



Media Release

Singapore commences first renewable energy electricity import via regional multilateral power trade

Keppel and Electricite du Laos sign power purchase agreement, pioneering cross-border power trade of renewable energy into Singapore

Singapore, 23 June 2022 – The Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP), which imports up to 100 megawatts (MW) of renewable hydropower from Lao PDR to Singapore via Thailand and Malaysia using existing interconnections, commenced today. This marks a historic milestone as the first multilateral cross-border electricity trade involving four ASEAN countries, and the first renewable energy import into Singapore.

The LTMS-PIP serves as a pathfinder towards realising the broader ASEAN Power Grid (APG) vision of multilateral electricity trading beyond neighbouring countries in the region. The APG is a key regional initiative to enhance interconnectivity, energy security and sustainability through existing electricity interconnections. This provides opportunities to tap on low-carbon and renewable energy sources in the region and contributes towards economic development and improving energy security and stability.

Singapore is tapping on regional power grids to access cleaner energy sources beyond its borders. Regional power grids can help accelerate the development of renewable energy projects and promote economic growth and bring greater energy security to the region. The LTMS-PIP is one of the electricity import trials that Singapore's Energy Market Authority (EMA) has been working on to pave the way for larger scale electricity imports of up to 4 gigawatts (GW) into Singapore by 2035 (Refer to [Annex](#) for more information on the LTMS-PIP).

As part of the LTMS-PIP, Keppel Electric Pte Ltd (Keppel Electric), a subsidiary of Keppel Infrastructure Holdings Pte Ltd (KI), and Electricite du Laos (EdL) have signed an initial two-year power purchase agreement following the announcement of the signing of an exclusive framework agreement in September 2021. Keppel Electric is also the first entity to be issued an electricity importer licence by EMA.

The LTMS-PIP demonstrates the feasibility of multilateral power collaboration as technical, commercial, legal and regulatory arrangements were finalised with the extensive collaboration among the various parties, including Keppel Electric and EdL, Electricity Generating Authority of Thailand (EGAT) and Tenaga Nasional Berhad (TNB), with the support from the governments of the four member ASEAN countries. Keppel Electric and EdL will continue to work closely with EGAT and TNB for the successful implementation of the power supply.

Mr Ngiam Shih Chun, Chief Executive of EMA, said, "The commencement of electricity imports from Lao PDR marks a significant milestone in our regional energy cooperation. The LTMS-PIP is a key project to advance multilateral power trade in Southeast Asia and complements existing efforts towards realising the ASEAN Power Grid vision. Interconnected power grids can accelerate the deployment of renewable energy, promote supply diversification and strengthen grid stability for the region as a whole. We would like to thank our regional partners for their strong support and close collaboration in moving towards a cleaner energy future for the region."

Dr. Daovong Phonekeo, Minister of Ministry of Energy and Mines of Lao PDR, said, “With its vast renewable energy potential, Lao PDR targets to be a major supporter of renewable energy in the region. Lao PDR has exported over 6,000MW cross-border electricity to its neighbouring countries including Cambodia, Myanmar, Thailand and Vietnam. The country has more than 8,000MW of installed hydropower capacity, which is set to grow in the near future to support its domestic demand and future exports. We continually support the ASEAN Economic Community, Greater Mekong Subregion, and ASEAN Power Grid implementation and this project proves that we are on the right track as we promote the development of clean energy resources including solar and wind power. Again, we would like to express our gratitude to the Government of Thailand, Government of Malaysia and the Government of Singapore for your support to implement this project.”

Ms Cindy Lim, Chief Executive Officer, KI, said, “Keppel is honoured to be the first electricity importer licensee in Singapore and to collaborate with EdL and the other esteemed LTMS-PIP partners on this significant project to promote greater energy infrastructure connectivity and sustainability in the region. Our participation in the inaugural cross-border renewable power trade aims to be scalable and long-term, so that Keppel Electric is better able to provide renewable energy to our customers in support of their journey towards net zero. In line with Keppel’s Vision 2030 and as we seek to provide sustainable energy and urbanisation solutions for the region and beyond, we are also developing various other opportunities in renewables and clean energy to capture growing market demands.”

Mr. Chanthaboun Soukaloun, Managing Director, EdL, said, “We are grateful to be part of ASEAN to support the clean renewable energy movement to reduce carbon within our region. This project started in 2014 during the ASEAN Energy Track to complement the ASEAN Economic Community and ASEAN Power Grid to interconnect the region for energy security and stability. We believe this project is just the beginning of a new era where distance is no longer an obstacle but a challenge that can push our potential to the next level. Our company looks forward to increasing the capacity in the near future and we are thankful for the support of Electricity Generating Authority of Thailand and Tenaga Nasional Berhad for their collaboration in this project to make it possible. The energy export market for EdL is continuously growing and we are appreciative for this opportunity granted by the Energy Market Authority (EMA) of the Government of Singapore. We would also like to thank all hardworking staff of EMA for materialising this project.”

In addition, Keppel and EdL are also collaborating on the establishment of renewable energy tracking, verification and assurance through Renewable Energy Certificates (RECs) as well as other long-term renewable electricity supply, in support for the Singapore Green Plan 2030 as well as to meet the growing demand for renewable energy and energy transition for the ASEAN region.

The abovementioned development is not expected to have any material impact on the earnings per share and net tangible asset per share of Keppel Corporation Limited, the parent company of KI, for the current financial year.

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About the Energy Market Authority

The Energy Market Authority (EMA) is a statutory board under the Singapore Ministry of Trade and Industry. Through our work, we seek to forge a progressive energy landscape for sustained growth. We aim to ensure a reliable and secure energy supply, promote effective competition in the energy market and develop a dynamic energy sector in Singapore. Visit www.ema.gov.sg for more information.

About Keppel Electric Pte Ltd

Keppel Electric Pte Ltd (Keppel Electric) is a wholly-owned subsidiary of Keppel Infrastructure Holdings Pte Ltd (KI).

Keppel Electric is Singapore's first home grown electricity retailer with more than 21 years of experience in powering Singapore's electricity grid and retailing electricity to diverse off-takers including multinational companies, small and medium sized enterprises and government agencies. Since the nationwide rollout of the Open Electricity Market (OEM), Keppel Electric has served over 160,000 satisfied residential consumers as their preferred electricity retailer.

For more information, please visit www.keppelectric.com

About Keppel Infrastructure Holdings Pte Ltd

Keppel Infrastructure (KI) is a wholly-owned subsidiary of Keppel Corporation, a Singapore flagship multinational company providing solutions for sustainable urbanisation. KI provides solutions for some of the world's most pressing challenges through its power & gas, environment and new energy businesses by leveraging its proprietary technology, strong technical expertise and proven operating capabilities.

KI has a track record of developing energy and environmental infrastructure end-to-end, including power generation assets, waste-to-energy (WTE) facilities, large-scale district cooling systems, as well as NEWater and desalination plants. In Singapore, it operates a 1,300-megawatt high efficiency gas-fired combined cycle power plant and a utility pipe rack and pipe line network in Jurong Island. It is also Singapore's leading electricity retailer, and the first and largest district cooling systems developer and service provider. Globally, through Keppel Seghers, it is one of the leading WTE technology providers with more than 100 project references in 20 countries.

KI is expanding its presence, in Singapore and overseas, in areas such as power generation, waste management, district cooling, renewables and energy storage, electric vehicle charging infrastructure and other clean energy opportunities.

For more information, please visit www.kepinfra.com

About the Électricité Du Laos

Électricité Du Laos (EDL) is the state-owned enterprise of Laos serving electricity for its domestic customers and is also responsible for the electricity transmission and distribution businesses. EDL is the majority owner of EDL-Generation Public Company (EDL-GEN) which owns and operates over 1500 MW of hydropower and also purchases from Independent Power Producers. EDL also manages the export of electricity from the national electricity grid of the country to the neighbouring countries.

For more information, please visit <http://edl.com.la>

**FACTSHEET ON THE LAO PDR-THAILAND-MALAYSIA-SINGAPORE
POWER INTEGRATION PROJECT (LTMS-PIP)**

Background

The Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP) serves as a pathfinder to advance cross border power trade in Southeast Asia, and complements existing efforts towards realising the ASEAN Power Grid by creating opportunities for multilateral electricity trading in the region.

2 As part of the first phase of the project, Lao PDR, Thailand and Malaysia initiated the Lao PDR, Thailand and Malaysia Power Integration Project (LTM-PIP) in 2016. These countries signed a two-year Energy Purchase Wheeling Agreement (EPWA) at the 35th ASEAN Ministers on Energy Meeting (AMEM) in Manila, Philippines in September 2017, to trade up to 100 megawatts (MW) of electricity under a Power Purchase Agreement (PPA) Model. Lao PDR, Thailand and Malaysia extended the EPWA in December 2019 for two years till December 2021 and increased the power trade capacity to up to 300MW.

3 At the 38th AMEM in 2020, Lao PDR, Thailand, Malaysia and Singapore announced their commitment to initiate multilateral cross-border power trade in a Joint Statement at the inaugural LTMS Ministerial Meeting. Under the LTMS-PIP, the four countries pledged to explore the technical and commercial feasibility and viability of electricity trade of up to 100MW from Laos to Singapore via Thailand and Malaysia using existing interconnections for a two-year period.

4 At the 39th AMEM in 2021, the four countries issued a Second Joint Statement at the 2nd LTMS Ministerial Meeting to reaffirm their commitment towards the project, made good progress in discussions by the LTMS-PIP Working Group, and looked forward to the early finalisation of all agreements underpinning LTMS-PIP to commence cross-border power trade in 2022.

5 The project commenced on 23 June 2022 and will run for a period of two years.

Developments on the LTMS-PIP

6 Electricite du Laos (EdL), the state utility of Lao PDR, has appointed Keppel Electric Pte Ltd as its working partner to import up to 100MW of hydropower from Lao PDR to Singapore, under the LTMS-PIP. EdL and Keppel Electric signed an exclusive framework agreement in August 2021, as well as a PPA in June 2022, to facilitate the purchase of electrons under the LTMS-PIP.

Benefits of the LTMS-PIP

7 The LTMS-PIP will benefit all four countries, by facilitating the development of a regional market for electricity trading, promoting investments, and enhancing regional electricity supply security and cost-competitiveness. This would help to drive the development and deployment of low carbon energy solutions in the region.

8 The LTMS-PIP contributes to Singapore's sustainability goals under the Singapore Green Plan 2030 by tapping on the abundance of renewable energy from the region, to advance our sustainable energy goals to progressively decarbonise electricity generation and diversify our energy supply.

9 The project will support the broader ASEAN Power Grid vision, as it creates the opportunity to trade electricity beyond neighbouring borders and enhance energy resilience. The ASEAN Power Grid, a key programme area under the ASEAN Plan of Action for Energy Cooperation Phase II: 2021-2025, also aims to promote clean and renewable energy integration in the region.