

New Technology Opportunities In Energy

New Sources of Generation

- Previous centralised supply of energy changing.
- Solar PV panels used in domestic, industrial and agricultural applications.
- Anaerobic Digestion (AD) & Waste Plants
- Ground/Air Source heat pumps to meet local heat demands





Energy Storage

- Energy at the right time
- Battery storage offers large and small scale solutions
 - Domestic systems linked to solar PV
 - Industrial installations for wind farms, solar farms
- Heat Storage
 - Domestic Heating
 - Communal plant rooms
- Ability to peak shift





Remote Control

- Distributed energy management
- Aggregation of small scale suppliers
- 1m individual domestic solar installs become 2500MW power station
- Reduced transmission losses
- Improved grid management





Demand Side Management

- "Nega watts"
- Improved control of energy use in building
- Finer control load management
- Cut energy costs for consumers
- Reduce peak demands





Potential Benefits

- Reduce number of power plants
- Cut transmission and generation losses
- Cut carbon emissions
- Reduce emergency load shedding
- Greater consumer engagement





Challenges

- Cultural Change
- Sustainability
- Legislative drag
- Stranded assets
- Grid management
- Net metering
- Security





India & UK

- UK developing regulatory frameworks & operational experience
- But mature market so replacement of source issues
- India undergoing huge growth in demand
- Proven ability to deliver large scale change programmes
- Strong potential for collaboration

