



Global Trends in Renewable Energy

Sushil Verma
August 21, 2015

Imagination at work

GE Proprietary Information—Class III (Confidential)
Export Controlled—U.S. Government approval is required
prior to export from the U.S., re-export from a third
country, or release to a foreign national wherever located.

Mega trends of power generation

Growth in Emerging Countries



- Increased global demand from non-OECD countries
- Will account for more than 60% of electricity consumption by 2025
- Focus on: India, Africa, Mexico, Chile, China

- Increase in global LNG supply
- NG investment to increase availability
- 80% of global output from North America by 2020

Increased Gas Availability



Mega trends of power generation

- Renewables expected to reach 40% of power generation in 2035
- Renewables will surpass fossil fuels as the top source of energy by 2035

Distributed Technologies



Mainstream Renewables



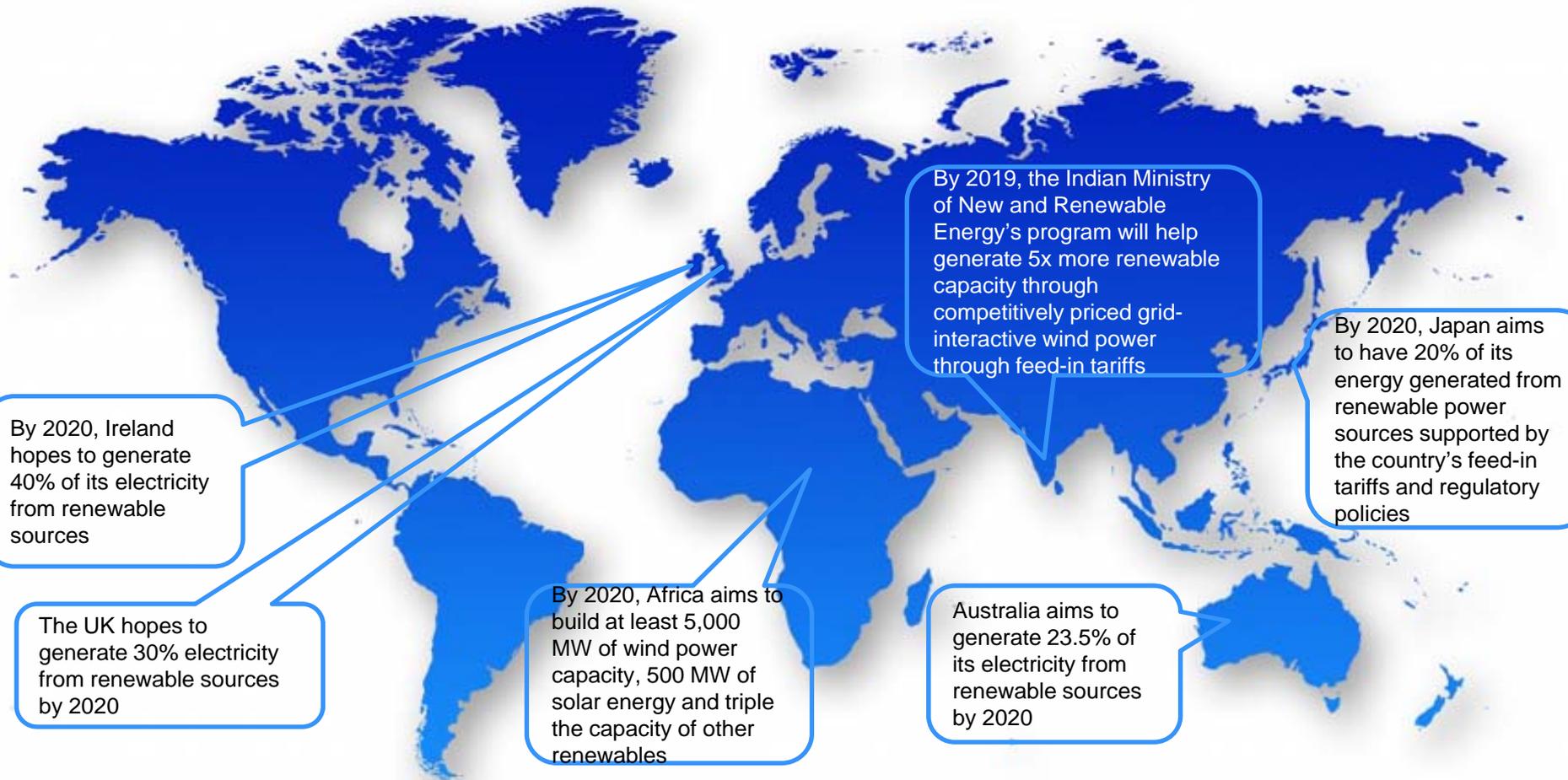
- Shift from CAPEX to OPEX financing
- Rooftop solar gains traction and accounts for 25+GW/yr
- Data & Analytics energy costs decrease 20% and energy storage costs decrease 40%
- Wind and solar PV costs continue to decrease due to technology





Imagination at work

Global policies driving renewable investment



Supporting competitively-priced renewable power through feed-in tariffs and regulatory policies



Global energy investment outlook

2014-2035 (\$2012)

\$1.6T per year; \$40T over the next 20 years

- 40% power, 30% oil, 20% gas
- 2/3rd of growth expected in Non-OECD countries (Asia expected to have the largest share)

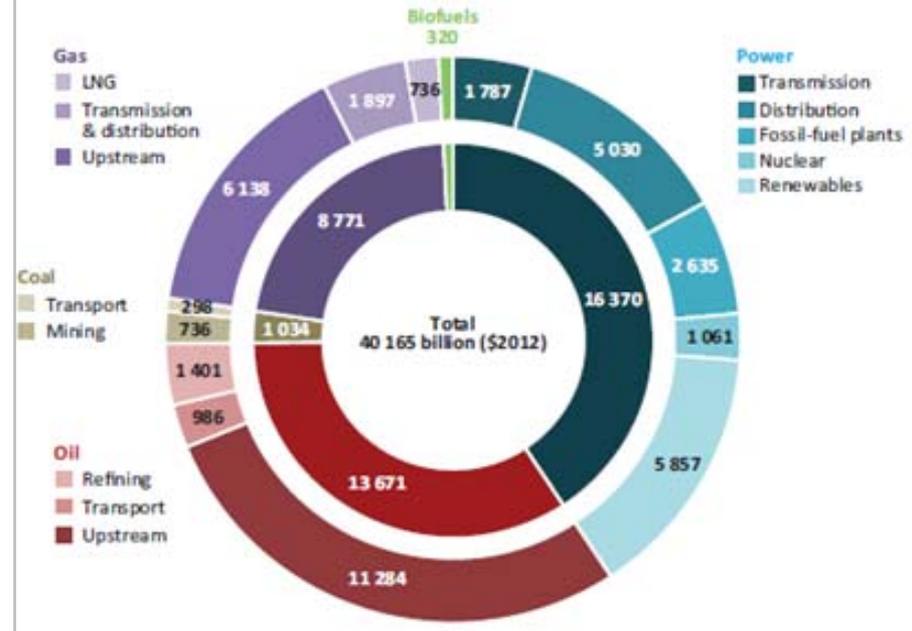
60% of total new investments will be needed to maintain current supplies

New Power Generation Capacity

- 60% of total power generation investment in renewables;
- 40% of generation capacity to be renewables by 2035



Cumulative global energy supply investments: 2014-35



Source: IEA World Energy Investment Outlook

Select global investments



Setouchi City - Japan

GE Energy Financial Services invested in Toyo Engineering Corp. and Kuni Umi Asset Management's 231-MW Setouchi City mega project, Japan's largest solar power project

Benefits

Helped lead \$900 million debt syndicate

Build on 1,210 acres of city land on the former Kinkai salt field

Debuted the GE 1-MW Brilliance Solar Inverter, which eliminates the need for an intermediate transformer

September 2014



Desert Sunlight - California, US

GE Energy Financial Services acquired an ownership stake in 550-MW Desert Sunlight, one of the world's largest photovoltaic (PV) solar plants

Benefits

Creates 630 construction jobs

Provides enough clean, affordable energy to power 160,000 CA homes

Aids California in its goal to generate 33% of its power from renewable sources by 2020

September 2011



