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Industry Focus:

UTILITY - ELECTRICITY & GAS

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KEMENTERIAN PEMBANGUNAN USAHAWAN DAN KOPERASI
MINISTRY OF ENTREPRENEUR DEVELOPMENT AND COOPERATIVES

DKN 2030
Dasar Keusahawanan Nasional

Industry Focus:
Utility – Electricity & Gas (1/6)

Positive Outlook

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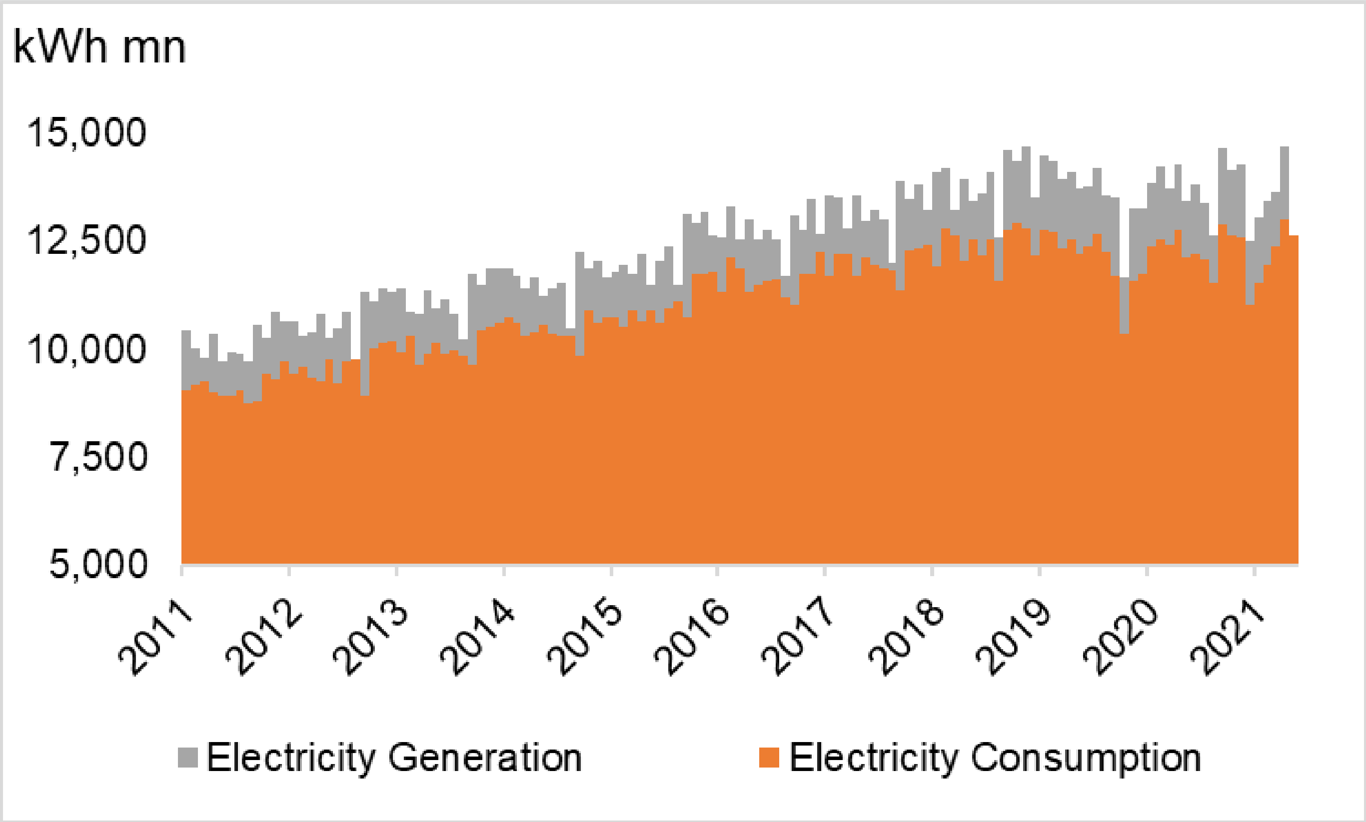
Electricity consumption's compounded annual growth rate is forecasted to come in at 3.04% for 2022-2031, due to robust demand arising from growing population & resilient economic growth. Renewable energy (RE) growth is aimed at increasing the country's installed capacity for RE mix to 31% by 2025 and 40% by 2035 (Oct 2021: 23%).

Sub-Sector	Outlook
Electricity & Gas	**Positive**

Uptrend in electricity demand



Recent developments

- The **Malaysia Renewable Energy Roadmap 2022 – 2035 targets installed capacity for renewable energy (RE) mix at 31% by 2025 and 40% by 2035,** respectively. **Coal-fired power facilities will no longer be built in Malaysia.** RE growth will leverage on the existing untapped resources such as **solar photovoltaic, bioenergy and hydro power.** **Solar power will remain the main source of non-hydro renewables.**

- The 4th cycle of the **large-scale solar programme (LSS4)** was concluded in 2021 with a selection of 30 companies to develop solar farms. **The tender for LSS5 is expected to open this year**, with a higher tariff reference than LSS4 due to higher prices of solar-related materials.

- Malaysia has committed to **reduce carbon emission** intensity (against GDP) by 45% by 2030 at the 26th Conference of Parties (COP26) end-last year, up from the 35% pledged at COP21 in 2015. The government estimates that green energy programmes will generate >20,000 jobs and investments worth >RM12 bil.

Sources: Ministry of Energy & Natural Resources, Economist Intelligent Unit, CEIC, EMIS, Energy Commision and SME Bank SCEA

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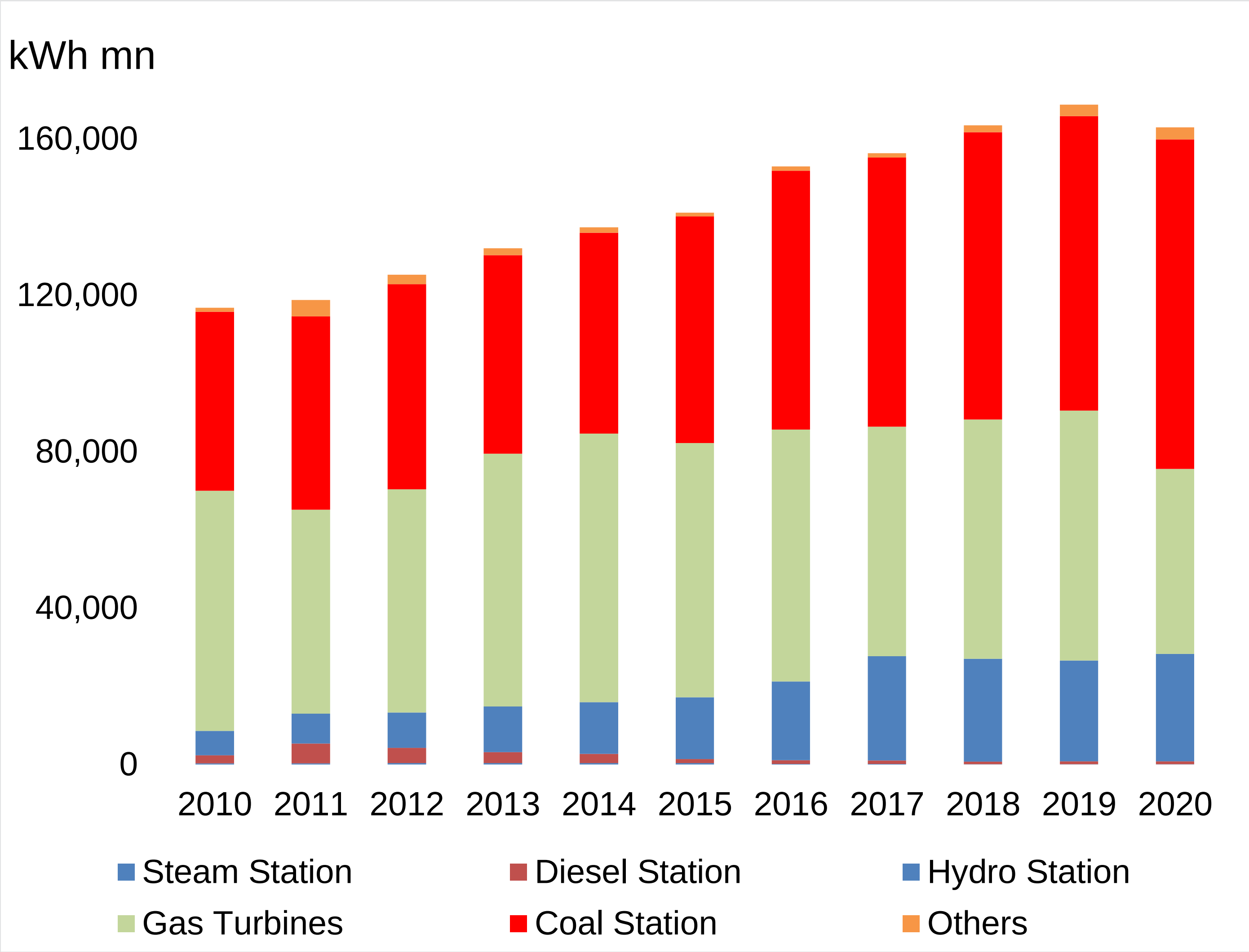
COAL

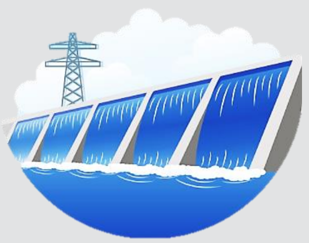
Coal station remains dominant electricity generation source



- Malaysia **imports ~90% of coal** for electricity generation purposes. The majority of Malaysia's coal imports come from Indonesia (63%) followed by Australia (24%), Russia (11%), and South Africa (2%).
- Coal prices reached an average new high of USD234 /tonne in Oct 2021, but has eased to USD166 /tonne as at Jan 26. **The power generation industry is under pressure as global coal prices continue to rise (persistently above its pre-pandemic 3-year historical avg of USD50-70 /tonne).**
- The sharp rise in coal prices resulted in **power generation costs rising by 45%** and caused a big impact on electricity tariff in Peninsula Malaysia. The **surcharge**, imposed under the Imbalance Cost Pass-Through (ICPT) mechanism, **rose 3.7 sen/kWh on non-domestic users from February to June 2022** while a 2 sen rebate for domestic users (household) is maintained.
- The government eyes **coal power facilities to be replaced by natural gas power plants** in Peninsular Malaysia **from 2030 onwards**.

- **Indonesia banned coal exports in January 2022** for mining companies that do not comply with the regulation to supply 25% of annual production to the domestic market at a price well below current market rates.
- The **temporary ban until end of the month** was due to concerns that **low supplies at domestic power plants** could lead to widespread blackouts.
- Nonetheless, **restrictions were relaxed by 20th January and 139 firms were given permission to ship internationally.**

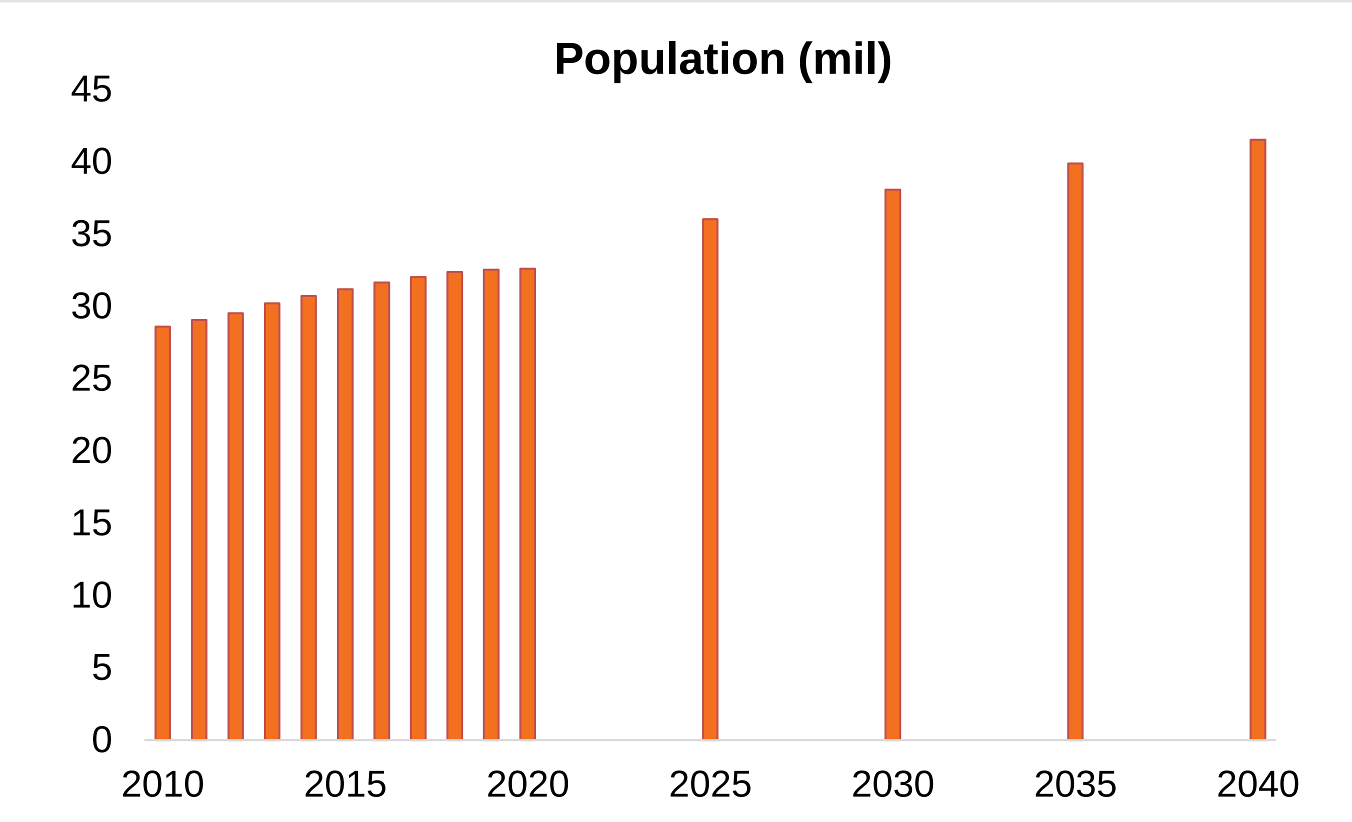
Sources: CEIC, DOSM, US Energy Information Administration, Markets Insider and SME Bank SCEA

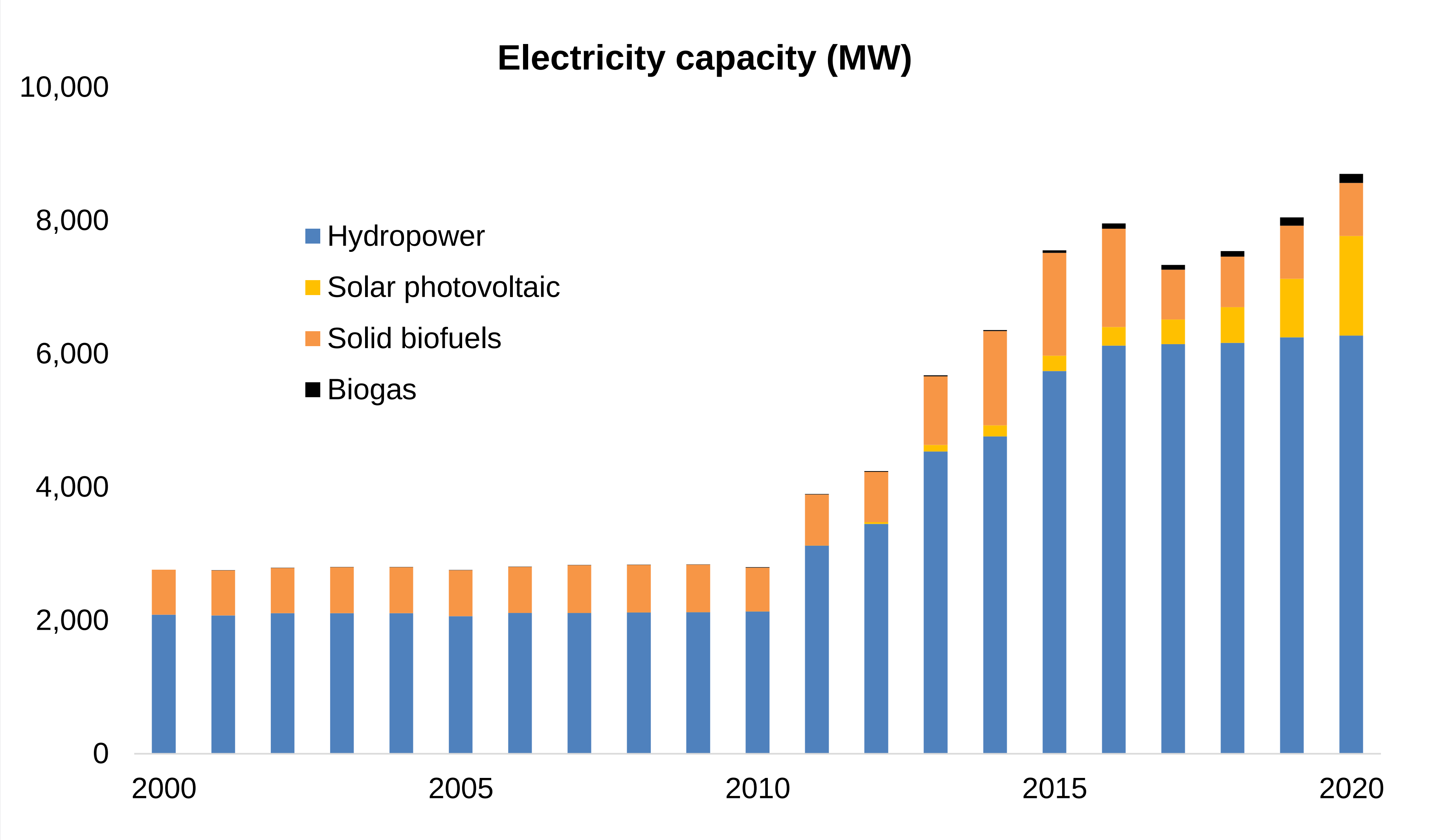


HYDROPOWER

- Excluding fossil fuels, **Malaysia is currently depending on large-scale hydropower.**
- However, these hydropower plants have caused the loss of land for many indigenous people. Environmental cost related to the submerging of huge tracts of land is also another concern, apart from the expensive development costs.
- Therefore, in recent years, **the government has been focusing more on solar projects.**

As population grows, electricity demand should increase





To generate electricity entirely from RE?

Unlikely. It is critical to have a **diverse range of energy sources**. Should one fail, another source can be utilised.

Sources: CEIC, IRENA, DOSM and SME Bank SCEA

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SOLAR

- Malaysia's **strategic location near the equator** underpins its ability to pursue **more aggressive solar energy plans.**
- In terms of building and construction costs, **solar plants** in Malaysia have **lower production costs and are easier to finance** compared to hydro electric power plants.
- **The potential for solar panel adoption is enormous**, given untapped capacity of 3.2 mil landed houses. Furthermore, solar photovoltaic (PV) manufacturing costs have really decreased in price by 85% in the last decade.

Types of support / programmes:

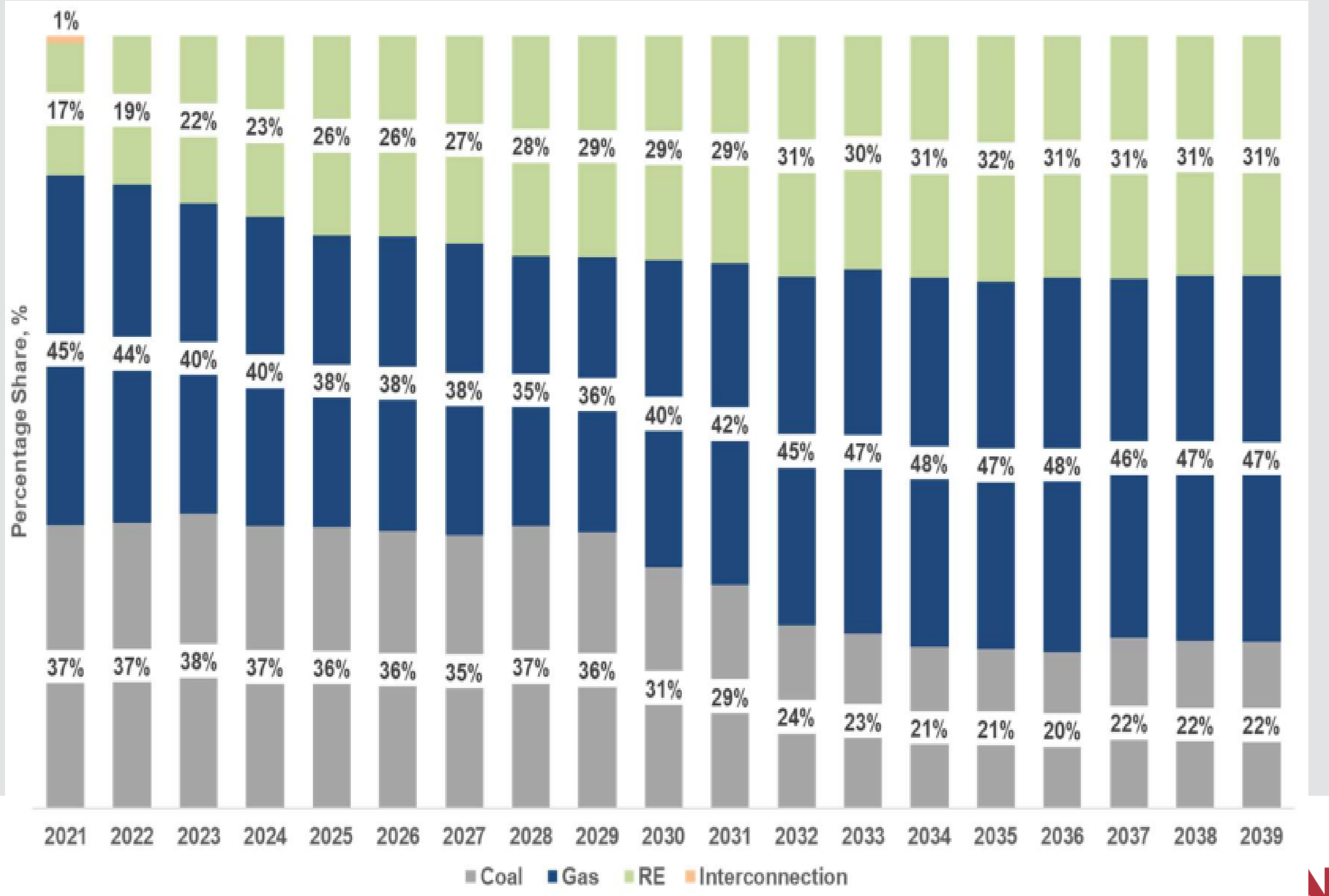
Technical

1. **The Net Energy Metering** allows power bill rebates with solar installations and the export of excess solar PV generated energy back to the grid.
2. **Utility-scale batteries** will be installed from 2030 onwards to support RE generation.
3. **Feed-in tariff** is a scheme that allows consumers to generate their own electricity and sell it back to the grid.
4. **Self-Consumption (SELCO)**: electricity is generated solely for personal usage, with no permission to be exported to the grid.

Financial

1. The **Green Investment Tax** and capital allowance. Companies engaged in **solar leasing** are eligible for **income tax exemption of 70% of statutory income for 5 or 10 years** based on the energy production capacity.
2. **RM1 bil** sustainable and low carbon practices financing by BNM.

RE expected to make up close to a third of installed capacity in Peninsular Malaysia from 2032 onwards

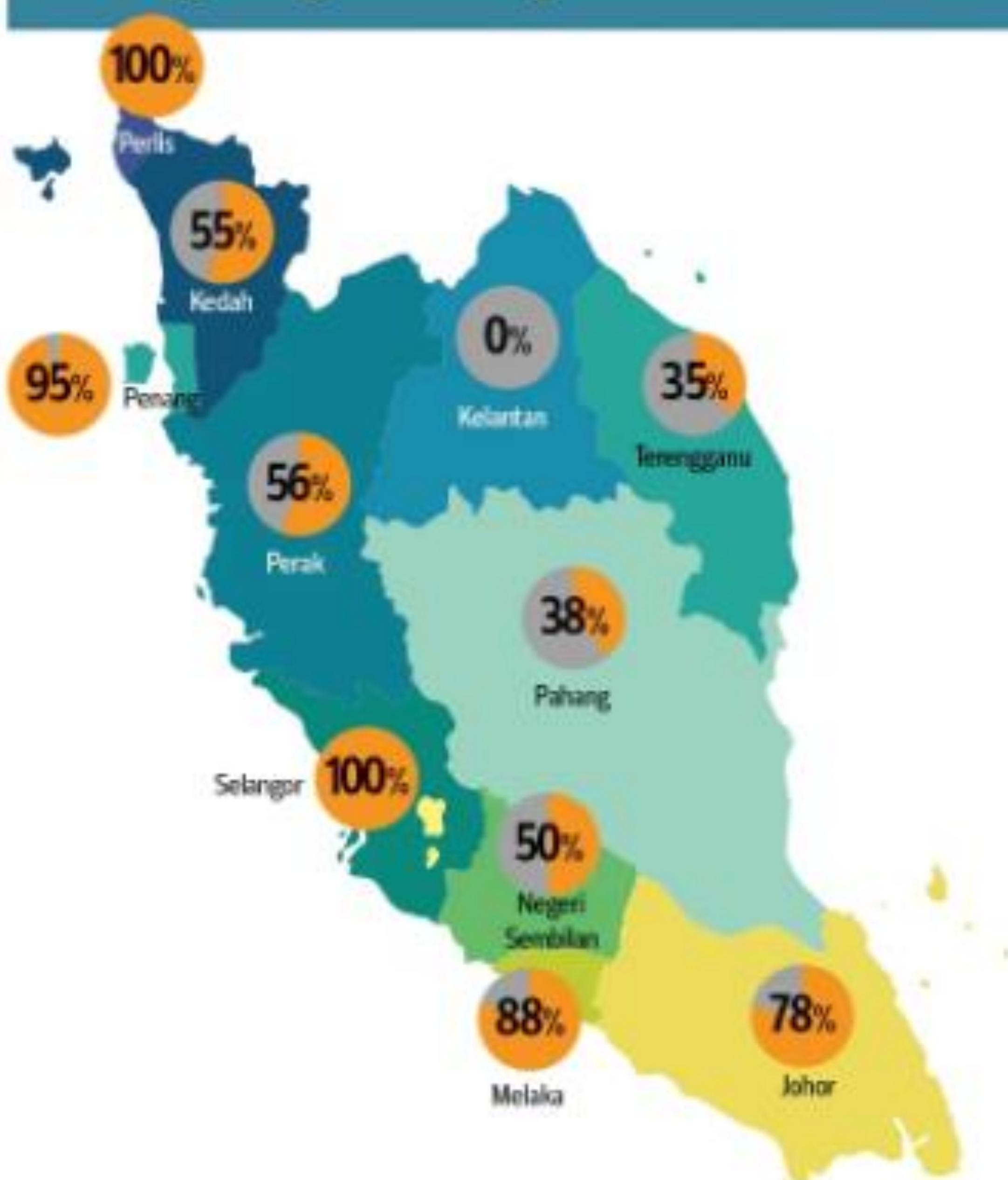


Sources: Peninsular Malaysia Generation Development Plan 2020, Plus Xnergy and SME Bank SCEA

Industry Focus:
Utility – Electricity & Gas (5/6)

Positive Outlook

LSS progress by state (4Q2020)



STATE	CAPACITY AWARDED (MW)	OPERATIONAL CAPACITY (MW)	IN PROGRESS (MW)	PERCENTAGE
Perlis	33.996	33.996	0	100%
Kedah	355.77	194.99	160.78	55%
Penang	21	20	1	95%
Perak	248.87	138.88	109.99	56%
Kelantan	30	0	30	0%
Terengganu	306.99	106.99	200	35%
Pahang	209.916	79.916	130	38%
Selangor	66.98	66.98	0	100%
Negeri Sembilan	121	61	60	50%
Melaka	56.8	50	6.8	88%
Johor	68.99	54	14.99	78%
Sabah	113.9	50	63.9	44%
	1634.212	856.752	777.46	52%

SOLS ENERGY

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Sources: The Edge and Energy Commision

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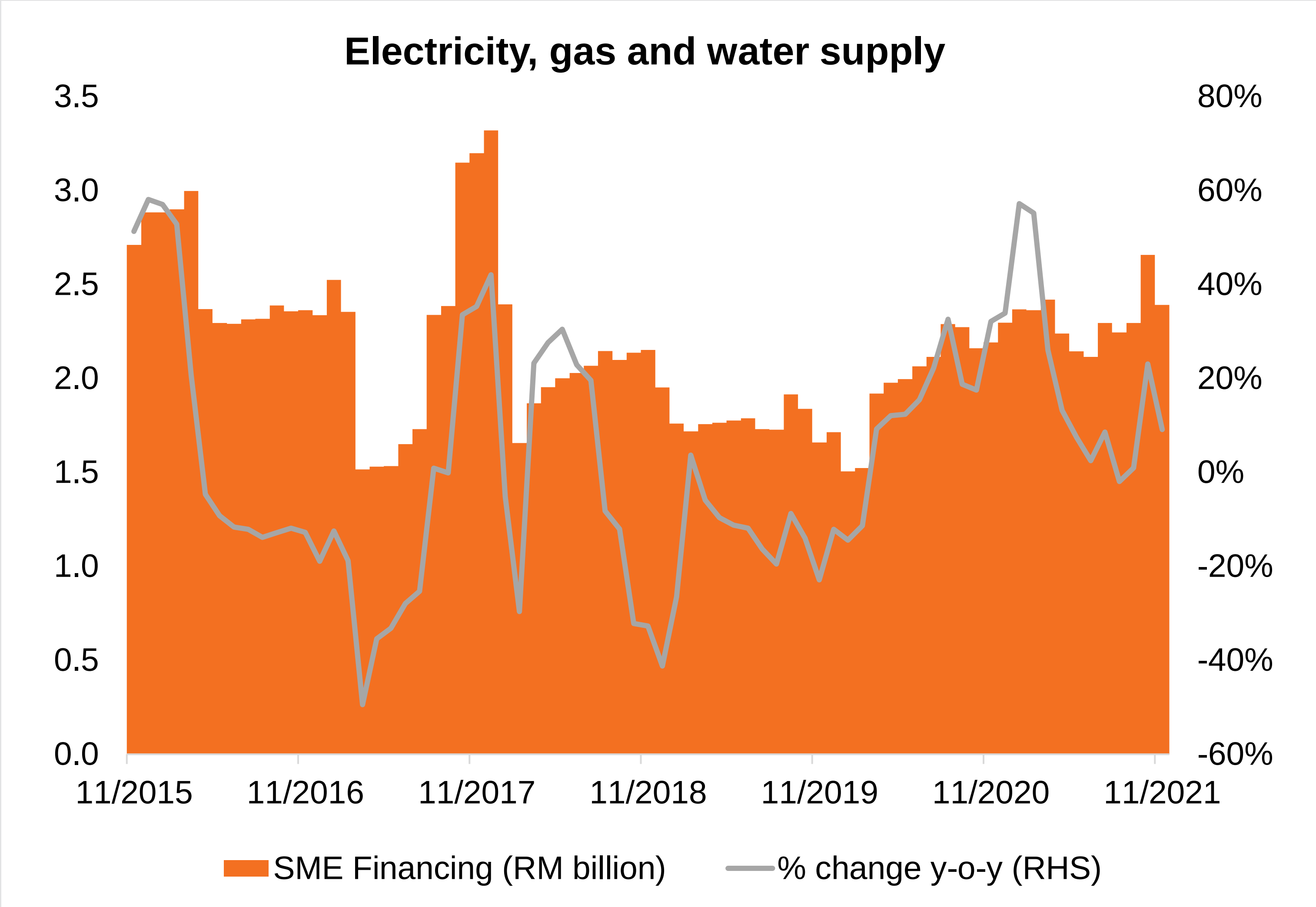
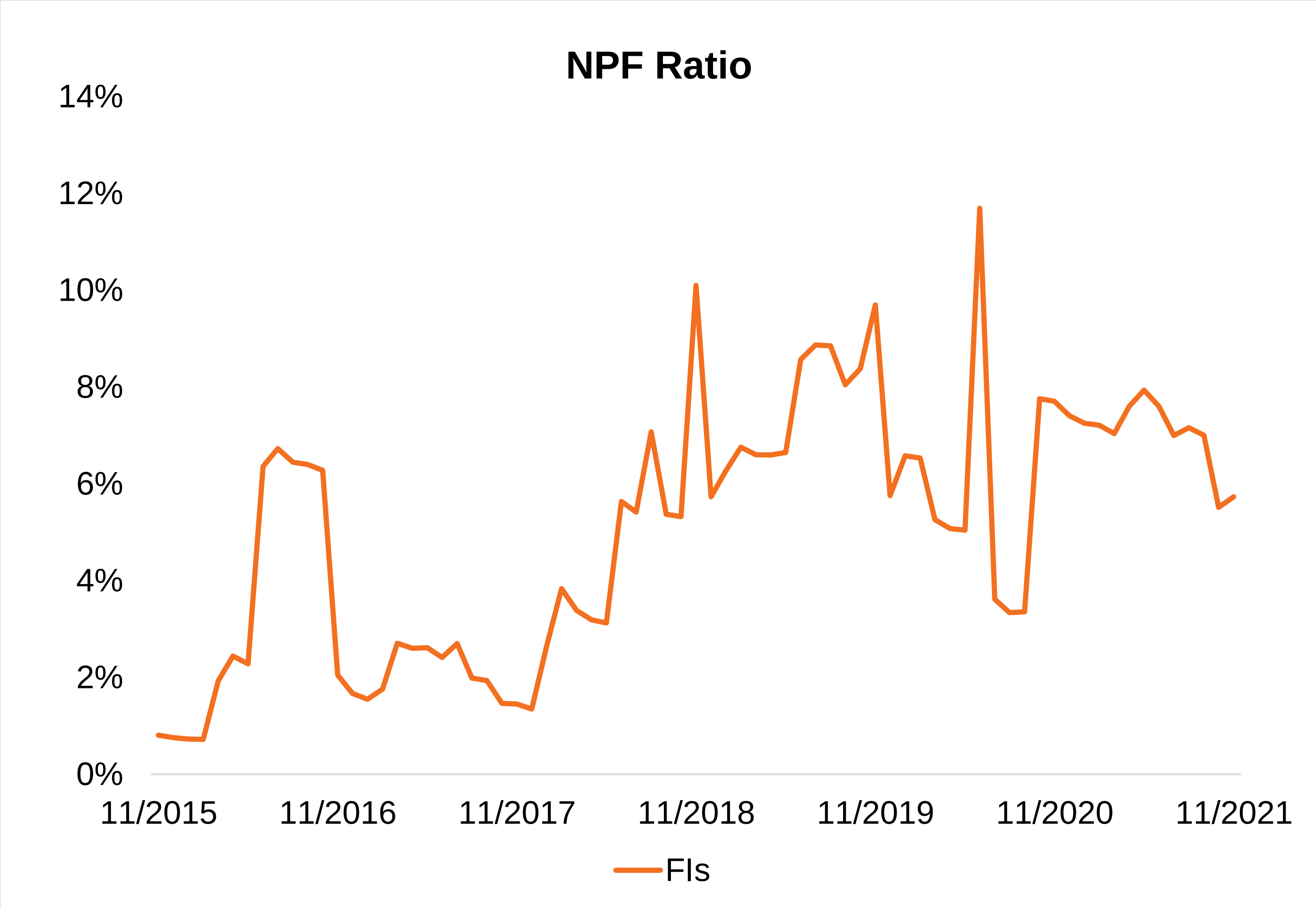
Positive Outlook

- Based on industry data, **financing extended to this sector tends to fluctuate drastically**, given **the lumpy nature.**
- Similarly, **NPF ratio has been swinging up and down**, with the latest 12-month ratio averaged at 7.1%.





Sources: CEIC, BNM and SME Bank SCEA

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