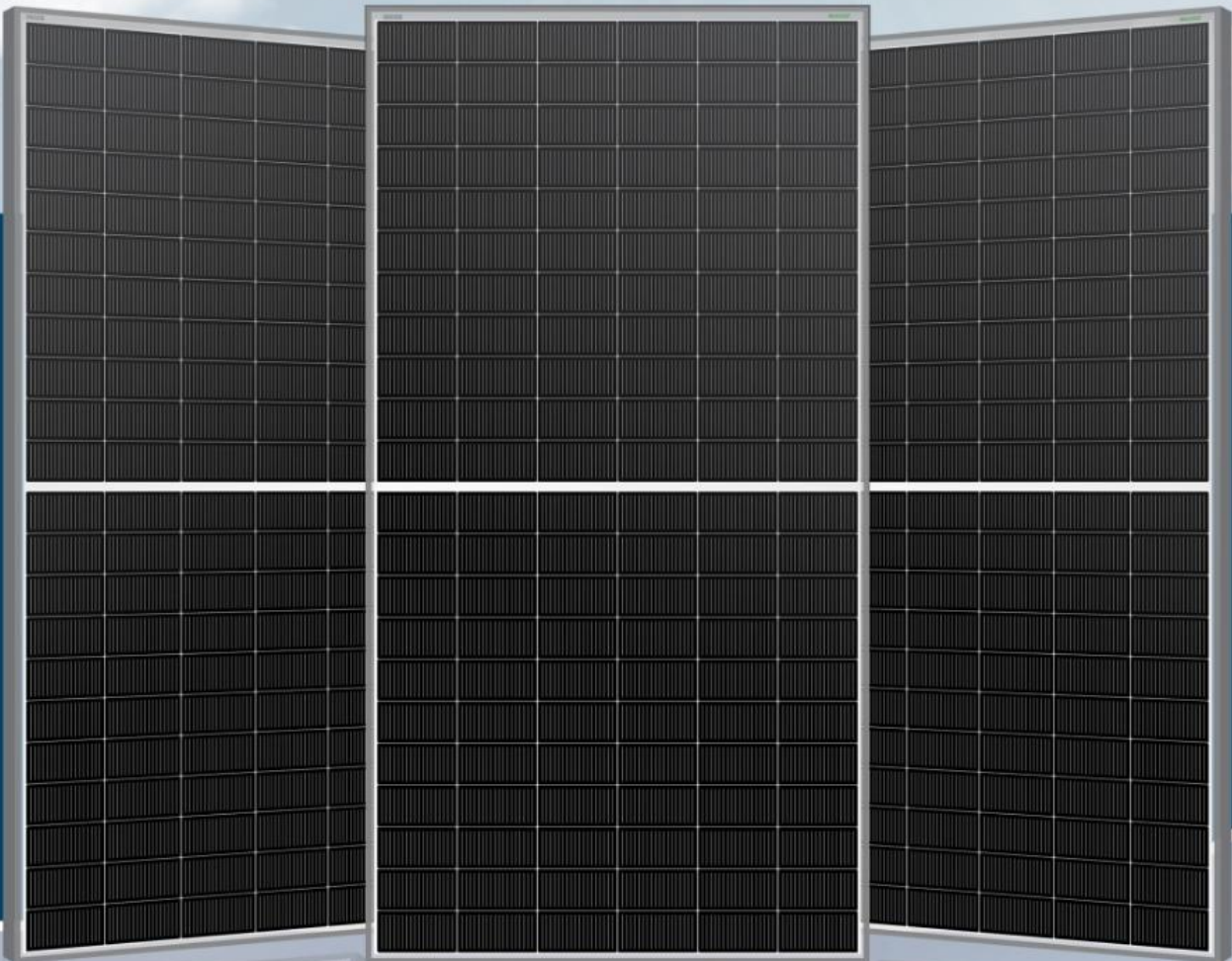


WAAREE ENERGIES LIMITED

October - 2024



ANALYST

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Waaree Energies Limited IPO Note

Accelerating Energy transition

Founded in 1990, Waaree Energies Limited (WEL) is India's largest manufacturer and exporter of solar modules. Over FY20-24, its installed capacity has zoomed 6x to 13.3GW (2GW in FY21), *by far the highest amongst its peers*, transpiring into a respectable 21% share of domestic market (as per ALMM) and a healthy 44% share in exports of solar modules from India. *WEL is setting up a 11.4GW integrated manufacturing facility (5.4GW solar cell in FY25E and 6GW fully integrated manufacturing facility to produce ingots, wafers, and solar cells by FY27E)*. This integration will enhance WEL's operational efficiency, reduce costs and the dependence on external suppliers. With solar energy emerging as a key global theme in the transition to renewable energy, *WEL is best placed to capitalize on the growing opportunity given its leading market share, strong financials, and continued focus on innovation and sustainability.*

- Pioneering solar module manufacturing:** WEL is a leading player in India's solar energy with a total installed capacity of 13.3GW. At 21% domestic market share for approved modules (as per ALMM), WEL is over 3x the size of the next largest player in the domestic market. The company's consistent investment in R&D, coupled with the global push for green energy, has further bolstered its position, capturing 44% of total solar module export from India. *Its order book of 19.9GW (as of FY24) is a testament to its long-standing relationship with its clientele and the product acceptance.*
- Capacity expansion including backward integration:** WEL is on track to expand its capacity to 20.9GW by FY27E, including the development of the US manufacturing facility with an initial capacity of 1.6GW, scalable up to 5GW by FY27E. *This ambitious growth plan is also supported by WEL's ongoing capacity expansion and vertical integration efforts, including the establishment of a 5.4GW solar cell manufacturing facility (COD by FY25E) and a fully integrated 6GW facility (COD by FY27E).* WEL's high-efficiency solar modules reflect its strong focus on innovation and R&D, ensuring that it remains at the forefront of advanced solar module technologies.
- Policy initiatives; encouraging opportunities:** Government initiatives, such as PM-KUSUM, Rooftop Phase-II, and Atmanirbhar Bharat, highlight India's commitment to promoting green energy. Supportive policies, including subsidies, PLI schemes, and customs duty exemptions on solar components, are actively attracting investment and propelling growth in the renewable energy sector. *This coupled with Gol targets of producing 5MT by 2030 of green hydrogen will entail huge investments in the solar sector. WEL with total capacity at 20.9GW by 27E (highest amongst domestic players) is well placed to capitalize on the opportunities.*
- Superior financials; industry-best return ratios:** Led by a 6x rise in installed capacity, favorable sector dynamics including policy initiatives, push towards green energy and operational efficiencies, WEL has witnessed a robust 80%/154%/204% CAGR in revenue/EBITDA/PAT over FY21-24. *Further, with efficient capital allocation, limited equity dilution (raised ~INR 20.4bn in equity over FY23-24) including low leverage, ROE / ROCE remain industry-best.* With renewable energy solutions gaining prominence, WEL stands at the cusp of a gigantic opportunity given its market leadership and commitment to innovation and sustainability. *Robust financial and strategic market positioning place WEL as a formidable player in the renewable energy sector. SUBSCRIBE.*

SUBSCRIBE

Waaree Energies IPO details

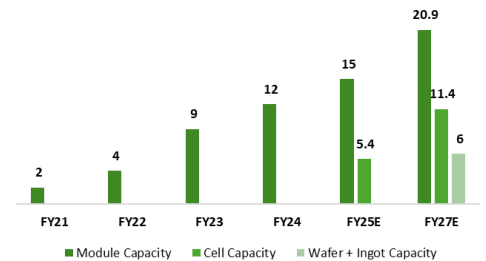
Particulars	Amount/shares
Fresh issue	INR 36bn
Offer for Sale	4.8mn shares

Source: RHP

Why should you read this report?

- To understand WEL history and what makes it stand out compared to its peers
- WEL's solid history and robust expansion plans to setup fully integrated manufacturing facility
- Industry overview and opportunities for WEL
- Fundraise and Object of the issue

Installed capacity at 20.9GW by FY27E



Source: Company, RHP

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Y/E (INR in mn)	Revenue	YoY (%)	Adj. EBITDA	Margins (%)	PAT	Margins (%)	EPS	RoE	RoCE	D/E
FY21	19,530	-2.1%	957	4.9%	456	2.3%	2.4	12.4%	9.5%	0.80x
FY22	28,543	46.1%	1,109	3.9%	797	2.8%	3.8	20.4%	9.6%	0.73x
FY23	67,509	136.5%	8,346	12.4%	5,003	7.4%	21.6	44.2%	41.5%	0.15x
FY24	113,976	68.8%	15,744	13.8%	12,744	11.2%	47.9	43.0%	31.0%	0.08x

Source: Consolidated financials. Company, RHP. ROE adjusted for exceptional item in FY24 would be at 31.5%.

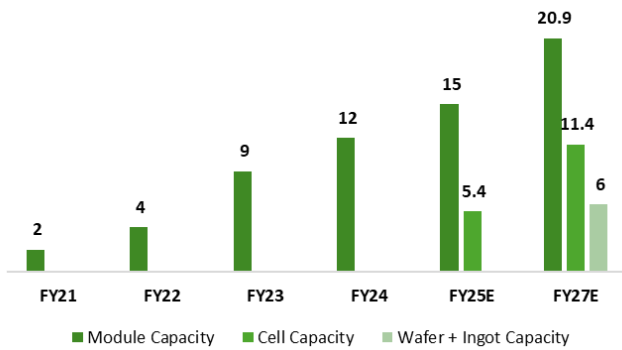
MNCL Research is also available on Bloomberg

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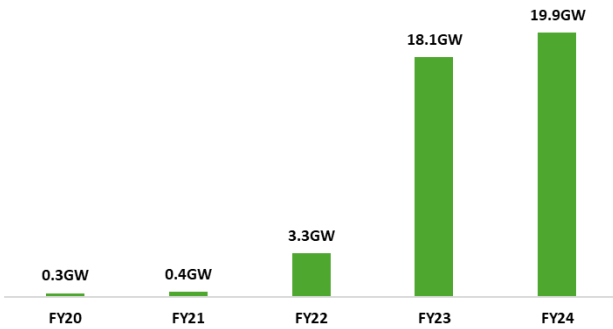
Story in Charts

Exhibit 1: 6x capacity growth between FY20 and FY24 (GW)



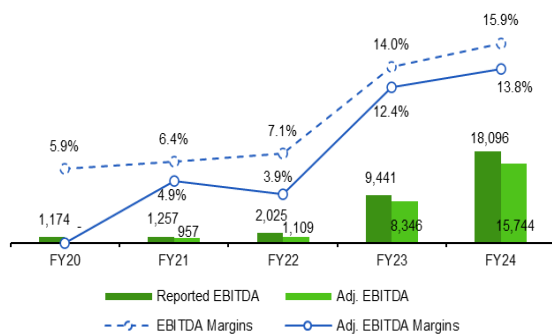
Source: Company, RHP

Exhibit 3: Robust 19.9GW of order book



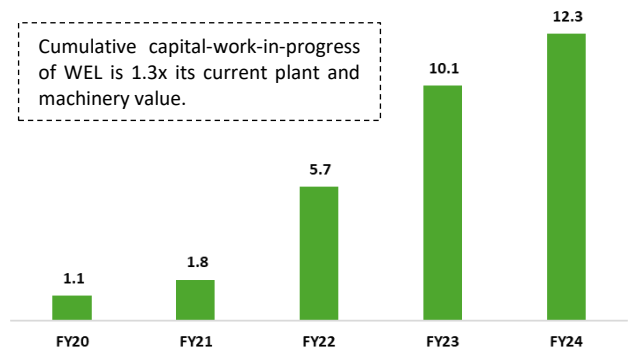
Source: Company, RHP

Exhibit 5: EBITDA (INR mn) and Margins (%)



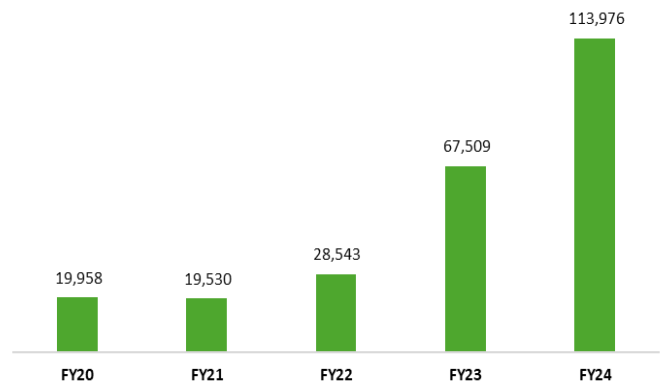
Source: Company, RHP

Exhibit 2: Capital Expenditure (INR bn)



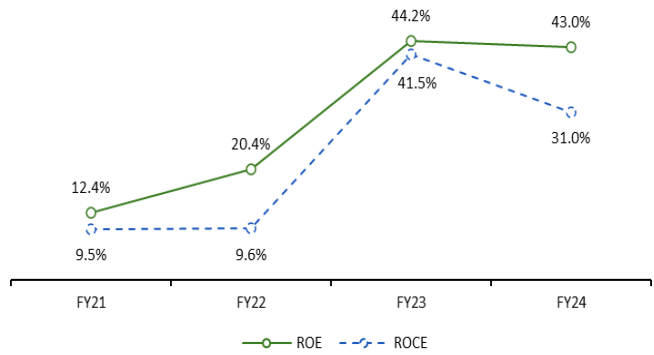
Source: Company, RHP

Exhibit 4: Sturdy 55% CAGR in revenue over FY20 -24 (INR mn)



Source: Company, RHP

Exhibit 6: Robust return profiles (%)



Source: Company, RHP

Pioneering Solar Module Manufacturing

Waaree Energies Limited (WEL), founded in 1990 and headquartered in Mumbai, is India's leading manufacturer and exporter of solar modules with the largest aggregate installed capacity of 13.3GW as of July'24. **Over the years, the company has significantly expanded its aggregate installed capacity from 30MW in 2007 to the current 13.3GW, highlighting the company's ability to execute expansion plans efficiently and on a scale.** The company operates through 5 state-of-the-art manufacturing plants strategically located in Gujarat (Surat, Tumb, Nandigram, and Chikhli) and in U.P (Noida) spread across 143+ acres of land.

Exhibit 7: 6x increase in capacity over the last four years

Manufacturing Facility	No. of Production Lines	Installed Capacity (GW)			
		2021	2022	2023	2024
Surat	1	0.5	0.5	0.23	0.23
Tumb	3	1	1	1	1
Nandigram	2	0.5	0.5	1.28	1.11
Noida*	2	-	-	-	1.3
Chikhli	13	-	2	6.49	9.66
Total	21	2.0	4.0	9.0	13.3

Source: Company, RHP. * Commenced operation in July 2024

WEL is India's leading solar modules manufacturer, accelerating global energy transition. With India aiming to reach 500GW of renewable energy by 2030, WEL contributes significantly to this vision by supplying high-efficiency solar modules worldwide. As the global demand for clean energy surges, WEL's leadership in exports positions it at the forefront of the solar industry, accelerating the shift towards sustainable energy.

Exhibit 8: Global presence incl. the United States, Canada, Italy, Hong Kong, Turkey and Vietnam



Source: Company, RHP

WEL's portfolio includes solar modules manufacturing, EPC services, project development, rooftop solutions, solar water pumps, and independent power production. **The standout aspect for WEL is its diverse product portfolio and services and includes:**

- **Solar Modules Manufacturing:** WEL portfolio of solar energy products consists of the PV modules including Heterojunction (HJT), TOPCon, Mono PERC, Flexible, and Special (customizable) modules.
- **EPC and O&M Solutions:** WEL, through its subsidiary, Waaree Renewable Technologies Ltd., ensures the efficient execution and timely delivery of high-quality solar installations along with O&M solutions that guarantee performance excellence.
- **Inverter:** WEL has gained industry recognition for its extensive range of quality, reliable, and efficient single and three-phase inverters. The company offers off-grid and on-grid inverters, addressing diverse energy needs and providing robust solutions for solar power systems.

- **Solar products:** WEL provides an extensive range of solar products, such as solar streetlights, home lighting systems, power packs, mobile chargers, and water pumps.
- **Independent Power Producers:** WEL extensive network of solar power plants generates clean, renewable energy.

WEL manufacturing facilities are **accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL)**, ensuring rigorous quality checks on its solar modules. In addition, WEL's automated production lines adhere to strict process control guidelines, as well as international industry standards and best practices. In 2024, WEL gained global recognition by being the **only Indian solar panel manufacturer featured in the prestigious RETC PV Module Index Report**, which assesses solar PV manufacturers worldwide. Additionally, WEL has been **recognized as a Top Performer in Kiwa PVEL's PV Module Reliability Scorecard for three consecutive years**, underscoring the company's commitment to excellence.

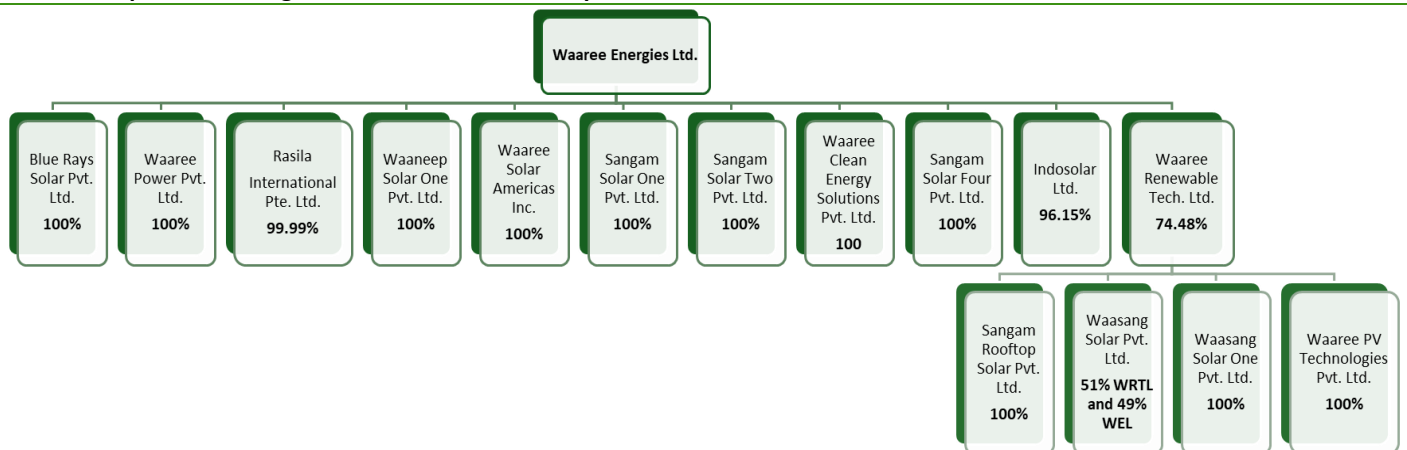
Exhibit 9: Various certifications support WEL's high quality product claims



Source: Company, RHP

WEL operates through 11 subsidiaries and 4 step-down subsidiaries. Its diversified ecosystem enables them to have better control of their operations. Rasila International Pte Ltd. and Waaree Solar Americas Inc. are its foreign subsidiaries. Waaree Renewable Technologies Ltd. (74.48% ownership) is a listed entity. Further, the company has acquired Indosolar through the corporate resolution insolvency process under the Insolvency and Bankruptcy Code, 2016. Pursuant to acquisition of Indosolar, WEL has access to Indosolar's facility at Gautam Budh Nagar, Uttar Pradesh where WEL has added the solar module manufacturing capacity of 1.3GW which began its operation in Jul'24.

Exhibit 10: Operates through 11 subsidiaries and 4 step-down subsidiaries



Source: Company, RHP | Note: The other listed entity, Waaree Technologies, is owned by the promoter and not by Waaree Energies or Waaree Renewables Technologies.

Solid Track Record and Execution Capabilities

Empirical studies suggest that a well-diversified revenue mix helps mitigate concentration risk and fosters sustainable growth.

WEL's revenue model includes several streams including **Direct Sales to Utilities and Enterprises, Export Sales** which cover solar module sales and international EPC revenue, **Retail Sales** through a wide franchisee network that focuses on rooftop and MSME customers, including both module sales and franchisee EPC revenue, **Other Revenue from Operations** including EPC services for domestic utilities and enterprises, O&M services, trading in ancillary products, export incentives, renewable electricity generation, and scrap sales.

WEL has 30+ years of experience in solar module manufacturing and 10+ years of experience as an EPC contractor. It has commissioned 1.82GW of solar EPC projects and has 2.1GW of projects under execution as of June 30, 2024. The company provides rooftop solar solutions for residential, commercial, industrial, and institutional projects across India and engages in the O&M space, offering maintenance and repair services for solar power plants.

Exhibit 11: Revenue mix

Particulars (INR mn)	FY21	FY22	FY23	FY24	Q1'FY25	CAGR (FY21-24)
Direct Sales to Utilities and Enterprises	8,144	15,963	13,168	35,815	13,410	63.8%
% of total operating sales	41.7%	55.9%	19.5%	31.4%	39.3%	
Export Sales	4,809	6,578	46,165	65,690	13,401	139.0%
% of total operating sales	24.6%	23.0%	68.4%	57.6%	39.3%	
Retail Sales	3,888	5,825	6,725	11,571	6,981	43.8%
% of total operating sales	19.9%	20.4%	10.0%	10.1%	20.5%	
Other Revenue from Operations	2,689	176	1,450	900	297	
% of total operating sales	13.8%	0.6%	2.1%	0.8%	0.9%	
Revenue from operations	19,530	28,543	67,509	113,976	34,089	80.0%

Source: Company, RHP

WEL serves a diverse global client base, including multinational corporations and several Fortune 500 companies. **With over 44% market share in India's solar module export market, WEL has strengthened its market position.** The company has also **experienced exceptional growth in its largest market, the US**, further reinforcing its global reach and industry prominence.

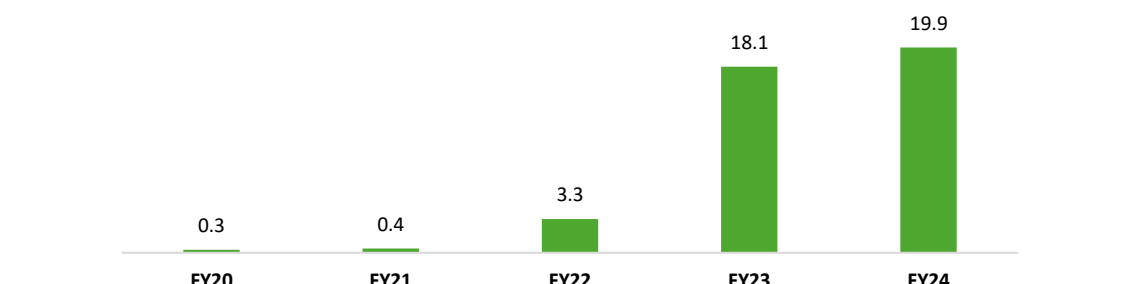
Exhibit 12: Exports account for ~60% of total revenue

Geographical breakup (INR mn)	FY21	FY22	FY23	FY24
India	14,721	21,964	21,343	48,021
% contribution	75.4%	77.0%	31.6%	42.2%
Other Countries	4,809	6,578	46,165	65,691
% contribution	24.6%	23.0%	68.4%	57.8%
Total	19,530	28,543	67,509	113,712

Source: Company, RHP

WEL holds a robust order book of 19.9GW, underscoring the company's strong market position and highlighting the significant growth opportunities within the sector. The company has consistently maintained its strong performance and gained traction in key export markets. **In FY24, the company generated over INR 65bn from export markets.** Further, WEL has strengthened its order book by securing substantial contracts from major developers in the US.

Exhibit 13: Impressive 19.9GW order book underscores growth potential (GW)



Source: Company, RHP

WEL remains committed to investing in and prioritizing the Indian market while actively pursuing growth in export sales, with a strong emphasis on the US, a vital player in the global market.

With the concept of solar rooftops gaining prominence, further accelerated by the Government of India's push, including incentive schemes, the Indian solar module market has received a significant boost. WEL, being one of the prominent players, has witnessed 32% CAGR growth in its retail sales over FY21 to FY23. The strong growth in the retail sales follows WEL strategy of building a **pan-India network of franchisees** providing extensive coverage across metros, large cities, towns, and rural areas, ensuring timely and high-quality service for customers. *This extensive network creates entry barriers for competitors attempting to penetrate WEL's target business verticals.* The presence of local franchisees plays a crucial role in reaching residential, commercial, and industrial consumers who often lack the technical expertise to understand complex products.

Exhibit 14: Key Operational Metrics

Particulars	FY21	FY22	FY23	FY24	Q1'FY25
1. No. of Customers Served					
India	1,381	716	566	836	1,067
Export	31	26	33	36	12
Total	1,412	742	599	872	1,079
2. Customer concentration					
Largest customer	14.07%	18.35%	15.95%	8.91%	18.23%
Top 5	30.61%	33.62%	52.14%	40.13%	48.56%
Top 10	40.09%	42.78%	65.90%	56.77%	58.41%
3. Retail Network*					
India	290	373	253	335	369
Retail Revenue	3,888	5,825	6,725	11,571	6,971

Source: Company, RHP

The company is focusing on partnering with franchisees that have a proven history of consistent sales, aligning with its long-term profitability and growth strategy.

Impetus on Backward Integration and Technology Upgradation

WEL is setting up a 5.4GW solar cells capacity to be operational by FY25 and 6GW fully integrated manufacturing facility for ingot, wafer, solar cell, and solar module production, with commercial operations likely in FY27E. This strategic consolidation of the production process is expected to significantly enhance operational efficiency and profitability, resulting in improved margins. Moreover, the expansion will reduce WEL's reliance on imported solar cells, particularly from China, positioning the company as a more self-reliant and competitive player in the global solar market.

The manufacturing process of solar cells, and subsequently solar modules is a complex process. The key steps involved in this process include:

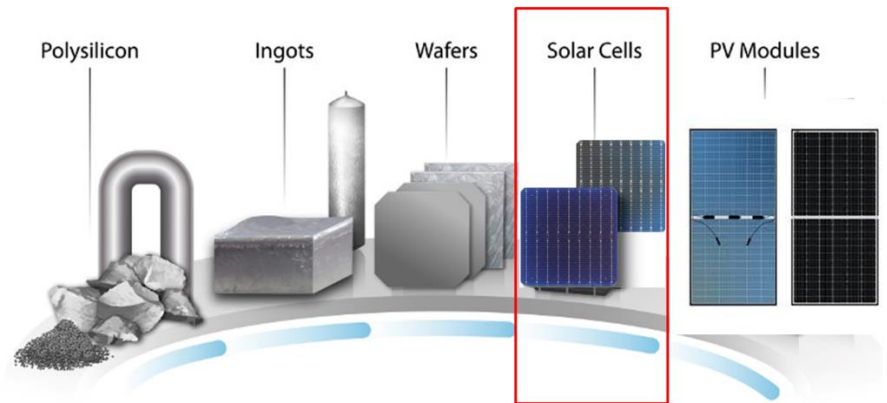
Exhibit 15: Backward integrated manufacturing facility illustration

Polysilicon Production: Starts from quartz as it has a lot of silicon in it. This sand is cleaned to get pure silicon, which is then mixed with special gases. Finally, this mixture turns into polysilicon, which looks like tiny rods or beads.

Ingot and Wafer Production: Polysilicon is turned into wafers by heating silica to form a liquid mass, followed by cooling to form large-grained silicon ingots. These are then sliced into very thin wafers.

Cell Manufacturing: Silicon wafers are then processed to create solar cells. This involves adding layers and treatments to enhance their ability to capture sunlight.

Module Manufacturing: Solar cells are then assembled into modules. This is where the individual cells are connected and encapsulated to form a complete solar module.



Source: Industry

Backward integration is crucial for domestic players like WEL to reduce dependency on China and become self-reliant, the dominant global supplier of raw materials such as wafers and solar cells. As China holds largest solar module manufacturing capacity worldwide and controls the entire value chain right from quartz until module production, many countries are adopting the China+1 strategy to diversify supply chains to lessen their dependence on a single source. This shift has gained importance amid geopolitical tensions and the supply chain disruptions witnessed during the COVID-19 pandemic, which exposed vulnerabilities in over-reliance on Chinese imports.

India, similarly, is heavily dependent on China for its solar manufacturing needs. By developing a fully integrated domestic facility, WEL can significantly reduce this reliance while gaining greater control over critical production processes. This would enhance operational efficiency, improve cost management, and foster more sustainable practices. WEL's strategy aligns with the Indian government's Make in India initiative, which promotes domestic manufacturing, job creation, and import reduction, particularly in vital sectors like renewable energy.

Exhibit 16: WEL aims to become fully integrated manufacturing company by FY27E

Particulars (GW)	Existing	Phase - 1 Ongoing	Phase -II (proposed)		Total
			Domestic	United States	
Solar PV Module	13.3	-	6	1.6 ¹	20.9
Solar Cell Capacity	-	5.4	6	- ²	11.4
Ingot-Wafer Capacity	-	-	6	-	6
Expected COD	-	FY25E	FY27E	FY25E	-

Source: Company, RHP

1. 1.6GW facility in the US could be expanded to 3GW capacity by FY26 and further to 5GW of capacity by FY27E depending on market situation and underlying opportunities.
2. The company may establish a 5GW solar cell manufacturing facility in the US facility by FY27E to supply solar cells for module production and qualify for incentives under the Inflation Reduction Act. The Board has approved a resolution for this expansion in the US. The company has not yet identified a site and has not completed a feasibility study.

WEL plans to gradually increase its manufacturing capacity throughout the value chain while optimizing the utilization of its production capabilities. By targeting a high utilization rate, the company seeks to continuously lower its unit production costs. With the commissioning of additional capacities, WEL anticipates achieving economies of scale and strengthening its presence in the global market.

Exhibit 17: WEL to focus on improving the capacity and utilization going forward

Facilities (GW)	FY22				FY23				FY24			
	Installed Capacity	Effective Capacity	Actual Production	Utilization	Installed Capacity	Effective Installed Capacity	Actual Production	Utilization	Installed Capacity	Effective Installed Capacity	Actual Production	Utilization
Surat Tumb Nandigram Chikhli	4	2.08	0.96	46.15%	9	6.50	2.63	40.46%	12	11.01	4.78	43.37%

Source: Company, RHP

Technological upgradation:

WEL places a strong emphasis on R&D to drive continuous innovation, ensuring cutting-edge technology and high-performance solutions in the solar energy sector. The company has consistently prioritized technological advancements, continually upgrading its products to meet the growing demand for high-efficiency solar modules. WEL is at the forefront of producing advanced modules, including HJT and TOPCon, leveraging the latest technology across all its facilities.

WEL’s product portfolio features a wide range of PV modules, such as Heterojunction (HJT), TopCon, Mono PERC, flexible and customizable modules, underscoring its commitment to innovation and delivering top-tier solar solutions.

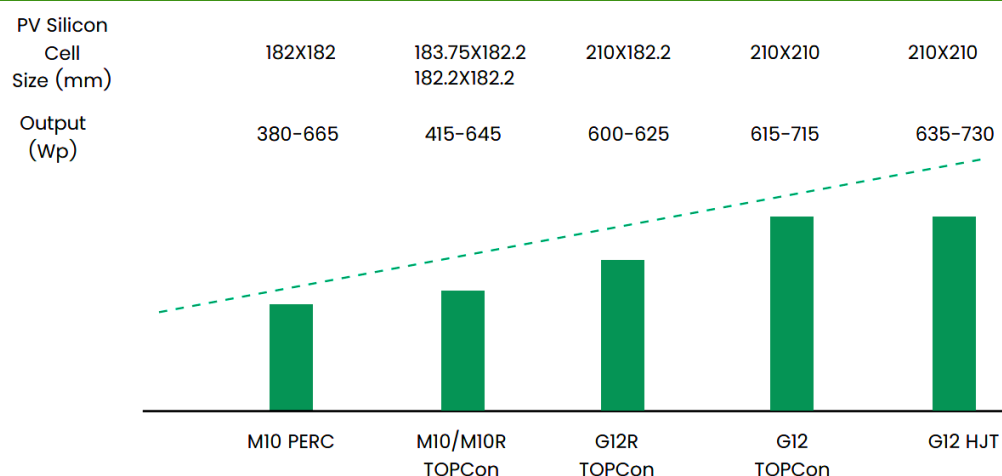
Exhibit 18: Types of solar panels

Module Type	% of Product Portfolio	Efficiency	Price Range
HJT Module	Up to 5%	22-23.5%	US\$ 0.17-0.24 per Watts
TOPCon Module	Around 80%	21-23%	
Mono PERC Module	15-20%	19-21%	

Source: Company, RHP

- WEL is focused on producing high-quality and high-efficiency solar modules. The company is making significant investments in R&D to stay at the forefront of technological innovation.
- WEL's module mix consists of around 80% high-efficiency TOPCon solar modules and 15-20% Mono PERC crystalline modules, and up to 5% HJT modules. The company plans to scale up HJT production based on market opportunities as HJT modules are priced higher compared to others.

Exhibit 19: Track record of consistently delivering higher efficiency module



Source: Company, RHP

Exciting Journey: From Solar to Green Hydrogen

1. Capacity Expansion

Exhibit 20: By FY27E WEL aims to become fully integrated manufacturing company

Particulars (GW)	Existing	Phase - 1 Ongoing	Phase -II (Proposed)		Total
			Domestic	United States	
Solar PV Module	13.3	-	6	1.6	20.9
Solar Cell Capacity	-	5.4	6	-	11.4
Ingot-Wafer Capacity	-	-	6	-	6
Expected COD	-	FY25E	FY27E	FY25E	-

Source: Company, RHP

- WEL is set to launch a 5.4GW fully integrated manufacturing facility at its Chikhli location, scheduled to become operational by Q3'FY25E. This state-of-the-art facility will produce solar cells and modules utilizing advanced PV technologies designed for high-efficiency, large-sized PV silicon wafers (M10, G12, G12R).
- The company has recently been awarded INR 19bn under the PLI Scheme by the Government of India. The company will be setting up a 6GW fully integrated manufacturing facility in Odisha, to produce ingots, wafers, solar cells, and PV modules. Commercial operations are expected by FY27E.

2. Expansion plan for the US market (Subsidiary Operations: Waaree Solar Americas Inc.)

- WEL aims to establish a 1.6GW module manufacturing facility in Houston, Texas, with potential expansions to 3GW by FY26 and further to 5GW by FY27E, depending on market conditions and opportunities. The company plans to further enhance its presence by developing a 5GW solar cell manufacturing facility by FY27E to supply solar cells for module production and *to qualify for incentives under the Inflation Reduction Act*. The site has not yet been identified and feasibility study is pending.
- The company intends to supply solar cells for modules manufactured in the US from either the Chikhli Facility, the proposed 6GW integrated facility or through other suppliers.
- Waaree Solar Americas Inc. has entered into a five-year binding agreement with a customer for supplying 3.75GW solar modules upon the commissioning of the US facility, currently proposed to be operational by FY25E. The customer will provide advances against future product supplies to support the facility's completion.

3. Go-to market strategies

- Domestic Market:** Strategically focusing on states with high growth potential for the rooftop business, including Delhi, Gujarat, Rajasthan, Maharashtra, Andhra Pradesh, Telangana, Karnataka, and Tamil Nadu. These states have high industrial and commercial loads, elevated distribution company tariffs, and established net/gross metering regulations, with favorable conditions for solar energy generation.
- International Market:** Plans to increase export sales and diversify revenue streams by targeting markets outside the US to minimize potential revenue risks.

The company aims to achieve an equal split between domestic and export market sales.

4. Green hydrogen

- WEL aims to expand its operations in the green energy sector through both organic and inorganic growth opportunities.
- WEL is in the planning phase to establish a Gigawatt-scale electrolyser manufacturing facility using suitable technology (preferably alkaline). Currently, the company is discussing technology partnerships with foreign electrolyser manufacturers for local production, with arrangements expected to be finalized in FY25E. The rollout of locally manufactured electrolyser is anticipated by the end of FY25E to facilitate the adoption of green hydrogen.
- Notably, WEL won the largest share of the 300MW electrolyser manufacturing capacity of PLI scheme. *The table below captures the allocated capacity of peers.*

Exhibit 21: Bucket 1 offered 1.1GW of electrolyser manufacturing capacity (PLI Tranche-II)

Bidder / Developer	Capacity Quoted (MW)	Type of Electrolyser	Allocated capacity (MW)
Waaree Energies	300	Alkaline	300
Matrix Gas and Renewables	237	Alkaline	237
Advait Infratech	200	Alkaline	200
Ohmium Operations	137	Proton Exchange Membrane	137
GH2 Solar	105	Alkaline	105
Newage Green Electro	300	Alkaline	71.5
Avaada Electrolyser	300	Alkaline	49.5
Total	1,579		1,100

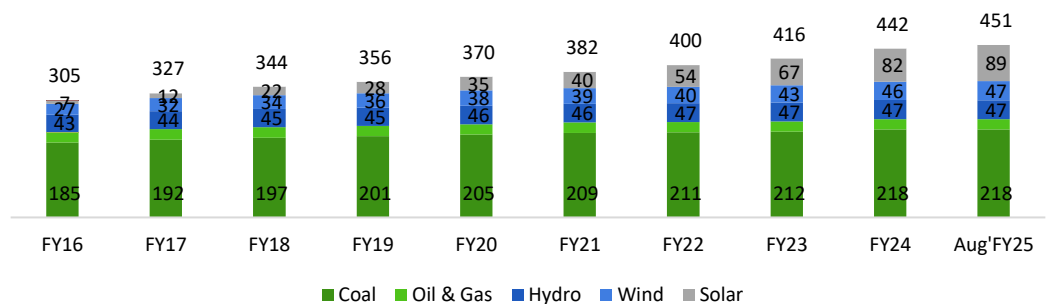
Source: Industry, MNCL Research

Industry Overview and Opportunity

India is the third-largest energy consumer globally. In FY24, the country expanded its installed power generation capacity to 442GW, reflecting a 6% YoY growth. According to CEEW-CEF, renewable energy (RE) sources accounted for 71% of the ~26GW of new power generation capacity added in FY24. Of the total installed capacity of 442GW, around 144GW (33%) came from RE, and about 47GW (11%) from hydro. **Coal and lignite share accounted for below 50% for the first time.**

Exhibit 22: RE accounts for over 40% of total installed capacity

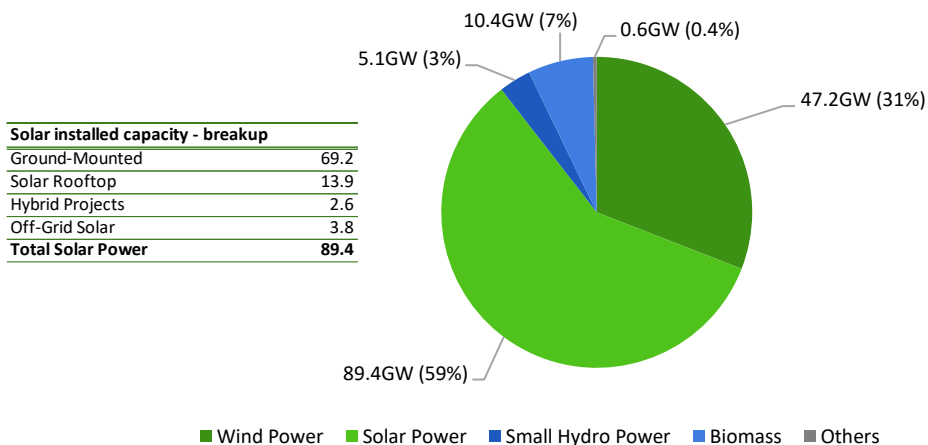
Indian installed capacity has grown at a CAGR of ~5% between FY16 and FY24. By 2030, India's peak power demand is expected to rise from the current 243GW to 366GW. To meet this growing demand, the country's installed capacity needs to increase significantly, from about 442GW today to 900GW, representing a CAGR of over 12% the forecasted period.



Source: Industry, MNCL Research

The renewable energy sector has seen remarkable growth, surging from 114GW in 2018 to 191GW as of Mar'24, driven by government initiatives, lower tariffs, and enhanced efficiency, underscoring the potential of renewables to sustainably meet India's increasing energy demand.

Exhibit 23: Installed RE capacity as on 31st Aug'24 excluding large hydro projects (GW)



Source: Industry, MNCL Research

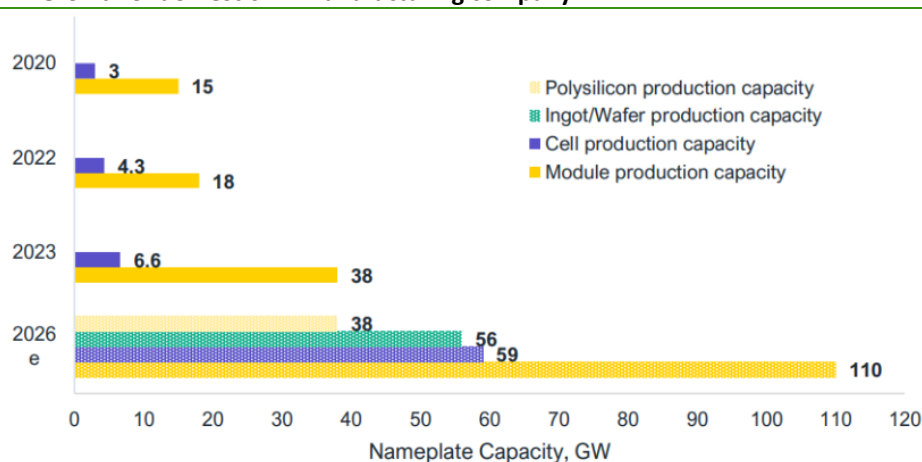
Solar installed capacity - breakup	
Ground-Mounted	69.2
Solar Rooftop	13.9
Hybrid Projects	2.6
Off-Grid Solar	3.8
Total Solar Power	89.4

As India strives to achieve its ambitious renewable energy targets, the following section delves into the key drivers, government schemes, and emerging trends that are shaping the country's solar energy revolution.

(I) Favorable policy reforms to boost solar energy landscape

Between 2020 and 2023, the nameplate capacity for both cells and modules more than doubled in India. By 2026, India will likely reach the 110GW mark in solar module manufacturing nameplate capacity. **India will also have a notable presence in all upstream components of PV manufacturing, such as cells, ingots/wafers and polysilicon.**

Exhibit 24: Growth of domestic PV manufacturing capacity



Source: Industry, MNCL Research

The PLI scheme is one of the primary catalysts spurring the growth of the entire PV manufacturing ecosystem in India. Besides the augmentation of infrastructure in all stages of PV manufacturing, from polysilicon to modules, it will also lead to the simultaneous development of an ancillary market. *Based on the result of both tranches of PLI, the scheme will lead to the direct augmentation of 51.6GW of module capacity and at least 27.4GW of integrated polysilicon-to-module capacity in India.*

(II) Government schemes supporting the solar energy revolution:

Government initiatives, such as PM-KUSUM, Rooftop Phase-II, and Atmanirbhar Bharat, highlight India's commitment to promoting green energy. Supportive policies, including subsidies, PLI schemes, and customs duty exemptions on solar components, are actively attracting investment and propelling growth in the renewable energy sector.

Production Linked Incentive (PLI) Scheme for solar modules

- Launched in 2021, the PLI Scheme aims to enhance domestic manufacturing of high-efficiency solar PV modules, reduce import dependence, and promote job creation.
- The total allocation for the PLI Scheme is INR 240bn, divided into two tranches:
 - Tranche-I: INR 45bn, targeting around 9GW of capacity.
 - Tranche-II: INR 195bn, expanding the total domestic manufacturing capacity to 48GW.

WEL is expected to receive INR 19bn of incentive over a five-year period for the 6GW integrated facility that they are going to establish.

National Solar Mission

- Launched in 2010, the National Solar Mission aims to promote solar energy and has been revised to target 300GW by 2030. The total budget for the NSM has significantly increased over the years. For FY25, the allocation for solar projects is ~INR 100bn, reflecting a 110% rise from the revised estimate of INR 47bn.
- To encourage solar adoption, the government has introduced various incentives and subsidies, including the Grid-Connected Rooftop Solar Scheme, promoting rooftop solar installations across residential, commercial, and institutional sectors. Recently, the PM Surya Ghar: Muft Bijli

India's Bold Climate Commitments: Key Targets from COP26

- Increase non-fossil energy capacity to 500GW by 2030.
- Source 50% of energy from renewables by 2030.
- Reduce carbon emissions by 1 billion tonnes by 2030.
- Lower carbon intensity by over 45% by 2030.
- Achieve net zero emissions by 2070.

Yojna was launched in FY24, with a proposed outlay of INR 750bn, aiming to provide up to 300 units of free electricity per month to 10mn households.

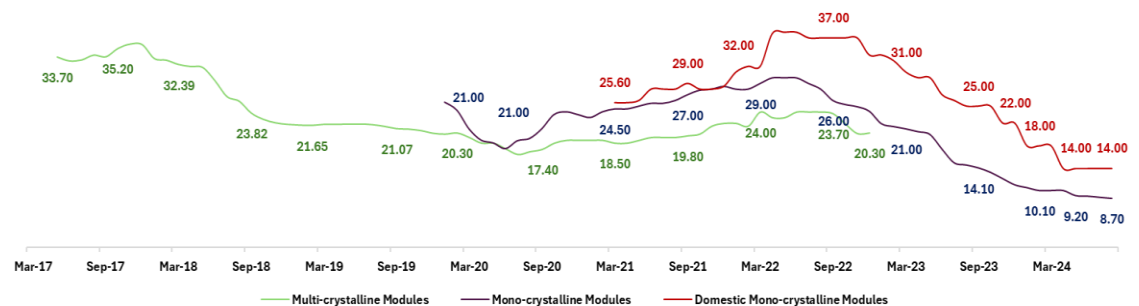
- **Approved List of Manufacturers and Models (ALMM) for solar modules and cells**
 - The ALMM list restricts the use of solar modules in certain projects to approved domestic manufacturers, aiming to reduce India’s reliance on imports, primarily from China and Vietnam. This initiative supports India in meeting its renewable energy targets by boosting the availability of modules and revitalizing stalled projects.
 - The ALMM circular includes 90 module manufacturers with a combined capacity of 56.5GW.
- **Basic Custom Duty (BCD)**
 - India’s basic customs duty (BCD) for solar imports is 40% on solar modules and 25% on solar cells
 - The government introduced these duties in April 2022 to reduce imports and promote local manufacturing. The goal is to make India a leading global supplier of solar components, while also meeting the country’s domestic needs.

India introduced a safeguard duty (SGD) in 2018, while the U.S. instated anti-dumping duty (ADD) on Chinese PV imports. More recently, the U.S. issued its Inflation Reduction Act (IRA), which provides an extensive production-linked incentive plan to support PV manufacturing.

(III) Falling module and cell prices set to boost global solar capacity

The significant reduction in solar module prices has been a major growth driver in the renewable energy sector. From US\$ 1.78 per watt peak in 2010, prices plummeted to US\$ 0.22 by the end of 2019 due to technological advancements, scale benefits, and a demand-supply gap in global manufacturing. This trend continued with prices reaching US\$ 0.15-0.20 per watt-peak by late 2023, easing capital costs. Declining inverter prices further reduced system costs.

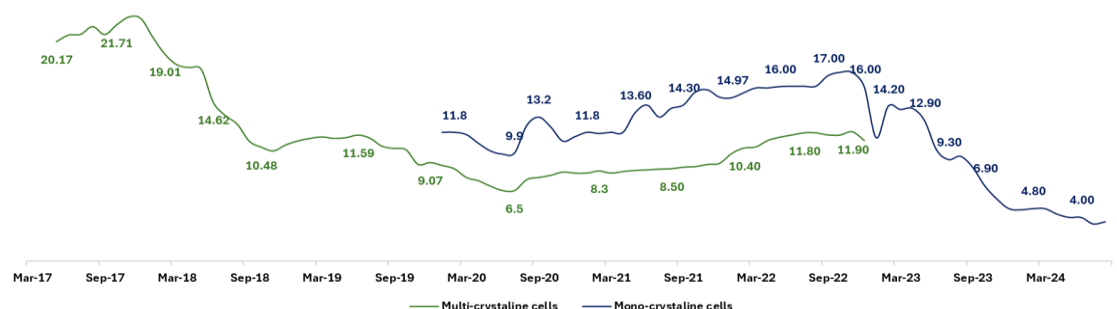
Exhibit 25: Declining solar modules prices: a catalyst for global solar infrastructure expansion (US\$)



Source: Industry, MNCL Research

As solar module prices stabilize in the near to short term, the renewable energy sector is likely to experience sustained cost-efficiency, fostering continued growth and investment. This stabilization will offer more predictability in project planning, contributing to long-term market confidence.

Exhibit 26: Falling solar cell prices accelerate feasibility of energy transition (US\$)



Source: Industry, MNCL Research

(IV) Green Hydrogen and Solar Capacity Expansion

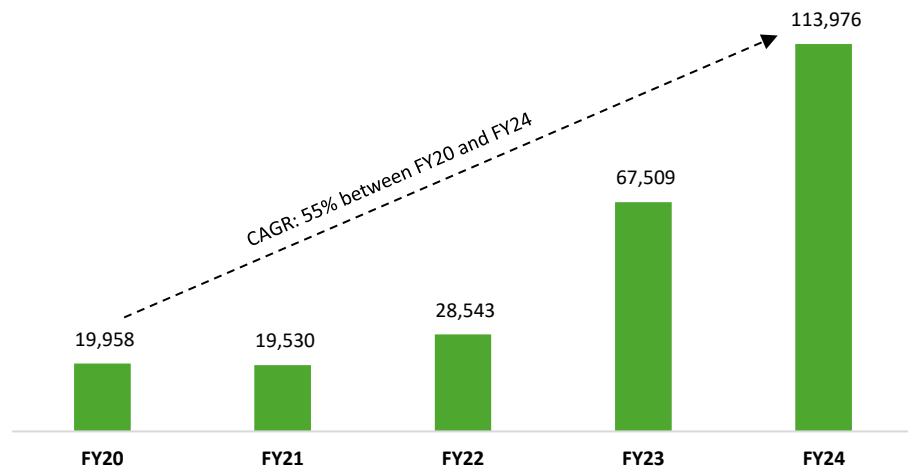
The production of green hydrogen is expected to gain significant momentum, with the government targeting 5MT by 2030. To support this goal, a substantial expansion in solar capacity is anticipated.

Highlights of National Green Hydrogen Mission

- Launched in 2023, the National Green Hydrogen Mission aims to make India a hub for green hydrogen production and export. The mission targets an annual production of 5MT of green hydrogen by 2030, with a focus on reducing carbon emissions and fostering clean energy technologies.
- The government has allocated c.US\$ 2.4bn to develop the entire green hydrogen value chain, including production, storage, and infrastructure.
- To meet the production targets, **India plans to significantly expand its renewable energy capacity, particularly solar and wind power, which are essential for producing green hydrogen through electrolysis.** By FY29, an additional 34-38 GW of solar capacity is expected to be commissioned specifically to support green hydrogen production, aiming to produce 2-2.5MT in the initial phase.

Financial Analysis

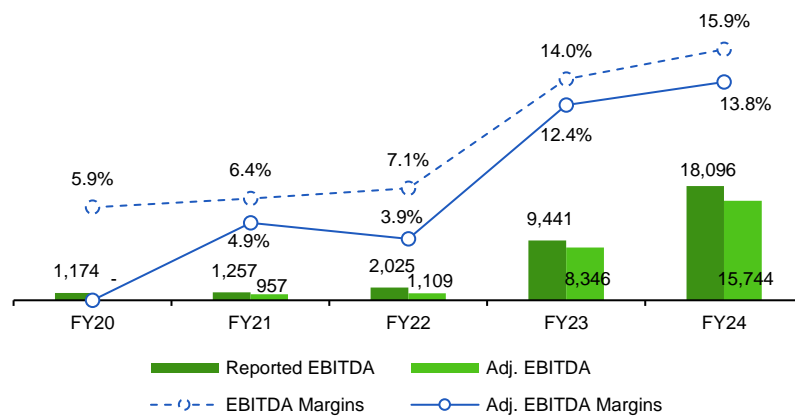
Exhibit 27: Revenue from Operations (INR mn)



Source: Company, RHP

WEL revenue grew at a CAGR of over 55% between FY20-24, driven by over 6x increase in installed capacity, robust policy support and global clean energy initiatives. WEL meets the rising demand in the domestic market and stands as one of the largest players in the industry. Exports are also gaining momentum, with WEL capturing a 44% share of India's export market, particularly in key regions like the USA. The company has commissioned and operationalized a 13.3GW module manufacturing facility across its various factories and is set to expand its capacity further, along with backward integration to enhance cost savings and manufacturing efficiency. WEL's increased capacity is well-positioned to meet substantial domestic and export orders in the future.

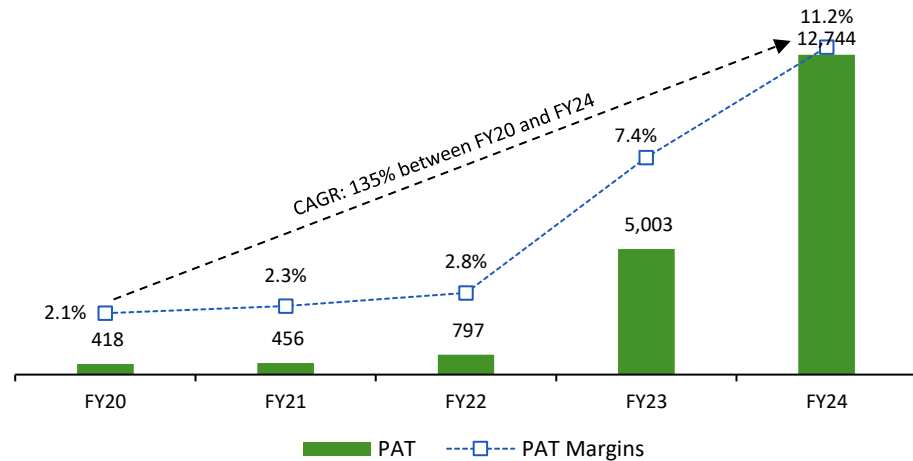
Exhibit 28: EBITDA (INR mn) and EBITDA margin (%)



Source: Company, RHP. Adjusted EBITDA excludes Other Income and Exception items G/L

EBITDA grew at a CAGR of 143% between FY21 and FY24 (Adj. EBITDA grew at a CAGR of 154% between FY21 and FY24). The margins improvement is the result of continuous improvement across operational processes and capabilities. WEL faces the risk of fluctuating raw material which it mitigates through pass-through clauses in most orders and order-backed procurement strategies, ensuring that any raw material price hikes are effectively transferred to customers.

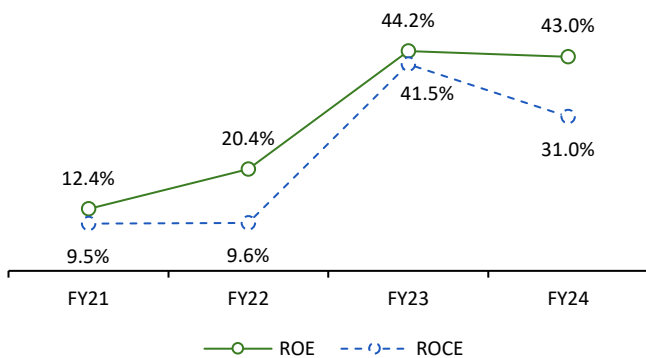
Exhibit 29: PAT (INR mn) and PAT margin (%)



Source: Company, RHP

The PAT increased at a CAGR of 135% between FY20 and FY24 driven by continuous improvement across operational processes and capabilities. Note that FY24 PAT includes order cancellation fees of INR 3.4bn. Even after excluding the exceptional item, PAT grew at a CAGR of 117%.

Exhibit 30: WEL superior return ratios



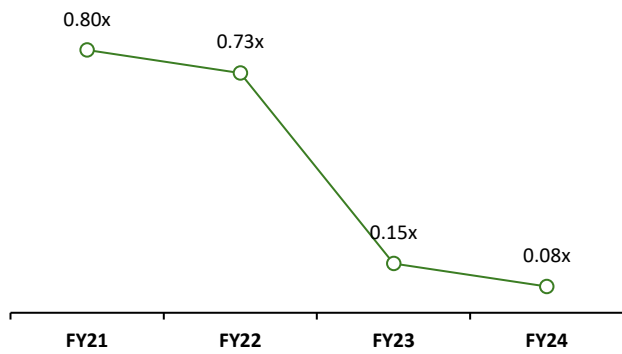
Source: Company, RHP

Exhibit 31: WEL's superior return profile vis-à-vis peers

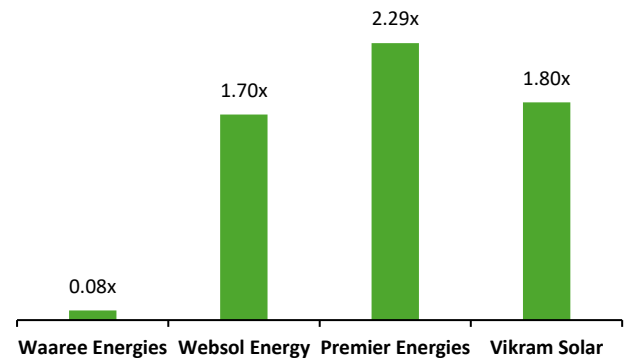
Company Name	RoE (%)	RoCE (%)
Waaree Energies	43.0%	31%
Premier Energies	36.0%	25%
Vikram Solar	18.0%	23%

Source: Company, RHP

FY24 calculated ROE and ROCE at 43.0% and 31.0% respectively are amongst the best when compared to its peers. Adjusting for exceptional gains of INR 3.4bn in FY24, calculated ROE at 31.5% still remains best amongst its peers.

Exhibit 32: WEL Debt-to-Equity (D/E)


Source: Company, RHP

Exhibit 33: WEL has lower D/E vis-à-vis peers


Source: Company, RHP

In a sector characterized by a huge capex, WEL has been a standout player with limited debt, which reflects its superior capital allocation strategy through internal accruals and limited equity dilution. WEL's debt-to-equity at 0.8x is significantly lower to Vikram Solar D/E at 1.8x, Websol Energy at 1.7x and Premier Energies at 2.3x as of FY24

Opportunities for Waaree Energies Limited

Domestic market offers significant opportunities for WEL, as India actively promotes locally manufactured modules over cheaper imports from China. In response, several domestic players are expanding their production capacity to capture a share of this growing market. WEL is at the forefront, with over 13.3GW capacity and a well-established ecosystem that includes forward integration into EPC services. The company is also developing backward integration to strengthen its market leadership and maintain its competitive edge.

Opportunities in the domestic market:

- India was the only country to see a large fall in imports from China. Module exports to India declined by 76% (-7.5GW) YoY, down from 9.8GW in the H1'22 to 2.3 GW in H1'23.
- The Approved List of Models and Manufacturers (ALMM) was introduced by the Indian government to promote domestic manufacturing of high-quality solar modules and reduce dependency on imports, particularly from China. Its key objectives include ensuring product reliability, supporting the Make in India initiative, and advancing India's renewable energy goals. **The total capacity under the ALMM stands at 56.5GW, with WEL contributing over 21% of that capacity. This underscores WEL's leading position in India's domestic solar manufacturing sector.**
- The government had imposed a basic customs duty of 40% on solar modules and 25% on solar cells, which came into effect in April 2022.

Exhibit 34: Domestic Price is Competitive against China (WEL Avg. Price US\$ 17-24 Cents)

Years	Avg. Import Price (US\$/W)	BCD	Effective Price (US\$/W)
2017	0.24	-	-
2018	0.26	-	-
2019	0.27	-	-
2020	0.21	-	-
2021	0.24	-	-
2022	0.26	40%	0.36
2023	0.18	40%	0.25
2024	0.12	40%	0.17

Source: Industry (Ember Data), MNCL Research

With many countries ramping up their renewable energy efforts, global demand for solar modules is rising. WEL is set to capitalize on this trend, particularly in regions seeking alternatives to Chinese modules due to tariffs and trade restrictions.

Opportunities from the export market

- India's solar module exports reached US\$ 2.0bn in FY24, up 90% YoY. The USA accounted for 98.5% of exports (US\$ 1.9bn), while South Africa imported US\$ 4.7mn. **(US Market Access is a huge plus for players like WEL as the increasing emphasis on renewable energy in the USA opens further growth potential.)**
- India faces challenges in cost-competitive solar cell production, but higher tariffs on Chinese solar modules in many countries have opened new markets. Further, to strengthen domestic production, the government introduced the ALMM on April 1, 2024, prioritizing locally made panels for government projects and export opportunities.

WEL strategy is to stay away from markets dominated by Chinese players hence it focuses mainly on US market although now trying to diversify to other markets too.

WEL's vis-à-vis its domestic and global peers

WEL demonstrates notable strength, with a high 3-year revenue CAGR of 80%, significantly outperforming its peers. The company delivered operating margins of 13.8% and a PAT margin of 11.2%, better than most peers. Additionally, WEL's low debt-to-equity ratio of 0.08x signals financial stability compared to peers.

Exhibit 35: Peer Benchmarking: WEL is placed strongly vs. peers

Company	Country of Operation	Market cap	Module Capacity (GW)	Total Revenue	Revenue 3Y CAGR (%)	EBITDA	3Y EBIDTA CAGR (%)	EBIDTA margins (%)	PAT	PAT margin (%)	Debt-to-Equity (x)
(FY24, INR mn)											
Waaree Energies	India	n.a.	13.3	113,976	80.0%	15,744	154.3%	13.8%	12,744	11.2%	0.08x
Vikram solar	India	n.a.	4	25,240	16.0%	3,986	31.8%	15.9%	797	3.2%	1.92x
Premier Energy	India	511,110	4	31,438	64.9%	4,778	106.8%	15.2%	2,314	7.4%	2.17x
(CY23, US\$ mn)											
Trina Solar	China	6,748	95	14,810	56.8%	1,843	57.4%	11.5%	783	4.9%	0.93x
JA Solar	China	6,390	40	10,808	46.7%	1,546	36.8%	13.4%	1,018	8.8%	0.48x
Canadian Solar*	China	891	57	7,613	29.9%	827	27.0%	10.9%	274	3.6%	1.41x

Note: * Canadian Solar is incorporated in Canada but manufacturing operations are based in China

Source: Company, Industry, MNCL Research

- WEL's order book currently stands at 19.9GW; the company has strategically negotiated contracts to ensure favorable terms that protect its profitability.
- The company's profitability is further supported by its backward integration initiatives. These efforts are strategically aimed at achieving cost efficiencies and enhancing production capabilities, which are expected to drive margin expansion. **WEL is well-positioned to strengthen its market leadership and capitalize on growth opportunities both domestically and internationally.**

Exhibit 36: Existing and Upcoming capacity

Company	Operational Capacity (as on June-24)	Under Construction Capacity	Enlisted Capacity as per ALMM List (Sep-24)	Market Share (%) as per ALMM List Sep-24
Waaree Energies	13.3 GW modules	6 GW Modules, 5.4 GW Cells	11,919 MW	21.1%
Vikram Solar	3.5 GW modules	Proposed 6 GW modules, 6 GW cells, 6 GW Ingot-Wafer capacity	2,250 MW	7.72%
Adani Solar	4 GW cells and modules	Proposed 7 GW Module and 3 GW integrated cells & modules	4,067 MW	6.8%
Mundra Solar PV	4.1 GW modules, 2 GW Cells	10 GW cell and module	2,561 MW	4.5%
Premier Energies	550 MW Module	1 GW modules, 1 GW cells	NA	NA
Websol Energy Systems	1.8 GW Cells	1.2 GW Cells, 2 GW Modules	1,636 MW	2.9%
RenewSys India	2.75 GW modules, ~0.1 GW cells	~1.9 GW	2,692 MW	4.8%
Emmvee Photovoltaic	3.5 GW modules	1.75 GW including 1.5 GW wafer-to-module capacity	248 MW	0.4%
Alpex Solar	848 MW modules	300 MW	NA	NA

Source: Company, RHP

Fundraising Journey and IPO Details

WEL has historically scaled its balance sheet through internal accruals and equity thereby avoiding excessive leverage. Between FY22 and FY24, WEL invested ~INR 18bn towards capex (incl. CWIP) to meet its expansion plans and witnessed over 5x increase in total assets to INR 113bn. This capex and scale up in the balance sheet were funded through internal accruals, improved working capital cycle and equity raise. WEL has raised cumulative ~INR 20.4bn via equity issuance over FY23-24.

The current IPO aims to raise INR 36bn through a combination of a fresh issue of shares and an offer for sale (OFS) of up to 4.8mn shares.

Exhibit 37: Offer for Sale worth 4.8mn shares

Selling Shareholders	No. of Shares
Waaree Sustainable Finance Private Limited	4,350,000
Chandurkar Investment Private Limited	450,000

Source: Company, RHP

Primary Objective of the IPO:

- Part finance the cost of establishing the 6GW of Ingot Wafer, Solar Cell and Solar PV Module manufacturing facility in Odisha, India. This equity investment complements the PLI Tranche II grant of INR 19bn awarded by the Government of India, demonstrating the government's commitment to boosting domestic solar manufacturing.

Exhibit 38: Deployment of IPO proceeds for 6GW integrated facility

Particulars	INR bn
Estimated Cost of project	90.50
Amount already invested as of Aug'24	1.47
Utilisation of IPO proceeds	27.75
Proceeds from existing identifiable internal accruals	6.10
Project Loan	55.18

Source: Company, RHP

- INR 27.75bn will be utilized over the next three years - *INR 2.75bn by FY25E, INR 20bn by FY26E, and INR 5bn by FY27E.*
- The company has already made preliminary investments in land acquisition and administrative expenses using its internal accruals, laying a solid foundation for the new facility.
- To meet the remaining funding requirements, the company has secured a sanction letter from State Bank of India (SBI) for a project loan, ensuring a structured financial approach to support the timely execution of the new project.

Company Evolution and Management Overview

Over the years, WEL has expanded its offerings across the solar value chain, including the production of high-efficiency solar modules, EPC services, and project development. WEL's achievements are largely driven by the extensive two-decade experience of its promoters in the global solar energy industry, which has played a crucial role in WEL's ascent to a leading position in the market.

Exhibit 39: WEL evolution

Year	Milestones
2007	Embarked on the solar journey with a 30MW module manufacturing line
2014	Partnered with NEEPCO to bring solar power to Sehore, Madhya Pradesh
2017	Secured ownership of Waaneep Solar in the independent power producer (IPP) segment, paving the way for a fully integrated company
2018	- Enhanced production capabilities with a 1GW solar PV modules plant - Strategically divested Waaneep Solar to focus on core strengths
2019	Commissioned the 49.5MWp Song Giang solar power project in Vietnam,
2021-22	Acquired Indosolar
2023	- Scaled capacity to 12GW - Awarded PLI for a 6GW integrated ingots, wafer, cell, module manufacturing facility - Successfully raised equity, cumulatively exceeding INR 20bn, over two consecutive years - Filed a DRHP for a INR 30bn IPO
2024	- Secured 300MW capacity for Electrolyser Manufacturing under PLI tender - Commissioned 1.3GW solar module capacity at the Indo Solar facility - Announced the upcoming 1.6GW module manufacturing facility in the US

Source: Company, RHP. The resolution plan for Indosolar Ltd, submitted by Waaree under the Corporate Insolvency Resolution Process (CIRP) was approved by NCLT on April 21, 2022.

Board of Directors Overview:

- **Hitesh Chimanlal Doshi (Chairman and Managing Director):** He holds a bachelor's degree in commerce from the University of Mumbai and a doctorate in professional entrepreneurship from European Continental University. With over 22 years of experience in engineering, he oversees financial performance, investments, and strategic direction.
- **Hitesh Pranjivan Mehta (Whole-time Director):** He holds a commerce degree from the University of Bombay and is a member of the ICAI. With over 23 years of experience in engineering, solar, and oil industries, he leads the company's strategic planning. He was previously a director at Waaree Instruments Limited.
- **Viren Chimanlal Doshi (Whole-time Director):** He completed higher secondary education from the Maharashtra State Board. He manages engineering, procurement, and construction of solar projects, bringing over 15 years of experience in the engineering sector.
- **Richa Manoj Goyal (Independent Director):** She has degrees in commerce from H.A. Commerce College and law from Gujarat University. She is a practicing company secretary and certified trademarks agent and is the managing partner at Richa Goyal and Associates.
- **Jayesh Dhirajlal Shah (Independent Director):** He holds a commerce degree from the University of Mumbai. With over 34 years in taxation, audit, and project finance, he is the founding partner of J.D. Shah Associates.
- **Rajender Mohan Malla (Independent Director):** He holds a bachelor's degree in commerce and a master's in business administration from the University of Delhi. He is a certified associate of the Indian Institute of Bankers and has served as a director at various financial institutions.
- **Sujit Kumar Varma (Independent Director):** He holds a bachelor's degree in arts from Ranchi University. He has over 35 years in banking, serving in key roles at the State Bank of India, including deputy managing director and CEO positions in international branches.
- **Dr. Arvind Ananthanarayanan (Non-Executive Director):** He holds a PhD in Physics from the BARC-Mumbai University collaboration, along with bachelor's and master's degrees in physics specializing in Materials Science and Engineering. He brings a robust academic background and research expertise to Waaree's board

Appendix 1: Financials

Exhibit 40: Consolidated Income Statement

Particulars (INR mn)	FY21	FY22	FY23	FY24	Q1'FY25
Revenue from operations	19,530	28,543	67,509	113,976	34,089
Cost of materials consumed	16,739	22,531	61,580	93,218	20,028
Changes in inventories	(731)	636	(10,069)	(5,620)	5,103
Gross Profit	3,522	5,376	15,998	26,378	8,958
<i>Gross Margin</i>	<i>18.03%</i>	<i>18.83%</i>	<i>23.70%</i>	<i>23.14%</i>	<i>26.27%</i>
Employee benefits expense	481	569	1,238	1,772	633
Other expense	2,084	3,697	6,414	8,862	2,800
EBITDA	957	1,109	8,346	15,744	5,524
<i>EBITDA Margin</i>	<i>4.90%</i>	<i>3.89%</i>	<i>12.36%</i>	<i>13.81%</i>	<i>16.20%</i>
Depreciation & amortization	323	433	1,641	2,768	758
EBIT	635	677	6,705	12,976	4,767
<i>EBIT Margin</i>	<i>3.25%</i>	<i>2.37%</i>	<i>9.93%</i>	<i>11.38%</i>	<i>13.98%</i>
Other Income	300	916	1,095	2,352	875
Finance costs	309	409	823	1,399	337
Exceptional Items	41	-	(206)	3,413	-
PBT	665	1,184	6,772	17,342	5,305
Tax expenses	209	387	1,769	4,598	1,294
PAT	456	797	5,003	12,744	4,011
<i>PAT Margin</i>	<i>2.34%</i>	<i>2.79%</i>	<i>7.41%</i>	<i>11.18%</i>	<i>11.77%</i>
Diluted EPS	2.4	3.8	21.6	47.9	14.93

Source: Company, RHP

Exhibit 41: Common-size Income Statement

Particulars (INR mn)	FY21	FY22	FY23	FY24	Q1'FY25
Revenue from operations	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of materials consumed	85.7%	78.9%	91.2%	81.8%	58.8%
Changes in inventories	-3.7%	2.2%	-14.9%	-4.9%	15.0%
Gross Profit	18.0%	18.8%	23.7%	23.1%	26.3%
Employee benefits expense	2.5%	2.0%	1.8%	1.6%	1.9%
Other expense	10.7%	13.0%	9.5%	7.8%	8.2%
EBITDA	4.9%	3.9%	12.4%	13.8%	16.2%
Depreciation & amortization	1.7%	1.5%	2.4%	2.4%	2.2%
EBIT	3.3%	2.4%	9.9%	11.4%	14.0%
Other Income	1.5%	3.2%	1.6%	2.1%	2.6%
Finance costs	1.6%	1.4%	1.2%	1.2%	1.0%
Exceptional Items	0.2%	0.0%	-0.3%	3.0%	-
PBT	3.4%	4.1%	10.0%	15.2%	15.6%
Tax expenses	1.1%	1.4%	2.6%	4.0%	3.8%
PAT	2.3%	2.8%	7.4%	11.2%	11.8%

Source: Company, RHP

Operational efficiency and scale benefit on back of increased capacity have contributed to improved margin profile.

Exhibit 42: Consolidated Balance Sheet

Particulars (INR mn)	FY21	FY22	FY23	FY24
Property, plant, and equipment	2,321	5,648	9,912	11,494
Capital work-in-progress	12	1,227	5,370	13,413
Right of use assets	481	465	1,002	2,870
Investment property	3	3	3	3
Intangible assets	77	77	73	69
Goodwill on consolidation	70	63	63	63
Financial assets	1,265	560	1,673	1,140
Deferred tax assets	38	180	143	832
Income tax assets (net)	33	15	1	1
Other non-current assets	929	694	1,129	3,121
Total non-current assets	5,228	8,932	19,370	33,006
Inventories	3,680	5,382	27,089	25,855
Trade receivables	1,182	925	3,126	9,714
Cash and cash equivalents	128	1,392	2,537	1,214
Bank balances	974	2,272	14,828	36,578
Financial assets	1,062	1,948	982	1,722
Other current assets	677	1,523	6,268	5,048
Total current assets	7,703	13,442	54,829	80,131
Total Assets	12,932	22,374	74,199	113,137
Equity share capital	1,971	1,971	2,434	2,630
Other Equity	1,956	2,427	16,185	38,855
Total Equity	3,927	4,399	18,619	41,485
Borrowings	1,888	1,890	1,458	1,026
Lease liabilities	444	427	381	2,075
Other financial liabilities	-	-	-	513
Long-term provisions	326	414	693	1,081
Deferred tax liabilities (net)	88	264	479	371
Other non-current liabilities	14	4	3,277	12,355
Total non-current liabilities	2,759	2,999	6,288	17,421
Borrowings	924	1,241	1,277	2,147
Lease liabilities	59	76	87	286
Trade payables	3,572	5,348	14,316	14,752
Other financial liabilities	977	1,458	8,844	10,479
Provisions	2	16	279	2,245
Other current liabilities	578	6,639	23,635	21,424
Current tax liabilities (net)	133	197	854	2,898
Total current liabilities	6,245	14,976	49,292	54,231
Total equity and liabilities	12,932	22,374	74,199	113,137

Source: Company, RHP

Exhibit 43: Cash Flow Statement

Particulars (INR mn)	FY21	FY22	FY23	FY24
Cash flow from operating activities	717	7,009	15,602	23,050
Cash flow from investing activities	(2,502)	(6,749)	(20,938)	(33,403)
Free cash flows	(1,262)	2,044	6,948	9,627
Cash flow from financing activities	1,573	985	6,425	9,092
Net Change	(212)	1,245	1,089	(1,260)
Beginning Cash and cash equivalents	339	128	1,392	2,537
Ending Cash and cash equivalents	128	1,392	2,537	1,214

Source: Company, RHP

Exhibit 44: Key Ratios

Particulars (INR mn)	FY21	FY22	FY23	FY24
Growth %				
Operating Revenue	-	46.1%	136.5%	68.8%
EBITDA	-	15.9%	652.3%	88.6%
EBIT	-	6.7%	890.8%	93.5%
PAT	-	74.7%	528.1%	154.7%
Margins %				
EBITDA	4.9%	3.9%	12.4%	13.8%
EBIT	3.2%	2.4%	9.9%	11.4%
PAT	2.3%	2.8%	7.4%	11.2%
Debt to Equity				
	0.80x	0.73x	0.15x	0.08x
Fixed Assets Turnover Ratio				
	6.6x	6.2x	7.8x	8.9x
DUPONT ANALYSIS				
Profit-to-sales	2.3%	2.8%	7.4%	11.2%
Sales-to-assets	1.5x	1.6x	1.4x	1.2x
Assets-to-equity	3.3x	4.2x	4.2x	3.1x
ROAE	12.4%	20.4%	44.2%	43.0%
ROACE	9.5%	9.6%	41.5%	31.0%
Working Capital Days				
Days of Inventory	70	71	115	110
Days of Receivables	24	13	11	21
Days of payables	84	81	70	61
Cash Conversion Cycle	10	4	56	70
CFO/EBITDA				
	0.7x	6.3x	1.9x	1.5x

Source: Company, RHP

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