MINORITY SHAREHOLDERS WATCH GROUP (MSWG)

Strategic & Financial Matters – Generation (1/2)

1) TNB recorded a lower Equivalent Availability Factor (EAF) of 83.35% in FY19 for generating capacity in Peninsular Malaysia, against 89.92% in FY18. The EAF recorded is also the lowest since FY14 (excluding financial period ended 31 December 2017) with EAF of 85.5% recorded. In addition, TNB's Equivalent Unplanned Outage Factor (EUOF) also spiked to 6.63% from 3.24% in FY18, suggesting a lower reliability recorded in TNB's stations during the year. The lower EAF and EUOF in the year were mainly due to prolonged forced outage in TNB Janamanjung Sdn Bhd Unit 2 (120 days in FY19 versus 5 days in FY18) and Kapar Energy Ventures Unit (KEV) 6 (151 days in FY19 versus 52 days in FY18) due to technical faults. *(Sources: Annual Reports, Presentation to Analysts)*

a) What are the findings from the Root Cause Analysis conducted on the two plants due to the outages?
b) What measures should TNB take to further strengthen asset reliability and to prevent such occurrence in the future?
c) What are the lessons the management can draw from the outages?

1) <u>KEV Unit 6</u>

- The outage of the KEV Unit 6 was due to the turbine failure which was caused by Stress Corrosion Cracking at the Turbine Blade Root.

- Temporary work carried out for the unit were:
  - Damaged blade L-zero (last stage of the blade) for Low Pressure Turbine A (LPA) was replaced with new blade.
  - Damaged blade L-zero (last stage of the blade) for Low Pressure Turbine B (LPB) was removed and replaced with pressure plate.

- The permanent repair:
  - New fully bladed rotor for both LPA and LPB is plan to be replaced in Aug 2021 during the next planned outage.

- KEV Unit 6 is currently running in good condition with turbine bearing vibration below 100micron (alarm 175micron).

- Lesson learnt from the incident:
  - The blade assessment shall be thoroughly inspected during each overhaul with additional input from historical operating data over the life cycle to provide an accurate analysis in predicting the life span of the component to avoid premature failure.

MSWG

Strategic & Financial Matters – Generation (2/2)

TENAGA NASIONAL

30th AGM

a) What are the findings from the Root Cause Analysis conducted on the two plants due to the outages?
b) What measures should TNB take to further strengthen asset reliability and to prevent such occurrence in the future?
c) What are the lessons the management can draw from the outages?

2) Janamanjung Unit 2

- The prolonged outage of TNB Janamanjung Sdn. Bhd. Unit 2 was due to the Steam Turbine high vibration during commissioning after the overhaul of the unit.
- The root cause of the vibration was due to loss of mass during the rotor blast cleaning work. Due to its design, the balancing work cannot be carried out online, meaning the turbine has to be disassembled and sent to the factory for correction. The affected rotor was sent to factory for balancing.
- The unit was fixed with a new rotor, the time taken was longer than normal due to some adjustment and testing. Station has instituted improvement on work process for the future overhaul of the turbine to address on the rotor balancing.
- As a backup, a set of balanced rotor is kept at site for quick replacement if the need arise.

Strategic & Financial Matters - Retail

2) Sales of electricity to industrial customers dropped 7.5% y-o-y to 10,509 Gwh in 1QFY20 due to the implementation of Movement Control Order (MCO) at the end of March 2020. Meanwhile, sale of electricity to commercial customers rose 34.9% y-o-y to 9,758.6 Gwh in 1QFY20.

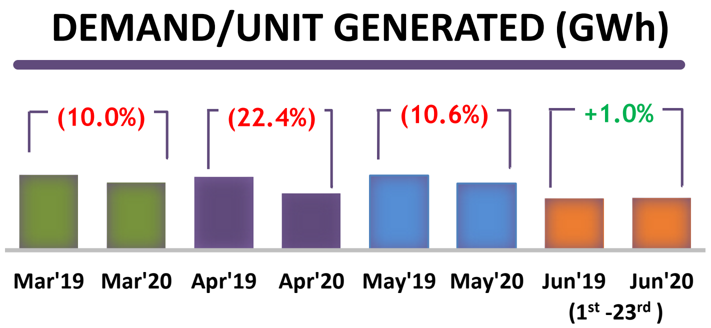
a) With resumption of most of the business activities under Recovery Movement Control Order (RMCO) beginning from 10 June 2020, has the sale to industrial customers return to normalcy after the demand shock due to MCO?

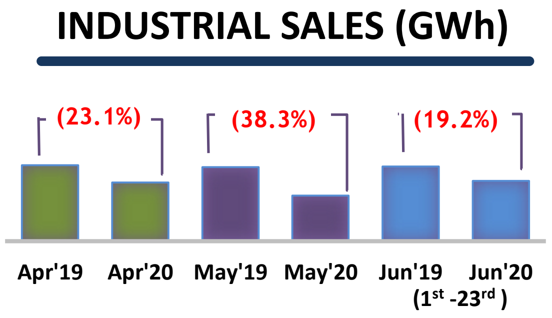
- Please take note that the sales of electricity to commercial customers for 1QFY2020 did not rose by 34.9% y-o-y. Instead, the sales for commercial customers dropped by 0.1% y-o-y. The 34.9% quoted in page 12 of 1QFY2020 Analyst Briefing slide was referring to the sales composition of commercial sector in 1QFY2020.

- We observed a jump in the peak demand from around 13,000MW throughout the MCO period to around 16,000MW as the Conditional Movement Order Control (CMCO) was announced.

- The electricity sales from industrial customers began to recover at a faster rate during the CMCO after businesses are gradually allowed to operate. Moving forward, we expect more improvement in term of electricity consumption from the industrial sector.

- However, we will continue to monitor the situation on a regular basis and we should have a better picture by 2HFY2020.





Sales for June 2020 (1st -23rd) may not yet reflect the improved demand in May because of the incomplete billing cycle.

MSWG

Strategic & Financial Matters - Retail

TENAGA NASIONAL

30th AGM

b) Notwithstanding the increase in electricity sales to commercial customers in1QFY20, is there a decline in electricity demand from commercial customers in April and May 2020 due to MCO and Extended MCO?

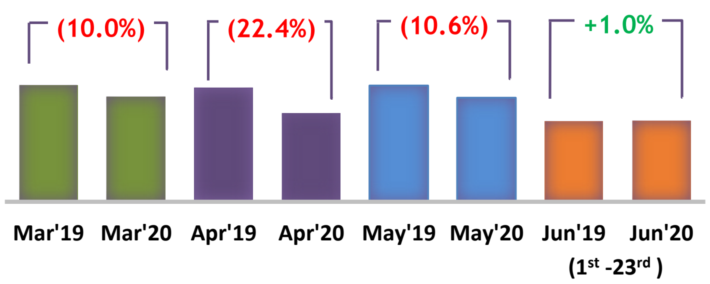
- Similar to what has mentioned in the previous question, the sales of electricity to commercial customers for 1QFY2020 actually fell by 0.1% y-o-y.

- Overall sales of electricity for Peninsular Malaysia contracted by 1.9% in 1QFY2020 as compared to the same period last year.

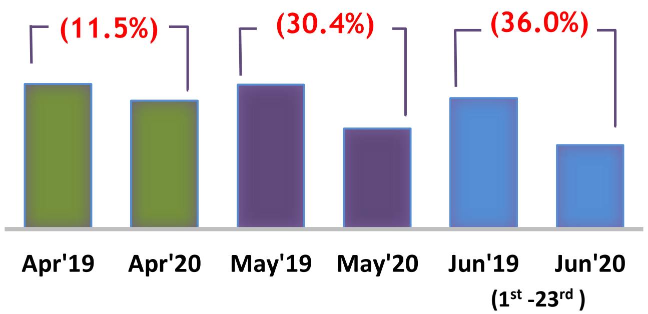
- Due to the Covid-19 pandemic and implementation of MCO, overall electricity demand Y-o-Y for April 2020 and May 2020 fell by 22.4% and 10.6%, respectively.

- This situation has translated into a lower sales in commercial sector Y-o-Y in April 2020, May 2020 and June 2020 by 11.5%, 30.4% and 36.0%, respectively.

DEMAND/UNIT GENERATED (GWh)



COMMERCIAL SALES (GWh)



Sales for June 2020 (1st -23rd) may not yet reflect the improved demand in May because of the incomplete billing cycle.

Strategic & Financial Matters - Retail

c) Given that commercial and industrial customers are the two largest revenue contributors to TNB, how will the demand sales to these two segments affect TNB's FY20 performance?

Our domestic electricity business is governed by a regulatory framework called the Incentive Based Regulation (IBR). Our regulated entities are divided into 2 segments which are Revenue Cap and Price Cap.

Revenue cap entities (Single Buyer Operation, Grid System Operator, Transmission & Distribution Network)

- Earnings of our regulated revenue cap entities are guaranteed at demand growth of 1.8% - 2.0% as stipulated by the IBR guidelines in RP2, thus will be neutral from volatility of the electricity demand.

- If demand falls short i.e. below 2%, TNB's revenue cap entities will be regularized on a 6 monthly basis through the computation of the Other Regulatory Adjustment which also coincides with the timing of ICPT announcement.

Price cap entity (retail/customer service business)

- Price cap entity earnings is expose to the volatility of the electricity demand, in terms of the shortfall in KWh. Considering the price cap entity only account for 1.04 sen/kwh (or 2.6%) out of the total base tariff of 39.45 sen/kwh, the impact to TNB's Regulated Business is expected to be minimal. Furthermore, the price cap entity is able to recover if the ASP falls below the base tariff.

- For 1QFY'20, the allowance for doubtful debt is RM99.1 mil. We expect continued challenges on our collection based on the prolonged impact of COVID-19 pandemic where majority of the commercial and industrial (non-essentials) are not allowed to operate during the MCO.

3) TNB has completed the RP3 (2021-2023) proposal and have submitted it to the Government for its consideration (page 23, IAR2019).

a) What are the key suggestions or improvement areas that TNB has put forth for Government's consideration?

Answer:

Our key suggestions and improvement include:

1) Strengthening the bi-directional flow of our distribution network to support increased connection of Renewable Energy (RE) devices to meet the government's 20% RE target.
2) **Broadening of AMI installation** to enable opening of the upcoming retail market while implementing new systems within Single Buyer business and Retail business to facilitate changes to the market.
3) **Proposing a new revenue model consistent with 'best practice' retail regulatory revenue determination methods** in the RP3 Guidelines.

b) Why are such proposed suggestions critical for TNB's performance during the regulatory period?

Answer:

- The suggestions are critical to ensure TNB continues to **provide a safe, efficient, secure and sustainable electricity supply to our valued customers.**

- These include developing a **more advanced and efficient electricity system, improving the services offered to the customers** and also **helping in realising the Government's vision for the energy sector** in Malaysia.

4) On Ordinary Resolution 9, TNB seeks shareholders' approval to allot up to 900,000 shares in TNB under the Long Term Incentive Plan to Datuk Seri Amir Hamzah Azizan, who is the president/chief executive officer of the Group from time to time.

a) What is the vesting period of the share grant allotted to Datuk Seri?

Answer:

The Vesting period for Datuk Seri Amir Hamzah Azizan for each grant is **3 years.**

b) Is the share grant subjected to any claw back provision?

Answer:

- Once the shares are vested, there is no clawback.
- Shares are granted to an individual based on their performance. Once granted, the shares (as explained) in (a) would be vested over a three year period.
- For vesting, the employee who was granted the shares would have to fulfil all the required performance level (as an individual) and the Company has to achieve the targets set at the point of the grant.
- If both of these targets (individual and Company) are met, then the shares granted can be vested. If not, it becomes null and void. All the unvested shares will be cancelled.
- For an example in 2019, all the portions of Restricted Shares (RS) that were due for vesting were not vested because the Company's target was not met. Similarly, since the launch of the scheme, Performance Shares (PS) granted in 2015 was vested in 2018 while PS that were granted in 2016 and 2017 were **not vested** because the Company's targets were not met in the year 2019 and 2020 respectively.