



**TENAGA
NASIONAL**

Better. Brighter.

INVESTOR PRESENTATION

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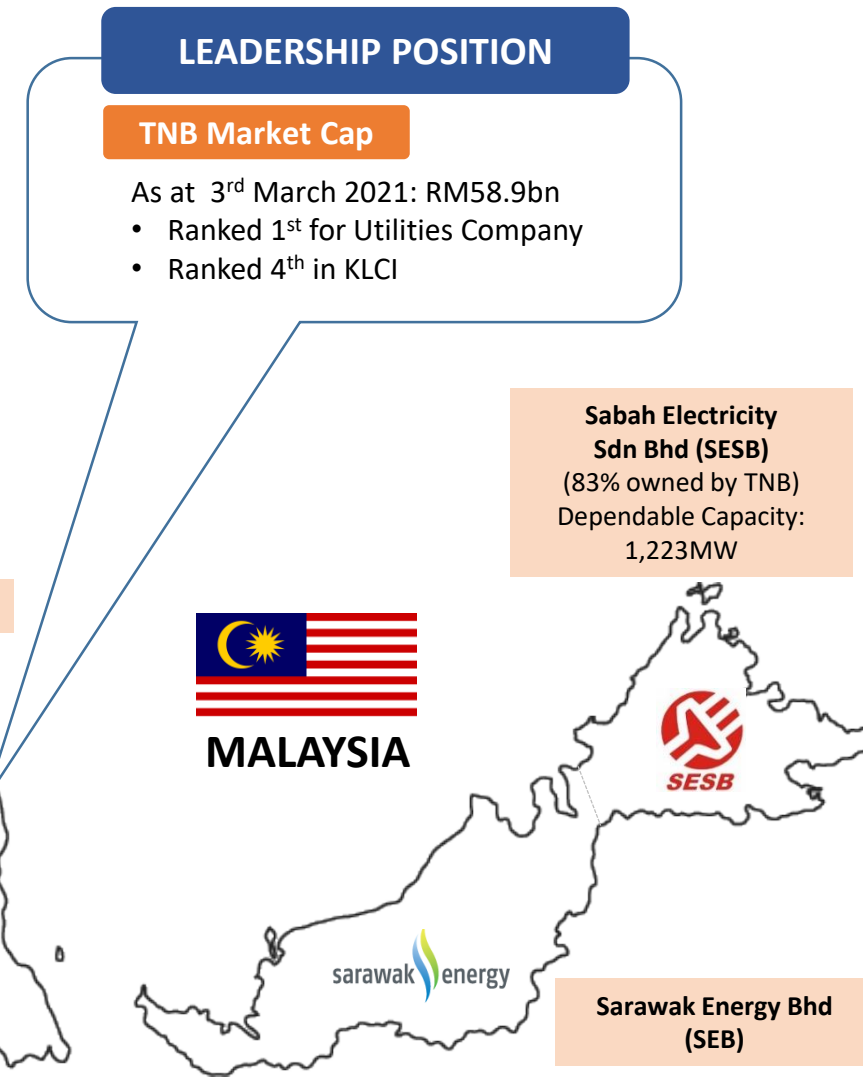
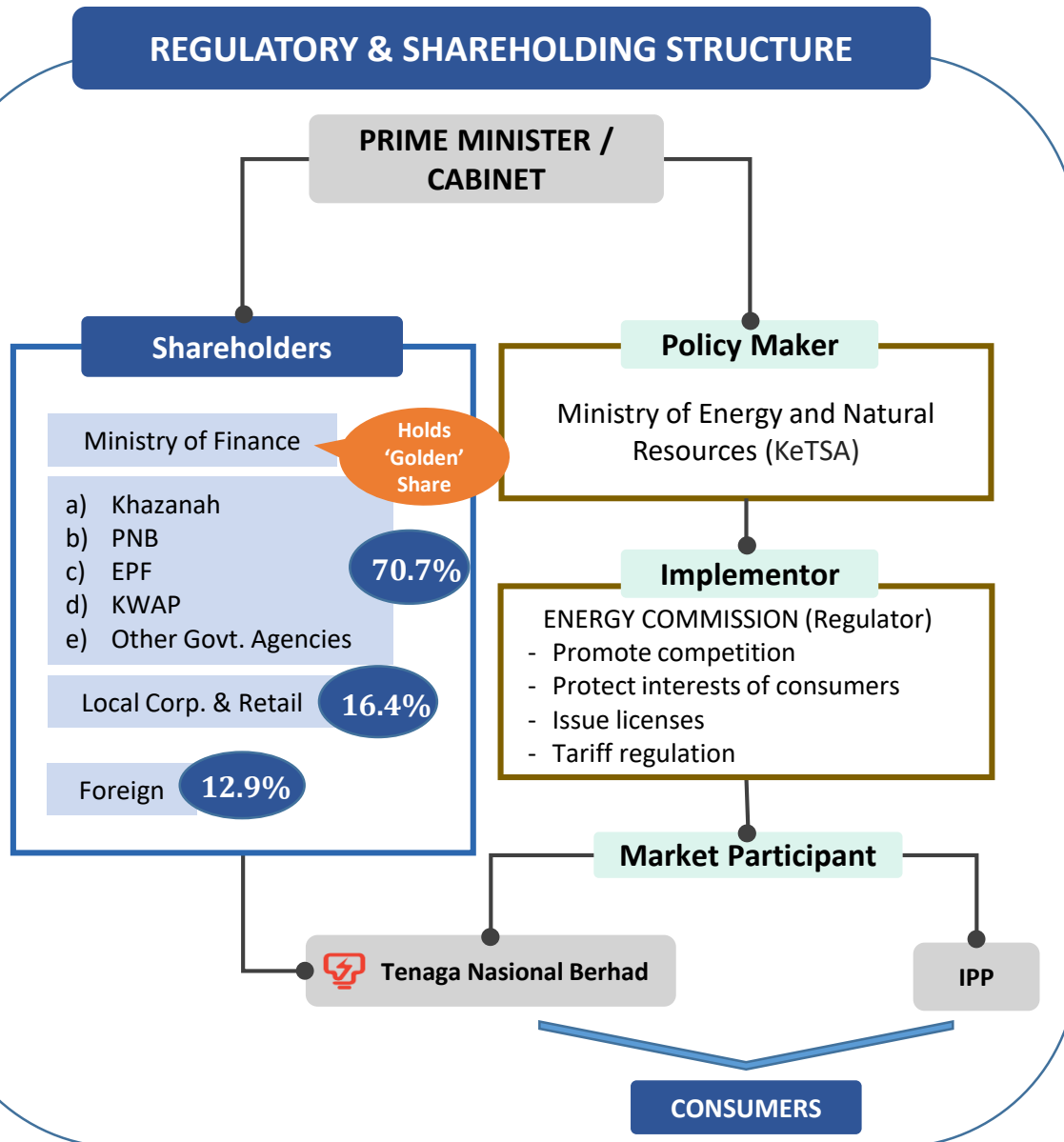
FY2021 OUTLOOK

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INTRODUCTION TO TENAGA

Regulatory & Shareholding Structure



INTRODUCTION TO TENAGA

Regulated & Non-Regulated Business

| Core Business | Generation | Grid/Transmission | Distribution Network & Retail |
|---------------|--|--|--|
| | Non-Regulated Business | Regulated Business | |
| | <p>TNB Generation Mix:</p> <div> <div> <div>Solar</div> <div>0.1%</div> </div> <div> <div>Hydro</div> <div>6.2%</div> </div> <div> <div>Gas & LNG</div> <div>28.8%</div> </div> <div> <div>Coal</div> <div>64.9%</div> </div> </div> <p>Installed Capacity: 25,212MW <small>TNB: 14,561MW @ 57.9% IPP: 10,854MW @ 42.1%</small></p> <p>Generation Market Share: 61.3%</p> <p>Equivalent Availability Factor (EAF): 87.4%</p> <p><small>Note: TNB installed capacity & Market Share are based on gross capacity</small></p> | <p>Transmission Network Length: 23,964KM</p> <p>Transmission Substations: 456</p> <p>Transmission System Minutes: 0.08 mins</p> | <p>Distribution Network Length: 683,008KM</p> <p>Distribution Substations: 83,467</p> <p>SAIDI: 45.0mins</p> <p>Customer Satisfaction Index (CSI): 8.1</p> |

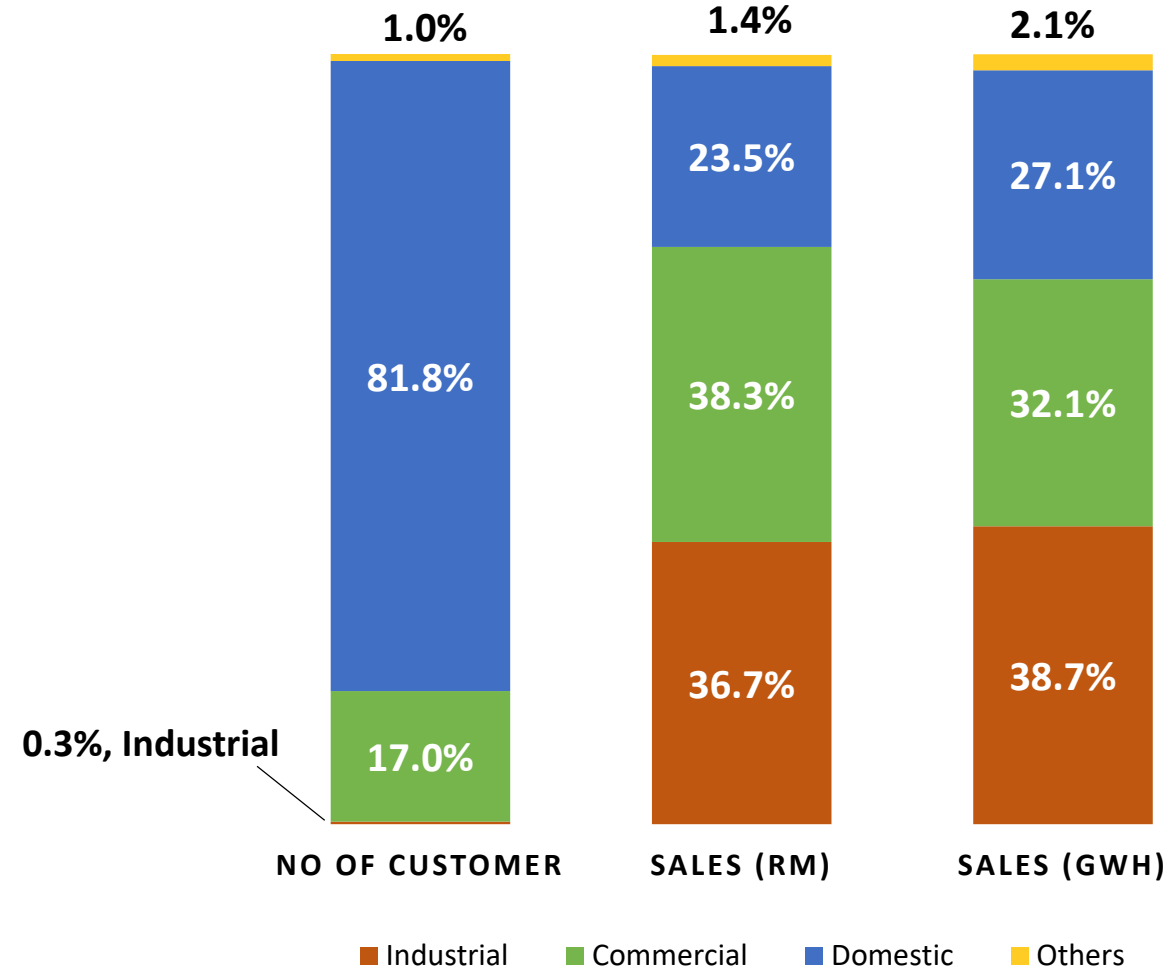
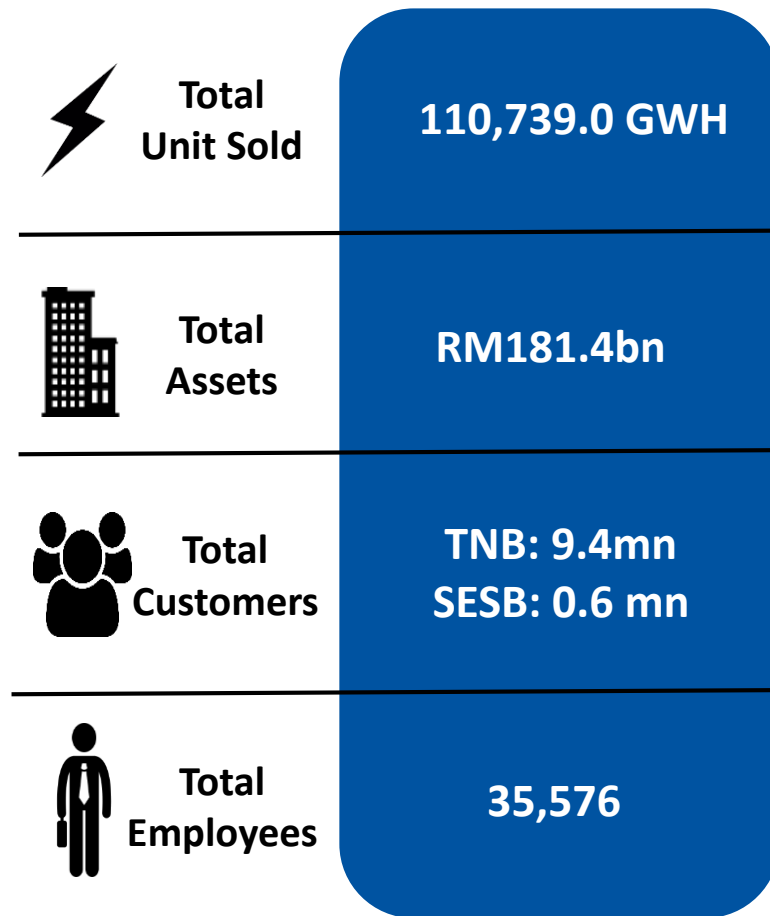
Source: TNB Data / Info as at Dec 2020

| Non-Core Business | Main Subsidiaries | | |
|-------------------|--|---|--|
| | Non-Regulated Business | | |
| | <p>Operation & Maintenance (O&M)</p> <ul style="list-style-type: none"> TNB Repair & Maintenance Sdn. Bhd. (REMACO) <p>Manufacturing</p> <ul style="list-style-type: none"> Tenaga Switchgear Sdn. Bhd. Malaysia Transformer Manufacturing Sdn Bhd. Tenaga Cables Industries Sdn. Bhd. | <p>Renewables, Energy Efficiency & Other Services</p> <ul style="list-style-type: none"> TNB Renewables Sdn. Bhd. GSPARX Sdn. Bhd. TNB Energy Services Sdn. Bhd. TNB Engineering Corporation Sdn. Bhd. Integrax Bhd. Allo Technology Sdn. Bhd. | <p>Education & Research</p> <ul style="list-style-type: none"> TNB Integrated Learning Solution Sdn. Bhd. (ILSAS) TNB Research University Tenaga Nasional (UNITEN) |

INTRODUCTION TO TENAGA

Vertically integrated utility company serving more than 9mil customers throughout Peninsula Malaysia

TNB Sectoral Sales Analysis*



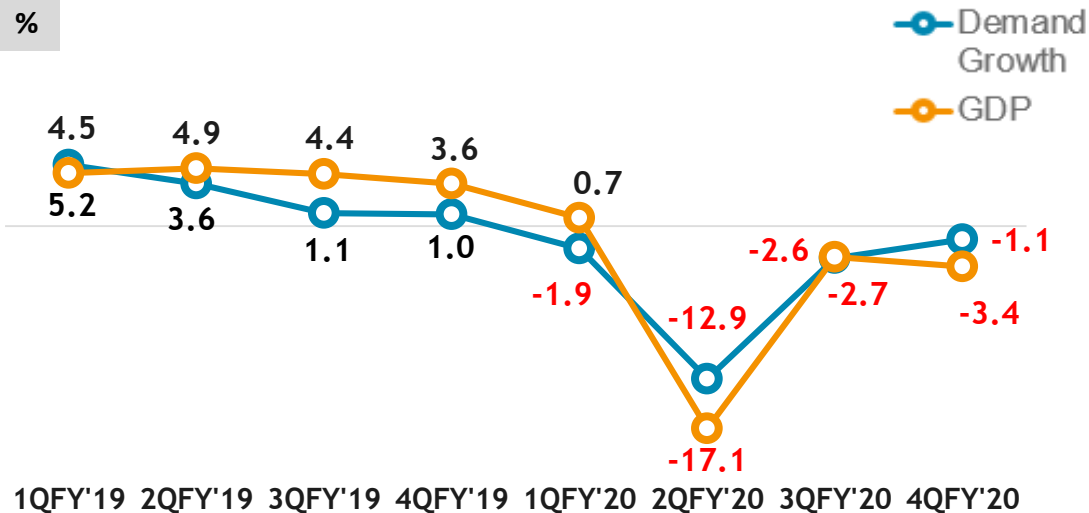
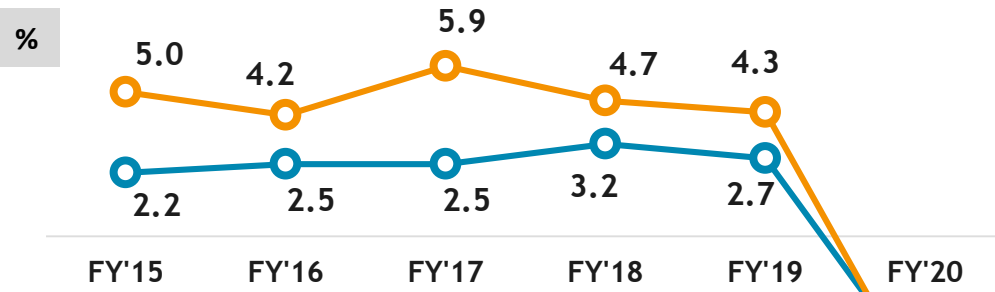
Note: Data / Info as at Dec 2020

* Peninsular Malaysia only (TNB exclude SESB and other subsidiaries)

INTRODUCTION TO TENAGA

Y-o-Y electricity demand contracted in tandem with GDP

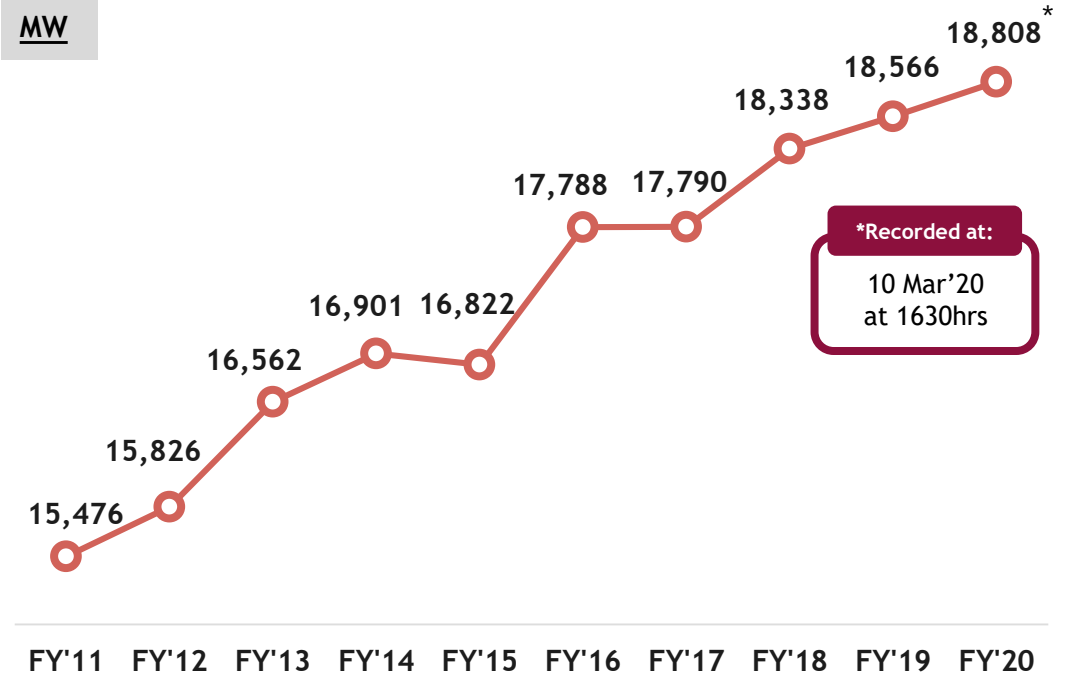
GDP & TNB (Peninsula) Demand Growth



TNB (Peninsula) Maximum Demand

| | 4QFY'20 | 4QFY'19 | Variance (%) |
|----------------------|---------|---------|--------------|
| Maximum Demand (GWh) | 18,037 | 17,680 | 2.0 |

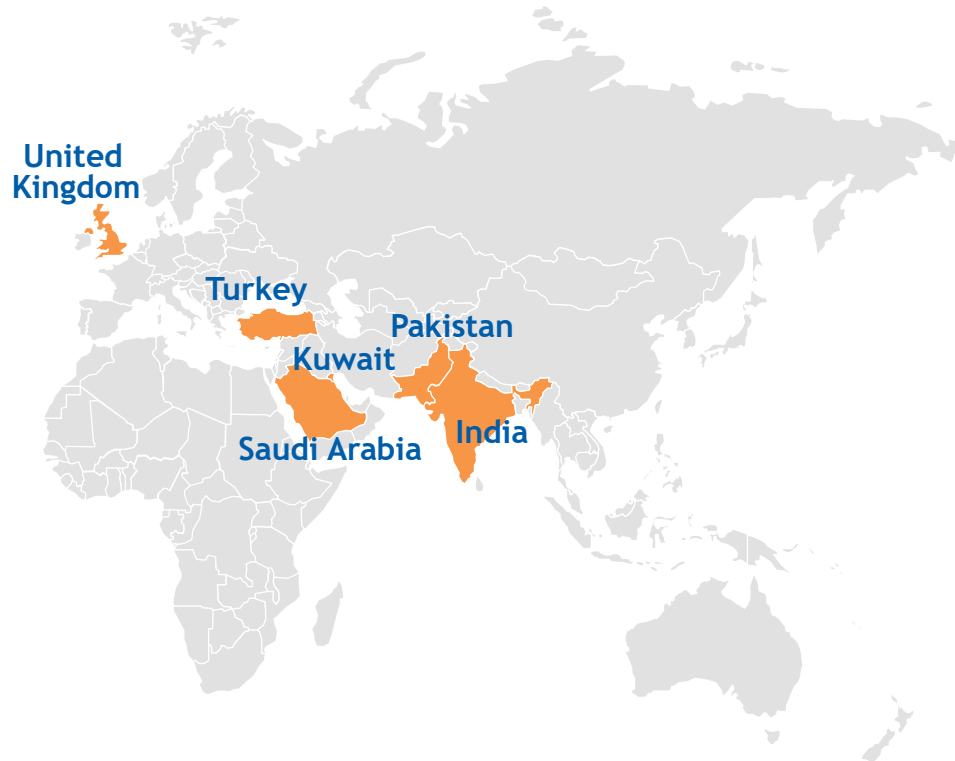
TNB (Peninsula) Yearly Peak Demand



- Note:**
- Data / Info as at Dec 2020
 - Peninsular Malaysia only (TNB exclude SESB and other subsidiaries)

INTRODUCTION TO TENAGA

TNB's global presence in six countries



**FOCUS ON GROWING RENEWABLE ENERGY
BUSINESS IN SPECIFIC MARKETS BY LEVERAGING
ON ITS INTERNATIONAL AND DOMESTIC
EXPERIENCE, CAPABILITIES AND ASSETS**



United Kingdom

- 55% equity ownership in Vortex Solar Investments S.à.r.l, 24 operational solar PV farm portfolio of 365MW (May 2017)
- Tenaga Wind Ventures UK Ltd, 53 operational onshore wind portfolio of 26.1MW (Feb 2018)



Turkey

- 30% equity ownership in GAMA Enerji A.Ş. (Apr 2016)
- Assets include 853MW (gas), 117.5MW (wind) & 131.3MW (hydro)



Saudi Arabia

- 6% equity ownership in Shuaibah Independent Water & Power Project (IWPP)(Aug 2005)
- REMACO O&M Services for 900MW Shuaibah IWPP (Jan 2010)



Kuwait

- REMACO O&M for 225MW Sabiya Power Generation & Water Distillation Plant (July 2014)
- REMACO O&M for Shuaiba North Co-Gen 900MW Power; 204,000 m3/day water (Sept 2013)
- REMACO O&M for 240MW Doha West Water Distillation Plant (Nov 2016)



Pakistan

- Liberty Power Ltd 235MW (Sept 2001)
- REMACO O&M Services - Bong Hydro Plant (May 2011)
- REMACO O&M Services - Balloki Power Plan (July 2018)



India

- 30% equity ownership in GMR Energy Ltd (Nov 2016)
- Assets include 1,915MW coal, gas and solar plants

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INCENTIVE BASED REGULATION (IBR)

A Mechanisms For Tariff Setting With Incentives To Improve Efficiency & Greater Transparency

Regulatory Environment:

1. Clear and Transparent Regulatory Framework

Clear and transparent regulatory framework governed by the Energy Commission provides investors with confidence in TNB's cash flow visibility

2. Consistent and Clear Returns

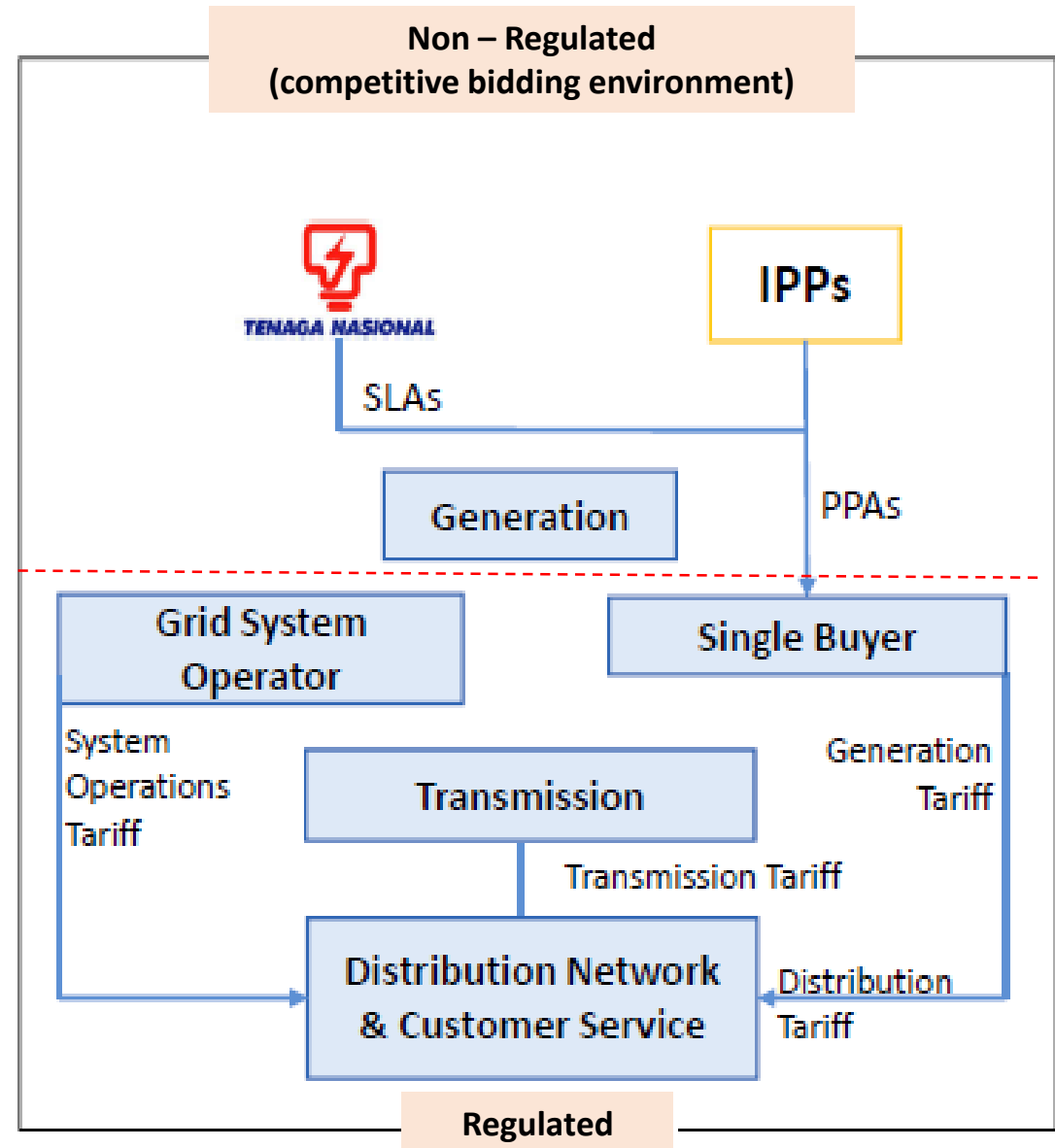
Regulatory WACC of 7.3% provides consistent and clear return to debt and equity holders

3. Shield against Uncontrollable Swings

Imbalance Cost Pass-Through mechanism shields Tenaga against uncontrollable swings in input costs, with a review every 6 months

4. Incentives for Operational Efficiencies

Incentive / Penalty mechanism provides clear incentives for TNB to achieve operational efficiencies

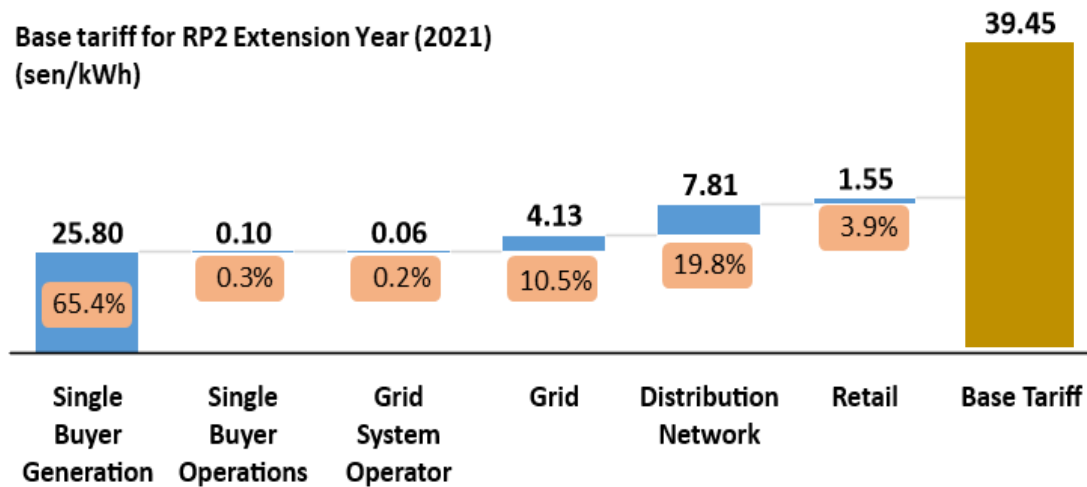


INCENTIVE BASED REGULATION (IBR)

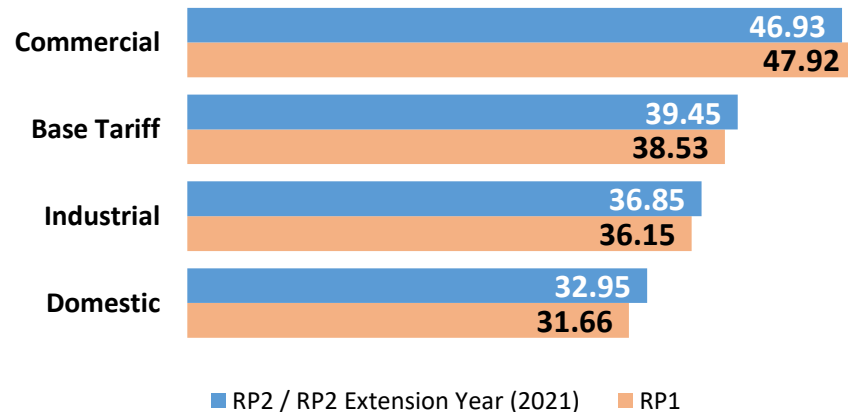
Regulatory Period 2 (RP2) Extension Year (2021)

Average Tariff by Entities (sen/kWh)

Base tariff for RP2 Extension Year (2021)
(sen/kWh)



Average Tariff by Sectors (sen/kwh)



Fuel Parameters



COAL USD67.45/MT @ RM4.212/USD

RP2 : USD75.00/MT (RM14.47/mmbtu @ RM4.212/USD)

REGULATED
GAS
@1,000mmscfd

RM27.20/mmbtu (Jan'21 – Dec'21)

RP2 : RM24.20/mmbtu (Jan'18 - Jun'18)

RM25.70/mmbtu (Jul'18 - Dec'18)

RM27.20/mmbtu (Jan'19 - Dec'20)

Other Parameters

WACC

7.3%
RP2 : 7.3%

OPEX

RM6.30bn
(approved OPEX)

RP2 : RM18.2bn
(Average per year: RM6.07bn)

TARIFF

39.45 sen/kwh
RP2 : 39.45 sen/kwh

CAPEX

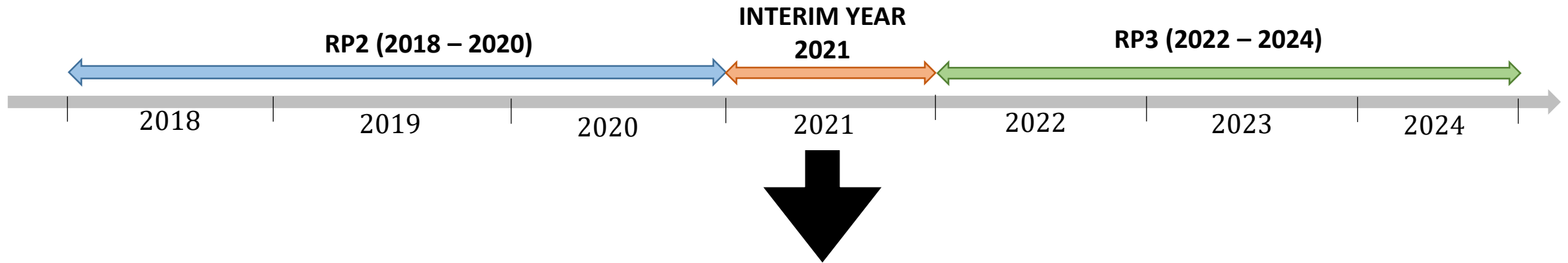
RM7.3bn
(approved CAPEX)

RP2 : RM18.8bn
(Average per year: RM6.63bn)

INCENTIVE BASED REGULATION (IBR)

Regulatory Period 2 (RP2) Extension Year (2021)

Regulatory Period Timeline



- The Government has approved a one-year extension of the Second RP2 of the IBR for year 2021
- Beginning from 1 January 2021:
 - a) The current base tariff of 39.45 sen/kWh.
 - b) Electricity Tariff Schedule are maintained and will continue to be applicable until 31 December 2021.
- RP3 is shifted by one year to start on 1 January 2022 and ends on 31 December 2024. This decision was made following the uncertainty in demand outlook for 2021 and the instability of the current global fuel markets following the COVID-19 pandemic.
- We have submitted RP3 proposal to the Energy Commission (EC) on 26th February 2021. Currently, we are in the midst of discussion with ST on the RP3 proposal, with final determination and cabinet approval is expected to obtain by end of this year.

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SUSTAINABILITY

Electricity industry continues to evolve, creating new opportunities and pushing the boundaries for innovation

Inevitable Changes in Industry Landscape



Global Energy Transition

- Climate change drives greater decarbonisation efforts and increased RE



Emergence of Disruptive Technologies

- Disruptive technologies are starting to reach economic viability and mass adoption across the world



Changing Customers' Expectations

- Customers expectations are being shaped by innovative product and across the value chain solution



National Commitments



COP21 commitment is to reduce GHG emissions intensity by 45% by 2030 relative to 2005 consisting of 35% on unconditional basis & 10% conditional with international assistance

Malaysia target to achieve 31% RE capacity mix by 2025

As a developing nation, it is important to implement strategies and action plans that achieve economic aspirations through a model that is sustainable, responsible, yet economical

ENERGY SECURITY



THE ENERGY TRILEMMA



ENERGY EQUITY



ENVIRONMENTAL SUSTAINABILITY

SUSTAINABILITY

As the primary driver of the nation's Energy Transition, TNB has a pivotal role in spearheading an evolving industry

TO BE A LEADING PROVIDER OF SUSTAINABLE ENERGY SOLUTIONS IN MALAYSIA AND INTERNATIONALLY



Future Generation Sources 2025 EBIT Target : RM5.0bil

Main Initiatives:

- Operational excellence, plant turnaround, assets and services expansion
- Growing capacity mainly into renewables in domestic and selected international strategic markets with strong growth prospects

2021 Focus:

- Improve performances of existing assets
- Operationalisation of RACo & ReDevCo
- Explore SEA for RE expansion



Grid of the Future 2025 EBIT Target: RM6.1bil

Main Initiatives:

- Upgrading existing grid network into a smart, automated and digitally-enabled network to enhance productivity, efficiency and reliability
- Leveraging innovation in the network to transform customer experience

2021 Focus:

- Complete Smart Meter target installations
- RAB Expansion through utilization of allowed CAPEX on Grid modernization Project
- Reduce System Losses



Winning the Customer 2025 EBIT Target: RM0.7bil

Main Initiatives:

- Enhance customers' experience through innovation of new solutions and service offerings
- Strengthen digital presence via digital solutions, interactions and enterprise

2021 Focus:

- Enhance customer service by ensuring customers experience a seamless interaction with TNB from the start to the end through Network of Teams models
- Expansion of rooftop solar PV



Future Proof Regulation

Main Initiatives:

- Working together with key stakeholders towards a stable and sustainable regulatory landscape

2021 Focus:

- RP3 Proposal Approval
- Shape TNB sustainability agenda

Capital allocation and value creation

Corporate and organization structure

Digital and data analytics

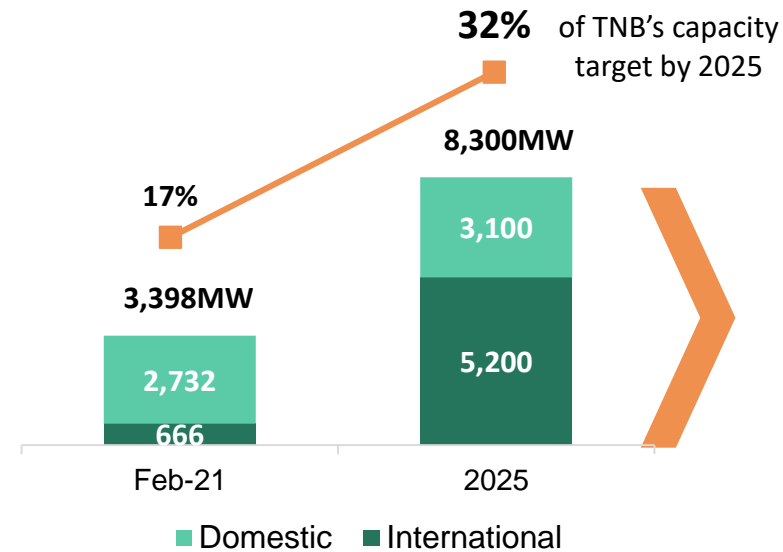
Culture, capabilities and performance management

SUSTAINABILITY

The increasing emphasis on Sustainable Energy sets the tone for ambitious RE targets

**TNB RE Target
of 8,300MW
by 2025**

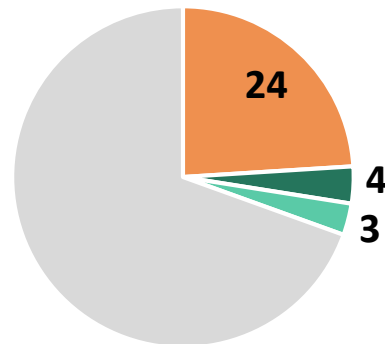
*Note:
8,300MW includes domestic and international RE assets, including large hydro*



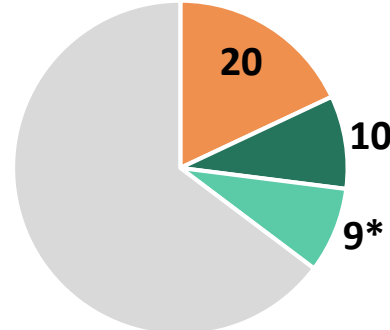
| Progress | |
|---------------|---|
| Domestic | <ul style="list-style-type: none"> i. Currently in discussion with EC on the terms and condition for Nenggiri large hydro plant (300MW) ii. GSPARX - Total 81 MW (secured capacity) as at February 2021 iii. LSS4 - Received Letter of Notification as a Shortlisted Bidder from the EC to develop a 50MWa.c. (75MWd.c.) LSS plant at Bukit Selambau, Kedah |
| International | <p>Ambition 1: RACo is currently building up investment pipeline leveraging on wide business network. RACo is expected to contribute 2GW of RE capacity by 2025.</p> <ul style="list-style-type: none"> • Binding Offer has been accepted by the seller for the acquisition of FiT wind asset in UK. • Solar asset acquisition in the pipeline. <p>Ambition 2: Finalising definitive JV agreements with Sunseap to explore RE business in Singapore & Vietnam.</p> <ul style="list-style-type: none"> • Secure cross border RE sales to Singapore – Entered into a binding term sheet of collaboration with Sunseap Group to tap into RE and Corporate PPA in Singapore market. • Expand into solar market in Vietnam – will acquire a 39% stake in a 21.6MW project comprising 5 rooftop solar plants in Vietnam from Singapore's Sunseap Group. |

**The Group aspires
to ensure that the
revenue from the
coal generation
plants does not
exceed 25%**

**Group Revenue
FY2020 (%)**



**Group Revenue
Forecast FY2025 (%)**



■ Coal ■ RE ■ Related to ET ■ Others

* Assumed RP3 proposed numbers

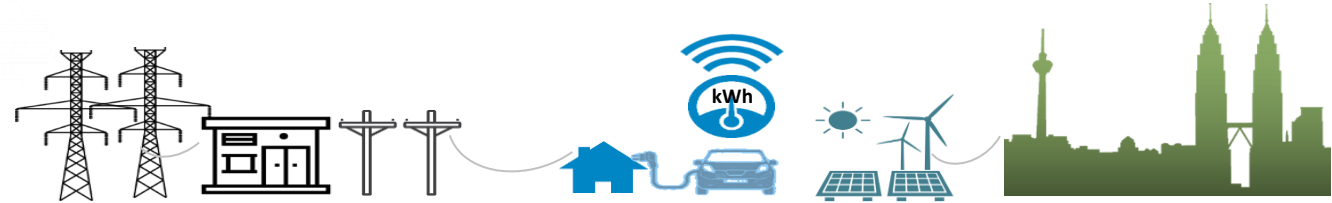


- The major coal plants' PPA are expiring with no like-to-like replacement, therefore our coal related revenue will continue to deplete from 2030 onwards
- TNB has pledged not to invest in greenfield coal plant (Jimah East Power which was commissioned in 2019 is the last new coal plant for TNB)

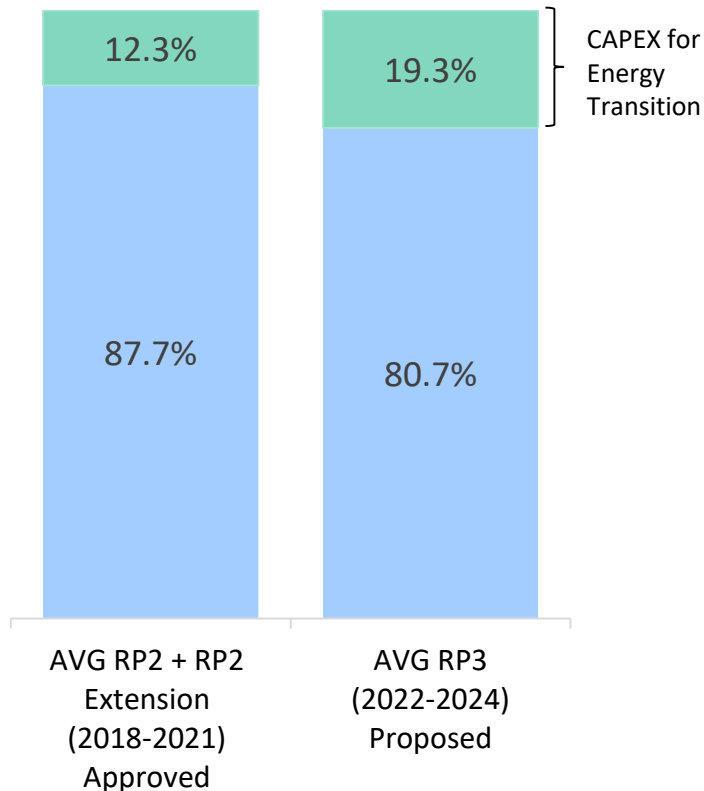
SUSTAINABILITY

Investment in infrastructure for regulated business is key towards catalysing a sustainable energy ecosystem










Regulated businesses spends on average ~16% of its CAPEX towards supporting Energy Transition



Annual Regulated CAPEX to support Energy Transition



DN is the largest contributor to the Group's overall EBIT target by 2025 of RM3.4 bil

| Renewable Energy (RE) Integration | Smart & Resilient Grid | Energy Efficiency & Sustainability |
|--|---|--|
| <ul style="list-style-type: none"> Accommodate intermittent RE generation, EV, Distributed Energy Resource (DER) with target of reducing CO₂ emission by up to 50mil kg CO₂ Enabling EV charging Station for electric vehicles up to 500 stations nation wide | <ul style="list-style-type: none"> Grid modernization with Smart Meters to empower consumers to rationalize and control their consumption as well as enable prosumers to sell back to the Grid System to optimise voltage flows to facilitate energy conservation as well as deliver resilient, reliable quality power with bidirectional energy flow | <ul style="list-style-type: none"> Enabling Green Energy program participation to reduce electricity cost consumption Providing dynamic supply and energy platform to utilize DER and support introduction of Green Energy Programs (NEM, FIT, ToU) |
|  Mini hydro  Battery Energy Storage Systems (BESS)  Electric Vehicle |  Advanced Metering Infra (AMI)  Advanced Distribution Management System (ADMS)  Volt-Voltage Optimisation (VVO) |  Advanced Metering Infra (AMI)  Smart Energy Management Infra (SEMI)  LED Relamping (LED) |
| DN will play an important central role in Malaysia's future electricity sector ecosystem, from a traditional electricity service provider to an energy integrator and facilitator of open markets | | |

SUSTAINABILITY

TNB is empowering customer participation in the Energy Transition and paving the way for electrification efforts

Encouraging voluntary RE programs for customers



- Facilitates the implementation of the Net Energy Metering (NEM) scheme and the Supply Agreement for Renewable Energy (SARE)
- Rooftop PV: Total 81 MW (secured capacity) as at February 2021



- Meets Carbon Disclosure Project (CDP) standard and RE100 best practice guideline
- We have sold 483,400MWh of renewable energy certificates (RECs) out of 870,366MWh tradable units as of February 2021



- Able to purchase green energy without having to install their own solar rooftop
- Total Subscription 4,376,000 kWh with a total of 145 customers as at 11th March 2021

Promoting Energy Efficiency (EE)



- EE solutions such as smart home energy monitoring and security solution



District Cooling

- TNB Engineering Corporation Sdn Bhd (TNEC) will be operating latest district cooling technology with higher efficiency in supplying cooling energy and electricity to KLIA's Main Terminal and its associated facilities

Electric charging stations & Electric Buses



Electric charging stations

- Working with Malaysian Green Technology Corporation (MGTC) to expand electric vehicle charging stations. As at February 2021, 73 ChargeEV stations had been installed.



Electric Buses

- 2 electric buses have been introduced at UNITEN as part of the Smart Mobility initiative

SUSTAINABILITY

TNB continues its Nation-Building legacy through Corporate Responsibility pillars anchored on empowering communities for a better, brighter Malaysia



Education

We believe that education can transform lives of not just one individual but families and generations.

RM111.1mil

- My Brighter Future
- Yayasan Tenaga Nasional
- Trust School
- Ceria Ke Sekolah
- Better Brighter Vision



Community & Social

We believe that capability, social, and community development supports liveability and enhances livelihood by uplifting the economic and social quality of life.

RM61.2mil

- Covid-19 Response Aid (MOH & State Gov.)
- Baiti Jannati
- Hockey Sponsorship
- Mesra Rakyat
- Better Brighter Shelter
- TNB Reskilling Malaysia initiative
- Training & Development



Environment

We believe that the future of our planet and next generation depends on our responsible behaviour today

RM1.6mil

- Firefly Conservation
- Mangrove Planting Programme

SUSTAINABILITY

TNB upholds the highest standards of corporate governance embedded in a culture that values ethical behaviour, integrity and sustainability

TNB Corporate Governance Framework

- Main Market Listing Requirements of Bursa Malaysia Securities Berhad
- Malaysian Code on Corporate Governance 2017
- Companies Act 2016
- Capital Markets and Services Act 2007
- Benchmark against the ASEAN Corporate Governance Scorecard

Remuneration

- The Board reviews the overall remuneration policy of the Non-Executive Directors, Executive Director and Top Management.
- The remuneration policy aims to attract, retain and motivate executives and Directors who will create sustainable value and returns for the Company's shareholders and other stakeholders.

Board Diversity

- TNB strongly supports diversity within its Board of Directors, including gender, age, professional diversity as well as diversity of thought i.e. TNB Board composition comprises various backgrounds from finance & accounting, legal, engineering and others.
- More than half of the Board comprises Independent Directors.

TNB Sustainability Reporting Framework

- | | |
|--|---|
| ▪ Bursa Malaysia's Sustainability Reporting Guidelines | ▪ Task Force on Climate-related Financial Disclosures (preliminary stage) |
| ▪ Global Reporting Initiative (GRI) standards | ▪ Sustainability Accounting Standards Board (SASB)* |
| ▪ United Nations Sustainable Development Goals (UN SDGs) | ▪ FTSE4Good* |

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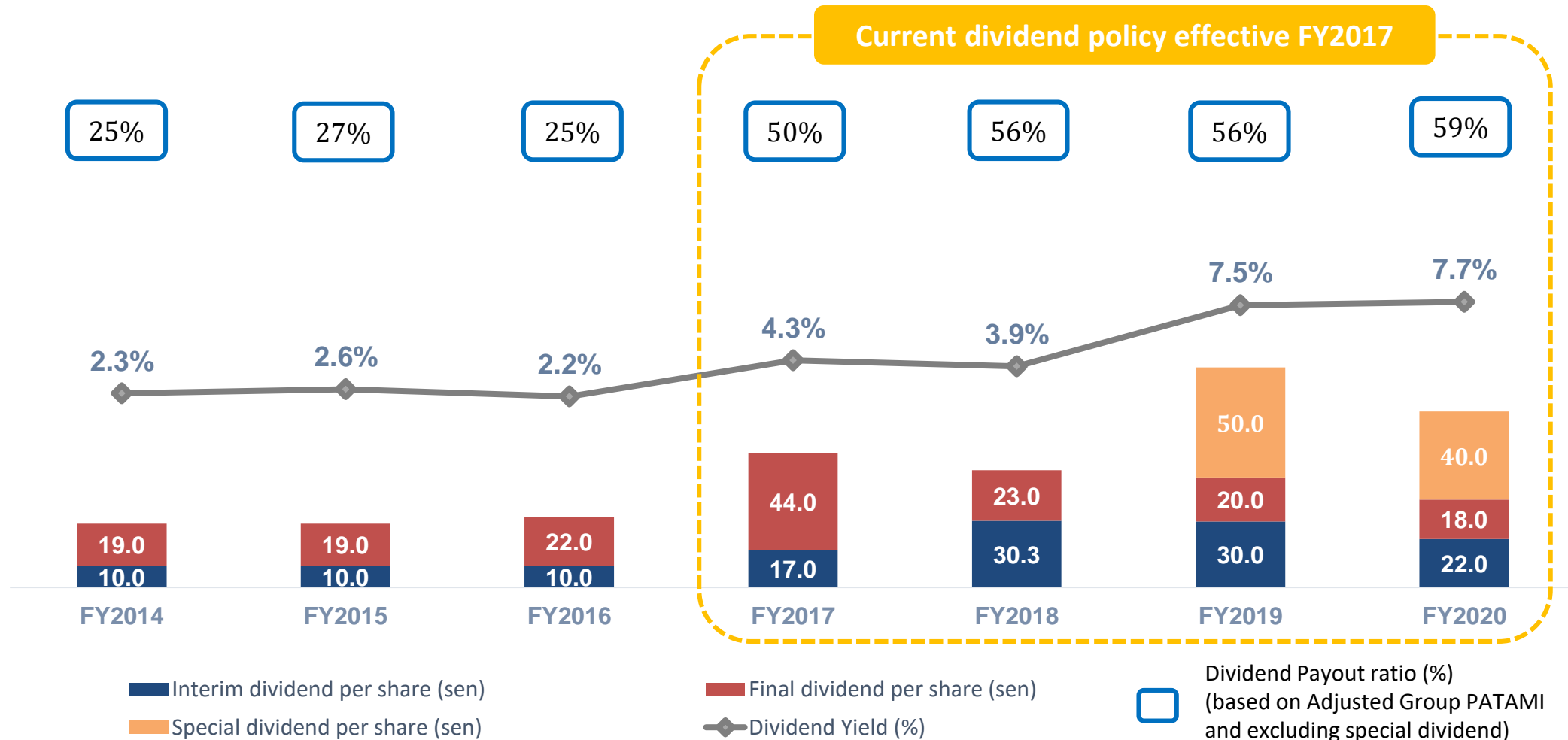
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Distribution of dividend is based on 30% to 60% dividend payout ratio, based on the reported Consolidated Net Profit Attributable to Shareholders After Minority Interest, excluding Extraordinary, Non-Recurring items



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FY2021 OUTLOOK



Electricity Demand

- Under RP2 extension year, our approved demand forecast is 113,909 GWh or 2.9% growth compared to JPPPET revised FY2020 forecast.
- Given that most of the Industrial and Commercial sectors are allowed to operate during MCO 2.0, we expect the impact of the lockdown to the electricity demand to be less severe than in FY2020.
- Nevertheless, earnings of our regulated revenue cap entities are guaranteed at demand growth as stipulated by the IBR guidelines.



MESI 2.0

- MESI 2.0 is currently under review by the Government. TNB is working closely with the Regulators towards realising the reform plans.
- TNB has been preparing for any future scenario reforms, putting in place a strong business strategy since 2015 i.e. Reimagining TNB. The separation of TNB Power Generation Sdn Bhd (TPGSB) and TNB Retail Sdn Bhd (TRSB) is part of navigating the Group towards being resilient to the industry changes.
- The Group anticipates that changes will happen in a managed and controlled manner. Therefore, impacts from the policy reforms are expected to be manageable.

FY2021 OUTLOOK



Regulatory Framework

- On 23rd Dec'20, EC had approved the RP2 Extension parameters under the IBR framework. This extension instils confidence on the effectiveness of the IBR mechanism to maintain stability in the power industry.
- The RP2 Extension approved parameters are fair and transparent. Our Regulated entities earnings will remain stable at base tariff of 39.45 sen/kwh and WACC of 7.3%.
- In addition, EC has allowed higher ADD of RM200mil for FY2021 (vs RM94.3mil for FY2020), in consideration of impacted collection due to MCO.

| | RP2 Extension Parameters |
|---|--------------------------|
| Base Tariff (sen/kwh) | 39.45 |
| Weighted Average Cost of Capital (WACC) (%) | 7.3 |
| Demand Forecast (Gwh) | 113,909 |
| Allowed CAPEX (RM bil) | 7.30 |
| Allowed OPEX (RM bil) | 6.30 |
| Fuel Parameters | |
| a) Gas (RM/MMBtu) | 27.20 |
| b) Coal (USD/MT) | 67.45 |
| c) FOREX (USD/RM) | 4.212 |

FY2021 OUTLOOK



International Business

- For 2021, we will be executing a strategy aimed at protecting value from existing assets, which includes Liberty, Shoaiba, GEAS and GEL and creating value for performing assets (Vortex and TWV).
- Part of this strategy involves executing a plan focusing on growing TNB's international Renewable Energy business leveraging on existing assets, capabilities and experience.
- Our immediate strategy is to grow TNB's international Renewable Energy business to sizeable portfolio through :
 - a) acquisitions of operational assets
 - b) greenfield development
- Our focus on Renewable energy is further supported by our observations of the global energy market during Covid-19 induced lockdowns. During this period, RE has shown to be a resilient source, where it has even increased market share amidst changing demand and supply dynamics of the sector.



Dividend Policy

We will continue to honour our dividend policy of 30% to 60% dividend payout ratio, based on the reported Consolidated Net Profit Attributable to Shareholders After Minority Interest, excluding Extraordinary, Non-Recurring items.



CAPEX

RM9.5 bil



- Regulated Recurring : RM7.3bil
- Others : RM2.2bil

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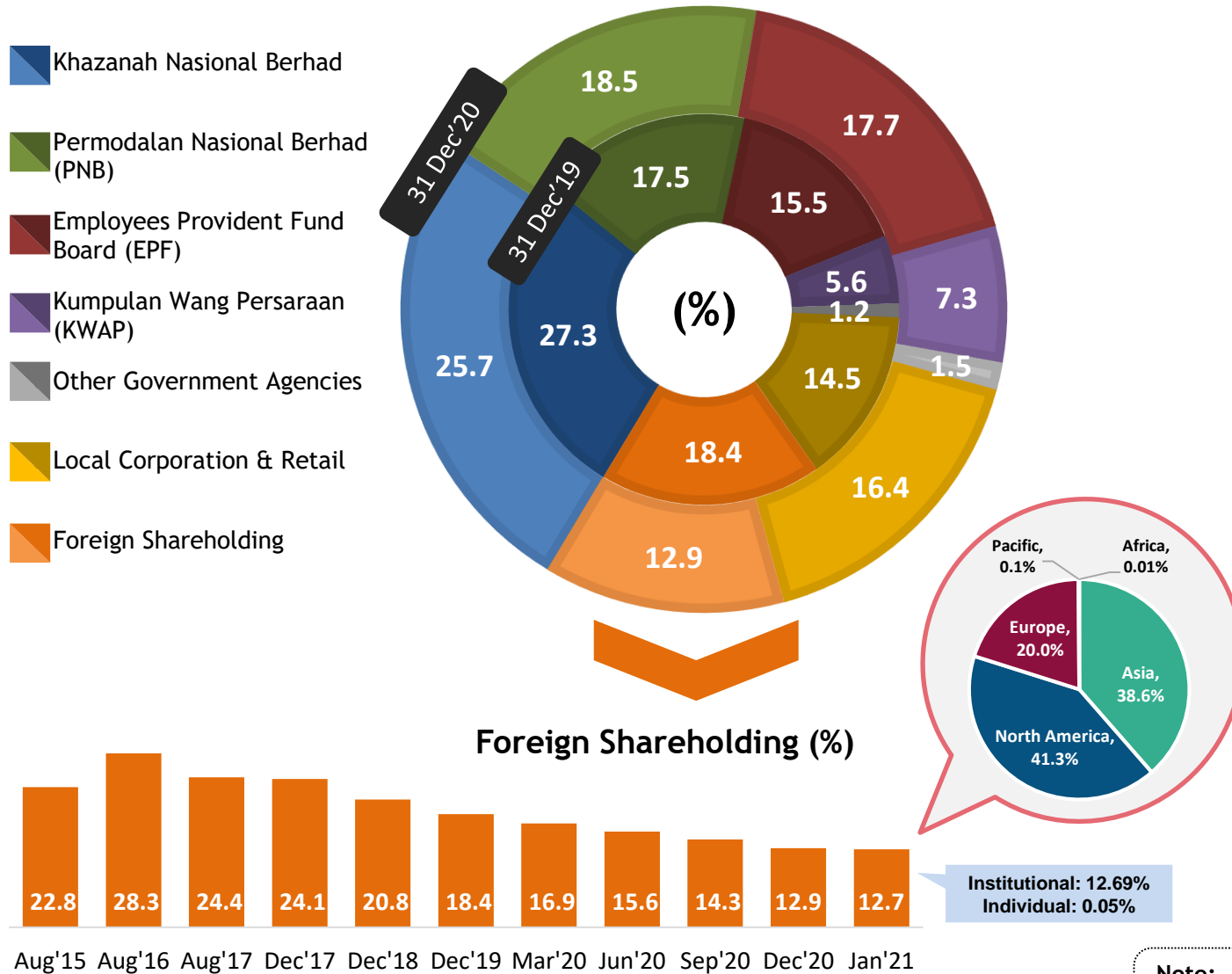
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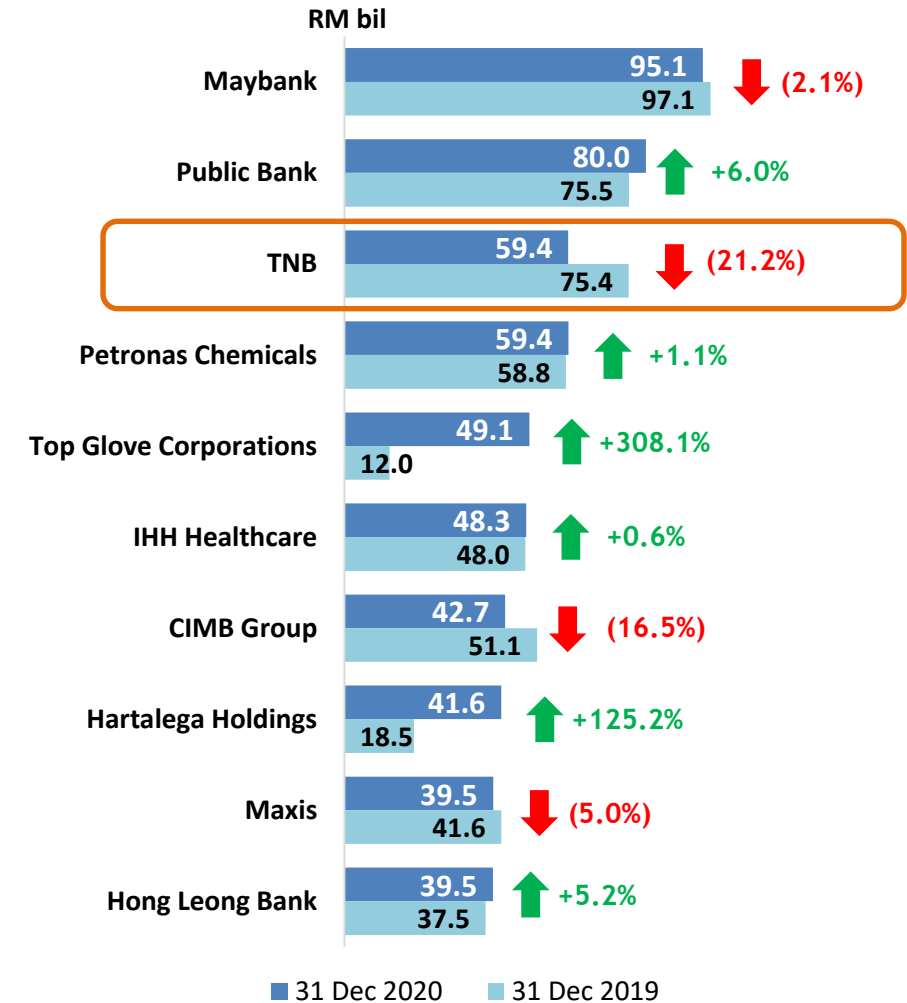
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TNB Shareholding Structure



Top 10 KLCI Stocks by Market Capitalisation

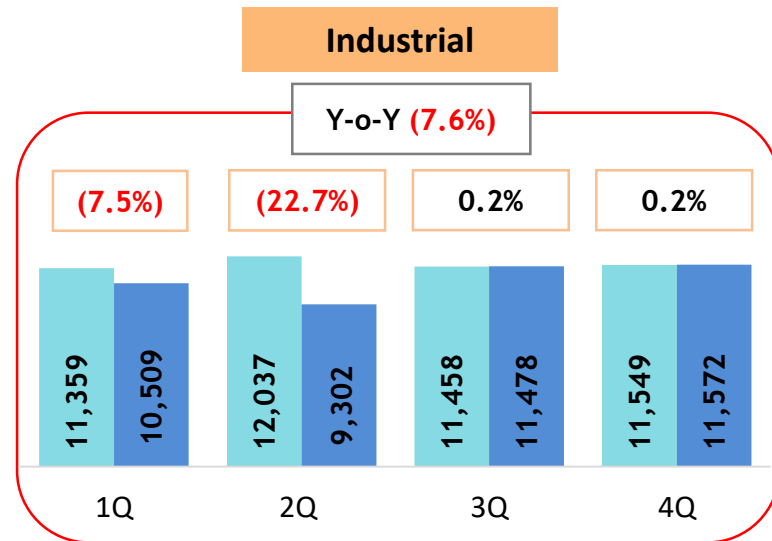


Note:

1. Top 10 KLCI ranking by Market Capitalisation as at 31st December 2020
2. TNB Latest Market Cap: RM56.5bil (4th), as at 24th February 2021

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Electricity Demand By Sectors – Lower electricity demand mainly from sluggish industrial and commercial sectors



4Q main contributors for the drop

Industrial:

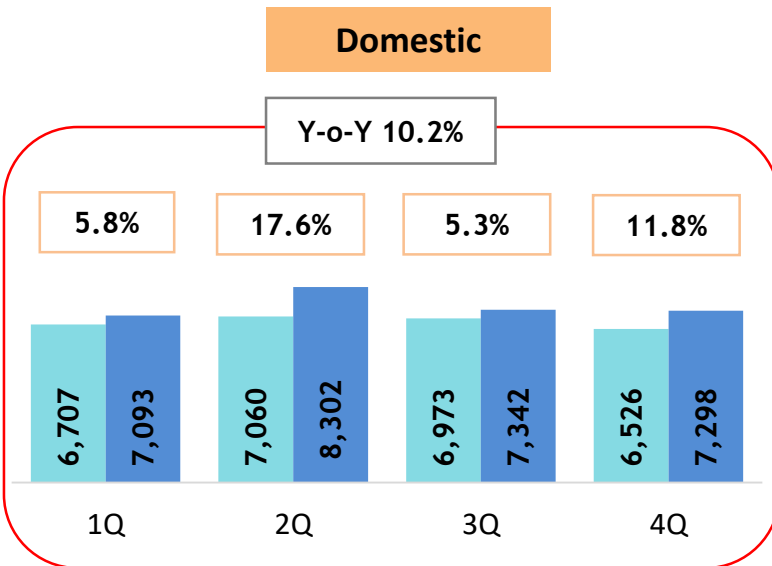
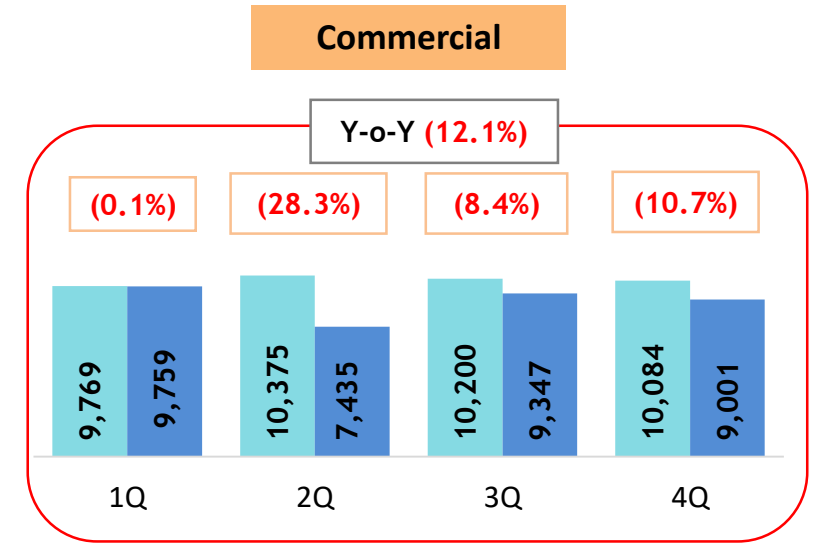
- Iron and steel
- Cement products
- Edible oil products

Commercial:

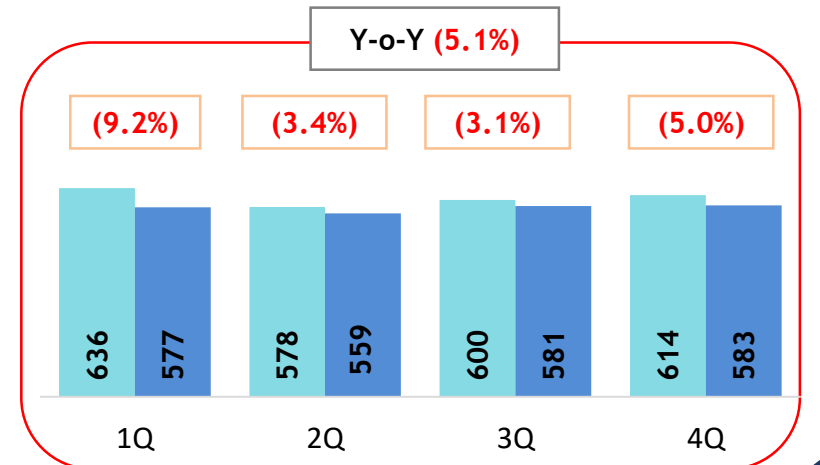
- Retails
- Educational
- Accommodation

Unit Sales (GWh) Growth

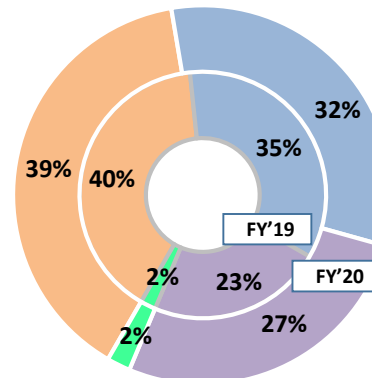
2019 2020 Y-o-Y Q-o-Q



Others* **includes Agriculture, Mining & Public Lighting*



Sector Mix (%) FY'20 vs FY'19



Industrial Commercial Domestic Others

APPENDIX

Incentive Based Regulation (IBR) – Imbalance Cost Pass-Through (ICPT) Mechanisms Ensures TNB Remain Neutral

Base Tariff under IBR framework comprises of:

- Opex, Depreciation of Regulated Assets & Tax Expenses of Business Entities
 - transmission, grid system operation, Single Buyer operation, distribution network and customer services
- Power purchase cost charged by generators to the Single Buyer
- Return on regulated assets (rate base) of Business Entities
 - Reviewed every 3 years

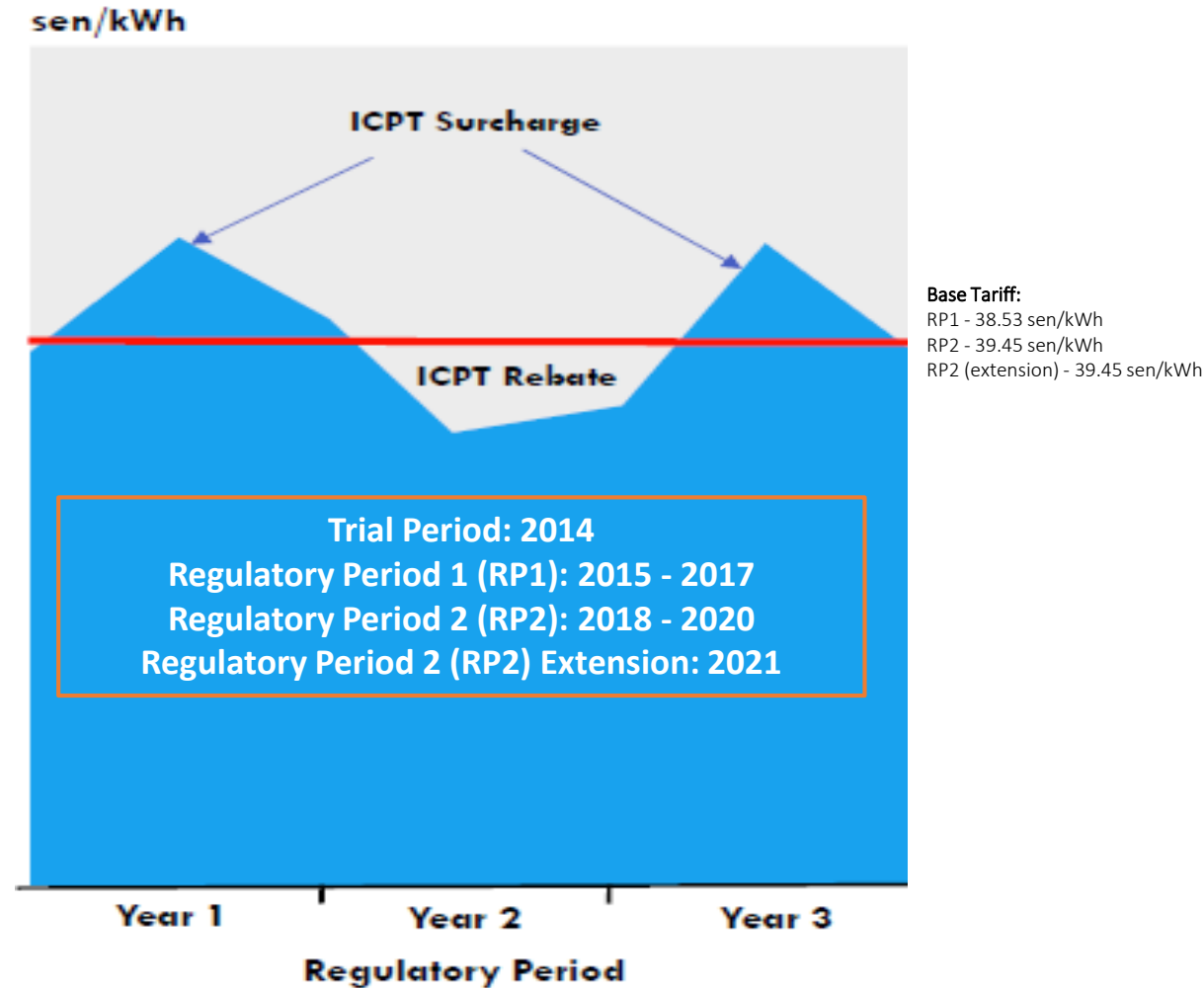
Imbalance Cost Pass-Through (ICPT):

- ICPT is 6-monthly pass-through of variations in uncontrollable fuel costs and other generation specific costs (imbalance cost) incurred by utility for the preceding 6-month period
 - Reviewed every 6 months

Principle for ICPT Calculation

Cost components comprise of

- The ICPT is calculated based on an estimated actual fuel cost and generation specific costs for a particular six (6) months period against the corresponding baseline costs in the Base Tariff.



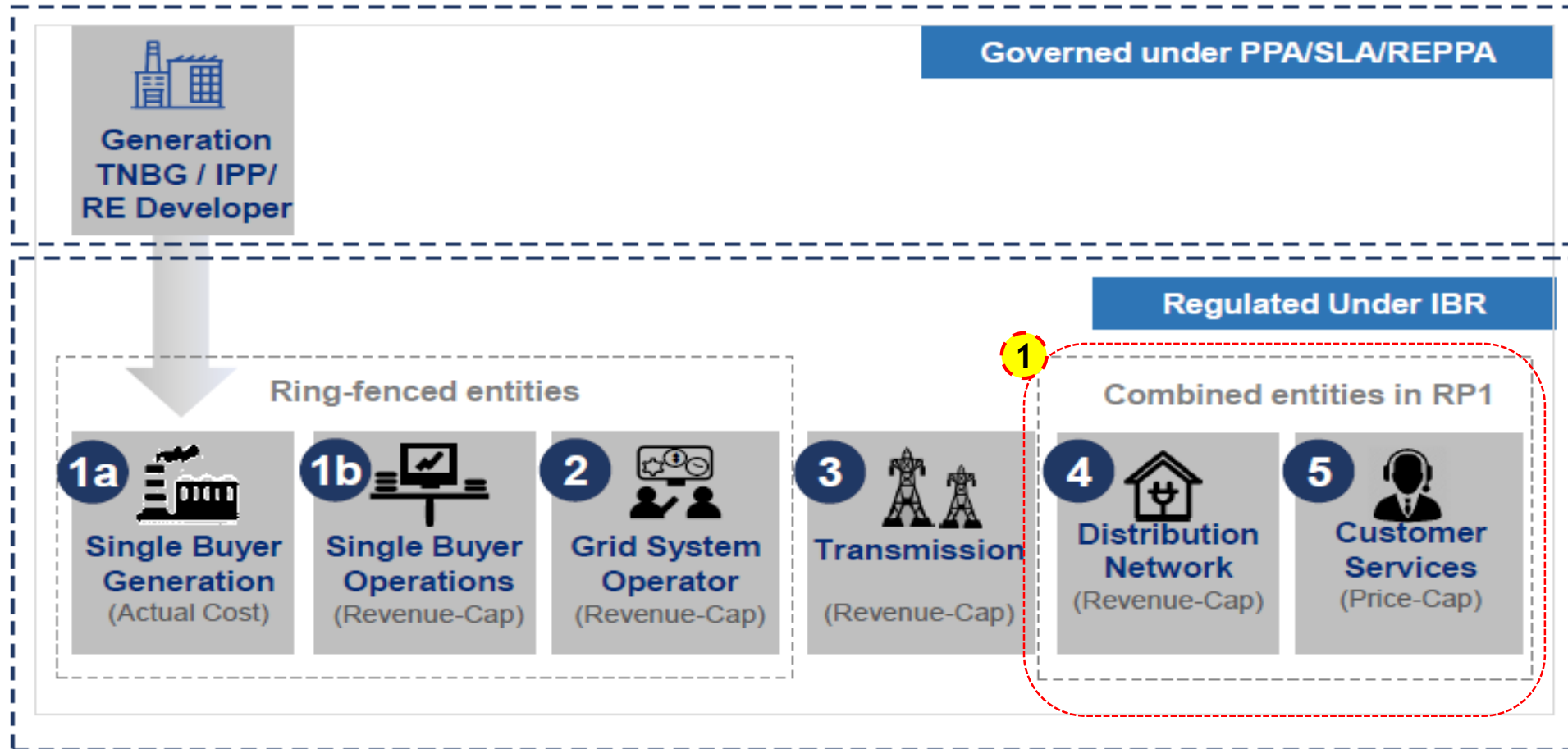
APPENDIX

Incentive Based Regulation (IBR) – New Features in Electricity Tariff Review for RP2 (2018-2020)

| More efficient and reliable electricity supply | Support Government's initiatives and aspirations | New addition in Key Performance Indicators* | Separation of Distribution Networks and Customer Services |
|---|---|--|---|
| <ul style="list-style-type: none">• Efficient and reliable electricity supply at the lowest efficient cost;• Enhancement in safety and reliability with smart grid capabilities. | <ul style="list-style-type: none">• Supporting Government's initiatives in green energy and sustainability for example AMI, Distribution Automation, Group Relamping of streetlight, etc.• Continue the gas price subsidy rationalization by gradual removal of gas price subsidy; | <ul style="list-style-type: none">• New performance indicators on each business entity that are in line with Government's policies;• Enhancement on KPI mechanisms and principles (symmetric and asymmetric). | <ul style="list-style-type: none">• Separation of these business entities will enhance the system reliability and consumer experience;• This will increase the productivity and consumer satisfaction. |

APPENDIX

Incentive Based Regulation (IBR) – IBR Entities

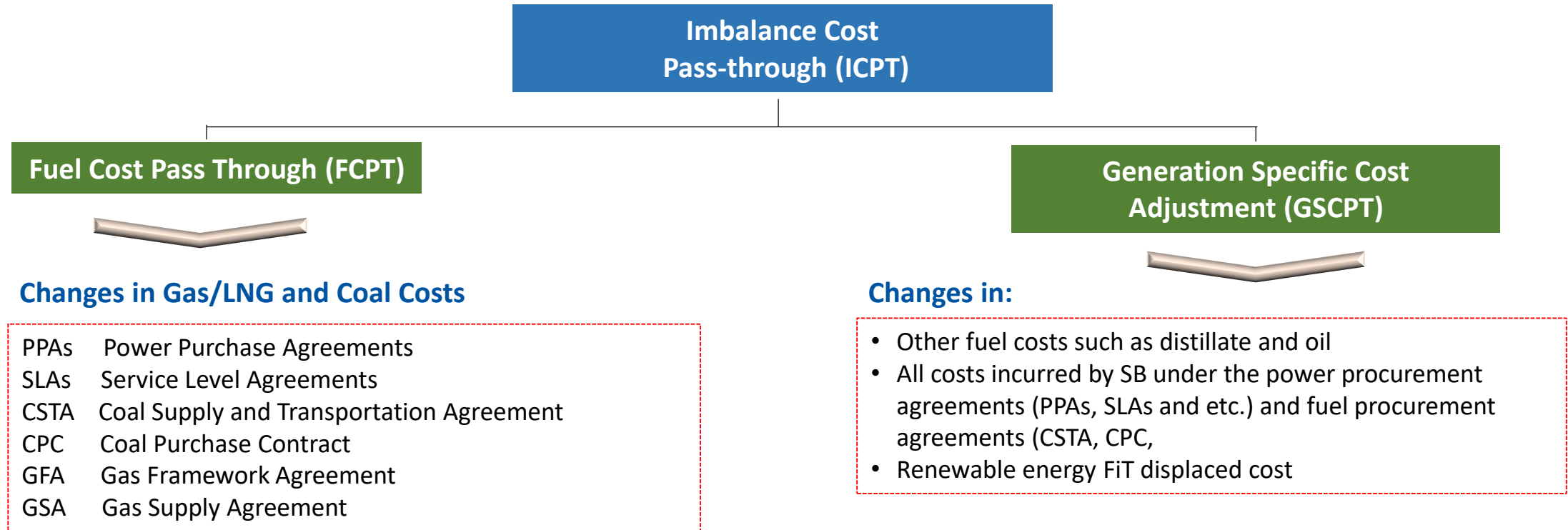


1

In RP1, these 2 entity are grouped as Price -Cap entity

APPENDIX

Incentive Based Regulation (IBR) – Imbalance Cost Pass-Through (ICPT) Comprises Two Components



RP2

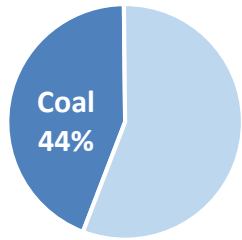
| ICPT | Surcharge / Rebate | Implementation Period |
|--------------|--------------------|-----------------------|
| Jul – Dec'18 | 2.15sen/kWh | Jan – Jun'19 |
| Jan – Jun'19 | 2.55sen/kWh | Jul – Dec'19 |
| Jul – Dec'19 | 2.00sen/kWh | Jan – Jun'20 |
| Jan – Jun'20 | 0.00sen/kWh | Jul – Dec'20 |
| Jul – Dec'20 | 2.00sen/kWh | Jan – Jun'21 |

APPENDIX

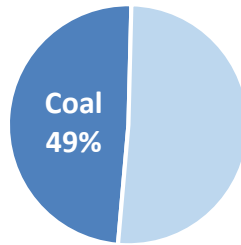
Incentive Based Regulation (IBR) – Generation and Customer Mix

Generation Mix RP1 vs RP2

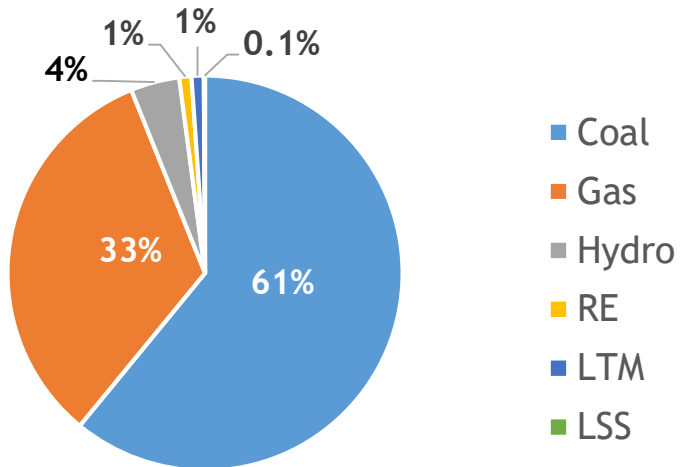
RP1 Base



RP1 Actual



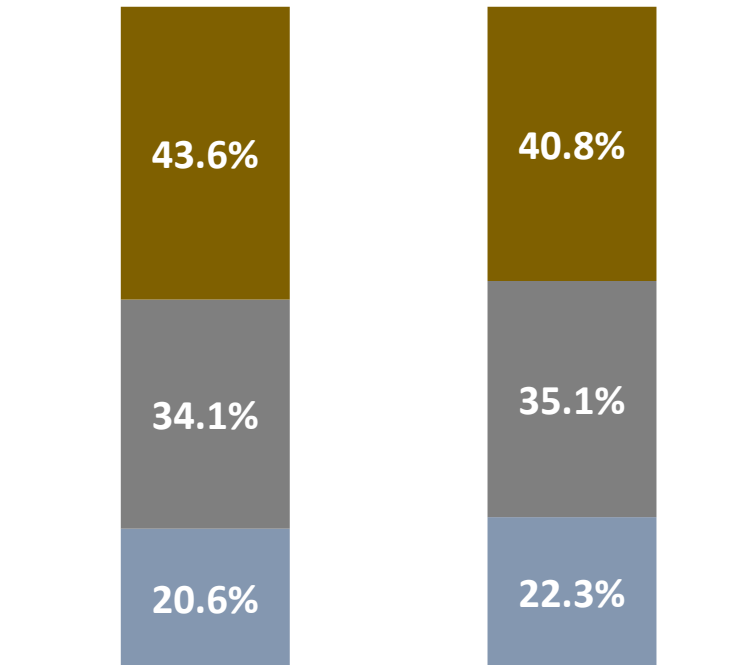
RP2



- Coal
- Gas
- Hydro
- RE
- LTM
- LSS

Made possible by improved coal plants performance and additional commissioning of coal plants.

Changes in Customer Mix (%) in RP1 (2015-2017)



Base IBR RP1

Average Actual IBR RP1

Domestic Commercial Industrial

RP2 Forecasted Demand Growth: 1.8 – 2.0%

Note:

LTM – Laos, Thailand & Malaysia Interconnection; LSS – Large Scale Solar

Source: Energy Commission (EC)

Sustainability – Our journey towards transitioning into a cleaner and sustainable energy provider

TNB's RE Capacity

WIND
144 MW



International:

- UK (TNB Wind Ventures): 26 MW
- Turkey (GAMA): 118 MW

Update:

Completed the acquisition of the remaining 20% stake in TNB Wind Ventures, UK in March 2020 with a total combined capacity of 26.1 MW

SOLAR
552 MW



International:

- UK (Vortex): 365 MW
- India (GMR): 26MW

Domestic:

- Large scale solar: 80 MW
- Rooftop PV: Total 81 MW (secured capacity)

Updates:

- Completed the acquisition of additional 5% controlling stake in Vortex Solar, UK in September 2020
- Received Letter of Notification as a Shortlisted Bidder for Large Scale Solar (LSS) 4 bidding with capacity of 50MW at Bukit Selambau, Kedah (Malaysia)

BIOGAS & BIOMASS
13 MW



Domestic:

- Biogas: 3MW
- Biomass: 10MW

HYDRO
2,689 MW



International: Turkey (GAMA): 131 MW

Domestic:

- Large Hydro: 2,536 MW
- Mini Hydro: 22 MW

TNB's RE Strategy

International

- 1) **Renewable Energy Driver (UK / Europe)**
- 2) **Growing TNB's utility business in South East Asia (SEA)**
- 3) **Technology Catalyst**

Focus Market

- TNB's growth strategy will focus on selected growth markets and regions where we have presence (UK, Europe and South East Asia) and specific asset classes/technology that are key to the Energy transition.
- The country selection is based on fit to TNB strategy, elimination of high-risk countries, power growth, market attractiveness and openness to foreign investments.

Domestic

- 1) **Win LSS** - Largest driver which focuses on winning local LSS bids, exploration of new entry points through NEDA and Green Corporate PPA as well as expansion on Asset Management Services.
- 2) **Secure Small RE** - Focus on mini hydro, biogas and Waste to Energy through the existing Feed-In Tariff Scheme and other initiatives.
- 3) **GSPARX** – To be the top solar distributed generation provider in Malaysia with end to end delivery.

Domestic (Peninsular Malaysia)

Others

- Mini Hydro (22MW)
- GSPARX Rooftop Solar (81MW)
- (Total secured)**

Kedah

- Large Scale Solar**
- TNB Bukit Selambau (30MW)

Perak

- Large Hydro**
- SJ Temengor (348MW)
- SJ Bersia (72MW)
- SJ Kenering (120MW)
- SJ Chenderoh (41MW)
- SJ Sg. Piah (67MW)

Selangor

- Large Scale Solar**
- TNB Sepang Solar (50MW)
- Solar PV**
- Floating solar in Sg Labu WTP (108kWp)

Kelantan

- Large Hydro**
- SJ Pergau (600MW)

Terengganu

- Large Hydro**
- SJ Kenyir (400MW)
- SJ Hulu Terengganu (265MW)

Pahang

- Large Hydro**
- SJ WOH (150MW)
- SJ JOR (100MW)
- SJ Ulu Jelai (372MW)
- Biomass**
- JV with Felda (10MW)

Johor

- Biogas**
- JV with Sime Darby (3.2 MW)

International

United Kingdom

- Solar**
- TNB Vortex Solar (365.0MW)
- Wind**
- TNB Wind Ventures (26.1MW)

Turkey

- Wind**
- GAMA Wind (117.5MW)
- Hydro**
- GAMA Hydro (131.3MW)

India

- Solar**
- GMR Solar (26.0MW)

APPENDIX

Sustainability (Governance) – Composition of BOD



CHAIRMAN
DATO' SERI DIRAJA MAHDZIR KHALID



EXECUTIVE DIRECTOR / CEO
DATUK IR. BAHARIN BIN DIN

Independent Non-Executive Directors (Total = 7)



NORAINI BINTI CHE DAN
Expertise: Audit & Finance



ONG AI LIN
Expertise: Audit & Finance



**GOPALA KRISHNAN A/L
K.SUNDARAM**
Expertise: Law



**DATUK RAWISANDRAN
A/L NARAYANAN**
Expertise: Business



JUNIWATI BINTI RAHMAT HUSSIN
Expertise: Project Management, Corporate
Planning and Human Resource



**DATO' ROSLINA BINTI
ZAINAL**
Expertise: Business



**DATO' IR NAWAWI BIN
AHMAD**
Expertise: Engineering

Non-Independent Non-Executive Directors (Total =2)



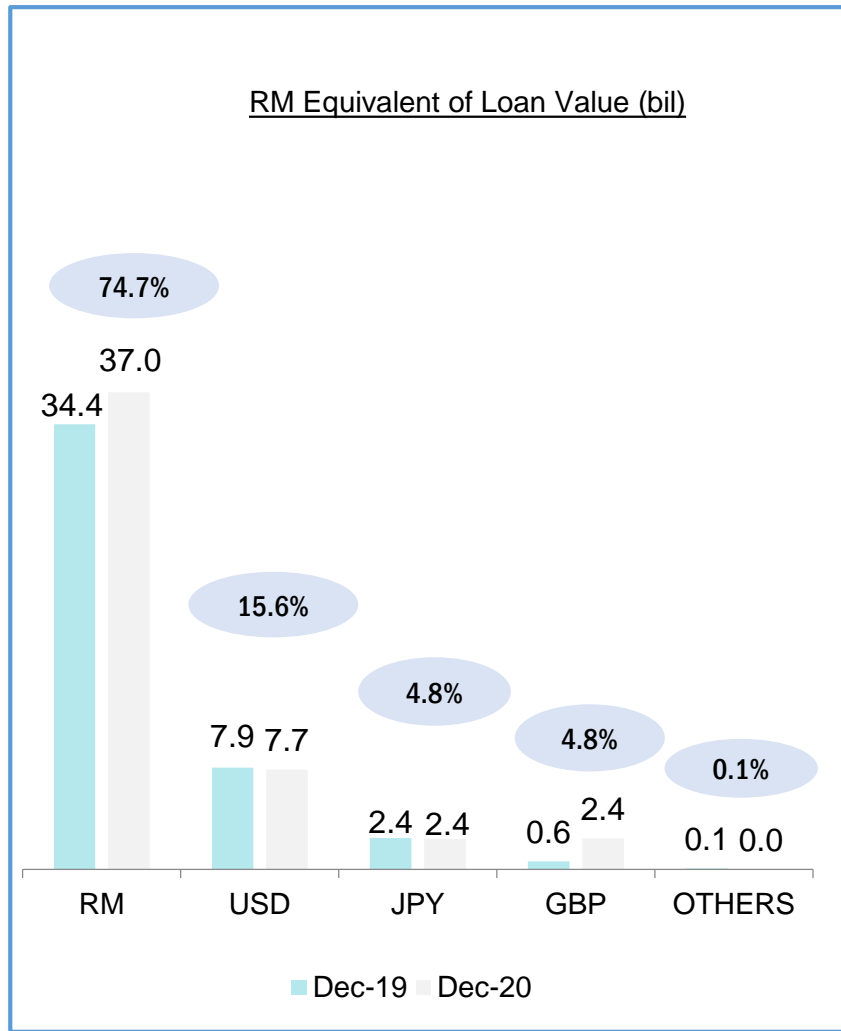
AMRAN HAFIZ BIN AFFIFUDIN
(Khazanah)



DATO' ASRI BIN HAMIDIN @ HAMIDON
(MoF)

APPENDIX

Gearing – Increased in total debt due to drawdown of new sukuk, however capital headroom remains healthy



Note:
Debt consists of Principal + Accrued Interest

| Statistics | | 31 st Dec'20 | 31 st Dec'19 |
|-------------------------|--|-------------------------|-------------------------|
| 1 | Total Debt (RM' Bil) | 49.5 | 45.4 |
| | Net Debt (RM' Bil)* | 36.0 | 31.2 |
| 1 | Gearing (%) | 46.3 | 43.4 |
| | Net Gearing (%) | 33.7 | 29.8 |
| Fixed : Floating | | | |
| | Underlying | 95:5 | 98:2 |
| | Final Exposure | 99:1 | 98:2 |
| 2 | Effective Average Cost of Borrowing (based on exposure) ** | 4.88 | 5.06 |

* Net Debt excludes deposits, bank and cash balances & investment in UTF

** Inclusive of interest rate swap

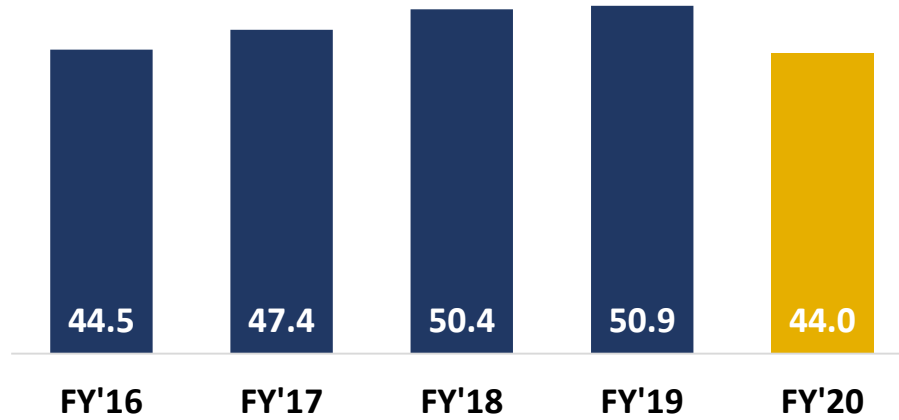
- 1 Increase mainly due to :
- Issuance of Sukuk Wakalah IMTN of RM3bil on 12th August 2020
 - Loan in Vortex of RM1.5bil due to change of accounting treatment from associate to subsidiary
 - Banker's acceptance of RM1bil for working capital purposes in 1Q'FY20
- 2 Reduced due to lower interest rate of the new drawdown.

| Closing FOREX | 31 st Dec'20 | 30 th Sept'20 | 30 th Jun'20 | 31 st Mar'20 | 31 st Dec'19 |
|---------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|
| USD/RM | 4.02 | 4.18 | 4.28 | 4.29 | 4.09 |
| 100YEN/RM | 3.90 | 3.93 | 3.98 | 3.96 | 3.77 |
| GBP/RM | 5.48 | 5.53 | 5.25 | 5.30 | 5.37 |
| USD/YEN | 103.12 | 106.36 | 107.68 | 108.24 | 105.40 |

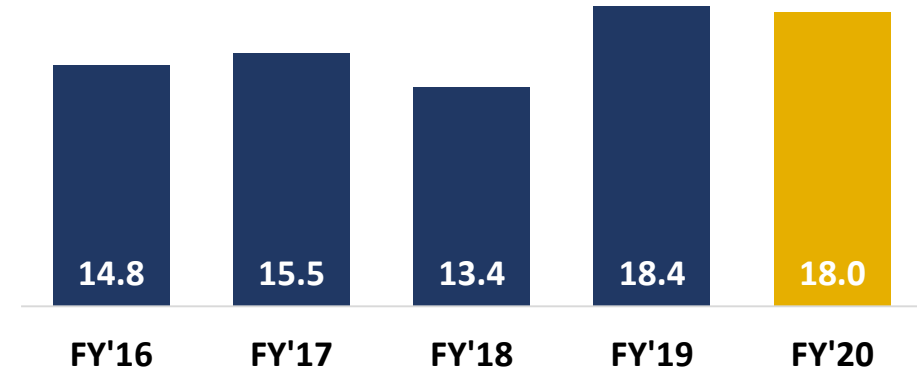
APPENDIX

Financial Highlights

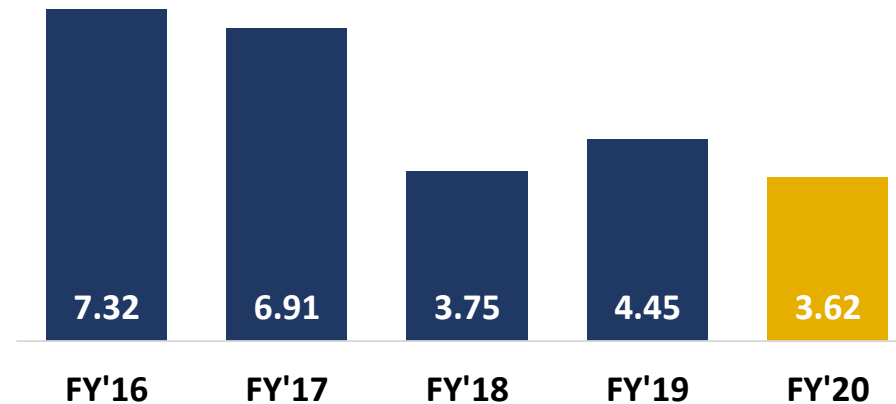
REVENUE (RM bil)



EBITDA (RM bil)



PAT (RM bil)

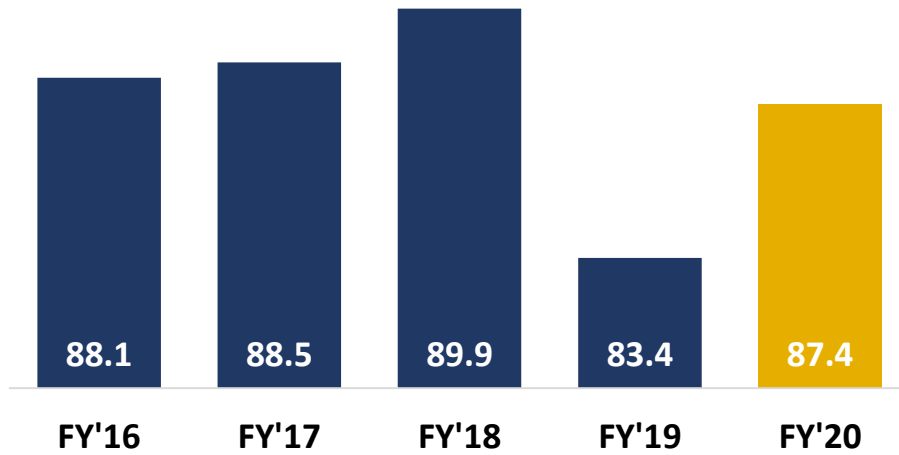


Note: FY2019 is after MFRS16 implementation

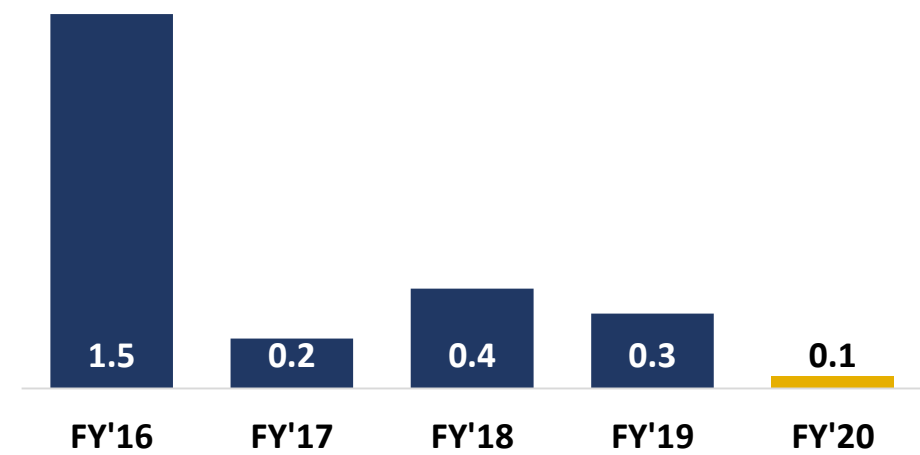
APPENDIX

Technical Highlights

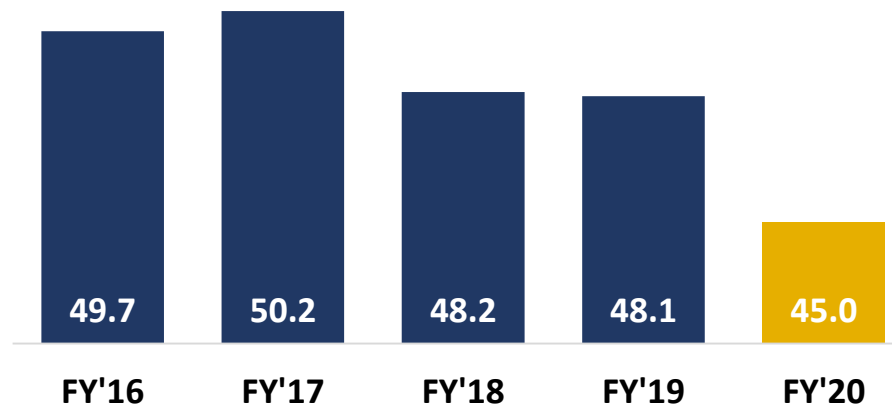
EAF (%)



Transmission System Minute (mins)



Distribution SAIDI (mins)



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THANK YOU

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