

Accelerating Progress on the ASEAN Power Grid 2.0:

Lessons from the Laos-Thailand-Malaysia-Singapore Power Integration
Project (LTMS-PIP) and Beyond

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Multi-year project on the APG by the Climate Change in Southeast Asia Programme (CCSEAP), ISEAS

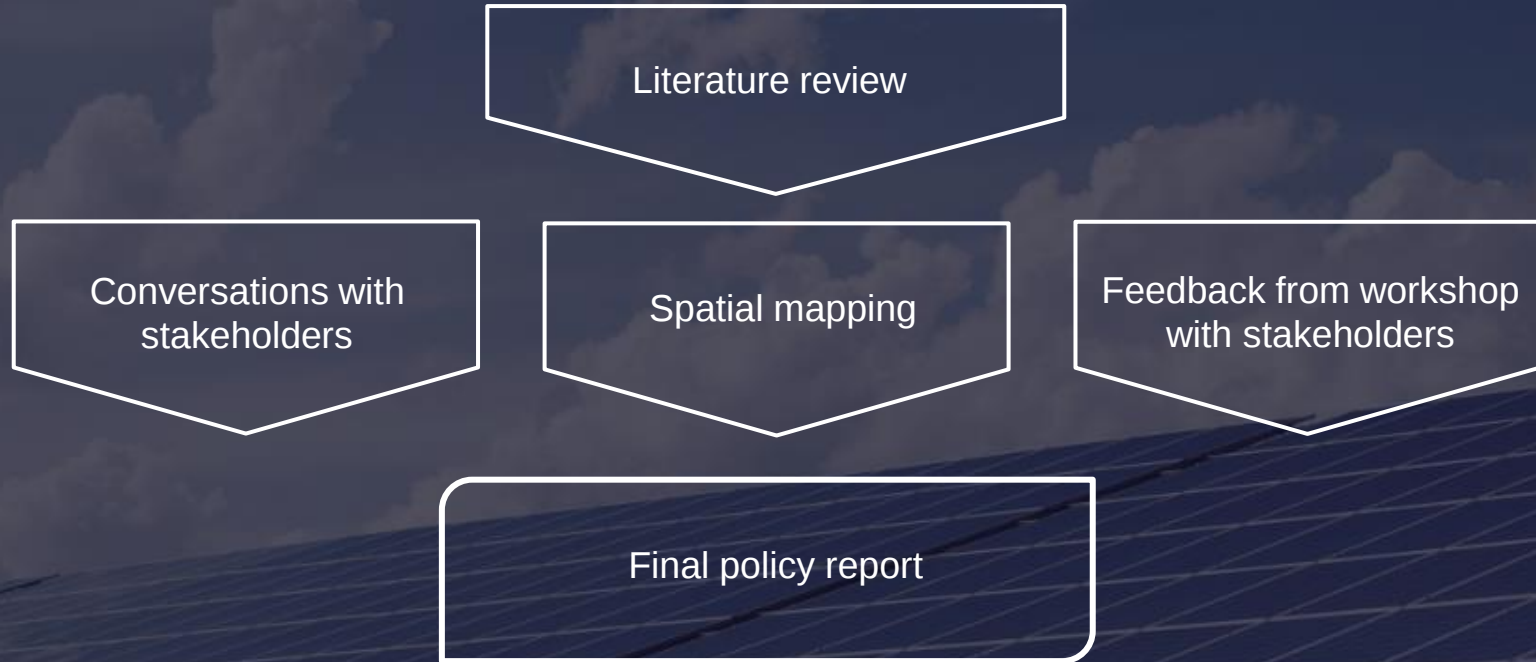
Phase 1: Lessons from the LTMS-PIP: Jan-Dec 2023

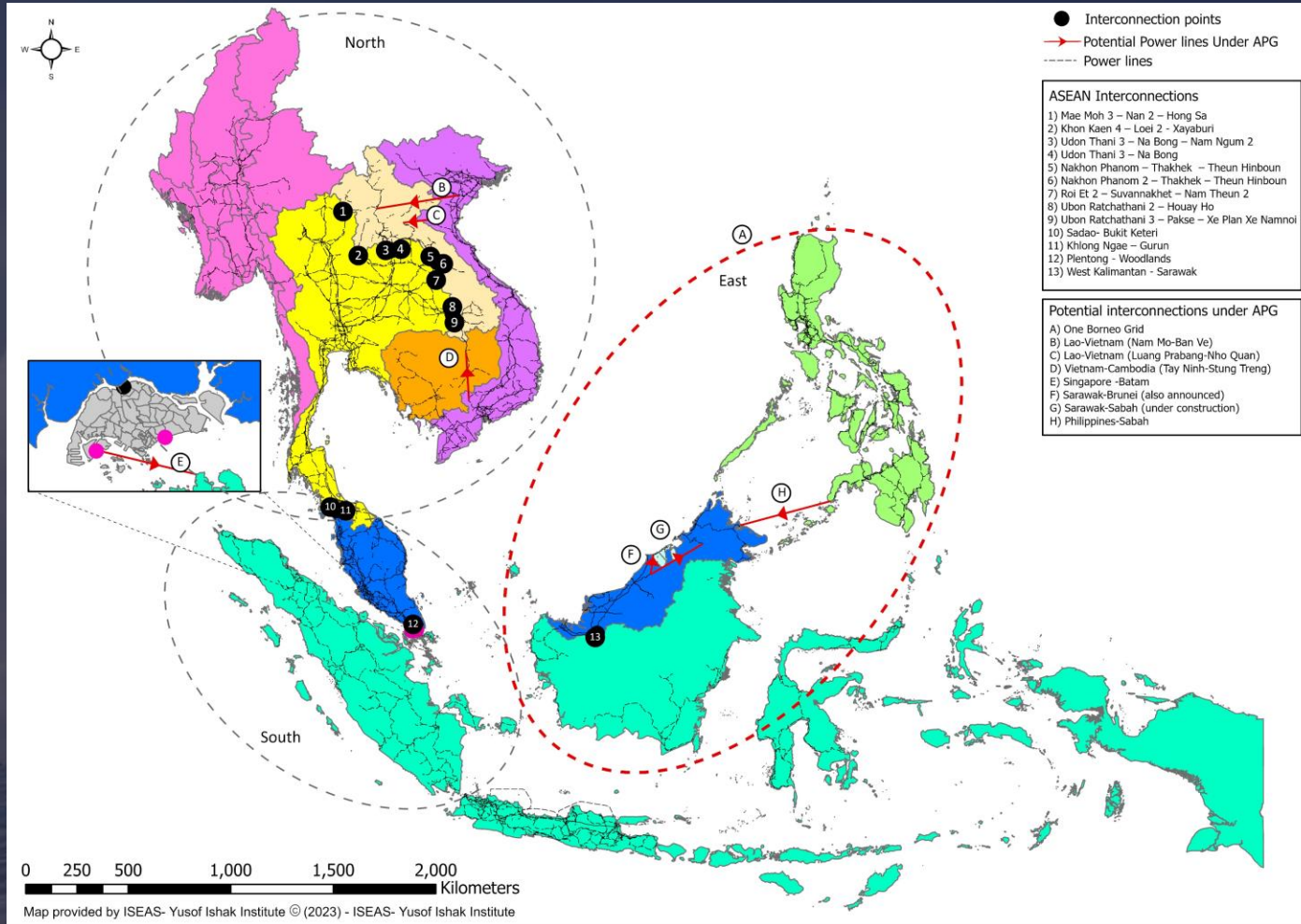
Phase 2: Renewable energy trade through the APG: Jan-Dec 2024

Objectives

1. Policy recommendations to enhance grid interconnections in Southeast Asia
2. Facilitate discussion between regional policymakers on energy integration

Methodology





- The technical feasibility of the APG has been established by the ASEAN Interconnection Masterplan Study (II) and reconfirmed as per preliminary findings of AIMS-III
- There is also academic and political consensus on the benefits of the APG
- Research has proposed multiple pathways to the realization of the APG
- We know the APG is feasible, provides multiple benefits and there are numerous pathways and best practices to guide us.
- The critical questions for energy research are: Why has the APG not been completed yet? What are the challenges to the APG? How can they be overcome?
- Our research tries to address the challenges to the realization of the APG through a case study on the LTMS-PIP



- ASEAN Interconnections
- 1) Mae Moh 3 – Nan 2 – Hong Sa
 - 2) Khon Kaen 4 – Loei 2 – Xayaburi
 - 3) Udon Thani 3 – Na Bong – Nam Ngum 2
 - 4) Udon Thani 3 – Na Bong
 - 5) Nakhon Phanom – Thakhek – Theun Hinboun
 - 6) Nakhon Phanom 2 – Thakhek – Theun Hinboun
 - 7) Roi Et 2 – Suwannakhet – Nam Theun 2
 - 8) Ubon Ratchathani 2 – Houay Ho
 - 9) Ubon Ratchathani 3 – Pakse – Xe Plan Xe Namnoy
 - 10) Sadao – Bukit Kateri
 - 11) Khlong Ngae – Gurun
 - 12) Plentong – Woodlands
 - 13) West Kalimantan – Sarawak

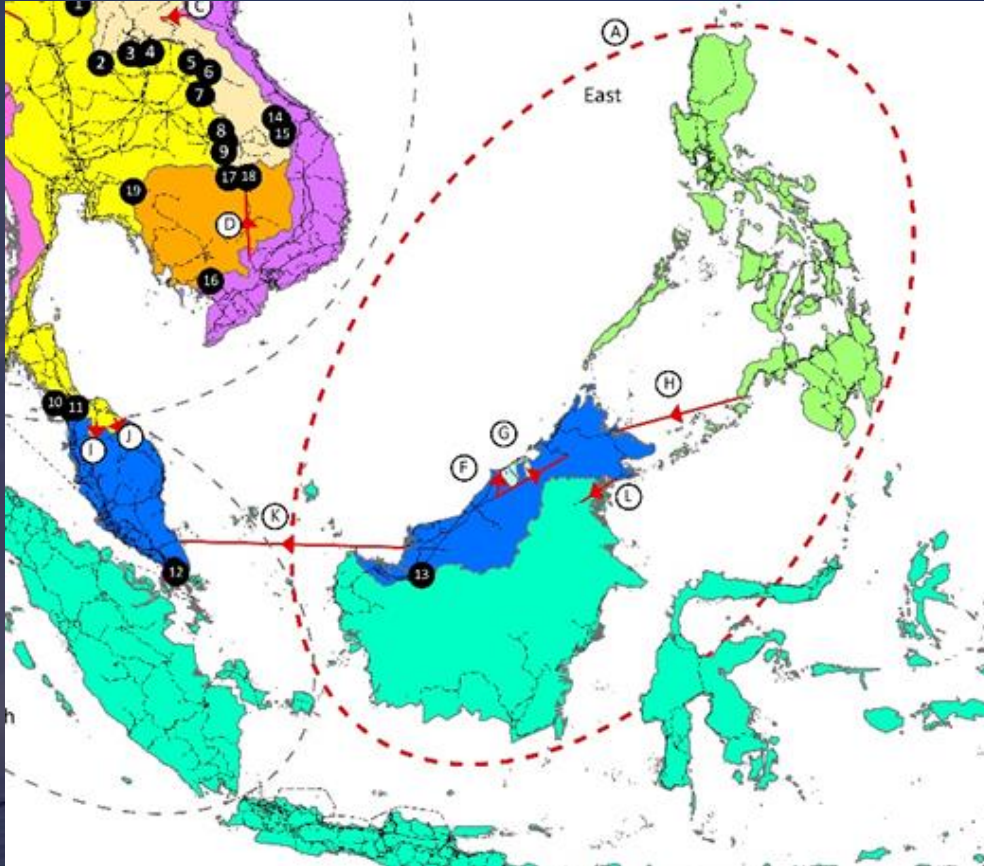
Legend

- Interconnection points
- Power lines
- Singapore
- Malaysia
- Thailand
- Lao

Map provided by ISEAS- Yusof Ishak Institute © (2023) - ISEAS- Yusof Ishak Institute

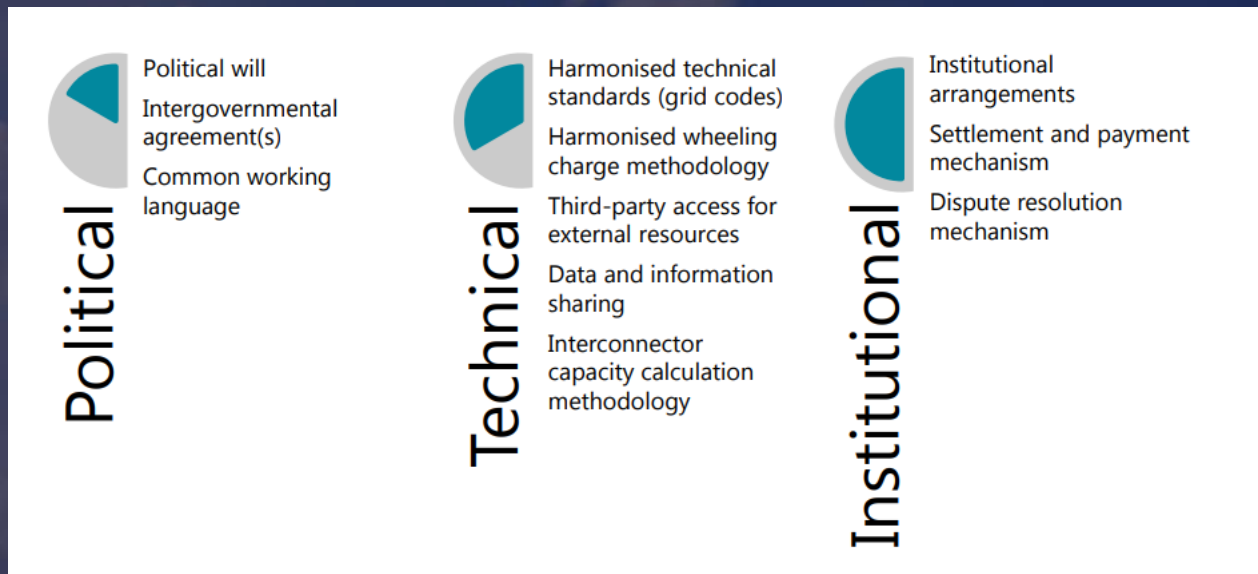


0 62.5125 250 375 500 Kilometers



- Malaysia can play a key role in applying lessons from the LTMS-PIP to the BIMP-PIP
- Together LTMS-PIP and BIMP-PIP include 7 out of 10 ASEAN countries
- Envisioning the APG 2.0 through development of infrastructure, institutions and markets

Minimum Requirements to Multilateral Trade



Source: IEA (2019) Establishing Multilateral Power Trade in ASEAN

From the LTMS-PIP to APG 2.0: Addressing Challenges to Requirements of Multilateral Trade

<i>Challenge</i>	<i>Recommendation</i>
Political Requirements are undermined by resource nationalism, regional rivalries and multiple levels of conflicts	Develop targeted communication strategies on regional cooperation, provide open-access data on share of benefits, implement stringent social and environmental safeguards
Technical requirements are undermined by lack of consensus on wheeling charge methodologies, and aging infrastructure	Utilize best practices on wheeling charge methodologies, examine feasibility of replicating the EU's Projects of Common Interest (PCIs) approach and implement climate modelling
Institutional requirements are undermined by lack of stakeholders from financial institutions in working groups, and resistance to developing formal dispute resolution mechanisms	Include stakeholders from Multilateral and National Development Banks in the Working Group, develop regional institutions and implement market reforms

Thank you

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