

CONNECTIVITY

TNB enhances power supply

Penang's monopole transmission tower to be completed by year end

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THE 8.5km monopole transmission tower project being built next to the Penang Bridge is set to fortify power capacity transfer to the island state.

It will connect the Prai Power Station (SJ) to the main intake substation (PMU) of the Light in George Town.

The iconic project aims to establish a direct electricity supply connection from the national grid to Penang, ensuring the island's stable power supply.

Upon completion, the project by Tenaga Nasional Bhd (TNB) is capable of transmitting 2,000 megawatts (MW) of electricity to the state.

Project to be completed by end-2024

TNB president and chief executive officer Datuk Seri Baharin Din said the overall project was expected to be completed by year end.

As of the end of November last year, TNB had completed about 51.2 per cent of the project and the installation of the tower's foundation structure (pilecap) was progressing rapidly, he told *Business Times*.

The piling work was anticipated to be completed this month, he said.

A total of 31 monopoles are being built, with six of them designed in betel nut style.

The project was inaugurated by Penang Chief Minister Chow Kon Yeow on Sept 15, 2022.

He had said during the launch an energy capacity of more than 2,000MW was crucial for the accelerated development of Penang.

Chow emphasised the significance of the enhancement of power supply to the island via the project.



“As the country's main utility provider, TNB (Tenaga Nasional Bhd) balances the energy trilemma while promoting the country's economic growth.”

DATUK SERI BAHARIN DIN

TNB president and chief executive officer



Tenaga Nasional Bhd's monopole transmission tower project aims to establish a direct electricity supply connection from the national grid to Penang.

“This project holds great meaning for the Penang state government and its residents, contributing to the stability of electricity supply. It serves as a catalyst for economic growth in various sectors, including industry, infrastructure development, transport and tourism.”

Chow said for the state government, the project would catalyse economic development in alignment with the Penang State Structure Plan 2030.

This plan outlined the state's development in physical infrastructure, road connections, public facilities, port and airport capacity enhancement as well as activities related to land reclamation for residential and commercial development, he said.

The transmission tower project will become the fourth source or medium of connectivity from the national grid to Penang.

The other three connectivity projects were the 132 kilovolt (kV) submarine cable from SJ Prai-SJ Gelugor commissioned in 1978, the 132kV cable under the bridge in 1989, and the 275kV submarine cable from PMU Juru-PMU Bayan Lepas in 1995.

Lower ecological impact on the seabed

According to Baharin, the ecological impact on the seabed is lower because the towers in the sea are much smaller compared to other submarine cables.

TNB is committed to the environment, social and governance agenda in obtaining the Environment Impact Assessment and Environmental Management Plan approval.

TNB also got the local community involved through Persatuan Nelayan Kawasan Pulau Pinang Selatan, comprising the Batu Uban

Fishermen's Unit and the Gelugor Fishermen's Unit.

Chow was present on Oct 14 last year when TNB handed over a donation to the fishermen's association. This was for 86 fishermen and 25 crew members who were impacted by the change in their fishing and catchment areas.

Baharin emphasised that the overhead power line was the most sustainable solution for channelling supply from the national grid to the island, considering factors such as cost-effectiveness, safety, efficiency and supply stability, including the speed of detecting any damage or disruption.

“As the country's main utility provider, TNB balances the energy trilemma while promoting the country's economic growth. Thus, TNB supports the aspirations of the National Energy Transition Roadmap (NETR). We ensure that the grid is flexible enough to accommodate the changing energy landscape.”

Baharin said this transmission capacity would be significantly

higher compared to under-bridge and submarine cables.

The TNB project also aligns with the TNB Energy Transition Plan, emphasising actionable steps across the electricity value chain, including the development of a flexible grid.

Baharin highlighted that a flexible grid was necessary for the energy transition, enabling a higher proportion of renewable energy production and distribution.

“The flexible grid plays a vital role as an enabler in supporting the NETR and the nation's net zero aspiration,” he explained.

The NETR provides growth opportunities aligned with the TNB Energy Transition strategy centred on three key levers: accelerate generation decarbonisation, develop flexible and cross-border grids, and empower cross-sector electrification and prosumers.

The peak load demand on Penang island reached 777.85MW in January 2020, compared with the existing supply system capacity (firm capacity) of 1,130MW.