



# Economic, social and regulatory policy challenges for energy

*CERPA launch, 12 August 2008*

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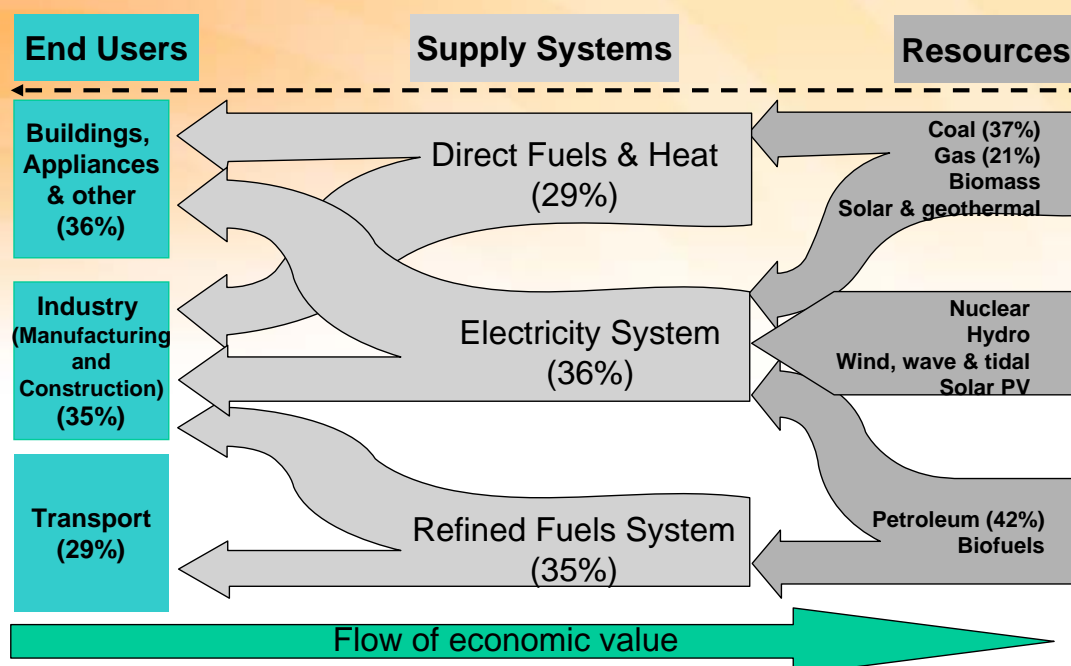
## Centre for Energy and Environmental Markets (CEEM) established ...

- *to formalise* growing interest + interactions between UNSW researchers in Engineering, Business, Arts and Social Sciences, Environmental Sciences, Law...
- *through UNSW Centre* providing Australian research leadership in interdisciplinary design, analysis + performance monitoring of energy + environmental markets, associated policy frameworks
- *in the areas of*
  - Energy markets
    - Primary focus on the Australian National Electricity Market (NEM)
  - Energy related environmental markets
    - Eg. National Emissions Trading, Mandatory Renewable Energy Target (MRET), Energy Efficiency Certificate Trading...
  - Broader policy frameworks and instruments to achieve desired societal energy and environmental outcomes

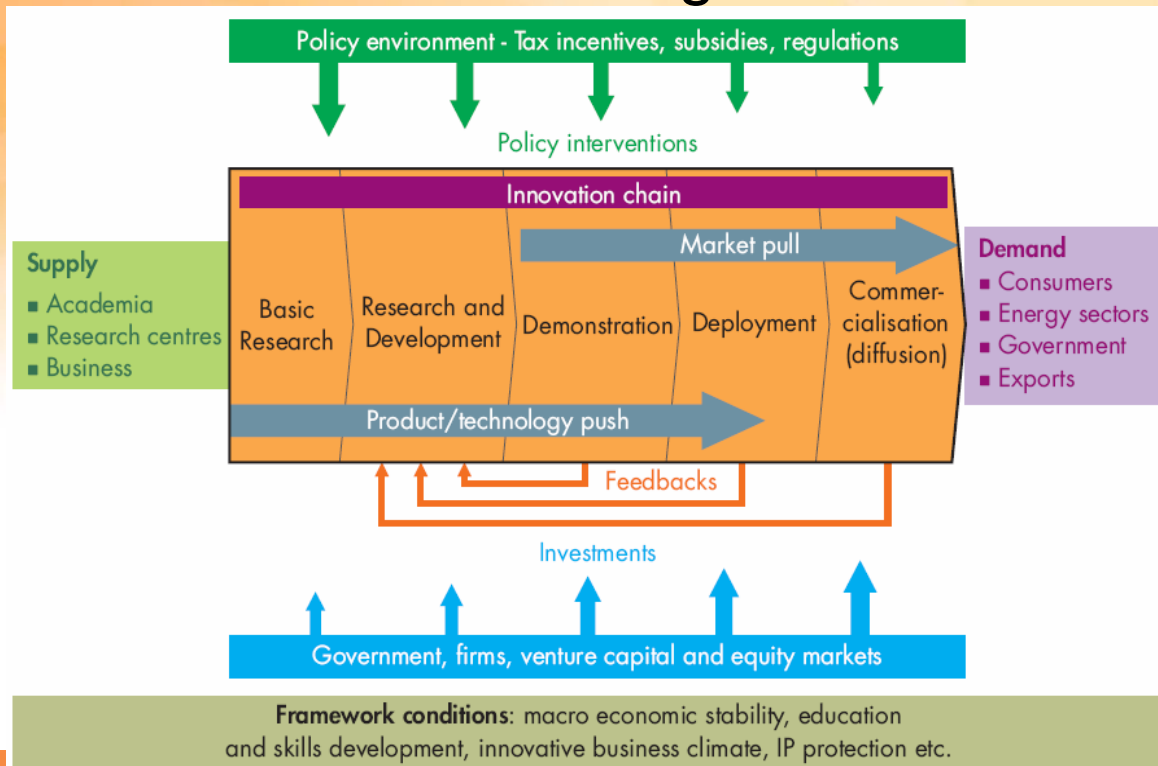
# Energy challenges

- Key drivers:
  - Climate Change
  - Energy security
  - Welfare and sustainable development
- Key opportunities
  - Renewable energy technologies
  - Cleaner fossil fuels
  - Distributed energy systems
  - Energy efficient technologies
- The key challenge
  - Developing and implementing economic, social and regulatory policies to drive appropriate change

# The complexities of our energy systems



# The innovation challenge



Source: IEA, Energy Technology Perspectives, 2008

# A coherent and effective policy mix

	<b>Informational and regulatory approaches</b>	<b>Economic instruments:</b>	<b>Innovation instruments :</b>
	<ul style="list-style-type: none"> <li>Information disclosure</li> <li>Auditing</li> <li>Technical Regulation</li> </ul>	<ul style="list-style-type: none"> <li>Subsidies and taxes</li> <li>Environmental 'designer' Markets</li> </ul>	<ul style="list-style-type: none"> <li>Market engagement programmes</li> <li>Strategic R&amp;D, demonstration and deployment</li> </ul>
<b>Behaviour</b>	●	●	●
<b>Substitution</b>	●	●	●
<b>Technical innovation</b>	●	●	●

Source: Adopted from Grubb 2006



## A role for CERPA in economic, social and regulatory policy analysis

### Such analysis requires:

- Understanding of the rapid technical innovation now underway in sustainable energy
- Engineering economics and policy understanding of different technologies
- Economics and market understanding
- Understanding of legal and policy environment

### Such analysis offers:

- Useful guidance to policy makers
- Knowledge for technology researchers

→ A key role for CERPA



Thank you... more information on our  
website:

[www.ceem.unsw.edu.au](http://www.ceem.unsw.edu.au)