

WHITE PAPER ON CAPITAL INVESTMENT MOBILIZATION- ELECTRICAL AND ELECTRONICS EQUIPMENT INDUSTRY IN INDIA

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Overview of ASPIRE Programme



Background

- ❖ The Government of United Kingdom is committed to supporting India's energy transition and climate goals. The UK's Foreign, Commonwealth and Development Office (FCDO) has been supporting the Indian power sector at the state and central level over the last four decades
- ❖ FCDO UK, Ministry of Power Government of India and Ministry of New and Renewable Energy, Government of India are jointly implementing the UK-India Technical Assistance Programme on "**Accelerating Smart Power and Renewable Energy in India**" (**ASPIRE**) to support the reforms process further.
- ❖ ASPIRE has two sub-programmes:
 - Smart Power (encompassing Electricity Distribution, Industrial Energy Efficiency, and E-Mobility)
 - Renewable Energy (includes Solar, Offshore Wind, Battery Storage & Green Hydrogen)
- ❖ KPMG is the delivery partner of the programme

Objectives of the Technical Assistance programme

1

Catalyze increased investment across power sector and renewable energy in India which supports energy security and economic growth that is inclusive, low carbon, leads to poverty reduction, and supports action on climate change.

2

Catalyze increased trade and investment opportunities and mutually beneficial economic relationships between Indian and international entities, including from the UK.



Structure of the Presentation

- 01** Commitments towards Climate Change Across the Globe
- 02** India's Green Energy Transition & Opportunities for Electrical & Electronics Manufacturing Industry
- 03** Key Takeaways

01

**Commitments
towards Climate
change across
the Globe**

Countries and corporates all over the globe are pledging towards decarbonisation

Climate change is a major global concern and there is a clear focus on the transition to a lower carbon economy

133

countries have committed to Net-zero carbon targets

55%

of the world's top 500 companies (by revenue) acknowledge the risk of climate change in financial reporting

£697bn

was invested in decarbonisation efforts globally in 2021 with ~50% of all investment occurring in Asia

91%

of global GDP covered by Net-zero targets

20.4%

of the world energy demand is in the form of electricity

Limiting global warming to 1.5°C requires net CO₂ emissions to fall by

45%

by 2030 and achieving Net-zero by 2050

Despite net zero commitments/pledges by countries across the globe, limiting the global temperature rise to 1.5°C is an enormous challenge

Source:

- [1] Net Zero Tracker (last accessed on 11 Jan 2023)
- [2] CEEW CEF Investment Sizing India's 2070 Target
- [3] World Energy & Climate Statistics Yearbook 2022

- [4] Glasgow Financial Alliance for Net Zero
- [5] Exchange rate as on 17.01.2023, 1 USD= 0.82 GBP

Major MNCs across sectors are transforming the core business processes to incorporate sustainable practices

Company	Net-zero target
	2030
	2030
	2035
	2035
	2040
	2040
	2050
	2050
	2050
	2050
	2039

Leading practices

Electrical Equipment

SIEMENS

Siemens AG has committed to become net zero by 2030 with 36% reduction in carbon footprint in last two years through adoption of renewables¹

Schneider Electric

Schneider Electric launched The Zero Carbon project in 2021 partnering with its top 1,000 global strategic suppliers to halve their operations CO2 emissions²

ABB

ABB Electrical has committed to become net zero by 2030 by electrifying its fleet and sourcing renewable electricity³

Prysmian Group

Prysmian Group will be spending ~£89 billion over the next 10 years to decarbonize 80% of their Scope 1 and 2 carbon footprint, phase out SF6 emissions, and use renewable energy for electricity⁴

Hitachi Energy

Hitachi Energy partnered with Stena Recycling to undertake the disposal of old transformers and reusing/ recycling about 99% of its composition⁵

FMCG

marico

Marico aims to achieve net zero emissions in its global operations by 2040 by integrating carbon neutrality measures across its all existing and future product configurations⁶

Cement

UltraTech CEMENT

UltraTech has committed to produce carbon neutral concrete by 2050 and also agreed to a sectoral commitment of reducing CO₂ emissions by 25% by 2030⁷. It is also a founding member of Global Cement and Concrete Association (GCCA), which has published a detailed 'Concrete Future' roadmap for the industry to decarbonize by 2050⁸

Source:

[1] Siemens, Sustainability, Siemens is leading the way towards carbon neutrality, URL www.siemens.com

[2] Schneider Electric, About Us, Sustainability, Climate Commitments 2021-25, URL www.se.com

[3] ABB, News, URL new.abb.com

[4] Prysmian Group, Sustainability, Climate Change Action, URL www.prysmiangroup.com

[5] Hitachi Energy, Sustainability, Partnerships, URL www.hitachienergy.com

[6] Marico, Environment, Futureproofing Assets for Tomorrow, URL www.marico.com

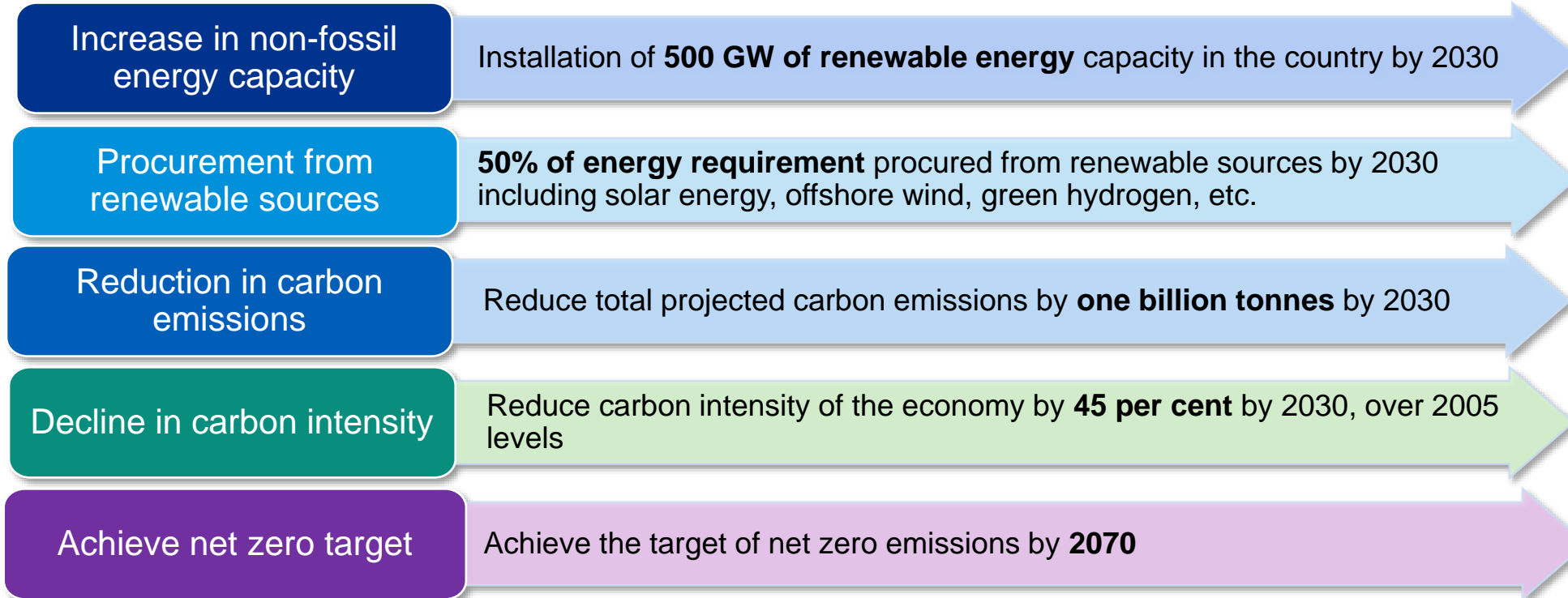
[7] Ultratech, About Us, URL www.ultratechcement.com

02

**India's Green Energy
Transition & Opportunities
for Electrical & Electronics
Manufacturing Industry**

Government of India has set ambitious targets to reduce carbon emissions and address the impacts of climate change

Shift towards energy transition is supported by policy push at the central level



During COP27, India launched “long-term low carbon emission development strategy” (LT-LEDS) indicating low carbon transition pathways in key economic sectors and revised its Nationally Determined Contribution (NDC)²

India has taken significant steps towards achieving the set targets in terms of making national and state policies, bringing relevant interventions, establishing nodal agencies and accessing required technologies. Access to affordable finance will be key in achieving the set targets

Source:

[1] National statement by PM in COP 26

[2] National statement by India in COP 27

Expanding capacities and emerging technologies will unlock new opportunities for Electrical & Electronics Manufacturers

India is expanding green power capacities-

3.5x

Increase in installed power capacity by 2047

7.5x

Increase in RE installed capacity by 2047

85%¹

Share of installed RE capacity in generation base by 2047

25 MMT²

Annual green hydrogen production by 2047

India is exploring emerging sustainable technologies-

H₂

Green Hydrogen

£6.6 billion market by 2030 and £279 billion by 2050³



Battery Storage

600 GWh by 2030⁴



Biofuels

Demand to reach 0.26 Million tonnes by 2030⁶

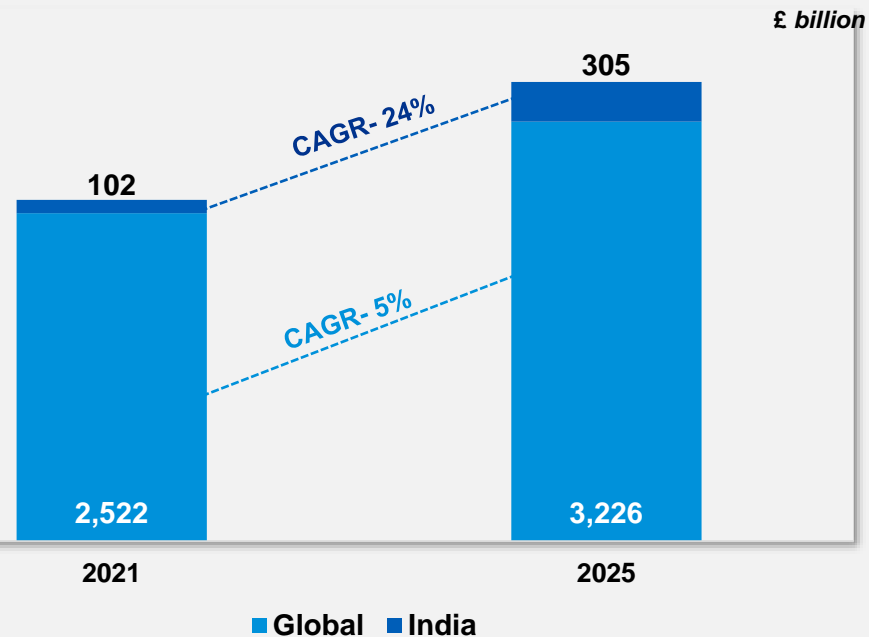


Smart Grid

£20+ billion market by 2026⁵

Indian Electrical & Electronics Manufacturing industry to grow exponentially in double digits, the global market is anticipated to rise by 5%

Comparison of Global and Indian Electrical and Electronics industry potential



The market comprises of BTG, transformers, electrical equipment, switch and control ears, cables, electrical devices etc.

- The share of electricity in total energy consumption (17% in 2019) is expected to double by 2050
- To cater to this demand, investment in developing RE capacities and Electric mobility and allied infrastructure becomes crucial
- This is likely to provide a push Electrical & Electronics Manufacturing industry due to derived demand from power and mobility sector

India aims to become a global export hub for Electronics System Design and Manufacturing

- Government of India is encouraging and driving capabilities in the country for developing core components and creating an enabling environment for the industry players to compete globally
- Introduced several Production Linked Incentive (PLI) schemes to boost the electronics sector and establish the necessary ecosystem including,
 - ✓ PLI for Large Scale Electronics Manufacturing,
 - ✓ Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS),
 - ✓ PLI for Modified Electronics Manufacturing Clusters Scheme (EMC 2.0)

Source:

- [1] Electrical And Electronics Global Market Report 2022
- [2] Electrical and Electronics Manufacturing Market Potential \$125 Bn= 75 Bn+50 Bn
- [2] Press Information Bureau, Ministry of Electronics and Information Technology, Vision Document on Electronics Manufacturing, Vol 2
- [2] Economic Times, Electronic Equipment Market may grow at 10% annually to reach \$72 Bn by 2025

- [2] Press Information Bureau, \$300 Bn Sustainable Electronics Manufacturing & Exports by 2026
- [3] Trading Economics, India Imports of Electrical, electronic equipment
- [4] Press Information Bureau, Government's initiatives give a boost to domestic manufacturing of quality and globally competitive products
- [5] Exchange rate as on 17.01.2023, 1 USD= 0.82 GBP

India needs enormous investment for effective energy transition

Significant gap between the supply and demand of financing resulted in an enormous investment gap with is likely to continue in coming years

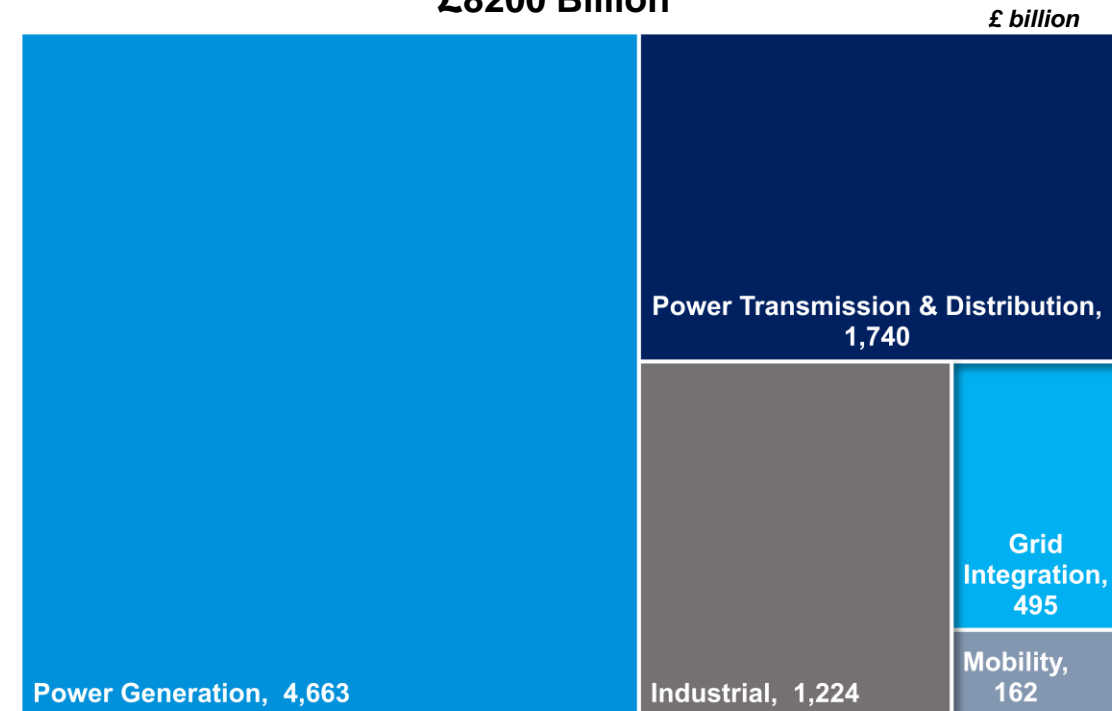
India requires **~£8.2 trillion** of investments to achieve net zero by 2070, with an annual average of **~£163 billion**. Against this, the supply of financing is limited to **~£36 billion** (2019/20)

India's financing supply need to increase by **~360%** or **4.6x** annually to cater to the anticipated demand

More than **90%** of the investment should be channelised towards decarbonising power and mobility sector

- *Sizeable capital investments required across technologies, consequent to substantial gap between supply and demand of financing prioritisation of investment is required*
- *Multilateral and bilateral developmental agencies have a key role in facilitating access to international funds*

Total Investment required to achieve Net Zero in 2070- £8200 Billion



Power and Mobility sector will require nearly 85% of the total investment for energy transition

United Kingdom has become the first major economy in the world to commit to achieve net zero emissions by 2050



One of the early movers in green transition journey; already reduced the GHG emission by 44% as compared to 1990



In 2020, **transport and mobility sector accounted for nearly 24%** of the total GHG emissions followed by energy supply (21%) and business (18%)



£50 Bn annual investment estimated by the Climate Change Committee by 2030 to achieve net zero target

Green Financing Interventions

Entered Just Energy Transition Partnership (JETP) with United States, France, South Africa, Germany and the European Union in COP26 with three major goals:

- Facilitate the early decommissioning of coal-fired power plants;
- Mobilize private sector capital to finance decarbonisation efforts; and
- Deliver a “just transition” for citizens¹

Developed Green Finance Strategy which aims to position UK as a global green finance centre, stands on 3 pillars:

- *Greening of finance*: Net zero remit for financial regulators and clean growth venture capital fund
- *Financing green*: financing to climate and environment positive projects
- *Capturing the opportunity*: Green Financing Institute (GFI) to moderate green financing market practises

Developed Greening Finance Roadmap and framework consists of specific measures focused on

- Improving the disclosure of climate-related risks and opportunities to investors through Sustainability Disclosure Requirements (SDRs),
- Green Taxonomy,
- Mandatory net zero transition plans and responsible investor stewardship

Several Financial Institutions have prioritised green financing practices including;

- *British Business Bank* has given a net zero mandate and is supporting SMEs to transition to net zero
- *UK Investment Bank* is encouraging private investment for innovative businesses and technology with higher risk profiles
- *UK Export Finance Bank* is helping businesses focused on climate-related technologies

UK has committed an international climate finance of £11.6 billion over five years, including a balance between mitigation and adaptation spending, with an extra £1bn in 2024-2025 if the economy grows as forecasted, supporting developing nations like India to access clean technology and build green infrastructure.

Source:

[1]Net Zero Strategy: Build Back Greener

[2] Enabling the Net Zero Transition: The Role of Financial and Related Professional Services

03

**Key
Takeaways**

Key Takeaways

01

Sharper prioritization and configuring differentiated financing pathways

02

Translating government intent to policy clarity, institutional readiness and threshold level of public finance

03

Functioning carbon markets, green financing frameworks roadmaps and portals

04

Strategic partnerships with developed countries

05

Financial institutions to bring innovative investment instruments



Thank You