



# Adani Energy Solutions Limited

(Formerly known as Adani Transmission Limited)

**Investor Presentation** 

March 2024

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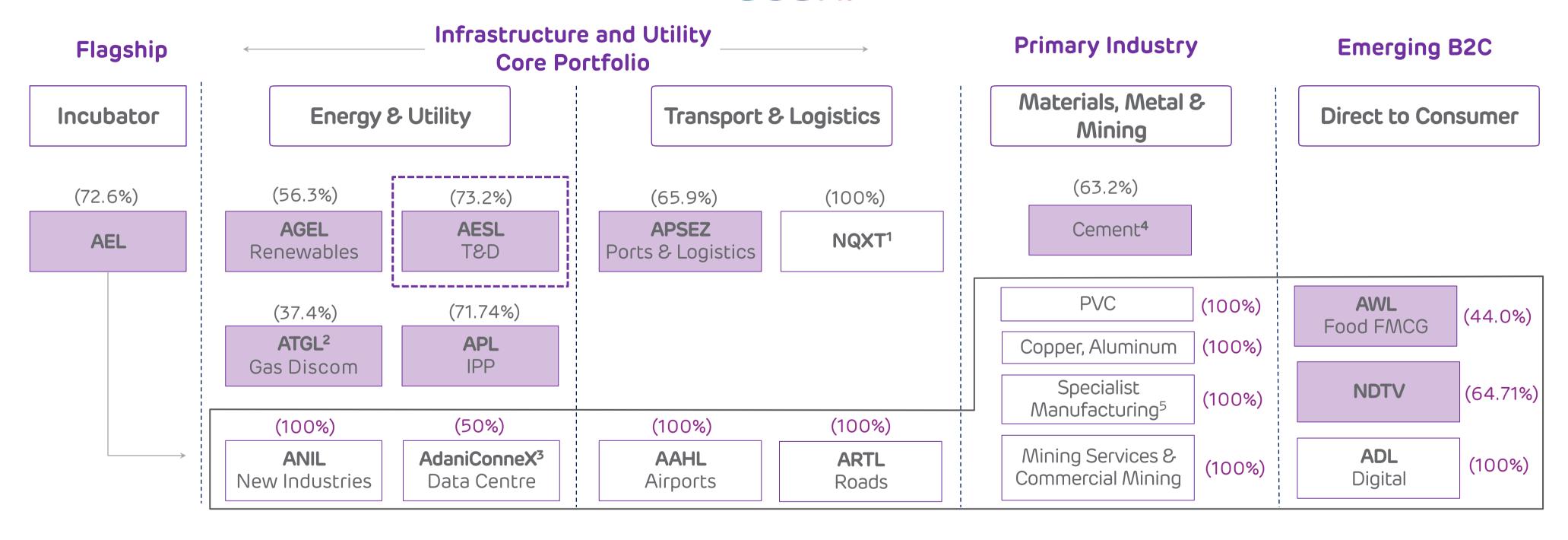


# Adani Portfolio

## Adani: A World Class Infrastructure & Utility Portfolio



# adani



(%): Promoter equity stake in Adani Portfolio companies

(%): AEL equity stake in its subsidiaries

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

Data as of December 31, 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 63.2% stake in Ambuja Cement which in turn owns 50.05% in ACC Limited. Adani directly owns 6.65% stake in ACC Limited. Ambuja has completed the acquisition of Sanghi Industries as on 31st Dec'23. | 5. Includes the manufacturing of Defense and Aerospace Equipment; **AEL**: Adani Enterprise Limited; **APSEZ**: Adani Ports and Special Economic Zone Limited; **APSEC**: Adani Power Limited; **APSEC**: Adani Green Energy Limited; **APSEC**: Adani Airport Holdings Limited; **APSEC**: Adani Power Limited; **APSEC**: Adani New Industries Limited; **APSEC**: Adani Digital Limited | Note - Purple color represent public traded listed verticals;



Represents public traded listed verticals

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



## Secular growth with world leading efficiency



Ports and Logistics

Growth 3x6

**EBITDA 70%** 1,2



Renewables

Growth 4x6

EBITDA 92% 1,4



Growth 3x6

EBITDA 91% 1,3,5

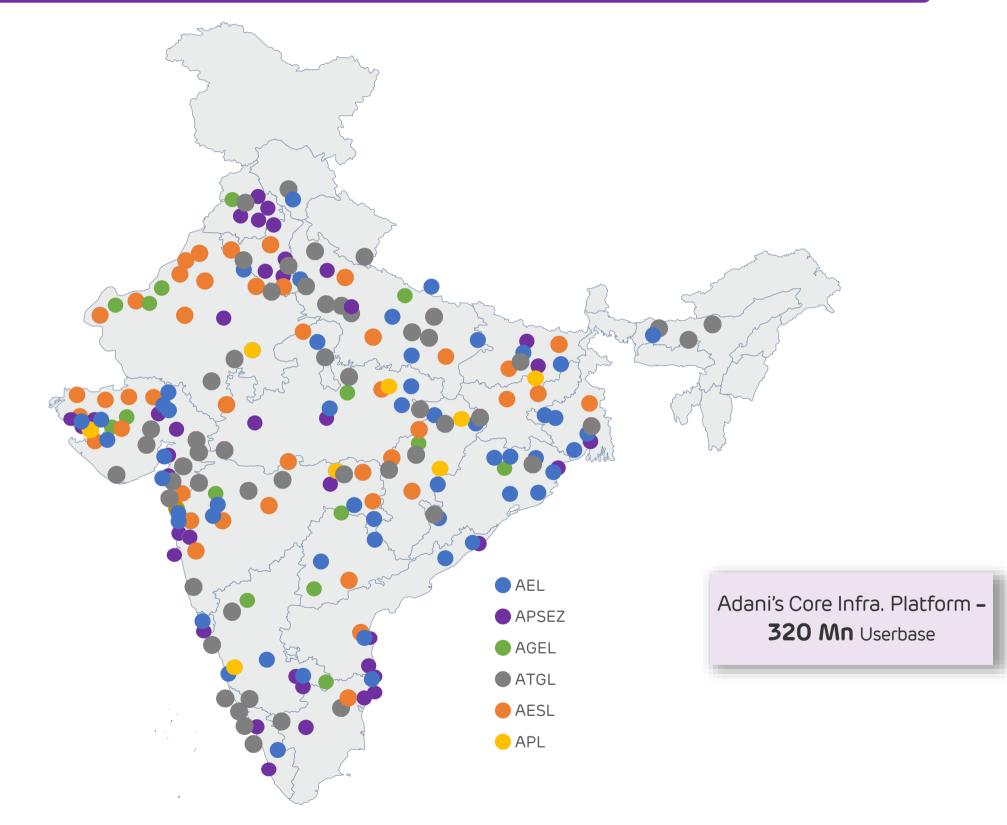


Gas

Growth 1.4x6

EBITDA 19% 1,3

## National footprint with deep coverage



Note: 1. Data for FY23; 2. Margin for indian 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 Energy Solutions Limited, APSEZ: Adani Energy Solutions Limited, APSEZ: Adani Power Limited, APSEZ: Adani Energy Solutions Limited, APSEZ: Adani Energy Solutions Limited, APSEZ: Adani Power Limited, APSEZ: Adani Energy Solutions Limited, APSEZ: Adani Power Limited, APSEZ: Adani Powe

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



Phase		Development			Operations		Post Operations	
Centre of Excellence		Project Management & Assu	urance Group		AIMSL*		Policy - Strategy - Risk	k
	Origination	Site Development	Construction		Operation		Capital Mgmt	
Activity	<ul> <li>Analysis &amp; market intelligence</li> <li>Viability analysis</li> <li>Strategic value</li> </ul>	<ul> <li>Site acquisition</li> <li>Concessions and regulatory agreements</li> <li>Investment case development</li> </ul>	<ul> <li>Engineering &amp; design</li> <li>Sourcing &amp; quality levels</li> <li>Equity &amp; debt funding at project</li> </ul>	•	Life cycle O&M planning Asset Management plan	•	Redesigning the capital structure of the asset  Operational phase funding consistent with asset life	
	India's Largest Commercial Port (at Mundra)	Longest Private HVDC Line (Mundra – Mohindergarh)	2,140 MW Hybrid cluster operationalized in Rajasthan in FY23		Energy Network Operation Center (ENOC)	•	Duration Risk Matching Forex Currency Risk Mana Interest Rate Risk manage	
Performance	Highest Margin among peers	Highest line availability	India's first and World's largest solar- wind hybrid cluster		Centralized continuous monitoring of plants across India on a single cloud-based platform	•	Governance & Assurance  (ABEX -Adani Business Exc	cellen
						31	% 55% 34% 2°5	29% 2% ch 2023

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



**Development** 



#### **Execution Prowess**

Transmission Network of **20,422 ckm**<sup>(1)</sup>

Built Longest Private HVDC Line (2)

#### **Strategic Presence**

**Transmission** - Presence in 15 states **Distribution** - Integrated utilities catering to Mumbai (AEML) and Mundra (MUL)

**Smart Meters** - Presence in 5 states

### RAB expansion through Asset Hardening in Discoms

8% CAGR growth in RAB in Mumbai Discom in 5 years (since acquisition)

AEML growth strategy is emulated in MUL

**Operations** 



#### Operating Efficiency

Robust network availability of 99.7%

One of lowest Distribution losses in the country (5.93% in FY23 in AEML)

**Highest EBITDA margin** in the sector (91% in Transmission)

#### Consumer-centricity

Supplier of choice for 12 million+ consumers with a green power option

Smart Metering (84 million potential consumer base)

CSAT surveys for 12 critical processes for high consumer satisfaction (top 3%)

#### Embedded ESG Framework

**Decarbonisation of Grid (Achieved 38% RE power** and on track to reach
60% by FY27)

Installed 3.36 MWp solar capacity for auxiliary consumption at substations

Board Diversity and Strengthening

Returns and Equity Value Creation



#### **Equity Partnerships**(3)

Secured primary and secondary equity investments from marquee investors –

QIA in AEML in 2019 and GQG Partners in 2023 in AESL

(infusion of US\$ 1,175 million)

# Construction Framework Agreement

Fully funded plan, AESL has raisedUS\$ 700 mn (US\$ 1.1 bn fullydrawn) revolving facility, additionalUS\$ 2 bn GMTN program in placefor AEML Capex program

### Significant Growth Potential

Parallel Licensing, Smart Metering and Cooling Solutions

Increasing participation in **renewable grid** (eg: HVDC Mumbai, Khavda)

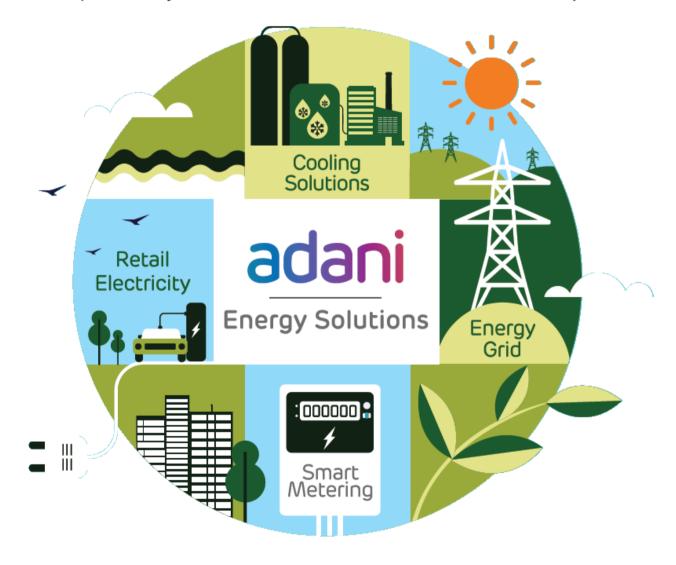
Green industrial cluster in Mundra

Note: 1) Transmission network is as of December 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), GQG Investment of Rs. 6,014 Cr (US\$ 723 million) for 6.81% stake based on closing price of Rs 1,045.75 dated December 29, 2023



## Adani Energy Solutions Ltd.

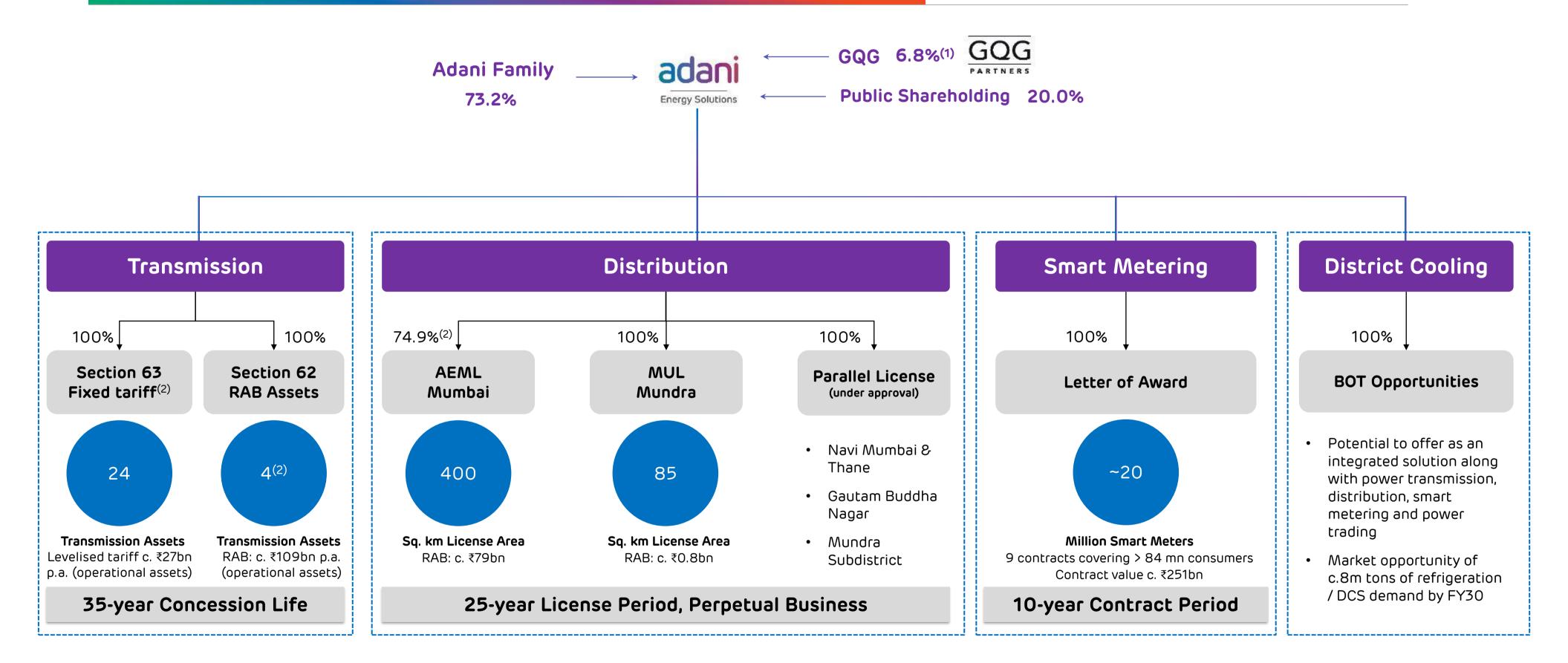
(formerly known as Adani Transmission Ltd.)



# About AESL

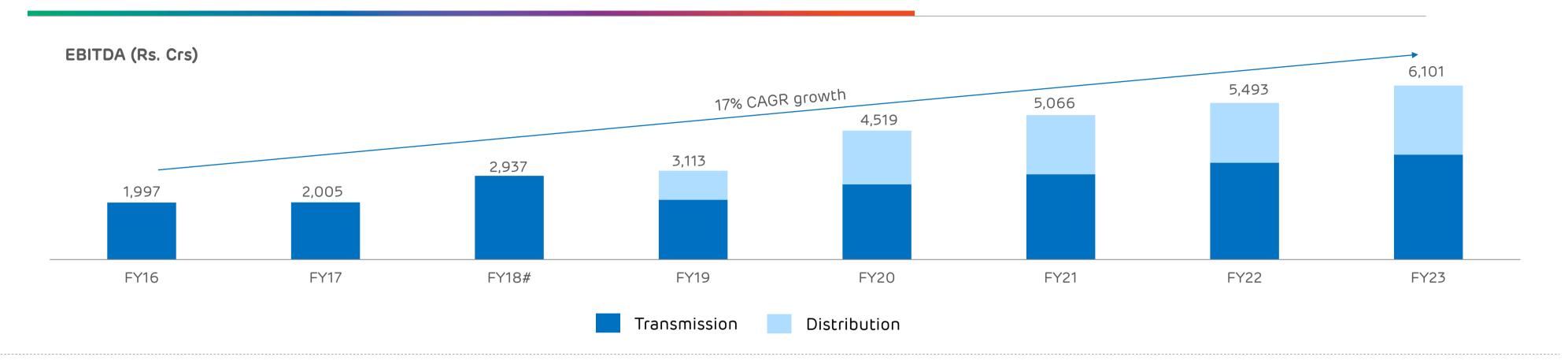
## **AESL**: Holding Structure and Portfolio Overview

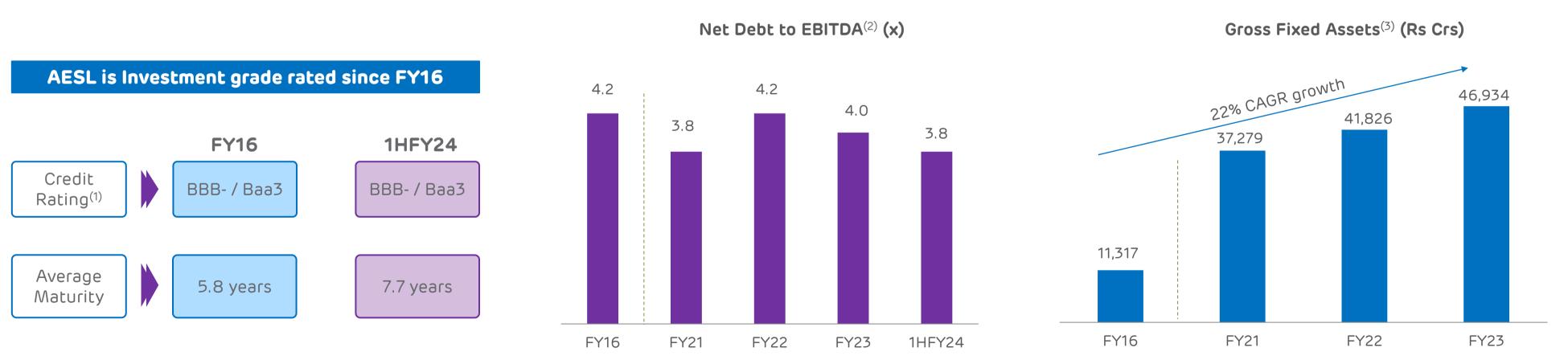




# Transformational Journey with Robust Growth and Credit Discipline







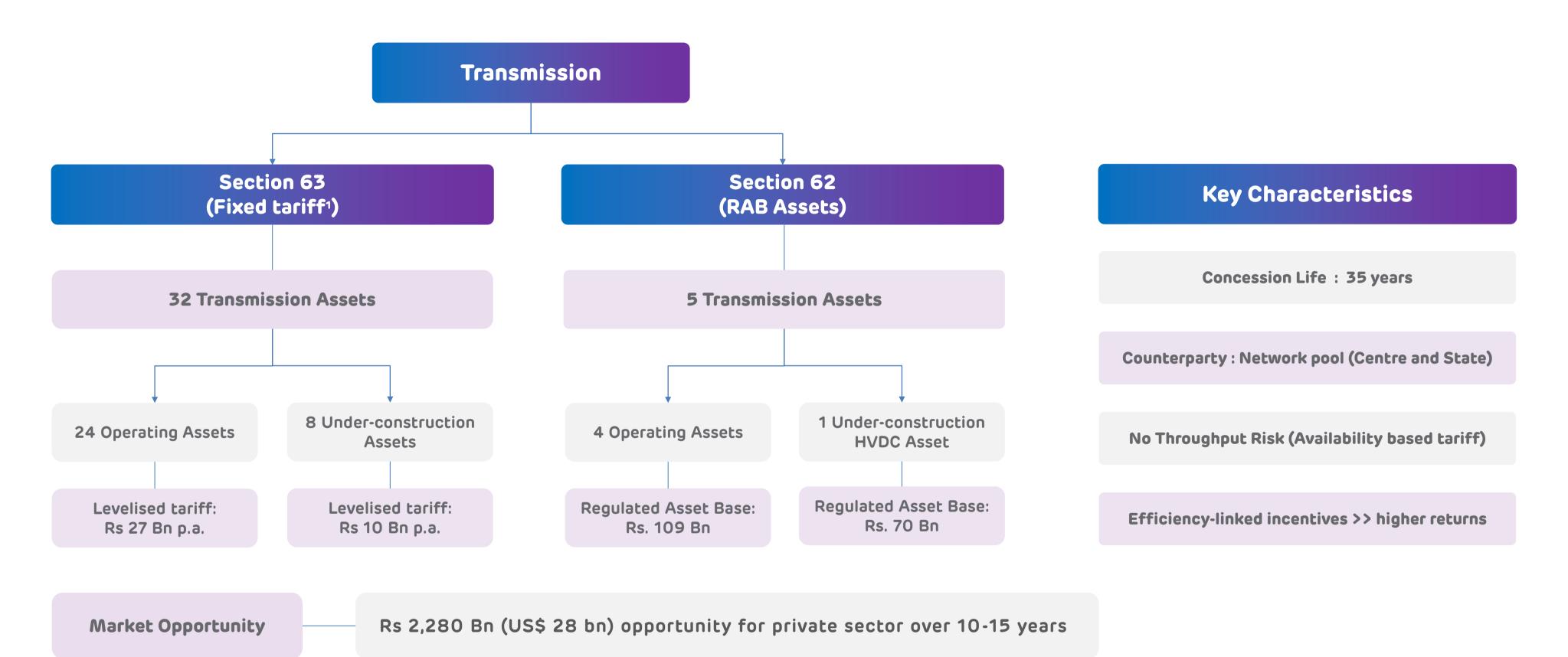




# Transmission

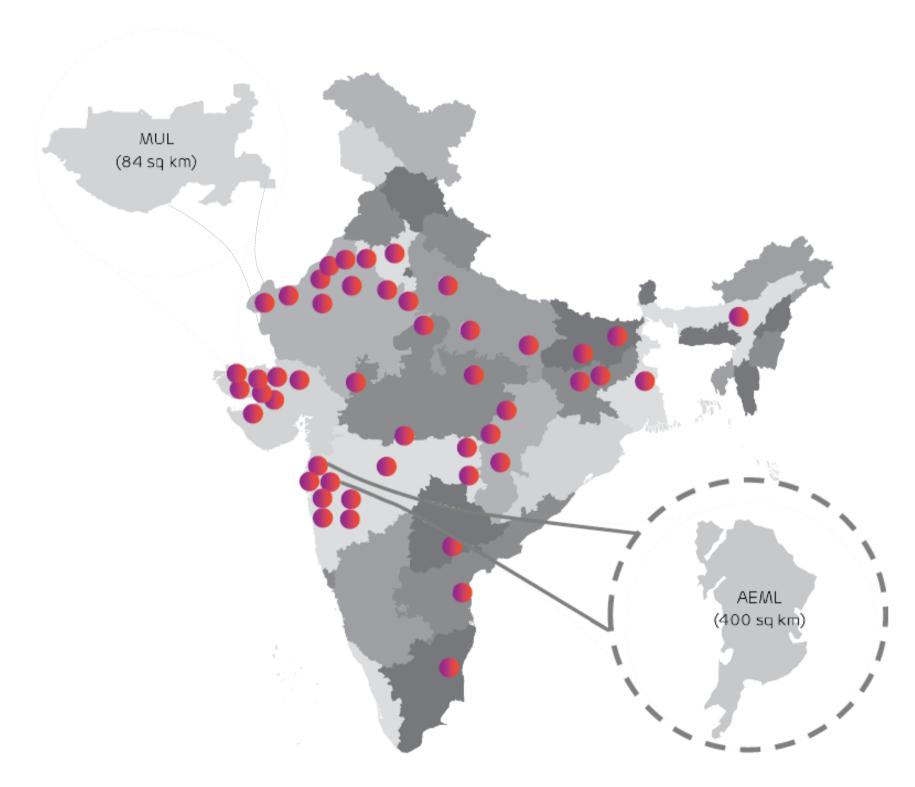
## **Transmission** Business





# Asset Portfolio – Presence Across the Country





#### #Map not to scale

MEGPTCL: Maharashtra Eastern Grid Power Transmission Company Limited; ATIL: Adani Transmission (India) Limited; ATSCL: Aravali 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 Transmission 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.; \*Out of 3,290 ckm, 983 ckm was operationalized in 9MFY24 and WKTL, KVTL, KTL, and KBTL (partial) were commissioned

17
States
(distinct states including smart metering business)

~20,422
ckt km
Transmission
Line

~54,661

MVA

Transmission
Capacity

No	Operational	Ckt Kms
1	MEGPTCL	1,217
2	ATIL (3 lines)	3,834
3	ATSCL	97
4	MTSCL	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

	Subtotal (A)	17,133
27	KVTL	74
26	KTL	9
25	WKTL	1756
24	MUL	151
23	JKTL	37
22	LBTL	351
21	WRSS_XXIA	295
20	OBTL	630

No	Under construction	Ckt Kms
28	NKTL <sup>(1)</sup>	304
29	AEMIL (HVDC)	80
30	MPII	1,087
31	Khavda Bhuj (KBTL)	217
32	WRSR	630
33	Khavda II Part A	355
34	KPS - 1	42
35	Sangod Trans	15
36	Khavda Ph-III Part-A	560
37	KPS – 1 (Augmentation)	
	Subtotal (B)*	3,290
	Total (A+B)	20,422

\*Out of 3,290 ckm, 983 ckm was operationalized in 9M FY24 and WKTL, KVTL, KTL, and KBTL (partial) were commissioned

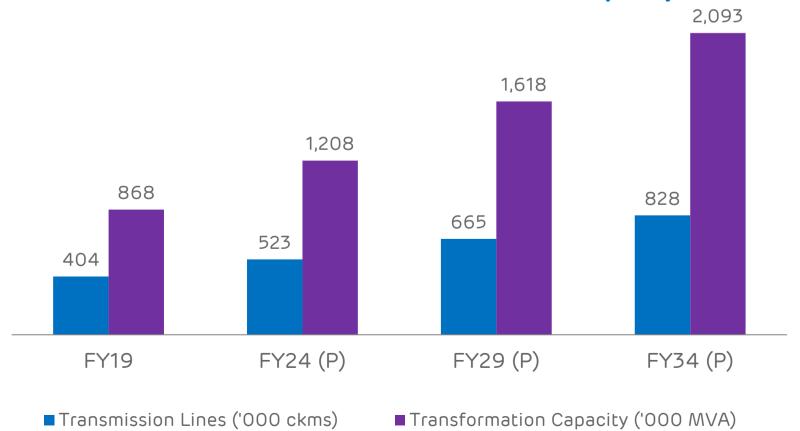


# Private Participants Opportunity of ~US\$ 28 bn projects over 10-15 years

#### 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. 1,260 Bn / US\$ 15 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

General network access (GNA)

#### 500 GW Target by 2030

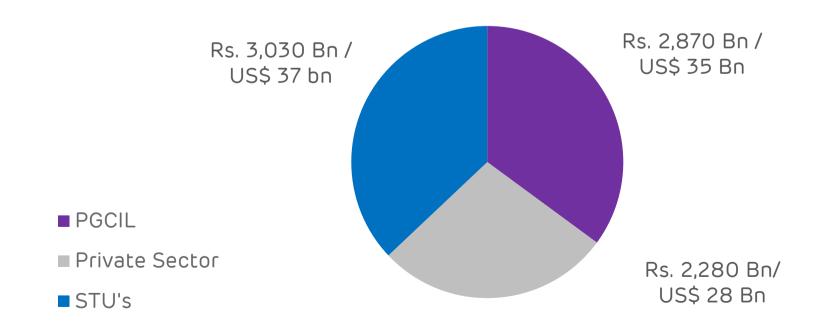
GNA Regulations for access to inter-state transmission systems since 2017

Rs 2.4 Lakh Crs (US\$ 30 billion) Transmission opportunity by 2030

(as per CEA's report dated December 2022)

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

# 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

**OUR BUSINESS PHILOSOPHY** 

## **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





Bidding, Site Scouting



Project Development & Basic Engineering



Execution



Operations



## Concept

## Integrated Project Management



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**

- Integrating & providing cross functional support for Bidding Process
- Site Location Assessment, coordinating for field visits
- Bid stage scope finalization & technology adoption with engineering
- Bid Stage Cost Estimates
- In case of M&A's, collaborating and assessment of asset

## **Project Development**

- Collaborates for Technology finalization &
   Scope
- Execution Strategy
- Contracting Strategy
- Detailed Project Report
- Coordinating for connectivity & evacuation
- Level 1 Project Schedule
- Capex Budgets and Estimates
- Risk Assessment & plan
- Procurement Planning
- Financial Closure Plans

## **Project Execution**

- Integrated L3 Project Schedule
- Baselining Cost and Resource plans
- Issue & Risk Management
- Supply Chain Management and Contract
   Administration
- Contractor & Vendor Management
- Change Management
- Monitoring Approvals , Permits & Licenses
- Managing Lenders & LIE interface
- Cash Flow Management
- Project Monitoring & Control
- Mid Course Corrections (Catch up)

## **Project Close Out**

- Facilitating the Handover & punch list closure
- Contract Closures
- Close Out Report
- Material Reconciliation
- Spares Handover
- Closure of LIE and Lender Reports
- Stakeholder Recognition
- Finalizing the Final Costs
- Ensuring built as per Drawings







**Strong Project Controls** 

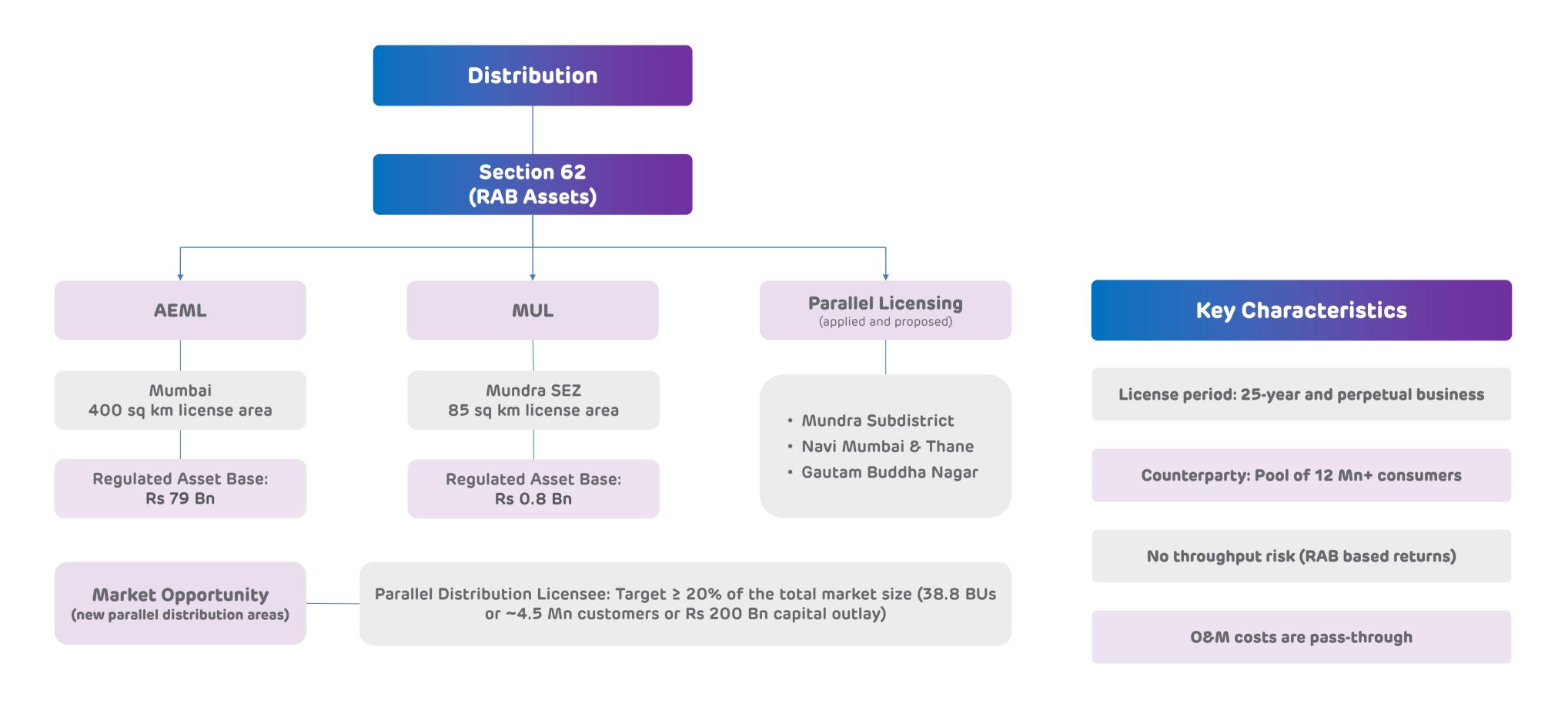




# Distribution

## **Distribution** Business

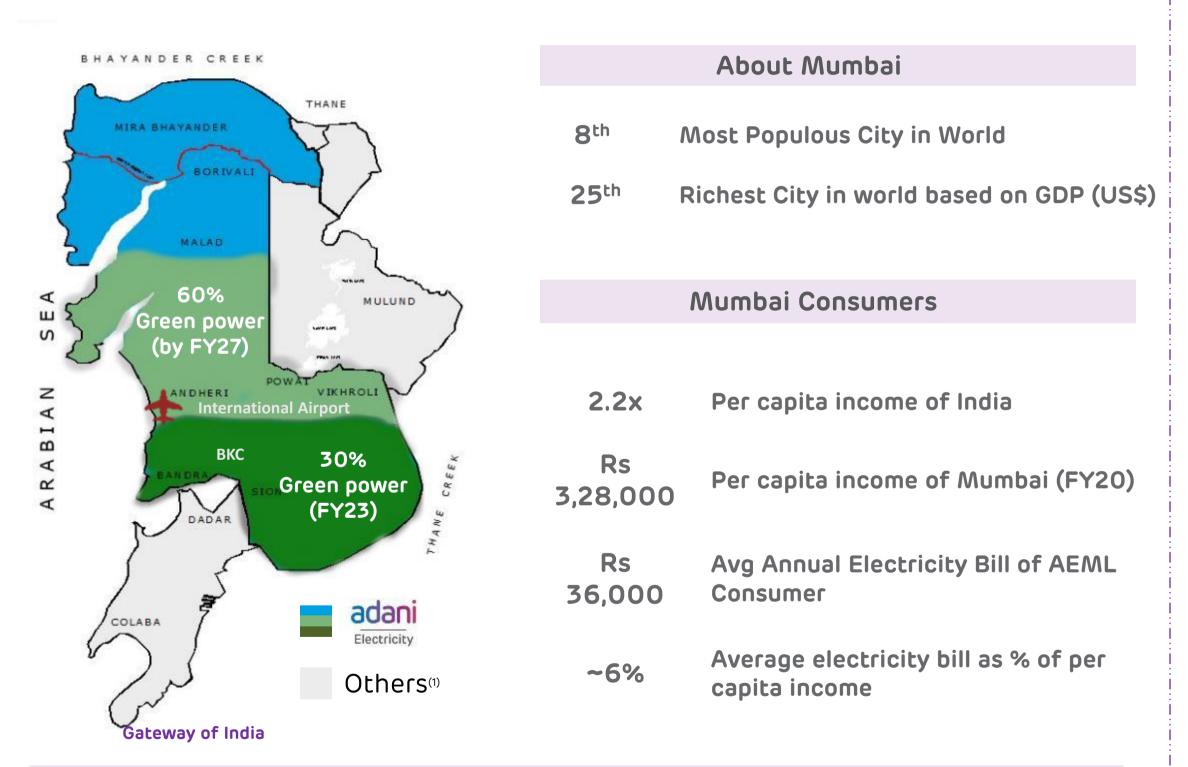


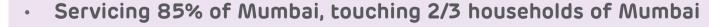


# AEML Distribution: India's No. 1 power utility, as per MoP, McKinsey, PFC (Scored 99.6/100)

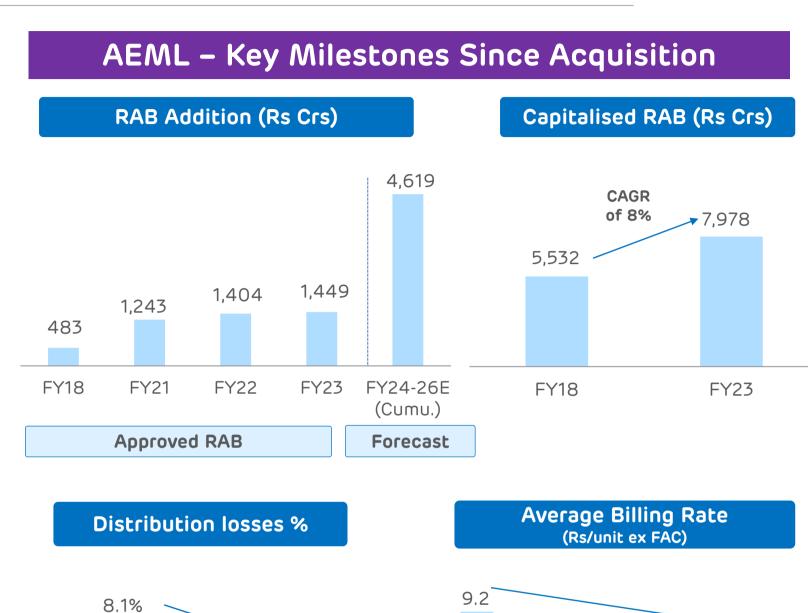


## Largest Integrated utility in India's Commercial Capital - Mumbai





One of the largest mega city in the world to achieve 30% renewable power





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

## MPSEZ Utilities Limited (MUL): Overview

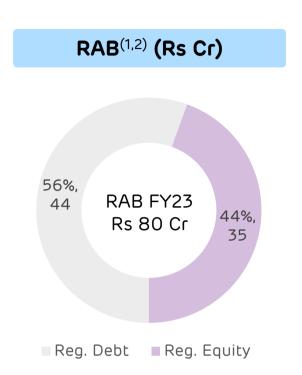


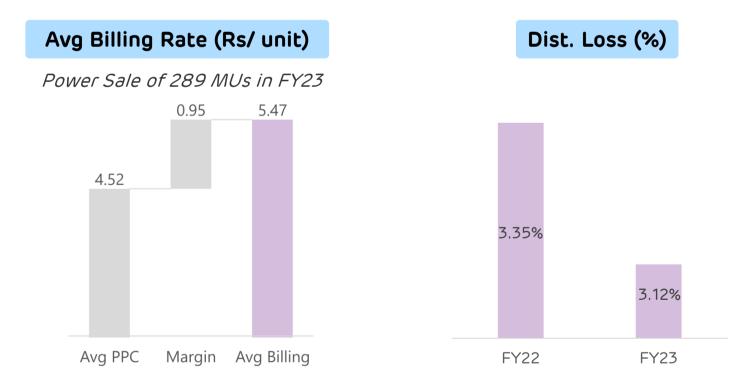
# Mundra SEZ is strategically located with well developed supporting infrastructure serving as an attractive industrial hub



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

- Mundra SEZ is India's largest multi-product SEZ spread across 85 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





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 of Rs. 200 Bn over 8 years
- Parallel Distribution Licensee  $^{(2)}$ : **Target \geq 20% of the total market size** 38.8 BUs or approx. 4.5 million customers

#### **Available Opportunities** Adani's Core Competency and Distribution Expertise Parallel Licensing in more than 3 new regions with potential 9x Cost Competitiveness - Cheap bulk power sourcing, Opex control growth in the distribution area<sup>(3)</sup> **Digitization** – Tech-enabled solutions for efficient operations Expansion of MUL Discom license area Our Growth Competitive **Technical Expertise** – Regulatory framework, Network design & operations areas Advantage Further RAB additions in AEML Value Added Services – Green Power, Energy Audits, EV Charging Distribution Platform for Group consumers and commercial and Reliability - Delivering world class reliability & quality of supply industrial 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

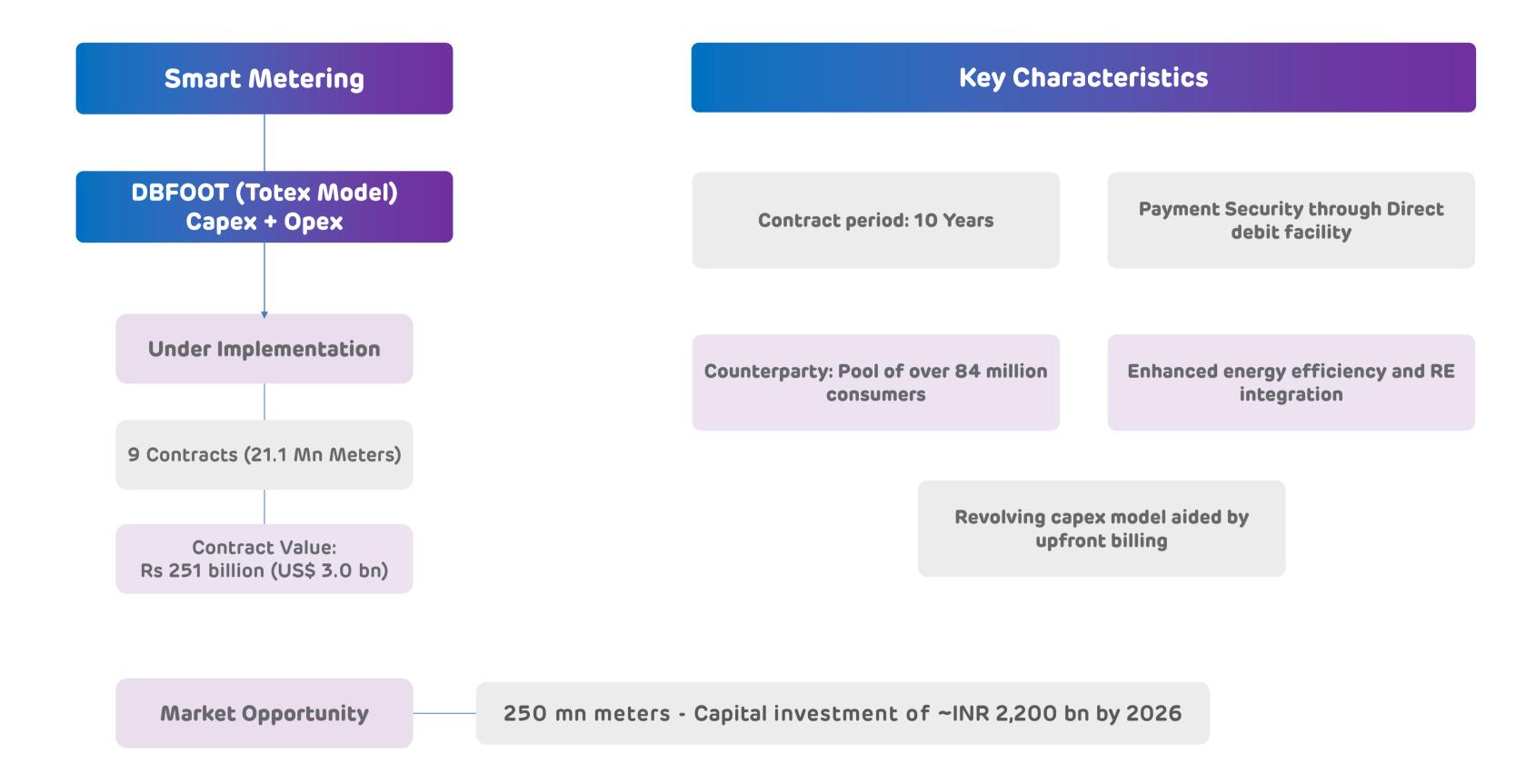




# Smart Metering

## Smart Metering Business

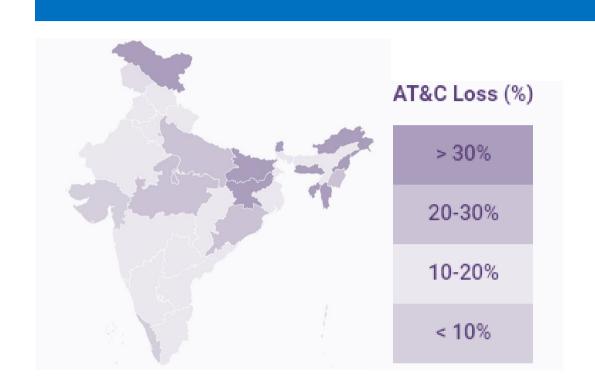




## Reforms in Discom sector: Advanced Smart Metering through RDSS scheme



#### Government Initiatives



#### Need for Smart Meters (nos of FY23) 1



High AT&C losses 15.77% (52 Discoms)



ACS-ARR gap ~Rs 1.26 per kWh



Billing Efficiency of 86.12%



consumption

Tendering through **competitive bidding** 

Revamped Distribution Sector Scheme (RDSS):

Target of 250 Mn smart meters by 2026

Outlay of ~Rs. 3 Tn (RDSS plan) with ~1 Tn GBS

# • • •

Elongated Receivables of discoms ~ 142 days (Rs 2.42 Lac Crs)

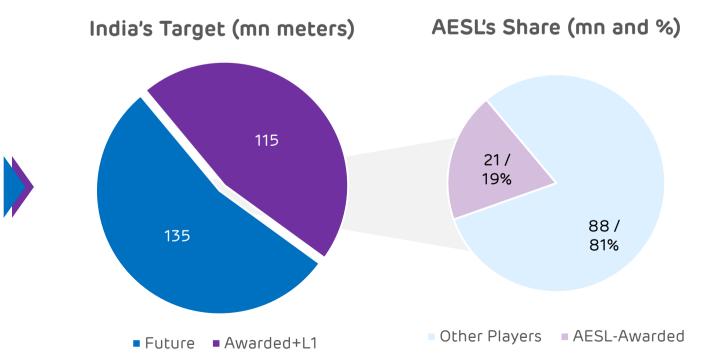
## **Opportunities**



34 States/UTsspread across60 Discoms



250 Mn Smart Meters Sanctioned



## Initial mover advantage

- Existing smart metering experience in AEML
- High EBITDA margin
- Track-record of complex projects
- Limited competitive intensity and economies of scale
- Higher Equity Return on Investment
- Augment Distribution offering

Cashflow generation during implementation stage leading to Lower Gestation Period

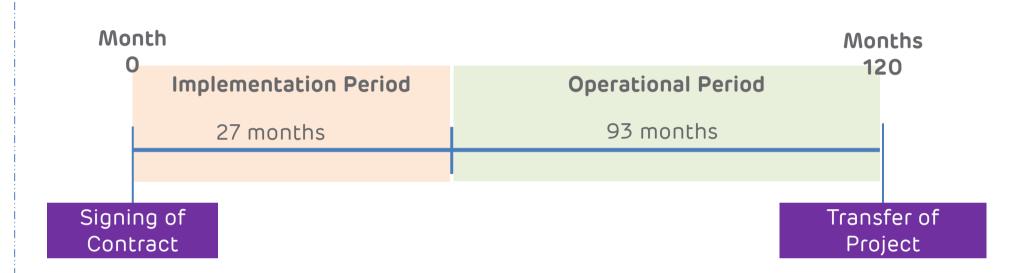
## Smart Metering Contractual Framework



### Flow of Revenue for Smart Meter SPV Payment of **Electricity Bills** Payment Gateway Consumers Agent Bank Direct Debit Facility Supply of Agent Bank **Electricity** Payment of Smart Meter Charges Smart Meter Utility SPV/AMISP Smart Meter Deployment Contract

- Assured Revenue for Smart Meter Implementing Agency;
- Pass through Expense under s.62 of electricity Act for Utility
- Ultimately recovered from the consumer

## Contract For Advanced Metering Infrastructure Service Provider (AMISP)



- Revenue inflows immediately on Operational Go live
- Operational Go Live: 5% of the Smart Meters being operational
- Revenue charged is based on Total Meter Months

Payment Security
Mechanism through
Direct Debit Facility
Agreement (DDF)

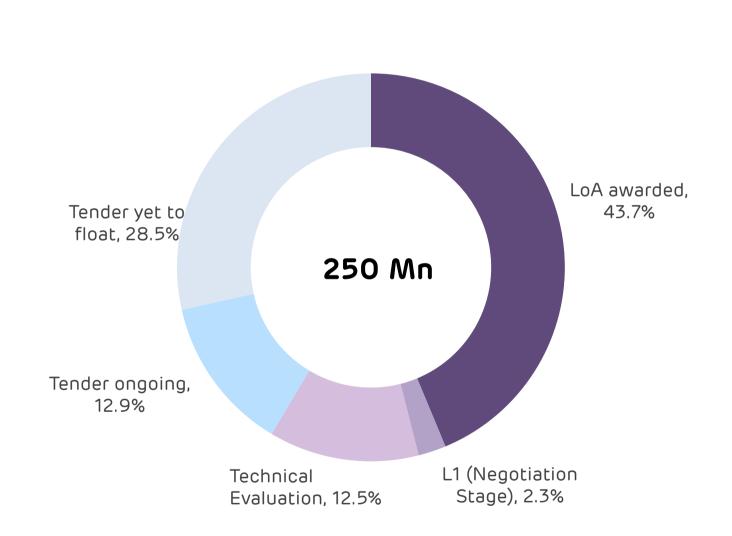
- A Quadripartite agreement ightarrow governs all payments due to AMISP
- Agreement uniform to all discoms, finalized by REC being the Nodal Agency
- Direct Debit facility include bucket filling approach  $\rightarrow$  all consumer bill payments will be routed through this account
- Irrevocable and Standing instruction to Agent Bank to directly pay to Smart Meter SPV from DDF account.

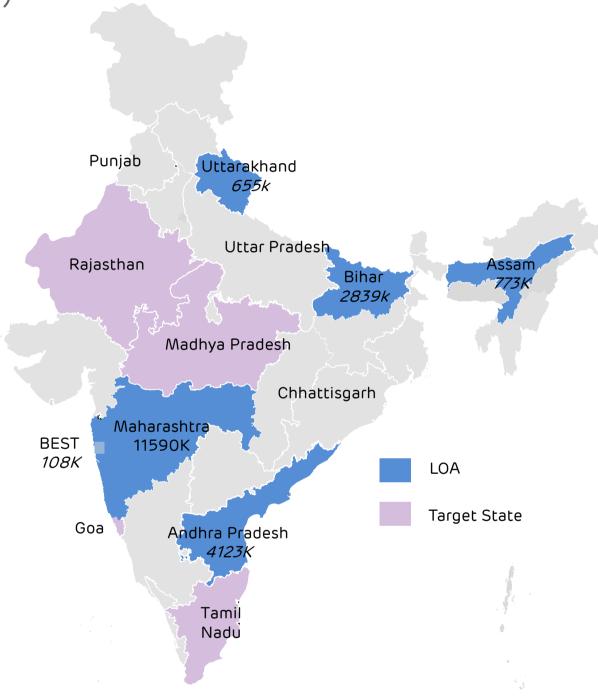
## Market Dynamics: Smart Metering Business



- 109 Mn Smart Meters awarded so far (LOA), and 6 Mn are at negotiation stage (L1)
- Untapped market of 135 Mn Smart meters

#### **Total Smart Meters**





AESL has an LOA for 21.1 Mn smart meter qty. with an order value of Rs 251 billion (US\$ 3 bn)

## **AESL's Core Strengths and Available Synergies:**

Distribution & Smart Metering Experience | Expanding Distribution business across India | Pan India presence





# District Cooling

## District Cooling Business - Snapshot



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.

1

A central cooling plant produces chilled water by using eco-friendly refrigerants

2

This chilled water is transported to the customer buildings through a network of insulated water carrying pipes.

3

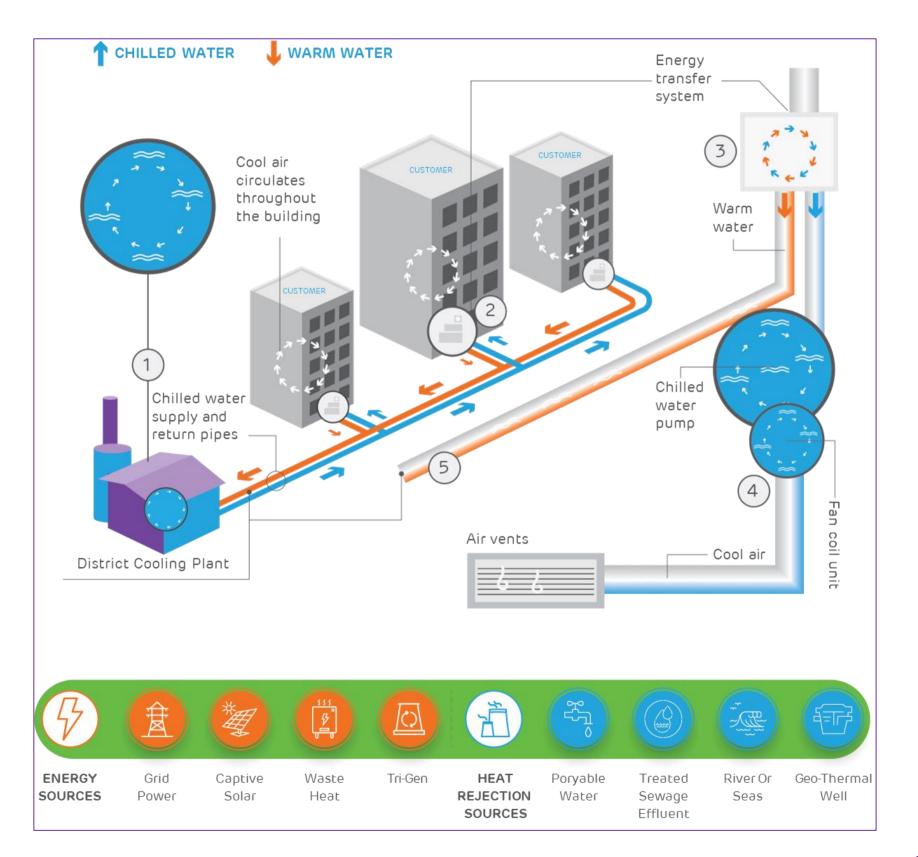
Energy Transfer Station (ETS) facilitates the heat transfer between the high-side chilled water circuit and low side (building) chilled water circuit with plate type heat exchanger to cool the building-side water.

4

The cold low side chilled water circulates through fan coil units and cools the hot air which is blown over the cooling coil in the fan coil unit, to produce an air-conditioning environment, which is predictable and efficient.

5

The warmer water from the ETS is returned to the central plant for re-cooling and recycling.



# **District Cooling** Business - a centralized, energy-efficient and low carbon cooling solution to drive sustainability in cooling sector



#### **BUSINESS RATIONALE**

# Large Addressable Market and Existing Synergies

- Opportunity to unlock potential in nation-wide Infrastructure (airports, data centers, SEZs, reality space)
- Limited competition and presence

Demographic and economic trends to drive cooling demand

- India's cooling demand projected to grow by 8 times in the next 20 years
- Rising per capita income, urbanization coupled with growing
   AC ownership to drive the growth

DCS demand to be driven by four key segments

 Airports, Industrial Cooling, Commercial Real Estate and Data Centers are the primary segments which will drive the demand

**Integrated Utility Offering** 

- Offer DCS under Cooling as a service model (DBFOT)
- Integrated solution with tailormade power sourcing from grid, wholesale or captive sources

**ESG** Integration

- Sustainable Cooling Solution for a Low Carbon Future (15-25% lower emissions)
- Contribute to India's net zero target by 2070

#### TRADITIONAL VS DISTRICT COOLING



## Four key segments to drive India's DCS demand



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



To experience growth from 0.6 bn sqft (2019) to 1 bn sqft (2030)



Industrial Cooling

Global industrial cooling market, expected to reach ~\$27 billion by 2030 @ CAGR of 5%



Data Centers

Data center cooling market growing @ CAGR of 22% to \$700 Mn over next 5 years



Airports

Indian air passenger traffic to double (vs pre-Covid level) by 2030



**AESL Focus Areas** 

An aggregate DCS demand potential of over 7.92 Mn TR by FY30

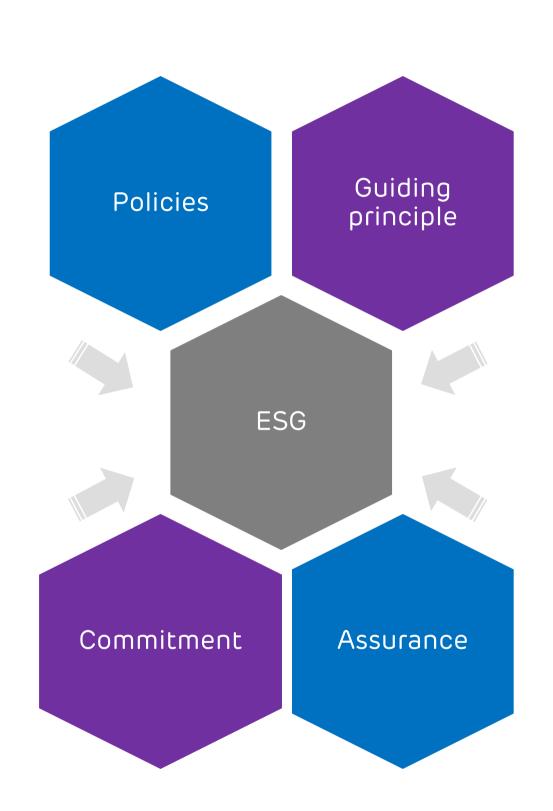




# ESG Framework

## Assurance backed ESG framework





### Guiding principles

**United Nations** Global Compact

UN Sustainable Development Goals India Business & Biodiversity Initiative (IBBI)

SLB Principles

IFC E&S Performance Standards

#### Disclosure Standards

TCFD

**TNFD** 

GRI Standards

CDP disclosure

**BRSR** 

**GHG Protocol** 

## Policy Structure

- Environment & Energy as part of IMS policy
- Biodiversity Policy
- Energy Management System
- S

E

- Guidelines on Human Rights
- Corporate Social Responsibility Policy
- Occupational Health & Safety as part of IMS Policy
- **Board Diversity** G
  - Code of Conduct
  - Related Party Transaction Policy

### Focus Area - UNSDGs









## Transforming through Green Energy Adoption





- AESL's pledge to 'Net Zero by 2050' to limiting the global temperature rise to 1.5°C with no or limited temperature overshoot.
- With interim ABSOLUTE GHG emissions targets:
  - Reduce 72.7% Scope (1 + 2) by FY 2032
  - Reduce 27.5% Scope 3 by FY 2031



- Green tariff and certificates for Mumbai customers choosing green energy options
- AEML is actively working towards goals:
  - Renewable energy: 60% by FY27, 70% by FY30 from 30% in FY23
  - GHG intensity [tCO2e/EBITA]: FY30 48.5% <FY19 from 38% in FY23
- AESL is developing an HVDC Transmission link for continuous supply of renewable power to Mumbai with commitment of \$1 billion (already commissioned 400 KV Kharghar Vikhroli line of 1000 MW)

## **ESG** Commitments & Targets



### **ESG Commitments**

- To be in Top 10 companies of the world in ESG benchmarking of electric utility sector by FY25
- To purchase RE power at AEML 60% by FY27 (committed under SLB framework) & 70% RE sources by FY2030
- To reduce Emission intensity [tCO2e/ EBITA] @ AEML by 40% by FY25, 50% by FY27 & 70% by FY2030 w.r.t baseline FY19
- To remain Single-use-Plastic-Free (SuPF) company
- To remain Zero-Waste-to-Landfill (ZWL) company
- To retain Water Positive status for the company
- To achieve No Net Loss of biodiversity on ongoing basis
- To complete ESG Evaluation and engage all Tier-1 critical suppliers through GHG Suppliers' Engagement Program for decarbonization of value chain by FY26

Targets			
Indicator	FY25 Target	FY23 Target	Status: FY23
Ranking in Global ESG benchmarking of electric utility sector	Тор 10	NA	Top 40 in Electric Utilities sector - Sustainalytics/ ISS ESG
Water positive sites	100%	100%	100%
Zero waste to landfill operating sites	100%	100%	100%
Single use plastic free operating sites	100%	100%	100%
No Net Loss of biodiversity	100%	NA	Ongoing

# ESG Ratings, Awards and Recognition



	ESG Commitments
ESG Ratings	AESL's Rating
<b>CSRHUB®</b>	Ranking of 86%, with consistent ranking above <u>Electric &amp; Gas Utilities</u> industry average [911 companies]
SUSTAINALYTICS  a Morningstar company	ESG Risk Rating of 'Medium Risk' with a score of 25.3 in February 2024 (improved from High Risk - 32.8 in April 2023), better than global Electric Utility Industry average of 31.6; Part of Global Top 20 in Electric Utility Industry
DJSI-S&P Global Corporate Sustainability Assessment	S&P CSA 2023: <b>Scored 62#/ 100, one of the best in Indian Electric Utility sector</b> and significantly better than average World Electric Utility score of 34/100
MSCI	ESG Rating of 'BBB'
FTSE Russell	FTSE reaffirms AESL as a constituent of <b>FTSE4Good index series with an improvement in ESG score from 3.3 to 4</b> . Also, AESL's Governance score stands at 5/5, Social score of 4/5 & Environment score 3.3/5 well above global Electric Utilities sector average of 2.7
CRISIL  An S&P Global Company	2022 ESG score of 62/100, the highest in Power –T&D sector



### **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

## AESL: Board and Management Team



### Strong Sponsorship

## Managing Director

### **Independent Directors**



Mr. Gautam S. Adani (Chairman)



Mr. Rajesh S. Adani (Director)



Mr. Anil Sardana (MD, AESL)



Mr. K. Jairaj



Dr. Ravindra H. Dholakia



Mrs. Meera Shankar



Ms. Lisa MacCallum

### Skilled and Experienced Management Team



Mr. Anil Sardana (MD, AESL)



Mr. Kandarp Patel (CEO, AESL)



Mr. Rohit Soni (CFO, AESL)



Mr. Kunjal Mehta (CFO, AEML)

Strong governance framework with focus on transparency and independence



# Annexures

40-43	ESG Initiatives
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48	Smart Metering – Key Benefits
49-52	Project Level Details – Asset Portfolio

## **AESL**: Key Environmental Indicators and Milestones



Key Performance Indicators	Current Status	Baseline	Medium to Long-term Targets		
Energy Mix & Emission Intensity					
- RE share in power procurement	AEML has <b>achieved 35% renewable</b> in power mix as of December 2023	3% FY19	30% by 2023 (achieved 35%) 60% by FY27		
- GHG Emission Intensity Reduction	The target for GHG emissions reduction is in line with Nationally Determined Contribution (NDC) for climate change. Disclosed in terms of a reduction in GHG per unit of revenue.	FY19 2,254 tCO2e/EBITA	40% by FY25 70% by FY30		
Waste Reduction and Biodiversity Management					
- Zero waste to landfill (ZWL)	<ul> <li>Secured ZWL status from Intertek</li> <li>Covered all operational sites (substations and TLs) of AESL</li> <li>Achieved landfill diversion rate exceeding 99%</li> </ul>	No certification in FY19-20	Achieved <b>ZWL for all O&amp;M</b> sites, AEML		
- Single use plastic (SuP) free sites	<ul> <li>Attained SUP free status from CII-ITC CESD</li> <li>Covered 37 operational sites of AESL</li> <li>Strengthening alignment with UNSDG 12</li> </ul>	No certification in FY19-20	Achieved <b>SUP free status for AESL</b> in March 2023		
- India Business Biodiversity Initiative (IBBI) and ensure no net loss to biodiversity	<ul> <li>Signatory to IBBI and submitted first progress report in 2020</li> <li>Afforestation of 441 hectares area in FY21-22</li> </ul>	FY20-21 289 hectares	No net loss to biodiversity and 100% alignment with IBBI and IBBI principles based public disclosures by FY23-24		
- Water Neutrality (Water conservation)	<ul> <li>Achieved "Net Water Positive" status for 30 substations and 07 TL clusters under UNSDG 6</li> <li>Carried-out rainwater harvesting feasibility study and implemented water metering across all sites</li> </ul>	No water neutrality in FY 19-20	Secured <b>Net Water Positive Certification</b> for all O&M sites in November 2022		
Energy Efficiency and Management					
- Reduction in auxiliary consumption through solar power	<b>3.362 MWp solar capacity</b> at Mahendragarh, Akola, Koradi, Sami, Morena, Rajnandgaon	Solar capacity of 1.7 MWp in FY19-20	Coverage across all transmission Sites		

## **AESL**: Key Social Indicators and Milestones



Material Categories	Material Themes	Key Performance Indicators	Baseline	Target (FY23-24)
Health & Safety		Rate of fatalities per million hours worked	Zero (FY 20-21)	Zero
	Work related injury	Rate of recordable work-related injuries per million man-hours worked	0.33 (FY 20-21)	Zero
	Safety awareness and training	Average hours of training provided per person on health and safety	15.6 (FY 20-21)	Further improve from baseline
Diversity and Inclusion	Measurement of Diversity and Inclusion Metrics and Enforcement of policies	<ul> <li>Women as a percentage of new hires and total workforce (%)</li> <li>Mapping &amp; Disclosure of Regional &amp; ethnic diversity</li> <li>Mapping &amp; Disclosure of inclusiveness</li> </ul>	<ul> <li>New Hire: 5 %</li> <li>Total Workforce: 5%</li> <li>Regional &amp; Ethnic diversity: NO mapping</li> </ul>	<ul> <li>New Hire: 10%</li> <li>Total Workforce: 6%</li> <li>Regional &amp; Ethnic diversity: 100% mapping</li> </ul>
Human Rights	Training on human rights	<ul> <li>Employees trained in human rights (%)</li> <li>Security Personal trained in human rights (%)</li> <li>Due diligence of business &amp; value chain</li> </ul>	-	100%
Skills for the future	Skill development trainings	Training and development expenditure for employees (INR)	Rs 3.81 Cr (FY 20-21)	Rs 4.69 Cr
Responsible Procurement	Proportion of spending on local suppliers (%)	<ul> <li>Spend on local suppliers against the total procurement budget (%)</li> <li>Due diligence of supply chain</li> </ul>	99.4 % (FY 20-21)	Maintain FY21 Performance
	Supplier screening on ESG metrics	Suppliers screened on ESG criteria (%)	100% (Critical New Suppliers)	100% (Critical All Suppliers)

## **AESL**: Key Governance Indicators and Milestones



Material Categories	Material Themes	Key Performance Indicators	Baseline	Actions Taken and Goals
Board Gender Diversity	Board Gender Diversity	Balance the board composition in terms of men and women directors	16.6% - women directors in board as of FY21	<ul> <li>% of women directors in board improved to 28.5% (2 of 7 board members)</li> </ul>
Board Independence	Great Board Independence and Improved Disclosures	<ul> <li>Improve board strength and independence</li> <li>Incorporate non-statutory committees</li> <li>Enhance disclosures in board &amp; committee meetings</li> </ul>	<ul> <li>6 directors as of FY21</li> <li>Only statutory committees as of FY21</li> </ul>	<ul> <li>Board now comprises of total 7 directors with 4 (58%) independent directors</li> <li>Enhanced disclosures through formation of new committees with min. 50% IDs (CRC, RMC, PCC, IT &amp; Data Security)</li> <li>Committees chaired by Independent Directors (Audit, NRC, STC)</li> </ul>
Code of Conduct	Corruption and Bribery Cases	<ul> <li>Number of Corruption cases and Bribery and Associated Risks</li> <li>Adoption of Anti Corruption and Bribery Policy</li> <li>% of Governance body members and employees trained on anti-corruption</li> </ul>	• Zero corruption cases	<ul> <li>Company Adopted Anti Corruption and Bribery Policy</li> <li>Zero Case on Corruption and Bribery</li> <li>Identification and Assessment of risks</li> <li>Yearly DD for CoC for board, employees, suppliers &amp; ABAC policy</li> </ul>
Anti-competitive Practices	Fines and Settlements	<ul> <li>Fines or settlements paid related to anti- competitive business practices (INR)</li> </ul>	Zero as of FY21	<ul><li>Zero in FY23 and beyond</li><li>Yearly ABAC due diligence</li></ul>
Customer orientation and satisfaction	Consumer Satisfaction	<ul><li>Affordable tariffs</li><li>Service reliability</li><li>Sustainable power</li></ul>	<ul><li>Distribution loss reduction</li><li>CSAT surveys</li><li>Reliability metrics</li></ul>	<ul> <li>Competitive tariff through RE power</li> <li>Option to switch to Green power tariff</li> <li>Advanced metering implementation for 12 million consumers</li> </ul>
Corporate Governance Standing	ESG Ratings	Improvement in ratings through improved disclosures and adoption of best practices	<ul><li>CSA: 59/100 (2022);</li><li>FTSE: 3.3/5 (2022)</li></ul>	Target 2023-24:  • CSA – 62/100 (Achieved 69/100 w/o MSA)  • FTSE: 4/5 (Achieved in FY23)

#### Notes:

A) List of non-statutory committees – CRC: Corporate Social Responsibility & Sustainability Committee; PRC: Public Consumer Committee; Information Technology & Data Security Committee; RMC: Risk Management Committee; B) List of statutory committees: SRC: Stakeholders' Relationship Committee NRC: Nomination and Remuneration Committee; STC: Securities and Transfer Committee; Audit Committee;

C) Sub-committees under Risk Management Committee: Mergers & Acquisitions Committee; Legal, Regulatory & Tax Committee; Reputation Risk Committee

### **AESL:** Enhanced Safety Culture



### Safety Initiatives During Q3FY24

- Safety training: 47,683 man-hours of safety training and awareness during Q3 FY24
- Positive Safety Culture:
  - Monthly Safety Quiz Series, Safety Perception Survey and a reference book guiding 'When to Stop the Job' to enhance safety awareness
  - o 2 Days of "URJA"- Electrical Safety Campaign on 5E Model (Exposure, Enable, Educate, Equip and Ensure) was conducted at various sites.
  - o Group Safety Audit was conducted at KVTL & Mahendergarh SS project site
  - Mandatory Safety Training Session on RVDTS LOTO, CSM, PPEs, Incident Reporting, Investigation and Work at Height was conducted by T&T's to ensure maximum knowledge retention.
- "SAMPARK" An initiative for AEML premium customers carried out to know safety concerns along with other commercial issues
- "Saksham" Mandatory Contractor Workmen Incubation & Induction Program was conducted at various sites to enhance training effectiveness
- OSH India Award 2023: AEML awarded "Excellence in Road Safety" and "Excellence in Innovation in Safety Technology" at the OSH India Awards for road & workplace safety.

### Safety Performance in Q3FY24

	Transmission		Distribution (AEML)	
Safety Parameters	Q3FY24	Q3FY23	Q3FY24	Q3FY23
Near Miss Reporting (Awareness)	1,308	1,671	1,901	1,850
Suraksha Samwad (Safety Dialogue)	1,751	2,862	2,661	2,701
LTI	0	0	1	5
Fatalities	0	0	0	0
LTIFR (LTI Frequency Rate)	0	0	0.19	1.07
LTI (LTI Severity Rate)	0	0	4.53	31.69
Safety training (in Man-Hours)	26,476	40,254	21,207	20,051



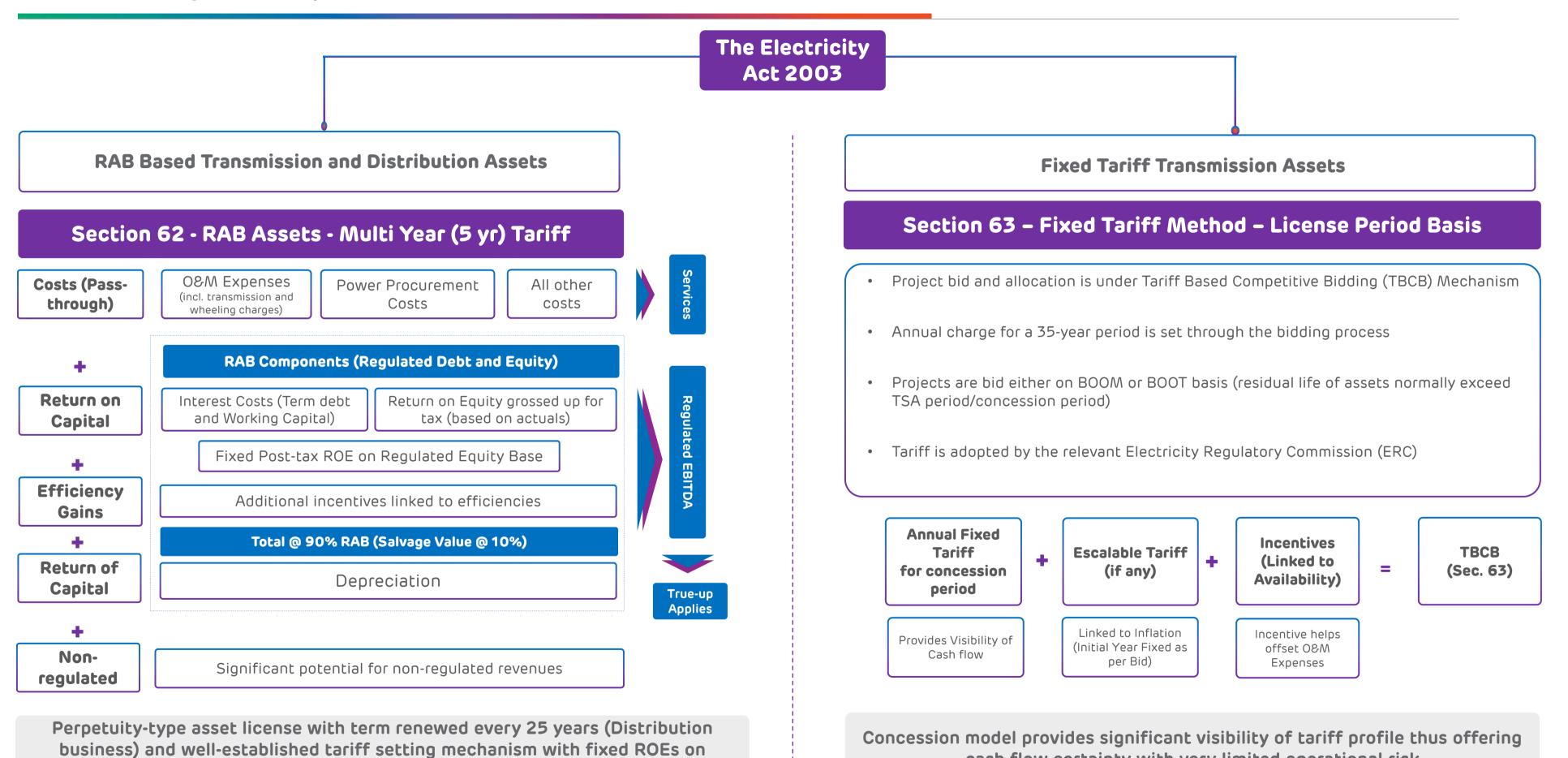




### Stable Regulatory Framework

Regulated Equity Base





cash flow certainty with very limited operational risk

## Payment Pooling Mechanism Reduces Counterparty Risk



#### Regulatory landscape

CERC and SERC established & predictable in maintaining and defining tariffs

- CERC and state regulatory body (e.g., MERC, RERC) determine:
  - Return on assets (ROA)
  - Adopt TBCB tariffs
  - Incentive triggers

#### **MYT** Determination

- CERC 20 years track record
- MERC 19 years track record

- CERC, MERC and other ERCs have a Long-Standing History of Maintaining and Defining Tariffs
- Establishes norms for capital and operating costs, operating standards and performance indicators
- Additional cost pass through via true up mechanism for section 62 RAB assets

### Transmission: Payment Pooling Mechanism Reduces Counterparty Risk

## Transmission System Users

All demand / drawal nodes

All generator / injection nodes



Billed as single charge per Generator / Demand Node Payment (MW / month)



#### Central Payment Pool

CTU (PGCIL) / STU acts as revenue aggregator



Billed as per regulatory / bid tariff profile



## Transmission Licensees

PGCIL + Private Sector Transmission Licensees



- Tariffs for all transmission licensees are collected by either the CTU (for Inter-state Transmission System) or the STU (for Intra-state System)
- All collections have to be mandatorily distributed in proportion to respectively yearly ARR of each licensee
- No discretion to CTU/STU to withhold payments
- Pooling mechanism ensures no stranded asset risk i.e. no bilateral counterparty/user

## AEML: Operating in a stable and evolved regulatory framework with predictable & robust returns



### Tariff is based on assured return on capital model + pass-through of costs + efficiency linked incentives



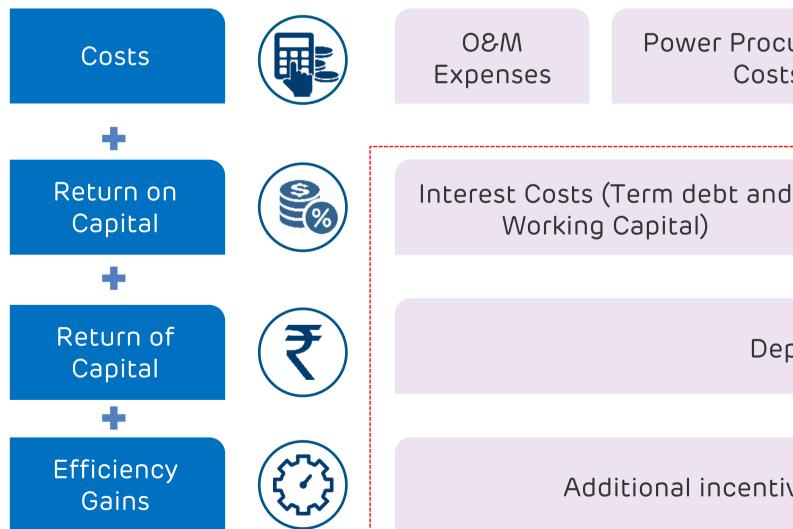
Incorporated in 1999, MERC is the regulator for consumer of Maharashtra

Assured return on regulated asset base

Normative costs pass-through → Efficiency rewarded

Efficiency linked incentives

Regular True Up mechanism



Power Procurement M30 Expenses Costs

Working Capital)

All other costs

Return on Equity grossed up for tax

Depreciation

Additional incentives linked to efficiencies

**EBITDA** 

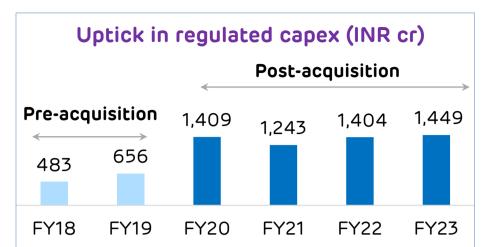
## **AEML Case Study:** Successful Acquisition and Turnaround

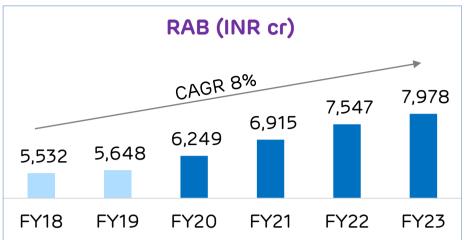




**Projection** Execution Excellence

- 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







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

**Operational** excellence



power

8.376

FY19

MUs

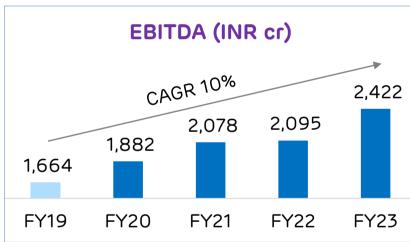
8,455

FY20

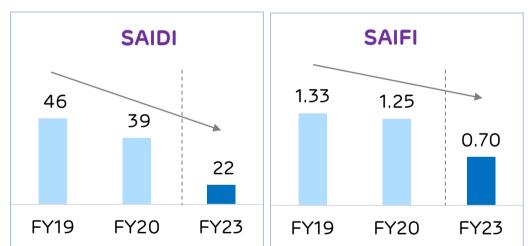
9,062

FY23

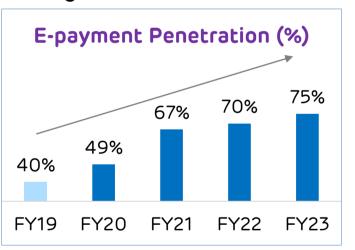




#### Best O&M practices →improved supply reliability at 99.99% every year



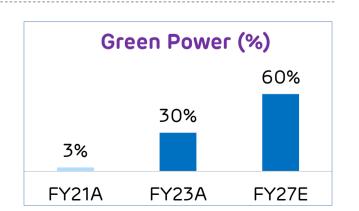
Higher digital penetration among consumers





#### 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-peruse model" to eradicate arrears
- Reducing working capital requirements



Reduction in Operational costs

Improved

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



- 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

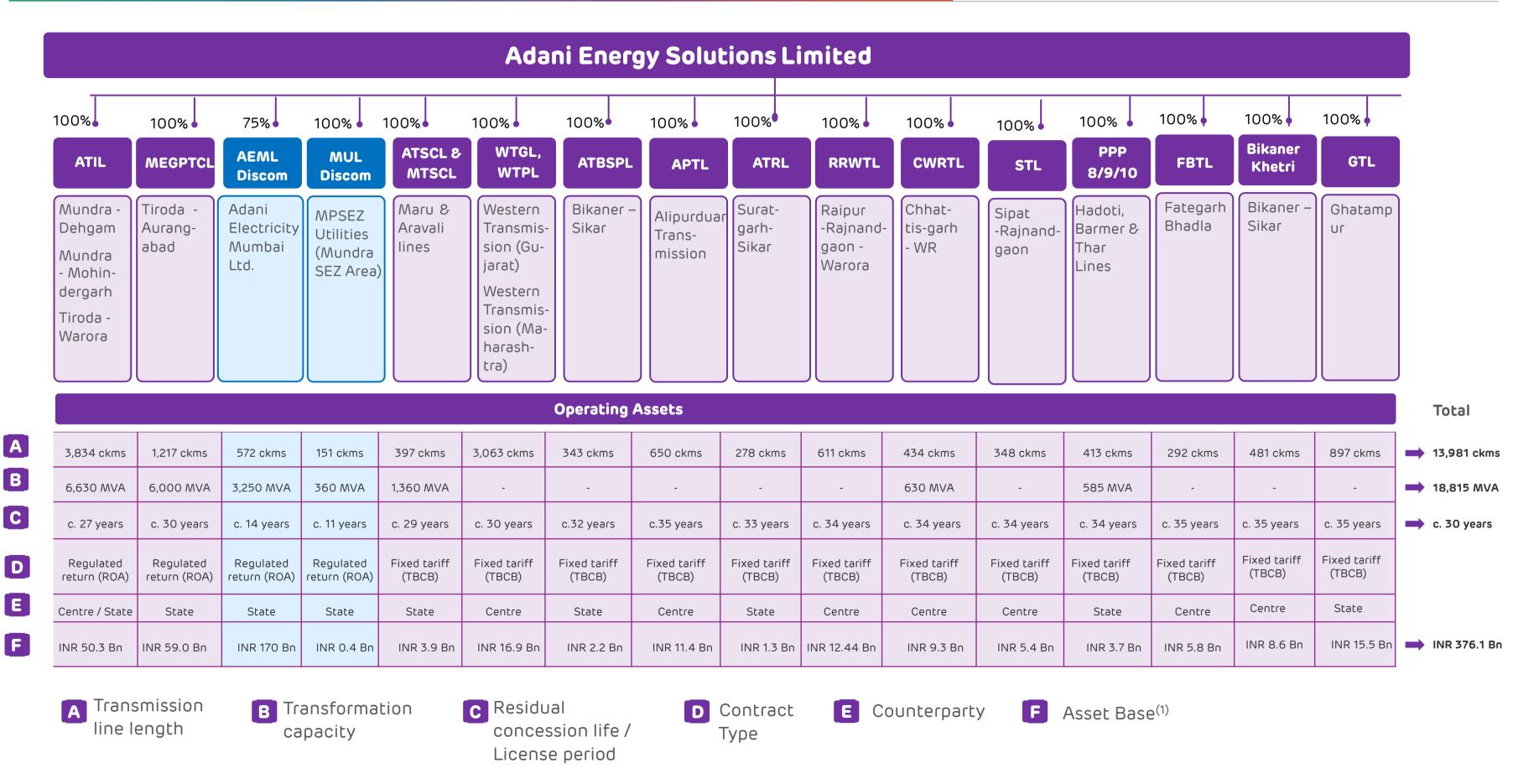


Improved
Energy
Accounting

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

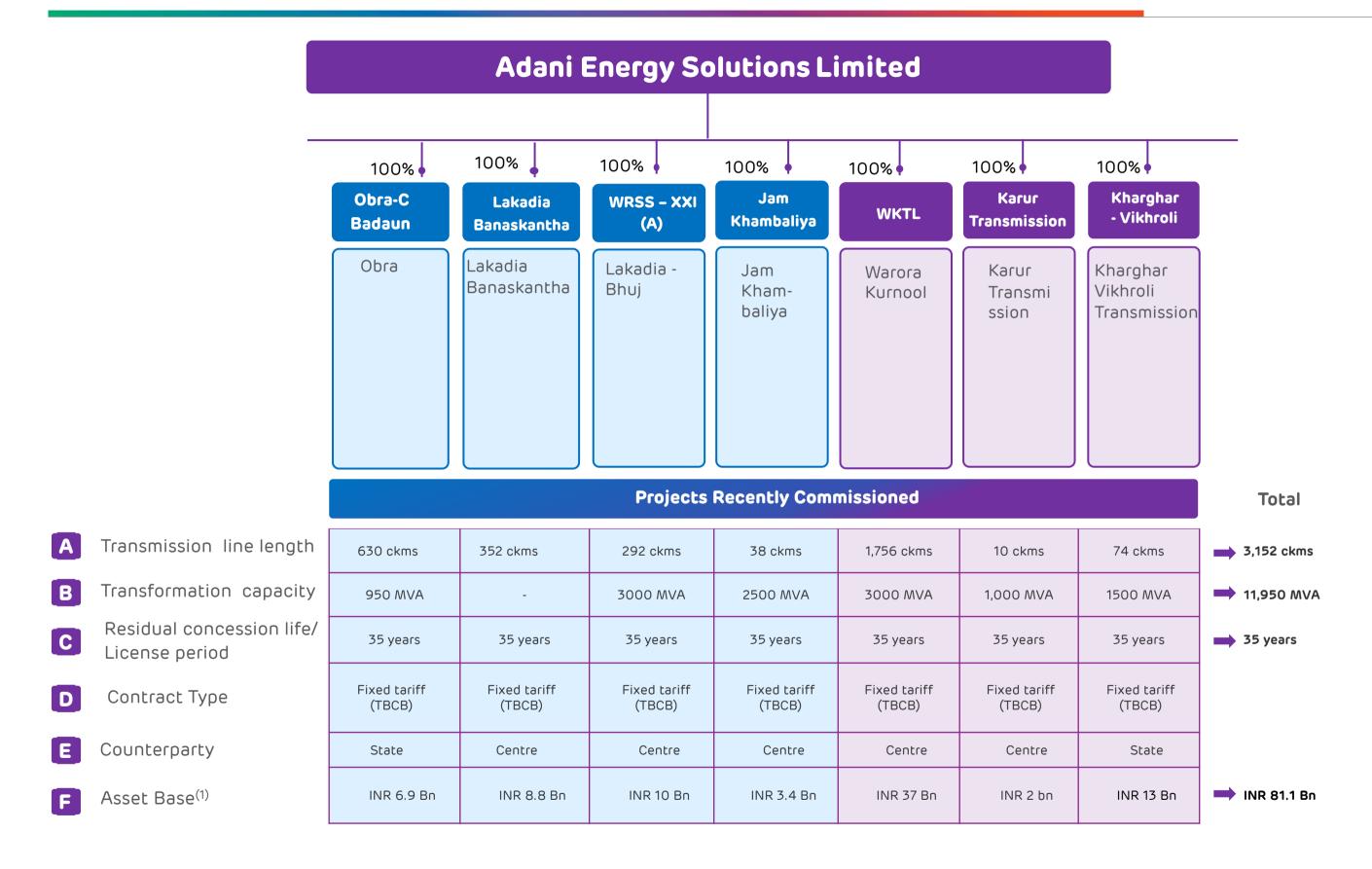
## AESL's Operational Asset Portfolio as of Dec 2023 (1/2)





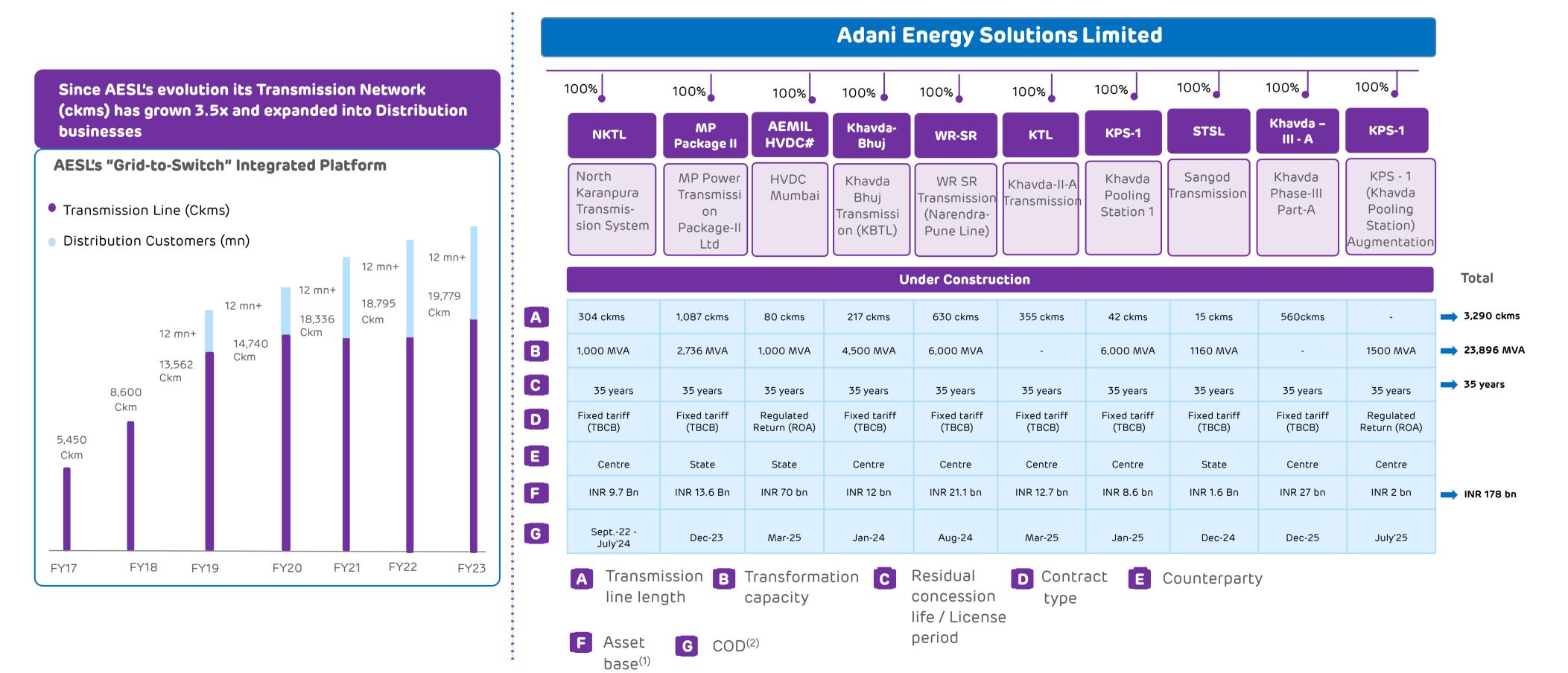
## AESL's Operational Asset Portfolio as of Dec 2023 (2/2)





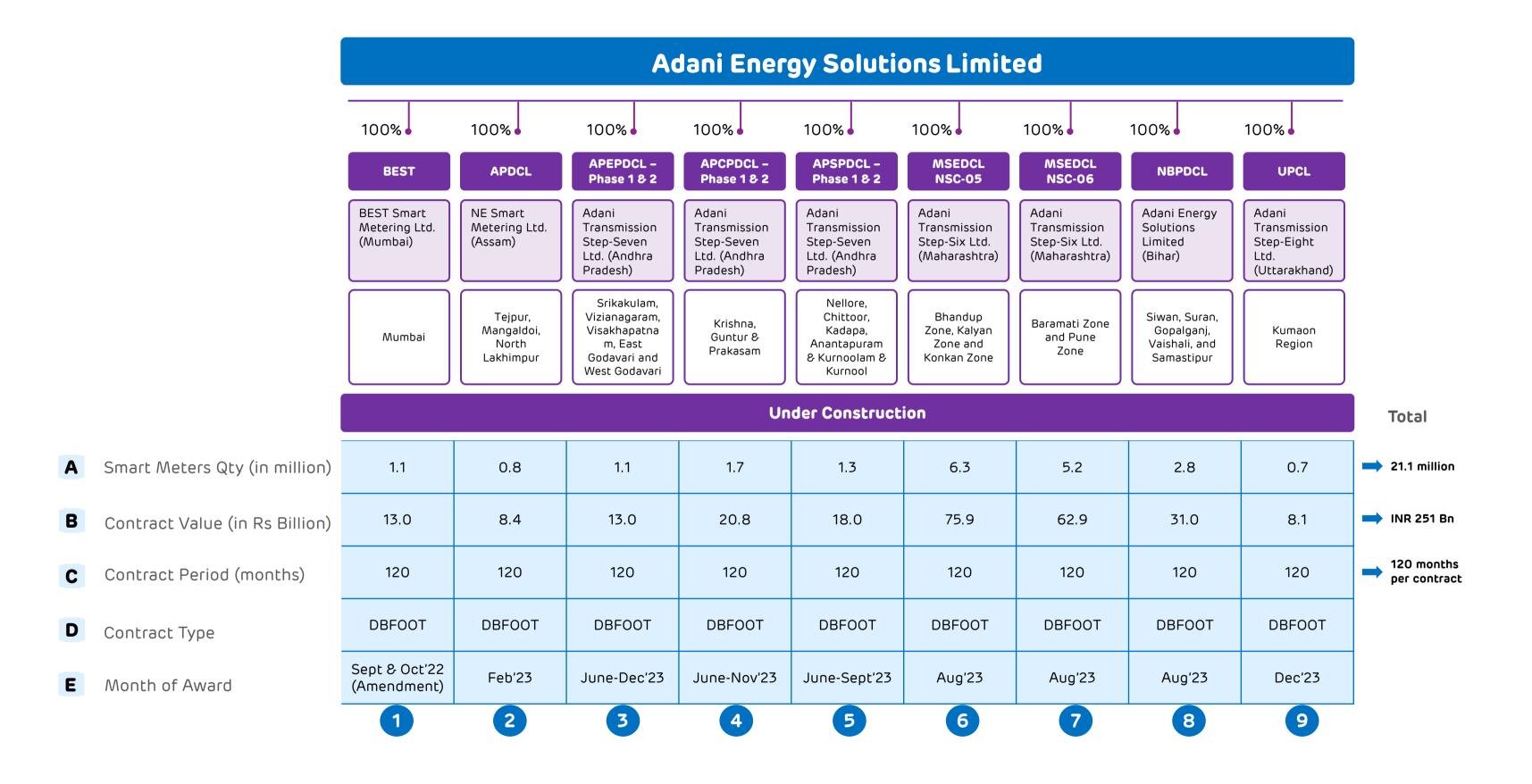
### AESL's Transmission Under-construction Asset Portfolio as of Dec 2023





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





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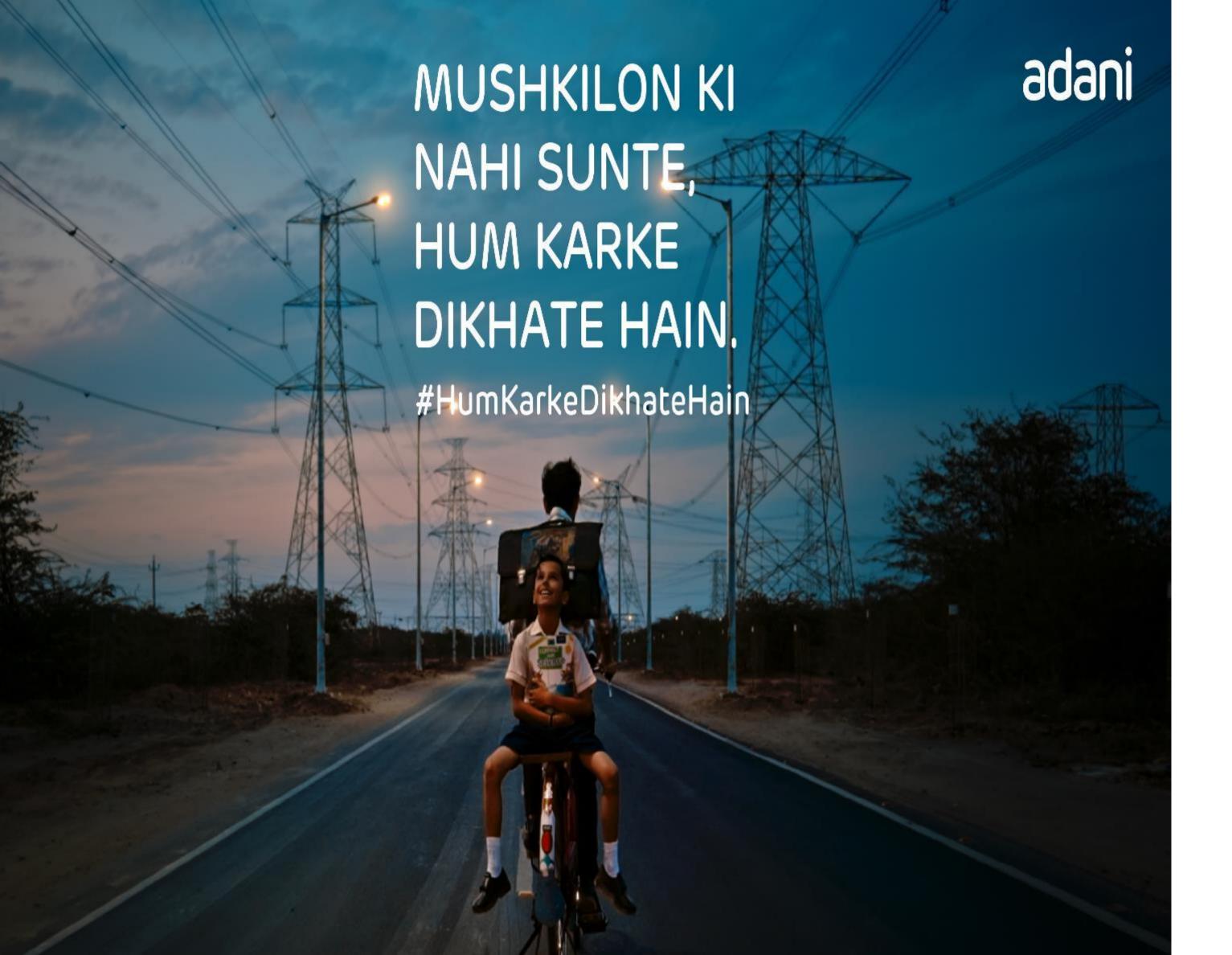
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# Thank You