**Myth 1:** Renewables are too expensive.

One of the biggest bane of renewables to energy is their upfront cost. However, renewables have higher levelised cost of energy (LCOE) than fossil fuels. But the LCOE is the cost per unit of energy over the average lifetime of the technology, including capital, maintenance and operation costs. An LCOE analysis does not relate to the upfront costs such as wind turbines and solar panels. When it comes to compare the LCOE of renewable energy with conventional energy, the whole system cost of electrification, transport, and assuring renewable energy involves greenhouses gas emission which is a driver for climate change.

**Myth 2:** Renewable technologies take longer to develop.

The truth is that all renewable energy sources require less time than fossil fuel counterparts.

Solar and wind technologies emit zero GHG while in use. Air pollutants, such as sulphur dioxide (SO2), nitrogen oxides (NOx), heavy metal, dust, ashes or black carbon. Renewable energy such as solar and wind can be deployed for electricity generation and heat production.

**Myth 3:** Renewable energy produces large scale economic losses.

Renewables have been receiving financial support over the years. True, but precisely because they have higher upfront capital costs compared to conventional technologies. The World Energy Outlook analysis of the IEA states that the total global investment in renewables in 2012 was $584 billion. Out of which, 72% was for investments in new capacity. So, although the data shows that renewable energy is relatively more expensive to begin with, the cost per kWh drops as the technology becomes more efficient over time.

**Myth 4:** Renewable energy is unstable in nature.

The International Energy Agency (IEA) in 2012 estimated that global subsidies to fossil fuels was $183 billion, compared to $105 billion in support of renewable energy.

**Myth 5:** Renewables are too expensive to produce.

The energy market tips heavily in favour of renewables. This shows that the energy market tips heavily in favour of renewables.

**Myth 6:** There are still some energy uses renewables can’t replace.

It is believed that renewable technologies take longer to produce energy as conventional technologies.

**Myth 7:** Renewable energy does not need economic support.

It is believed that renewable technologies take longer to produce energy as conventional technologies.

**Myth 8:** Production of bioenergy has negative effects on nature, climate and food security.

Contrary to popular belief, bioenergy production has negative effects on nature, climate and food security.

**Myth 9:** Bioenergy is only suited for rural areas.

It is believed that bioenergy can only be deployed in rural areas. But bioenergy can be deployed in industrial areas as well. Some bioenergy plants can be set up in urban areas as well.

**Myth 10:** Renewable energy is infinite.

It is believed that renewable energy is infinite. Renewable energy resources, especially the sun and wind, are inexhaustible. In reality, all renewable energy resources have a finite lifetime. The sun will burn out in 5 billion years, and wind will not blow forever.

*Image credit: © Martin Harvey / WWF-CANON*
A FUTURE POWERED BY RENEWABLES

A key barrier in the proofs of renewable energy’s enormous potential and value is the misconception that renewable energy is not competitive or affordable. In order to achieve the transformational change required to curb the risks of fossil fuelled power, we need a clear, consistent and realistic package towards renewables. Positive public perceptions towards renewables will ultimately enable a shift to the energy paradigms of the future.

RENEWABLES IN NUMBERS

The world has abundant renewable energy resources

The world is increasing its energy demand

Energy efficiency is a key requisite

Energy jobs

Renewable energy (compared to fossil fuels) creates more jobs per unit of electricity generated (i.e. GWh)

5.7 million

Renewable energy (compared to fossil fuels) creates more jobs per year

74%

Energy conservation

Result in annual improvements in energy intensity of global resources

resulting in at least

100% of CO2 emissions in 2012

2035

Estimated that renewable energy (compared to fossil fuels) creates more jobs per year

4% per million of US$ invested

Energy jobs

The world is building a clean energy policy landscape

1.9–3.2 times

Renewables provide electricity savings per million of US$ invested

625 EJ

Global energy consumption

522 EJ

Present global energy consumption

Renewables provide 25% of global power generation

20% of total power generation capacity by 2030

3.5–5.6 times

Annual electricity generation from renewable energy projects

Renewables are expected to account for 50% of total power generation capacity by 2030

138

Targets include clean energy and climate action targets

37

Total investments in renewable power generation (US$)

880bn

Global investments in renewable energy projects

$470bn

Annual rate of increase

Power generation

60%

Potential renewable energy generation (US$)

$54bn

Investments in renewable power generation may increase rapidly

The world is far from using its technological potential

The world has abundant renewable energy resources

Renewable energy reduces CO2 emissions

Renewable power generation is becoming increasingly competitive

The world is increasing its energy demand

Energy efficiency is a key requisite

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