

**Output-Outcome Framework for Schemes 2017-18
Demand No.44: Department of Heavy Industry**

(Rupees in crore)

S. No.	Name of the Scheme/Sub-Scheme	Financial Outlay 2017-18	Output/ Deliverables against the Outlay 2017-18	Projected Medium Term Outcome
Central Sector Scheme				
1.	Enhancement of competitiveness in the Indian Capital Goods Sector	150.00	<ul style="list-style-type: none"> • Common Engg. Facility Centre at Chakan will be set up • Training Centre for students of ITI and diploma holders in the machine tool operations etc. at HMT, with target to train 480 students per annum • Advanced Training Centre at HEC, Ranchi for specialized training in the field of electro slag re-melting, welding, gear box manufacture and non-destructive testing. • R&D support to identified needs of capital goods industry by Center of Excellence at IIT Chennai 	<ul style="list-style-type: none"> • Better training facilities for machine tools, metallurgy and allied areas would lead to enhanced skilled workers in both public and private sector. • Cluster approach, skilled workforce and better R&D facilities would increase production and productivity of the sector. • Machine Tool Park would lead to increase of domestic turnover of machine tools.
2.	Faster Adoption and Manufacturing of Electric (& Hybrid) Vehicles in India	175.00	<ul style="list-style-type: none"> • Establishment of 200 charging stations. • Technology Development support of Rs. 25 crores for manufacture of full range of cleaner electric Vehicles and components; • 1.5 lakh vehicles • Academic partner for setting up of Centre Excellence for Battery technology would be identified. • 200 Electric busses would be included in urban public transport; • 1000 Government Vehicles would be converted as Electric Vehicles. 	Faster adoption and development of manufacturing/ market ecosystem of hybrid/electric vehicle with about 2 to 3 million hybrid/electric vehicles users would lead to adoption of environment friendly technology and also reduce dependence of the country on fossil fuels thus improving the Balance of Payments.
3.	National Automotive Testing and R&D Infrastructure Project (NATRIP)	485.88	<ul style="list-style-type: none"> • Completion of incomplete Labs on Power Train, Passive Safety, Noise, Vibration, and Harshness (NVH), Electromagnetic compatibility (EMC), Fatigue and Certification Lab) at Global Automotive Research Centre (GARC) Chennai, International Centre for Automotive Technology (ICAT) Manesar, Automotive Research Association of India (ARAI) Pune and National Automotive Test Tracks (NATRAX) Indore. • Completion of Test Tracks at GARC Chennai, ICAT Manesar and partial completion of Test Tracks at NATRAX- Indore. 	<ul style="list-style-type: none"> • Indian automotive & component manufacturers become globally competitive for export with aim to scale up exports to the extent of 35-40% of overall output by 2026. Would give impetus to the "Make in India" program. • Certification needs of Indian automotive industry will be met with enhanced support for developmental testing for the automotive industry, OEMs and components for their product development needs.
S. No.	Name of the Scheme/Sub-Scheme	Financial Outlay 2017-18	Output/ Deliverables against the Outlay 2017-18	Projected Medium Term Outcome
4.	R&D project for	120.00	<ul style="list-style-type: none"> • Creation of testing procedure and 	<ul style="list-style-type: none"> • Establishment of rotor test

	Development of Advanced Ultra Supercritical (AUSC) Technology for thermal power plants		schematic of Rotor Test Rig etc. <ul style="list-style-type: none">• Preliminary designing of Steam turbine rotor and casting, Blade profile for high pressure turbine.• Preliminary design of boiler feed pump, feed water heater and valves and HP bypass valves.	rig, test plans and procedures <ul style="list-style-type: none">• Design of major equipment-Boiler, Steam turbine, generator, valves, piping• Overall layout of Plant• Complete deign of an 800 MW AUSC thermal power plant.
	Total	930.88		