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# Complementary measures to emission trading for the electricity industry

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# Outline

- Lessons from electricity industry restructuring:
  - Strengths & weaknesses of “designer” markets
- Design of complementary measures for the electricity industry:
  - Supply-side examples
  - Demand-side examples
  - Innovation & structural adjustment
- Conclusions



# Lessons from electricity restructuring

- NEM is a “designer” market:
  - Governments created & can change the rules:
    - Require long-term stability for climate change
  - Long-term outcomes hard to predict:
    - Easier to deliver efficient operation than investment
- NEM rules favour incumbents:
  - Much easier to write rules for existing players than new ones, eg:
    - Recognised barriers to distributed generation and end-use efficiency (IPART DM Inquiry, 2002)



# Complementary measures: Supply side examples

- Solve group-decision making problems, eg:
  - Connection framework for small generators
  - Interval metering for all industry participants
  - Better management of variable gas demand
  - Regional planning for wind farms
- Improve market design & policy framework:
  - NEC treatment of intermittent generation
  - Derivative markets for electricity & permits



# Complementary measures: Demand side examples

- Most end-users value electricity more by its absence than its presence:
  - ET price-effects unlikely to change behaviour
- Group-decision complementary measures:
  - Appliance & equipment standards
  - Building infrastructure standards
  - Workforce skills & community education



# Complementary measures: Innovation & structural adjustment

- Market-driven innovation requires:
  - Clear & stable long-term guidance on priorities:
    - From markets and surrounding policy framework
  - Informed decision makers:
    - Purchasers, designers, researchers
  - Services & systems more important than products
- Structural adjustment through innovation:
  - Regional options for sustainable energy:
    - Education, facilitation, innovation in regional context



# Conclusions

- Emission trading will not be enough:
  - Complementary measures needed to deliver sustained & substantial reductions
- Complementary measures are case-specific, eg electricity industry requires:
  - Supply-side measures
  - Demand-side measures
  - Code changes