World Energy Trilemma 2016
Defining measures to accelerate the energy transition
Balancing the ‘energy trilemma’

**Energy security:**
The effective management of primary energy supply from domestic and external sources, the reliability of energy infrastructure and the ability of energy providers to meet current and future demand.

**Energy equity:**
Accessibility and affordability of energy supply across the population

**Environmental sustainability:**
Encompasses the achievement of supply and demand side energy efficiencies and the development of energy supply from renewable and other low-carbon sources.
Defining measures to accelerate the energy transition

1. Transforming energy supply
2. Advancing energy access
3. Enabling consumer affordability and industry competitiveness
4. Improving energy efficiency and managing demand
5. Decarbonising the energy sector
1. Transforming energy supply

- Transition requires
  - clear and straightforward energy targets
  - consensus

- Piloting and analysing policy effectiveness is critical
2. Advancing energy access

- 1.1 billion people without access to electricity

- Innovative mechanisms and distributed generation to advance energy access for low-income consumers and remote areas
3. Addressing affordability

• Subsidies can be vital to support lower-income consumers in the short-term

• Long-term subsidies can decrease overall performance of the energy trilemma
4. Improving energy efficiency and managing demand

• Energy efficiency and managing energy demand top action priorities for energy leaders

• Cost savings alone are insufficient to stimulate the adoption of energy efficiencies or behaviours

• Standards, performance ratings, labelling programmes, incentives and increased awareness of industry and consumers
5. Decarbonising the energy sector

- Dynamic and flexible renewable energy investment policies are crucial

- Need to adapt to evolving market dynamics and technological developments

- COP 21 climate goals will require a clear path to a meaningful carbon price signal
Key recommendations

- Policy matters
- Time matters
Further information

• Download the report: https://www.worldenergy.org/publications/

• Access the data: https://www.worldenergy.org/data/

Thank you

Joan MacNaughton CB HonFEI
macnaughton@worldenergy.org