

ADS656: SEMINAR IN PUBLIC MANAGEMENT

TITLE OF GROUP PROJECT :
TENAGA NASIONAL BERHAD (TNB)

PREPARED FOR:

MISS SITI NURAMIRA BINTI SEIKH MUHAMAD

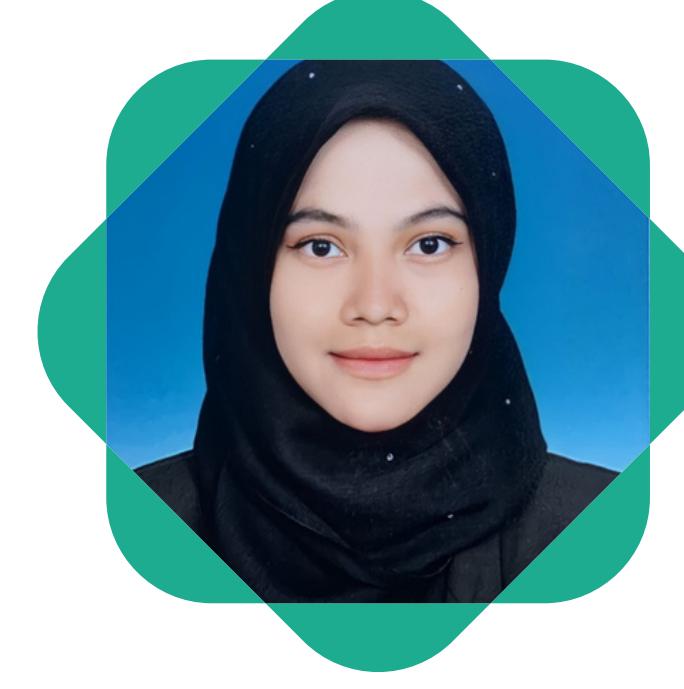
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1.0 INTRODUCTION OF TNB

- History of electricity by Loke Yew and Thamboosamy Pillai's in 1894
- The first power was brought to Kuala Lumpur's railway station in 1895.

BACKGROUND OF TNB

- The Central Board (CEB) was established in 1949.
- The National Electricity Board (NEB) was established in 1965.
- Tenaga Nasional Berhad (TNB) was officially established on 1st September 1990
- Responsible for the generation, transmission, and distribution of electricity in the region
- Regulated by the Electricity and Gas Supply Department (EGSD).
- The Energy Commission (EC) regulates Malaysia's energy industry.



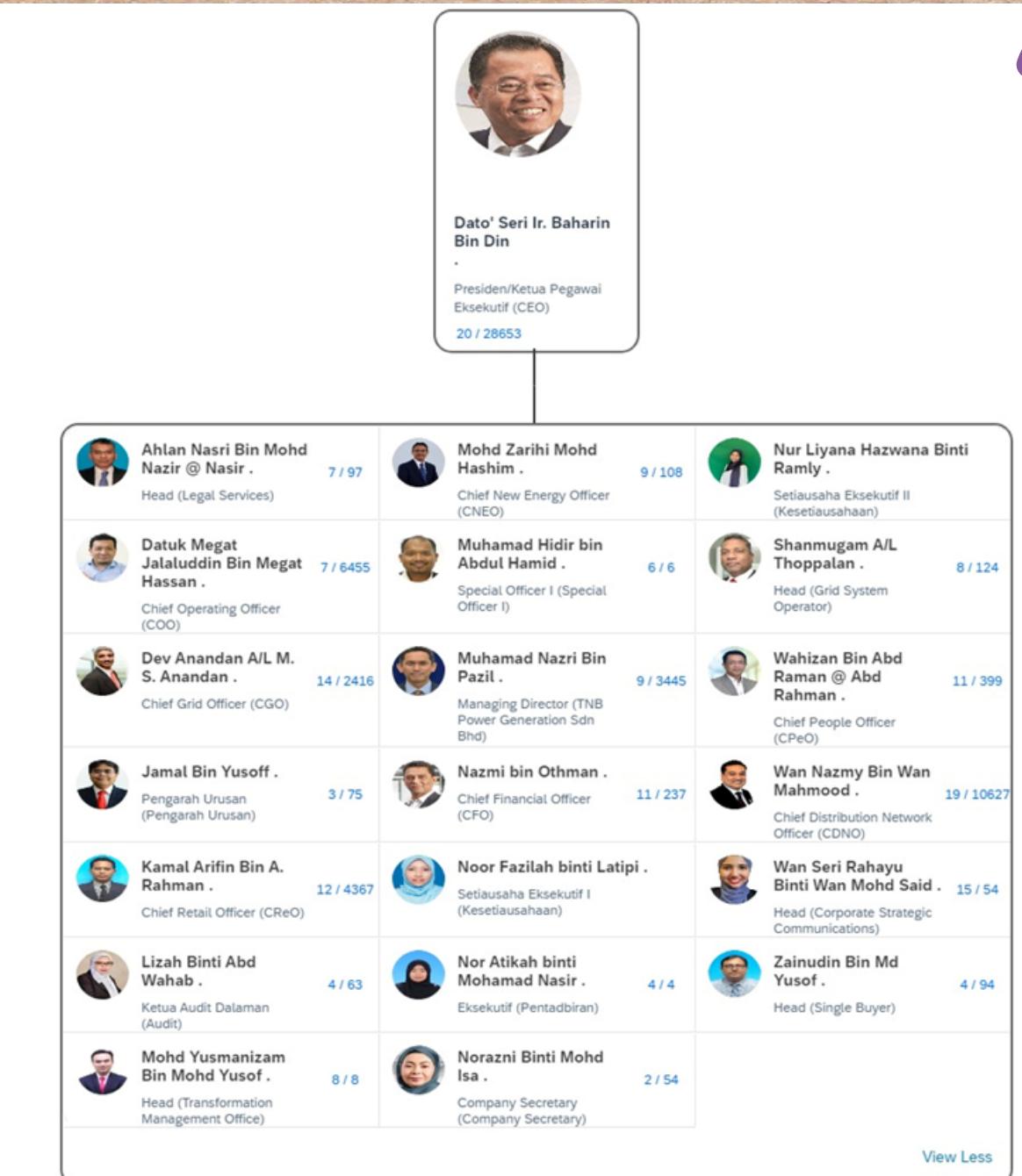
Vision
To Be a Leading Energy Services Company (ESCo) of Choice.

Mission
We Are Committed to Customer Satisfaction at All Times Through Excellence in Our Products and Service

2.0 ORGANIZATIONAL CHART



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



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3.0 PROBLEM THAT LEADS TO REFORMATION OF TENAGA NASIONAL BERHAD (TNB)

• 3.1 METER INACCURACY

- The outdated method of manually reading electricity meters, which involves manual reading by TNB personnel, can lead to human error and inaccurate data.
- Erroneous data can result from misreading numbers, misinterpreting meter displays, or being confused about decimal points
- Result in billing discrepancies, causing customers to receive inaccurate bills.
- Human variables, such as preoccupation or unfamiliarity with specific meter models, can also affect the accuracy of readings.
- This can result in financial strain for customers and a breach in the relationship between TNB and its customers.

3.0 PROBLEM THAT LEADS TO REFORMATION OF TENAGA NASIONAL BERHAD (TNB)

• 3.2 LACK OF INFRASTRUCTURE IN RURAL AREAS

- Tenaga Nasional Berhad (TNB) in Malaysia faces challenges in establishing and maintaining energy infrastructure in rural areas due to the country's isolated terrain, mountainous regions, dense forests, and remote communities.
- This causes delays and raises the price of implementation. Building electricity lines and substations can be challenging in places like Sarawak and Sabah forested villages or mountainous areas where there may not be adequate roads or transit systems.
- The financial difficulties of constructing and maintaining infrastructure in rural areas can be attributed to socioeconomic factors, financial constraints, and a lack of awareness about the benefits of access to power.
- The situation is particularly challenging for indigenous communities such as Orang Asli, who often lack adequate infrastructure and are located in remote areas. TNB must address these challenges while ensuring reliable and culturally relevant electrical services.
- Rural populations are separated, making it difficult to provide essential services and hinder local economies.

3.0 PROBLEM THAT LEADS TO REFORMATION OF TENAGA NASIONAL BERHAD (TNB)

• 3.3 LACK OF TECHNOLOGY ADVANCEMENT

- Tenaga Nasional Berhad (TNB) in Malaysia faces challenges due to outdated traditional methods of paying electricity bills.
- These methods, which rely on in-person transactions, have led to inconvenience, time wastage, and potential mistakes.
- The lack of digital platforms and online payment options further hinders TNB's ability to offer contemporary, user-friendly bill settling solutions.
- The company has not made significant technological breakthroughs in traditional payment methods, such as cash and check payments, which results in inefficiencies and inconvenience for customers.
- The process of processing checks and cash payments is more time-consuming for rural or underprivileged customers, making it difficult for them to physically visit TNB offices or payment counters.

* * * 4.0 THE REFORM IN TNB

4.1 SMART METER

- A SMART METRE IS A DEVICE THAT AUTOMATICALLY DETECTS YOUR POWER USE AND TRANSMITS IT TO TNB VIA RADIO-FREQUENCY WAVES FOR MONITORING AND INVOICING.
- EXAMPLE COUNTRY USING SMART METER : THE UNITED STATES OF AMERICA, UNITED KINGDOM, JAPAN AND CHINA

BENEFIT SMART METER

- DIGITAL-BILLING
- TRACK YOUR ELECTRICITY USAGE
- GO GREEN!
- ENERGY BUDGET



NEW SMART METER FROM TNB



More accurate bills



Help manage household budgets

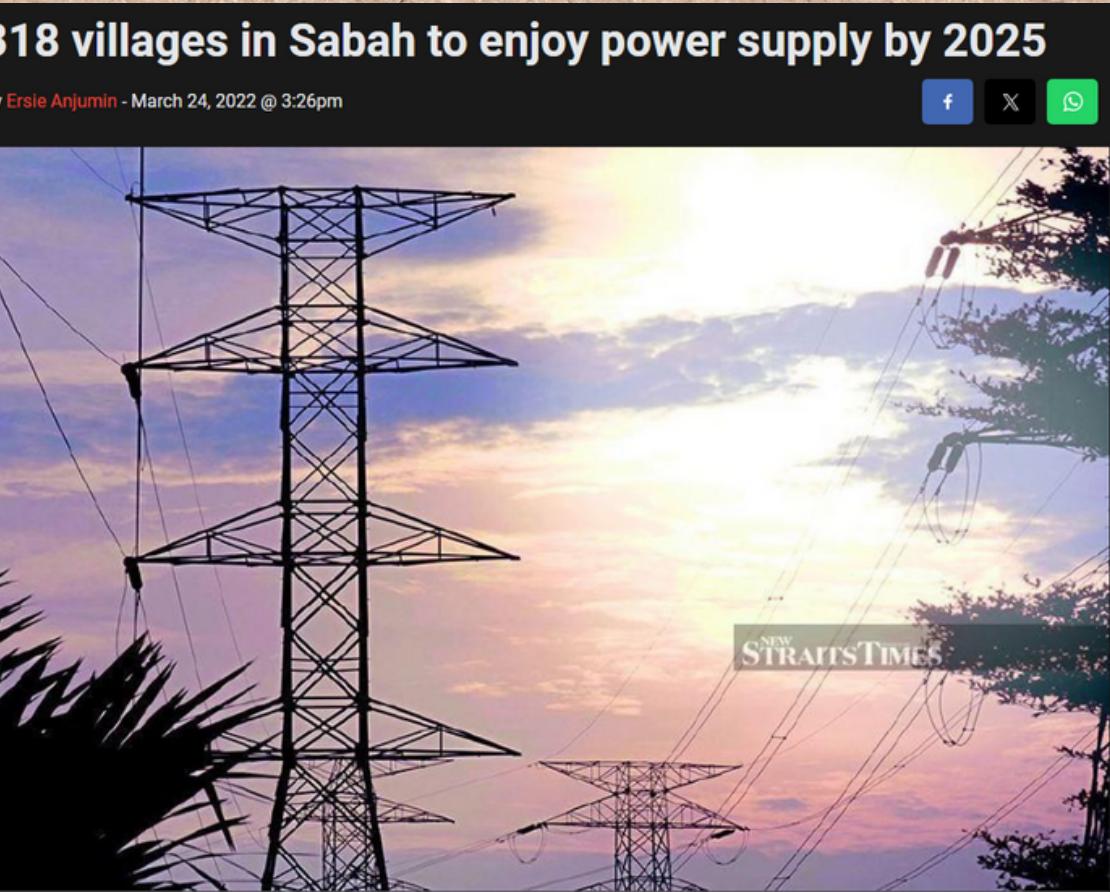


Improve power outage detection



* * * 4.0 THE REFORM IN TNB

4.2 THE RURAL ELECTRICITY SUPPLY (BELB) PROGRAMME



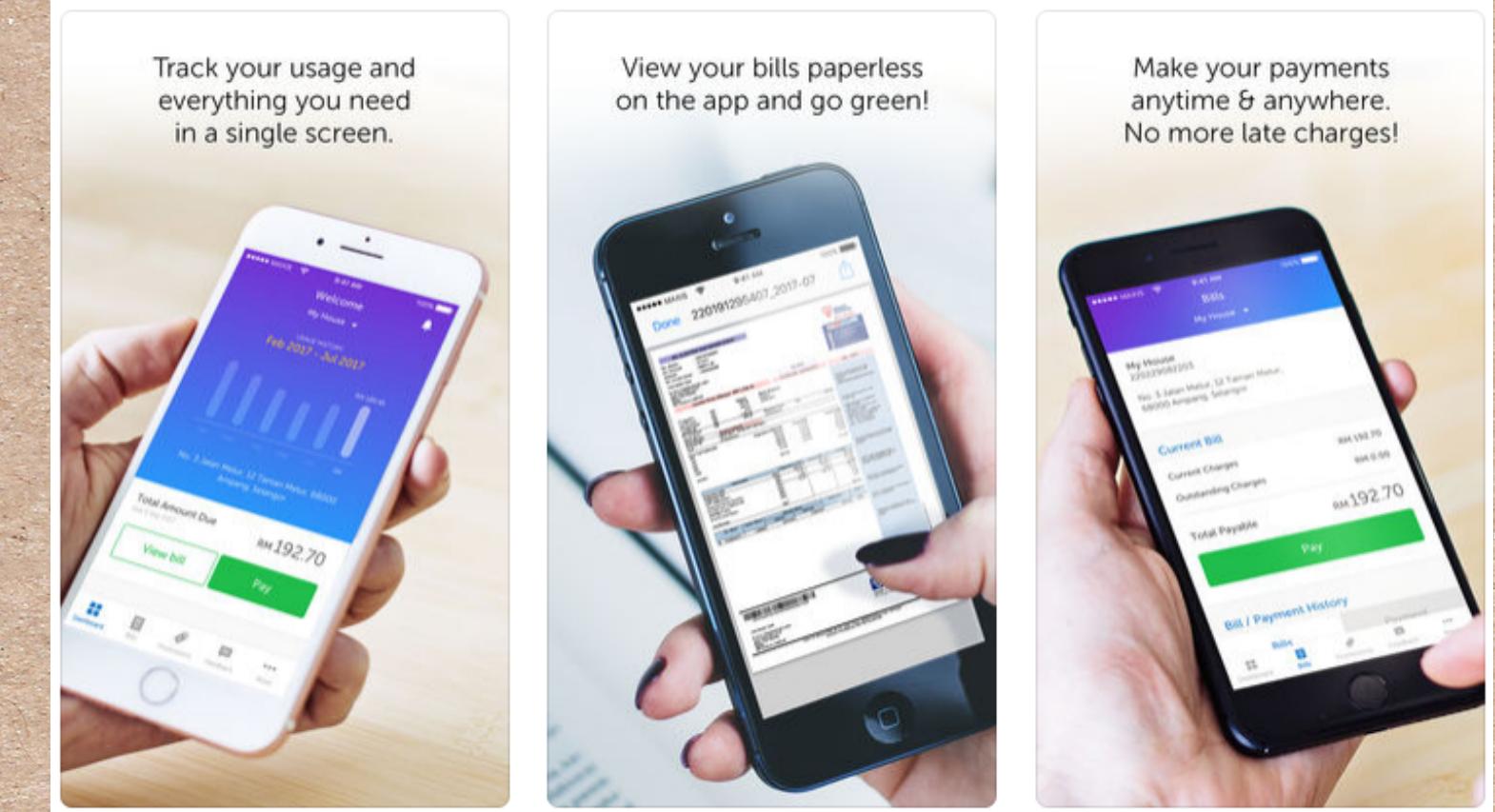
- Supplying electrical power to remote and rural regions of Malaysia,
- Objective of the programme is to enhance the standard of living
- The programme comes under the responsibility of Ministry of Rural and Regional Development (KKLW)



* * * 4.0 THE REFORM IN TNB

4.3 MYTNB APP

- MYTNB APP IS A FREE MOBILE APP TO MANAGE TNB ELECTRICITY ACCOUNT(S)
- MALAYSIA'S OBJECTIVE OF BECOMING A DIGITAL NATION AND ENCOURAGING THE USE OF TECHNOLOGICAL SOLUTIONS TO ADDRESS DAILY OBSTACLES.



BENEFIT MYTNB APP

- FIND OUT HOW MUCH ELECTRICITY HAVE USED
- VIEW TOTAL ELECTRICITY BILL FOR ALL TNB ACCOUNTS
- PAY FOR ELECTRICITY BILL ANYTIME, ANYWHERE
- SUBMIT FEEDBACK FOR ANY BILL RELATED MATTERS QUICKLY



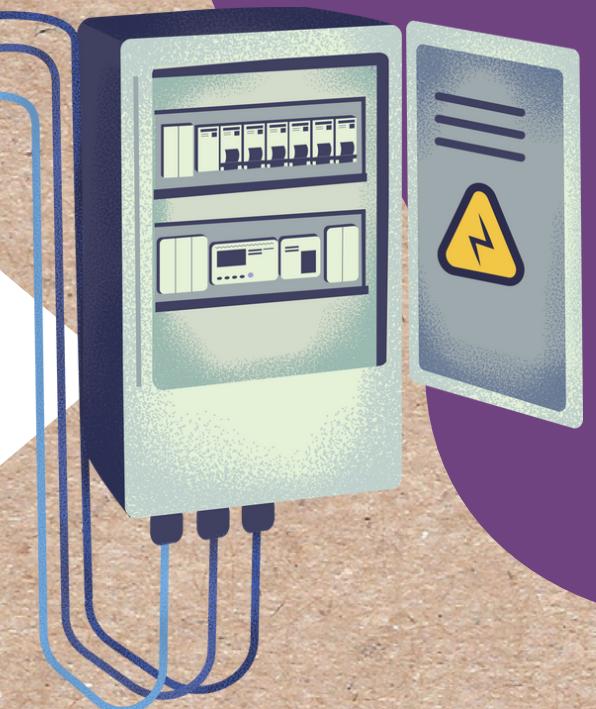
Download myTNB mobile app for **FREE**



5.0 THE IMPLICATION OF THE REFORM (5.1 POSITIVE)

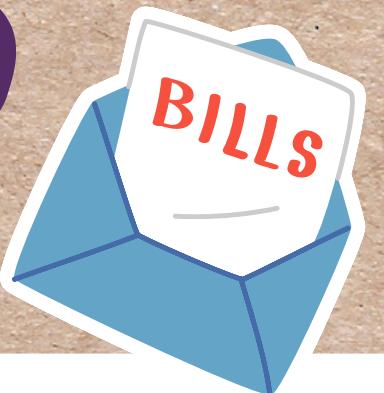
5.1.1 Improved Accuracy and Efficiency

- Manual metre reading has been replaced by more precise readings of power use from smart metres.
- The increased precision not only guarantees equitable invoicing for customers but also optimises TNB's billing procedure, reducing operational expenses and enhancing overall effectiveness.
- According to Hao and Wang (2012), one crucial strategy for achieving effective energy control is to use smart devices that gather data to monitor the on/off statuses of electrical appliances in real time.
- The intelligent metering system, which includes smart metres, communication infrastructure, and control devices, is an improved energy measurement instrument compared to a traditional energy metre.



5.0 THE IMPLICATION OF THE REFORM (5.1 POSITIVE)

5.1.2 Convenient Access to Billing Information



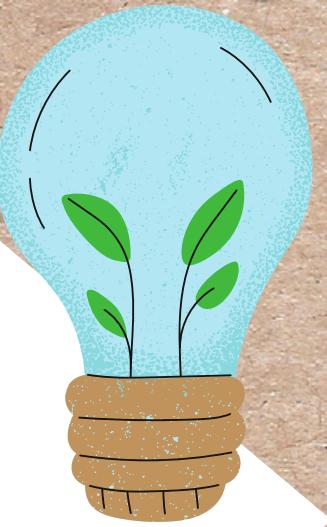
- TNB customers may easily and quickly obtain their billing information using the myTNB site. In addition to tracking payment histories and seeing previous and present bills, users may also see patterns in their power usage
- Technology is changing many businesses in the digital era, and the energy industry is no exception. The main electricity utility company in Malaysia, Tenaga Nasional Berhad (TNB), has embraced innovation by launching the myTNB portal.
- This online platform functions as an entry point for TNB customers, providing a variety of advantages that improve the entire experience of using electricity.
- According to GM Kamaliah Abdul Kadir of TNB customer service senior, as long as a person has an Internet connection, they may use the new system to complete all of their TNB services almost anywhere at any time, including while on vacation.



5.0 THE IMPLICATION OF THE REFORM (5.2 NEGATIVE)

5.2.1 Lack of skills and insufficient education, training

- In general, an "electric program" might encompass a number of activities pertaining to the provision of electrical services, including tariff programmes, energy efficiency programmes, renewable energy programmes, and other initiatives meant to enhance the sustainability, supply, or consumption of electricity.
- In contrast, the term "Green Electricity Tariff Programme" usually designates a special electricity tariff or price structure intended to promote the production and use of renewable energy sources. A workforce lacking of the necessary skills has significant consequences for the renewable energy industry. A lack of expertise may hinder the effectiveness of green energy initiatives, from setting up and maintaining of solar panels to the complexities of wind energy grid management.
- For instance, the first hybrid system at the Langkawi Cable Car, which was constructed in 2002 and consisted of two 50 kW diesel generators and 16 kW of solar panels, was discovered to be non-operational



5.0 THE IMPLICATION OF THE REFORM (5.2 NEGATIVE)

5.2.2 Reduction in Meter Reading Jobs

- The energy landscape of Malaysia is undergoing a transformative journey, driven by technological advancements that are reshaping the traditional structures of power distribution.
- TNB's efforts to simplify operations have made smart meters which feature real-time data collecting and communication capabilities as the foundation of its strategy. These gadgets provide precise and immediate data on energy use, doing away with the requirement for metre readers to make in-person visits.
- The decrease in meter reading positions at TNB as a result of this technology shift raises significant concerns about what will happen to the current workforce.
- It is because meter readers' once-essential responsibilities are progressively becoming less important, raising worries about job displacement and the effects of technology on people.



6.0 DISCUSSIONS

- 1. Ensure the national grid is world-class, automated, and digitally connected.
- 2. Enhance cyber-resilience of IT and OT systems by implementing ISO 27001:2013 Information Security Management System (ISMS).
- 3. Prioritize energy efficiency, sustainable energy technologies, and supporting infrastructure.
- 4. Aim for zero deaths, equitable education, and net-zero emissions by 2050.
- 5. Prioritize modernization, sustainability, and community participation for a sustainable energy industry in Malaysia.

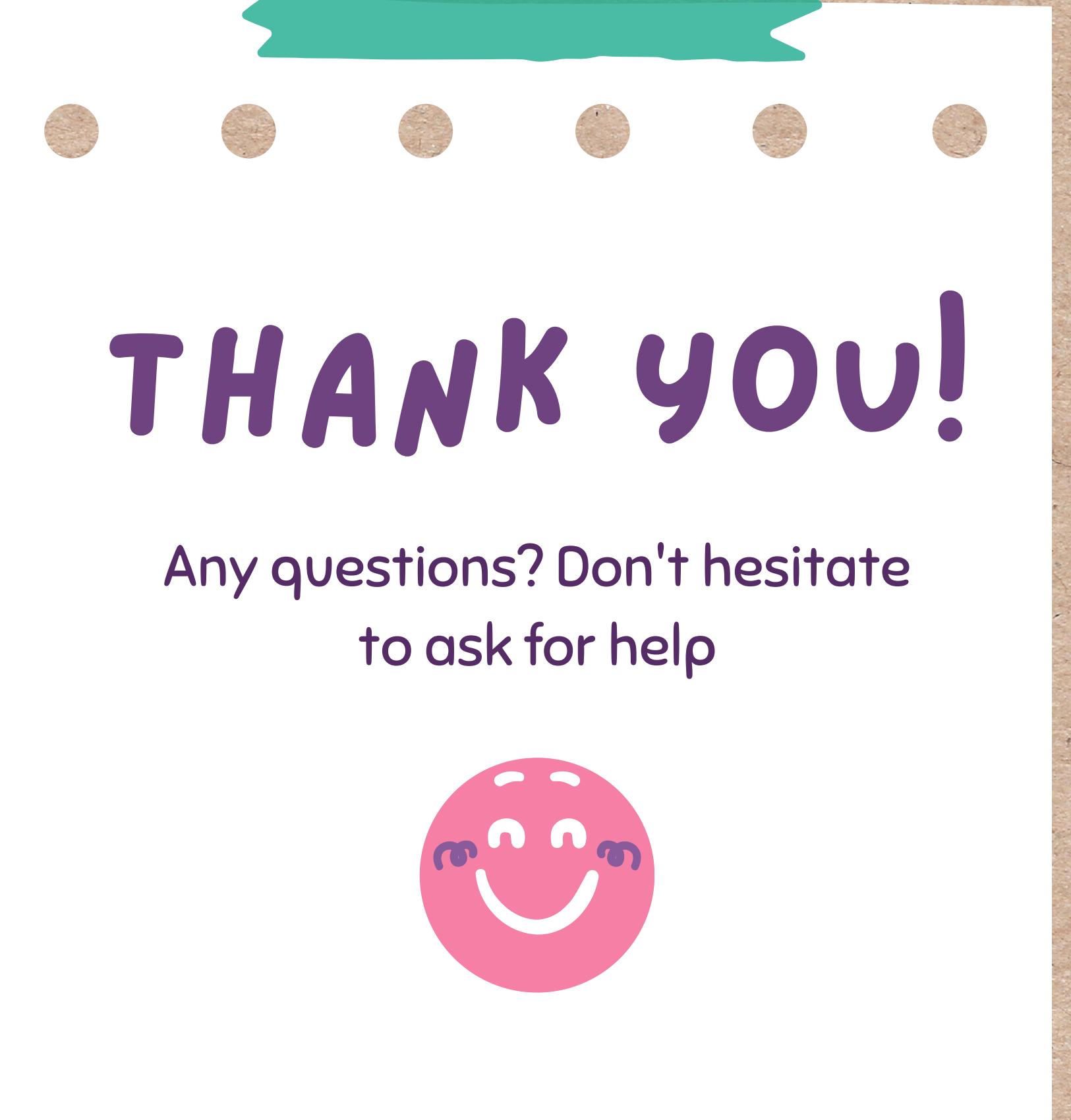


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THANK you!

Any questions? Don't hesitate
to ask for help

