



Centre for Science and Environment  
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# SCALING UP RENEWABLE – A POSSIBLE PROPOSITION?

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# What is supply side situation?

- Per capita electricity availability - 884
- Per capita electricity availability (rural) – 100
- 77 million still uses kerosene for lighting
- 700 million uses biomass for energy needs
- Grid power not available even for 6 hours



# What is demand side situation?

- Rising population – 124 crore by 2014
- Rising economy – USD 1.7 trillion by 2013-14
- Rising demand
  - ▣ Oil – 1.6 mb/d
  - ▣ Gas – 15MMT /year
  - ▣ Coal – 660 MMT/year
  - ▣ Electricity – 975 billion kWh/year



# What we have?

- Population – 17% of world population
- Primary Energy -
  - Oil – 0.6 % global reserve
  - Gas – 0.4% global reserve
  - Coal – 10 % global reserve
  - Renewable – xx% of global potential



# What are we doing now?

- Net energy import - 35%
  - ▣ Oil – 70 % import – \$160 billion in 2012-13
  - ▣ Gas – 35% import
  - ▣ Coal – 15 % import – 170 MMT in 2013-14
- Subsidize
  - ▣ Benefit - 30% population who can pay
  - ▣ Panelize – 70% population who cannot pay



# What renewable can do?

- Huge potential
  - ▣ Solar – 20 - 30 MW / sq. km – 2000 MW achieved
  - ▣ Wind – 100,000 MW – 20000 MW achieved
  - ▣ Biomass – 24000 MW – 3800 MW achieved
  - ▣ Small Hydro – 15000 MW – 3774 MW achieved
- Huge benefits
  - ▣ Reduce energy imports – a step towards energy security
  - ▣ Reduce carbon emission – combat climate change



# What is required?

- A change in the mindset
  - ▣ Believe in renewable – think radical
  - ▣ Be ambitious – but realistic – make sustainable
- Policy support
  - ▣ Revisit integrated policy – mainstream renewable
  - ▣ Inclusive definition of village electrification – not extensive
  - ▣ Integrated renewable – not fragmented one
  - ▣ Make RPOs, RECs and FiTs efficient
  - ▣ Redistribute subsidies to promote renewable