

Foreword

The concept of a low-carbon city or eco town to curb the increasing energy demand and to mitigate emissions of greenhouse gases is gaining popularity among the countries of the Association of Southeast Asian Nations (ASEAN). This is because both increasing energy demand and carbon dioxide emissions could threaten the sustainability of future energy supply and could impact the environment, health, and tourism – thus, the quality of life – of these countries. Towards energy saving and green environment, the eco town concept is considered as an ideal solution. This study then focuses on introducing current and future energy efficiency technologies on buildings and road transport as well as smart grid technologies to be applied to a future town in Temburong District in Brunei Darussalam, or to any other city in ASEAN.

The Ministry of Development of Brunei Darussalam plans to design the Temburong District as a world-class and green city. The framework for the development of Temburong District, developed by the Town and Country Planning Department, highlights a new bridge, a new university, commercial and industrial centres, housing, schools, flood prevention projects, and public facilities. Thus, the need for sustainable urban development is highly crucial to secure Temburong District's reputation as the 'Green Jewel of Brunei'. Protecting the area's abundant natural resources is key, and providing facilities to attract tourists will contribute to economic growth.

The ongoing construction of Temburong Bridge, which will link Temburong District to the rest of the country, is scheduled to be completed by the end of 2019. With this, the government expects a boost in tourist arrivals in the district, necessitating the eco town concept to be applied to facilitate the influx of tourists as well as to preserve the ecosystem of the national park. Temburong District in Brunei Darussalam could become the world's best example of an eco town, boasting the best facilities to host world-class summits, meetings, and conferences, while enjoying the rich nature of the district.

The Economic Research Institute for ASEAN and East Asia (ERIA) is committed to support the future development and study of Temburong District in Brunei. In 2017, ERIA and the Brunei National Energy Research Institute (BNERI) will look closely at the climate data of Temburong District and conduct a simulation model to optimise the size of renewable electricity sources, such as solar/photovoltaic (PV), wind, biomass, and backup power generation facilities. Based on the renewable electricity plan, ERIA and BNERI will also come up with a smart city development design in Temburong in the next stage.

I hope that this study will benefit Brunei. I further hope that the eco town concept could be replicated in other countries in the region, tailor-made to meet their respective economic, social, and environmental capabilities.

A handwritten signature in black ink, reading "H. Nishimura". The signature is fluid and cursive, with a large initial "H" and a long, sweeping tail.

Hidetoshi Nishimura
President
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