

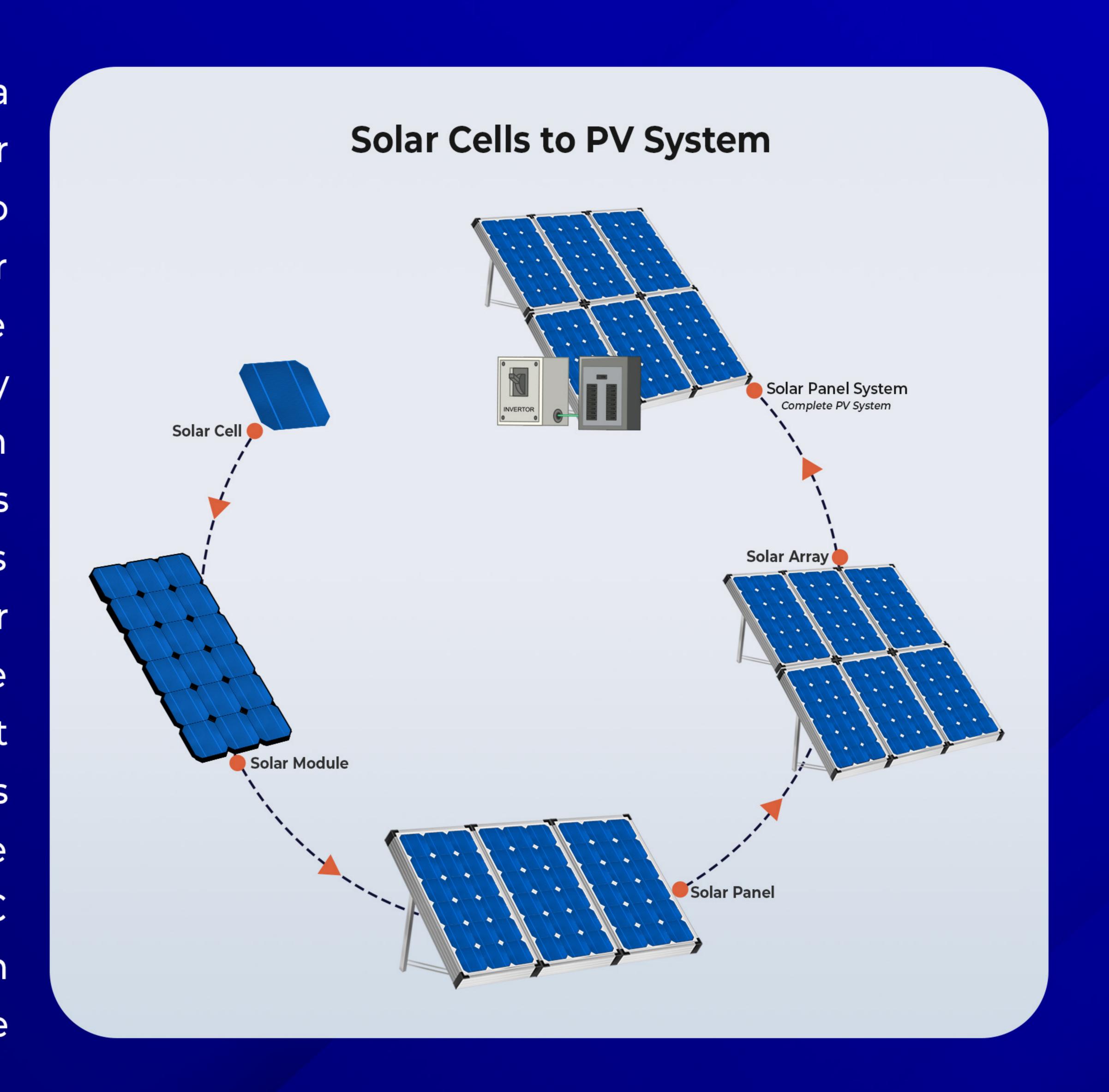
Solar Panels >





## Overview

A solar module is composed of solar cells enclosed in a material that protects it from the environment. Solar cells are able to capture photons from the sun due to their semiconductor properties and convert their energy into electricity in a process called the photovoltaic effect. A solar panel is composed of many solar modules and when each panel is linked with other panels to produce higher amounts of energy, it is called a solar array. A photovoltaic (PV) system is formed with a solar array using an inverter and other electrical and mechanical hardware to generate electricity. The inverter is used to convert the direct current (DC) electricity to alternating current (AC) as the electricity from the PV system is sent to the electrical grid which provides (and requires) AC electricity. The AC electricity from the PV system can be used to power electronics locally or be sent to the electrical grid for use elsewhere.







- ▶India is ranked 4th globally in terms of installed capacity of renewable energy and received over US\$14 billion in foreign direct investments (FDI) between April 2000 to June 2023. In the Union Budget 2023-24, the government has allocated over INR 7,000 crores to the solar power sector, reflecting a YoY increase of ~48%. Between 2017 and 2023, India added roughly 100 GW of installed electric capacity, of which ~80% is attributed to non-fossil fuel-based resources.
- Roughly 85% of the solar panel market in India is of utility type the remaining being rooftop. Major solar makers in the country include Adani Solar, Tata Power Solar Systems, Vikram Solar, Waaree Energies, and Goldi Solar, among others.
- India's solar cell and PV module capacities more than doubled from 2020 to 2023. The solar cell capacity rose from 3 GW in 2020 to 6.6 GW by March 2023 while the solar PV module capacity grew from 15 GW to 38 GW in the same period.



China dominates the solar panel supply globally accounting for nearly 75% of the market due to its early mover advantage and establishment of an end-to-end supply chain. The Indian government has implemented a basic customs duty (BCD) of 20% on solar cells and 40% on solar modules, effective April 2022, to protect domestic manufacturers and encourage them to ramp up production capacity of solar cells and modules. However, Chinese modules are still competitive in the Indian market even with the BCD.



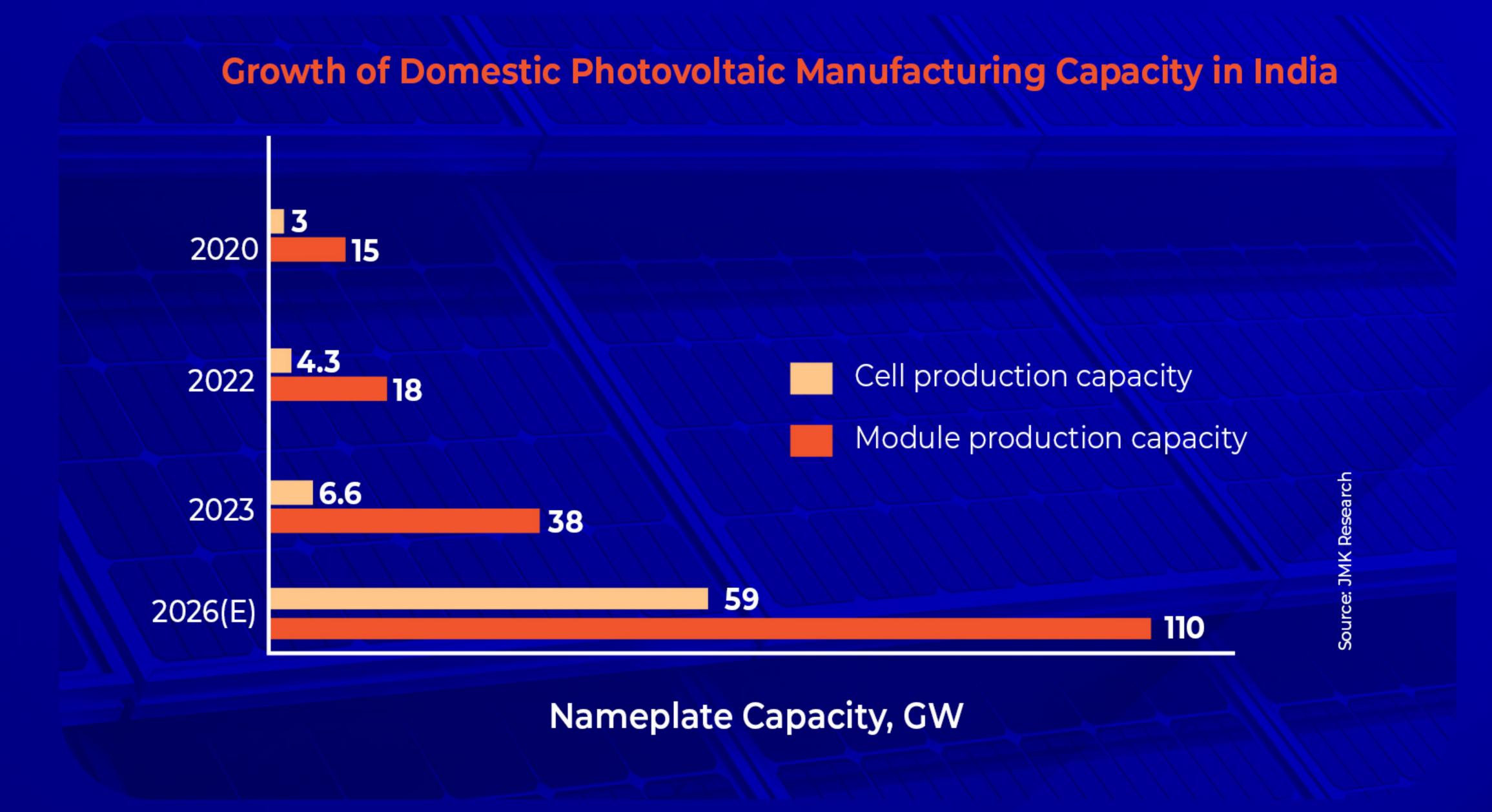


India's solar industry still depends on China for ~80% of its solar panel imports, However, solar module imports from China fell 76% YoY to 2.3 GW over January-June 2023, according to energy think tank Ember. On the other hand, due to US sanctions on solar imports from China due to concerns about forced labor, India has gained an edge in solar panel/module exports to the US. Exports of solar panel/modules to the US increased manifold from ~US\$19 million in the first half of 2022 to ~US\$800 million in the same period of 2023.

### Current Outlook

India plans to achieve 280 out of the 500 GW of renewable capacity from solar by 2030. This is expected to materialise with an addition of 110 GW of PV module manufacturing 'nameplate' capacity by 2026 (Nameplate is the maximum production capacity of a facility), helping India to attain self-sufficiency in solar module production and to become the 2nd largest PV manufacturing country after China, as per a recent collaborative report by the Institute for Energy

Economics and Financial Analysis (IEEFA) and JMK Research and Analytics.



The domestic manufacturing of PV modules is expected to receive a significant boost from the Centre's production-linked incentive (PLI) scheme. The total domestic solar PV module manufacturing capacity allocated by the Ministry of New and Renewable Energy under the two tranches of the PLI Scheme stands at 48,337 MW, with a cumulative support of INR 18,500+ crores.





Steady fall in prices of solar modules since late 2022 is expected to boost the internal rate of return of 45 GW utility-scale solar projects awarded since FY21, as per a recent report by CRISIL. The trajectory of falling module prices was reversed in late FY21 due to the rise in prices of raw materials like polysilicon and aluminium impacting the return profiles of the 45 GW project pipeline.

### Recent News

- PLarsen and Toubro's renewable engineering, procurement, and construction (EPC) arm secured a project to set up an 1800 MW solar power plant in Dubai. The project is the 6th phase of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai and is expected to reduce ~2.4 million tons of carbon emissions annually. Spread over 20 km, the project is expected to be operational in three phases.
- ► Torrent Power Limited signed four MoUs with the Government of Gujarat under the 10th edition of the

Vibrant Gujarat Global Summit with proposed investments totaling INR 47,350 crores. It includes setting up of 3,450 MW of solar power projects, 1,045 MWs of Hybrid Power Projects, the development of the infrastructure of a solar park for a 7,000 MW solar power project, and a green hydrogen / green ammonia production facility with a capacity of 100 kilo-tonnes-per-annum.

▶ Freyr Energy, a leading rooftop solar company, announced a foray into Kerala to solarize 2,000 homes by the end of 2024 across all districts. There is a notable growth in rooftop solar capacity in Kerala. About 1.7 lakh houses are already equipped with solar panels in the state as part of Kerala State Electricity Board's solar project. The state's overall solar capacity stands at 893 MW through various projects and sectors.







IT Peripherals >





### Overview

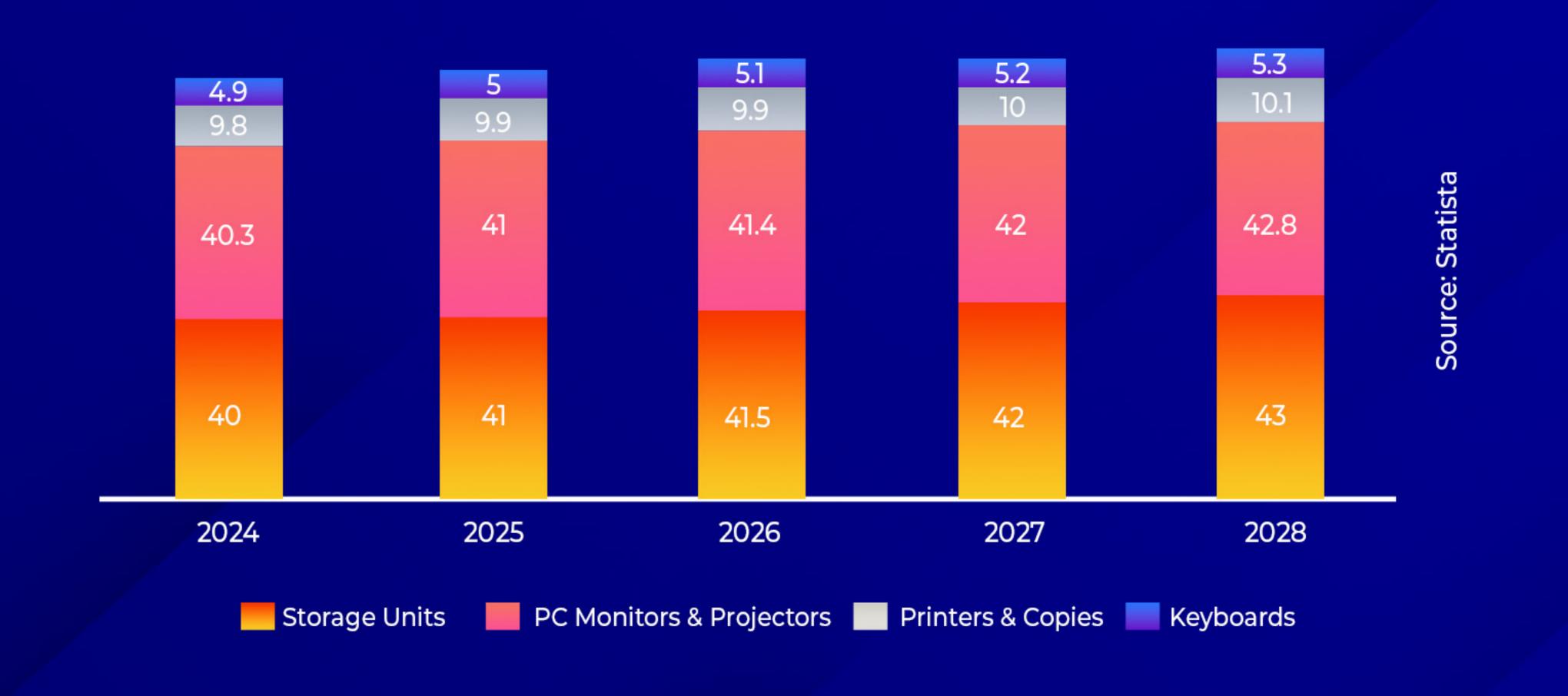
- IT peripherals are external devices designed to augment the user experience and extend the capabilities of the primary computing device by offering additional functionality, connectivity, and input/output features. These devices are keyboards, monitors, printers, scanners, speakers, webcams, external storage devices, and networking equipment.
- There is a growing demand for IT peripherals due to the increasing adoption of hybrid working models, rise in Gen Z users preferring continuous upgrades and advanced features in peripherals like cordless, programmable mouse, etc., rise in demand for high-performance peripherals due to the fast expansion in the gaming industry, among other factors.
- Some of the major players in the market are Compuage Infocom, HCL Infosystems, D-Link India, Intex

Technologies, iBall India, Cerebra Integrated Technologies among others.

### **Current Outlook**

- The global IT peripherals market was valued at ~USD 470 billion in 2022 and is anticipated to be around ~USD 780 billion by 2030, reflecting a CAGR of ~7%.
- ►The market's expected revenue from 2024 to 2028 across segments is as shown below:

#### IT Peripherals Market Revenue (USD Billion)









### Overview

- ▶ Equipment rental operates as a service industry that offers a diverse range of machinery, equipment, and tools, spanning from earthmoving, powered access (like scissor lifts, boom lifts), and power generation to hand-held tools. The industry players provide these resources for a limited duration to end-users, primarily to industries such as construction and infrastructure.
- Opting for machine rentals allows an Asset Light Model for businesses, minimizing project costs by avoiding capital investment in construction machines. Lower maintenance costs and improved uptime enhance focus on core construction activities. With India's infrastructure growth, major contractors are increasingly favoring equipment rentals over the complexities of ownership and maintenance.
- The prominent players in the Indian construction equipment rental market include iQuippo, Volvo

- Construction Equipment, ACE Cranes, ABC Infra Equipment Pvt Ltd., Sanghvi Movers Limited, All India Crane Hiring Co., Jainex Group, and others.
- ▶The equipment rental industry has experienced substantial growth and transformation in the past decade, driven by four key trends. Firstly, there's a significant move towards increased digitization as businesses shift operations online for process streamlining and meeting customer expectations. Secondly, sustainability is a growing focus, prompting companies to invest in eco-friendly equipment. Thirdly, telematics systems are enhancing operational efficiency by providing valuable usage data and reducing maintenance costs. Lastly, the Equipment-as-a-Service (EaaS) model is revolutionizing traditional rental structures, providing greater flexibility and cost-effectiveness.





# **Current Outlook**

- ► The global construction equipment market size is expected to grow from USD 152 billion in 2023 to almost USD 240 billion by 2030, growing at a CAGR of ~6% in the forecast period.
- India has made substantial progress in enhancing its infrastructure capabilities, propelled largely by increased government expenditure. Over the last 3 years (FY22-FY24), the central government has spent over INR 23 lakh crore on infrastructure projects, with a notable emphasis on roads, highways, and railways. Furthermore, in the recent Budget 2024, the government raised the sector's allocation to INR 11.11 lakh crores for FY25, constituting almost 3.4% of the GDP.

The industry has also experienced rapid growth through initiatives like 'Housing for All by 2022' and the Smart Cities Mission. The expansion of commercial real

Smart Cities Mission. The expansion of commercial real estate, driven by the IT-ITeS sectors, further contributes to this growth.

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