



PRESS RELEASE

S.A. 2024/02/04_04 (HQ)

TNB EMBARKS ON INNOVATIVE CO-FIRING PROJECT TO ADVANCE ENERGY TRANSITION AGENDA

- Joint Study with IHI Corporation and TNB Fuel Services Sdn Bhd (TNBF) to pioneer an initial stage co-firing project at two of its power plants
- The study is currently in the Front-End Engineering Design (FEED) phase which is essential in validating the co-firing project's technological suitability and showcasing TNB Genco's commitment to spearhead sustainable energy solutions

Tenaga Nasional Berhad (TNB), is conducting a Joint Study with Japan's IHI Corporation (IHI) to pioneer small-scale co-firing project at its two thermal power plants located at the Stesen Janakuasa Sultan Azlan Shah (SJSAS) in Lumut, Perak and the Stesen Janakuasa Tuanku Mukhriz (SJTM), Port Dickson, Negeri Sembilan. IHI has extensive experience in converting conventional fuel to carbon neutral fuel including biomass and ammonia at several plants of their clients in Japan, Malaysia, and Indonesia. TNB is undertaking the project through its wholly-owned subsidiaries, TNB Power Generation Sdn Bhd (TNB Genco) and TNB Fuel Services Sdn Bhd (TNBF). TNBF has vast experience in procurement of fuel for all power plants in Malaysia.

"As we transition from laboratory experimentation to actual plant implementation, our ongoing co-firing project signifies remarkable progress in our commitment to sustainability. Having successfully demonstrated the burning of 1% biomass, we are now advancing to the next level by introducing 1% ammonia and 2% biomass co-firing. This significant development aligns seamlessly with TNB's ambitious 2050 net-zero goals, marking a substantial reduction in carbon emission intensity. The co-firing of 1% ammonia and 2% biomass is poised to offset carbon emissions equivalent to 71,000 passenger cars per year, underscoring the tangible environmental impact of this advancement." said TNB President and Chief Executive Officer, Dato' Seri Ir. Baharin Din.

Concurrently, a demonstration (demo) of 1% biomass (EFB pellet) co-firing has been successful at SJTM between 10 to 14 September 2023, validating the suitability of co-firing to the local climate. The demo program was witnessed by representatives from the regulators and partners, Mitsui, and Chugoku. The result is well within emission regulatory limit.

The co-firing project is presently in the Front-End Engineering Design (FEED) phase, commenced on 30 August 2023 to substantiate the project's technological viability. This includes finalising technical specifications, determining carbon emissions offset and fuel procurement strategies, and assessing the feasibility of chosen technologies.

The FEED phase is expected to be completed in April this year (2024) while the initial stage co-firing is expected to take place by the third quarter of 2026 after plant modification works. The initiative is in line with TNB's effective carbon management target of Carbon Dioxide (CO₂) emission 0.35 tonne CO₂ per megawatt-hour (t-CO₂/MWh) by 2035.

Baharin said the commencement of the FEED marks another significant achievement in TNB's commitment in reducing greenhouse gas emissions (GHG) and embracing a sustainable energy future, in line with Malaysia's National Energy Transition Roadmap (NETR) and TNB's own net zero carbon emission 2050 target.

Highlighting the profound impact of TNB's strategic collaboration with IHI and the initiation of the FEED phase for the co-firing, he said the project lays the foundation for a more sustainable and eco-friendly energy generation process. "This initiative underscores TNB's unwavering commitment in mitigating GHG emissions and fostering a greener world."

He emphasised that TNB, through TNB Genco is steadfast in its commitment to spearhead sustainable energy solutions, and to assume a pivotal role in the quest to reduce carbon emissions and supports the Government for the energy transition and decarbonisation.

"As the leading power producer in Peninsular Malaysia, TNB is firmly committed in supporting Malaysia's aspirations for decarbonisation and sustainability, in support of the nation's efforts to achieve net zero emissions by 2050. This project aligns with Malaysia's goal of becoming a global leader in reducing GHG," he added.

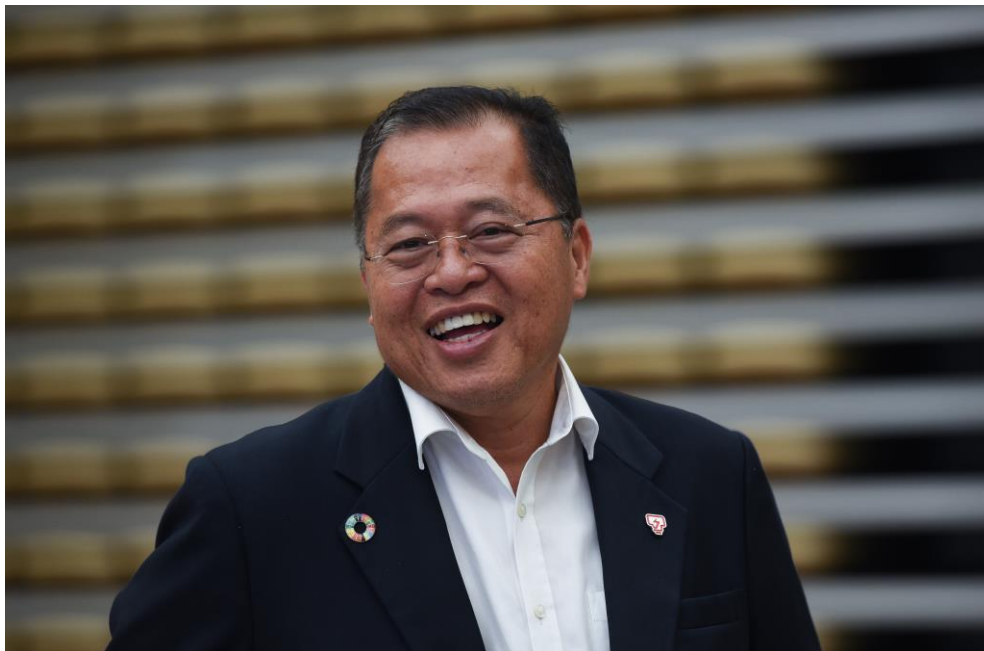
Mr. Koji Takeda, Managing Executive, President of Resources, Energy and Environment Business Area of IHI Corporation, expressed his gratitude to TNB Genco for the confidence in IHI expertise and accumulated knowledge on the carbon neutral technology, through collaboration to initiate the FEED phase.

He also stated, "TNB shares our ambition in accelerating decarbonisation to realise a better, cleaner world tomorrow. Through this collaboration, we are confident that we create a great impact to accelerate a responsible energy transition in this region. We are looking forward to expanding the collaboration beyond this, as well."

The co-firing project has been identified as one of NETR Flagship initiatives of which TNB has been entrusted to be the champion. TNB will be working together with the relevant government agencies on enhancing energy efficiency and driving sustainable practices through all TNB NETR Flagship initiatives including the establishment of Renewable Energy (RE) Zones over 5 sites, each with 100 MW capacity and the development of floating solar at TNB dams with a total capacity of 2,500 MW.

Released in Kuala Lumpur on 04 February 2024 at 10:00 am

*Kindly forward all press enquiries to Hanim Idris at 019-2617617 /
Grace Tan 016-6626229 / Faiq Haikal 013-3889606 / Atikah Aqilah 011-10772731
or email us at media@tnb.com.my*



TNB President and Chief Executive Officer, Dato' Seri Ir. Baharin Din



Stesen Janakuasa Tuanku Mukhriz (SJTM) in Port Dickson, Negeri Sembilan, is one of the power plants that successfully achieved biomass (Empty Fruit Bunch - EFB pellet) co-firing trial burn operation from September 10th to 14th, 2023. This groundbreaking event not only validated the project's technological feasibility but also highlighted TNB Genco's unwavering dedication to safely implementing innovative solutions, marking a significant step toward a cleaner and more sustainable energy future.