TATA POWER

TATA

The Tata Power Company Limited (TPCL)

ANALYST MEET 2023

28 NOVEMBER 2023

Powering India Today and Tomorrow

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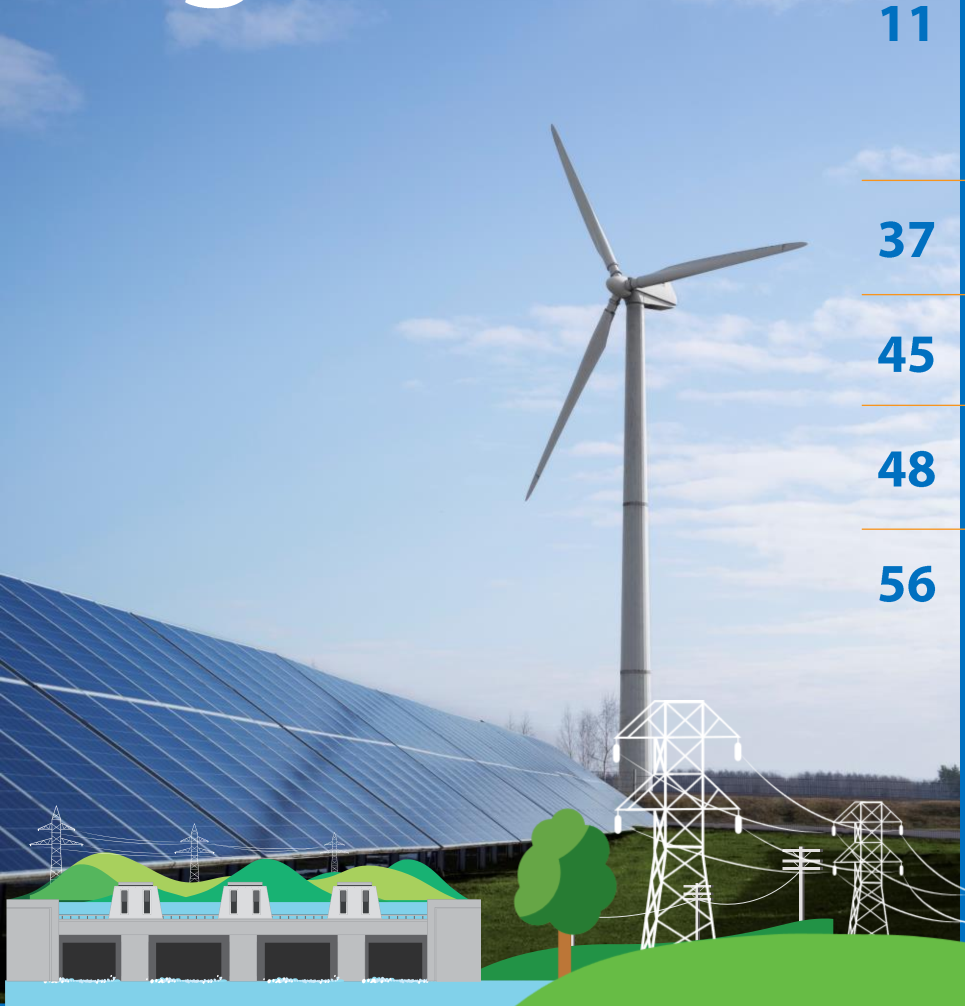
Agenda



The Tata Power story

TATA

India's largest vertically-integrated power company

9,281 MW
Clean & Green Energy
(Including 3,760MW in pipeline)

8,860 MW
Thermal energy generation
(Installed capacity)

5,713 Ckm
Transmission capacity
(Including 1,330Ckm in pipeline)

12.4 Mn
Total distribution customers served

2.8 GW
MoU signed for Pumped Hydro Project (PSP)

>₹18,700 Cr
Solar EPC order book- Large Scale Utility, Group Captive and Rooftop EPC

~4.9 GW
Manufacturing capacity including 4.3GW each of Cell & Module operational/under construction

>11.5 GW
EPC large projects executed and under pipeline

>4,900
Public EV charging points energised across 442 cities and towns

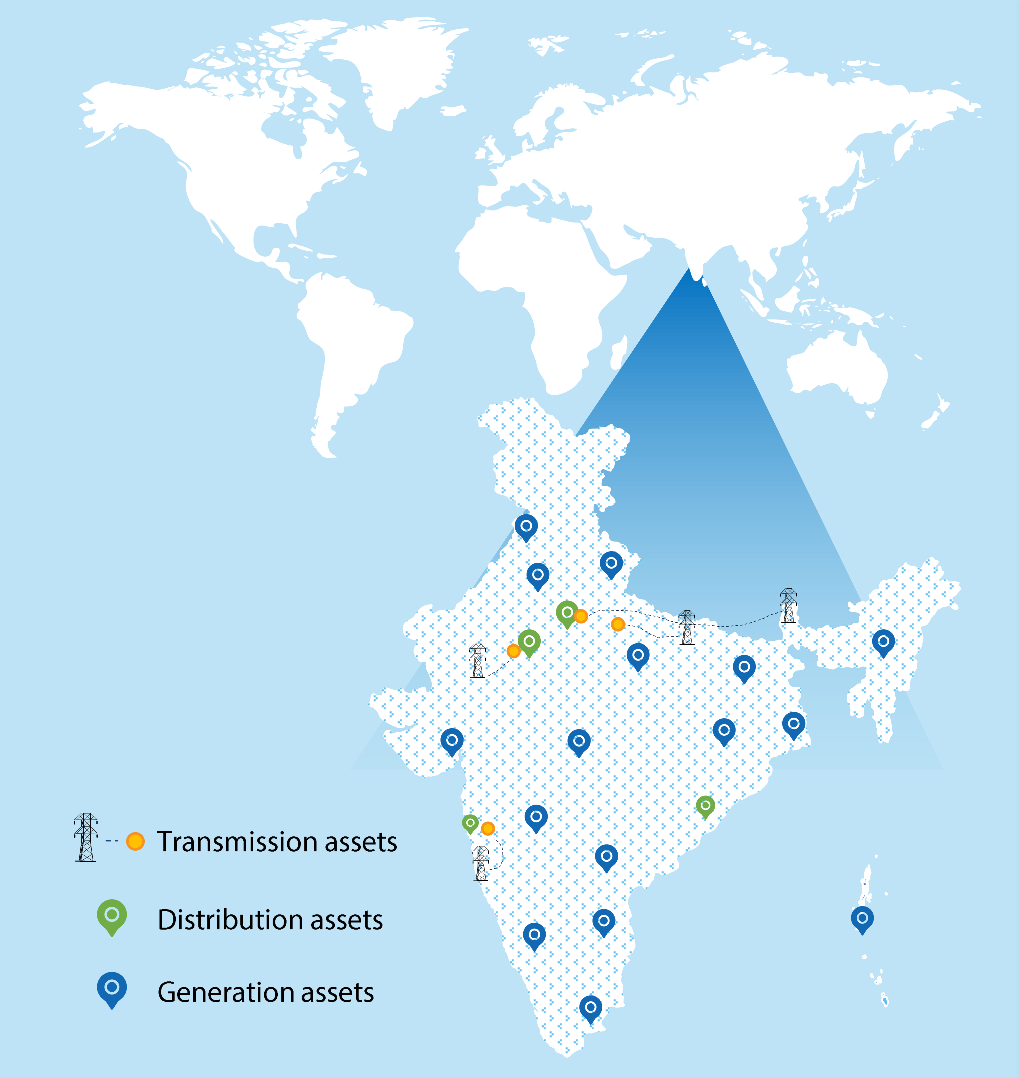
New-age Energy Solutions

Generation

Renewables

Transmission and Distribution

Assets spread across India…



Capacity Mix (Domestic + International)

8,860 MW Thermal

1,007 MW Wind

880 MW Hydro

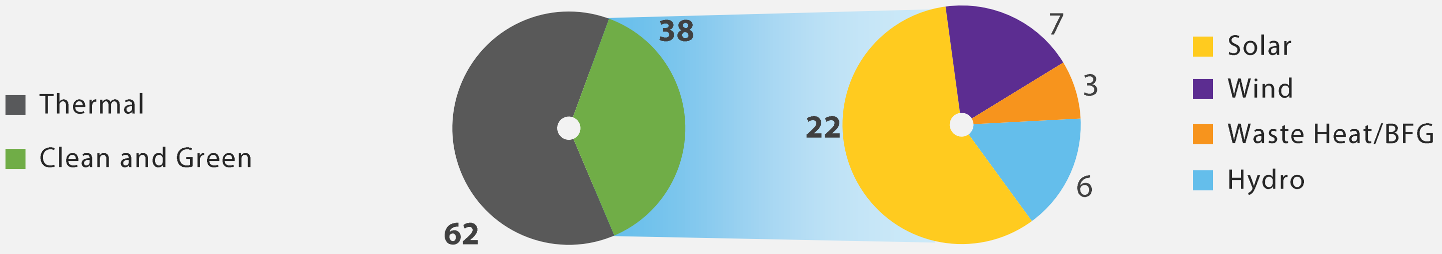
14,381 MW Total

443 MW Waste Heat Recovery /BFG

3,191 MW Solar

3,760 MW Renewable capacity under construction

Distribution of installed capacity (Domestic & International) (%)



Transmission and Distribution

12.4 Mn Customers in Distribution

4,383 Ckm Transmission

906 Ckm Transmission pipeline under construction

424 Ckm L1 (lowest) bidder

… as well as a few Global locations

Georgia, Adiaristsgali

187 MW Installed capacity | 50% TPCL stake

Bhutan, Dagachhu

126 MW Installed capacity | 26% TPCL stake

Zambia, Itezhi Tezhi (ITPC)

120 MW Installed capacity | 50% TPCL stake

Indonesia Coal Mines

78 MT Total Capacity

Coal mines	Tata Power Share %
Kaltim Prima Coal (KPC)	30%
Baramulti Suksessarana (BSSR)	26%
Antang Gunung Meratus (AGM)	26%

Tata Power Indonesian Coal Mines*

Operational Parameters	KPC	BSSR	AGM
Production (MT)	50.1	5.3	12.6
Sales (MT)	48.5	5.1	12.3
Financial Parameters			
Revenue (USDm)	6,791	371	813
EBITDA (USDm)	1,669	150	213
*PAT (USDm)	1,140	110	153

Hydro   Coal Mines

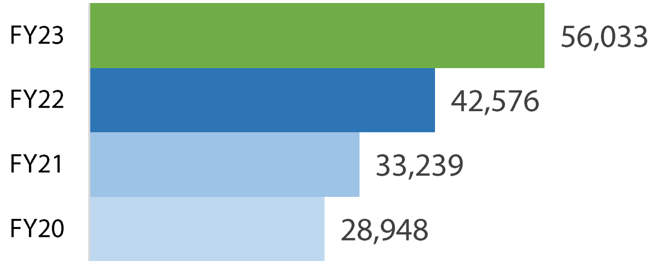
*FY23 operational and financial numbers on a 100% basis.

Generating consistent value over the years…

Revenue (₹ in Cr)

30,446

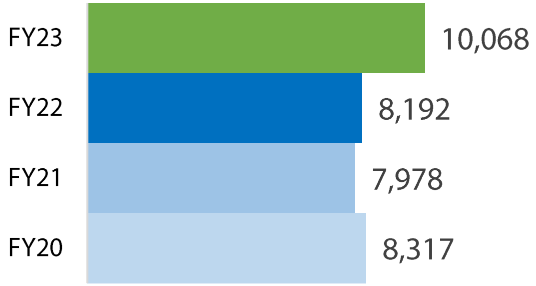
H1FY24



EBITDA (₹ in Cr)

6,092*

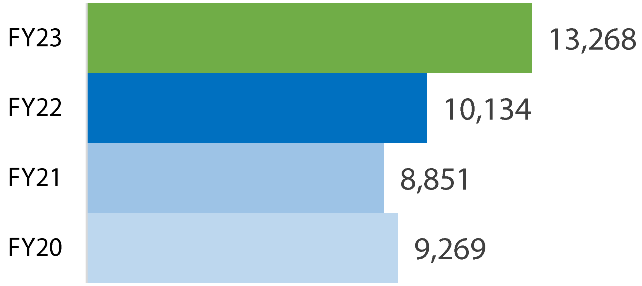
H1FY24



Underlying EBITDA(₹ in Cr)

6,694**

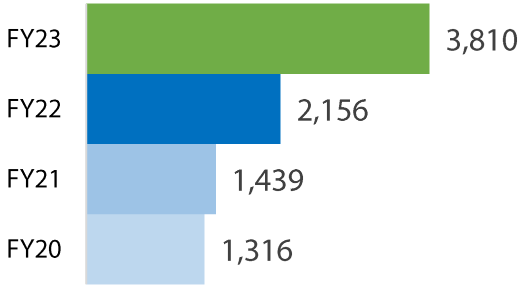
H1FY24



Reported PAT^ (₹ in Cr)

2,158

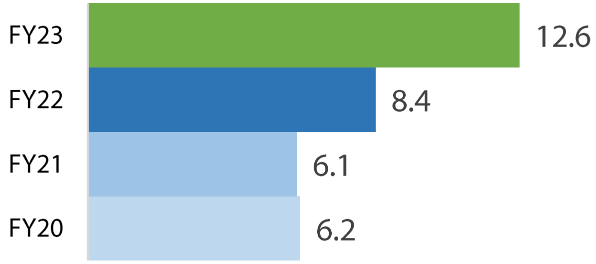
H1FY24



ROE (%)

12.3

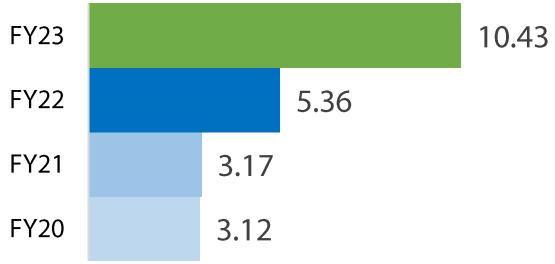
H1FY24



EPS (₹)^^

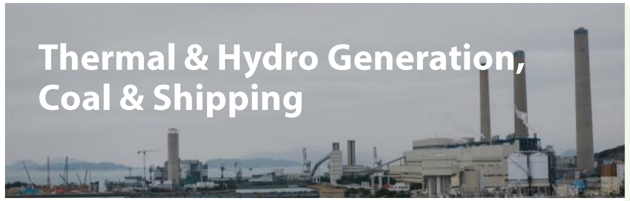
5.78

H1FY24



*Including other income | **Including Share of JV's and Associates | ^ Before Minority Interest | ^^ Not Annualised

…with rising contribution from our Core businesses*

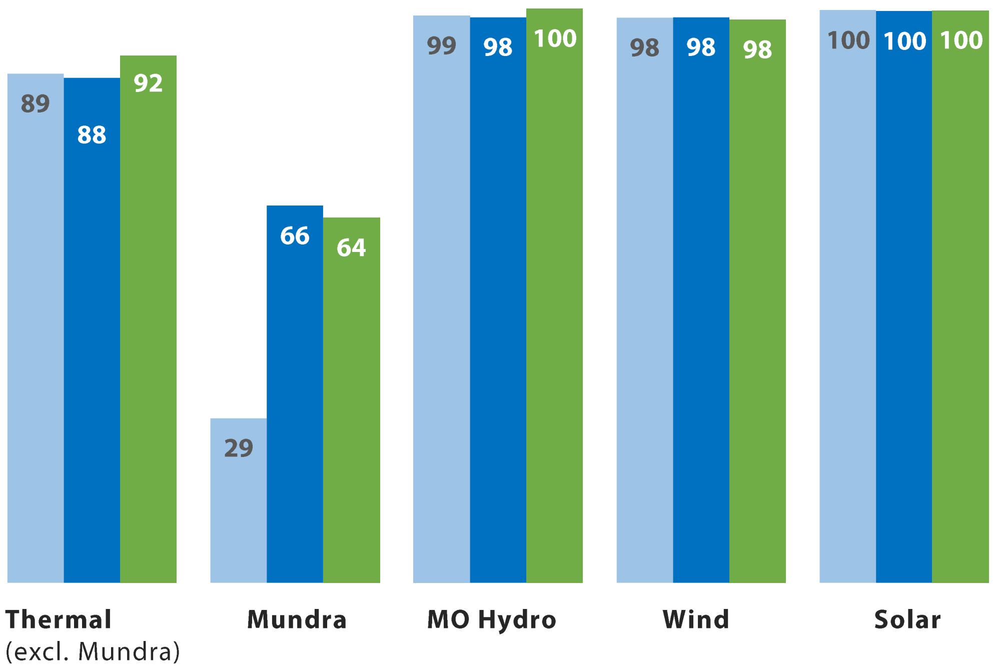


	Revenue (₹ in Cr) H1 FY23	Revenue (₹ in Cr) H1 FY24	Revenue change	EBITDA (₹ in Cr) H1 FY23	EBITDA (₹ in Cr) H1 FY24	EBITDA change	Reported PAT (₹ in Cr) H1 FY23	Reported PAT (₹ in Cr) H1 FY24	Reported PAT change
Thermal & Hydro Generation, Coal & Shipping	9,960	9,800	2% ↓	853	2,107	147% ↑	1,748	1,370	-22% ↓
Renewables	3,693	4,235	15% ↑	1,513	1,721	14% ↑	309	426	38% ↑
Transmission & distribution	17,980	18,731	4% ↑	1,697	2,180	28% ↑	526	683	30% ↑
Eliminations/ Others	(2694)	(2320)		87	84		(764)	(321)	
Consolidated performance	28,939	30,446	5% ↑	4,150	6,092	47% ↑	1,819	2,158	19% ↑

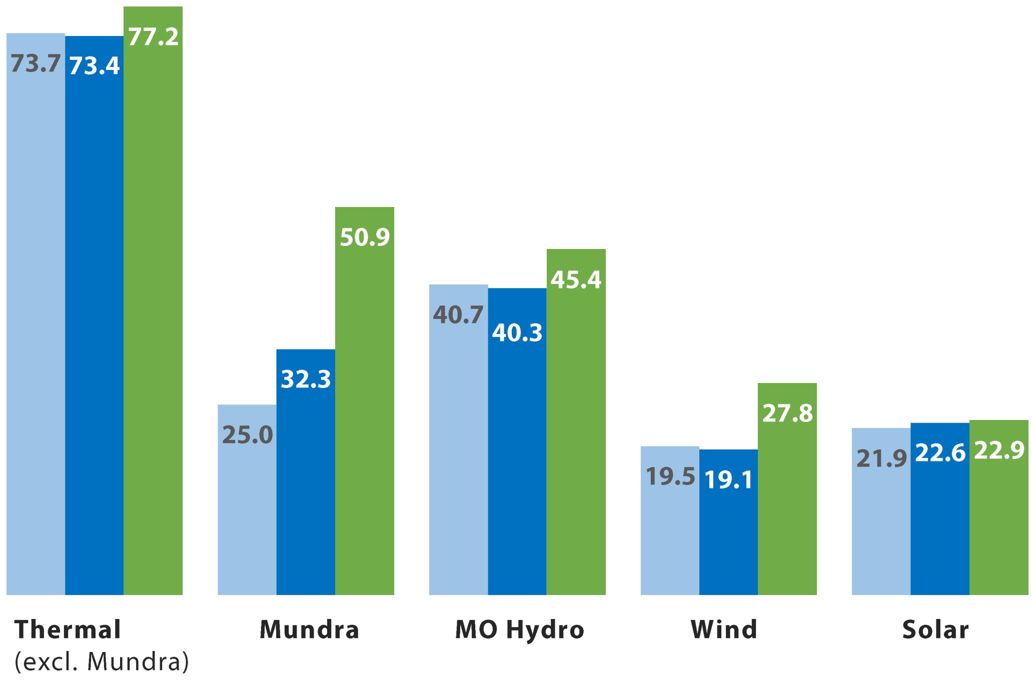
*Coal, Overseas Hydro Assets, Stake in Tata Projects & Nelco considered as Non-core

Operational excellence fueling benchmark results

Generation availability (%)



Plant load or capacity utilisation factor (%)

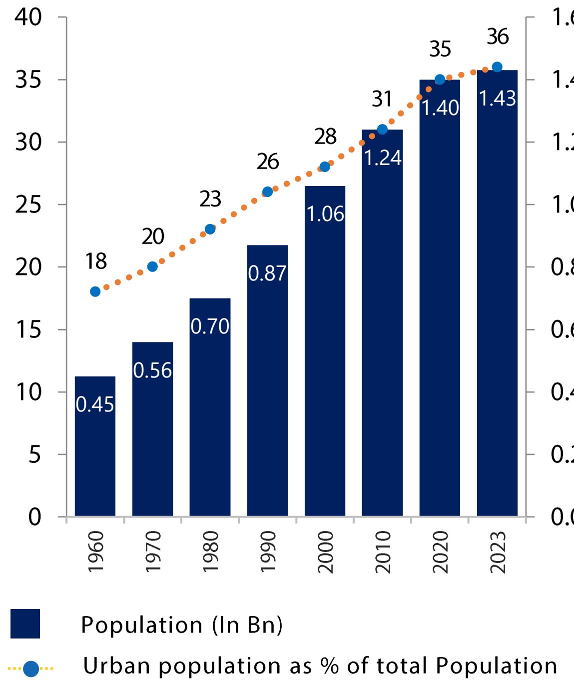


FY22 FY23 H1 FY24

Indian power sector: Witnessing strong tailwinds

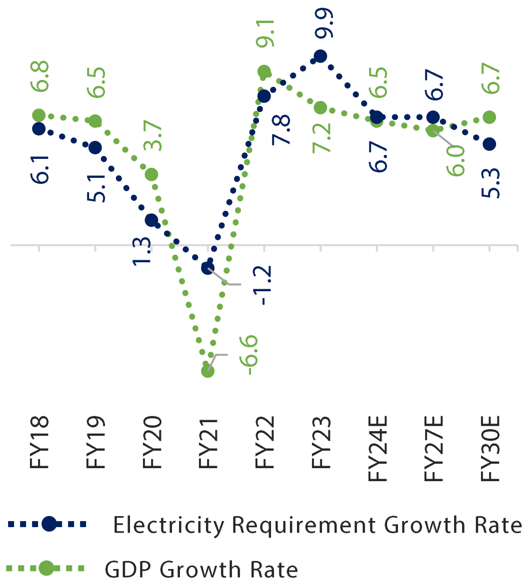
The power sector is set to grow as India grows

Rising population and urbanisation to drive demand



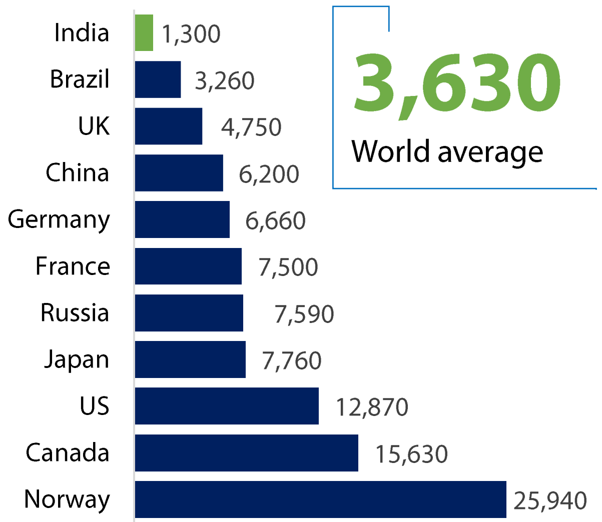
Source: Worldometer

Strong Correlation seen between GDP and Power Demand growth (%)



Source: CEA, RBI, IMF, S&P

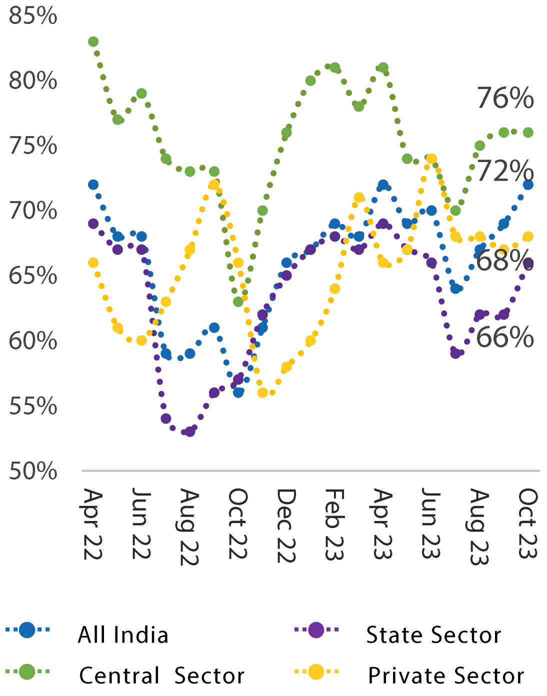
India has one of the lowest power consumption per capita (in units)



Data represents per capita power consumption for CY22

Source: ember-climate.org

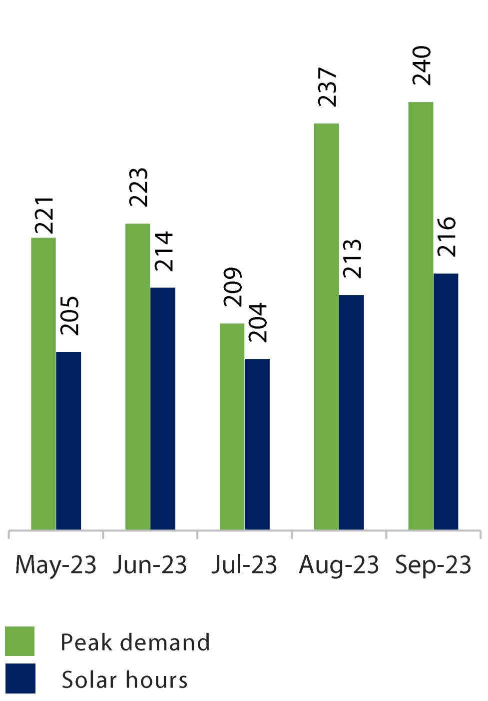
All India coal-based generation Plant Load Factor (PLF) (%)



Source: NPP

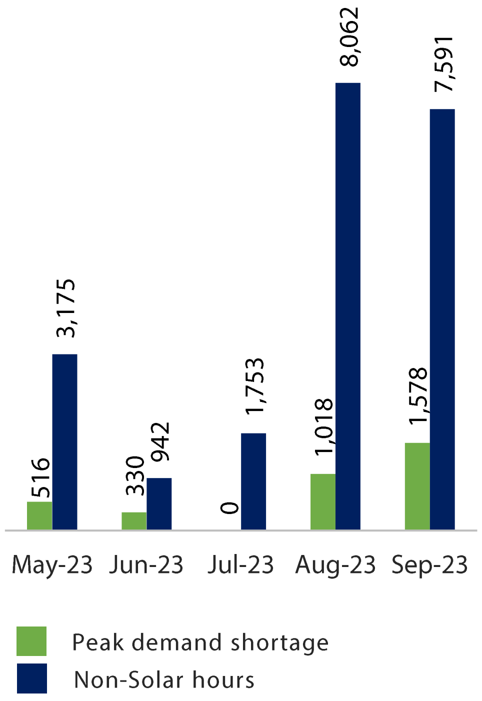
Rising power demand has resulted in power deficit inching up, especially during non-solar hours

Peak demand in solar hours (GW)



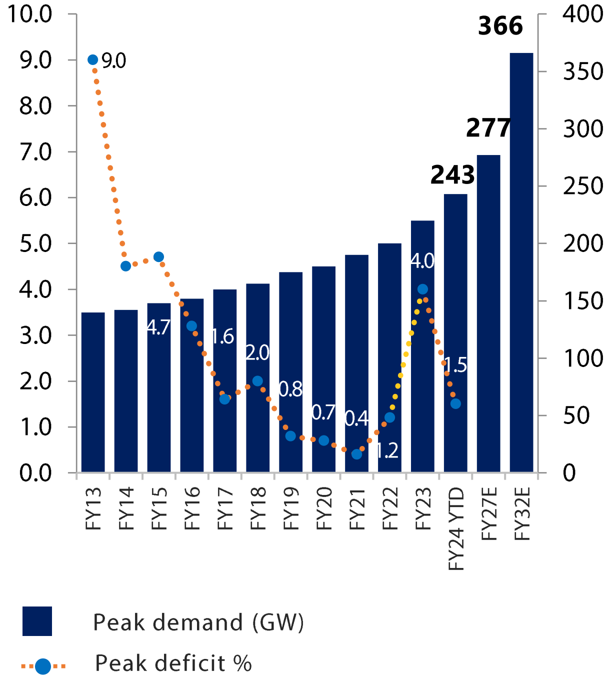
Source: Avendus Spark research

Peak demand shortage in non solar hours (MW)



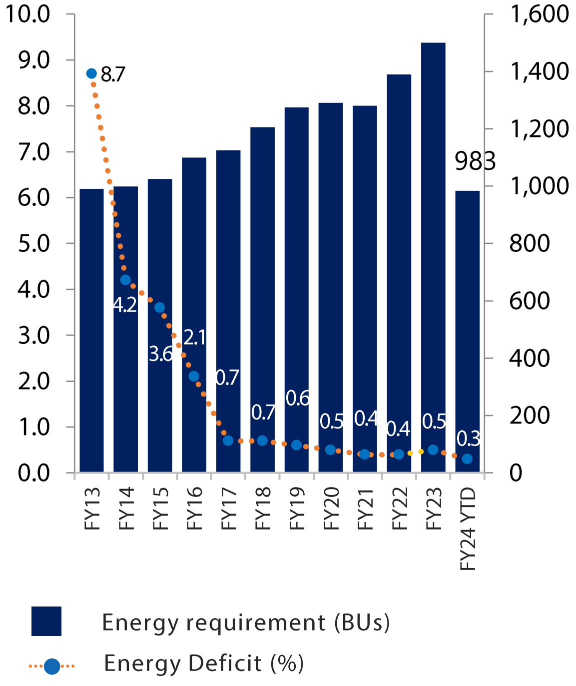
Source: Avendus Spark research

Peak demand (GW) **and Peak power deficit** (%)



Source: CEA, EPS

Energy requirement (BUs) **and Energy Deficit** (%)



Source: CEA

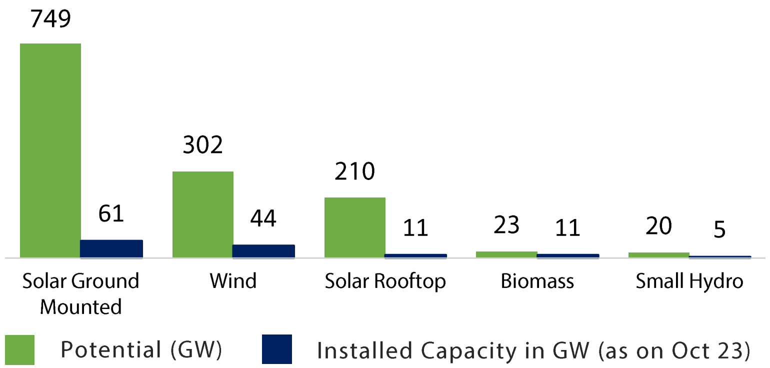
TATA POWER

Renewable energy

Our key growth driver

Clean & Green Energy to lead the way as India targets 500GW RE capacity by 2030

Immense Potential compared to currently Installed capacity of 132 GW*

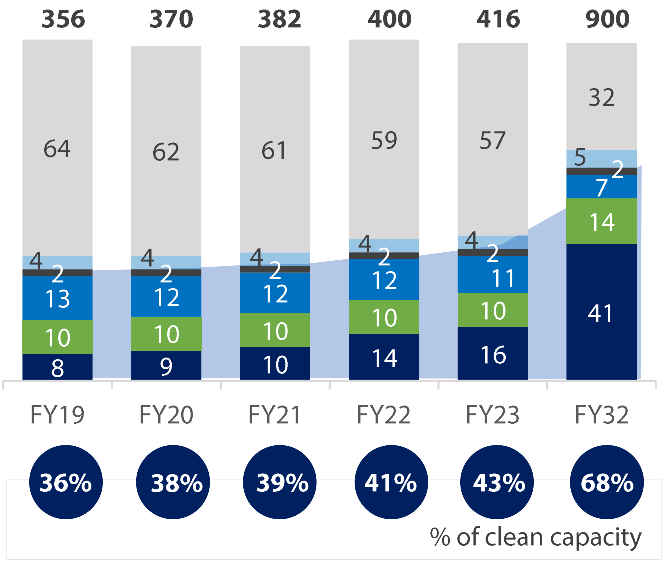


Huge untapped Renewable resource potential in India

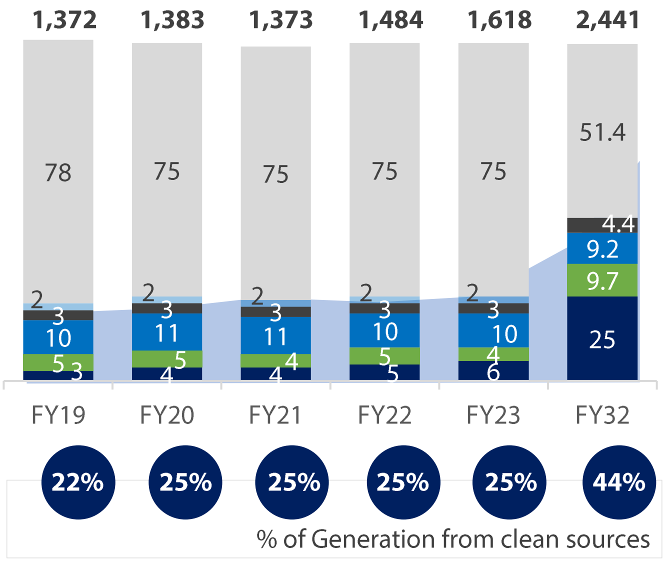
~749 GW
Solar

~302 GW
Wind

Clean & Green to account for 68% of capacity in 2032 from 43% in FY23



Clean & Green to account for 44% of Generation (TWh) in 2032 from 25% in FY23



RE | Solar | Wind | Hydro | Nuclear | Other non-fossil | Thermal

Source: MNRE

*Excludes large Hydro Capacity of 47GW

Source:- CEA, NEP

Strong Pipeline: 500GW 2030 target implies ~45GW Capacity additions each year on an average

500 GW by 2030

Aspirational capacity addition target

179 GW

Installed by Oct, 2023

72 GW Solar

44 GW Wind

11 GW Biomass

5 GW Small Hydro

47 GW Hydro Power

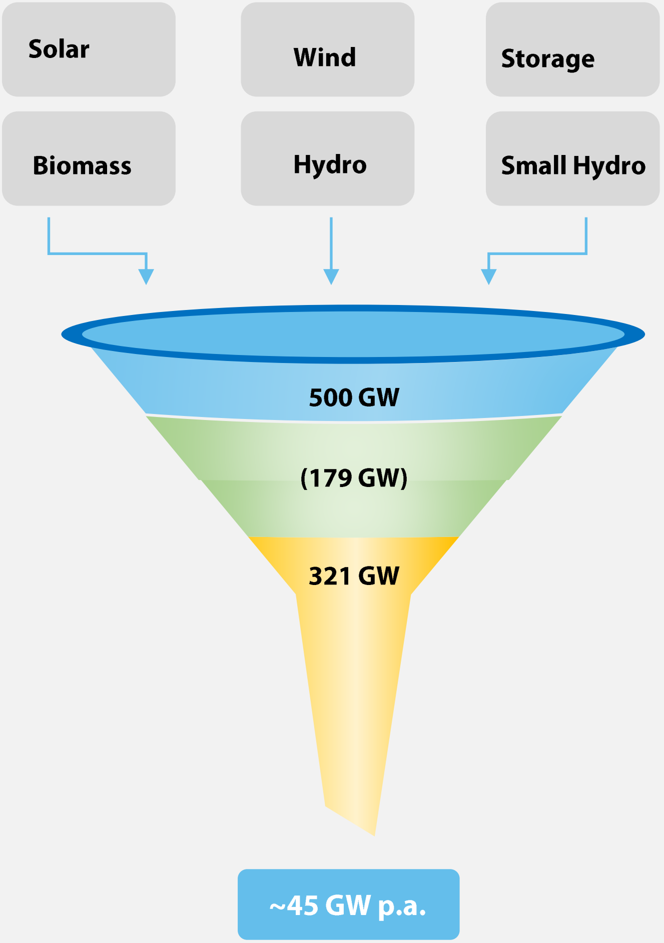
In pipeline

97 GW of projects under implementation

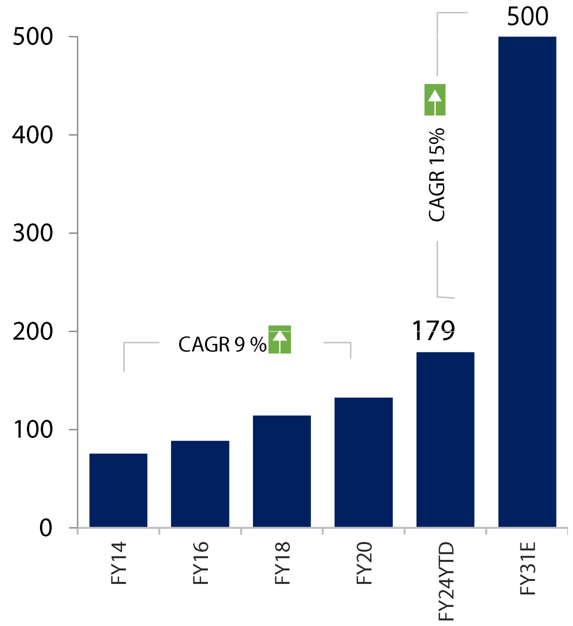
224 GW

Auctioning needed until 2028*

*to reach 500GW installed capacity by 2030



Renewable energy capacity target of 500 GW by 2030



Source: Nuvama Research

RPO* to spur renewable adoption on the demand side

Electricity Amendment Bill
- Mandating National RPO & compliance by SERC

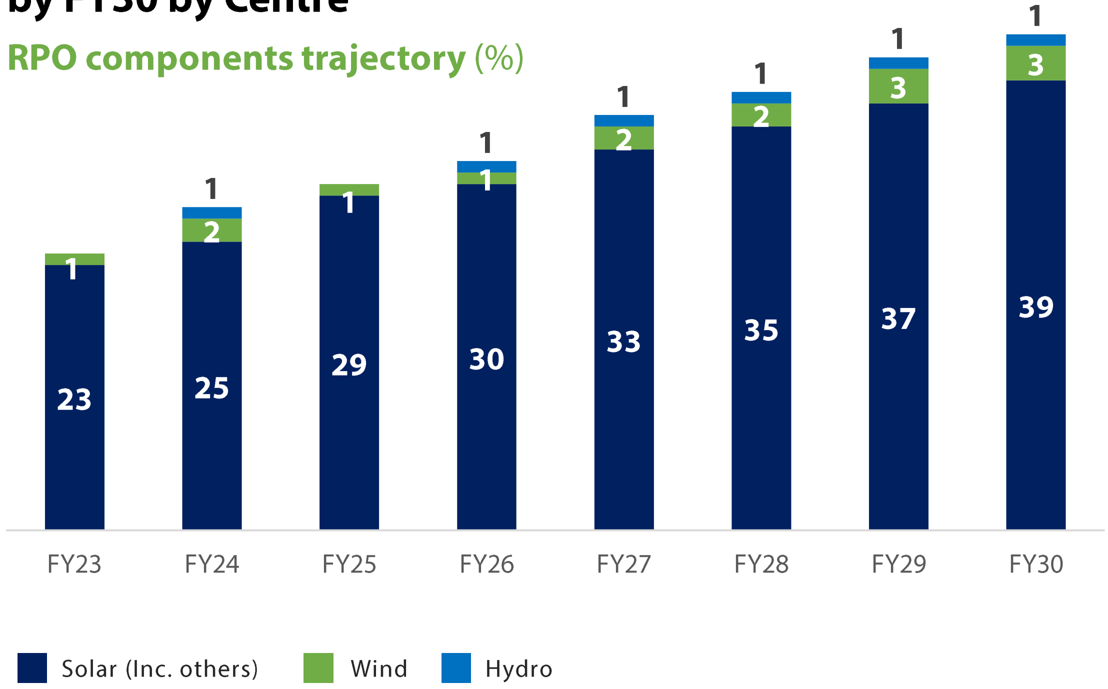
SERCs are required to enforce national RPO

Non-compliance to be penalised at ₹0.25-0.35/ kWhr in 1st year & ₹ 0.35-0.5 / kWhr in subsequent years

Potential increase in RPO, a stricter implementation to promote RE and open access

RPOs to be increased from 25% in FY23 to 43% by FY30 by Centre

RPO components trajectory (%)

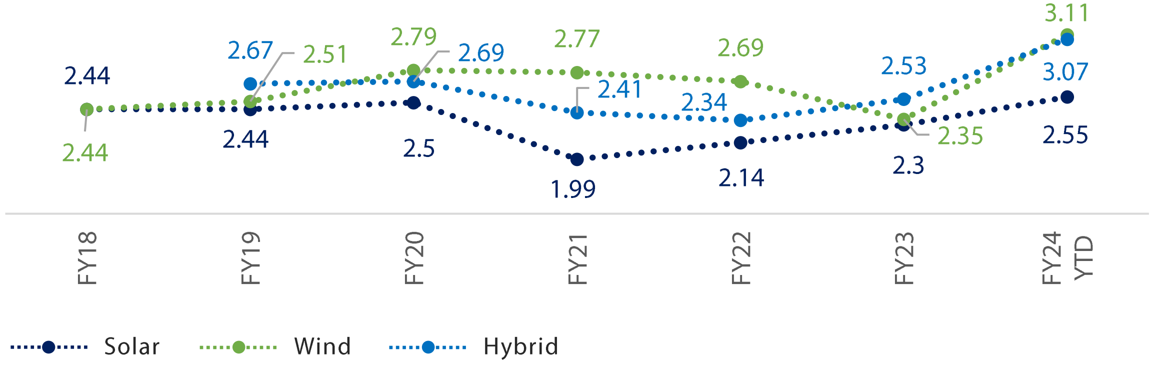


Source: Ministry Of Power (MoP)

*Renewable Purchase Obligation (RPO)

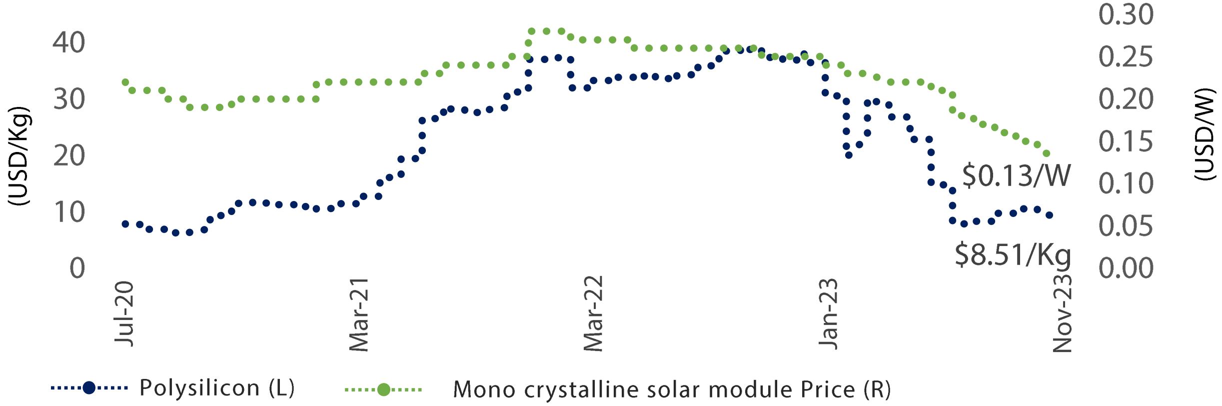
Record-low module prices and attractive RE tariffs should boost RE capacity additions

Minimum e-reverse auction tariff in India



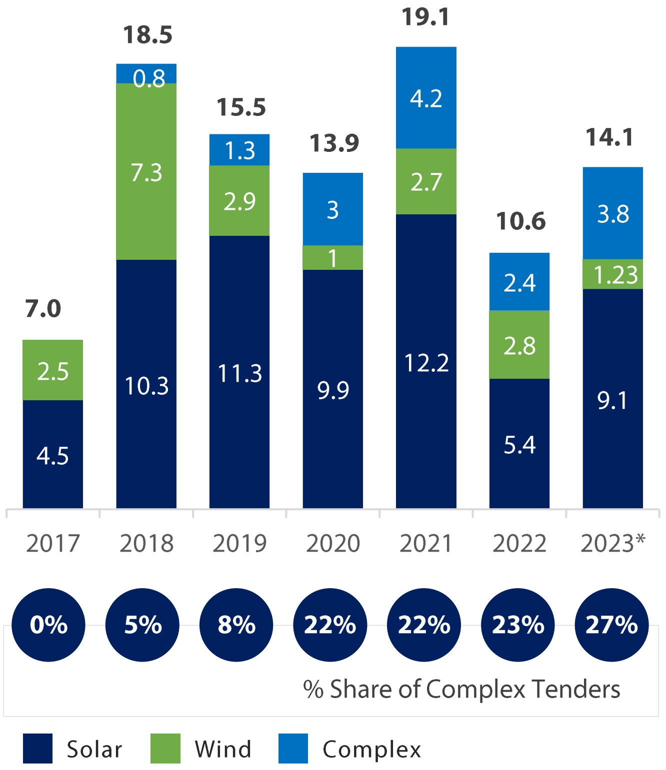
Source: CEA, Bloomberg, Avendus Spark Research

Polysilicon and module prices at multi-year lows



Source: Nuvama

Renewable energy auction volumes (GW)



*As on Jul 2023

Source: BNEF- India's Renewable Energy Auctions 2022 Roundup, BTI RE Navigator

Clean & Green capacity target: >20GW by 2030, accounting for 70% of total

What we have achieved

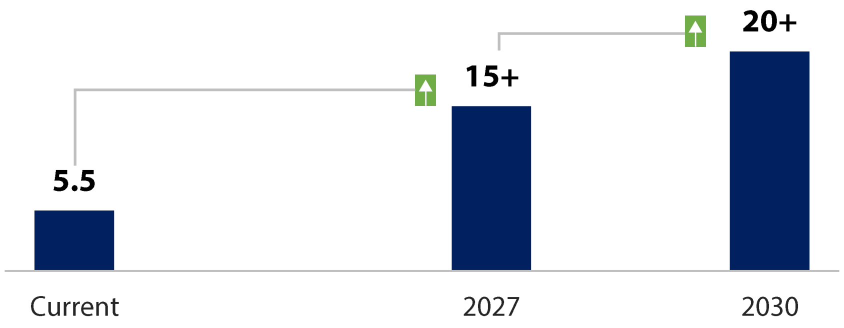
>5.5 GW
Clean and green Capacity

>3.7 GW
Under construction

What we wish to achieve

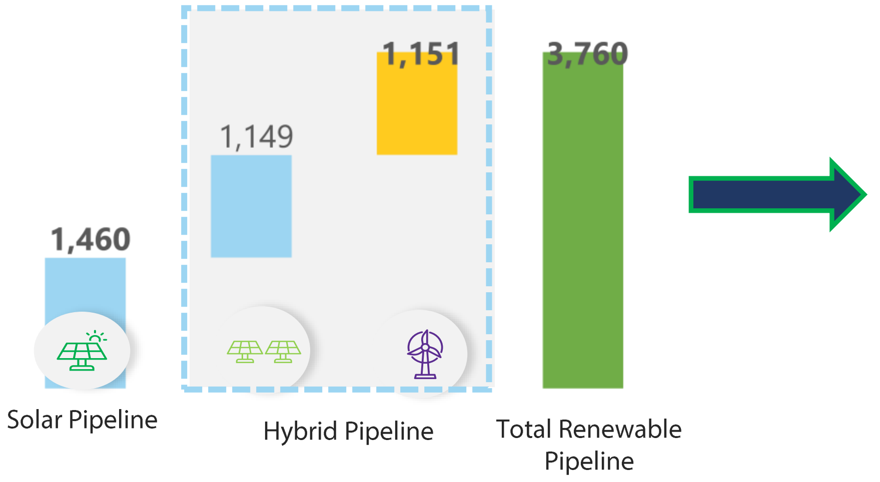
>20 GW
(70% by 2030 and 100% before 2045)
Clean and Green Capacity

Targeting 15GW+ Clean & Green Capacity by 2027 (GW)

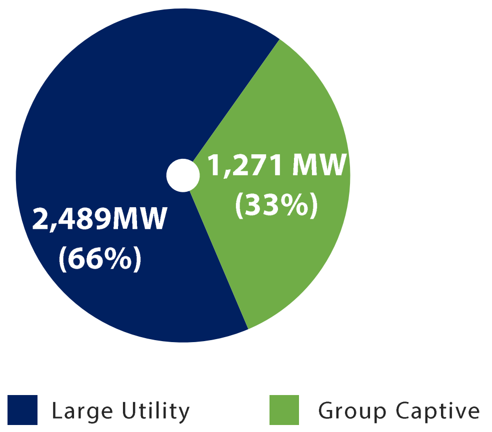


Source: Tata Power Estimates

Renewable capacity pipeline (MW)



Group Captive accounts for a third of RE Pipeline



As on 30 September, 2023

TPSSL revenues to rise with declining contribution from third-party EPC

What we have achieved

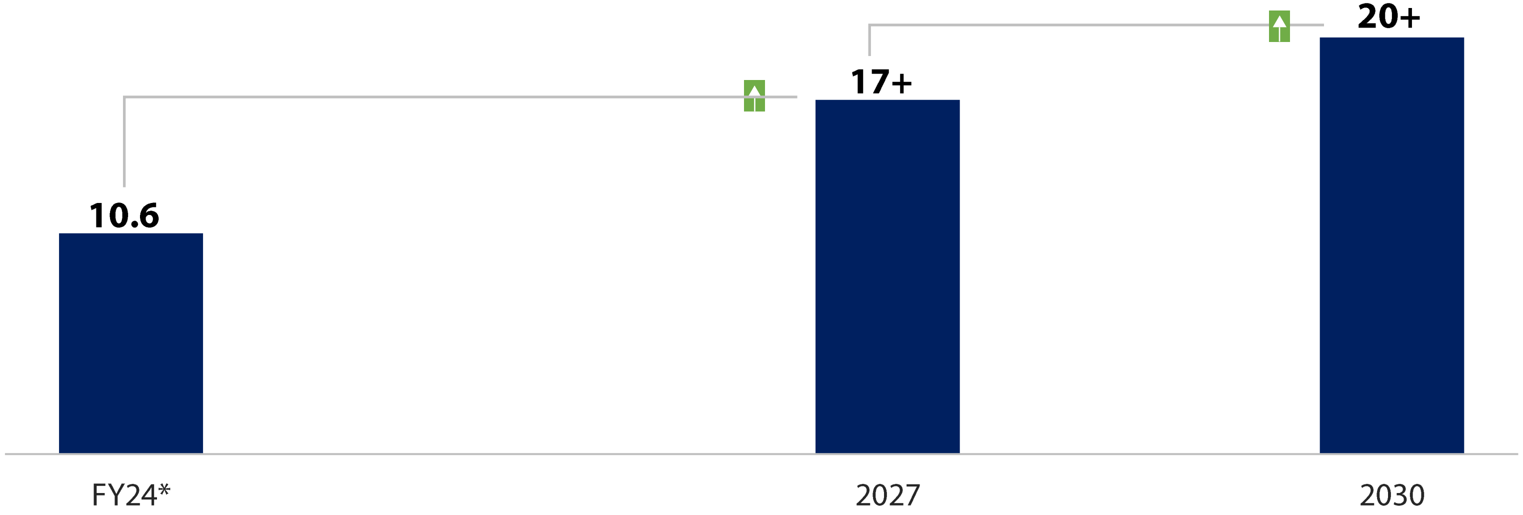
4,391* MW
Order Book

>₹18,700* Cr
Order Book

What we wish to achieve

>₹20,000* Cr
Revenue in FY30

₹17,000Cr+ Revenue projected for FY27 with rising share from Captive projects (₹ '000 cr.)



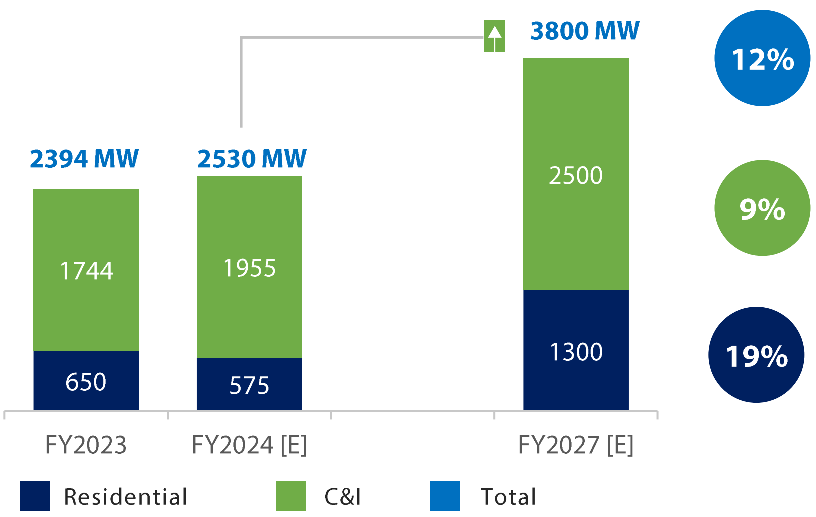
*Trailing 12-months

*Includes large scale utility, residential, C&I as well as group captive
As on 30 September, 2023

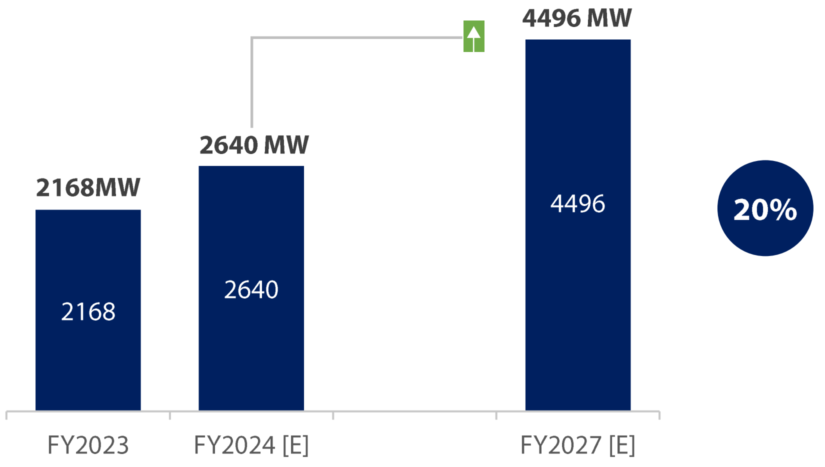
Annual additions of Rooftop & Group Captive in India – Adding to RE growth story

Strong offtake across segments; 19% CAGR in residential and 20% for Group Captive till FY27

Rooftop* (MW) **4-year CAGR**



Group Captive (MW) **4-year CAGR**



Note: Market estimates as per Bridge To India research, Tata Power estimates

*Rooftop segment includes Commercial & Industrial (C&I)

Demand drivers

Compelling economics

Rooftop: Reduces electricity bills by upto 80%+, payback period of 4-7 years

Group captive: Customer to invest ~8% of project Cost, payback in 2 years

Enabling regulatory ecosystem

Rooftop :

- Net Metering upto 500/ 1000 kW
- State administered subsidy programs for residential

Group captive

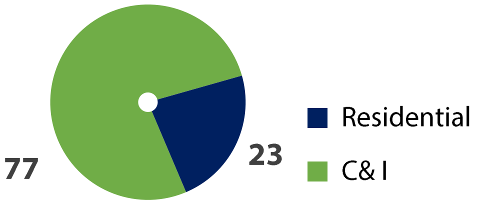
- 15-20% of savings through exemption of regulatory charges
- State administered subsidy programs for residential

Enabling regulatory ecosystem

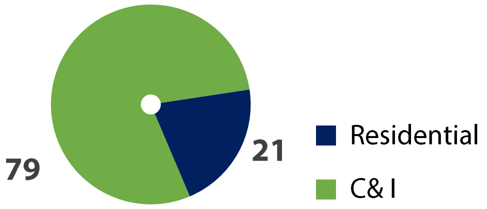
- Increase in Govt of India's RE commitment to 500 GW by 2030
- Carbon neutrality / 100% renewable electricity targets of corporates

Tata Power Solar Rooftop: Differentiators to sustain Pole position

404 MW Rooftop capacity added in FY23 (%)



₹641 Cr order booked in H1 FY24 (%)



- Bifacial modules on roof
- Innovative products like hybrid, balcony, artefacts, solar tree
- Digital tools, e.g., array modelling, shadow analysis, daily report

VARIED OFFERING

- Presence across all customer segments
- EPC + Opex Models
- Solutions from 1 kW to multiple MW, powering 5K+ C&I, 43K+ residential customers

FINANCING

- Multiple tie-ups offer several options to customers
- Innovative products such as Instant EMI; term loan, etc.
- Collateral free, quick financing

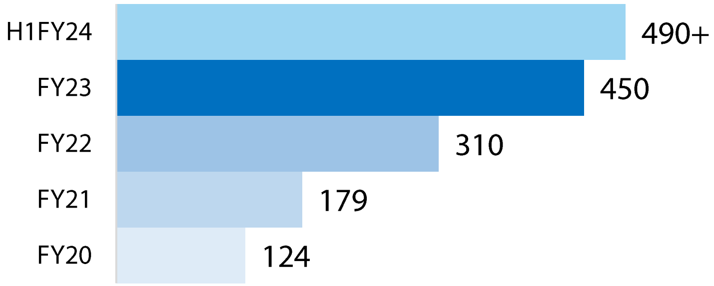
PRODUCT PORTFOLIO

- Value-added offerings: Bundling with roofing solutions,
- Performance analytics
- Innovative Premium products

CHANNEL & MARKETING

- 490+ Channel Partners (CPs) as on date – covering 275+ towns
- ~44% of FY23 revenue from CPs
- Customer referral and social influencers

Channel partner network growth



Tata Power EZ Charge- Only CPO* in India to operate across four segments

Home Charging

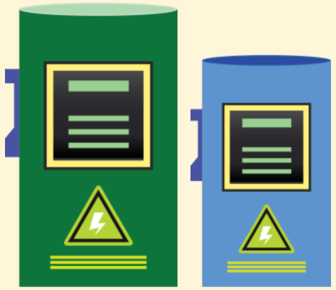
Brief-Tie-up with OEMs for home charging installations for their customers

Services-Installation & commissioning Service

Fleet Charging

Brief-Tie-up with fleet operators for either deployment of charging infrastructure or accessibility of public charging stations

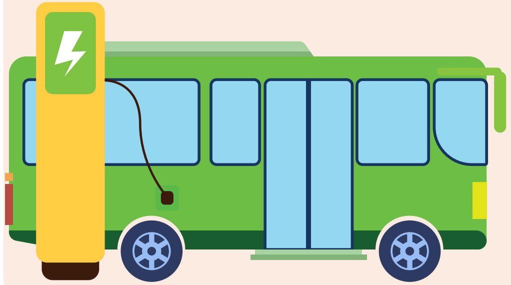
Services-Deployment of EV chargers in dedicated hub for fleet cars



Public Charging

Brief-Dependence on the current EV penetration and current utilization of the EV users

Services-Deployment of EV chargers in Public & Semi-Public Locations



Bus Charging

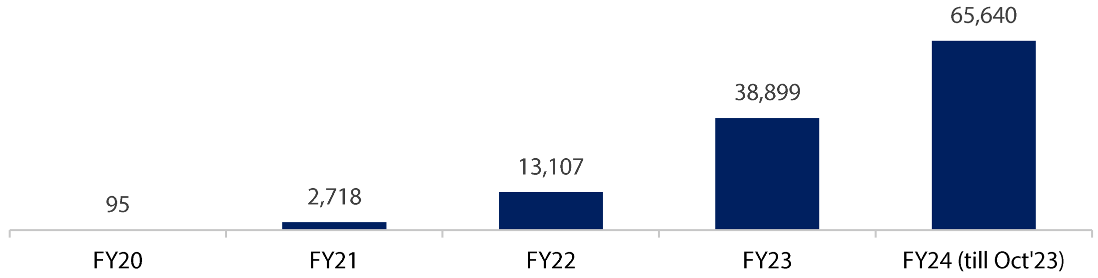
Brief-Tie-up with bus OEMs for deployment of charging infrastructure for their bus supplies/Govt. deals for e-bus chargers

Services- Deployment of EV chargers in STU depots for Buses

*Charge Point Operator

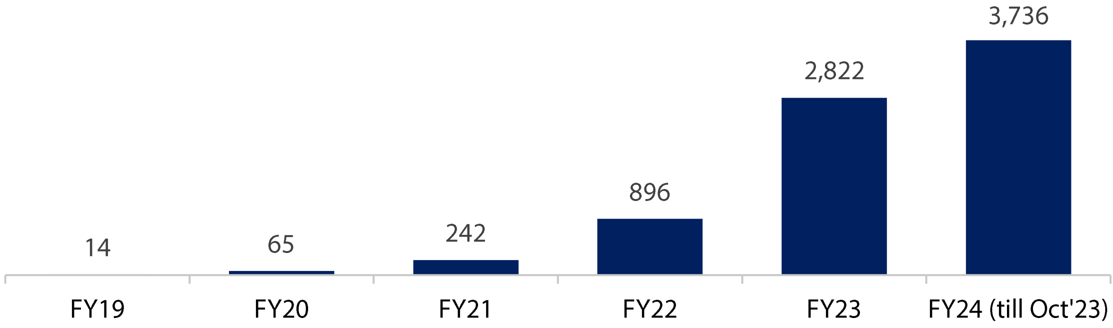
Tata Power EZ charge- Stellar growth in home and public charging segments

Home charging installation



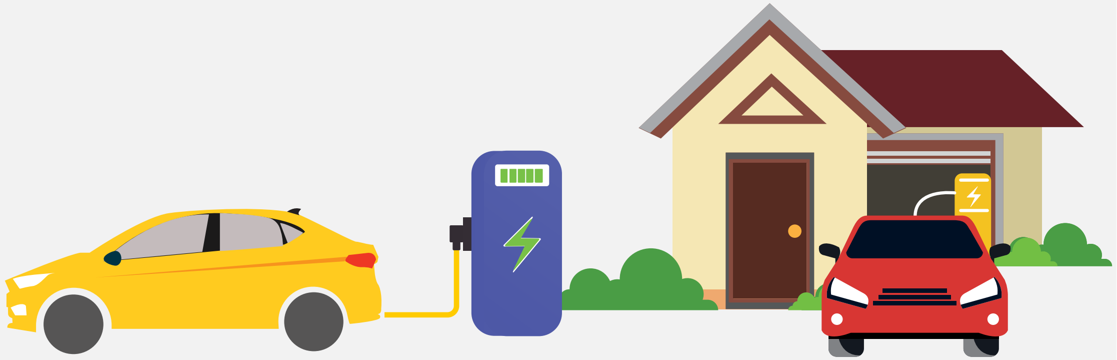
Source: Tata Power Estimates

Public charging stations



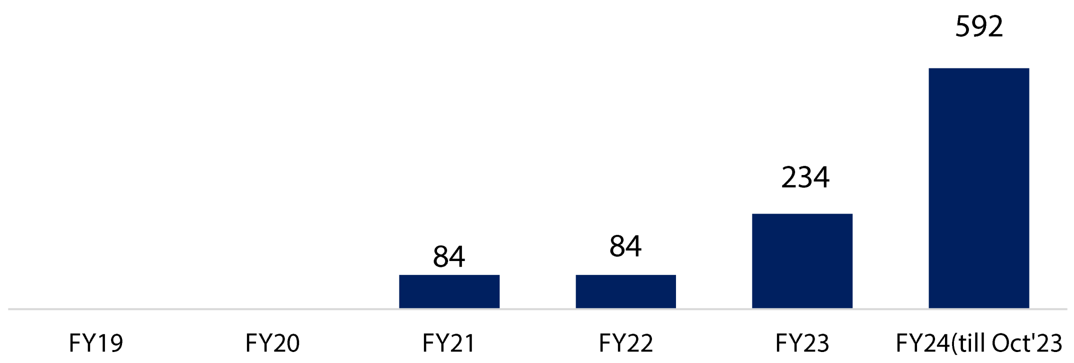
Source: Tata Power Estimates

- Market leadership in public charging segment with ~55% share and ~85% share in home charger installations
- Exponential growth in-line with increasing EV adoption over the last 2 years
- Partnership with OEMs and fleet players leading to assured utilization and revenue



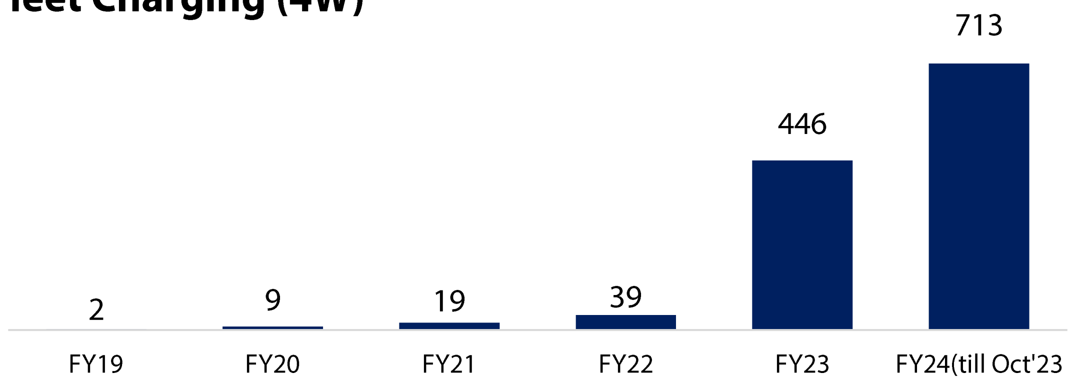
Tata Power EZ charge: Stellar growth in E-bus and fleet charging segments

E-bus Charging Stations



Source: Tata Power Estimates

Fleet Charging (4W)



Source: Tata Power Estimates

- Segment with assured utilisation and revenues/profitability
- Over 100% growth in first 8 months of FY24 in bus segment and 60% in fleet segment, healthy pipeline in execution
- Huge E-bus charging opportunity through PM E-bus Sewa programme, to introduce 10,000 electric buses to the city bus service across India
- Fleet opportunities in employee transportation services and mid & last mile delivery segment

Tata Power EZ Charge: Targeting >10k Public and >200k Home chargers by FY28

Catering to every segment

4,900+ Public, Semi-public and Captive CPs

Energized more than **442+ cities & towns**

460+ Ultra high Capacity Bus Chargers energized in multiple cities

65,000+ Home Chargers installations

Award winning Advanced Software Platform and Mobile Application

Largest Player in the Country in Public Charging Space

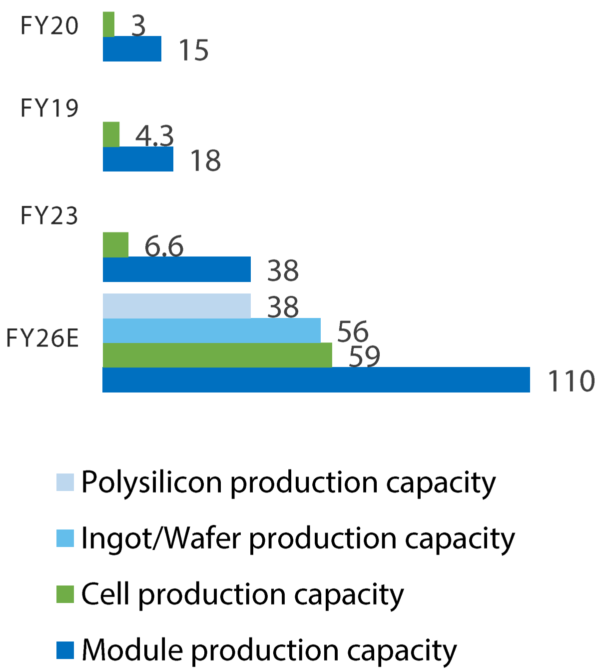
Current presence in **442+ cities & towns Largest by any CPO**

Differentiated strategy for the 3 businesses

	Home Charging (Private 4W)	Captive Charging (Shared 4W & Bus)	Public Charging (Private & Shared 4W)
Tata Power green strategy	• **~85%+ of Home Charging** market • **Partnership with OEMs** as preferred service provider	• **~40% of Fleet 4W & Bus Charging** market • Contracts with 4W fleets/Bus OEMs with minimum usage guarantee	• **~55% public charging market share** • Post FY24, **asset-light aggregator** of franchisee operators
Rationale	• Enables **customer acquisition** from personal EV owners	• Builds **network presence & operating know-how** with low risk	• Enables capturing **leading share** of public charging & data
Growth outlook	**>200,000 Home Chargers by FY28**		**>10,000 Charge Points (CPs) by FY28**
Partnerships	Indian Navy, Coimbatore City Municipal Corporation, Government of Assam, Airports Authority of India, Ayodhya Development Authority, IndianOil, Indian Army, Tata Motors, Taj, GAIL, Mahanagar Gas, MG		

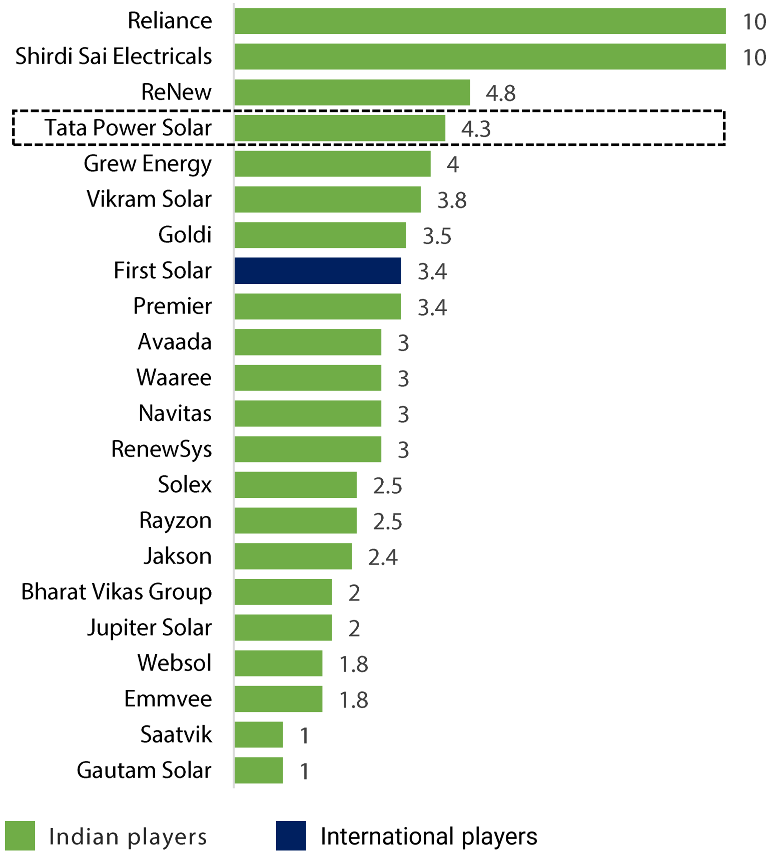
Contributing to India's Atmanirbhar ambition with our 4.3GW Cell & Module facility in Tamil Nadu

Estimated capacities expected to ramp-up by FY26 In India (GW)



Source: JMK Research

Proposed addition of Module capacity by large manufacturers (>1GW) by 2026



Source: JMK Research

Tata Power's first module out from 4.3 GW of Cell & Module

First Cell production scheduled in Q4FY24

Total Capex of around Rs. 4,000Cr

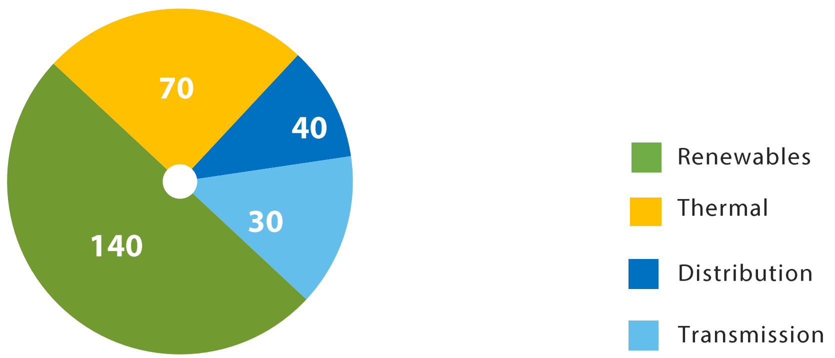
TATA POWER

Transmission and distribution

Long runway for Growth

Indian transmission: A USD30 Bn opportunity (till FY30)

USD30 Bn transmission Capex anticipated between FY24-30E (USD Bn)



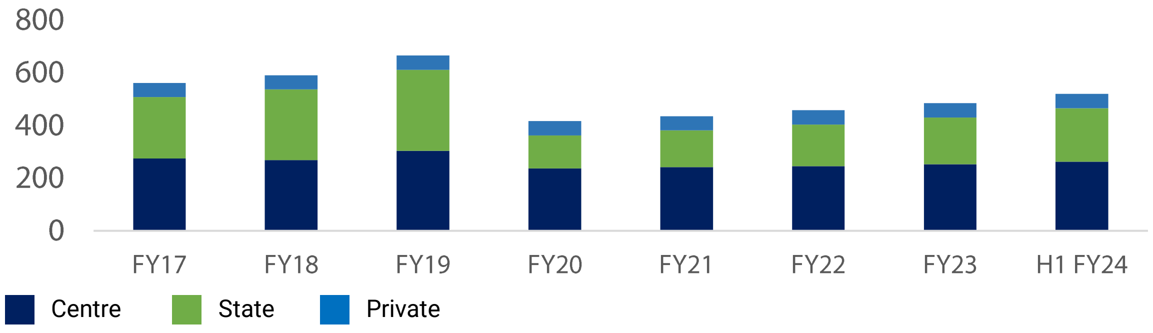
Source: Jefferies

TBCB opportunity	Trans. Lines	Sub-station capacity
As on FY23	**4.7** lakh Ckt. Km	**11.8** lakh MVA
Additional opportunity by 2030	**50,890** Ckt. km.	**4.3** lakh MVA

Source: MOP, CEA

Pickup in transmission lines installation

Transmission lines (in Ckt km)



Source: CEA

- As a significant step towards successfully achieving 500 GW of RE capacity by 2030, the Ministry of power has outlined a systematic planning of transmission system which envisages huge-inter transmission opportunities till 2030
- Most of these projects will be bid through TBCB route, thereby, presenting a huge opportunity for the private players

Tata Power - Recent wins to expand Tata Power's transmission portfolio

What we have achieved

4,383 Ckm
Operational Capacity

906 Ckm
Under construction
Total Capex: ₹1,610 Cr

424 Ckm
Declared L1 bidders
Total Capex: ₹2,294Cr

Declared L1* on 4th October 2023

Project:
Jalpura Khurja Power Transmission Limited (80 Ckm)

Project Brief

- Construction and O&M of 400 kV substation at Greater Noida and Jalpura in Uttar Pradesh
- Line in line out (LILO) of 400 kV line at Greater Noida substation and construction of 400 kV line from Jalpura substation to Tehri Hydro development corporation (THDC) Khurja Thermal Power Plant (TPP)

Capex: ₹750Cr

Declared L1* on 7th November 2023

Project:
Rajasthan Phase IV Part C (344 Ckm)

Project Brief

- Bikaner-III - Neemrana-II 765 kV D/C line (2nd)
- 765 kV 110 MVAR switchable line reactor – 6 at Bikaner III PS
- 765 kV 110 MVAR switchable line reactor – 6 at Neemrana II S/S
- 765 kV line bays – 2 at Bikaner III PS
- 765 kV line bays – 2 at Neemrana II S/S

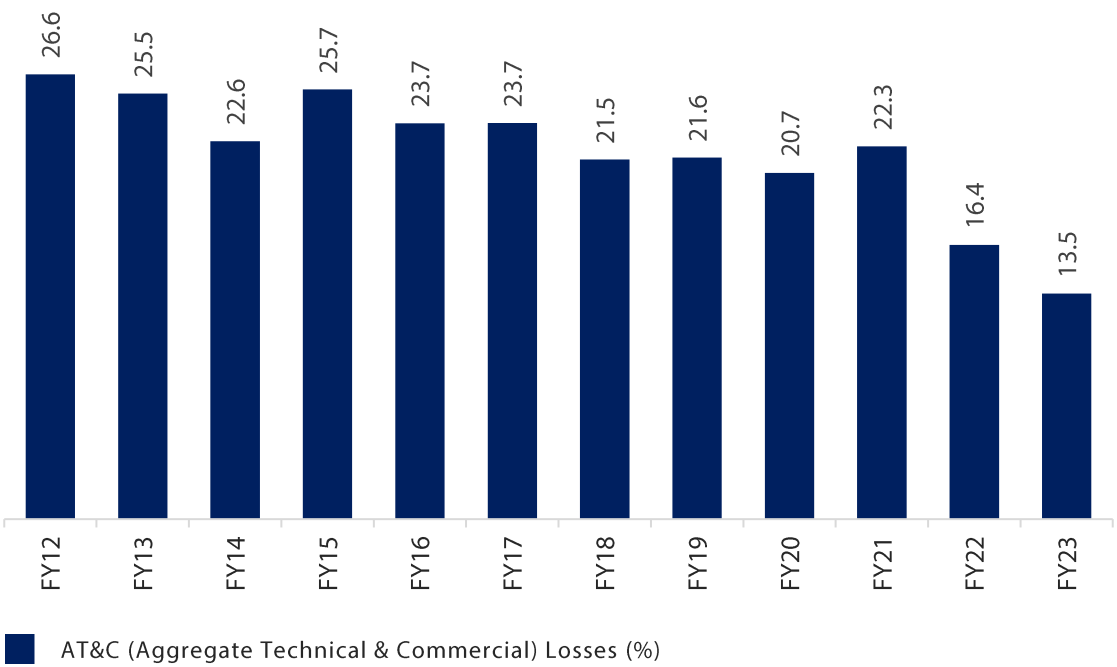
Capex: ₹1,544 Cr

*Lowest bidder

India Distribution: On the mend but concerns remain

All India AT&C losses (%) have declined due to LPS and RDSS schemes

All India basis

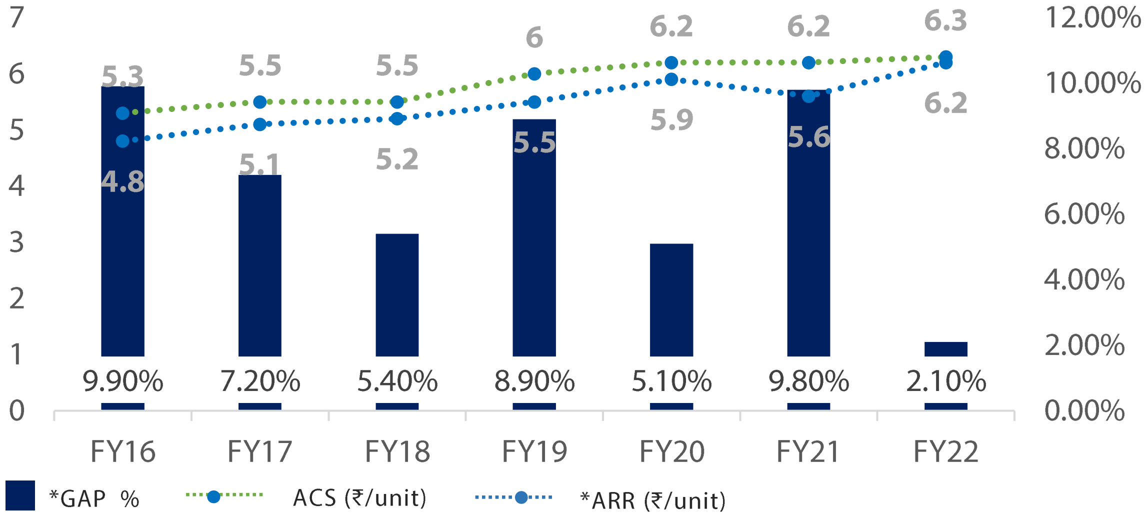


*PFC Report

Abbreviations:
LPS- Late payment surcharge
RDSS - Revamped Distribution Sector Scheme
ACS – Average cost of Supply
ARR – Average Revenue Realised

ACS –ARR gap has narrowed but continues to persist

Overall ACS-ARR GAP



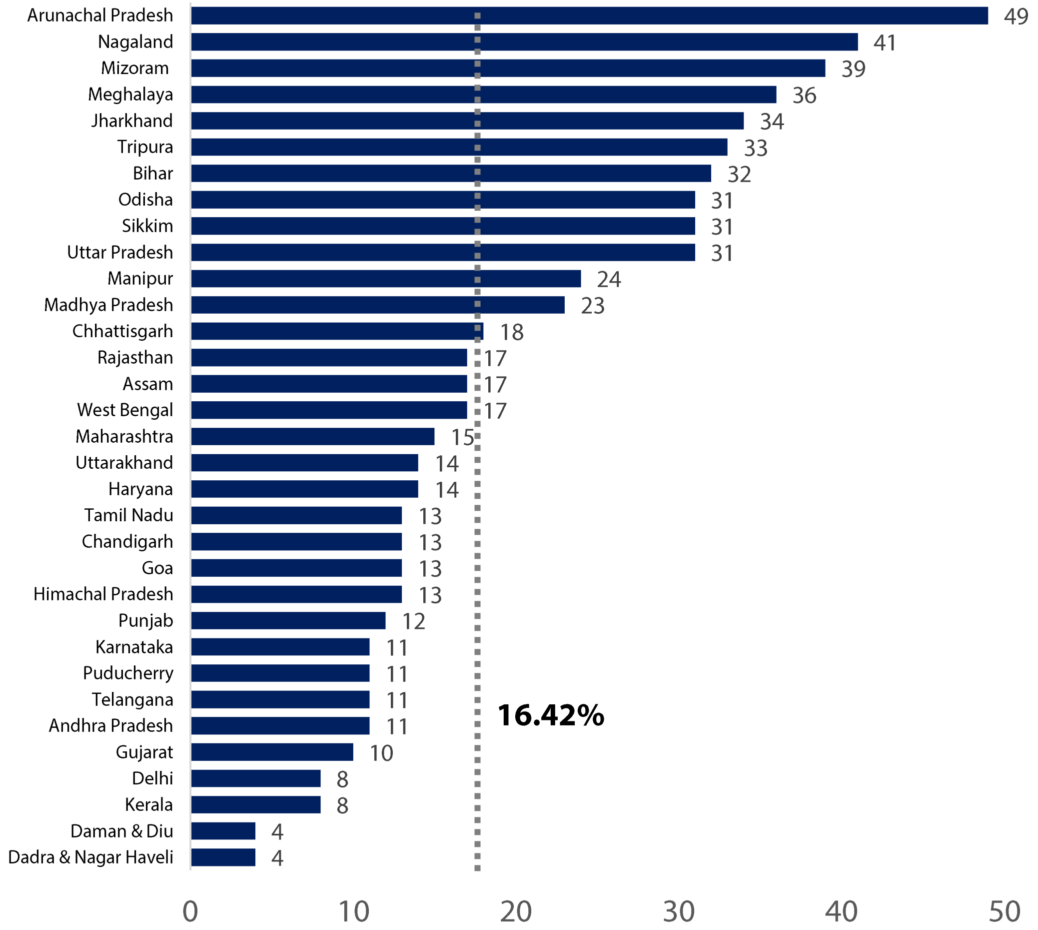
Source: PFC Report

- Periodic and targeted measures taken by the Union govt helped DISCOMS improve their performance.
- Implementation of Late Payment Surcharge Rules inculcated a discipline amongst DISCOMs to make timely payment to Genreating Co's, thereby reducing overdue amount
- Increased smart metering implementation helped improve the billing efficiency

* After Tariff subsidy received

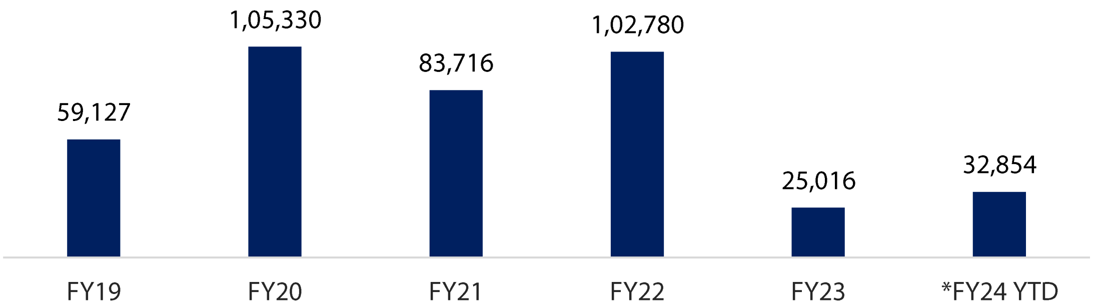
India Distribution: Several states continue to display high AT&C losses and remain in financial stress

State-wise AT & C losses (%) for FY22



Source: MOP

RDSS and LPS reduce DISCOM Dues (₹ in Cr)



*Till 24th November 23 Source: PRAAPTI portal

Financial performance of DISCOMs			
Parameters	Unit	FY20	FY22
Total Losses (on accrual basis)	₹ Cr	30,752	31,026
Debt	₹ Lakh Cr	5.0	6.2
Regulatory assets	₹ Cr	65,414	75,178
Accumulated losses	₹ Lakh Cr	5.05	5.52

Source: PFC report

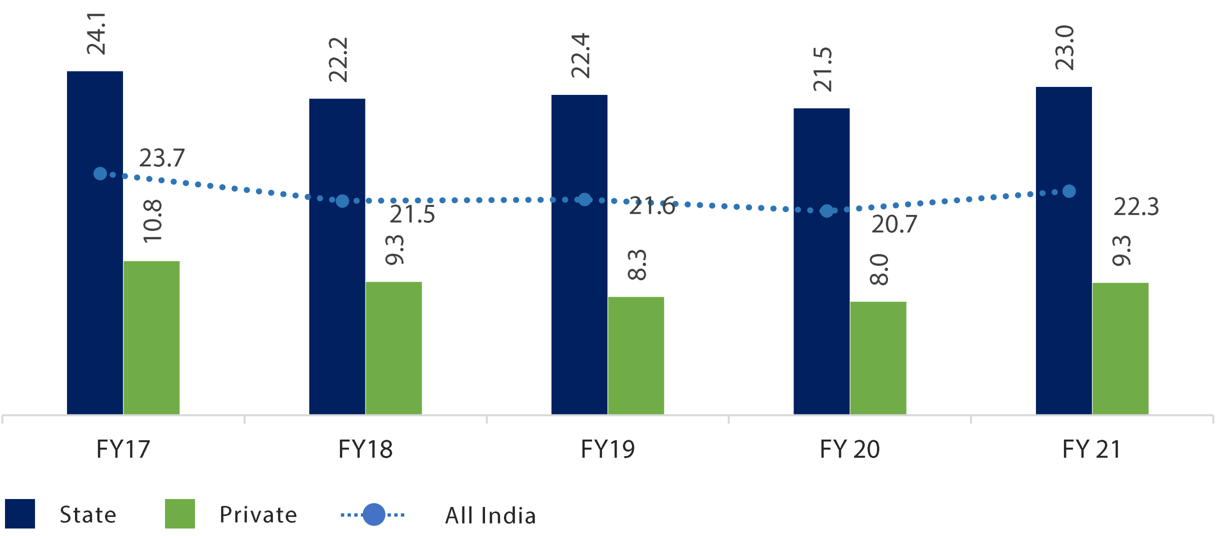
While green shoots are visible in power distribution sector, major concerns remain

Key challenges for State DISCOMs

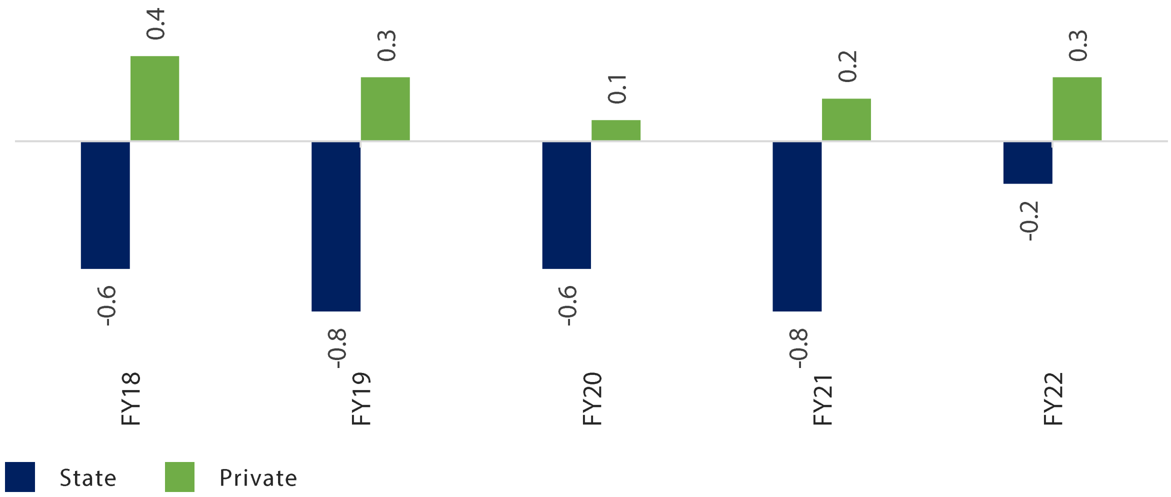
- Increased power purchase cost
- Shift of subsidizing C&I customers to options of OA/GC/RTS
- Limitation on taking RE benefits

Private DISCOMs in a better shape; Tata Power has 50% share in Private DISCOMs

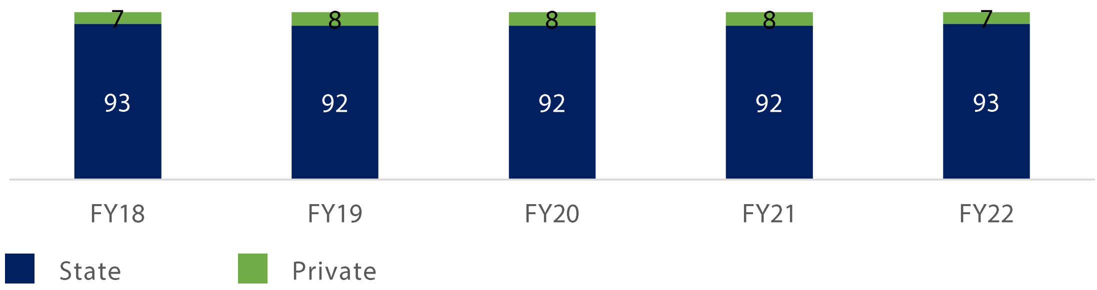
AT&C losses (State vs Private) (%)



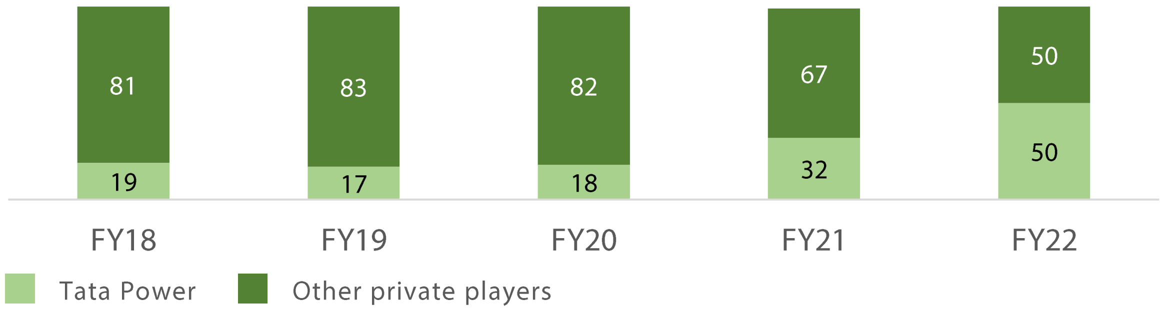
ARR-ACS GAP (State vs Private) (₹/unit)



Market share of State vs Private players (Revenue basis) (%)

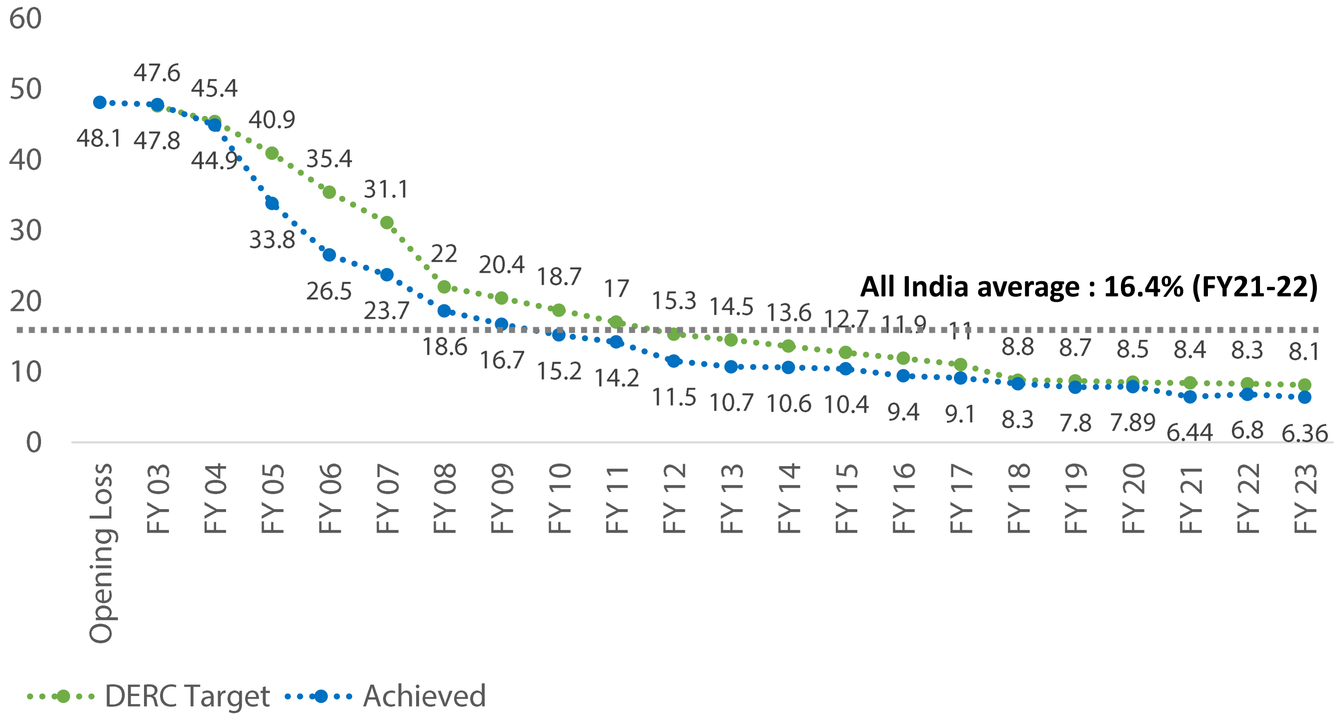


Our position among private players (%)



Source: MOP, PFC

TPDDL: Solid turnaround for the past two decades



TPDDL turnaround in Numbers

₹50,000 Cr

Estimated saving to the Government (since takeover in FY02)

₹7,600 Cr

Cumulative Capex till FY23

₹801 Cr

Dividend paid to the Government

*Loss level of 6.44% in FY21 due to additional collection pertaining to FY20 (Covid period), corrected AT&C is 7.26

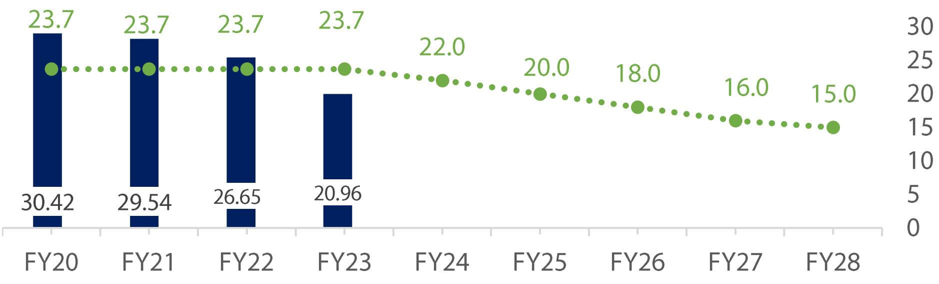
Tata Power Delhi Distribution Limited (TPDDL) acquired by Tata Power in FY02

TATA POWER

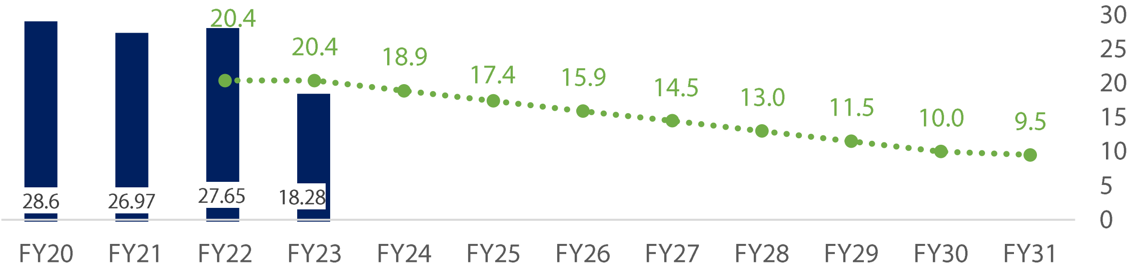
TATA

Odisha DISCOMs: Significant improvement in AT&C losses in a short span of time

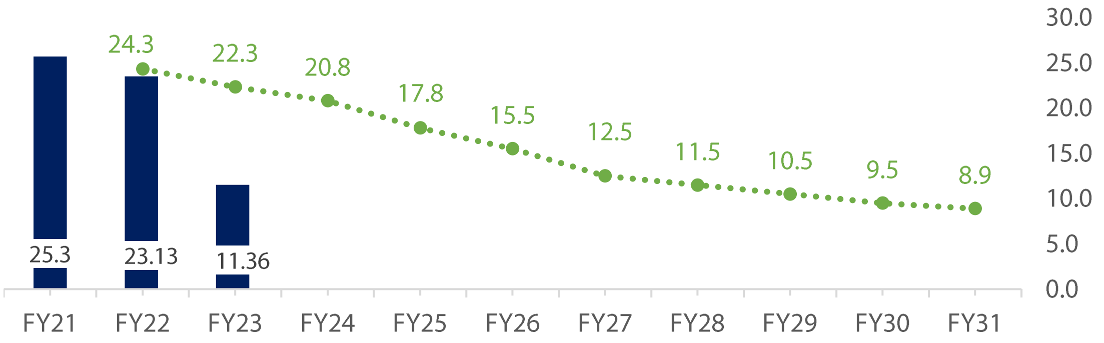
Tata Power Central Odisha Distribution Ltd. (TPCODL)



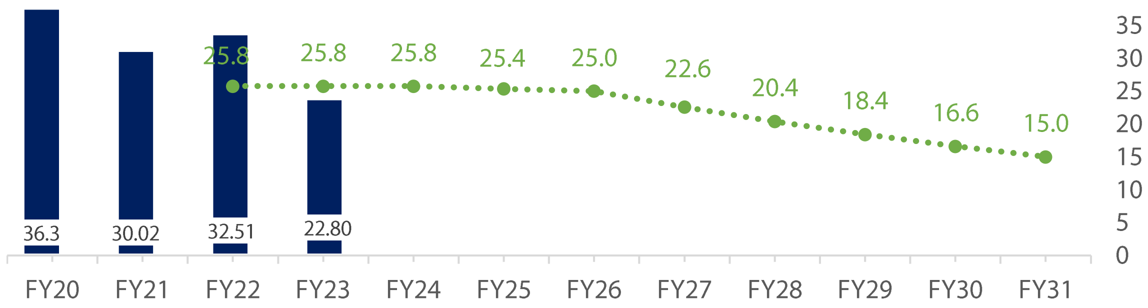
Tata Power Western Odisha Distribution Ltd. (TPWODL)



Tata Power Northern Odisha Distribution Ltd. (TPNODL)



Tata Power Southern Odisha Distribution Ltd. (TPSODL)



Tariff determination trajectory for AT&C losses

AT&C Actual

Source: OERC, Tata Power

TPCODL acquired in June'20
TPWODL acquired in Jan'21
TPNODL acquired in Apr'21
TPSODL acquired in Jan'21

Levers of Odisha Turnaround Story

Improving Reliability & Quality of Power

Predictive Analysis

Reliability improvement measures like DTR augmentation, Network strengthening, installing auto-reclosure & sectionalizers on feeders

Sub-stations automated

206 | 115 | 148 | 115

Capex to upgrade systems (₹ in Cr)

798 | 546 | 668 | 635

Central PSCC

Enhancing Safety Culture

Drone surveillance for overhead network monitoring

PPEs to Employees

Safety Audits & Practice Yards

VR based safety trainings, Workmen family Behavioral-based safety awareness program

Contractor Safety Mgt

Technology deployment

Innovative Tech - Trolley mounted Sub-station, Automatic Voltage Regulator Transformer, etc

Advanced Distribution Management System

AI based OCR meter reading , Drone technology for Bluetooth enabled meters.

Smart Meter installation (thousands)

68 | 56 | 85 | 55

ERP, Billing & CRM

Consumer Centricity

24 x 7 call centre services

Multiple digital payment avenues

TAT Matrix for redressal

New Connections (MW)

1063 | 519 | 1362 | 816

Rural PDS linked Anubhav Kendras

Commercial focus

Arrear Collections (₹ in Cr)

411 | 257 | 370 | 576

Theft Load (MW)

268 | 168 | 209 | 246

Energy Audit & GIS Indexing of network & consumers

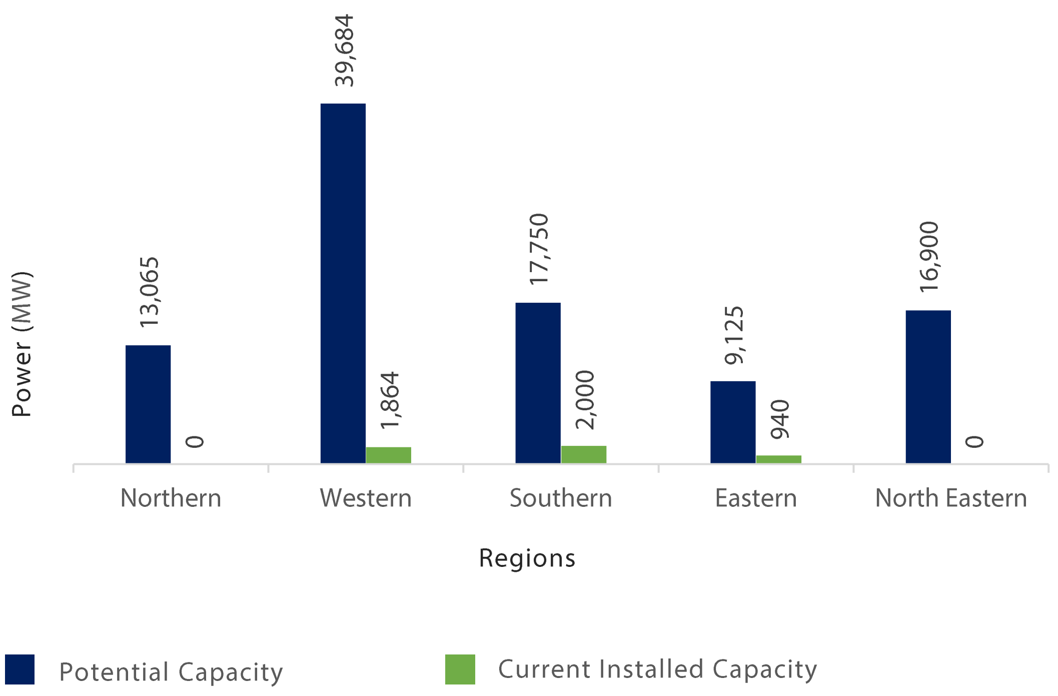
Mobile App & M-Pos integrated revenue collection app

TPCODL TPSODL TPWODL TPNODL

Pumped hydro plants: Our emerging growth lever

97GW of Pumped Hydro (PSP) potential in India with c40GW in Western India

Region-wise distribution of PSP potential and current PSP installed capacity (MW) in India



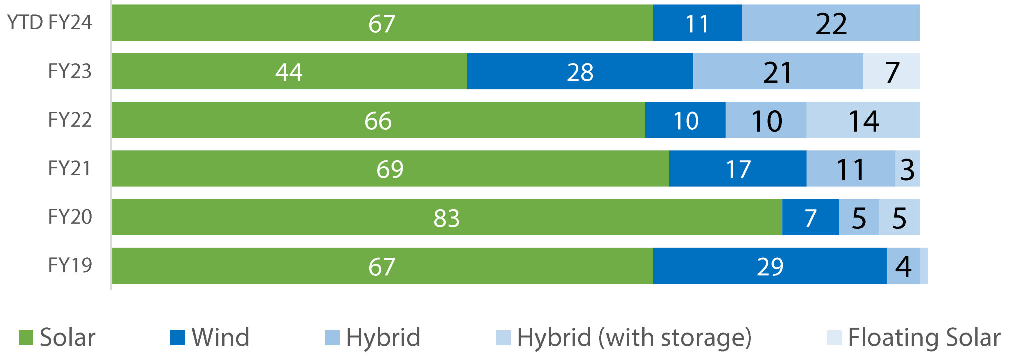
Source: CEA

Current status of pumped storage hydro plants in India

Status	No of projects	Installed capacity (MW)
In Operation		
Working in Pumping Mode	6	3,305
Not working in Pumping Mode	2	1,440
Under Construction		
Under Active Construction	3	2,700
On which Construction is held up	1	80
DPR concurred by CEA	1	1,000
Under Examination	1	1,350
Under S&I (Survey & Inspection)	33	42,150
Under S&I Held Up	5	5,320
Grand Total	52	57,345

Source: CEA

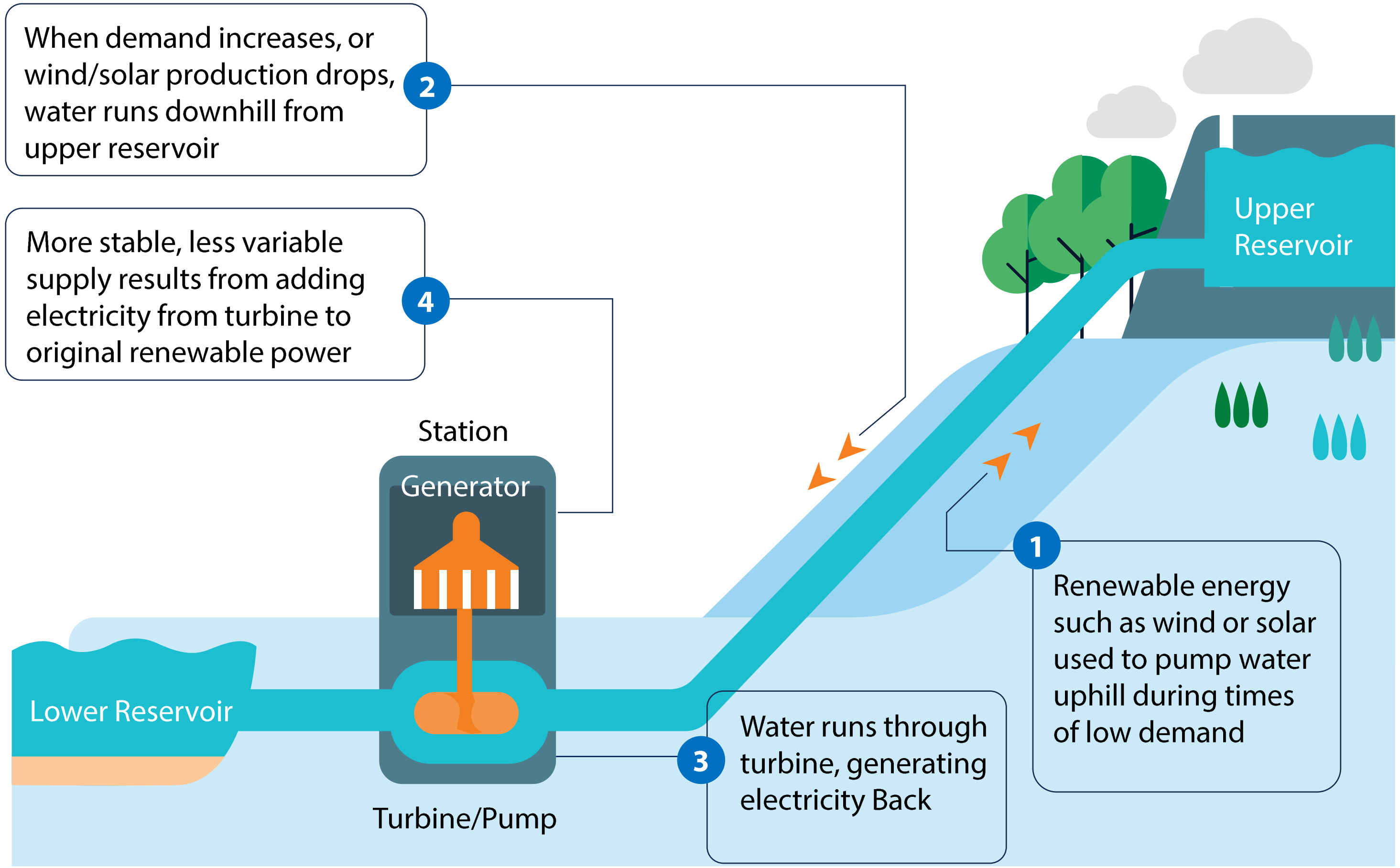
Share of Hybrid in RE auctions has been rising (%)



Source: Elekore, HSBC

Why Pumped Storage Hydro plants?

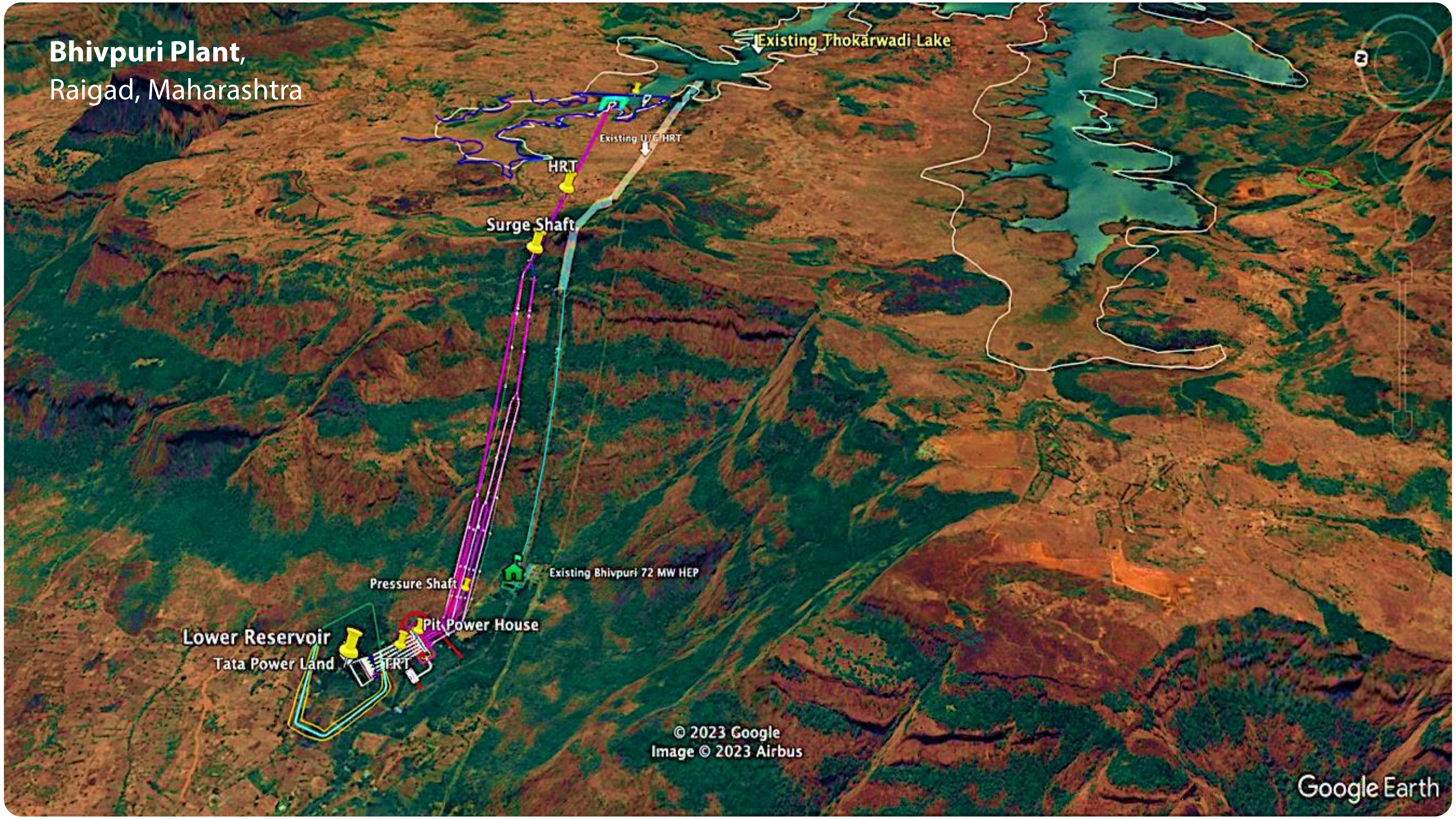
Pumped Storage Hydro - Concept



Benefits of PSP

- Green Storage
- Flexible and Reliable
- High Economic Value
- Useful life > 80 Years
- Black Start Capability

1,000 MW Bhivpuri PSP (Brownfield Project) - Key highlights



1,000 MW
Bhivpuri PSP

Type
Existing Off-stream

Upper Reservoir
Thokarwadi – 352 MCM (million cubic meters)

Lower Reservoir
New – 5 MCM

Daily Generation
6,000 MWhr

Capital Investment
₹4,700 Crores

Timeline:
Start by Mid-2024
Completion- End 2027

1,800 MW Shirawta PSP (Brownfield Project) - Key highlights

1,800 MW
Shirawta PSP

Type
Off-stream

Upper Reservoir
New -15 MCM

Lower Reservoir
Existing Shirawta Dam
197 MCM

Daily Generation
10,800 MWhr

Capital Investment
₹7,850 Crores

Timeline:
Start by Mid-2024
Completion by 2028

Our Pumped Storage (PSP) projects: Current Status

FSR submitted to CEA for approval. Project layout approved by CEA for survey & investigation (S&I). Investigation in progress.

Connectivity application made to CTU; First consultation meeting held

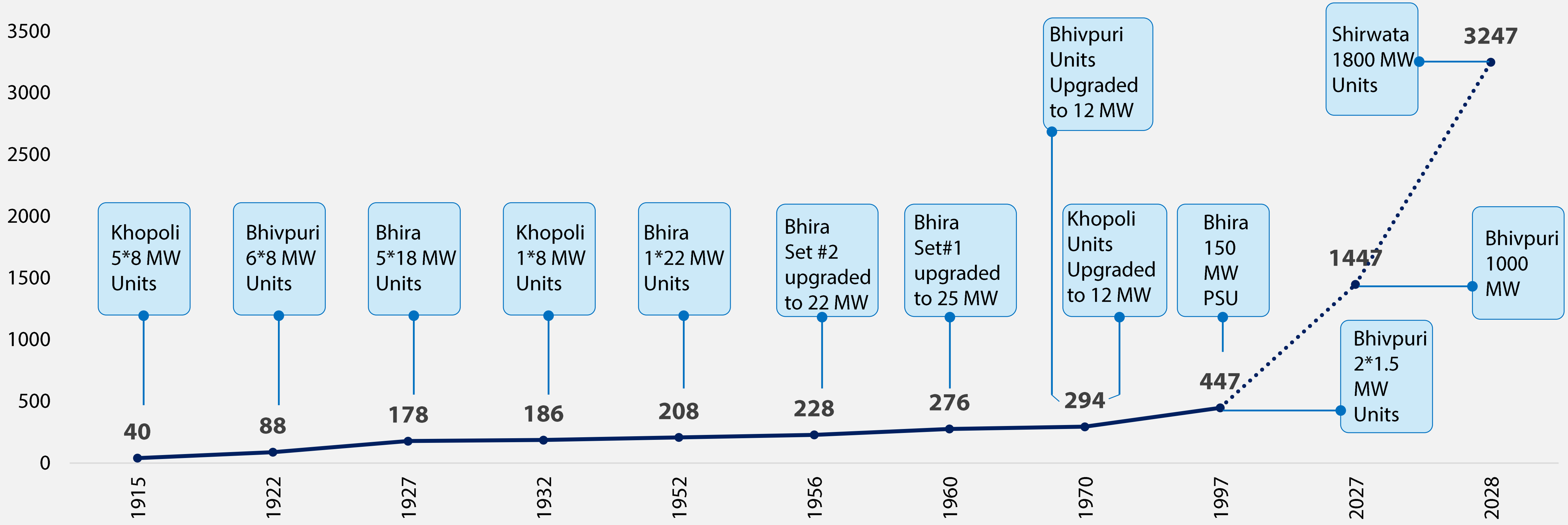
Terms of Reference approved by MoEFCC

Order placed for pre-order engineering

Detailed Project Report (DPR) preparation in progress : Target January 2024

Domestic hydro capacity to rise by 7x+ post commissioning of PSP Projects

Hydro overview: Plant capacity addition (MW)



Additional potential of 9GW in the future should help support RTC of ~30GW

573 MCM **Mulshi dam,**

3,000 MW,

Nenavali, Mulshi dam Upper Reservoir

72 MCM **Walwhan dam,** Raigad,

3,000 MW,

Kataldhara, Walwhan dam Upper Reservoir

353 MCM **Thokarwadi dam,** Bhivpuri

3,000 MW,

Poltalpali, Thokarwadi dam Upper Reservoir

Other Reservoir Sites of Tata Power

6 MCM **Kundali dam,** Khopoli

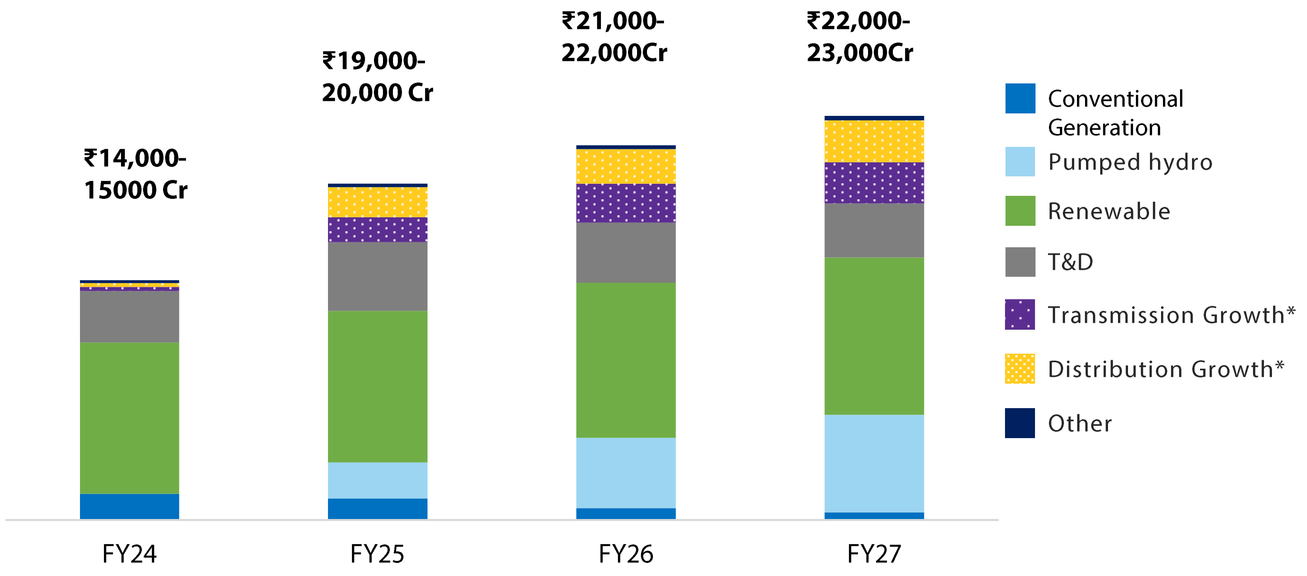
12 MCM **Lonavala dam,** Khopoli

TATA POWER

Looking ahead: Key targets for FY27

Tata power to deploy 45% of its capital to renewable sector

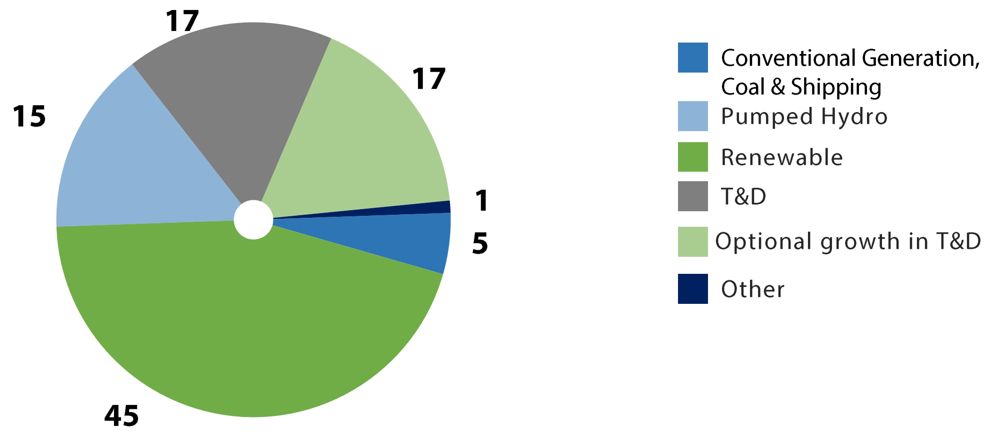
Estimated capex of around ₹60,000 Cr till FY27



Source: Tata Power Estimates

*Optional Capex of ₹12,000 Cr subject to TBCB wins in transmission and DISCOM circles

45% of the capex to be spent on renewables between FY24-27e

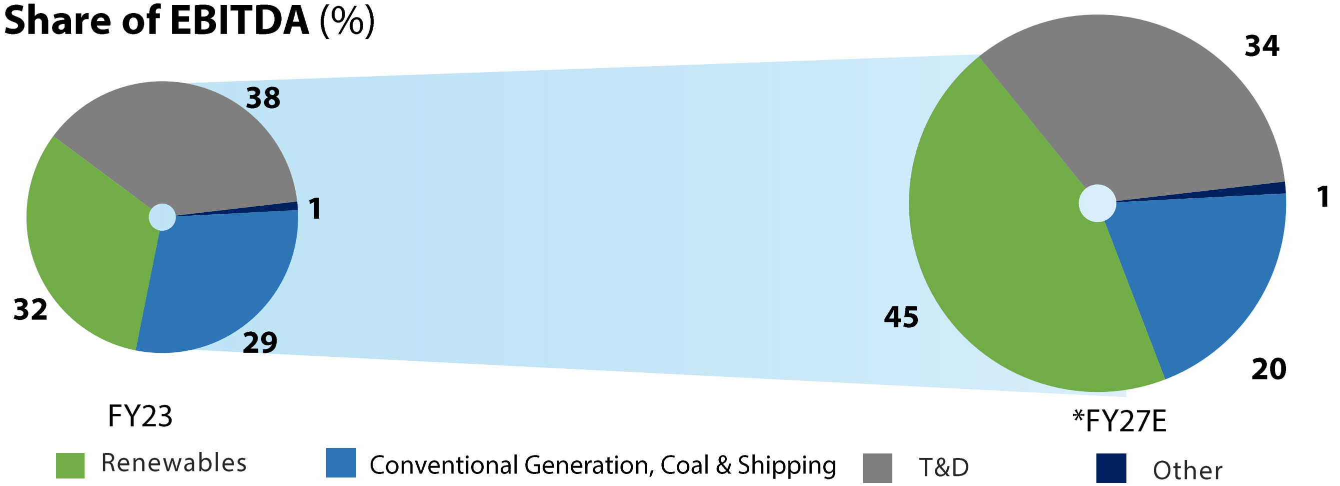


Source: Tata Power Estimates

Confident about growing profits with rising share from core businesses

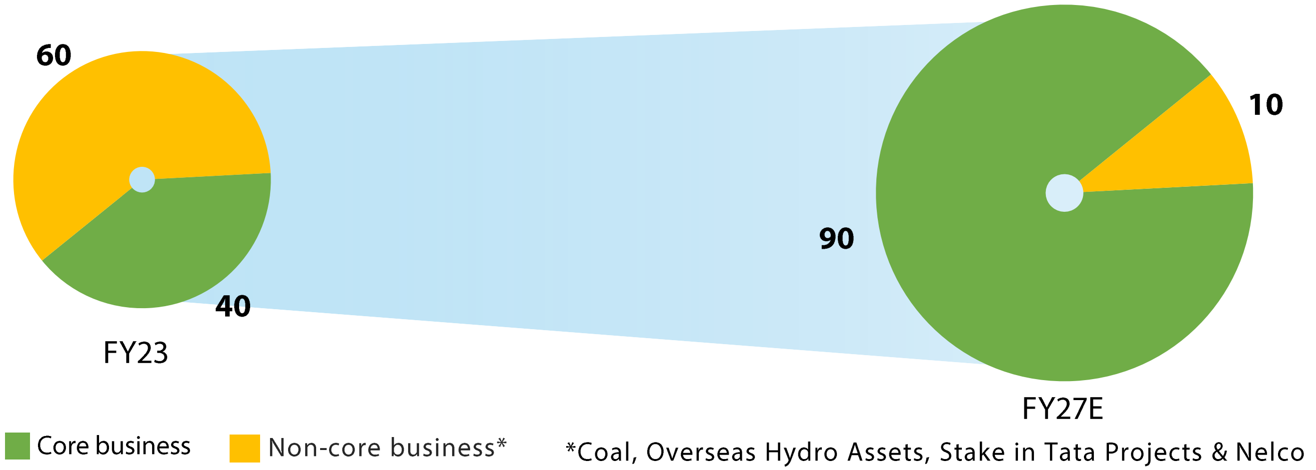
	FY23		FY27E
Revenue	₹56,033 Cr	▶	~2X
EBITDA	₹10,068 Cr	▶	~2X
PAT (before Minority)	₹3,810 Cr	▶	~2X

Share of EBITDA (%)



* EBITDA contribution from PSP shall start from FY28

Share of PAT (%)



*Coal, Overseas Hydro Assets, Stake in Tata Projects & Nelco

Sustainability: At the core of all that we do

Our sustainability aspirations

- Become **carbon net zero before 2045**
- Become **water neutral before 2030**
- **Zero waste to landfill** before 2030
- **No Net Loss to Biodiversity**
- Leverage technology to create the **'Utility of the Future'** (IOT, Smart Grids, BESS, Green H2, robotic panel cleaning etc.)

- **Education** - Train **35 lakh+** youth as conservation and STEM education champions by 2028
- Employability and Employment - **20 lakh+** youth trained and made employable by 2028
- Entrepreneurship - Enable **1 lakh+** community collectives (Self Help Groups) by 2028
- Improve overall gender diversity ratio to **20%** by 2028
- Leverage technology to create the **'Utility of the Future'** (IOT, Smart Grids, BESS, Green H2, robotic panel cleaning etc.)

- Improve **Sustainability Disclosures** and get listed in **DJSI Emerging Markets list by 2027**
- Inclusion in S&P Global Emerging Market List by 2027

Taking leaps towards our ESG goals

Particulars	Description	Baseline		Target		On going actions
		Value (FY23)	Year	Value	Year	
Environment	Clean & Green Portfolio	16%*	2015	70%	2030	• 38% RE portfolio as of June 2023
	Net Zero (Absolute Carbon Emissions)	38.9 Million Tonnes	2023	100%	2045	• SBTi Commitment • Renewable Portfolio Growth • Thermal plant phase-out plan • Annual plantation of more than 1 million saplings
	Water Neutral (Fresh Water Consumption)	69.7 Billion litres	2023	100%	2030	• 3% Fresh Water reduction • 17% Rain Water Harvesting • 80% by offsets
	Zero Waste to Landfill	5.96 Million Tonnes	2023	100%	2030	• Waste utilisation of Ash
	Total Non HW Waste (including Ash)	5.8 Million Tonnes				• Waste Management Plan for biodegradable waste, plastic, and e-waste
Social	Education	1.6 Million beneficiaries	2023	3.5 Million	2028	• CSR initiatives made a positive impact on 3.7 million lives across 17 Indian states during FY23 • ₹ 50 Cr CSR spend in FY23
	Employability & Employment	39,156 beneficiaries	2023	2.0 Million	2028	
	Entrepreneurship	26,170 beneficiaries	2023	100,000	2028	
	Gender Diversity (%)	9%	2023	20%	2028	• Women employees across roles • 59% - Campus hires • Policies supporting women in all life stages and mentorship program
Governance	DJSI Emerging Markets List (Absolute Score)	67/100	2023	80/100	2027	• ESG Action Plan and Gap Analysis

*Base Year 2015 for Clean & Green Portfolio in alignment with Paris Agreement

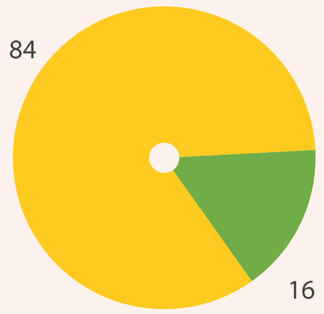
Gradually improving our ESG ratings

	2023	2022	2021	2020	2019	2018
CDP – Climate Change	**B**	B	C	C	D	D
CDP – Water	**B**	B	B	C	F	F
DJSI	**67**	67	67	-	48	15
MSCI	**BBB**	BBB	BB	BB	BB	BB
Sustainalytics	**40.9**	41.2	38.6	-	-	-

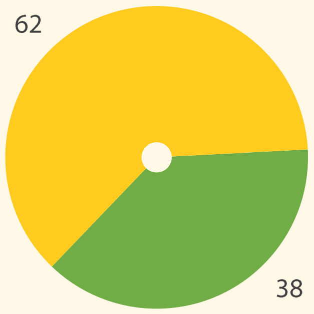
As on 30 September, 2023

Achieving 100% clean power generation by FY 2045

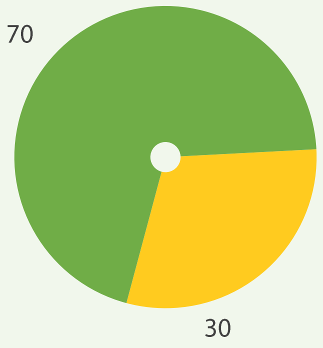
2015
Largely a coal-based company, having capacities to fulfil the energy demands of a developing India



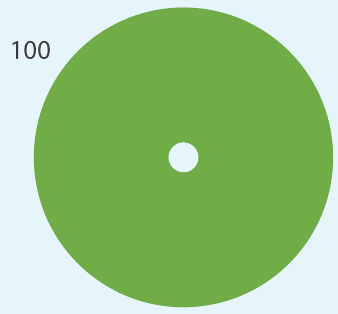
2023
Transitioning towards a clean and green portfolio through renewable energy capacity expansion



2030
Clean & Green Capacity will account for 70% of our overall capacity in 2030



2045
Phasing out thermal portfolio before 2045 as Power Purchase Agreements (PPA's) for our thermal capacity expires



Clean & Green (%) Thermal (%)

Empowering Communities

CSR Mission

To work with communities in the vicinity of our operations or as specially identified, to gain their acceptance of co-existence by addressing salient development imperatives

The key interventions for target communities are focused in the following thematic areas

Education	**Employability & Employment**
Entrepreneurship	**Essential Enablers**

3.7 Mn
Touching lives

85+
Districts in 17 states

**Tata Power has taken a major leap in the CSR ranking by securing a spot in top 10 as against its 57th rank in the last year

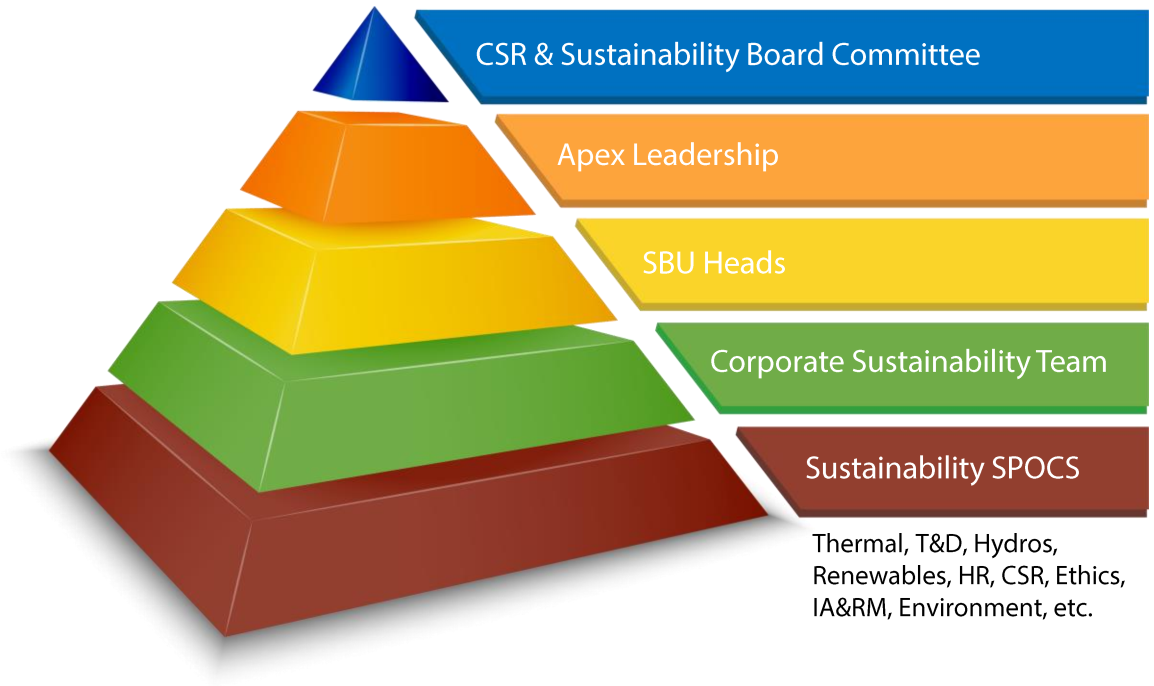
Powering Transforming

Public Private Partnerships (Collaboration & Leverage)	Improving access & creating opportunities	Far Reaching Impact on Community and Co-ownership
Optimal Utilization of Resources (Premises)	Green Jobs	Technology Enablement
Institutionalisation & Standardization	Tree Mittra leveraged for social afforestation	

**Source: https://www.futurescape.in/responsible-business-rankings/ | https://thecsrjournal.in/top-100-companies-india-csr-sustainability-2021/

Well-established governance framework

Our CSR and Sustainability Committee at the Board level guides the strategy, and the Apex Leadership Team enables its impactful implementation



Leadership and Oversight on Sustainability

Advocacy

New technology

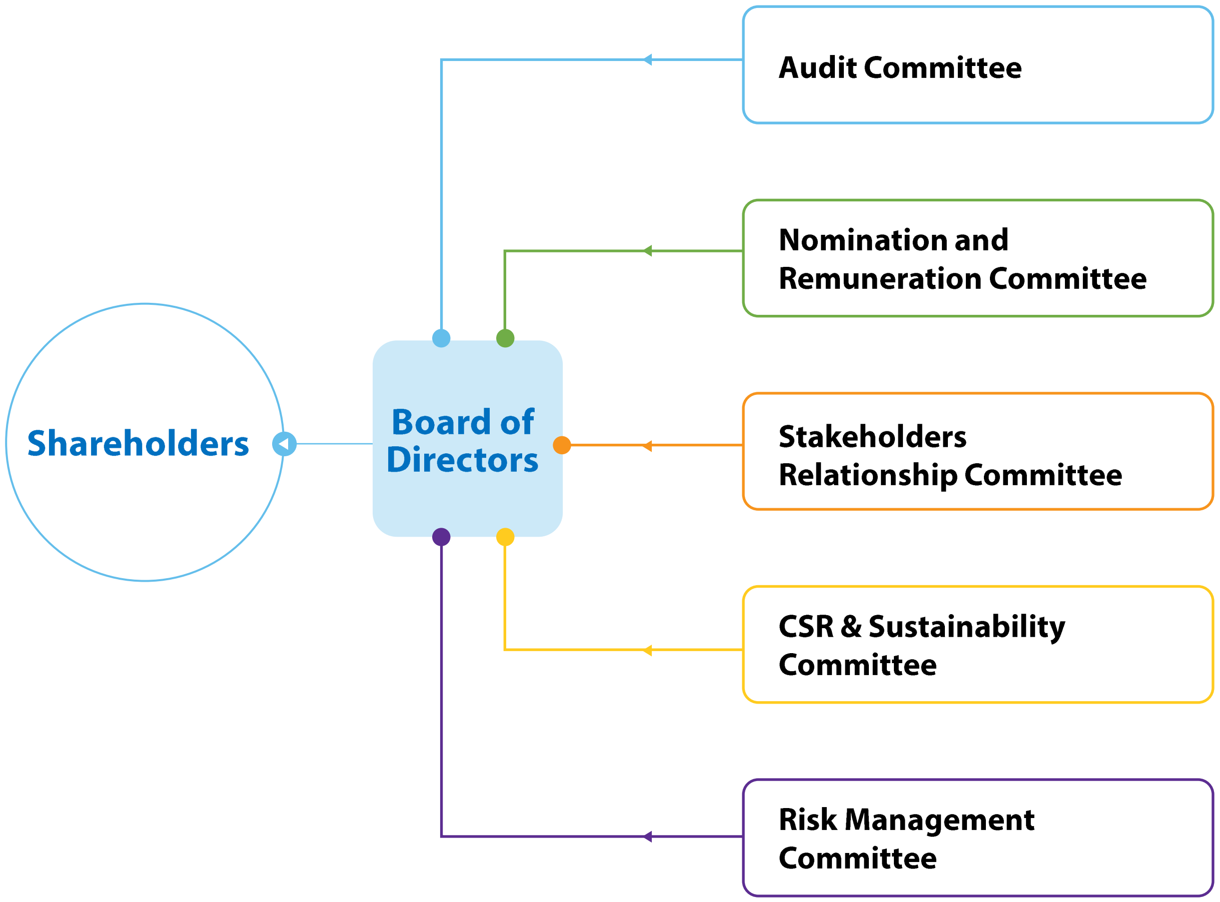
Institutional Structures and Systems

Leadership with care	**Initiatives that are based on, and are encompassing**
Care for our environment (society at large) • Environment conservation • Efficient use of energy • Investment in green technology	What needs to be done (material to both, for stakeholders and us)
Care for our shareholders and customers	What we are good at doing and is linked to our business objectives
Care for our community	What we should take up as national thrust areas for development
Care for our people	What we should define as our standards, from compliance, to competing, to leading

Going beyond compliance

Architecture of Care

Robust Governance Structure in place



Governance policies

- Tata Code of Conduct
- Code of Conduct for Independent Directors
- Code of Conduct for Non-Executive Directors
- Related Party Transactions Policy, Framework & Guidelines
- Whistle Blower Policy & Vigil Mechanism
- Risk Management Policy - ISO certified
- process
- CSR Policy
- Tata Code of Conduct for Insider Trading and Corporate Disclosure Policy
- Dividend Policy
- Policy for Determining Material Subsidiaries
- Policy for determining Materiality for Disclosures
- Remuneration Policy for Directors, Key
- Managerial Personnel and Other Employees
- Charters of various Board appointed Committees

... and others

What sets us apart

TATA

Deeply entrenched Power company with history of more than 100 Years

1910-1955

- **1910:** Incorporated as Tata Hydroelectric Power Supply Company
- **1915:** 1st Hydro power generating station (40 MW) commissioned at Khopoli, followed by Bhivpuri **(1922)** and Bhira **(1927)**

1956-2000

- **1956-65:** 3 units of 62.5 MW each and 4th thermal unit of 150 MW capacity at Trombay commissioned
- **1977:** 150MW pumped storage at Bhira upgraded
- **1984:** 500 MW-5th Unit established at Trombay, to supply uninterrupted supply to Mumbai
- **1991:** 1st Solar cell manufacturing capacity is set up by TPSSL in collaboration with BP Solar

2001-2005

- **2001:** Commissioned first wind asset of 17 MW at Supa Maharashtra
- **2002:** Took over distribution of Delhi, later renamed as TPDDL a JV between Tata Power (51%) and Delhi Government (49%)
- **2003:** Entered a JV with PGCIL, to develop a 1,200 Km long transmission line to bring electricity from Bhutan to Delhi

2007

- Completed acquisition of 30% stake in Indonesian Coal Mines: KPC Arutmin & Indo Coal for US$1.15Bn
- Tata Power - Mundra signed PPA with 5 states (Gujarat, Maharashtra, Punjab, Haryana & Rajasthan)
- Industrial Energy Limited (IEL), a JV formed between Tata Power (74%) and Tata Steel (26%) to meet power requirements for Tata Steel

2011

- Commissioned first solar asset of 3 MW at Mulshi, Maharashtra
- Unit 1 of 525MW Maithon Power Limited (MPL) commissioned

2012-2013

- **2012:** Commissioned 2nd unit of 525 MW in MPL
- **2013:** 5 units of 800 MW each at Mundra UMPP commissioned, the first super critical technology in India
- **2013:** Acquired 26% share in the Indonesian coal mine BSSR for US$ 152 million

2014-2015

- **2014:** Entered into agreement to sell 30% stake in Arutmin for US$401Mn
- **2015:** Commissioned the 126MW Dagachhu Hydro Power Corporation in Bhutan

2016-2017

- **2016:** Acquired 1,010MW operational RE assets of Welspun, renamed it to Walwhan Renewable Energy Ltd (WREL).
- **2016:** Resurgent Power JV formed by Tata Power and ICICI Venture to acquire stressed assets in Indian Power Sector. Tata Power holds 26% stake in Resurgent Power"
- **2017:** Tata Power Ajmer Distribution Limited (TPADL) formed to take over supply and distribution of Ajmer

2018-2019

- Resurgent Power Ventures acquired 75.01% equity stake of Prayagraj Power Generation Limited (PPGCL)
- Announced the sale of South African JV Cennergi for US$84mn
- Won bid for the installation of 105MWp largest floating solar plant in Kayamkulam, Kerala

2020

- Sold 3 ships for US$ 213Mn
- Tata Sons infuse ₹ 2,600 crore; raise promoter holding to 47% from 37%
- Completed sale of Defence business to Tata advanced Systems Ltd. for ₹ 1076 cr.
- Took over the distribution in Central Odisha TPCODL formed as JV between Tata Power (51%) and Odisha Government (49%)

2021

- Took over the distribution in North-Eastern Odisha, Western and Southern Odisha. TPNODL, TPWODL and TPSODL formed as JV between Tata Power (51%) and Odisha Government (49%)

2022

- Mundra (CGPL) amalgamated into Tata Power
- Tata Power Renewable Energy Limited (TPREL) entered into an agreement to raise ~₹ 4,000 (US$ 525 million) crores by issuing shares to a consortium of Blackrock and Mubadala
- Resurgent announces acquisition of 100% stake in NRSS XXXVI Transmission Ltd. and SEUPPTCL (Transmission Company)

2023

- TPREL received second tranche of ₹2,000 Cr and issued compulsorily convertible preference shares (CCPS) which will result in further dilution of 5.37% equity stake
- TPREL receives LoA for 966MW Hybrid RE Project from Tata Steel
- Tata Power signs MoU with Maha Govt. for development of 2.8GW of Pumped Storage Project (PSP)
- 4.3GW Cell & Module Plant achieved First Module Out (FMO) in October 2023

Most vertically integrated and diversified power portfolio in India

Tata Power Company Limited (TPCL) H1FY24	Revenue (₹ in Cr)	EBITDA (₹ in Cr)	Net Debt (₹ in Cr)	PAT*** (₹ in Cr)
	30,446	6,092	36,609	2,158

Thermal generation, coal & hydro renewables

Revenue (₹ in Cr)	EBITDA (₹ in Cr)	PAT (₹ in Cr)
9,800	2,107	1,370

THERMAL	CAPACITY	FUEL	STAKE
Mundra	4,150 MW	Coal	100%
Trombay	930 MW	Coal/Gas	100%
Maithon (MPL)	1,050 MW	Coal	74%
Prayagraj (PPGCL)*	1,980 MW	Coal	20%
Jojobera	428 MW	Coal	100%
Haldia	120 MW	Coal	100%
IEL	483 MW	Coal/ WHRS	74%
Rithala	108 MW	Gas	51%
PT CKP	54 MW	Coal	30%

INDONESIA COAL MINES, SHIPPING & INFRA		
MINE	**CAPACITY**	**STAKE**
Kaltim Prima (KPC)	60 MT	30%
BSSR & AGM	18 MT	26%
NTP (Coal Infra)	-	30%
TERPL (Coal Shipping)**	-	100%
HYDRO	**CAPACITY**	**STAKE**
Bhira	300 MW	100%
Bhivpuri	75 MW	100%
Khopoli	72 MW	100%
Dagachhu	126 MW	26%
Itezhi Tezhi	120 MW	50%
Adjaristsqali	187 MW	50%

Renewables^

Revenue (₹ in Cr)	EBITDA (₹ in Cr)	PAT (₹ in Cr)
4,235	1,721	426

RENEWABLES	CAPACITY
Solar Power	3,191 MW
Wind Energy	1,007 MW
UNDER CONSTRUCTION	**CAPACITY**
Solar Power	1,460 MW^^
Hybrid	2,300 MW
EV CHARGING	**CAPACITY**
Public	4,932
Home	61,959
E-Bus	464

TATA POWER SOLAR SYSTEMS LIMITED (TPSSL)	
PARTICULARS	**CAPACITY/ ORDER BOOK**
Utility Scale Solar EPC	₹15,870 Cr
Rooftop EPC	₹2,872 Cr
Cell & Module Capacity	530 & 682 MW
TP SOLAR: UNDER CONSTRUCTION	**CAPACITY**
Cell & Module	4,300 MW (each)

Transmission & distribution

Revenue (₹ in Cr)	EBITDA (₹ in Cr)	PAT (₹ in Cr)
18,731	2,180	683

DISTRIBUTION LICENSE	CUSTOMERS	STAKE
Mumbai	0.76 Mn	100%
Tata Power Delhi (TPDDL)	2.00 Mn	51%
Odisha	10.06 Mn	51%
DISTRIBUTION FRANCHISE	**CUSTOMERS**	**STAKE**
Ajmer (TPADL)	0.16 Mn	100%
POWER TRADING COMPANY		**STAKE**
TPTCL		100%

TRANSMISSION	CIRCUIT KM	STAKE
Mumbai	1,264	100%
Powerlinks	2,328	51%
SEUPPTCL	789	26%
NRSS XXXVI	1.5	26%
UNDER CONSTRUCTION		
SEUPPTCL	754	26%
NRSS XXXVI	151.5	26%

Eliminations/ Others

(Incl. corporate taxes , expenses and interest)

Revenue (₹ in Cr)	EBITDA (₹ in Cr)	PAT (₹ in Cr)
(2320)	84	(321)

ENTITY	BUSINESS MODEL	STAKE
Tata Projects	EPC	31%
Nelco	Communication	50%
Corporate		

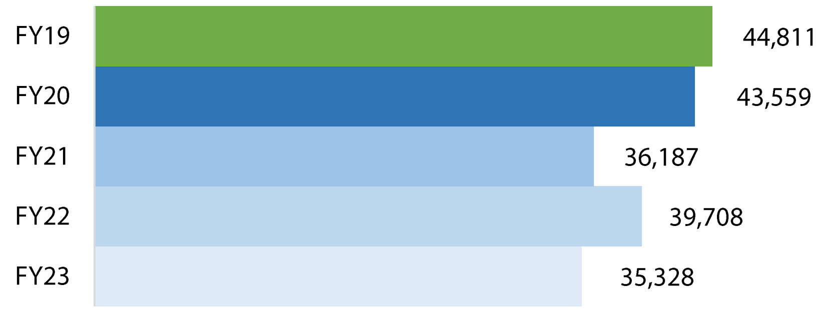
* Resurgent owns 75% in Prayagraj | ** TERPL is a wholly owned subsidiary of Tata Power International Pte Ltd., which is wholly owned by Tata Power. | *** Reported PAT before Minority Interest after exceptional items| ^ Tata Power currently owns 93.94% stake in Renewables (TPREL). CCPS has been issued which will result in further dilution of 5.37% equity stake in TPREL | ^^15 MW is for IEL

JVs and Associates | Standalone Divisions | Subsidiary

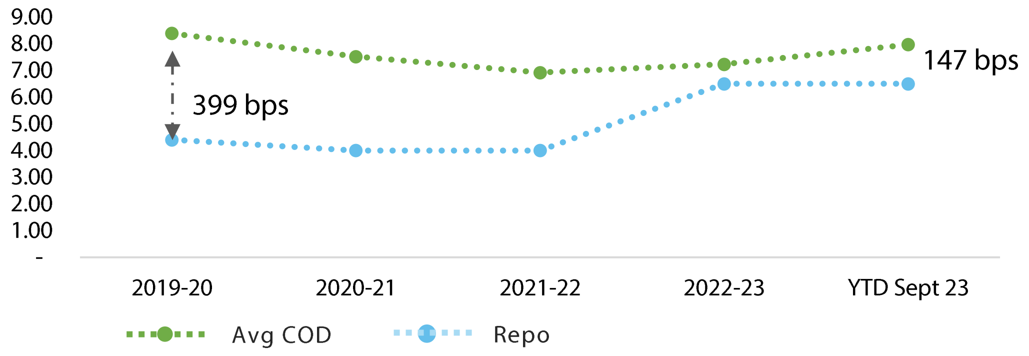
As on 30 September, 2023

Well-capitalised with one of the strongest Balance Sheets

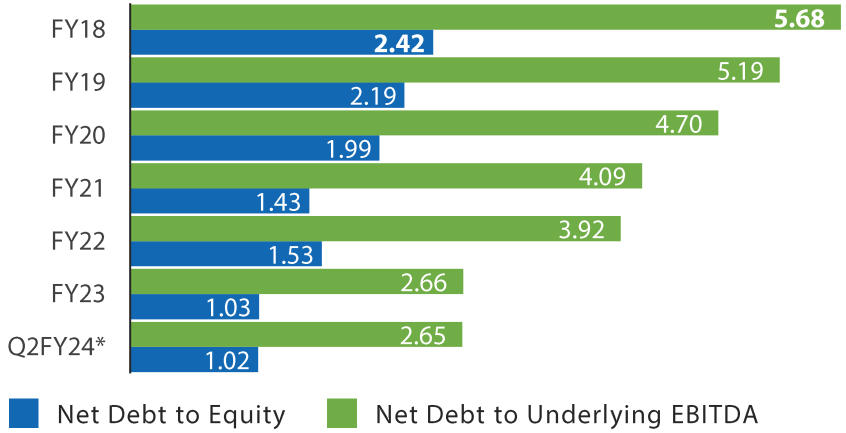
Net Debt (₹ in Cr)



Relatively smaller rise in Cost of Debt (CoD) compared to rise in Repo rate (%)



Balance Sheet continues to strengthen



*Trailing twelve months

Credit rating continues to improve

Credit Rating* (Consolidated)	2019-20	2020-21	2021-22	2022-23	Current
CRISIL	AA- /Positive	AA /Stable	AA /Stable	AA /Stable	AA /Positive
ICRA	AA- /Stable	AA- /Positive	AA /Stable	AA /Stable	AA /Positive
India Ratings	AA /Stable	AA /Stable	AA /Stable	AA /Stable	AA /Stable
CARE	AA /Stable	AA /Stable	AA /Stable	AA /Stable	AA /Positive
S&P Global	-	B+ /Positive	BB /Stable	BB+ /Stable	BB+ /Stable
Moody's	-	Ba3 /Stable	Ba2 /Stable	Ba2 /Stable	Ba1 /Stable

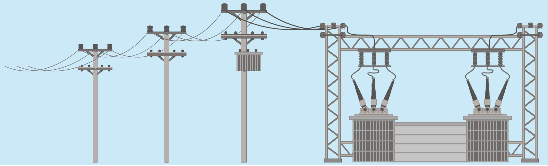
*Credit Upgrades indicated by deepening shades of blue

Well poised to achieve our aspirations

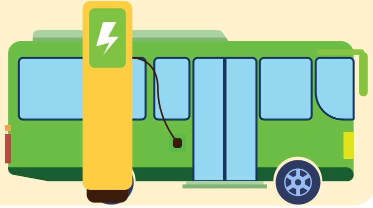
An All-round
"Utility of the Future"

PSP Projects to add 2.8GW to our Clean and Green Energy Portfolio

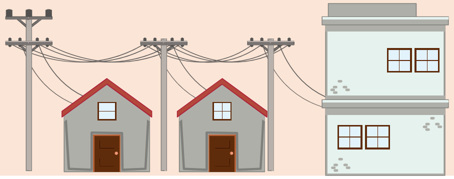
Double Revenues, EBITDA and profitability by FY27 with rising contribution from our Core Businesses - Generation, Renewable, Transmission and Distribution, in India



Clean & Green portfolio to reach 70% of the generation capacity by 2030



Expand distribution footprint to **40 million customers by 2027;** and grow transmission business through **TBCB & M&A** in transmission



Lead industry in transition to **carbon neutrality by 2045, 100% water neutral and 100% zero waste to landfill-biodegradable waste by 2027**

As on 30 September, 2023

TATA POWER

TATA

Thank You!

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