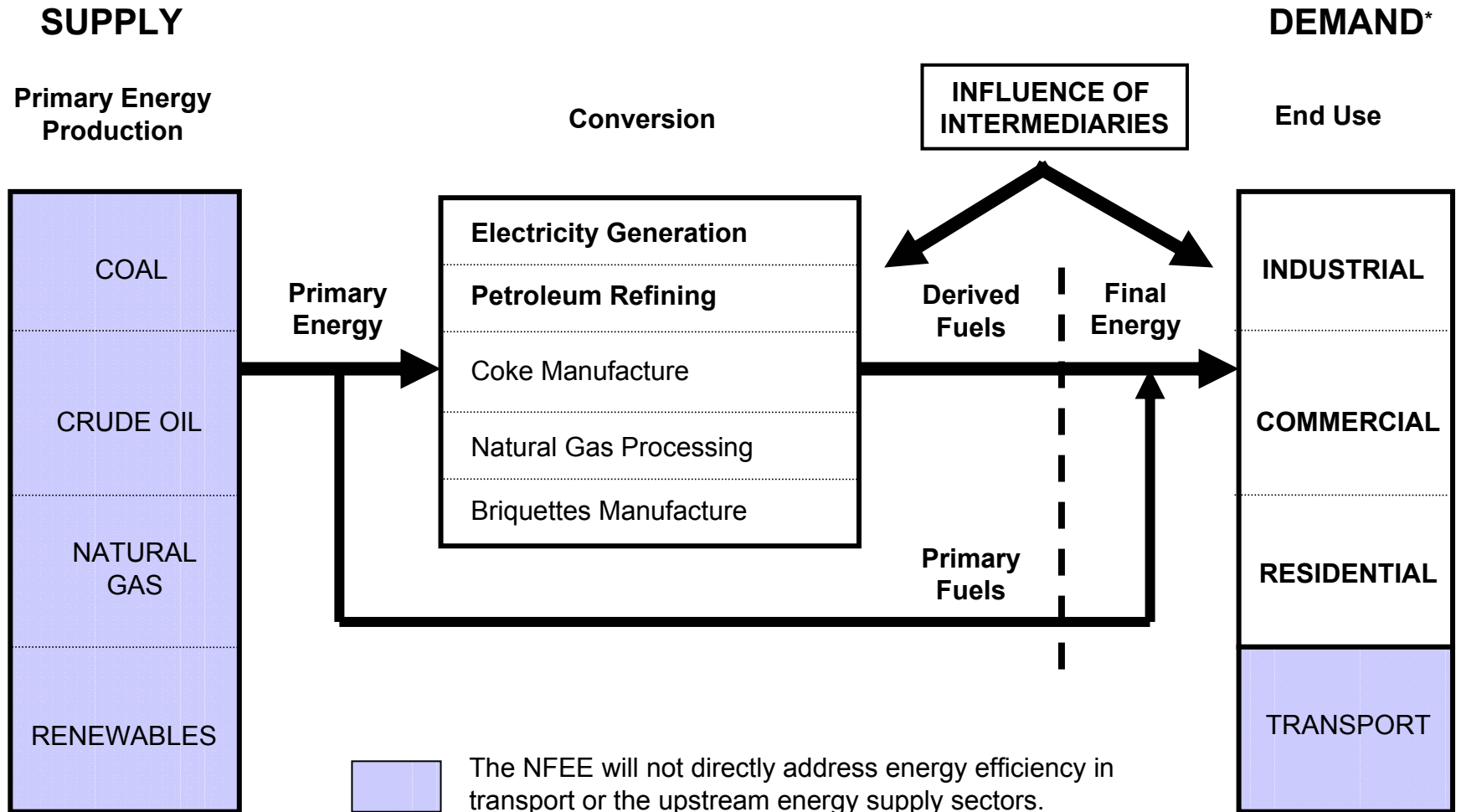
STEP CHANGE IN ENERGY EFFICIENCY



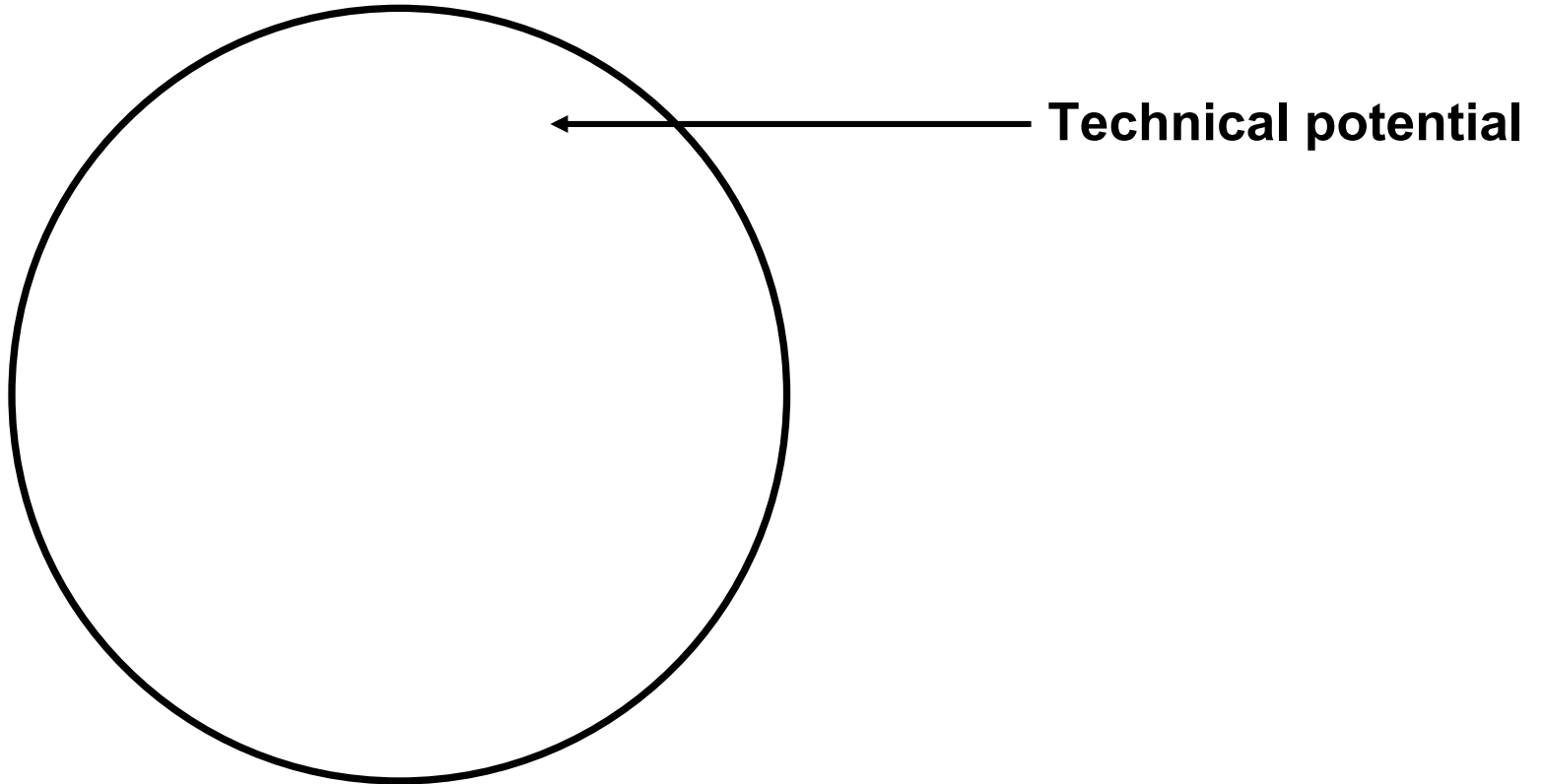
Background to the National Framework for Energy Efficiency

- Council of Australian Governments established the Ministerial Council on Energy (MCE) in July 2001
- One of the MCE's major tasks is to identify ways of **significantly improving energy efficiency** through cooperative action by the Commonwealth, States and Territories
- Energy Efficiency and Greenhouse Working Group (E₂G₂) has been established to lead this task.

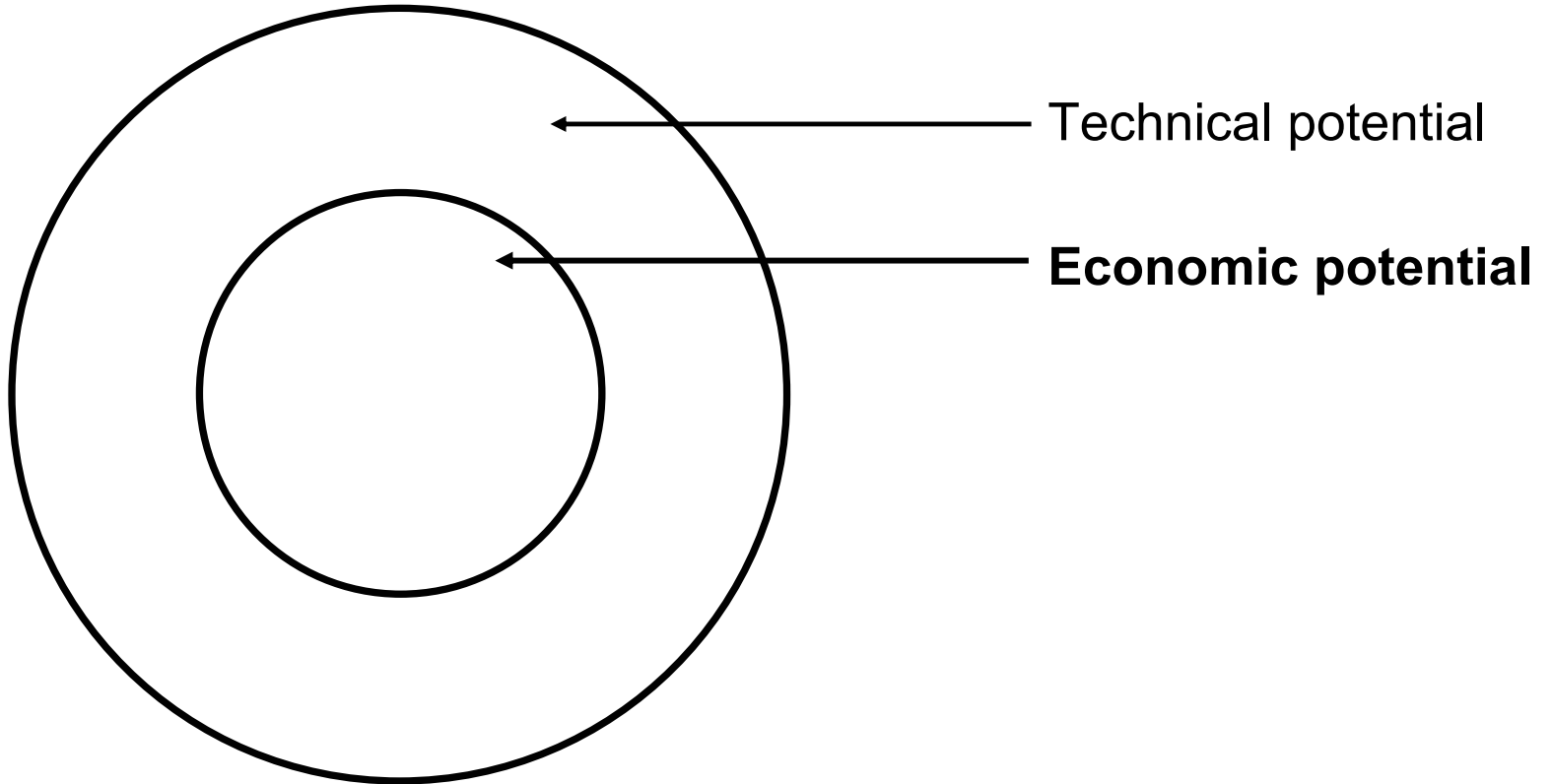
Scope of the National Framework



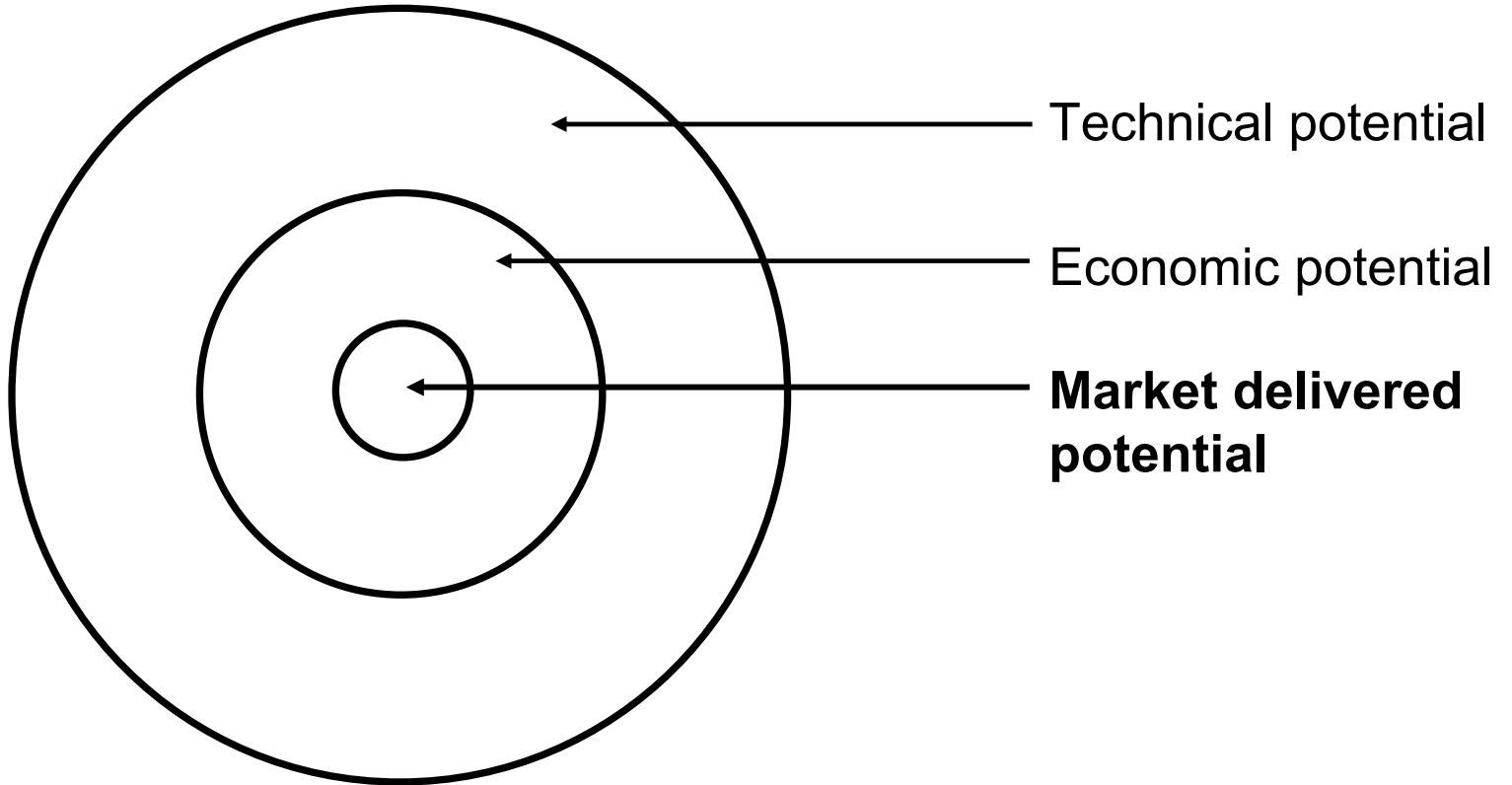
Technical energy efficiency potential



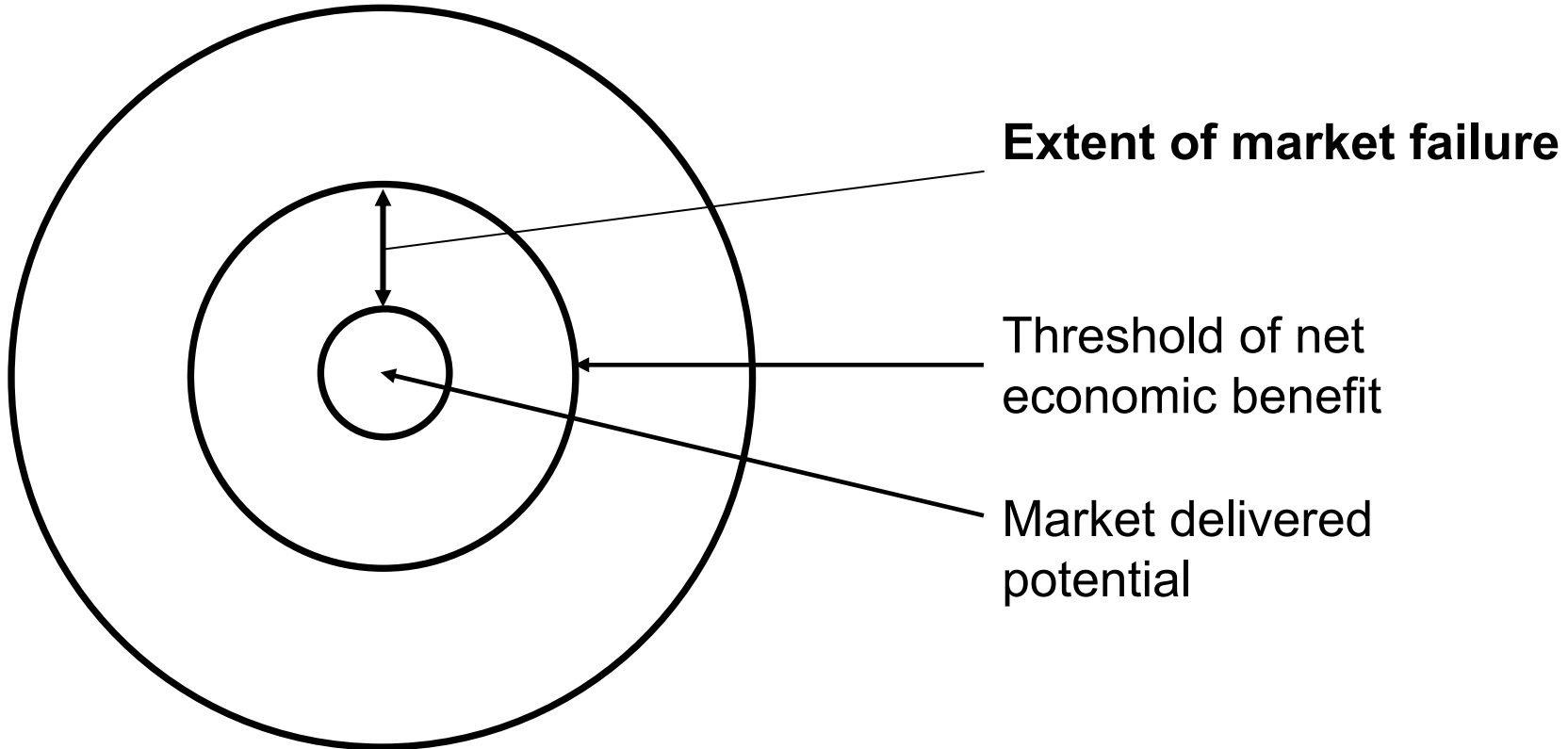
Economically beneficial energy efficiency potential



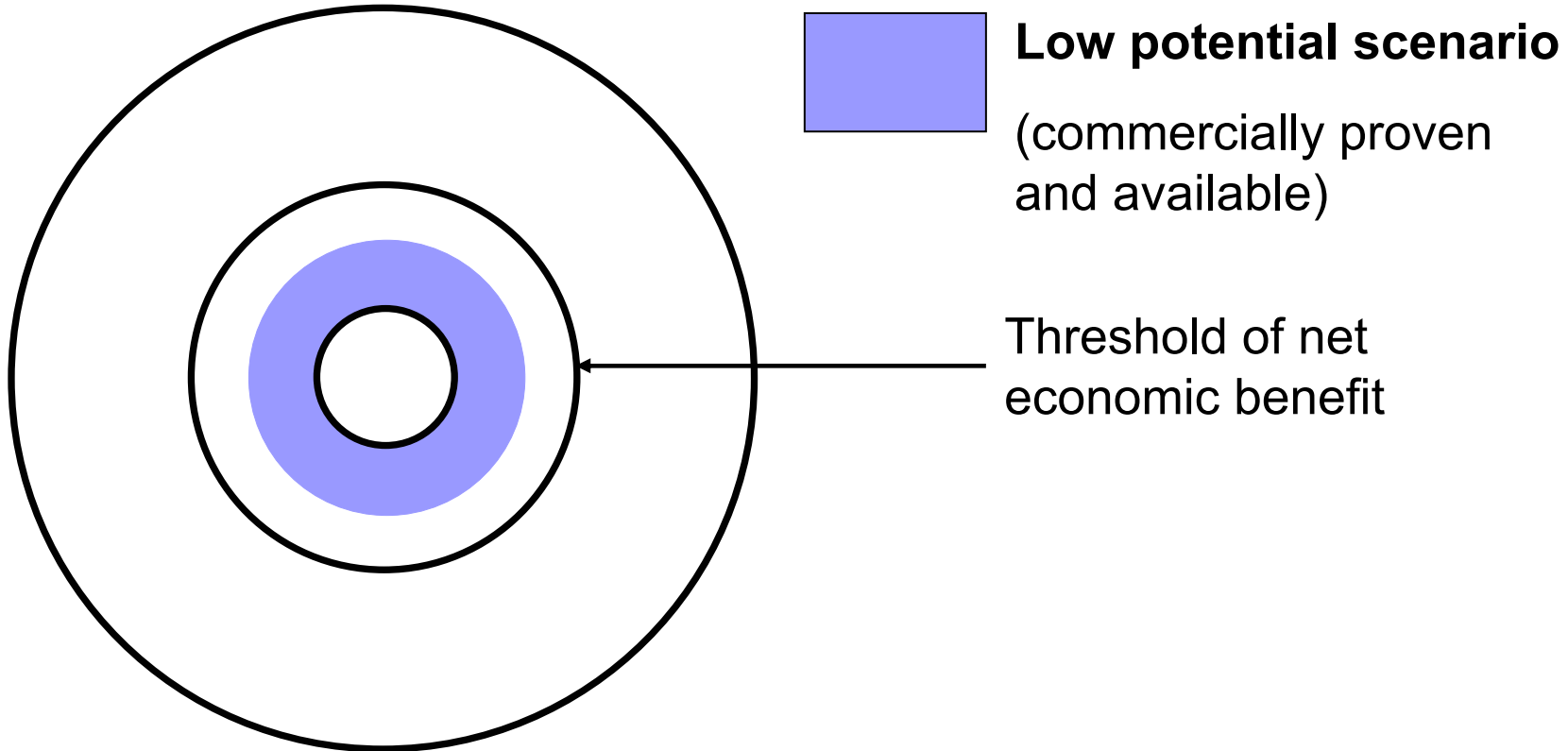
Current market for energy efficiency



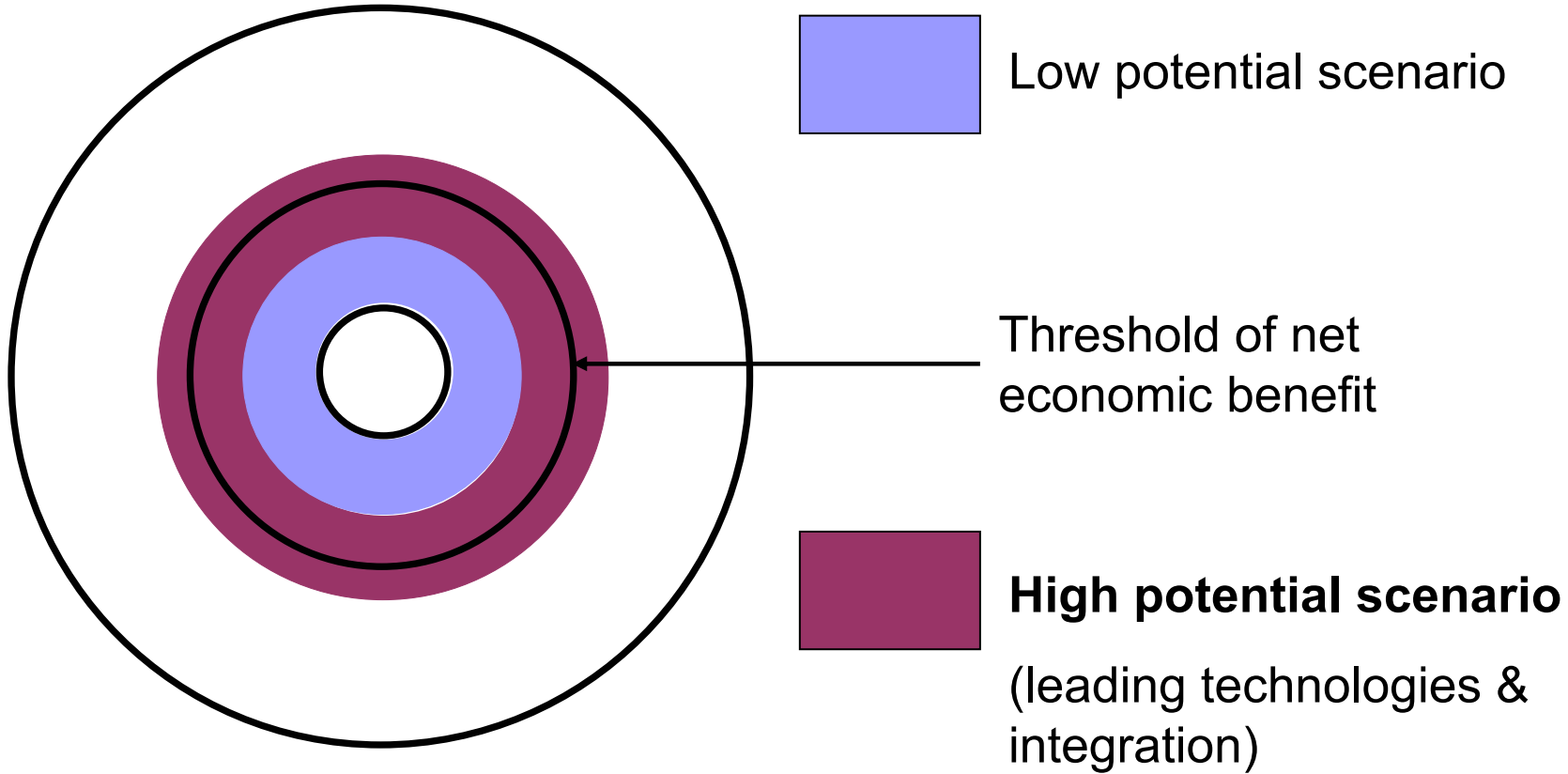
Market failure in energy efficiency



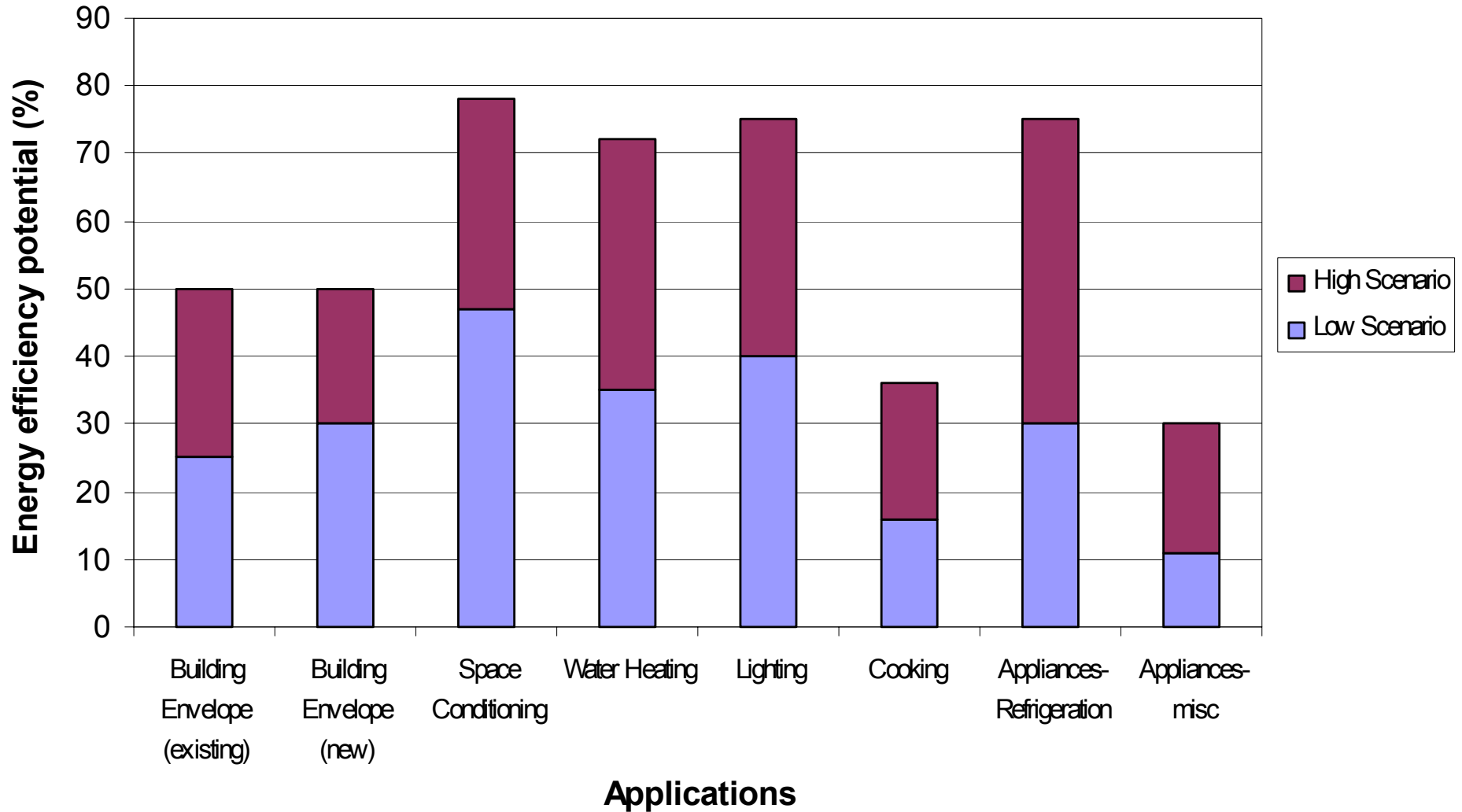
Immediate potential to improve energy efficiency



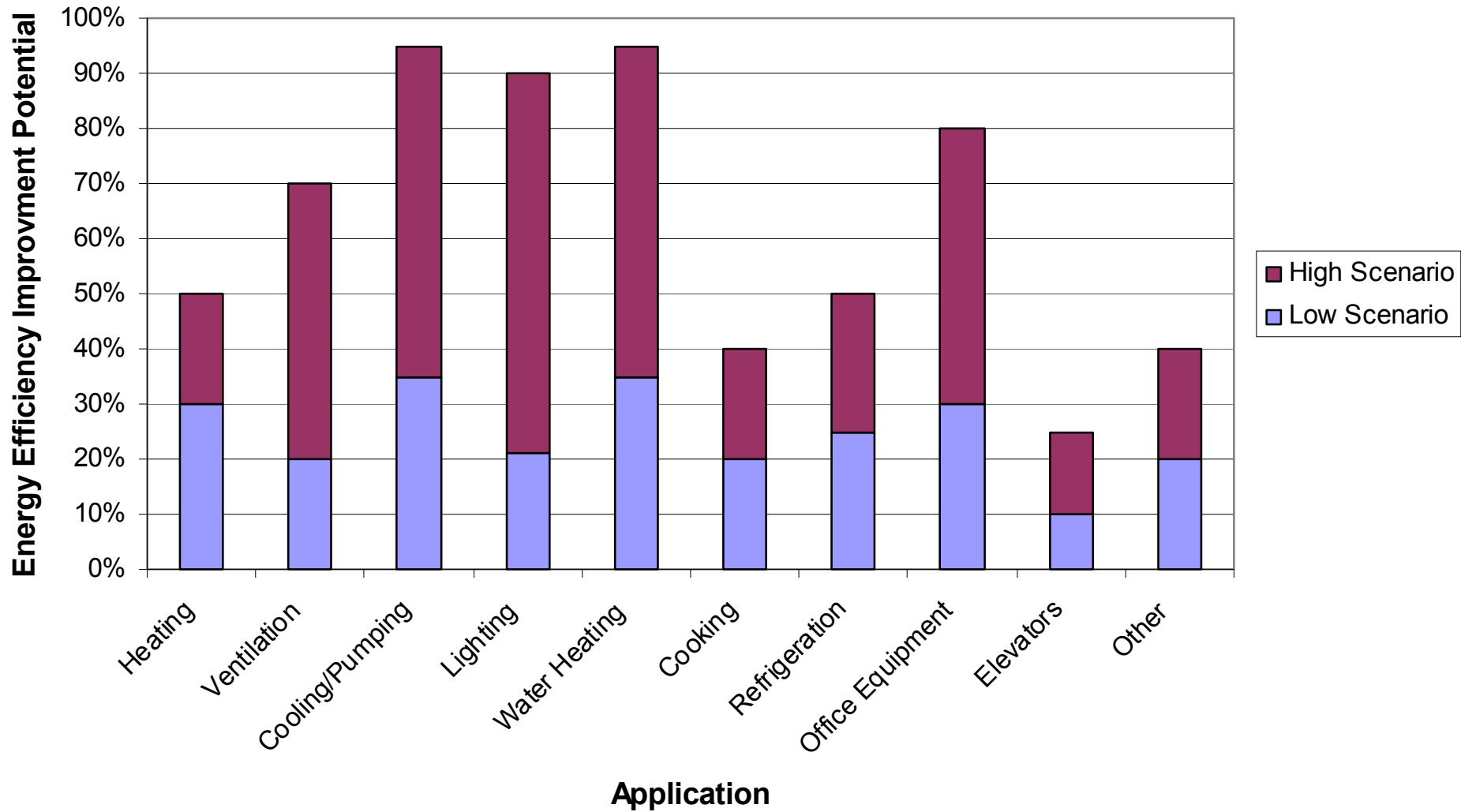
Further opportunities to improve energy efficiency



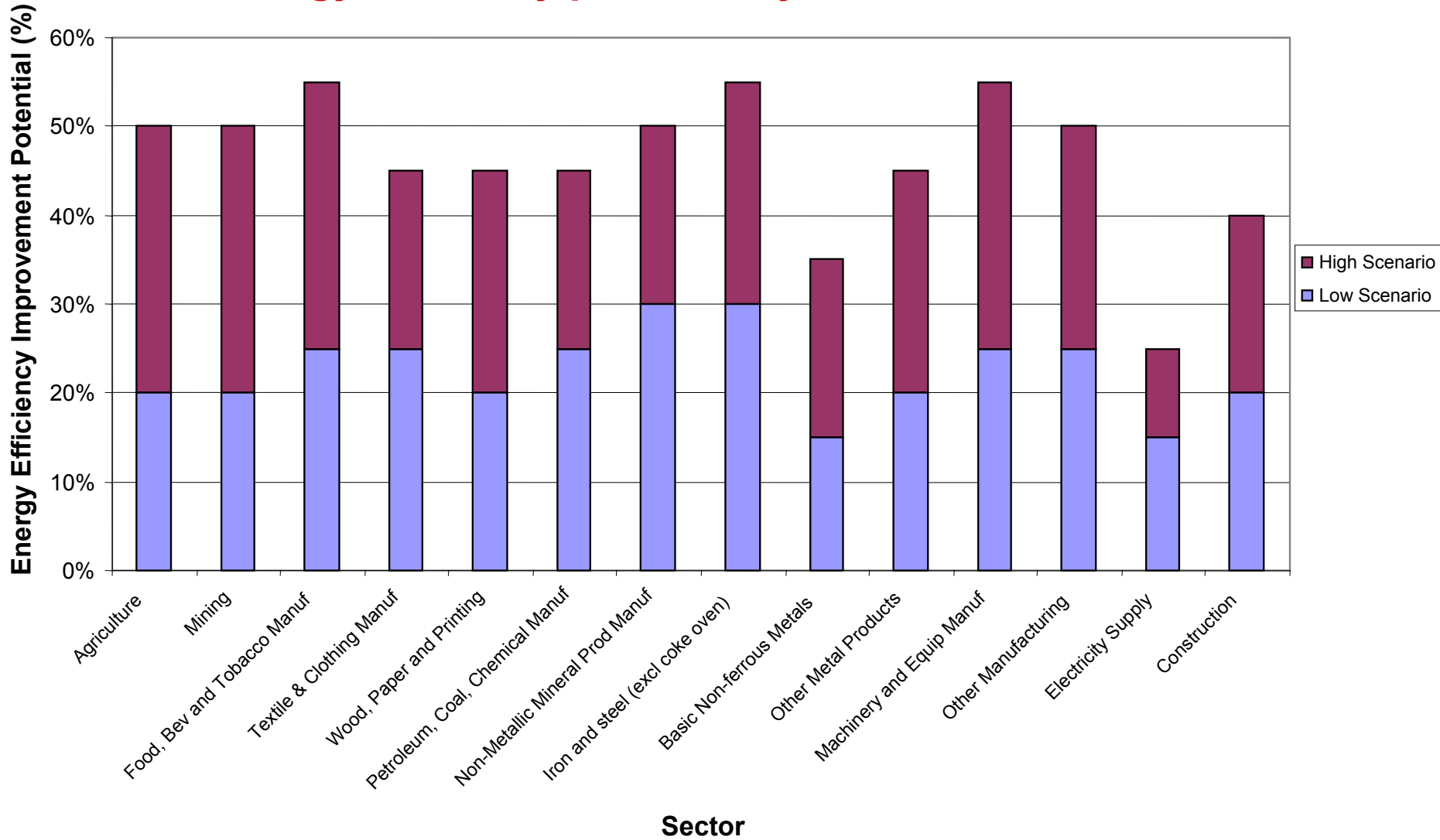
Residential energy efficiency potentials



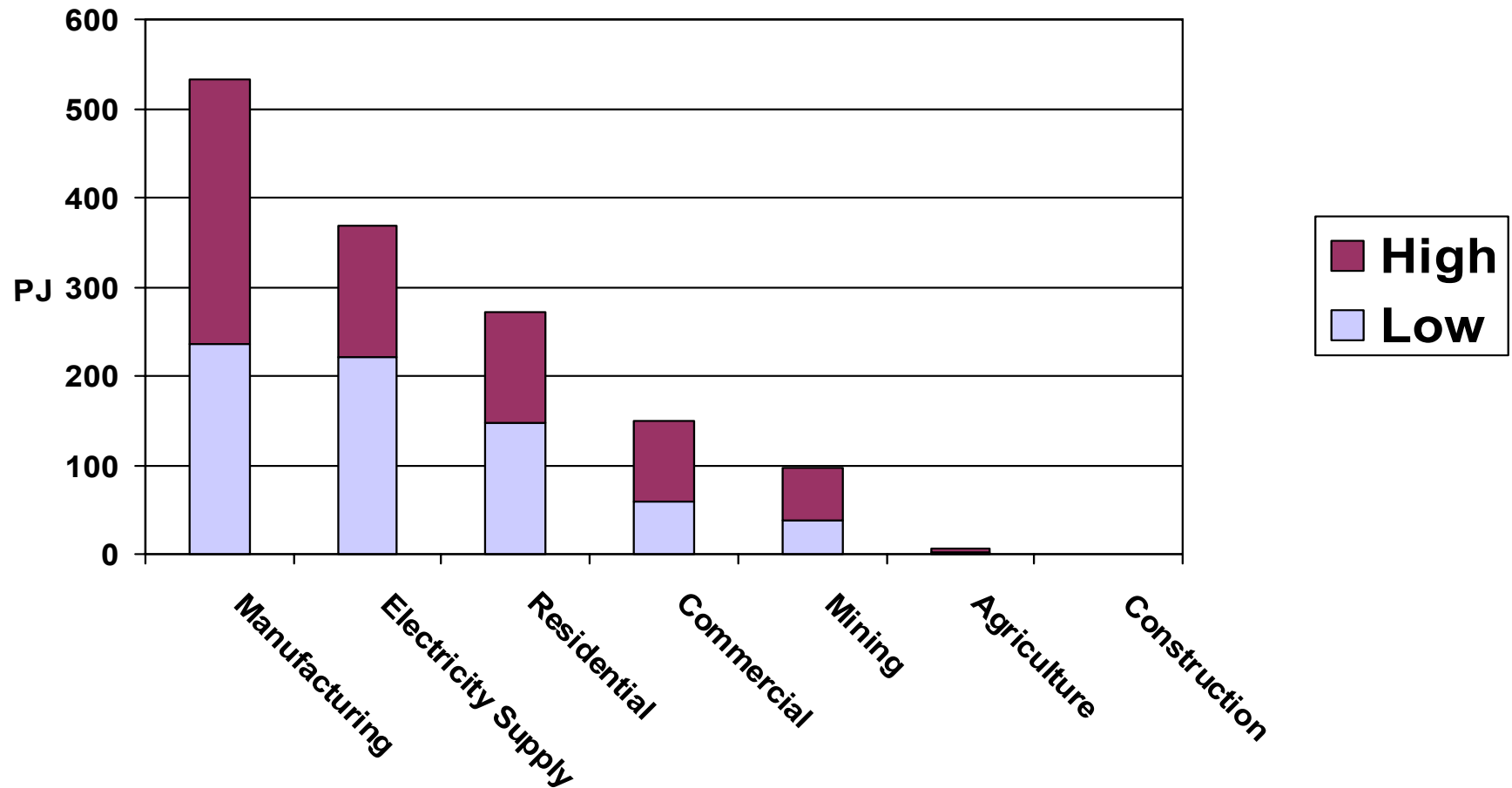
Commercial energy efficiency potential by application



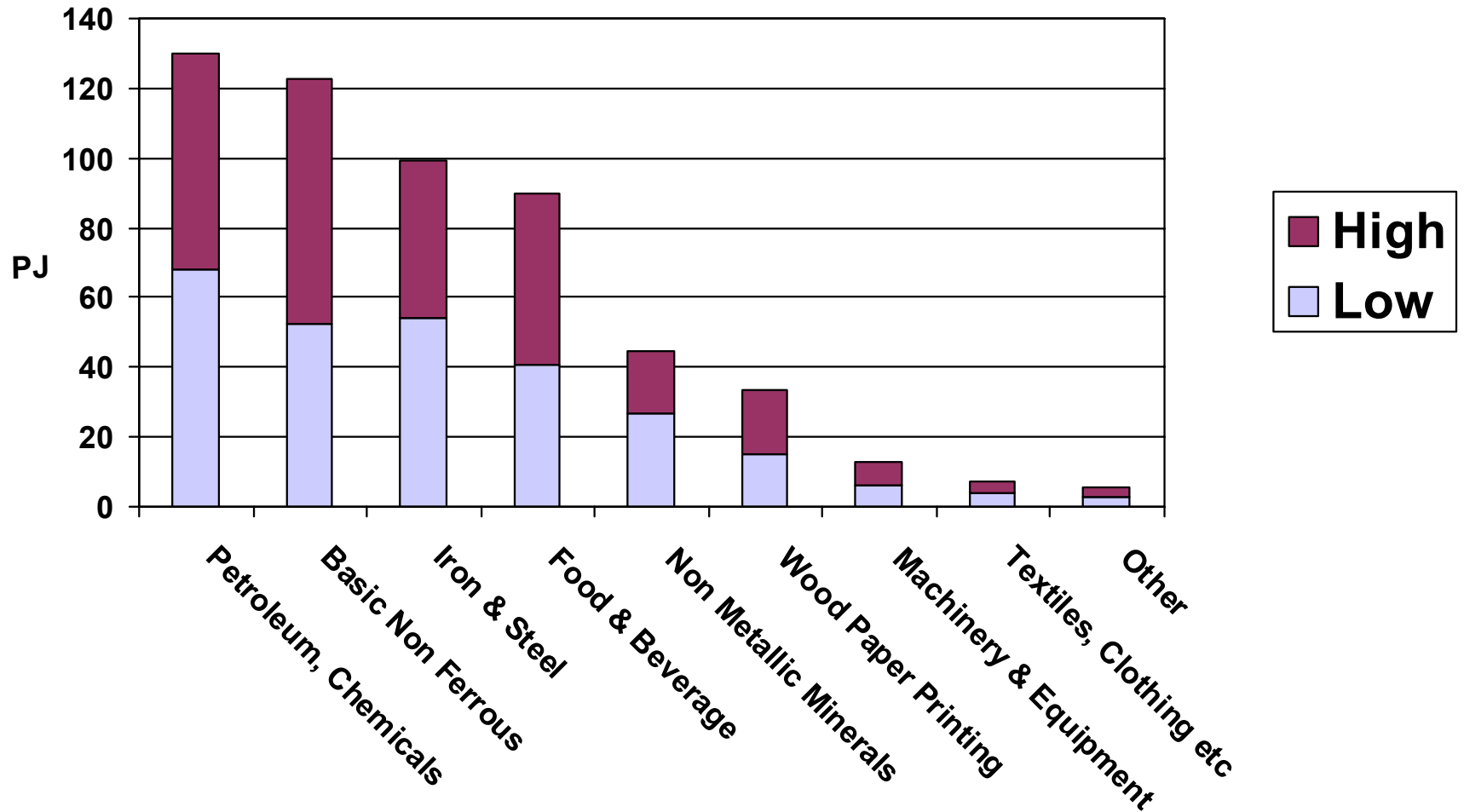
Industrial energy efficiency potential by sector



Energy use and energy efficiency potential across different sectors of the economy



Energy use and energy efficiency potential in the manufacturing sector



Economic Impact of Enhanced Energy Efficiency (1)

- The Allen Consulting Group, working with the Sustainable Energy Authority and the Centre of Policy Studies, are currently modelling the economic impact of enhanced energy efficiency.
- Preliminary results of the first case run are available – **note that these results are indicative only.**
- The case modelled is the assessment of **Low Energy Efficiency Potential**, excluding the electricity supply sector. The potential is in excess of business as usual improvements.
- It is assumed that the full potential is realised (i.e, 100% penetration) over 12 years.
- The incremental investment in energy efficiency over 12 years is around \$32.0 billion resulting in direct accumulated energy savings of about 3000 PJ.

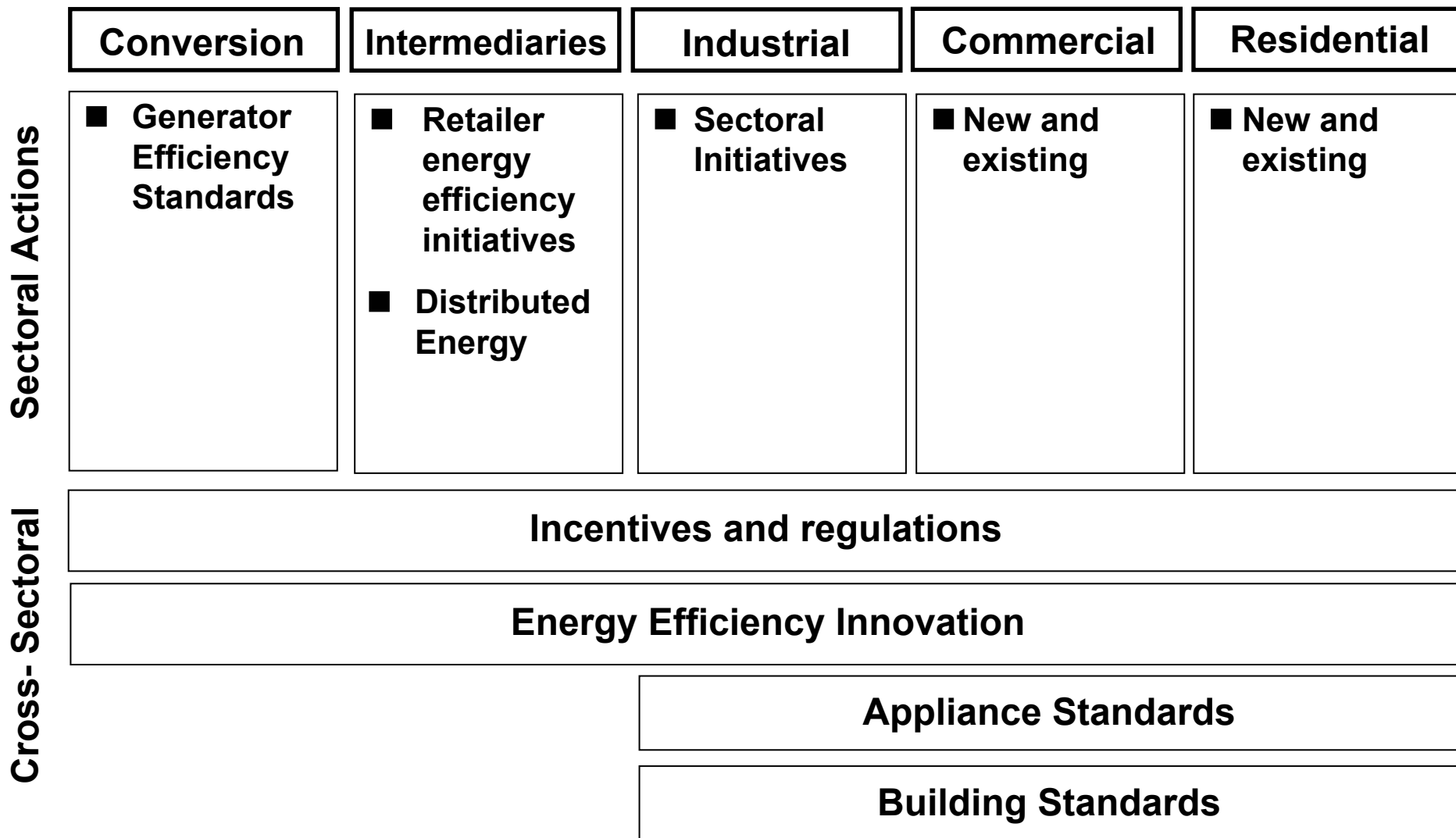
Economic Impact of Enhanced Energy Efficiency (2) Preliminary Headline Results

As a result of enhanced energy efficiency, by 2012:

- GDP is around **\$3.4 billion higher** (0.4%) than would otherwise have been the case
- Consumption is around **\$1.9 billion higher** (0.4%).....
- Employment is around **11,000 people** more (0.1%).....
- Greenhouse gas emissions are around **53 Mt lower** (11%).....
- Energy use is around **320 PJ lower** (15% of stationary final energy consumption).....

Source : Allen Consulting & Monash University, 2003 (in prep)

Potential Dimension of a National Framework



Conclusion - Energy Efficiency at the Crossroads

Major economic opportunity

- Energy productivity
- Stimulus for Innovation
- Greenhouse

OR

Business as usual

- Energy efficiency not a nationally significant issue
- Significant misallocation of resources
- Programs as 'Greenwash'

Key Challenges

- Mechanisms to stimulate \$32 billion of investment over 12 years
- National Agreement!!