

GOVERNMENT OF INDIA
MINISTRY OF HEAVY INDUSTRIES
LOK SABHA
UNSTARRED QUESTION NO.1453
ANSWERED ON 07.12.2021

DIVERSIFYING OPERATIONS IN BHEL

1453. SHRI SUBBARAYAN K.:

Will the Minister of HEAVY INDUSTRIES **भारी उद्योग मंत्री** be pleased to state:

- (a) the initiatives taken by the Government to diversify operations in Bharat Heavy Electricals Limited (BHEL);
- (b) the strategy/plans to be implemented;
- (c) the time by which the new renewable energy technologies are to be adopted; and
- (d) the outcome of the diversification strategy?

ANSWER

THE MINISTER OF STATE FOR HEAVY INDUSTRIES
(SHRI KRISHAN PAL GURJAR)

(a), (b) & (d): Bharat Heavy Electricals Limited (BHEL) on a continuous basis assesses its portfolio of offerings including diversification avenues.

The Company has created various customer focused business groups such as for Nuclear, Hydro, Defence & Aerospace, Transportation, Energy storage including e-mobility, Solar, Water, Captive Power & Process Plant, Make-in-India etc. in its endeavour to reinforce diversification efforts, besides to explore business opportunities in such areas.

BHEL in the recent past has forayed / enhanced offerings / contracted various products / systems / solutions as part of its diversification initiative, which include the following:

Power Sector (including thermal, hydro, nuclear, solar, transmission)

- (i) Emission control solutions viz. Flue Gas Desulphurization (FGD) and Selective Catalytic Reduction (SCR)
- (ii) Combustion Modification package / systems for thermal power plants
- (iii) BHEL along with consortium partners NTPC Ltd. and IGCAR (Indira Gandhi Centre for Atomic Research) successfully completed the R&D phase for Development of Advanced Ultra Super-Critical (AUSC) Technology for Thermal Power Plants
- (iv) Lift Irrigation Schemes (LIS) - pump & motor sets
- (v) Expanded offerings to include large scale utility floating solar projects, canal top solar, large scale utility seasonable tilt-able solar PV plants, Passive tracker based solar power plants and Power Conditioning Units (PCUs)
- (vi) Development of various 765kV class power transmission equipment

Transportation Sector

- (i) Developed and supplied India's first regeneration system for 5000 HP WAG-7 locomotive, for Indian Railways' fleet of conventional electric locomotives

- (ii) First air-conditioned local train for Mumbai (manufactured by BHEL and Integral Coach Factory)
- (iii) In partnership with Indian Railways (IR) successfully commissioned a 1.7 MW pilot solar photovoltaic plant at Bina, which is one of its kind as the power is evacuated and directly fed into the Traction substation for utilisation for traction purposes
- (iv) Developed and supplied 9000 HP WAG-9HH Locomotives with BHEL propulsion electrics, including 1200 kW 3-phase traction motors for Indian Railways

Defence & Aerospace Sector

- (i) Offering of / order bagged for Upgraded SRGMs (Super Rapid Gun Mounts) - Indian Navy
- (ii) Supply of Compact Heat Exchangers for “Tejas” (India’s indigenous light combat aircraft (LCA))
- (iii) Working protocol signed with Zorya Ukraine, Indian Navy and BHEL, for localization of manufacturing of Marine Gas Turbine Aggregates in India – a step towards Aatmanirbhar Bharat in Defence equipment production
- (iv) Maiden Indigenous Aircraft Carrier (IAC) – INS Vikrant successfully completed basis trials at Kochi, wherein BHEL has supplied Integrated Platform Management System (IPMS)
- (v) Appreciation letter received from ISRO’s Liquid Propulsion Systems Centre (LPSC), for completion of manufacturing of Central Rings for Chandrayaan-3 Project in record time

Oil & Gas Sector

- (i) First-ever lump-sum turn-key (LSTK) order for Process Unit for Sulphur Recovery Unit (525 TPD) from IOCL, Paradip against stiff competition – foray into Downstream Oil and Gas business
- (ii) First-ever order for 650 MT Fractionator Column from HPCL Rajasthan Refinery Ltd. (HRRL), enabling BHEL to qualify for high tonnage (crude distillation unit / vacuum distillation unit) columns, vessels in future projects
- (iii) First-ever order for oil heater package for Purified Terephthalic Acid (PTA) unit of IOCL, Panipat

Other Sectors

- (i) Developed and supplied EV (electric vehicle) chargers and solar based charging stations.
- (ii) Maiden order for installation of Battery Energy Storage System (BESS) of 410 KWH cumulative capacity from M/s TERI (The Energy and Resource Institute)
- (iii) Development and manufacture of medical-grade oxygen plants using CSIR-Indian Institute of Petroleum technology
- (iv) Indigenous development of Air Pollution Control Tower (APCT) and its prototype installation in Noida (in association with Noida Administration)

For meeting long term organizational and national objectives of ‘Aatma Nirbhar Bharat’, BHEL has undertaken several initiatives through dedicated teams in other upcoming areas, such as Coal to Methanol (for which BHEL has indigenously designed, installed and demonstrated 0.25 TPD Methanol generation technology demonstration plant using high ash Indian coal – a first of its kind in India), Hydrogen economy (generation, storage, utilization), Industry 4.0 solutions for process industries (remote monitoring & diagnostics, spares & services business), Battery Energy Systems and Additive Manufacturing.

(c): In renewable energy, BHEL has been in the field of solar photo-voltaic (SPV) since 1980’s, and in hydro-electric power projects since 1970’s. The Company has in place a mechanism for regularly assessing technological requirements, which are addressed through in-house developments or collaborations.
