



# The Joule Centre for Energy Research

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Melanie Watts

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# Context - UK Energy Policy

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- Energy White Paper of 2003
  - Emphasis on Renewables, Energy Efficiency, use of Gas
  - Each region should develop and implement an energy strategy
- Energy Review announced 2005
  - Increasing evidence of Climate Change
  - High and sustained international energy prices
  - UK becoming a net oil and gas importer
  - Increasing sensitivity over energy security

# Goals of UK Energy Policy

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- To put ourselves on a path to 60% CO<sub>2</sub> reduction with real progress by 2020
- To maintain the reliability of energy supplies
- To promote competitive markets in UK and beyond
- To ensure every home is adequately and affordably heated



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## Energy in England's NW

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- England's North West contains approximately 6.8M people and an economy of £98B.
- The 2003 study "Energy in England's North West" identified an energy cluster of companies employing 53,000 people with a turnover of £5B.
- In the Region's HEIs approximately 40 Departments were active in some form of energy R&D. Strengths on Demand and Supply side.
- Major commercial organisations with an interest in energy located within the Region. Large energy user community.

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# Implications for Energy R&D

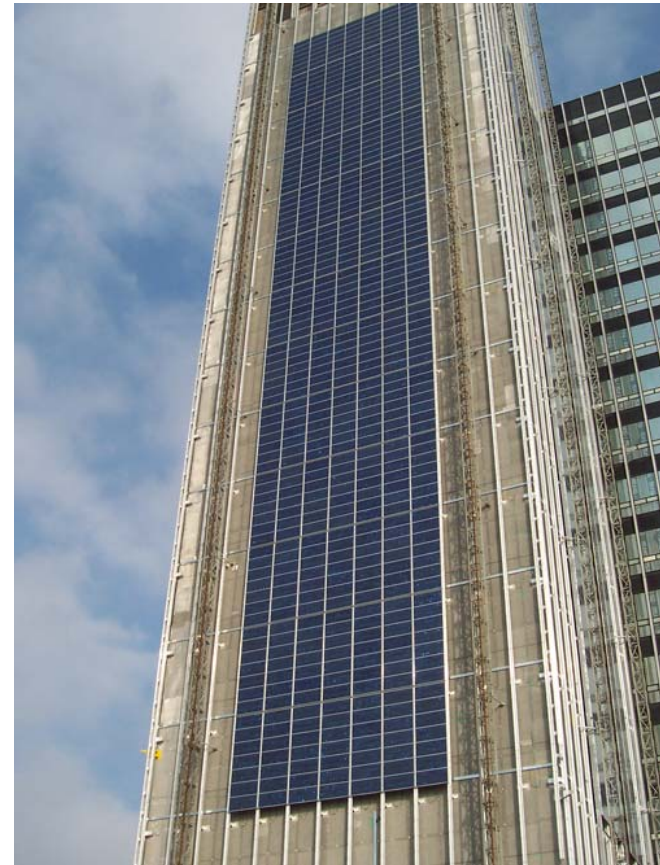
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- Innovation is essential to deliver a sustainable low carbon energy system
- Long term decline in UK energy R&D budgets followed by recent increase
- UK energy research capacity needs to be expanded
- Significant skills gaps in the UK energy sector
- Support for Regional strategic approach to energy

# Joule Centre key challenges

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- Building Energy R&D capacity. Collaboration within Regional R&D base.
- **Joule Forum**
- Energy Technologies
  - Energy Supply Technologies
  - Demand Reduction Technologies
- Energy Strategy
  - Energy Supply Strategy
  - Demand Reduction Strategy



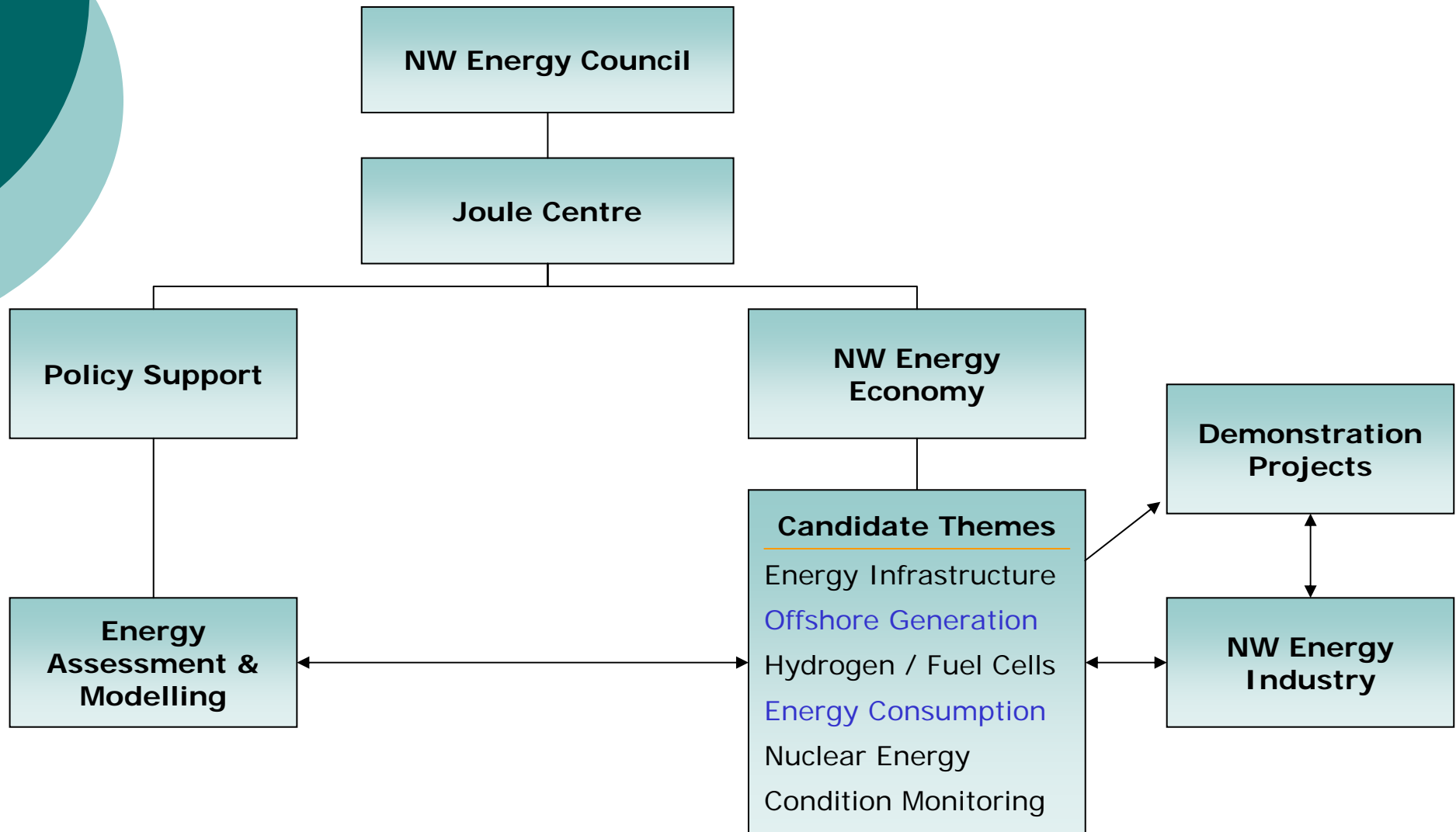


# Vision

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“To create a world-leading energy research centre in England’s North West which will significantly increase the region’s research capabilities in sustainable energy technologies and energy systems”

# Research Themes





# Progress

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- Joule Centre established Oct 2005
- Manchester based staff recruited and space refurbished.
- 1<sup>st</sup> Call for Research Grants issued on “Wet Renewable Energy”. Good response from, Lancaster, Liverpool, Manchester, MMU, and Salford.
- 2<sup>nd</sup> Call issued 5<sup>th</sup> June on “Demand Reduction” and for “Seedcorn Grants”.
- 3<sup>rd</sup> Call issued January 2007 on “Energy Supply Technologies” and for further Seedcorn Grants

# Objectives for First Phase of Joule

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- Facilitate internationally recognised energy research
- Stimulate inter-disciplinary energy research relevant to Region
- Create applied technology research clusters in key areas.
- Increase post-graduate activity in energy technologies and transfer to regional commercial organisations
- Ensure full engagement of Regional energy stakeholders with Joule