

Korea-India Business Dialogue 2020

“DOOSAN’s Growth Story in India”

November 11, 2020

Doosan Power Systems India Private Limited





Building your tomorrow today

All about Power

It's what we bring together that sets us apart

Doosan Power Systems India builds, maintains and extends the life of power plants in India. We provide clean, efficient, flexible and integrated power solutions from EPC, power generation equipment for major power projects, to services. **Integrated solutions for a better life**

"We Make In India, We Make For India, We Make With India"



Doosan Power Systems India

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Introduction to DPSI

DPSI's Business Overview

Indian Energy Landscape



DOOSAN IN INDIA

Company Experience

- **Presence in India:** Doosan since 1994, DPSI 2011
- **Purpose of Establishment:** Sustainable power business growth in India through localisation
 - *Implemented 'Make-in-India' in Chennai Factory*
 - *Bringing DHIC's best global capabilities to India*
 - *Sharing sustainable growth with India*
- **Main Business:** EPC, Boiler, Service Business
- **Investment in India:** About 2,565 Cr.
- **Sales amount('19):** About 4,236 Cr.
 - Outlook(PA): 3,495 Cr. ('19~'20 avg., On-hand est.)
- **Employees ('20/Oct):** Approx. 1,500
- **Office & Factory**
 - **Gurgaon:** HQ, Marketing, Plant Engineering/Design
 - **Chennai Factory:** Boiler Design/ Manufacturing / Painting
 - Manufacturing Capacity: Yearly 2.2GW
 - Area: Approx. 100,000 m² (Factory and Storage Yard)

Gurgaon Office and Chennai Factory



ILLUSTRIOUS JOURNEY IN INDIA

Doosan is one of the pioneers of the SC & USC Technology in India

1st Awarded SC



NTPC Sipat (3x660MW)

1st UMPP



Tata Mundra (5x800MW)

1st Awarded B/O



NTPC Kudgi/Lara (5x800MW)

**1st Full EPC, USC
(incl. FGD/ SCR)**



**JVUNL Jawaharpur (2x660MW)
& UPRVUNL Obra-C (2X660MW)**

2004



2007

2011/2012

1st EERM



Torrent AmGen (2x110MW)

2016

DOOSAN'S ONGOING 'MAKE-IN-INDIA' JOURNEY

MAKE-IN-INDIA

1 Strengthening Manufacturing Prowess

- Established **2.2 GW BLR Mfg. capability** in Chennai and close support & cooperation to Indian suppliers
- **Incubating local leadership and cultivating employees** for sustainable business operations.

MAKE-FOR-INDIA

2 Integrating DOOSAN's Global Capabilities

- Bringing **DHIC's Best Global Capabilities to India** like Air Quality Control Systems to support India's Climate Change targets
- Secure **Global Co-operation and Best Practices** for Design & Engineering, Procurement, Manufacturing etc.

MAKE-WITH-INDIA

3 Sharing Sustainable Growth

- **Enriching Local Supply Chain** by sharing technical expertise with local MSME: 30%(2011) → 70%(2013) → 95%(2016) → **97%(2017)**
- Contributing towards welfare and sustainable development of local less privileged communities

COMMITTED INVESTMENTS IN INDIA ASSTES (incl. Employees)

DPSI Chennai Factory



- Acquisition of AE&E Chennai Works in 2011
- Capacity Expansion and modernization from 0.9 to 2.2 GW
- Install Cutting-edge manufacturing equipment

Technology Transfer to India



- Transfer of Ultra/ Super Critical Boiler Manufacturing technologies to India (upto 1000MW Boilers)
- Established Boiler Engineering Center, as part of Doosan's Global Engineering Hub
- Skill transfer and development of local employees through Doosan's People Programs (2G, etc.)

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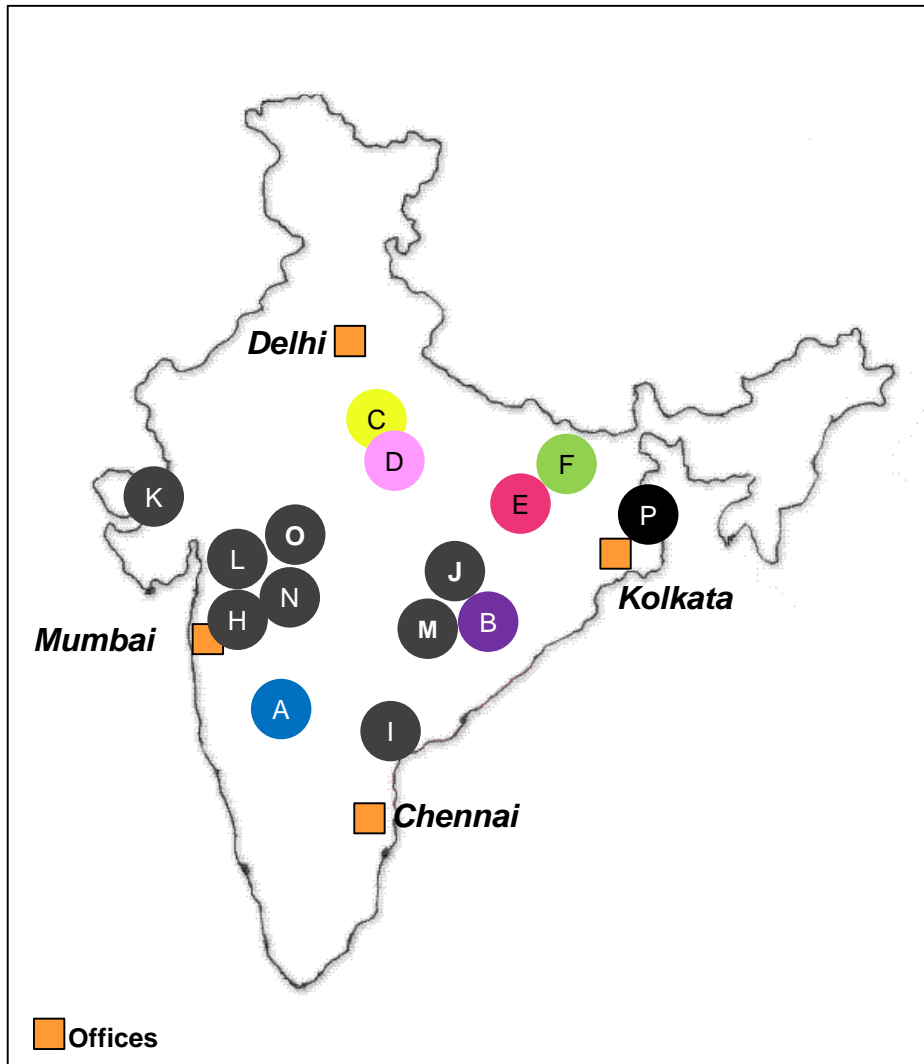
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DOOSAN'S PRESENCE IN INDIA



1 On-Going Projects

- A** NTPC Kudgi (3X800MW, BLR, '12~'18), under Commercial Op.
- B** NTPC Lara (2X800MW, BLR, '12~'19) under Commercial Op.
- C** UPRVUNL/TJPS Harduaganj (1X660MW, BLR, '15~'21)
- D** JVUNL Jawaharpur (2X660MW, EPC, '16~'23)
- E** UPRVUNL Obra-C (2X660MW, EPC, '16~'23)
- F** NTPC Barh-1 (3X660MW, R&M, '16~'21)

2 Completed Projects

- H** Essar Hazira (515MW,STG/HRSG, 94~'98)
- I** Lanco Kondapalli (355MW, CCPP EPC, '98~'00)
- J** NTPC Sipat STPP (3x660MW, Boiler '04~'11)
- K** Tata Mundra (5x800MW, Boiler EPC,'07~'14)
- L** Torrent DGen (3x400MW,HRSG, '11~'15)
- N** Torrent UnosuGen (383MW,HRSG, '11~'15)
- M** GMR Raipur (2x685MW BTG, '10~'16)
- O** Torrent Amgen (110MW R&M, '11~'13)
- P** WBPDC Bandel (210MW R&M, '12~'15)

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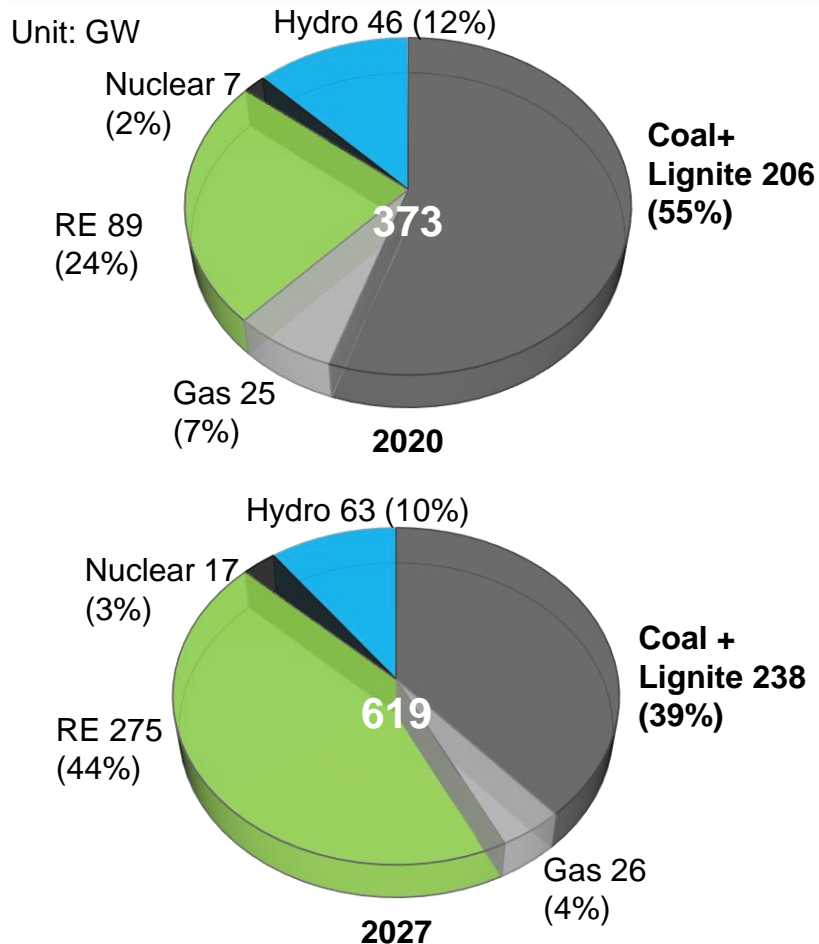
Indian Energy Landscape



INDIA POWER MARKET PROSPECTS AND POLICY

India is making great strides towards affordable, secure and cleaner energy

National Electricity Plan 2018.01, CEA



Key Policy Focus

RES

- Funding from Global Finance – World Bank / ISA etc.
- 'Make in India' for Solar PV and Wind

Coal

- Subdued Coal growth, RE prioritized
- Focus on Clean coal tech. like coal gasification

Gas

- Dependence upon expensive imported gas for power generation – Commercially non viable assets

Nuclear

- Capacity addition till '27 from under construction/ expansion PJTs.
- New PHWR (2x700)



1) Coal Retirement included 48.3 GW, Coal capacity under construction: 47.8 GW 2) 2020 capacity as on '08.2020
 2) NEP scenario of CAGR of Electricity @ 6.18% basis for energy generation, peak demand & capacity addition

POSITIONED TO SUPPORT INDIA'S CLEAN ENERGY VISION

India's 7 Clean Energy Pillars

Gas Based Economy

Cleaner use of Fossil Fuels

Greater reliance on domestic fuels to drive biofuels

Achieving RE target of 450 GW by 2030

Increasing contribution of electricity to decarbonize mobility

Emerging fuels / Technology

Digital innovation across all energy systems

Doosan's Global Offerings

- Air Quality Control Sys.(FGD/SCR)
- Ultra Super Critical technology
- Coal Gasification

- Wind turbines (Onshore/ Offshore)
- Energy Storage
- Waste to Energy
- Hydro

- Fuel Cells to power EV/ H₂ vehicles
(under development)

- Fuel Cells (H₂/NG/ Biogas/ LPG)
- Small Modular Reactors (SMR)

- Remote Monitoring System
- Boiler Tube Management System
- Drone Surveying

CURRENT STATUS OF UNDER CONSTRUCTION PROJECTS

Drone view of USC JVUNL Jawaharpur (2X660MW) Project progress



Thank You
आपका बहुत बहुत धन्यवाद।