

India's Energy Transition Process: SECI Perspective

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India's Clean Energy Initiative

India's Intended Nationally Determined Contribution

- ❖ To reduce the Emissions Intensity of its GDP by 33 to 35 Per Cent by 2030 from 2005 Level
- ❖ To create additional Carbon Sink of 2.5 to 3 Billion Tonnes of CO₂ Equivalent through Additional Forest and Tree Cover by 2030.
- ❖ India to Anchor a Global Solar Alliance

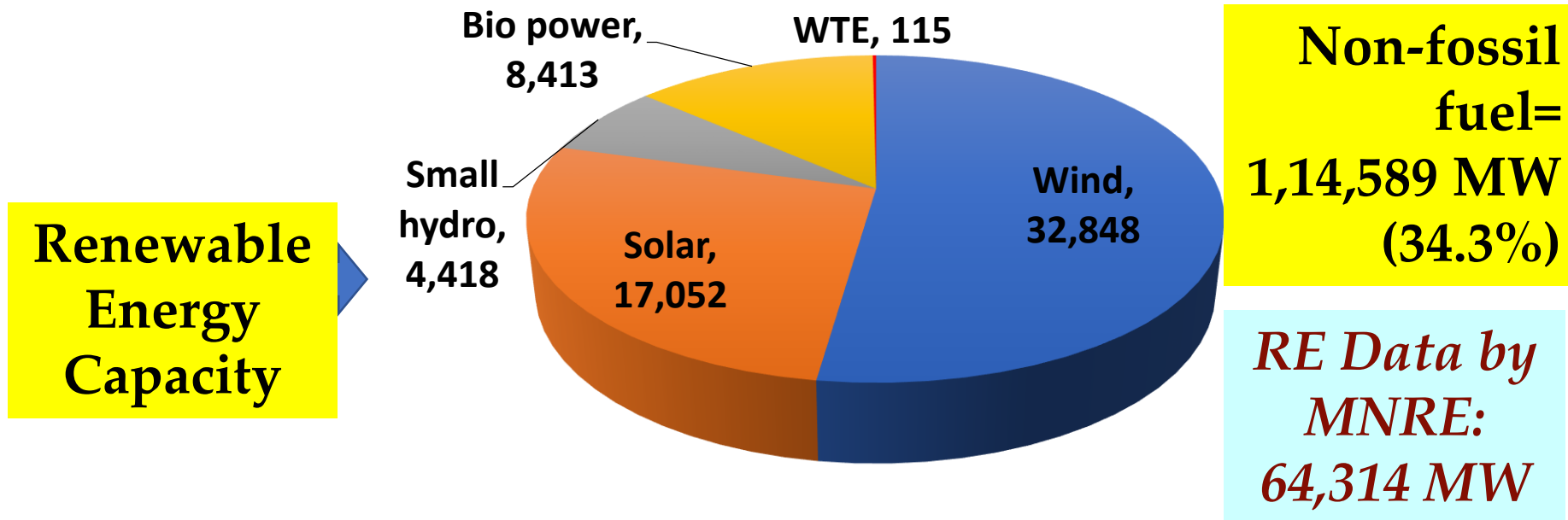
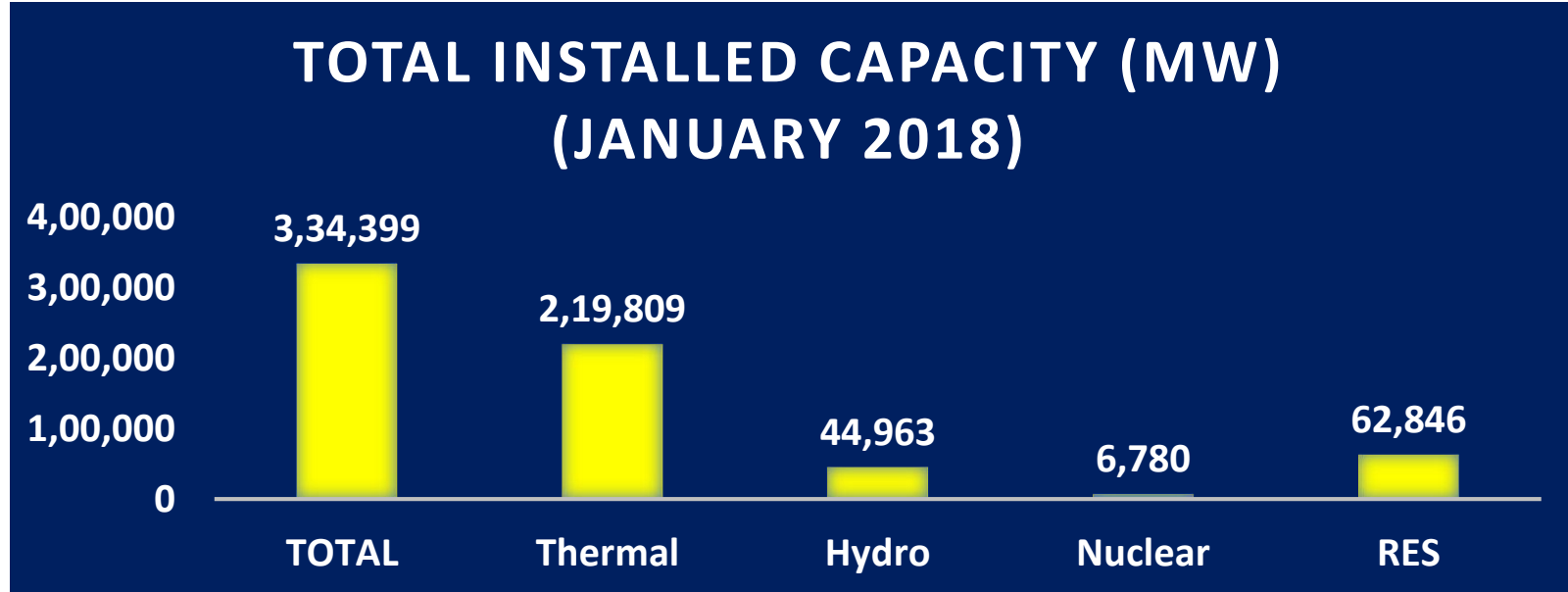
Approach to achieve INDC includes

- ❖ Increasing share of non-fossil fuel in the total installed capacity to about 40 % by 2030.
- ❖ **Upscaling target for RE Capacity installation to 175,000 MW to result in abatement of 326.22 million tons of CO₂ eq. /year.**
- ❖ **International Solar Alliance has been launched; became a legal entity recently on 6th December 2017.**

Energy Transition Pathways

- ❖ **Replacing Fossil Fuel based power generation with Renewable energy technology and storage**
- ❖ **Accelerated deployment of energy efficient technologies in sectors, like, buildings and industry, which results in energy productivity improvement**
- ❖ **Moving from use of fossil fuel to electricity in transportation and industry sectors**
- ❖ **Providing low carbon technology options where fossil fuels are used and electricity is not cost effective.**

Power Generation Capacity - INDIA



Solar Power in India.....

- Estimated RE potential is about 900 GW with maximum from solar power (745 GW).
- National Solar Mission was launched in 2010 to aim at 20,000 MW of utility scale power by 2022. Target for solar is now scaled up to 1,00,000 MW.
- Solar capacity additions are implemented primarily in competitive mode.
- Government of India envisaged policy on the concept of **“Polluter should pay”**, and levied cess on each tonne of coal purchased by generating companies; this created **National Clean Energy Fund**.
- Government of India supports roof top solar plants by providing capital subsidy for residential and institutional sectors.
- **Solar Radiation Resource Assessment** was taken up and 120 state of art measurement stations are in operation with strong support from GIZ.

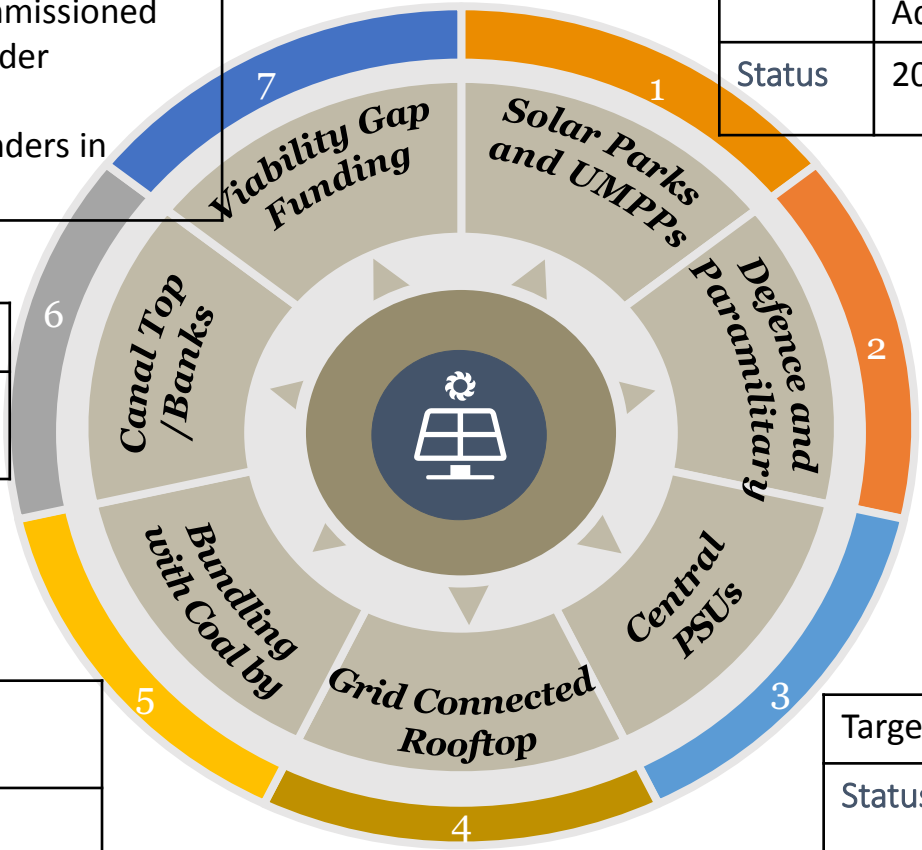
Schemes to Support Solar Power in India

Target	About 8000 MW
Status	1820 MW- commissioned 2900 MW – Under Installation 1975 MW – tenders in progress

Target	25 parks, 20 GW Additional 20 GW approved
Status	20 GW sanctioned (34 parks)

Target	100 MW
Status	100 MW Sanctioned

Target	300 MW
Status	354 MW Sanctioned



Target	15,000 MW (NTPC) (3000+5000+7000)
Status	3000 MW tendered

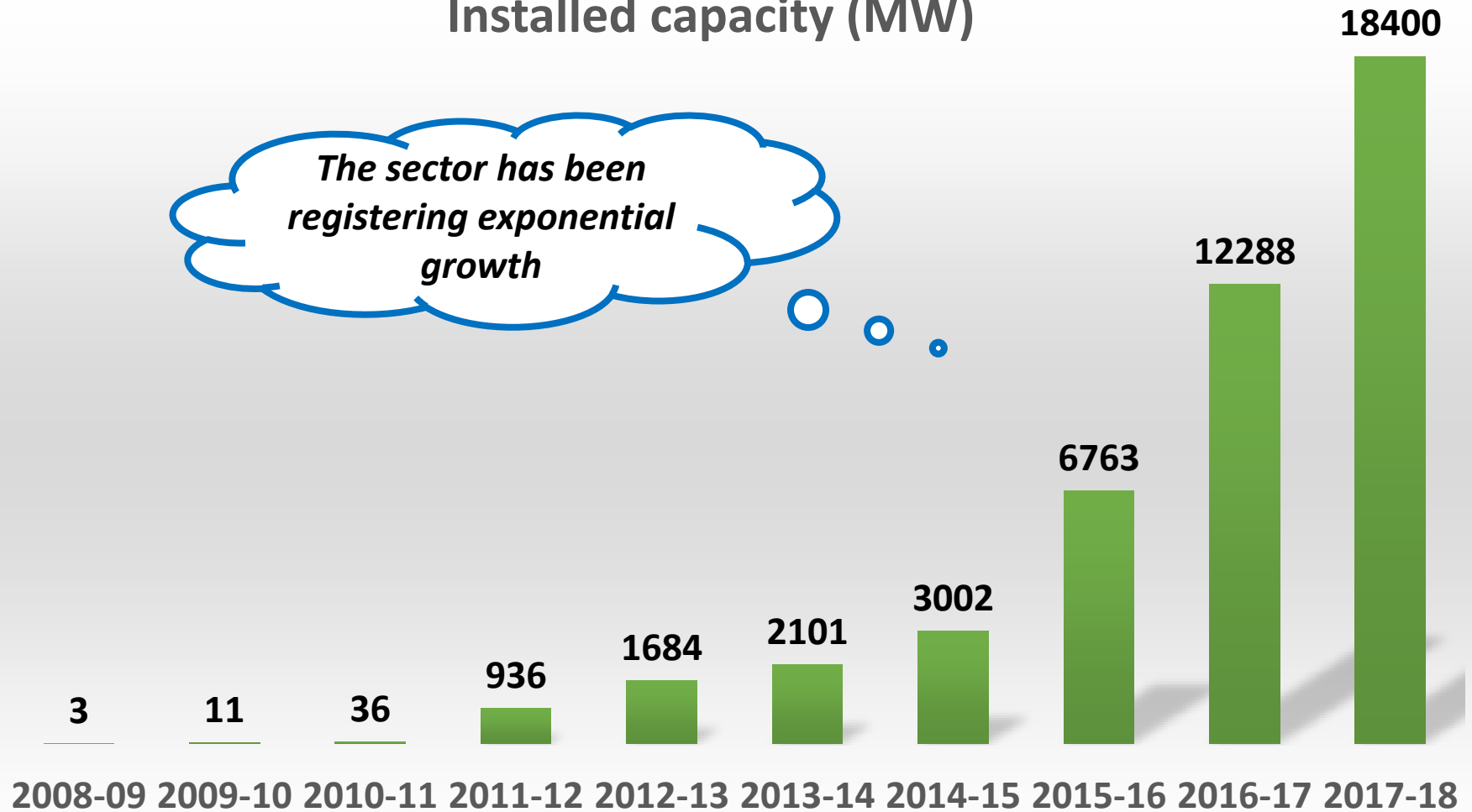
Target	1,000 MW
Status	1,000 MW sanctioned

Target	4200 MW
Status	Over 1000 MW Commissioned, Balance is under tenders/implementation

Growth of Solar Capacity in India

Installed capacity (MW)

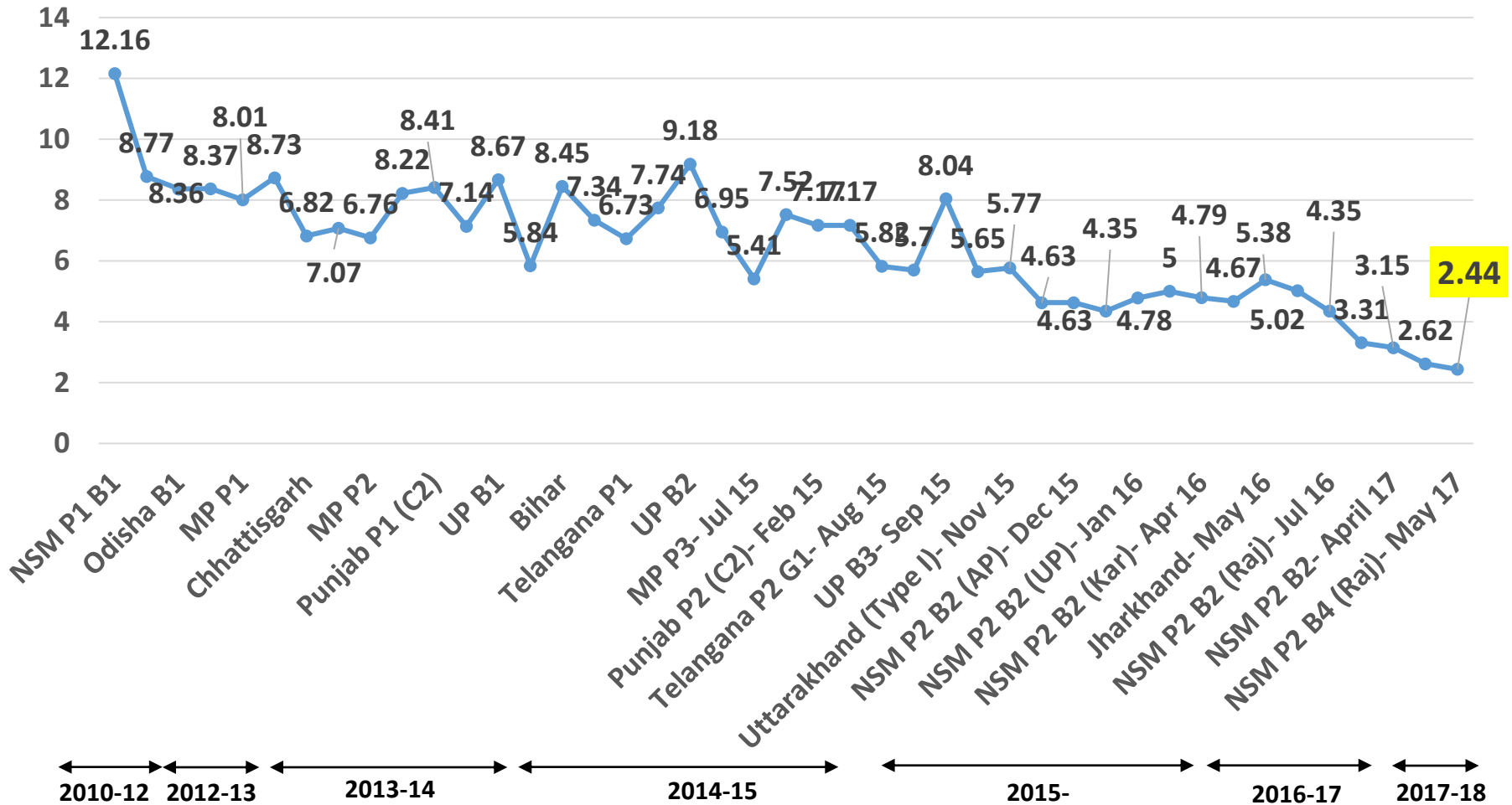
The sector has been registering exponential growth



Discovery of Tariff

Ground based Megawatt-scale Solar Power Projects

Tariffs (INR/kWh)



INR 12.16 = US\$ 0.187
INR 2.44 = US\$ 0.0375
1 US\$ = INR 65.0

Other MNRE Schemes by SECI

- **Wind Power connected at CTU level:**
 - Lols for 2 x 1000 MW has been issued.
 - Lols for 2000 MW is about to be issued.
 - 2000 MW tender is in progress. Likely to close by March 2018.
- **10,000 MW Floating Solar:**
 - Eol was issued; data is being compiled and studied.
- **20,000 MW Integrated Solar Manufacturing Capacity – Eol has been issued.**
- **150 MW Solar wind hybrid in Andhra Pradesh with World Bank Support**



Thank You

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