



**adani**  
Energy Solutions

**Adani Energy Solutions Limited**  
(Formerly known as Adani Transmission Limited)

**Equity Presentation**

**August 2023**

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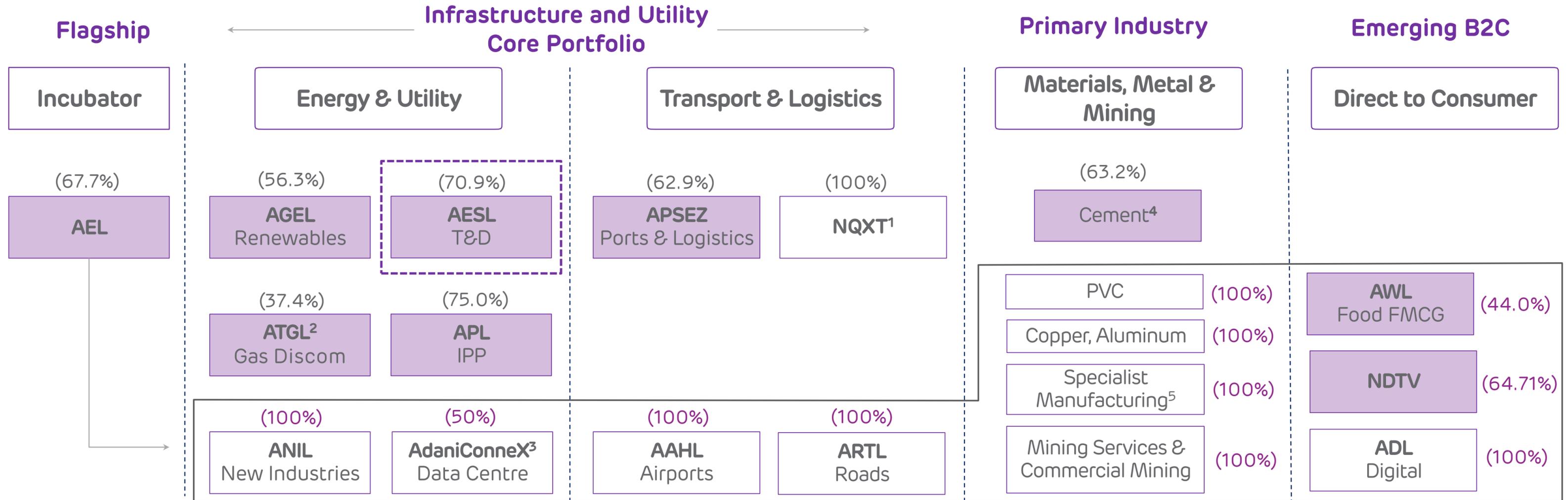
**Annexure**



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**Adani Portfolio**

# Adani: A World Class Infrastructure & Utility Portfolio



(%): Promoter equity stake in Adani Portfolio companies  
 (%): AEL equity stake in its subsidiaries

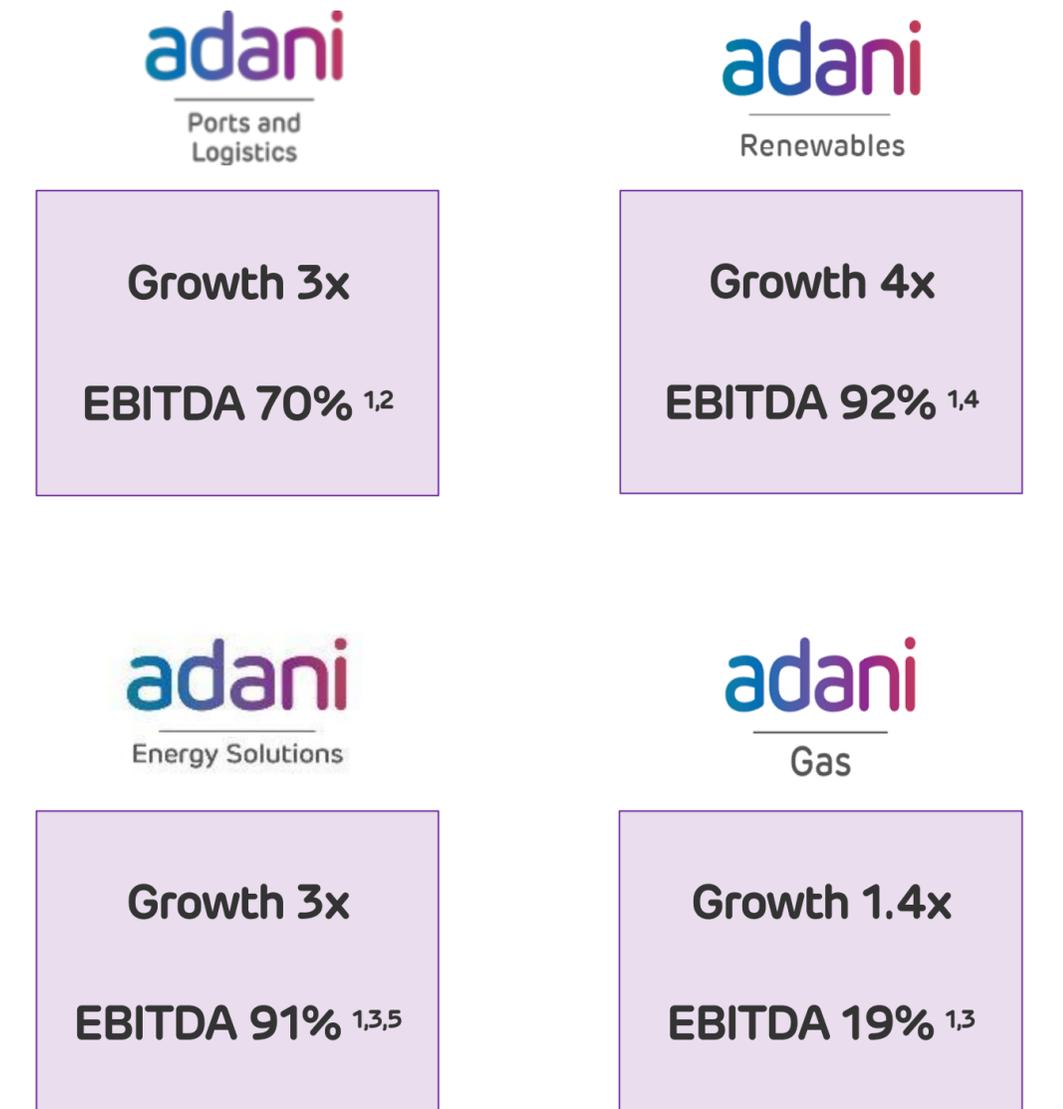
- Represents public traded listed verticals

**A multi-decade story of high growth centered around infrastructure & utility core**

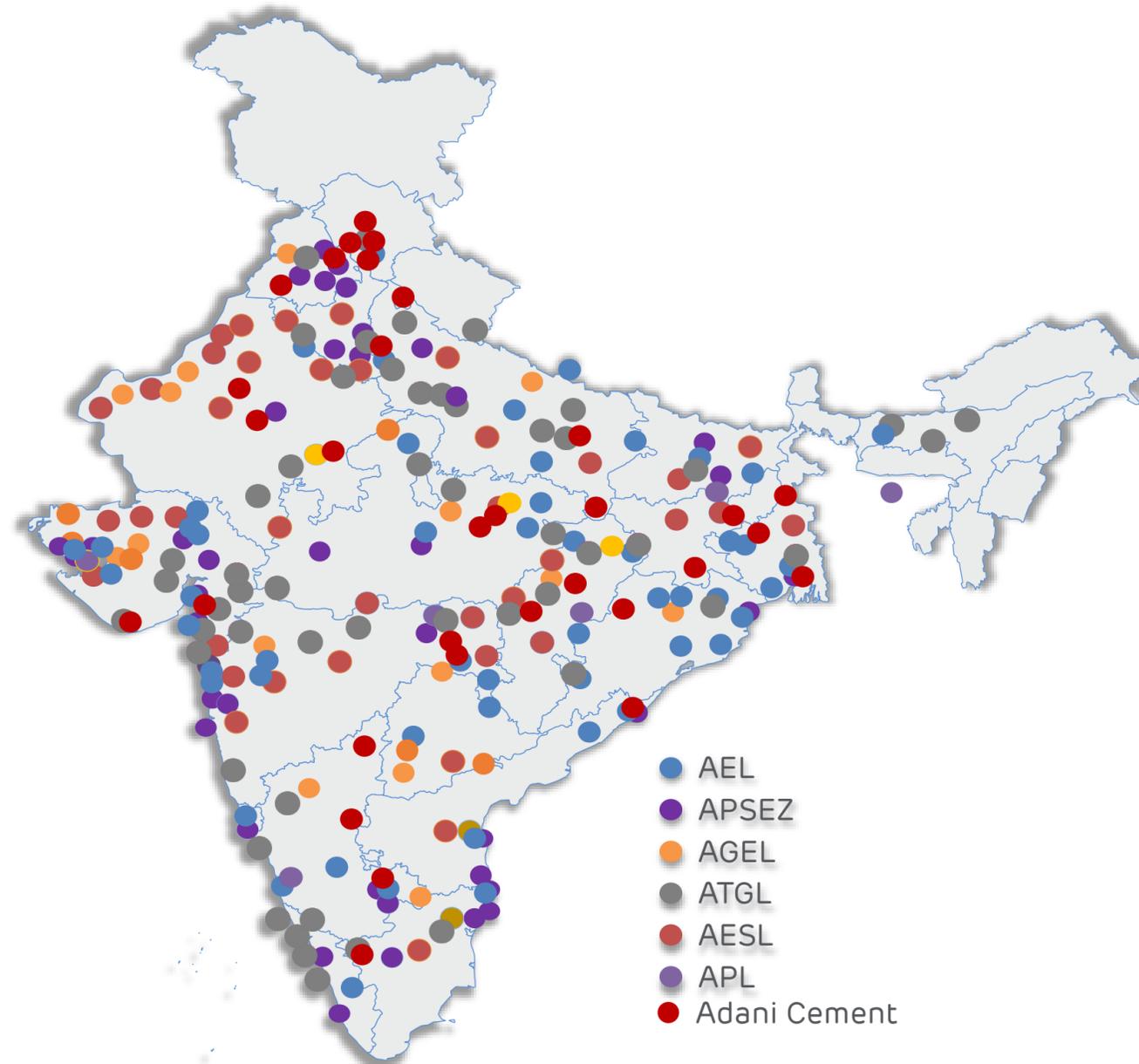
Data as of June 30, 2023. 1. NQXT: North Queensland Export Terminal | 2. ATGL: Adani Total Gas Ltd, JV with Total Energies | 3. Data center, JV with EdgeConnex | 4) Cement business includes 63.15% stake in Ambuja Cement which in turn owns 50.05% in ACC Limited. Adani directly owns 6.64% stake in ACC Limited | 5. Includes the manufacturing of Defense and Aerospace Equipment  
 APSEZ: Adani Ports and Special Economic Zone Limited; AESL: Adani Energy Solutions Limited; T&D: Transmission & Distribution; APL: Adani Power Limited; AGEL: Adani Green Energy Limited; AAHL: Adani Airport Holdings Limited; ARTL: Adani Roads Transport Limited; ANIL: Adani New Industries Limited; AWL: Adani Wilmar Limited; ADL: Adani Digital Limited | Note - Purple color represent public traded listed verticals;

# Adani Portfolio: Decades long track record of industry best growth with national footprint

## Secular growth with world leading efficiency



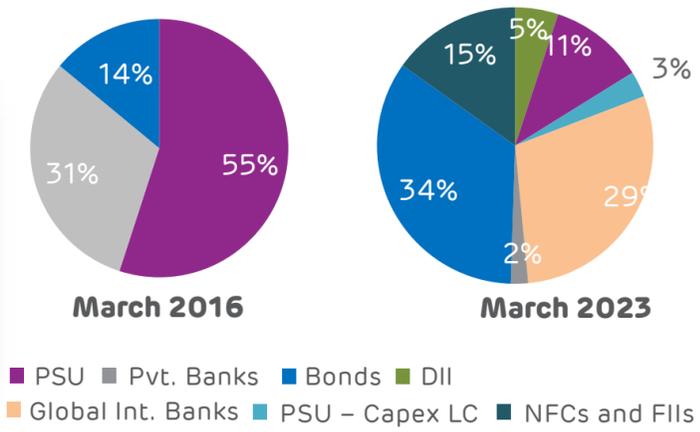
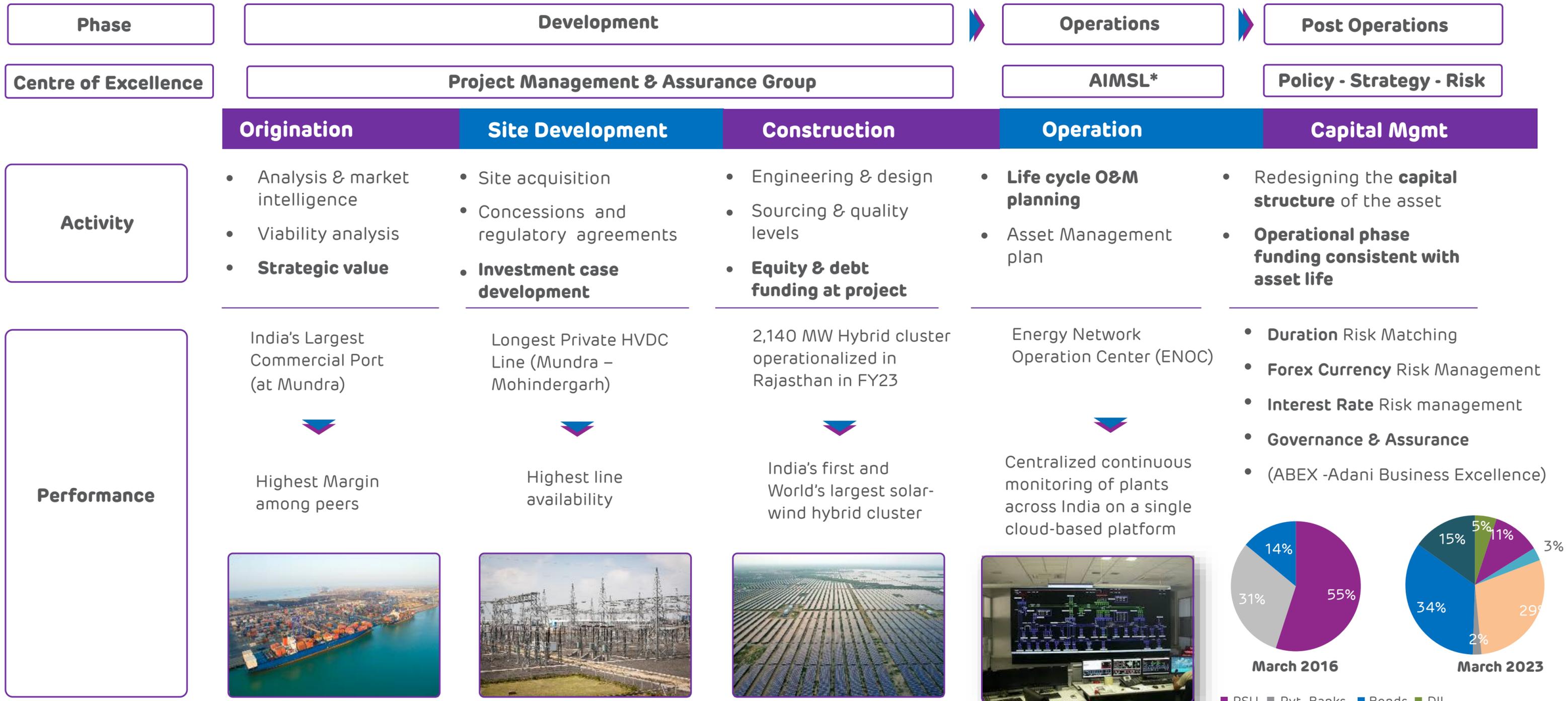
## National footprint with deep coverage



Adani's Core Infra. Platform - **320 Mn** Userbase

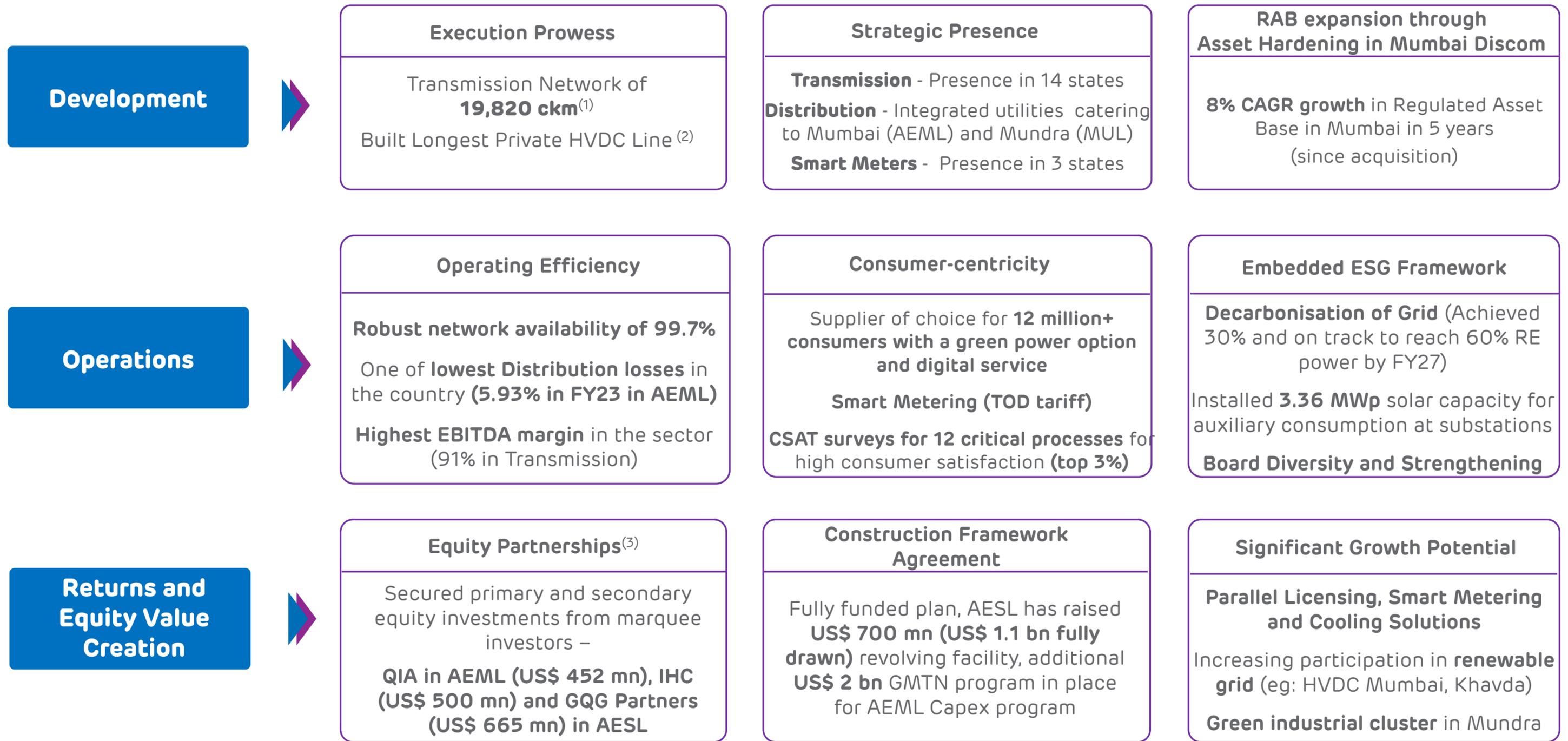
Note: 1. Data for FY23; 2. Margin for ports business only, excludes forex gains/losses; 3. EBITDA = PBT + Depreciation + Net Finance Costs – Other Income; 4. EBITDA Margin represents EBITDA earned from power supply 5. Operating EBITDA margin of transmission business only, does not include distribution business; PBT- Profit before tax, ATGL-Adani Total Gas Limited, AEL: Adani Enterprises Limited, APSEZ: Adani Ports and Special Economic Zone Limited, AESL: Adani Energy Solutions Limited, APL: Adani Power Limited, AGEL: Adani Green Energy Limited; Map not to scale

# Adani: Repeatable, robust & proven transformative model of investment



O&M: Operations & Maintenance, HVDC: High voltage, direct current, PSU: Public Sector Undertaking (Public Banks in India), GMTN: Global Medium-Term Notes SLB: Sustainability Linked Bonds, AEML: Adani Electricity Mumbai Ltd. IG: Investment Grade, LC: Letter of Credit, DII: Domestic Institutional Investors, COP26: 2021 United Nations Climate Change Conference; AGEL: Adani Green Energy Ltd; NBFC: Non-Banking Financial Company | \*AIMSL - Adani Infrastructure Management Services Ltd

# AESL: A platform well-positioned to leverage growth opportunities in energy domain



Note: 1) Transmission network is as of June 2023 and includes operational, under-construction assets; 2) HVDC : High voltage direct current – Longest at the time of commissioning, 3) QIA's Investment in AEML: US\$ 452 mn (Rs 32 bn) total investment (US\$ 170 mn of Equity and US\$ 282 mn of shareholder sub-debt), IHC Investment is Rs. 3850 Crs for 1.41% stake (US\$ 500 million), GQG Investment of Rs. 5,532 Cr (US\$ 665 million) for 6.63% stake based on closing price of Rs 878 dated August 20, 2023

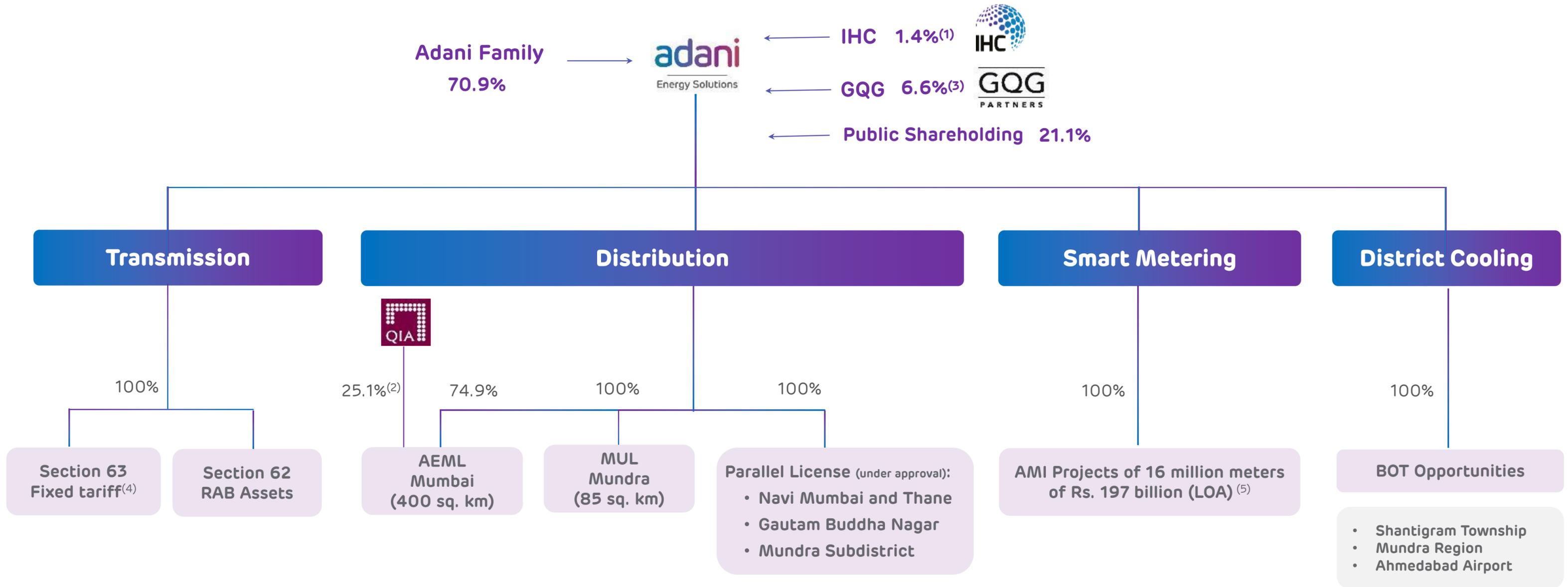
QIA: Qatar Investment Authority, IHC: International Holding Company; TOD Tariff: Time of Day Tariff; AMI: Advanced Metering Infrastructure, MUL: MPSEZ Utilities Limited EBITDA: Earning before interest tax, depreciation & amortization; O&M: Operation and Maintenance, MWp: Megawatt Peak, SS: Sub-station, Ckm: Circuit Kilometer, ESG: Environmental, Social and Governance, ROE :Return on Equity, GMTN: Global Medium Term Note, AEML: Adani Electricity Mumbai Limited; CAGR: Compounded Annual Growth Rate; RE: Renewable Energy; CSAT: Consumer Satisfaction

**Adani Energy Solutions Ltd.**  
(formerly known as Adani Transmission Ltd.)



**About AESL**

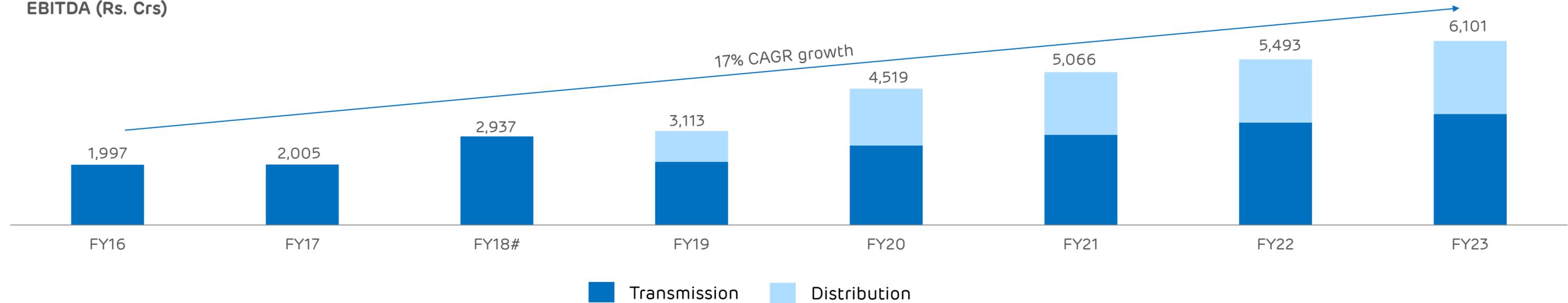
# AESL: Business Snapshot



Notes: 1) Primary equity by IHC Investment: Rs. 3850 Cr for 1.41% stake (US\$ 500 million) ; 2) Primary Equity - QIA's Investment in AEML: US\$ 452 mn (Rs 32 bn) total investment (US\$ 170 mn of Equity and US\$ 282 mn of shareholder sub-debt) for 25.1% stake in AEML ; 3) GQG's Secondary Investment of Rs. 5,532 Cr (US\$ 665 million) for 6.63% stake based on closing price of Rs 878 dated August 20, 2023 ; 4) Tariff based competitive bidding (TBCB); 5) Smart Meter Project details: (i) Brihanmumbai Electric Supply & Transport Undertaking (BEST) – 10.8 lakh smart meters (Rs 13 bn) (ii) Assam Power Distribution Company Limited (APDCL) – 7.7 Lakh smart meters (Rs. 8.5 bn) (iii) 3 Andhra Discoms – 27.7 Lakh smart meters (Rs 37 bn) (iv) 2 MSEDCL projects – 115.9 Lakh smart meters (Rs 139 bn); RAB: Regulatory Asset Base; AEML: Adani Electricity Mumbai Limited; MUL: MPSEZ Utility Limited; AMI: Advanced Metering Infrastructure; HVDC : High voltage direct current, LOA: Letter of Award, LOI: Letter of Intent; Ckm: Circuit Kilometer, SEZ: Special Economic Zone, Sq.Km: Square Kilometer; PDSL: Power Distribution Services Ltd.

# Transformational Journey with Robust Growth and Credit Discipline

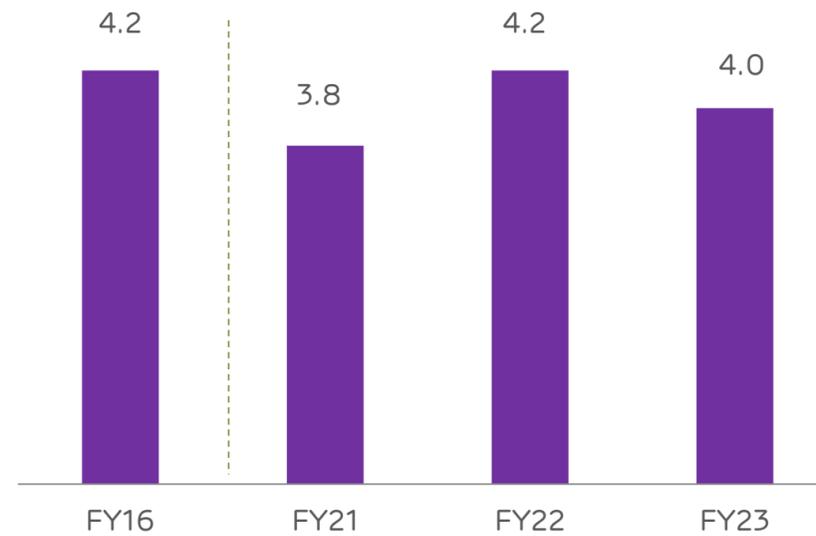
EBITDA (Rs. Crs)



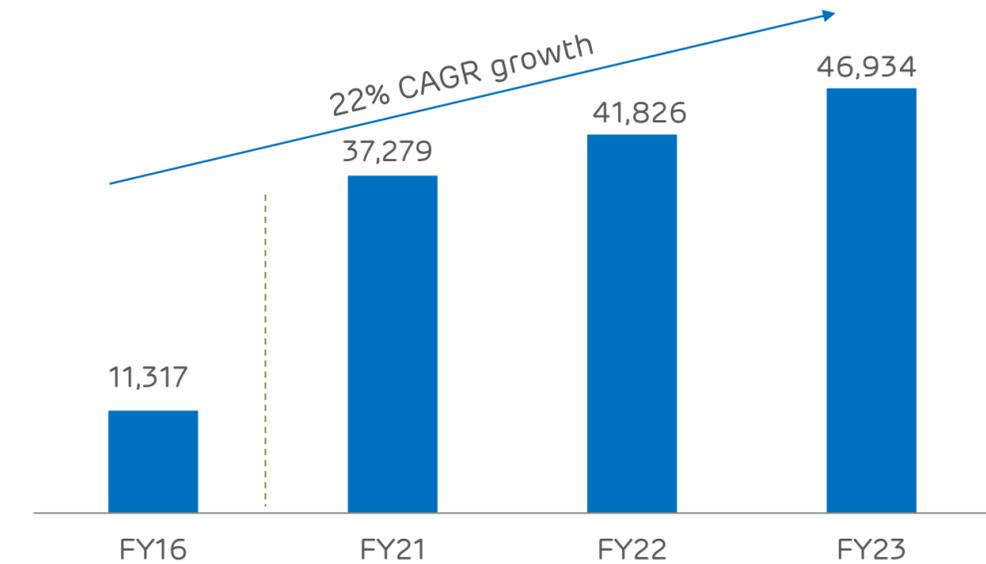
**AESL is Investment grade rated since FY16**



Net Debt to EBITDA<sup>(2)</sup> (x)



Gross Fixed Assets<sup>(3)</sup> (Rs Crs)

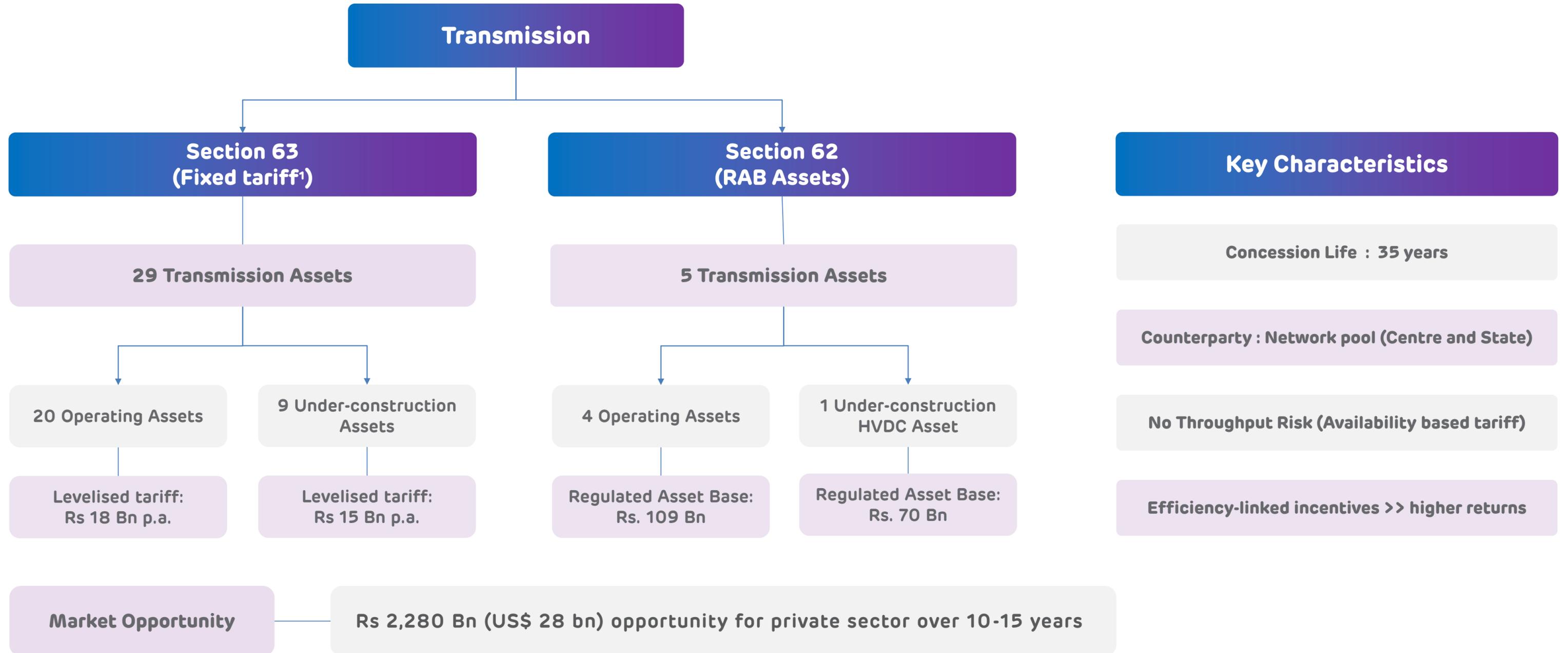


Notes: (1) Credit Rating: Fitch / Moody's ratings (2) Net-debt to EBITDA ratio calculation considered only long-term debt at hedge rate and excluded sub debt; (3) Gross Fixed Assets: Fixed Assets includes Property, Plant & Equipment, Right of Use Assets, Capital Work in Progress, Goodwill & Other Intangible Assets; EBITDA : Earning before interest tax and depreciation, CAGR: Compounded Annual Growth Rate; #Includes one-time income of Rs. 873 Crores recognised during the year based on CERC order



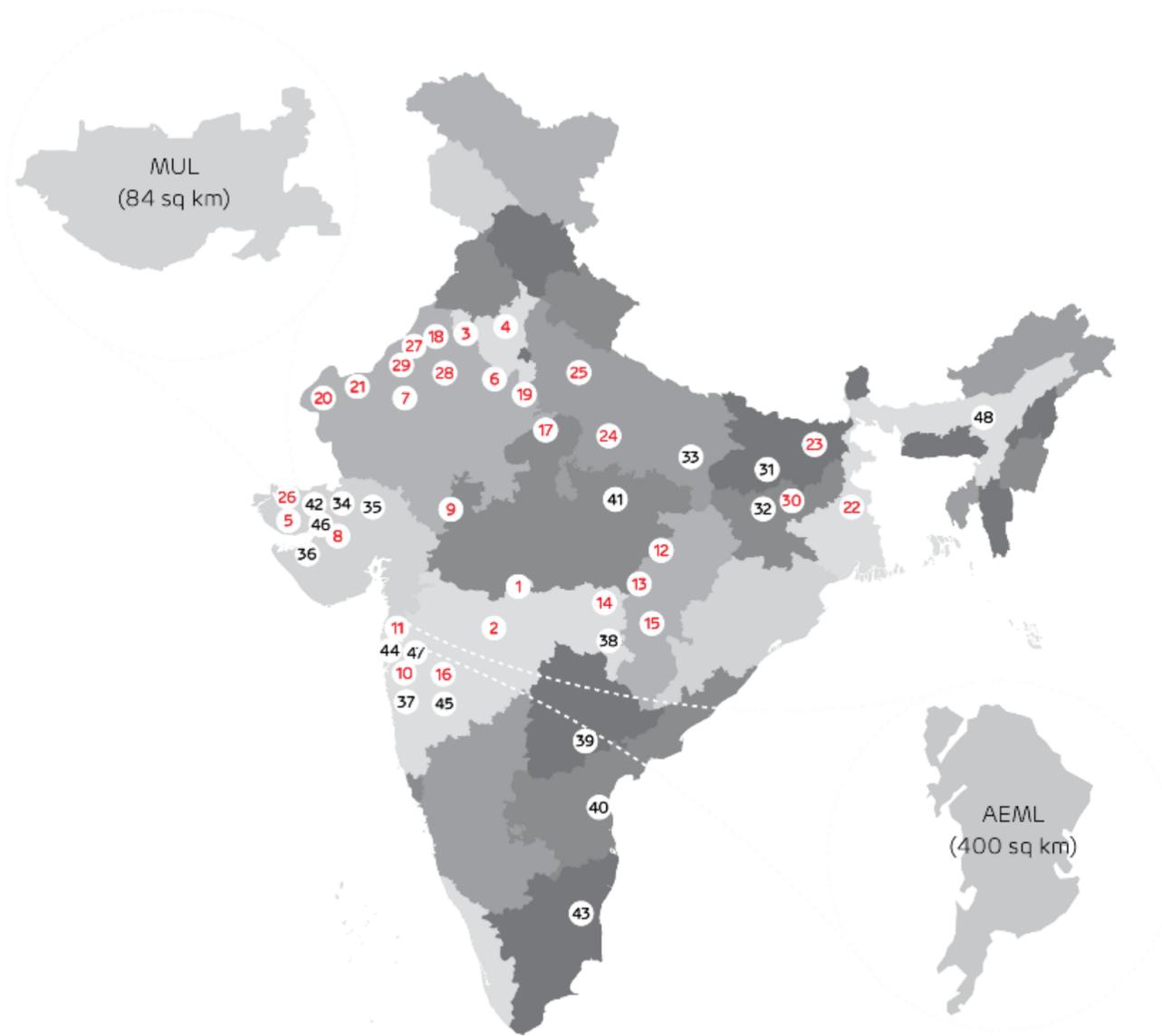
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**Transmission**



Notes: 1) Tariff based competitive bidding (TBCB); RAB: Regulatory Asset Base, p.a.: per annum; HVDC: High Voltage Direct Current

# Asset Portfolio – Presence Across the Country



Red: Operational assets  
 Black: Under-construction assets  
 #Map not to scale

MEGPTCL: Maharashtra Eastern Grid Power Transmission Company Limited; ATIL: Adani Transmission (India) Limited; ATSCS: Aravali Transmission Service Company LTD.; MTSCS: Maru Transmission Service Company LTD.; WTGL: Western Transmission (Gujarat) LTD.; WTPL: Western Transco Power LTD.; AEML: Adani Electricity Mumbai Limited; STL: Sipat Transmission Limited; RRWTL: Raipur Rajnandgaon-Warora Transmission Limited; CWRTL: Chhattisgarh-WR Transmission Limited; ATRL: Adani Transmission (Rajasthan) Limited; HPTSL: Hadoti Power Transmission Limited; BPTSL: Barmer Power Transmission Limited; TPTSL: Thar Power Transmission Limited; ALTL: Alipurduar Transmission Ltd.; GTL: Ghatampur Transmission Limited; FBTL: Fatehgarh Bhadla Transmission Ltd; BKTL: Bikaner Khetri Transmission Limited; ATBPSL: Adani Transmission Bikaner Sikar Private Limited; OBTL: Obra- C Badaun Transmission Limited; WRSS\_XXIA: WRSS XXI(A) Transco Limited; LBTL: Lakadia Banaskantha Transco Limited ; JKTL: Jam Khambaliya Transco Limited; MUL: MPSEZ Utility Limited; NKTL: North Karanpura Transco Limited; KVTL: Kharghar Vikroli Tranmission Limited; WKTL: Warora Kurnool Transmission Ltd.; AEMIL: Adani Electricity Mumbai Infra Limited; MP II: MP Power Transmission Package II Ltd; KHAVDA: Khavda Transmission Ltd.; KARUR: Karur Transmission Ltd.; \*Operationalised 631 ckm out of 4,485 ckm in NKTL, KBTL, KVTL, WKTL and MP Package – II in Q1 FY24



No	Operational	Ckt Kms
1	MEGPTCL	1,217
2	ATIL	3,834
3	ATSCS	97
4	MTSCS	300
5	WTGL	974
6	WTPL	2,089
7	AEML	572
8	STL	348
9	RRWTL	611
10	CWRTL	434
11	ATRL	278
12	HPTSL	116
13	BPTSL	133
14	TPTSL	164
15	ALTL	650
16	GTL	897
17	FBTL	292
18	BKTL	481
19	ATBPSL	343

20	OBTL	630
21	WRSS_XXIA	295
22	LBTL	351
23	JKTL	37
24	MUL	151
<b>Subtotal (A)</b>		<b>15,294</b>

No	Under construction	Ckt Kms
26	NKTL <sup>(1)</sup>	304
27	KVTL	74
28	WKTL	1,756
29	AEMIL	80
30	MP II	1,060
31	KHAVDA	217
32	KARUR	9
33	WRSR	630
34	Khavda Part A	355
35	KPS - 1	42
<b>Subtotal (B)*</b>		<b>4,527</b>
<b>Total (A+B)</b>		<b>19,820</b>

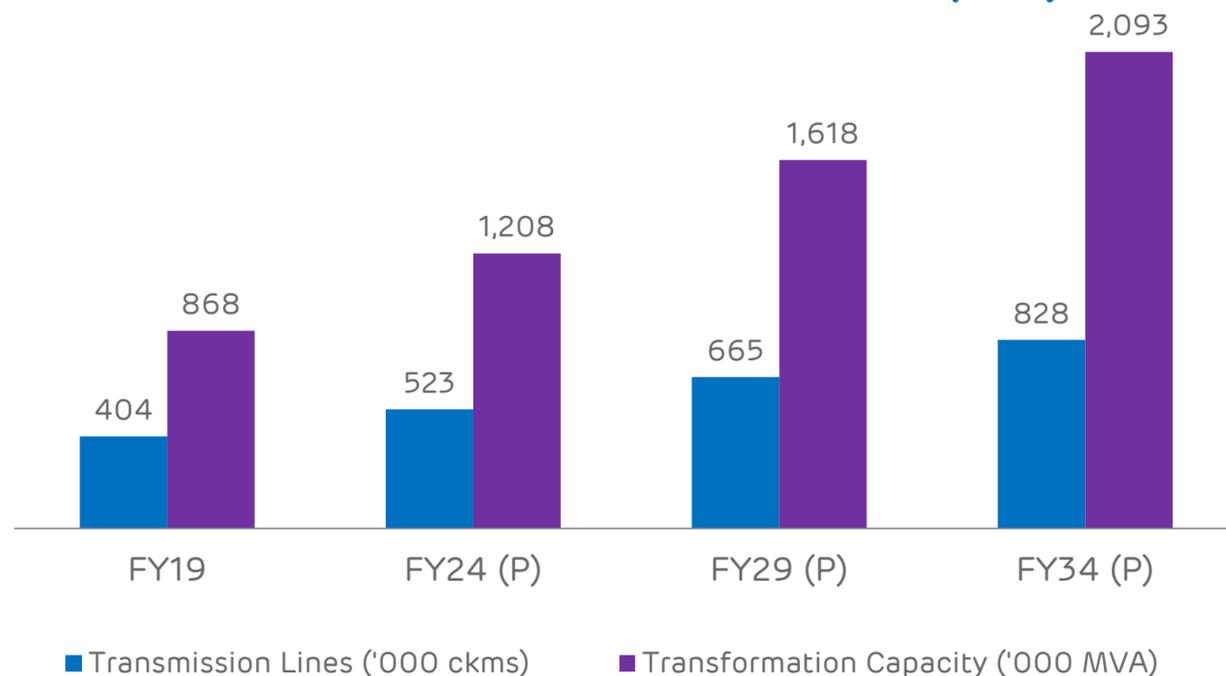
\*Out of 4,527 ckm, 631 ckm was operationalised in Q1FY24

# Private Participants Opportunity of ~US\$ 28 bn projects over 10-15 years

## Attractive Industry Opportunity backed by strong policy support

- Mandatory competitive bidding introduced since 2006 (TBCB) has created a level playing field for private players
- Private sector has won 47 projects out of total 77 transmission TBCB projects awarded since April-15<sup>(2)</sup>
- Identified TBCB opportunity in near-term is about Rs. 750 Bn / US\$ 9.0 Bn<sup>(2)</sup> under RFP/RFQ stage
- Schemes like UDAY, 24x7 Power for All, Village Electrification etc. strengthening the value chain

## Growth in transmission lines and transformation capacity



## RE penetration & General Network Access to boost system strengthening

### Renewable Penetration

500 GW Target by 2030

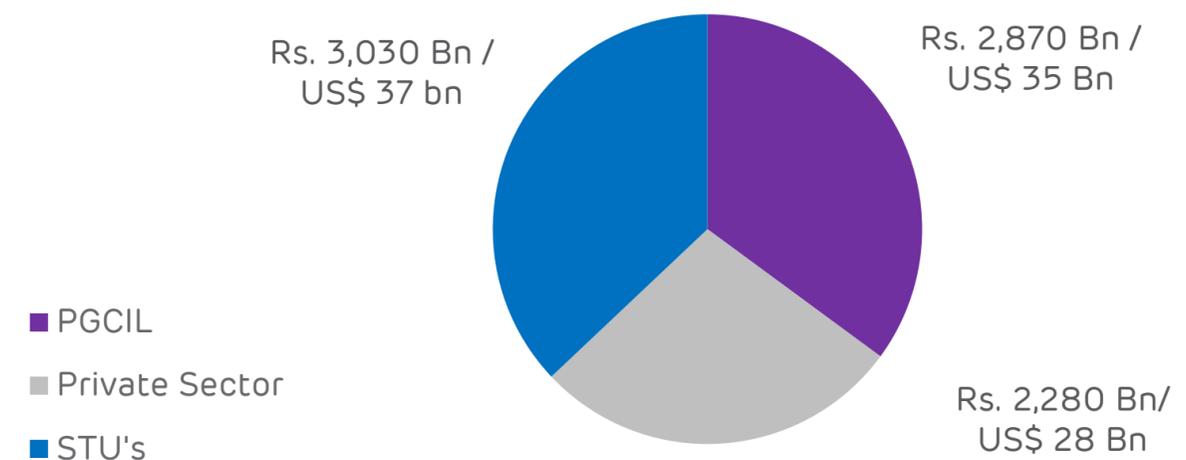
Rs 2.4 Lakh Crs (US\$ 30 billion)  
Transmission opportunity by 2030  
(as per CEA's report dated December 2022)

### General network access (GNA)

GNA Regulations for access to inter-state transmission systems since 2017

Flexibility to Discoms to procure higher component of power under short term and medium-term tenders from generators across the country

## Overall investment of Rs. 8,180 Bn / US\$ 100 bn over 10-15 years



## Private Participants Opportunity of Rs. 2,280 Bn / US\$ 28 bn

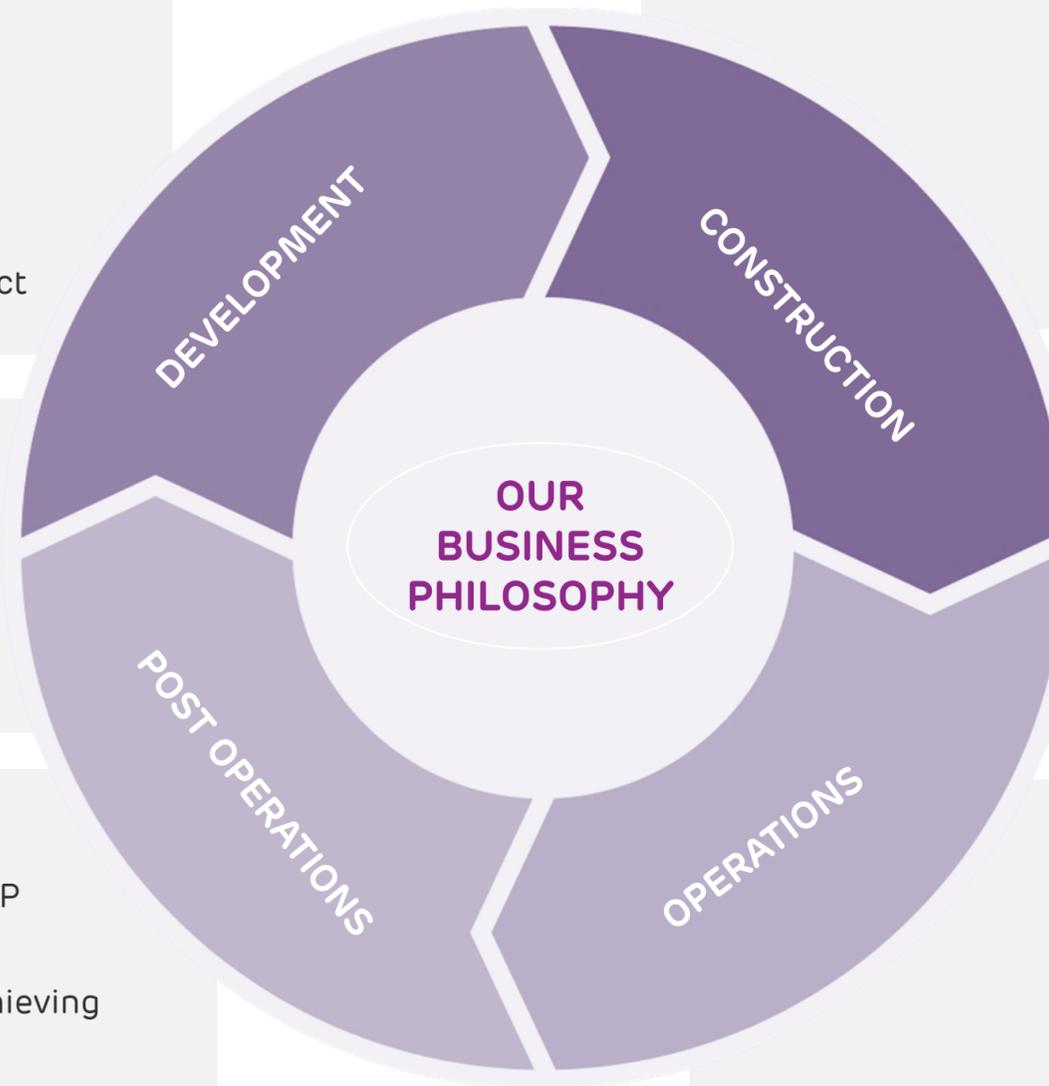
Source: i) Opportunity size as per internal study conducted by Deloitte in Jan 2019, ii) CEA (Central Electricity Authority)

Notes: 1) FX rate as on May 2023, of US\$/INR – 82; 2) Data as of July 2023

TBCB: Tariff base competitive bidding, RFP/RFQ : Request for Proposal/ Request for Quotation, Ckms: Circuit Kilometers, MVA: Mega Volt Ampere, RE: Renewable Energy, GW: Giga Watt , PGCIL: Power Grid Corporation of India Ltd; UDAY: Ujwal DISCOM Assurance Yojana

# Business Philosophy focusing on De-risking at every stage of project lifecycle

## DE-RISKING AT EVERY STAGE



### Route Identification & Survey

- **Route alignment** on topographic maps to optimize route & identify key parameters
- Utilization of Drones for route survey
- **Robust site diligence and route planning** to minimize project cost and ROW issues

### Project Planning & Scheduling

- **Robust Pre bid estimation** of ROW, Project Cost and Timelines resulting in **assurity of returns**
- **Solid vendor management** and strong relationships adds to business sustainability and **avoid cost escalations**

### Capital Management

- **Takeout of construction debt** post commissioning (eg: USPP issuance)
- Maintained international **investment grade rating** while achieving impressive growth

### Project Execution

- **Complex projects experience:** Completed HVDC project (~1000 kms) in a record time of 24 months
- Contracting methodology focused on derisking – competitively awarded on **fixed price & fixed time basis**
- Availability of large talent pool and in-house capabilities

### Construction Finance

- Derisked financing through **fully-funded plan**
- Revolving Construction facility of US\$ 700mn for transmission and GMTN program of US\$2 bn for AEML
- LC facility to reduce financing cost & optimize funding schedule

### Tech Enabled Operations

- Life cycle O&M planning
- Reliability centered Maintenance
- **Remote operation of sub-stations** and integration with Energy Network Operating Centre

## DE-RISKING AT EVERY STAGE

# Project Management & Assurance Group (PMAG) - End to End Project Integration



Strength: Team of 90 professionals having hands-on experience of 2,000+ man-years of complete project management cycle of small, medium & large projects

Bidding Stage	Project Development	Project Execution	Project Close Out
<ul style="list-style-type: none"> <li>Integrating &amp; providing cross functional support for Bidding Process</li> <li>Site Location Assessment, coordinating for field visits</li> <li>Bid stage scope finalization &amp; technology adoption with engineering</li> <li>Bid Stage Cost Estimates</li> <li>In case of M&amp;A's, collaborating and assessment of asset</li> </ul>	<ul style="list-style-type: none"> <li>Collaborates for Technology finalization &amp; Scope</li> <li>Execution Strategy</li> <li>Contracting Strategy</li> <li>Detailed Project Report</li> <li>Coordinating for connectivity &amp; evacuation</li> <li>Level 1 Project Schedule</li> <li>Capex Budgets and Estimates</li> <li>Risk Assessment &amp; plan</li> <li>Procurement Planning</li> <li>Financial Closure Plans</li> </ul>	<ul style="list-style-type: none"> <li>Integrated L3 Project Schedule</li> <li>Baselining Cost and Resource plans</li> <li>Issue &amp; Risk Management</li> <li>Supply Chain Management and Contract Administration</li> <li>Contractor &amp; Vendor Management</li> <li>Change Management</li> <li>Monitoring Approvals , Permits &amp; Licenses</li> <li>Managing Lenders &amp; LIE interface</li> <li>Cash Flow Management</li> <li>Project Monitoring &amp; Control</li> <li>Mid Course Corrections ( Catch up)</li> </ul>	<ul style="list-style-type: none"> <li>Facilitating the Handover &amp; punch list closure</li> <li>Contract Closures</li> <li>Close Out Report</li> <li>Material Reconciliation</li> <li>Spares Handover</li> <li>Closure of LIE and Lender Reports</li> <li>Stakeholder Recognition</li> <li>Finalizing the Final Costs</li> <li>Ensuring built as per Drawings</li> </ul>

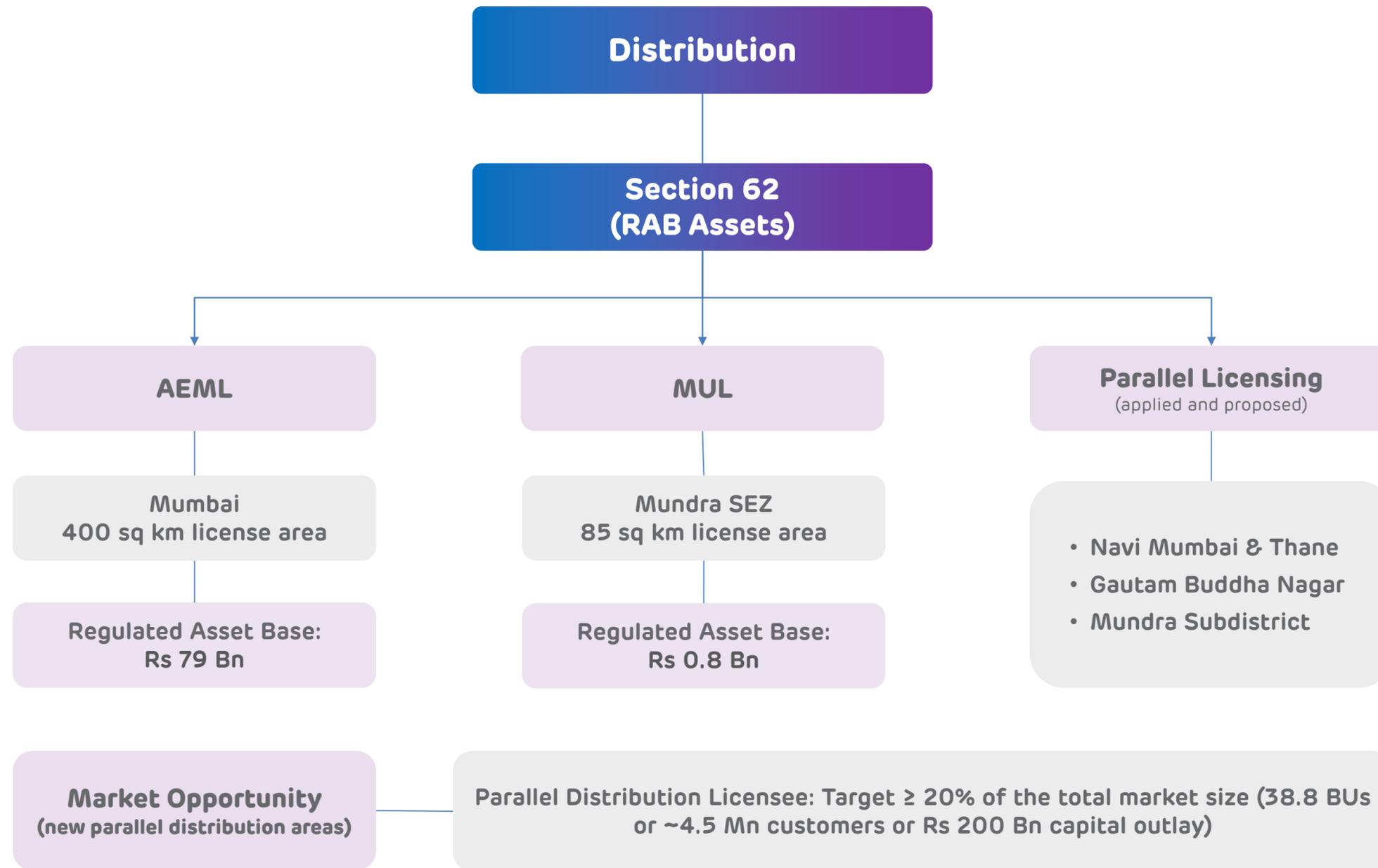
Strong Project Controls

Collaborating & Convergence

Effective Project Delivery



# Distribution

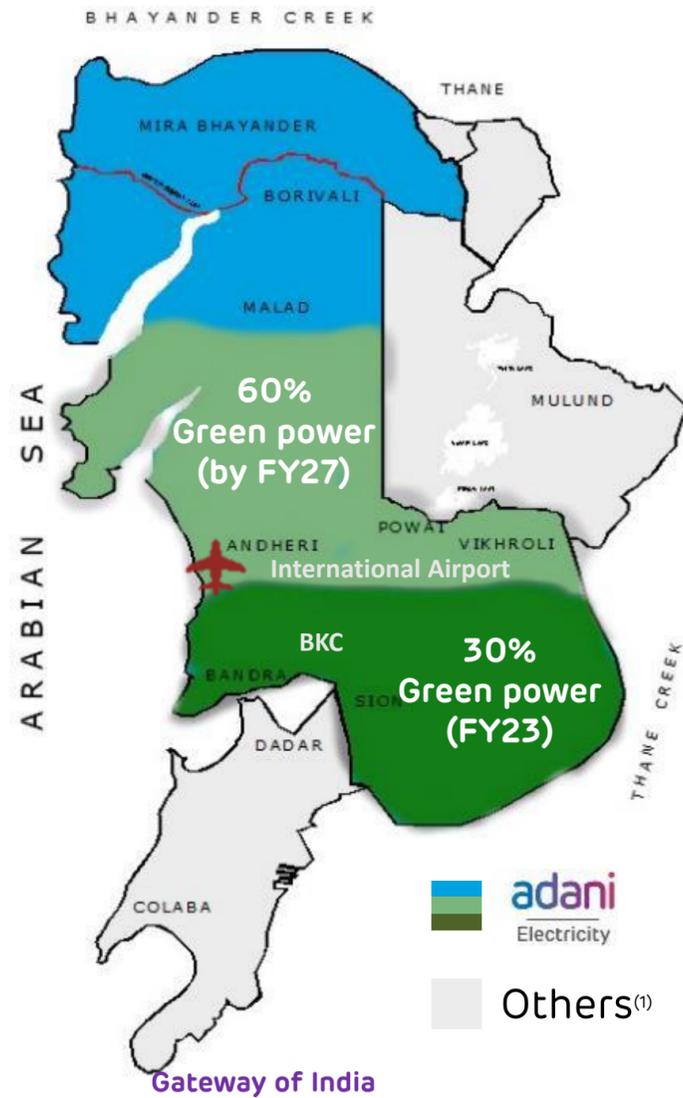


## Key Characteristics

- License period: Perpetual
- Counterparty: Pool of 12 Mn+ consumers
- No throughput risk (RAB based returns)
- O&M costs are pass-through

# AEML Distribution: India's No. 1 power utility, as per MoP, McKinsey, PFC (Scored 99.6/100)

## Largest Integrated utility in India's Commercial Capital - Mumbai



### About Mumbai

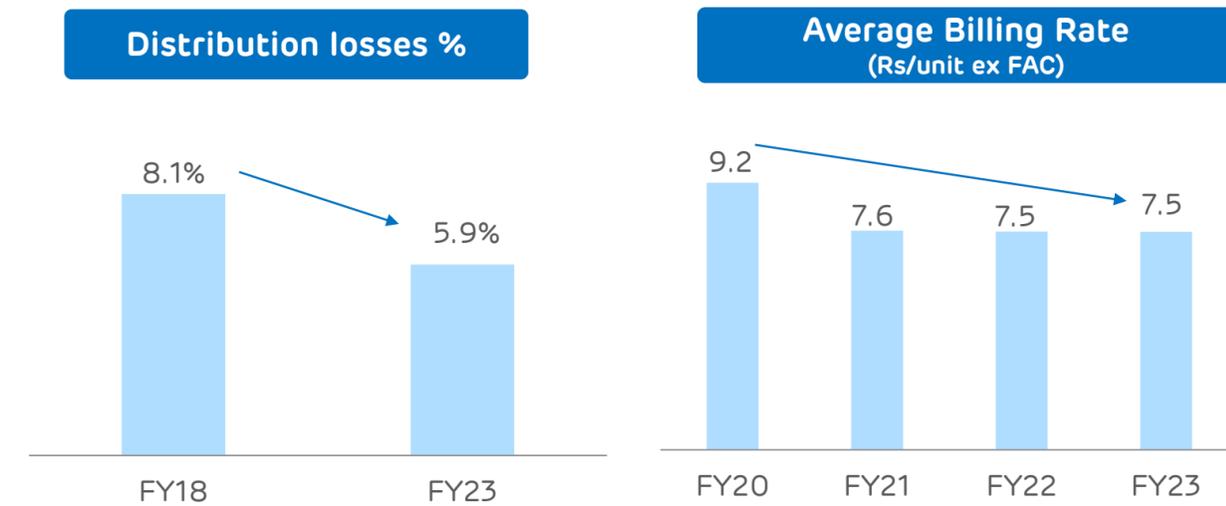
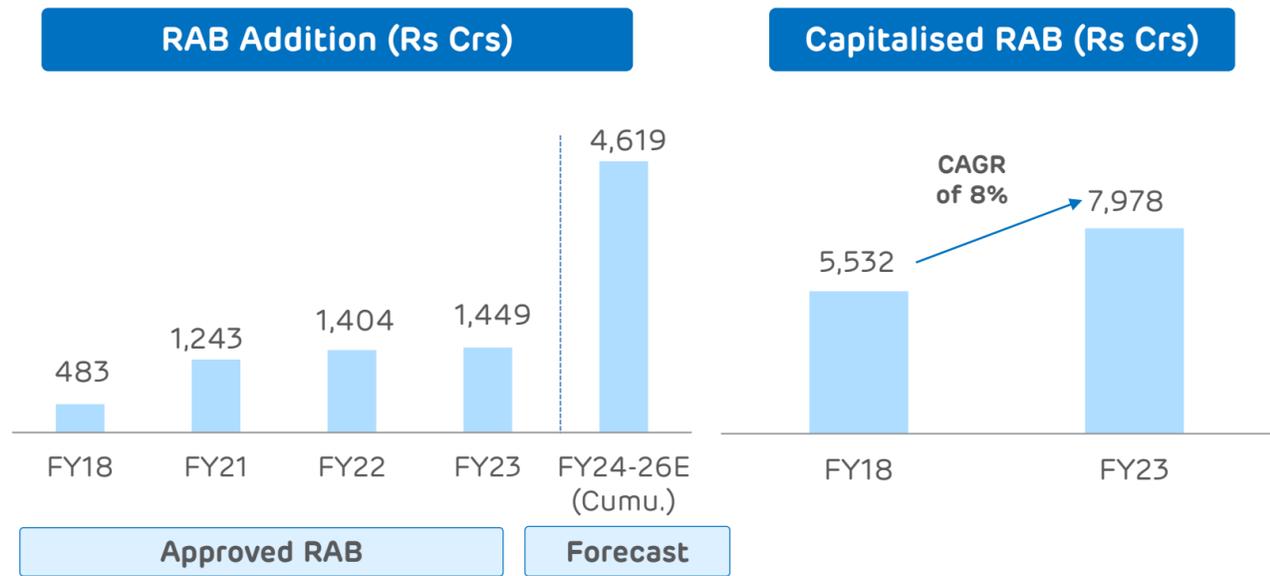
- 8<sup>th</sup> Most Populous City in World
- 25<sup>th</sup> Richest City in world based on GDP (US\$)

### Mumbai Consumers

- 2.2x Per capita income of India
- Rs 3,28,000 Per capita income of Mumbai (FY20)
- Rs 36,000 Avg Annual Electricity Bill of AEML Consumer
- ~6% Average electricity bill as % of per capita income

- Servicing 85% of Mumbai, touching 2/3 households of Mumbai
- Only mega city in the world to achieve 30% renewable power

## AEML – Key Milestones Since Acquisition



Capex-led growth in Regulated Asset Base to drive growth in returns (Rs. 46 Bn over FY24-26)

**Note:-** 1) Others include BEST, MSEDCL & Tata Power; 2) Source – Population Of Mumbai 2020 (Demographic, Facts, etc.) – India Population 2020  
 MoP: Ministry of Power; PFC: Power Finance Corporation; BKC – Bandra Kurla Complex, MW- Mega Watt, GDP: Gross Domestic Product; CAGR: Compound Annual Growth Rate , RAB: Regulatory Assets Base; FAC: Fuel Adjustment Charges; Map not to scale

# MPSEZ Utilities Limited (MUL) - Overview

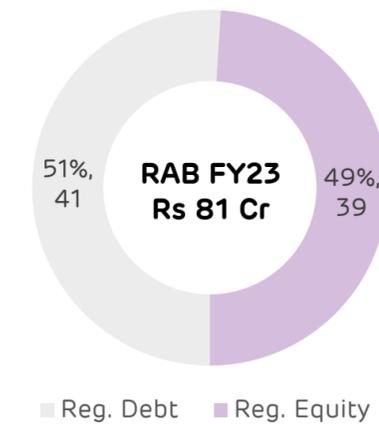
Mundra SEZ is strategically located with well developed supporting infrastructure serving as an attractive industrial hub



- Electricity Distribution for Mundra SEZ area
- 160 Kms Distribution network
- Catering primarily to commercial and industrial consumers
- Section 62 (RAB Based) asset governed by Gujarat Electricity Regulatory Commission

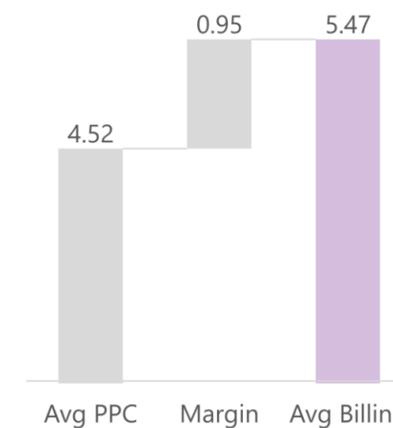
- Mundra SEZ is India's largest multi-product SEZ **spread across 84 sq km**
- Mundra port is **India's largest private commercial port** with capacity to handle cargo of ~264 MMT
- SEZ also has a huge land bank reserve for large-scale industries in future
- Given the large industry cluster opportunity in Mundra SEZ area and the accompanying expected growth in power demand, AESL is well placed to grow the MUL business

## RAB<sup>(1,2)</sup> (Rs Cr)

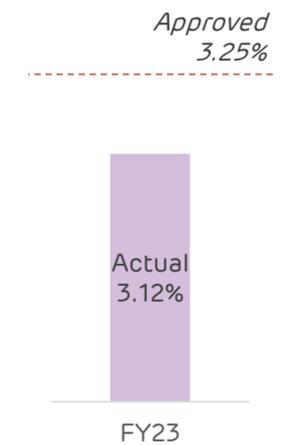


## Avg Billing Rate (Rs/ unit)

Power Sale of 289 MUs in FY23



## Dist. Loss (%)



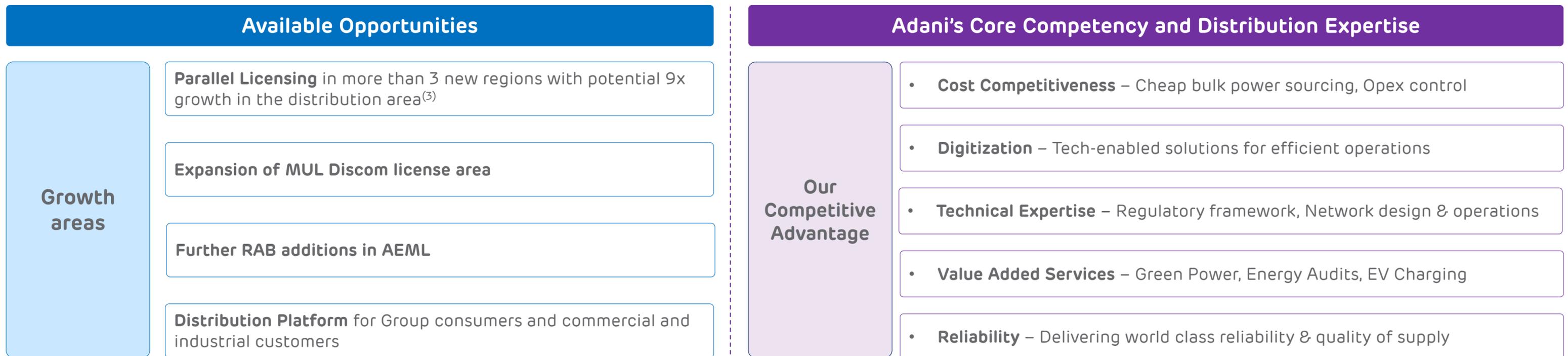
MUL's existing load of MUL is ~80MW, which is expected to grow multifold due to new investments in copper, petrochemicals and solar manufacturing & ancillary industries in the Mundra region

# Distribution and Parallel License Opportunity

- Power distribution is one of the largest consumer facing sectors in the country. 96.7% of ~270 mn households<sup>(1)</sup> in India are connected to the grid and primarily owned and operated by state governments
- AESL's Distribution platform intends to position as the electricity **supplier of choice**
- Parallel Distribution Licensee – enabled under **6<sup>th</sup> proviso to section 14 of Electricity Act 2003** as follows:

*“The Appropriate Commission may grant a licence to two or more persons for distribution of electricity through their own distribution system within the same area, subject to the conditions that the applicant for grant of licence within the same area shall, without prejudice to the other conditions or requirements under this Act, comply with the additional requirements [relating to the capital adequacy, credit-worthiness, or code of conduct] as may be prescribed by the Central Government, and no such applicant, who complies with all the requirements for grant of licence, shall be refused grant of licence on the ground that there already exists a licensee in the same area for the same purpose”*

- Proposed Total Capital Outlay<sup>(2)</sup> of **Rs. 200 Bn over 8 years**
- Parallel Distribution Licensee<sup>(2)</sup> : **Target ≥ 20% of the total market size** – 38.8 BUs or approx. 4.5 million customers



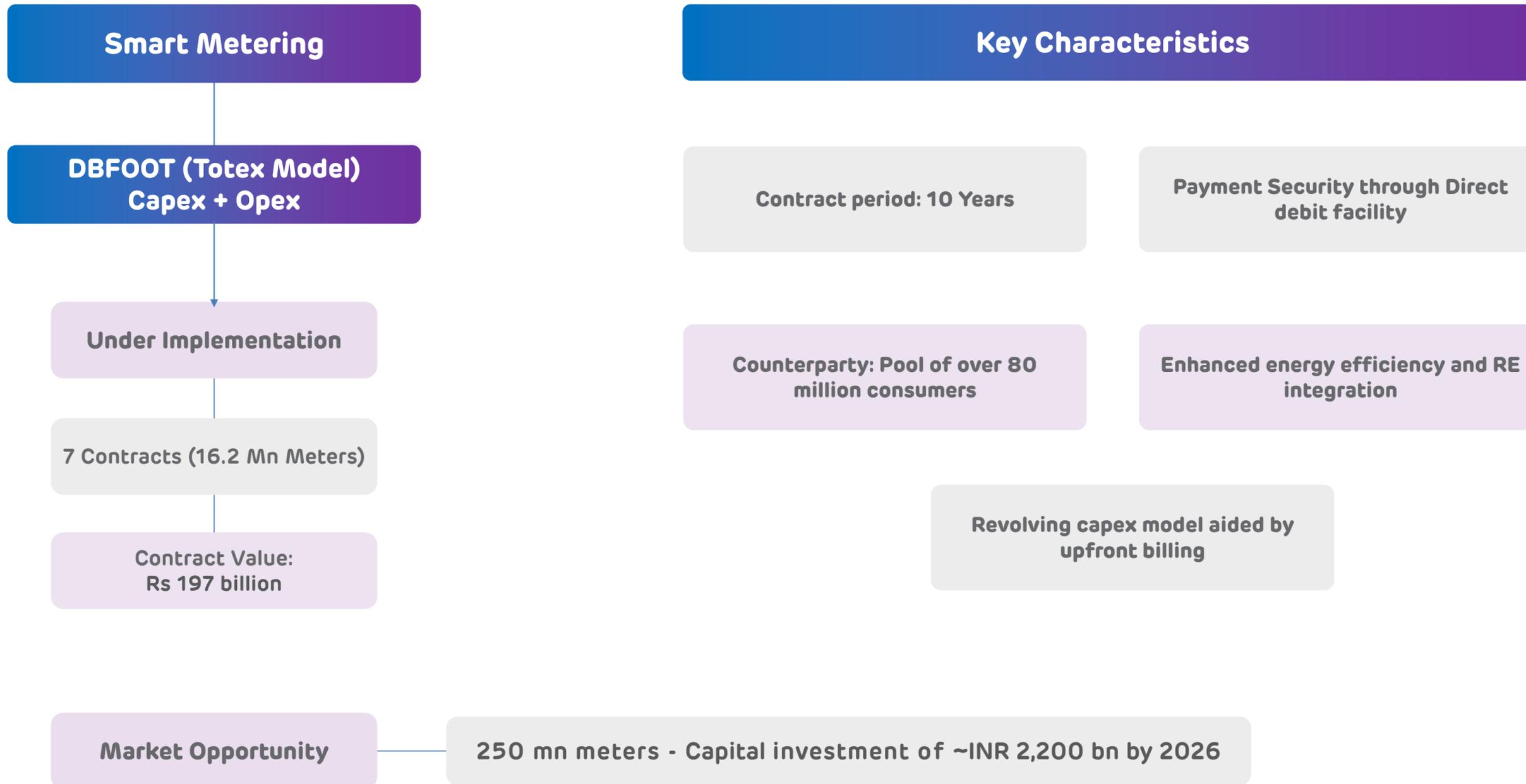
## AESL's Core Strengths and Available Synergies in the Distribution space:

Experience of operating AEML – the No. 1 Discom in the country | Expertise of operating in a multi-player competitive environment

1) Source: India Residential Energy Survey (IRES 2020) 2) As per internal study; 3) Applied for Mundra subdistrict (1000 sq kms), Navi Mumbai (700 sq kms) and Gautambuddha Nagar (1,750 sq kms) and AEML (existing – 400 sq km) ; AMI: Advanced Metering Infrastructure; EV: Electric Vehicles; RAB: Regulatory Asset Base; AEML: Adani Electricity Mumbai Ltd; MUL: MPSEZ Utilities Ltd; BU: Billion Units

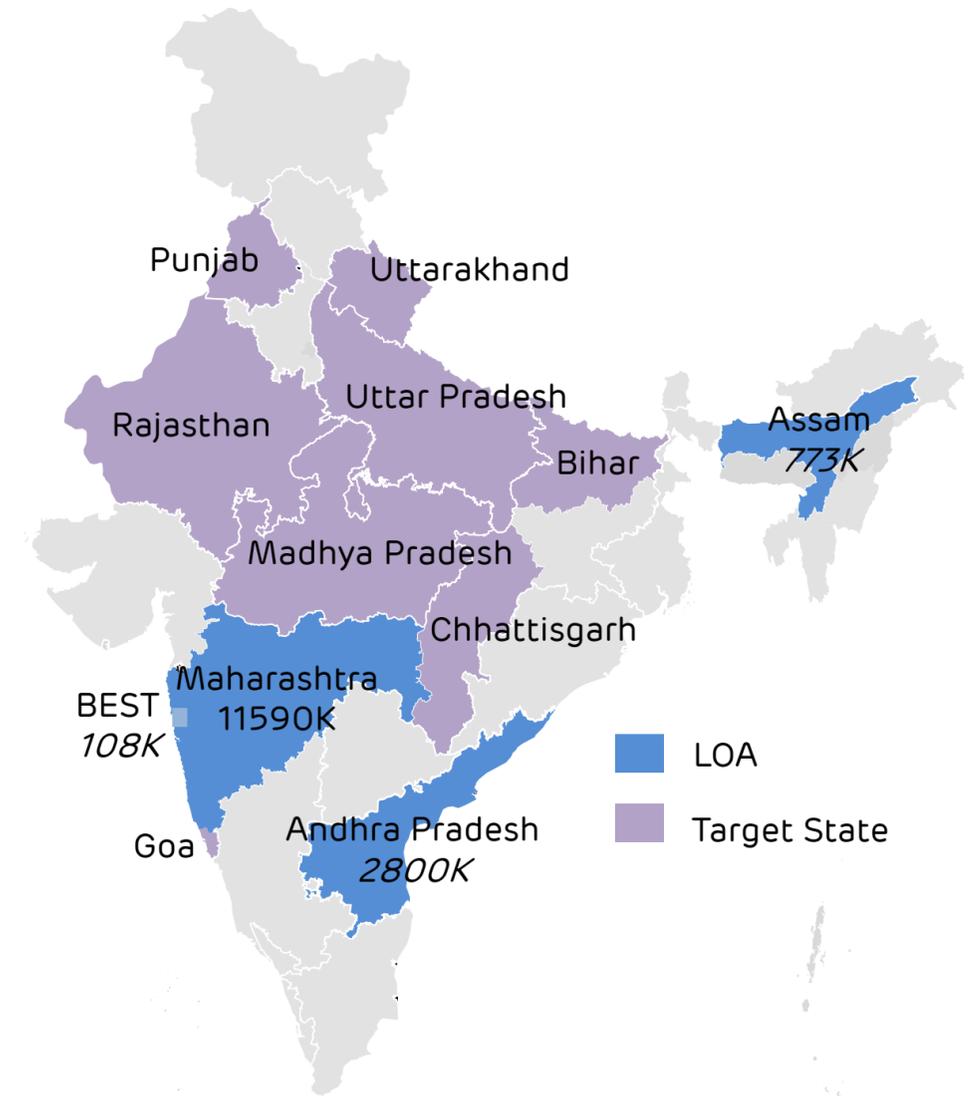
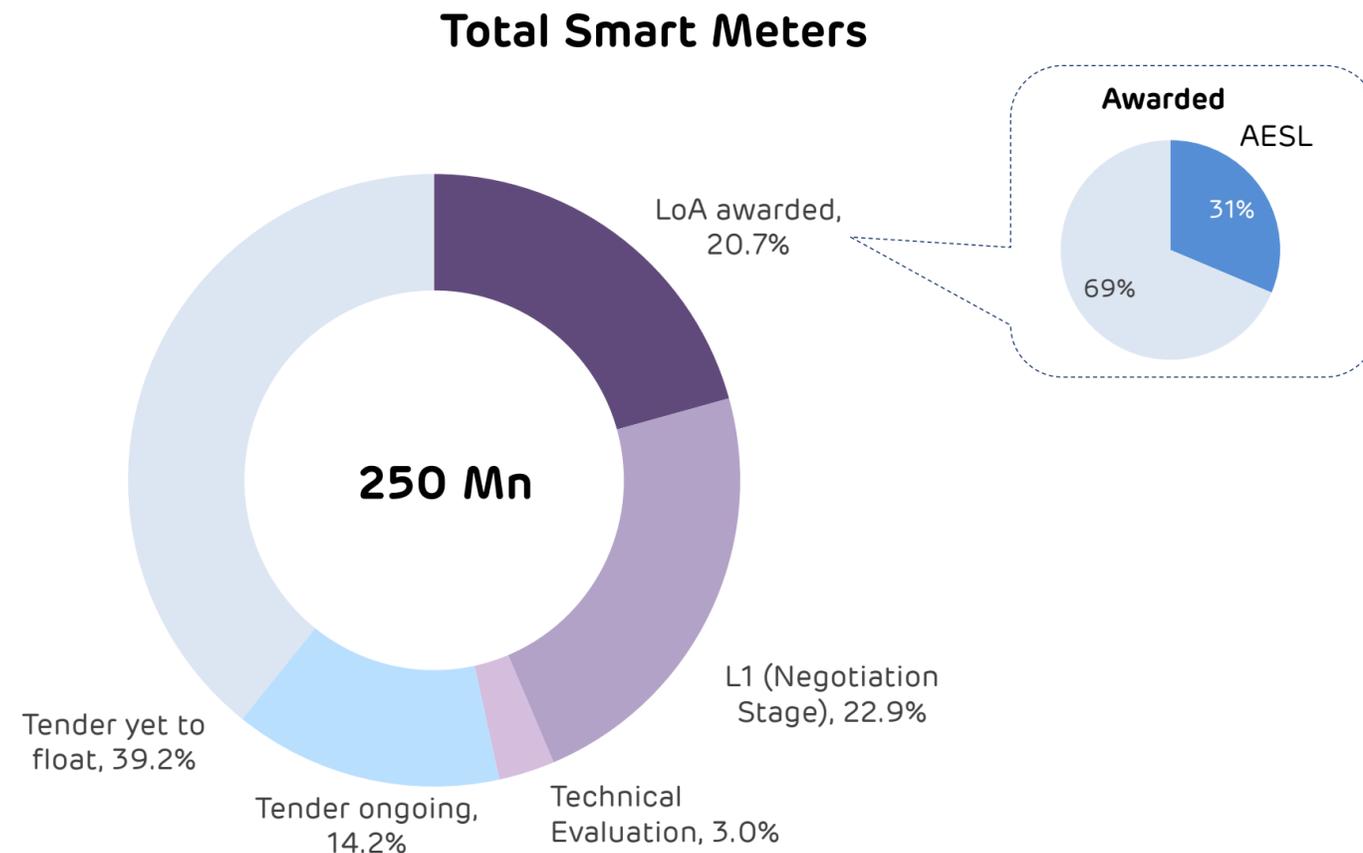


# Smart Metering



# Market Dynamics – Smart Metering Business

- AESL's Market Share (LOA and L1) – 31% out of 109 Mn Smart Meters tendered so far
- Untapped market – 141 Mn Smart meters



Of the targeted 250 Mn meters, India has bid out <sup>(1)</sup> 44%, of which AESL Smart Meters has secured 31% market share

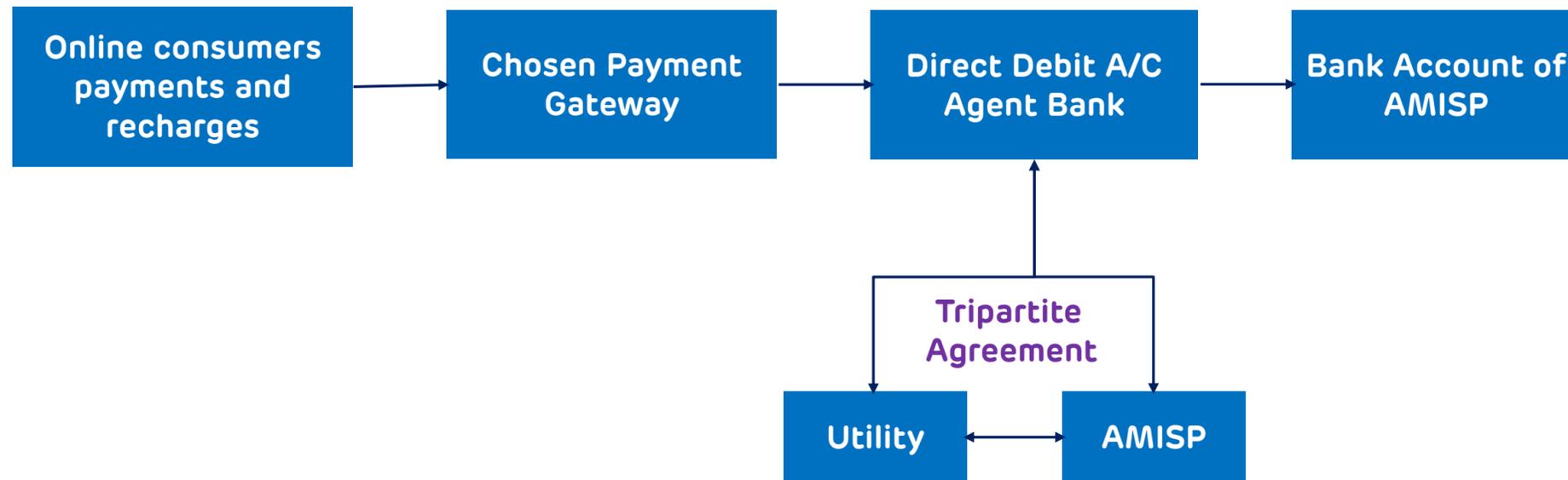
**AESL has an LOA for 16.2 Mn smart meter qty. with an order value of Rs 197 billion (US\$ 2.4 bn)**

**AESL's Core Strengths and Available Synergies:**  
Distribution & Smart Metering Experience | Expanding Distribution business across India | Pan India presence

Source : Ministry of Power (PowerLine) | 1. 'Bid Out' includes awarded (LOA) & L1 (negotiation stage) ; Note: DBFOOT: Design, Build, Finance, Own, Operate, Transfer; LOA: Letter of Award; Map not to scale;

# Smart Metering Contractual Framework

## Payment Flow under the Direct Debit Facility Agreement (DDF Agreement)



- Payments shall commence one month after "Operational Go Live" Operational Go-Live shall be considered upon successfully installing 25K nos. of smart meters
- All payments due to AMISP shall be governed under the DDF Agreement
- Direct Debit Facility Agreement uniform to all discoms, finalized by REC being the Nodal Agency
- Payment shall be made through 'Direct Debit Facility' (DDF) from a dedicated account to the account of the SPV
- Direct Debit facility will include bucket filling approach whereby all consumer bill payments to the extent of the invoice smart meter will be routed to the SPV's Bank account

## Key Highlights of the Contractual Framework

Implementation model – Design, Build, Finance, Own, Operate, Transfer (DBFOOT) model with complete responsibility of development and O&M on Implementing agency (AMISP)

End to End Smart Metering services with a contract period of 10 years, and Smart Meter, including installation period of 27 months

Revenue inflows are received immediately on installation

Monthly fees for assuring meter installation and its integration with system

# Smart Metering Opportunity under RDSS

- Smart meters enable demand side management, better efficiency & technological interventions to improve quality of power supply
- Hence, Gol has embarked on a very ambitious target of deploying 250 mn smart meters over next 3 years by FY26
- **Smart Metering Opportunity** – Estimated Market Size of 250 mn meters requiring investment of ~INR 2,200 bn (US\$ 27 bn) by FY26 <sup>(1)</sup>
- Outlay of \$32.8Bn including central govt. grant of \$2.8Bn (~15% of project cost)

## Reduce AT&C Losses

- Accurate and consistent energy accounting of all feeders
- Data analysis and revenue protection
- 100% consumers are metered

## Improve Financial Viability

- Improving cash flow and collection efficiency
- Managing subsidized consumers more efficiently
- Improve gap between cost of supply and tariff
- Optimized staff / manpower

## Providing Better Services to Consumers

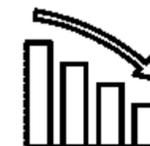
- Improving power availability to the extent of 24X7
- Optimize power consumption through Time of Day (TOD) tariff

## Efficiency

- Billing efficiency improved from 80.7% in FY16 to 85.9% in FY22
- Collection efficiency improved from 94.2% in FY16 to 97.2% in FY22



**Improve quality, reliability & affordability** of power supply



**Reduce AT&C loss** to 12-15% by FY25



**Reduce ACS-ARR Gap** to zero by FY25

**Gol has focus on smart meter deployment, through the Revamped Distribution Sector Scheme (RDSS)**

Notes: 1) As per internal estimates 2) Fx rate INR/US\$: 82.00

Gol: Government of India; DISCOM: Distribution Company; PFC: Power Finance Corporation; Mus: Million Units; ACS: Average Cost of Supply per Power Unit; ARR: Average Revenue Realized; AT&C: Aggregate Technical & Commercial;

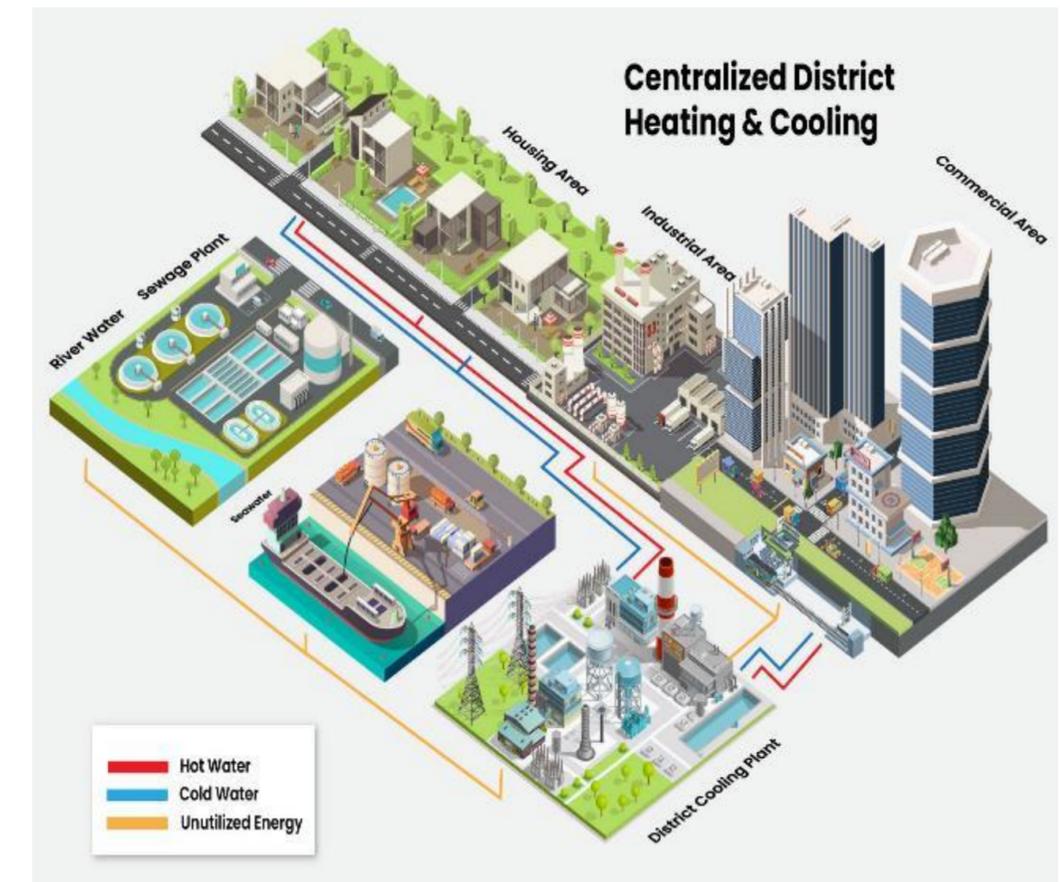


# District Cooling

# District Cooling Business

The District Cooling System (DCS) produces chilled water in a central plant and distributes cooling capacity in the form of chilled water from the central plant to multiple buildings through a network of underground pipes for use in space and process cooling.

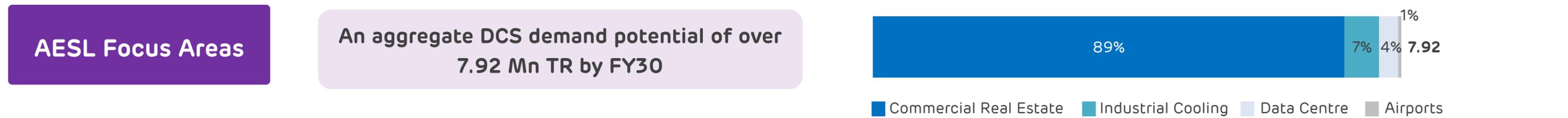
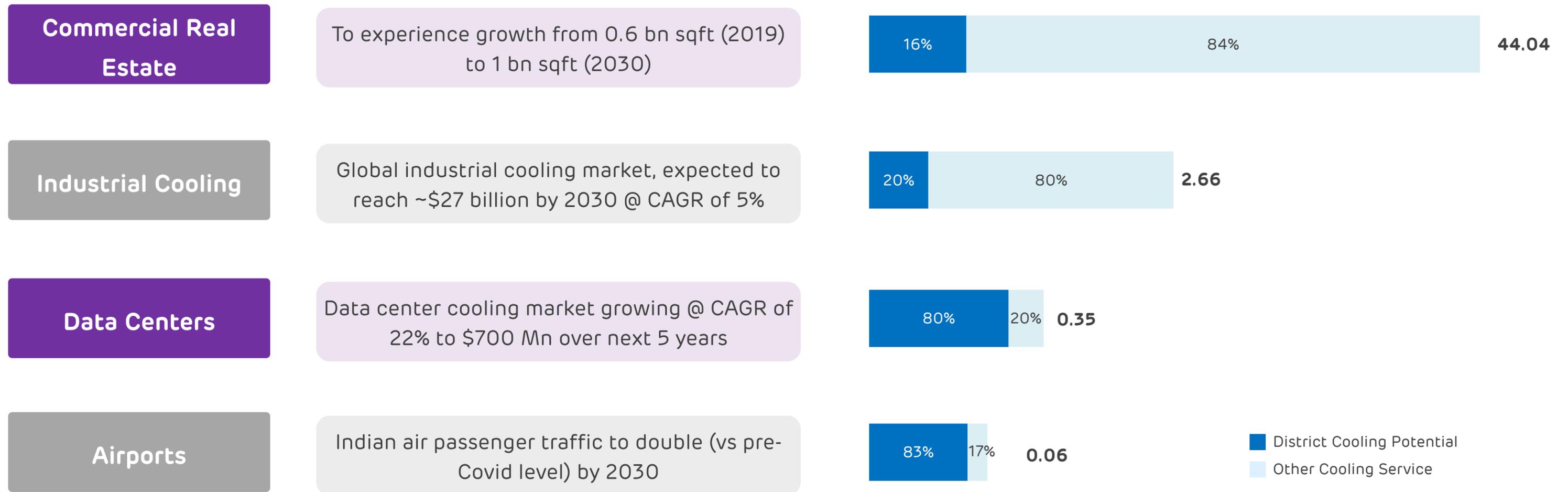
<p><b>Large Addressable Market and Existing Synergies</b></p>	<ul style="list-style-type: none"> <li>– Opportunity to unlock potential in nation-wide Infrastructure (airports, data centers, SEZs, reality space)</li> <li>– Limited competition and presence</li> </ul>
<p><b>Demographic and economic trends to drive cooling demand</b></p>	<ul style="list-style-type: none"> <li>– Rising per capita income &amp; urbanization coupled with higher AC ownership (penetration of 8% in 2022) cooling energy consumption will increase</li> </ul>
<p><b>DCS demand to be driven by four key segments</b></p>	<ul style="list-style-type: none"> <li>– Airports, Industrial Cooling, Commercial Real Estate and Data Centers are the primary segments which will drive the demand</li> </ul>
<p><b>Integrated Utility Offering</b></p>	<ul style="list-style-type: none"> <li>– Potential to offer as an integrated solution along with power transmission, distribution, smart metering and power trading</li> </ul>
<p><b>ESG Integration</b></p>	<ul style="list-style-type: none"> <li>– Sustainable Cooling Solution for a Low Carbon Future</li> </ul>



Picture source: Hisaka Asia

# Four key segments to drive India's DCS demand

## Cumulative Cooling Demand from key segments by FY30<sup>(1)</sup> (in Mn TR)

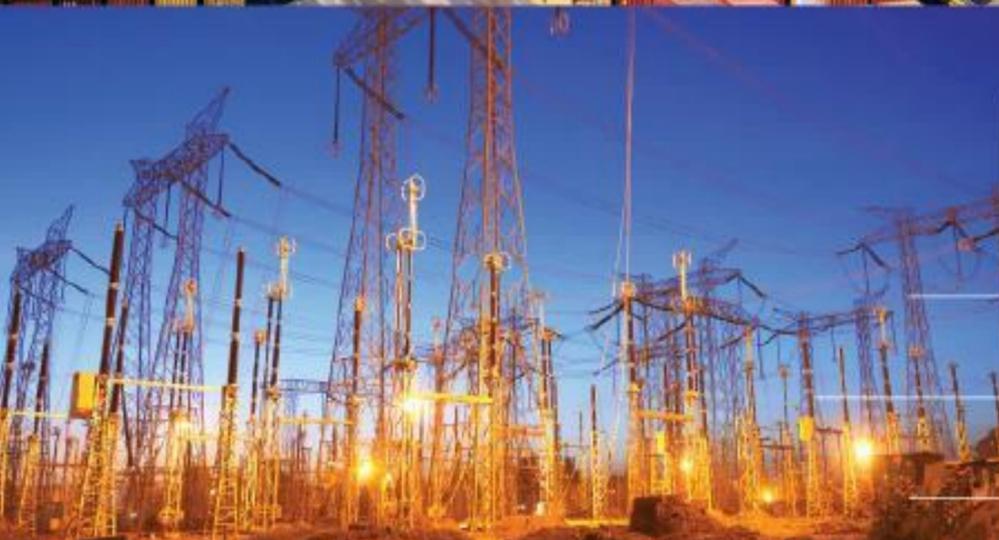


Sources: Cooling India, ICAP, Praxis, CREDAI/CBRE, CEA, IEA, EIA, Adani Connex, Boeing, Internal analysis  
 Notes: 1) Cum. Cooling demand (new) and DCS market potential is considered from FY 24-25 onwards  
 TR: A ton of refrigeration; CAGR: Compounded Annual Growth Rate



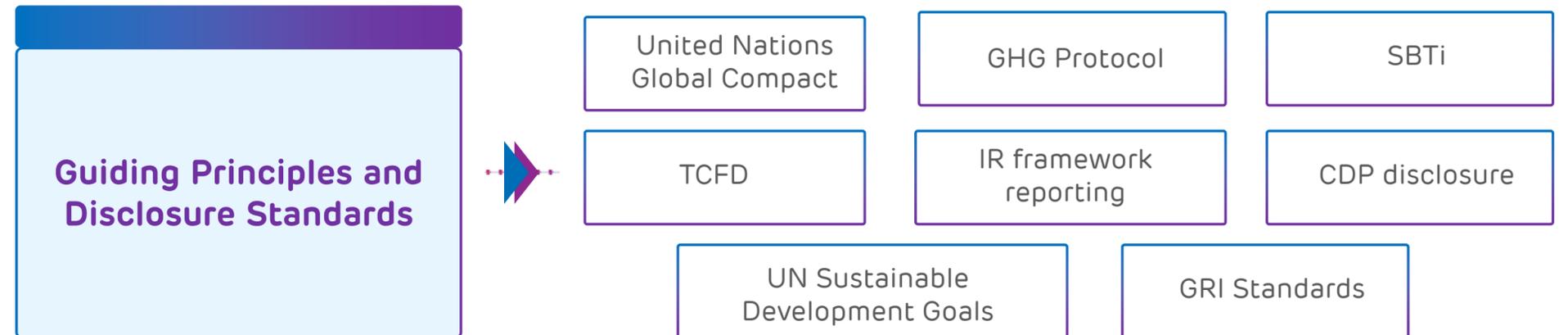
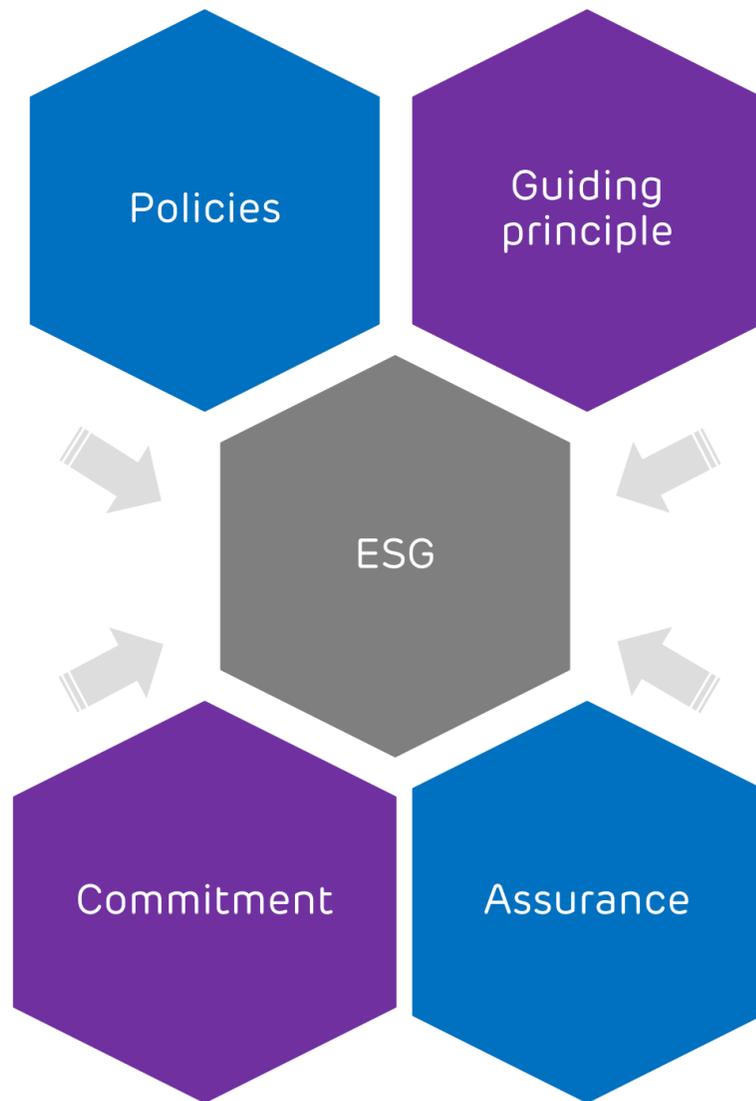
**adani**  
Energy Solutions

Growth with **Goodness**



**ESG Framework**

# AESL: ESG Framework



Policy Structure	Focus Areas
<b>E</b> <ul style="list-style-type: none"> <li>Environment Policy</li> <li>Energy Management System</li> </ul>	<u>UNSDG aligned:</u> <ul style="list-style-type: none"> <li>Affordable &amp; Clean Energy</li> <li>Sustainable Cities and Communities</li> <li>Climate Action</li> <li>Good Health &amp; well being</li> <li>Quality Education</li> <li>Industry, Innovation &amp; Infrastructure</li> </ul> <u>Others:</u> <ul style="list-style-type: none"> <li>Consumer empowerment</li> </ul>
<b>S</b> <ul style="list-style-type: none"> <li>Corporate Social Responsibility Policy</li> <li>Occupational Health &amp; Safety Policy</li> <li>Customer Grievance Redressal Mechanism</li> </ul>	
<b>G</b> <ul style="list-style-type: none"> <li>Corporate Social Responsibility Committee</li> <li>Corporate Responsibility Committee</li> <li>Risk Management Committees</li> <li>Stakeholders Relationship Committee</li> </ul>	

ESG Ranking
<ul style="list-style-type: none"> <li>MSCI (2023): <b>BBB</b></li> <li>S&amp;P CSA (2022) <b>scored 59/100</b> vs. world electric utility average of 31</li> <li>FTSE (2023): <b>4/5</b> (world utilities avg. 2.7/5)</li> </ul>

Our Commitment:
<ul style="list-style-type: none"> <li>Increase renewable power procurement to 60% by FY27 (<i>achieved 30% RE in FY23</i>) (SDG 7)</li> <li>Reduce GHG Emission Intensity<sup>(1)</sup> to 40% by FY25, 50% by FY27 and 60% by FY29 (SDG 13)</li> <li>Achieve Zero Waste to Landfill<sup>(2)</sup> for all operational sites (achieved in FY23)</li> <li>Achieve Single Use Plastic Free<sup>(2)</sup> (achieved in FY23)</li> </ul>

Notes: 1) GHG Emission Intensity = tCO2 / Rs Cr EBITDA; 2) Confederation of Indian Industry-ITC Centre of Excellence for Sustainable Development (CII-ITC CESD) certified SUP Free status to 37 operational sites of AESL, i.e., 30 substations and 7 transmission line clusters including stores; 3) AEML, being subsidiary of AESL with ~40% of reported EBITDA share, reports disclosures through AESL; 4) AEML is in process to adopt the guiding principles for independent reporting | UNSDG – United Nation Sustainability Development Goals | TCFD - Task Force on Climate-Related Financial Disclosures | SBTi - Science Based Targets initiative | CDP - Carbon Disclosure Rating GHG – Green House Gas



# Investment Case

# AESL: Compelling Investment Case

## Favorable Industry Landscape

- Evolved and stable regulatory regime has enabled growth of **AESL's business into multiple segments (Transmission, Distribution, Smart metering, District cooling) within energy domain**
- Focus on **Grid reliability, consumerism and shift to RE based** power propelled investments in across the value chain

## Development and Construction Expertise

- Proven track record of **excellence in development & construction** of Transmission systems and **asset hardening at AEML**
- AESL remains **competitive at bidding stage** due to scale benefits and geographical presence across the country
- **Solid vendor management** and strong relationships adds to business sustainability and avoid cost escalations

## Operational and Execution excellence

- **Energy network operation center (ENOC)** allows remote monitoring and diagnostics to enhance O&M efficiency
- **Robust operational metrics** - line availability, supply reliability, distribution loss, affordable tariffs
- One of the **lowest O&M cost through predictive maintenance** and technology excellence

## Capital Management Philosophy

- Capital structure designed through debt financing at **tenure matching concession life** and terms akin to stable assets
- AESL is the only private sector transmission and distribution company in India with **International IG Rating**

## Capital Allocation and turnaround capability

- Disciplined approach towards new project bidding and acquisitions; stringent IRR (returns) threshold
- Commitment to **maintain strong credit profile and investment grade rating**
- Strong track record of acquisition and turn around of transmission and distribution assets

# Annexures

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Regulatory Framework

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AEML – Case Study

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Smart Metering – Key Benefits

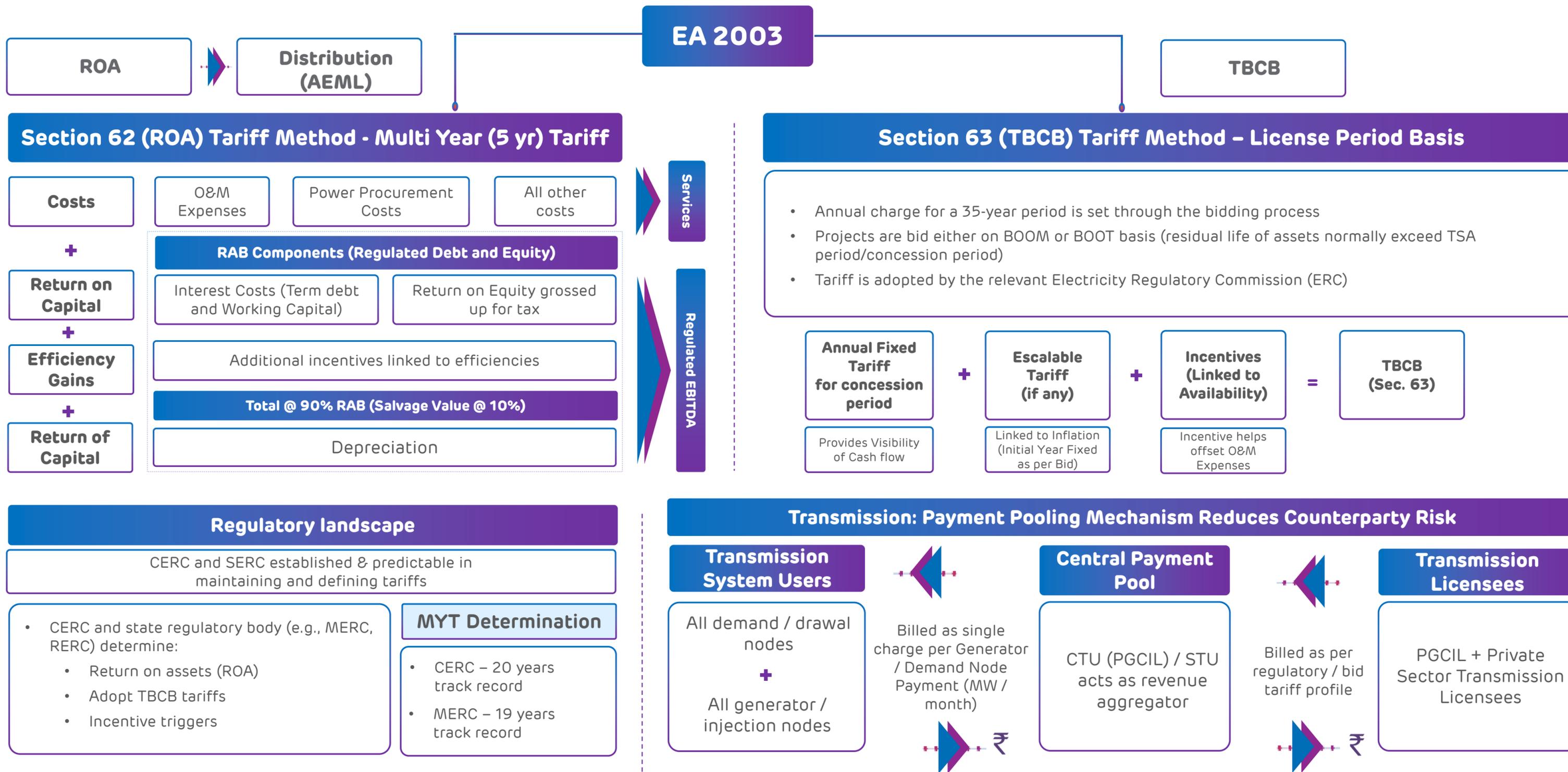
38-40

Project Level Details – Asset Portfolio

41

AESL - Board and Management Team

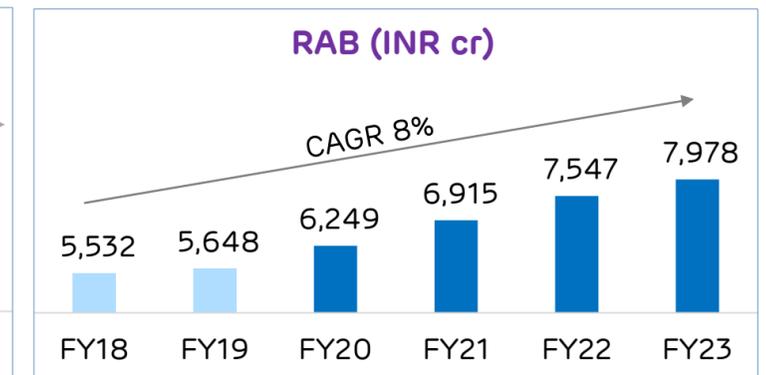
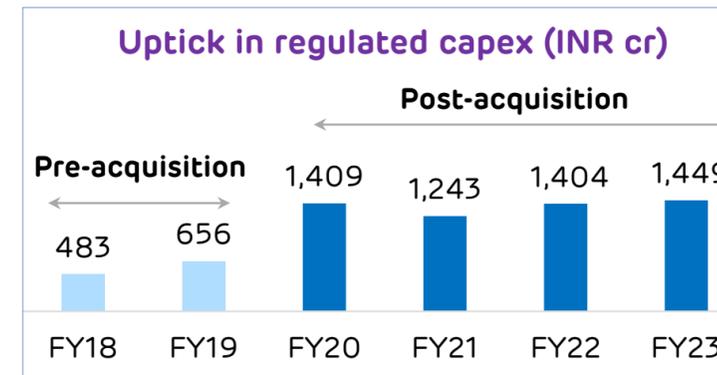
# Attractive Industry Opportunity supported by an Evolved and Stable Regulatory Regime



# AEML Case Study: Successful Acquisition and Turnaround

## Projection Execution Excellence

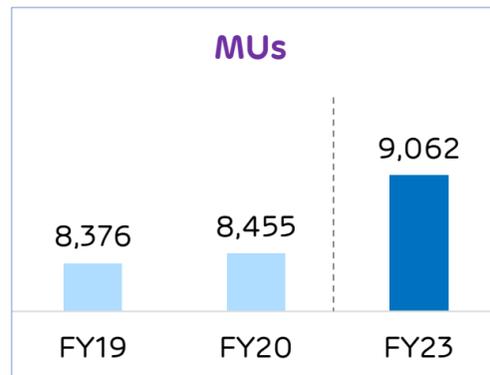
- Low capex pre-acquisition on account of liquidity constraints
- Investment in capex resulting in **asset hardening** → supply reliability and higher efficiencies
- **One of the highest ever regulated asset development** in the Covid period



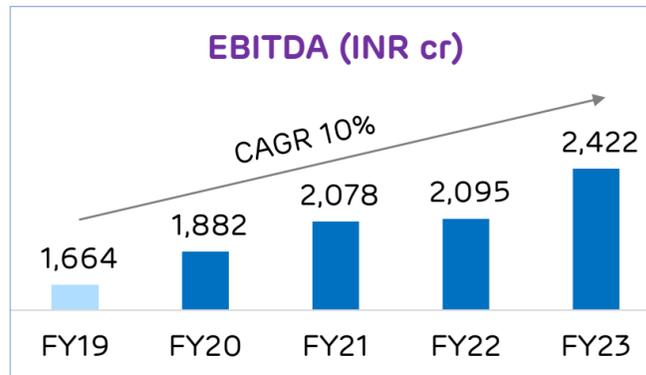
## Operational excellence

- Best practices implemented with technology integration to ensure supply reliability, responsiveness as well as profitability

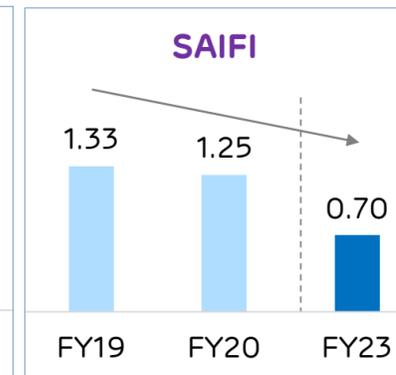
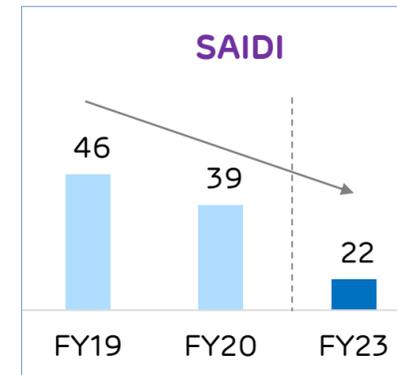
### Consistently delivering power



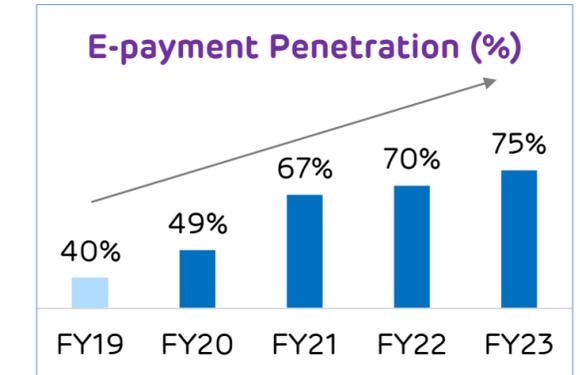
### Operating assets at increasing profitability



### Best O&M practices → improved supply reliability at 99.99% every year

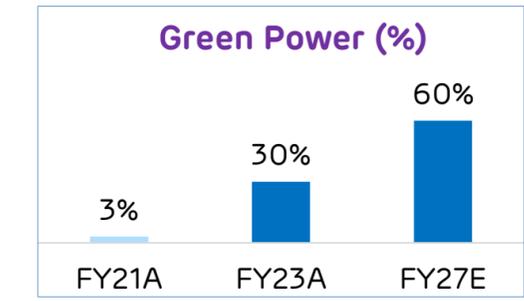


### Higher digital penetration among consumers



## Sustainability

- Sustainability is a key focus area post-acquisition to transform AEML into a **world class utility**
- AEML signed **700 MW wind-solar hybrid PPA** which increased renewable share from 3% to 30% in FY23
- First time ever **covenanted sustainability linked framework** by a utility in India



# Smart Metering – Key Benefits

## Technology transformation

Key technology towards the **transformation of power sector** in India

## Real time information

Measures electricity consumption & communicates the consumption reading to the power utilities

## Two-way communication

Between the meter and the power utility through cellular communication or radio frequency

### Key Benefits



#### Improved Cash Flows

- Upfront collection of dues and “Pay-as-per-use model” to eradicate arrears
- Reducing working capital requirements



#### Reduction in Operational costs

- Reduced meter reading charges, bill printing, manpower cost
- Field situation awareness to reduce theft and average / estimated billing



#### Improved Supply Quality

- Automatic monitoring of SAIFI, SAIDI
- Quicker response time to fault removal / consumer complaints
- Control over consumption
- Accurate estimates for network upgradation
- Real-time assessment of system performance



#### Customer Satisfaction

- Enhancing consumer participation
- Consumer profile, consumption pattern on real time basis.
- Increases accuracy of meter reading



#### ESG & RE Integration

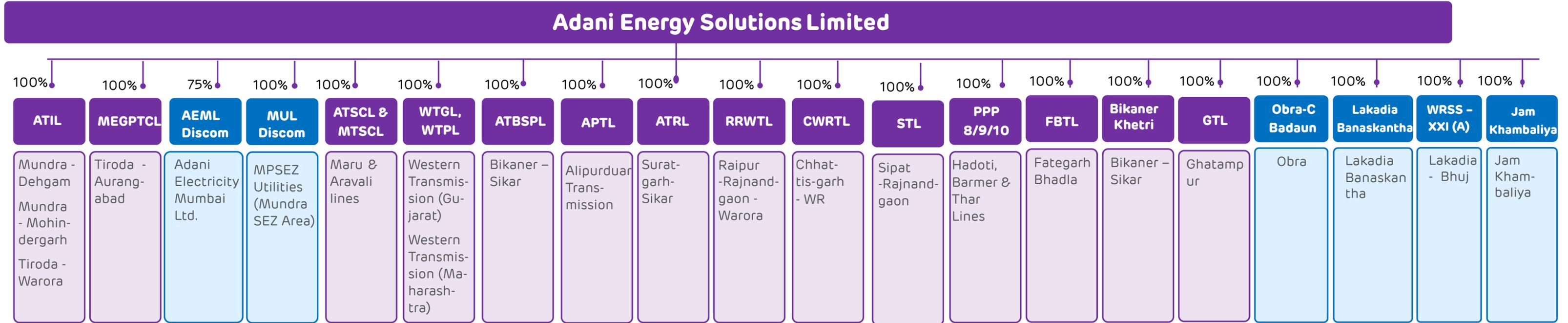
- Data analytics helps load disaggregation, forecasting & consumption
- Time of Day (TOD) tariff matched with RE generation
- Efficient & sustainable energy management
- Helps people revise their consumption habits



#### Improved Energy Accounting

- Enables mapping of consumer demand, feeder wise loading
- Identification of pilferage / high-loss pockets

# AESL's Operational Asset Portfolio (T&D) as of August 2023



Operating Assets															Projects Operationalised in FY23					
<b>A</b>	3,834 ckms	1,217 ckms	573 ckms	148 ckms	397 ckms	3,063 ckms	343 ckms	650 ckms	278 ckms	611 ckms	434 ckms	348 ckms	413 ckms	292 ckms	481 ckms	897 ckms	630 ckms	352 ckms	292 ckms	38 ckms
<b>B</b>	6,630 MVA	6,000 MVA	3,250 MVA	360 MVA	1,360 MVA	-	-	-	-	-	630 MVA	-	585 MVA	-	-	-	950 MVA	-	3000 MVA	2500 MVA
<b>C</b>	c. 27 years	c. 30 years	c. 14 years	c. 11 years	c. 29 years	c. 30 years	c.32 years	c.35 years	c. 33 years	c. 34 years	c. 34 years	c. 34 years	c. 34 years	c. 35 years	c. 35 years	c. 35 years	N/A	c. 35 years	C. 35 years	c. 35 years
<b>D</b>	Regulated return (ROA)	Regulated return (ROA)	Regulated return (ROA)	Regulated return (ROA)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)										
<b>E</b>	Centre / State	State	State	State	State	Centre	State	Centre	State	Centre	Centre	Centre	State	Centre	Centre	State	State	Centre	Centre	Centre
<b>F</b>	INR 49.6 Bn	INR 57.7 Bn	INR 75 Bn	INR 0.4 Bn	INR 3.9 Bn	INR 18.2 Bn	INR 2.2 Bn	INR 10.8 Bn	INR 1.3 Bn	INR 12.1 Bn	INR 9.5 Bn	INR 5.4 Bn	INR 4.4 Bn	INR 5.5 Bn	INR 8.5 Bn	INR 18.2 Bn	INR 7.4 Bn	INR 7.0 Bn	INR 8.1 Bn	INR 3.2 Bn

**A** Transmission line length      **B** Transformation capacity      **C** Residual concession life / License period      **D** Contract Type      **E** Counterparty      **F** Asset Base<sup>(1)</sup>

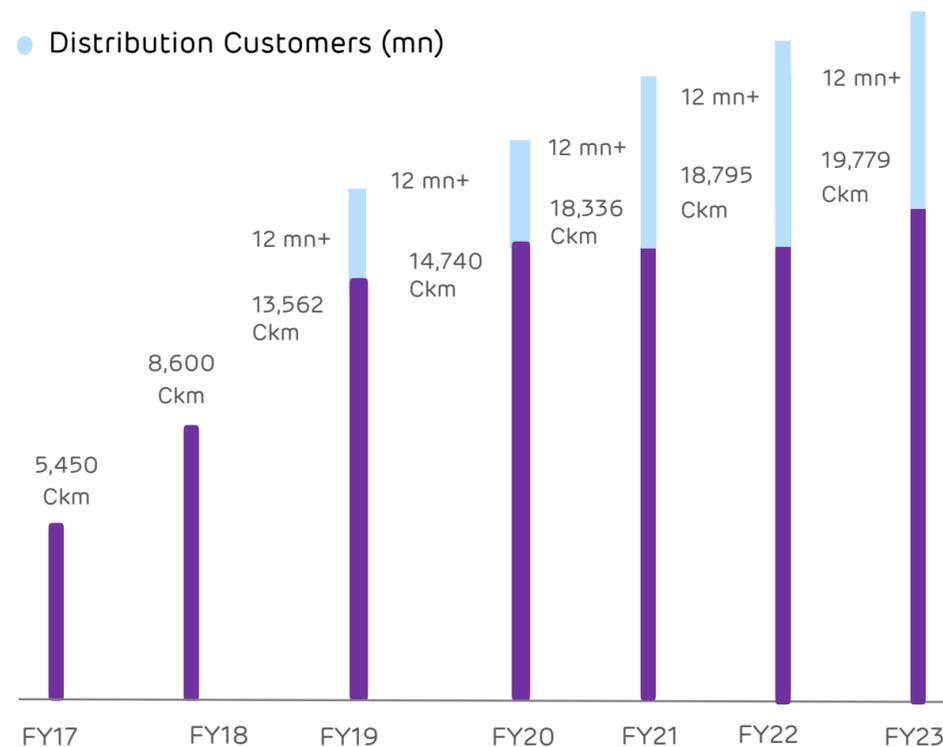
**Notes:** ATIL - Adani Energy Solutions (India) Limited; MEGPTCL - Maharashtra Eastern Grid Power Transmission Co. Limited; AEML: Adani Electricity Mumbai Limited (Distribution business); ATBSPL: Adani Energy Solutions Bikaner Sikar Private Limited; STL - Sipat Transmission Limited; RRWTL - Raipur Rajnandgaon Warora Transmission Limited; CWTL – Chhattisgarh WR Transmission Limited; ATRL – Adani Energy Solutions (Rajasthan) Limited; ATSCL – Aravali Transmission Service Company Limited; MTSCl – Maru Transmission Service Company Limited, WRSS M – Western Region System Strengthening Scheme Maharashtra, WRSS G – Western Region System Strengthening Scheme Gujarat, (1) Asset base for operational assets as per project cost and Mumbai GTD (AEML) as per Regulated Asset Base

# AESL's Under-construction Transmission Asset Portfolio as of August 2023

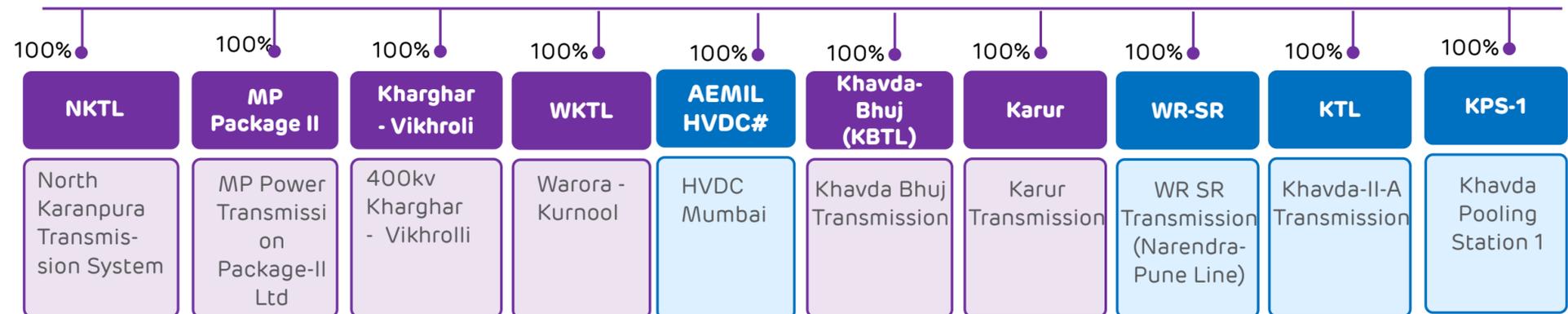
Since AESL's evolution its Transmission Network (ckms) has grown 3.5x and expanded into Distribution businesses

## AESL's "Grid-to-Switch" Integrated Platform

- Transmission Line (Ckms)
- Distribution Customers (mn)



## Adani Energy Solutions Limited



### Under Construction

	A	B	C	D	E	F	G	Recently Won and Acquired		
<b>A</b>	304 ckms	1,060 ckms	74 ckms	1,756 ckms	80 ckms	221 ckms	10 ckms	630 ckms	354 ckms	42 ckms
<b>B</b>	1,000 MVA	2,736 MVA	1500 MVA	3500 MVA	1,000 MVA	4,500 MVA	1,000 MVA	6,000 MVA	-	6,000 MVA
<b>C</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>D</b>	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Regulated Return (ROA)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)	Fixed tariff (TBCB)
<b>E</b>	Centre	State	State	Centre	State	Centre	Centre	Centre	Centre	Centre
<b>F</b>	INR 6.7 Bn	INR 12 Bn	INR 18.9 Bn	INR 35 Bn	INR 70 bn	INR 12 bn	INR 2 bn	INR 22 bn	INR 12 bn	INR 8 bn
<b>G</b>	Sept.-22 - July'24	Dec-23	Dec-23	Aug-23	Mar-25	Jan-24	Aug-23	Aug-24	Mar-25	Jan-25

- A** Transmission line length
- B** Transformation capacity
- C** Residual concession life / License period
- D** Contract type
- E** Counterparty
- F** Asset base<sup>(1)</sup>
- G** COD<sup>(2)</sup>

Notes: 1) Asset base for under-construction assets – as per the estimated project cost as of March 2023; (2) Provisional Commercial Operation Date (COD); NKTL – North Karanpura Transco Limited; GTL: Ghatampur Transmission Limited; OBTL: Obra Transmission Limited; LBTL: Lakadia Bhuj Transmission Limited; JKTL: Jam Khambaliya Transmission Limited; KVTL: Kharghar Vikhroli Transmission Limited; WKTL: Warora Kurnool Transmission Limited

#AEMIL - Adani Electricity Mumba Infra Limited 100% shares are currently being held by AEMIL. Due to CERC restrictions 51% shares are pledged in favor of AESL

# AESL's Smart Metering Under-construction Portfolio as of August 2023

## Adani Energy Solutions Limited

	100%	100%	100%	100%	100%	100%	100%
	BEST	APDCL	APEPDCL	APCPDCL	APSPDCL	MSEDCL	MSEDCL
	BEST Smart Metering Ltd. (Mumbai)	NE Smart Metering Ltd. (Assam)	Adani Energy Solutions Step Seven Limited (Andhra Pradesh)	Adani Energy Solutions Step Seven Limited (Andhra Pradesh)	Adani Energy Solutions Step Seven Limited (Andhra Pradesh)	Bhandup Zone, Kalyan Zone and Konkan Zone	Baramati Zone and Pune Zone
Under Construction							
A	1.1	0.8	0.8	1.0	1.0	6.3	5.2
B	13.0	8.4	10.5	12.8	13.9	75.9	62.9
C	120	120	120	120	120	120	120
D	Yes	Yes	Yes	Yes	Yes	Yes	Yes
E	DBFOOT	DBFOOT	DBFOOT	DBFOOT	DBFOOT	DBFOOT	DBFOOT
F	Oct'22	Feb'23	June'23	June'23	June'23	Aug'23	Aug'23

**A** Smart Meters Quantity (in million)

**B** Contract Value (in Rs Billion)

**C** Contract Period (months)

**D** Capex + O&M

**E** Contract Type

**F** Month of Award

# AESL: Board and Management Team

## Strong Sponsorship



Mr. Gautam S. Adani  
*(Chairman)*



Mr. Rajesh S. Adani  
*(Director)*



Mr. Anil Sardana  
*(MD, AESL)*

## Managing Director



Mr. K. Jairaj



Dr. Ravindra H.  
Dholakia

## Independent Directors



Mrs. Meera Shankar

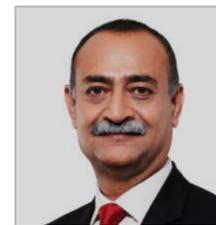


Ms. Lisa MacCallum

## Skilled and Experienced Management Team



Mr. Anil Sardana  
*(MD, AESL)*



Mr. Bimal Dayal  
*(CEO, Transmission)*



Mr. Kandarp Patel  
*(CEO, Distribution)*



Mr. Rohit Soni  
*(CFO)*



Mr. Kunjal Mehta  
*(CFO, AEML)*

Strong governance framework with focus on transparency and independence

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MUSHKILON KI  
NAHI SUNTE,  
HUM KARKE  
DIKHATE HAIN.

#HumKarkeDikhateHain

adani

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Energy Solutions

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Energy Solutions

Thank You