SINGLE BUYER
WATT UP
Issue 13, January 2020

("What's Up")
ELECTRIFYING THE FUTURE

REMARKS FROM CEO

Wishing all our readers health and happiness in this new decade!

We bid farewell to 2019 and welcome 2020 with new hopes and aspirations.

In 2019, SB has attained significant achievements for NEDA. Based on the outcome of the NEDA Viability Study completed last year, several amendments have been made to the NEDA Guidelines. These include the introduction of Large Scale Solar (LSS) as a new category of NEDA participant, and the incorporation of changes in the bidding period, bidding mechanism and settlement. SB also welcomed three NEDA participants in this particular year.

NEDA will continue to become SB's primary focus in 2020 via the NEDA+ initiative, which is one of the key reform initiatives under MESI 2.0. Recognising the importance of IT as a critical enabler of successful NEDA+ implementation, SB is currently embarking on a project to enhance its NEDA IT infrastructure. SB is also actively working to develop the Information Security Management System (ISMS), to further enhance our role as a market operator that conforms to international best practices.

A total of 240 MW of transmission-connected solar plants under the LSS2 program is expected to be commissioned this year. This steady growth of solar capacity is in line with the Government's initiative to achieve 20% of Renewable Energy capacity by 2025.

2020 will mark the end of the second Regulatory Period (RP2) and work is underway to quantify SB's capital and operational expenditure for the third Regulatory Period (RP3) in a prudent manner.

SB's focus for the coming year is to pursue the technical knowledge, operational efficiency and innovation to establish our readiness to support MESI's transformation.

Thank you for your continuous support and we look forward to yet another exciting year in MESI.

Charanjit Singh Gill
Chief Executive Officer
Single Buyer

WATT'S INSIDE:

AMENDMENT OF GUIDELINES FOR NEDA

NEDA

In this issue, we feature the latest amendments in the Guidelines for NEDA, effective as of 5 December 2019

The Guidelines of NEDA have been amended two times in 2019:

1. 28 May 2019 (GP/ST/No.12/2017 Ver 1)
   - To incorporate **Large Scale Solar (LSS)** as a new category of NEDA Participants
2. 5 December 2019 (GP/ST/No.12/2017 Ver 2)
   - To incorporate short-term recommendations by the **NEDA Viability Study** including **Bidding Period**, **Bidding Mechanism** and **Settlement**

BIDDING PERIOD

amendment

2 Peak & Off-peak ▶ **48** Half-hourly interval

BIDDING MECHANISM

amendments

- **PPA/SLA generator:**
  Heat rate and / or VOR ▶ VOR only
- **Ex-PPA/SLA generator:**
  Heat rate and / or VOR ▶ Price Quantity

SETTLEMENT

amendments

- **Ex-PPA/SLA & Large Merchant generator:**
  Pay as Bid ▶ Actual SMP
- **Price Taker:**
  Higher of Forecast and Actual SMP ▶ Actual SMP

Additionally, a **minimum export capacity for settlement** of Price Takers is imposed, where any metered **output below the minimum** will be **disregarded for payment**:

No minimum export capacity ▶ 100 kW or 1% of the Price Taker's Installed Capacity, whichever is higher

NEDA
ENGAGEMENT ACTIVITIES

02

06

01 NEDA BRIEFING SESSION WITH SEDA

11 October 2019, Putrajaya | A briefing was held to SEDA officers on NEDA mechanisms and how NEDA can play a role in achieving government's target of 20% RE capacity by 2025.

02 MEETING WITH GADING KENCANA

23 October 2019, Bangsar | A meeting was held with Gading Kencana, a solar power plant developer that is exploring the prospects of participating in NEDA as a Price Taker.

03 MEETING WITH HANWHA ENERGY

30 October 2019, Bangsar | This was the 3rd meeting following the session held in September 2019. The consortium is exploring the possibility of forming a joint venture with a local company, Huayang, to develop a floating solar plant and participate in NEDA as a Price Taker.

04 MEETING WITH TAN CHONG GROUP

30 October 2019, Bangsar | A meeting was held with the company, which is considering to build a solar plant and participate in NEDA as a Price Taker.

05 MEETING WITH SUNWAY ENGINEERING

4 November 2019, Bangsar | A meeting was held with Sunway Engineering representatives to explore their prospect as a Price Taker. A 2nd meeting was conducted on 22 November 2019, together with SB Technical Advisory and Legal representatives to further discuss on the potential plant's connectivity and legal aspects.

06 MEETING WITH CENTRALISED UTILITY FACILITY

11 November 2019, Bangsar | Subsequent to the meeting held between CUF and the Contract Performance Unit of SB on matters pertaining to the current PPA of CUF Gebeng and Kerteh, a discussion was held on the prospect of both facilities to participate in NEDA as Price Taker.

07 MEETING WITH EASTERN STEEL

27 November 2019, Bangsar | A meeting was held with Eastern Steel which intends to sell excess capacity from its co-generation plant to NEDA.

08 MEETING WITH GADING KENCANA AND MAYBANK

17 December 2019, Bangsar | A briefing on NEDA was conducted for Maybank, a potential financier for Gading Kencana to participate in NEDA.

WORKSHOP
TO STREAMLINE NEDA REGISTRATION PROCESS FOR DISTRIBUTED-CONNECTED GENERATORS

22 October 2019, Bangsar

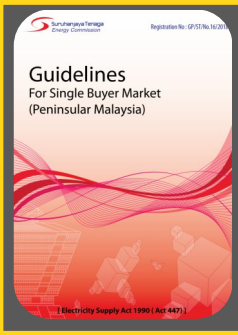
SB organised a 1-day workshop with ST, TNB Distribution Network, TNB Retail and TNB Metering to streamline the NEDA Registration Process for Distribution-connected Generators.

Each party presented their respective process flows and highlighted the challenges experienced in the NEDA Registration Process.

The key items from the workshop will be used to update SB's NEDA Briefing Kit.

SINGLE BUYER RING-FENCING

The 2nd part of this series covers Annex 1 of the Guideline, i.e. ***The Single Buyer Market Rules****—Contents, Applicability of other Documents and Key Definitions*



PART 2 Series on

GUIDELINES FOR SINGLE BUYER MARKET (PENINSULAR MALAYSIA)

RULES

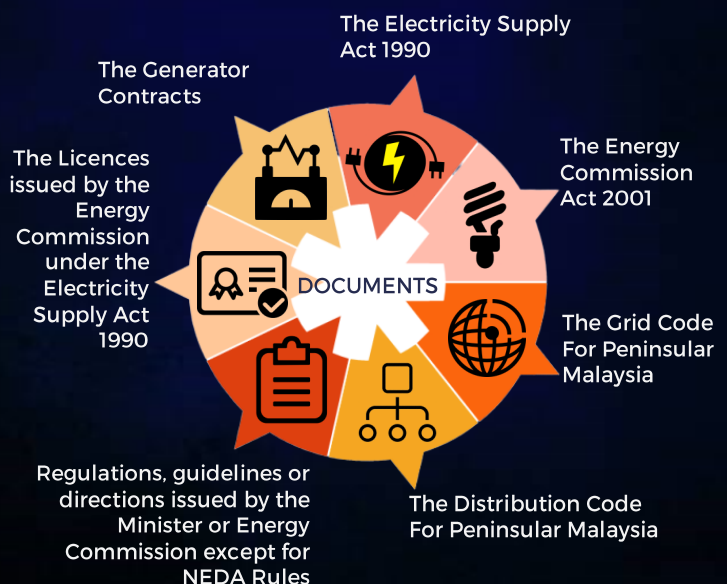
Annex 1 (the "Single Buyer Market Rules") consists of **20 Rules** which govern the operation of the **Single Buyer Market** and conduct of **Participants** in complying with the Single Buyer Market Rules.

20 RULES

- 01 Introduction
- 02 Terms and Definitions
- 03 Single Buyer Market Participants
- 04 Objectives of the Single Buyer
- 05 Roles and Functions of the Single Buyer
- 06 Ring-fencing
- 07 Single Buyer Governance
- 08 Least Cost Dispatch Scheduling Methodology
- 09 Three Month Ahead Dispatch Schedule
- 10 Week Ahead Dispatch Schedule
- 11 Day Ahead Dispatch Schedule
- 12 Supply Capacity Adequacy Assessment
- 13 Fuel Management
- 14 Single Buyer Tariff
- 15 Long-term Supply and Demand
- 16 Contracting for New Capacity
- 17 Dispute Resolution
- 18 Change to Single Buyer Market Rules
- 19 Single Buyer Website and Publications
- 20 Appendices

OTHER DOCUMENTS

The following **documents** are to be applied with the Single Buyer Market Rules



WHAT IS SINGLE BUYER MARKET?

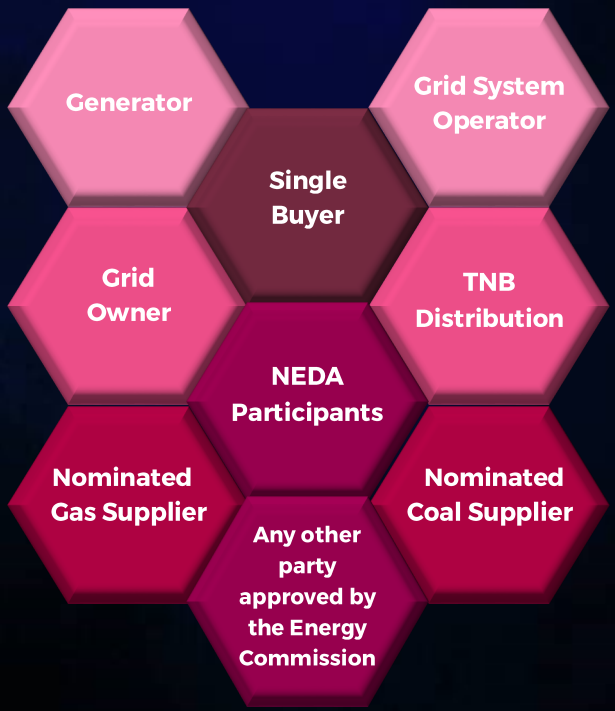
The market for supply and procurement of electricity in Peninsular Malaysia where the procurement of electricity and related services is managed by the **Single Buyer**

WHAT IS SINGLE BUYER?

The person authorised by the Energy Commission to be responsible for the management of procurement of electricity and related services, which includes scheduling, procuring and settlement and registered under Rule 3.9 as the Single Buyer in accordance with the registration process outlined in Rule 3.10

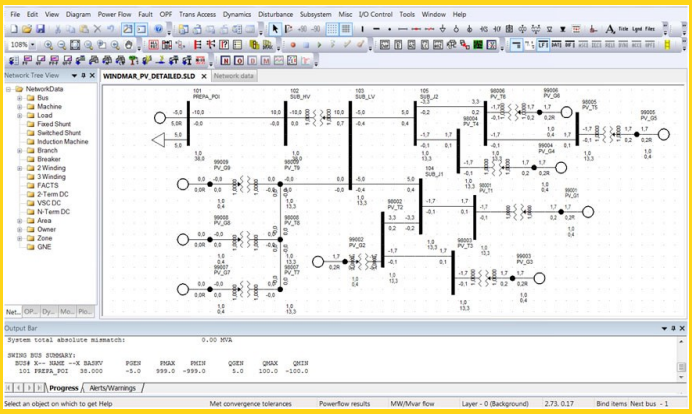
WHO ARE SINGLE BUYER MARKET PARTICIPANTS?

The rules are applicable to not only SB as the Single Buyer, but also to **all Single Buyer Market Participants**, i.e. the following parties as registered under Rule 3.10



Power System Simulator for Engineering (PSS®E)

High-performance Transmission Planning and Operations software for Power Industries



PSS®E is a power system simulation and analysis tool for Power Transmission Operations and Planning. It is used in over 145 countries around the world by utility transmission Planning and Operations engineers, consultants, universities, and research labs.

PSS®E is one of the main tools for SB Technical Advisory (Transmission) to perform a wide variety of analysis functions, including: power flow, dynamics, short circuit, contingency analysis, optimal power flow, voltage stability, transient stability simulation, and much more.

PSS®E MAIN APPLICATIONS IN SB

GENERATION

Users need to run a variety of different studies to plan for secure, reliable, and economically feasible investments in the power generation infrastructure including multiple types of analysis e.g. power flow, dynamics, contingency analysis, load deliverability, generation deliverability.

TRANSMISSION

In order to ensure grid reliability, security, compliance with regulations, and sound capital investment decisions, transmission companies need to perform a wide variety of studies around their grid infrastructure.

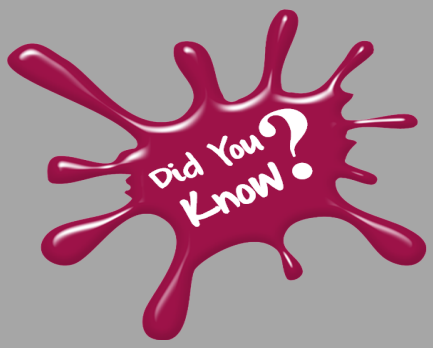
PSS®E supports a full spectrum of analysis functions across power transmission planning and operations workflows, including power flow, advanced contingency analysis, steady-state voltage stability, short-circuit analysis, dynamics / transient stability simulation, optimal power flow.

STANDARD FEATURES

- LOAD FLOW ANALYSIS
- NETWORK REDUCTION
- LINEAR ANALYSIS
- ADVANCED CONTINGENCY ANALYSIS
- INTEGRATED NODE-BREAKER NETWORK REPRESENTION
- RESULTS AND REPORTING
- DYNAMIC SIMULATION
- INTERACTIVE SINGLE-LINE DIAGRAMS

TECHNICAL FEATURE ARTICLE: AUTOMATION OF WORK PROCESSES

Have you ever **spent hours** extracting data from emails or getting data from hundreds of different spreadsheets? If you do, you know how tedious these tasks can be...



Do you realise that you could let your computer do them for you?

Automation is nothing new, it has been around for decades since the industrial revolution, in the workplace and factories. Workflow automation can save time and money. Your customers, clients or colleagues will even be delighted that they will receive result in **predictable manner**, and **preclude human error**...

Can your tasks be **automated**? How to determine what can and cannot be automated?

As a start, determine if your workflow or process is:

- Narrowly defined
- Straightforward if/then/else scenarios
- Predictable and repetitive tasks

For example,

- **Process that can only be started with certain triggers**. Do you need to calculate the cost when a new email arrived? Do you need to send an email when a simulation is completed?
- **Report generation**. Does the report have a fixed template? Is the data for the report is kept in a structured format?
- **Routine sanity check**. Do you need to check certain data every morning at 8am? Do you need to send the email every day at 5pm?

TECHNICAL FEATURE ARTICLE: AUTOMATION OF WORK PROCESSES

Once an automatable process has been identified, these are the steps to carry out the implementation part.

- Define the **automation goal**.
- Break down the process into small **and manageable** steps.
- Create scenarios. Initially, rare scenarios can be ignored. Just start with algorithm that can **work correctly 80% of the time** and gradually improve.
- **Measure current process**. How much time and person does the process cost? This information will give you a baseline to compare your automated process to.
- **Testing**. Test your algorithm in parallel with current workflow to identify areas of improvement. Test it in a variety of scenarios.
- Go live! **Monitor** and always be around to troubleshoot.
- **Compare** the automated process with baseline, and gradually progress to next goal.

Workflow automation **saves time**, and **reduces errors**, but more importantly it allows you to spend your time on more fulfilling tasks. Even if you have never written a single line of code, you can **make your computer do the grunt work**. In this case, **do not work hard, works smart!**

There are plenty of tools that you can use to automate tasks in your computer. Some of the common ones are already inside your computer.

- For **general Windows automation**, you can use **PowerShell**, while **VBA** (Visual Basics for Applications) can be used to automate programs in **Microsoft Office suite, like Microsoft Access and Excel**.
- For something independent, you may use variety of programming languages such as **Python** and **Ruby**.

Python

&

Ruby

- If you are just looking to **record all mouse-clicks and keystrokes**, then repeat them, **TinyTask** can easily do that for you without any coding involved.
- Lastly, you may look inside the documentation of your program to find whether it provide **API** (Application Programming Interface) access to control the software programmatically.

LTM OPERATIONAL WORKSHOP

Bukit Bintang, KL

Supplemental Agreement to the Energy Purchase and Wheeling Agreement (LTM 2.0) - The term of energy purchase and wheeling agreement (EPWA) dated 27 September 2017 among EDL, EGAT and TNB has expired on 31 December 2019. The parties agreed to extend the term of the EPWA for another two years and the sale, transit and purchase of energy were increased from 100 MW to 300 MW. In order to amend the relevant terms contained in the original content of the EPWA, a supplementary agreement (LTM 2.0) was signed in December 2019.

SB has hosted a two-days operational workshop to streamline the understanding of operational and commercial obligation under LTM 2.0. This workshop is also a platform for EDL and EGAT to explain details on the updates implemented in the web application and the GSO to review the interconnection operation manual for LTM 2.0.

7 & 8 Oct 2019

LEARNING JOURNEY WORKSHOP

Damansara, KL

Learning Journey Workshop - Enterprise Management recently organised a challenge session on "Learning Journey" at Royale Chulan Damansara intending to streamline the "Learning Journey" for all SB staff. It is a one day session and attended by Chief Corporate Officer (CCO), COO (Chief Operation Officer), all Head of Units (HOU), HR Business Partner (HRBP) and manager/executive from each units. Each unit finalized and present their "Learning Journey" to CCO,COO, HOU and HRBP.

20 Nov 2019

JIMAH EAST POWER

Negeri Sembilan

Technical Visit to Jimah East Power Unit 1 - SB organised a site visit to Jimah East Power Station , Negeri Sembilan. The objectives of this visit are to understand the technical operations of JEP Unit 1 and to gain better understanding on the type of coal used for JEP Unit 1 and coal handling.

17 Oct 2019

LEADERSYNERGY TEAMBUILDING

Bangsar South, KL

SB Teambuilding - In conjunction with InnCOp2.0, a teambuilding event was held for SB staff, The event, conducted by Leadernomics, stimulated awareness on the importance of good communication skills taking into consideration differences in personality and cultural sensibilities to foster stronger bond amongst staff.

12 Nov 2019

AMAN PALESTIN

Bangsar South, KL

Sharing Session from Aman Palestin - SB invited Tuan Hj. Mohd Akib from Aman Palestin Malaysia to share his experience on Misi Bantuan Palestin. The objective is to give exposure on Palestinian issues and to raise donations in helping Palestinians in Palestine, Lebanon and Syria.

25 Nov 2019

ISMS AWARENESS WORKSHOP

Bangsar South & Petaling Jaya

SB ISMS/ISO 270001 Awareness Workshop - SB conducted a workshop towards establishing, implementing, maintaining and improving a management system to the requirements of the ISO 27001 specifications. The objective of this workshop is to give awareness to top management and implementers about information security.

29 Nov & 9 Dec 2019

ICON 2019

Petaling Jaya

ICON 2019 - ICT Secure360 Conference (ICON) 2019 objective is to empower TNB community with current cyber threats and techniques as well as effective protection method of ensuring comprehensive IT and OT infrastructure. SB representatives won 1st place in the Kaspersky Interactive Protection Simulation on Power Plant competition conducted during the event.

12 Dec 2019

K'Cho Shelter Home

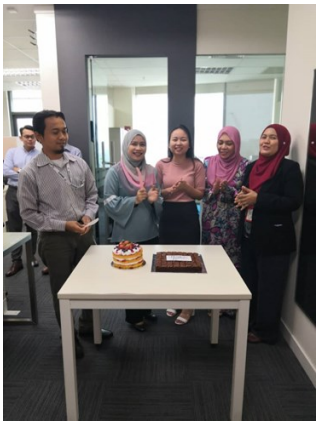
Pandan Perdana, Selangor

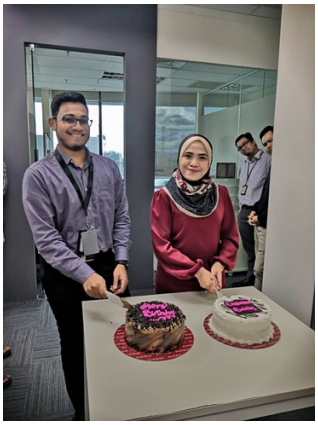
K'Cho Shelter Home - SB visited the K'Cho Shelter Home to give away Christmas donation in the form of blankets, steam pots and exercise equipments. A total of 14 adults and 16 children live in the shelter and most of them are from K'Cho Ethnic in Myanmar.

27 Dec 2019

BIRTHDAY CELEBRATION

Bangsar South, KL





MONTHLY BIRTHDAY CELEBRATION - Despite everyone's busy schedule, the monthly birthday celebrations in SB continued to be held for the October, November and December 'babies'.

Oct - Dec 2019

SEMINAR ON GRID THIRD PARTY ACCESS

Establishing a common understanding on the basic concept and features of Third Party Access (TPA) to grid

9 November 2019, SB conducted a one-day seminar on "Grid Third Party Access" or Grid TPA. The Grid TPA concept is envisaged to allow any party to connect, access and use, in certain circumstances, the transmission and distribution grid network owned by a utility. Grid TPA is not something new or uncommon. It has been practiced in many other jurisdictions such as UK, Australia, Singapore and others. However, it is a new concept in Malaysia as the grid system is only accessible by TNB and no third party can utilise the grid to sell directly to particular consumers.

The seminar was conducted by an industry expert, Professor Dr. Ing. Peter Birkner, who is the Managing Director of the "House of Energy" and Chairman of "Environmental and Energy Policy" within the German Council of Economy in the federal state of Hesse.

The main objective of the seminar is to understand the pre-requisites, issues, challenges and lessons learnt for a successful TPA from other jurisdictions in the following areas:

The seminar was participated by experts of the Malaysia Electricity Supply Industry (MESI) from various organisations—Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC), Suruhanjaya Tenaga (ST), MyPOWER, TNB, SB and GSO.

Opening remarks by En. Abdul Razib Dawood, CEO of ST

Presentation by Puan Nurulhidayah from TNB Grid on the overview of the Peninsular Malaysia Grid System.

Prof. Birkner presenting about Energy System of the Future.

Workshop participants from various key stakeholders in MESI. Dato' Abdul Razak Abdul Majid, CEO of MyPOWER (third from left) presented on MESI Overview.

En. Abu Bakar Ahmad presented a small token of appreciation to Prof. Birkner.

SINGLE BUYER'S ISMS INITIATIVES

This year, SB will be embarking on a project to implement the Information Security Management System (ISMS). The ISMS provides a systematic approach to manage and protect sensitive information, which comprises of people (employee), process (procedures, guidelines) and product (technology).

This initiative is intended to serve as a foundation for SB's cyber security and can be built upon in SB's future goal to acquire ISMS certification. The project will mainly involve internal effort, with the guidance of Nexagate Sdn. Bhd. which is a local Cyber Security Consulting and Services firm. SB will undergo a series of workshops to develop the ISMS framework, policies and processes.

As a beginning to the ISMS initiative, SB conducted a half-day ISMS Awareness Session for Top Management on 28 November 2019 and a 2-day ISMS Awareness Session for Project Implementers on the 9-10 December 2019. The ISMS Awareness Session for Project Implementers was aimed to introduce the information security landscape, ISMS ISO 27001 clauses, information security best practices and the benefits of implementing ISMS.

Did you know?

The world's longest power transmission lines

High-voltage direct current (HVDC) has emerged as the preferred transmission technology for long-distance bulk power supply. Brazil and China each house two of the world's longest power transmission lines.

1. Belo Monte-Rio de Janeiro transmission line, Brazil – 2,543km

The 2,543km-long Belo Monte-Rio de Janeiro transmission line in Brazil is an 800kV ultra-high-voltage direct current (UHVDC) line that transmits electricity from the 11.2 GW Belo Monte hydroelectric power plant located in Para to Rio de Janeiro, Brazil.

Construction of the transmission line, which is also known as the Belo Monte UHVDC Bipole II line, started in September 2017 and completed in April 2019. The overhead transmission line, that has transmission towers 105 m and taller, crosses 80 cities along its route from the Amazon to Brazil's southeast coast. The line has two power converter stations and is capable of transmitting 4 GW of electricity.

2. Rio Madeira transmission link, Brazil – 2,385km

The Rio Madeira transmission link in Brazil is a 600kV high-voltage direct current (HVDC) bipolar line commissioned in November 2013. It is capable of transmitting 7.1 GW of power. The Rio Madeira HVDC link transmits electricity from the Santo Antônio and Jirau hydropower plants on the banks of the Madeira River in north-west Brazil to major load centres in south-eastern Brazil. It connects the Porto Velho Collector Substation in the state of Rondônia to the Araraquara-2 Substation in the state of São Paulo.

3. Jinping-Sunan transmission line, China – 2,090km

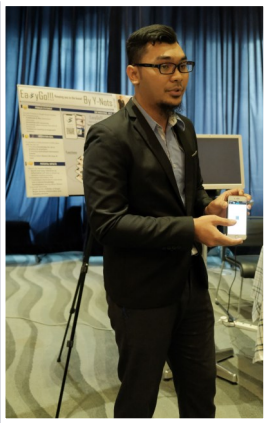
The Jinping-Sunan transmission link in China is an 800kV UHVDC transmission line. Owned by State Grid Corporation of China (SGCC), the 7.2 GW transmission link was put into operation in December 2012. The line passes through eight Chinese provinces to transmit power generated from Guandi, Jinping, and Sichuan hydroelectric plants located on the Yalong River in central-western Sichuan province to the industrialised coastal area of Jiangsu province in eastern China. The AC voltage at both ends of the line is 525kV.

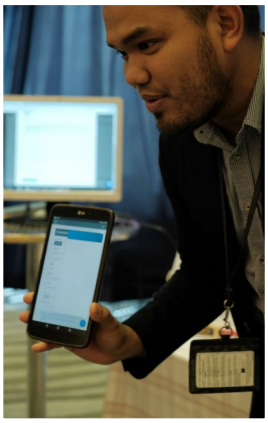
4. Xiangjiaba-Shanghai transmission line, China – 1,980km

The Xiangjiaba-Shanghai transmission line, with an overhead length of 1,980 km, is an 800kV, 7.2 GW line, owned by SGCC. The world's first ever UHVDC transmission line, it started commercial operation in July 2010. The Xiangjiaba-Shanghai link transmits power from the Xiangjiaba hydropower plant located in south-west China (Sichuan province) to the country's major industrial and commercial hub, Shanghai. The link comprises a single overhead line and 28 high/ultra-high-voltage converter transformers. The AC voltage at both ends of the line is 525kV.

INNOVATION & CREATIVITY OPERATION (InnCOp) DAY



12 November 2019—SB held the InnCOp grand finale day at Menara PNS that saw five finalist teams competing for the grand prize.

InnCOp is SB's initiative to provide a platform for the staff to present innovative ideas and solutions that provide value to the organisation.

The first phase of InnCOp Day was held on 1 March 2019 where the teams completed a session with the SB management team to pitch their ideas in the form of a pitching competition. The teams were then given several months to finalise their product prototypes, testing, and final preparation before the final.

The grand finale was organised as a trade fair where the teams presented their final products to all SB staff. The winners were selected by SB's judges and popular votes.

Team Muskelon (Azlan Uda, Syafiq Mazli, Syafiq Rosley and Izzuddin Izam) won the coveted grand prize for their project on meeting room booking platform.

SB staff spent the afternoon after the grand finale in a mini team building session conducted by an external leadership development consultant.

During the team building, SB staff learnt the importance of collaboration and problem solving in a war simulation game. The war simulation game required teams to collaborate and work each other in facing a simulated external threat.

WATT SAY YOU

VIEW ON InnCOp

InnCOp is a great innovation platform and working as a committee in this event allows me to see a huge amount of innovative talent in SB. It is amazing to see how the participants express their splendid ideas to make SB better. I hope InnCOp not only inspires SB-ians to work in groups and to try new things, but also to inspire them to think about their own ideas, what they have to say and how to make it work.

Mohd Raziq Khirudin (Organizer)

I'm very pleased to be called as a judge for InnCOp competition. It has allowed SB employees to showcase their potential by developing ideas to create innovation in line with today's technology. I was impressed with the participants in the competition as they were able to show great results to all SB staff. I hope this opportunity continues so that we can cultivate the talent that is within reach of our employees.

Nor Suraiya bt Abdul Rahman (Judge)

For me InnCOp is all about teamwork—between you and your teammates as well as the team and the end-users. In my team (Muskelon), we learned how to delegate the tasks in order to achieve each milestone as planned. For the end-users, it is about how to collaborate with them to address their pain points and fulfill their needs. At the end of the day, innovation should make people's life easier.

Muhammad Syafiq bin Mazli (Winner for InnCOp 2.0)

MEET THE PEOPLE BEHIND SB

PERSONAL ASSISTANT

TO THE CHIEF OPERATION OFFICER OF SINGLE BUYER

SYUHADA MAHMUD

In this issue, we speak to Syuhada Mahmud about her background, roles in SB and her new year resolution for 2020.

01 WattsUp: Thank you for making time for us to get to know you better. Can you share a brief background about yourself and how you started joining the company?

Syuhada: I was born in Melaka but my early education up until secondary school was in my hometown, Negeri Sembilan. I pursued my Diploma in Secretarial Science at Politeknik Port Dickson. Upon graduating in 2010, I received an offer from TNB as a secretary in Company Secretary Division (CoSec). My first task was to assist the manager in handling administrative work for the organisation and its subsidiaries. My highpoint experience was the opportunity to be a part of the organising team for the TNB Annual General Meeting from 2010 until 2016. 7 years in CoSec Division has provided me with great platform to start off my career in TNB as well as develop my secretarial skills.

02 WattsUp: How and when did you join SB and what is your role here?

Syuhada: I felt the need to gain a new experience as well as to build my career path. Soon after that, there was a vacancy as a personal assistant (PA) in August 2017 and without hesitation, I gave it a try. The examination and interview were tough and Alhamdulillah I succeeded. The offer letter mentioned Single Buyer, and that was the first time I heard about it. My journey in SB started officially in October 2017 as a PA to the CCO, En. Abdul Malik Mohd Jaafar. My responsibilities are to work closely with our CCO, to provide the administrative support, handling his work schedule and all necessary tasks given.

03 WattsUp: What are the challenges that you face when you first join SB?

Syuhada: My previous role at CoSec was quite focused specifically doing clerical stuff i.e. letter typing. It is quite a contrast now as I have to be an all-rounder in my current role. In the beginning, it is very challenging to adapt and familiarise myself with my immediate boss's work, routines and preferences. My main challenge is that I have to propose a relevant and practical suggestion in arranging a schedule, appointment and activities for the CCO. As time goes by, I managed to perform my job well with help and guidance from my boss and colleagues.

04 WattsUp: What do you love most about working in SB?

Syuhada: I love the fact that everyone in SB is very supportive especially my boss, En. Malik. He has always guided me in performing my duties. We are encouraged to attend any relevant trainings and courses for career advancement. At the same time, the positive working environment here makes me feel good about coming to work, and this provides the motivation to increase productivity throughout the day.

05 WattsUp: What do you enjoy doing in your leisure time?

Syuhada: I enjoy spending my leisure time with my husband and lovely daughter. We love to spend our weekend going to the mall for window shopping and watching new movie release. I also love to visit home decoration page to get the idea and inspiration to decorate my house.

06 WattsUp: Any random facts about you that can be shared with us?

Syuhada: I have a twin sister which I am very close to. I feel so lucky to have her as my best friend since I was born. I never get lonely cause I always have someone to talk to. There are no secrets between us and she is the first person I would share everything with.

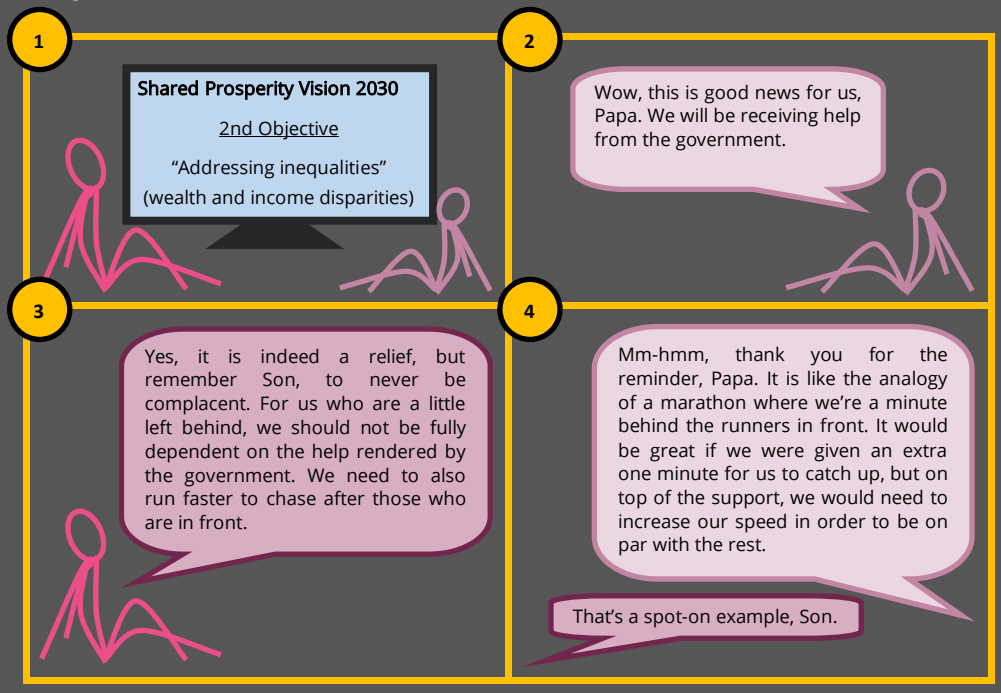
07 WattsUp: Lastly, would you like to share your new year resolution for 2020?

Syuhada: New year is another opportunity to experience life and of course I want to improve myself to be better in 2020. So, my New Year's resolution is to be more productive and well organised so that I can perform my work efficiently. I also would like to have a healthier lifestyle. I believe that a healthy lifestyle is not only to prevent body physically from critical diseases but also our mind, attitude and mood to live a much happier life. Last but not least, I wish everyone a blessed new year ahead.

SB CORNER

Shared Prosperity Vision 2030 (SPV2030)

5 October 2019—Shared Prosperity Vision 2030 (SPV2030) was launched by our Prime Minister, Tun Dr. Mahathir. SPV2030 is a government blueprint that aims for all Malaysians to achieve a decent standard of living by 2030. Below is a short story inspired by our Prime Minister shared during the launch.



Reference:

1. Jenny Ng (7 October 2019). "Short-term pains seen on road to SPV 2030". The Edge Financial Daily. The Edge Markets. Archived from the original on 7 October 2019. Retrieved 7 October 2019.

WORDS OF WISDOM

"There is nothing magical about the flip of the calendar, but it represents a clean break, a new hope, and a blank canvas."

Jason Soroski

CONTACT US

We welcome any comments or content that you would like us to include in the upcoming editions of WattsUp.

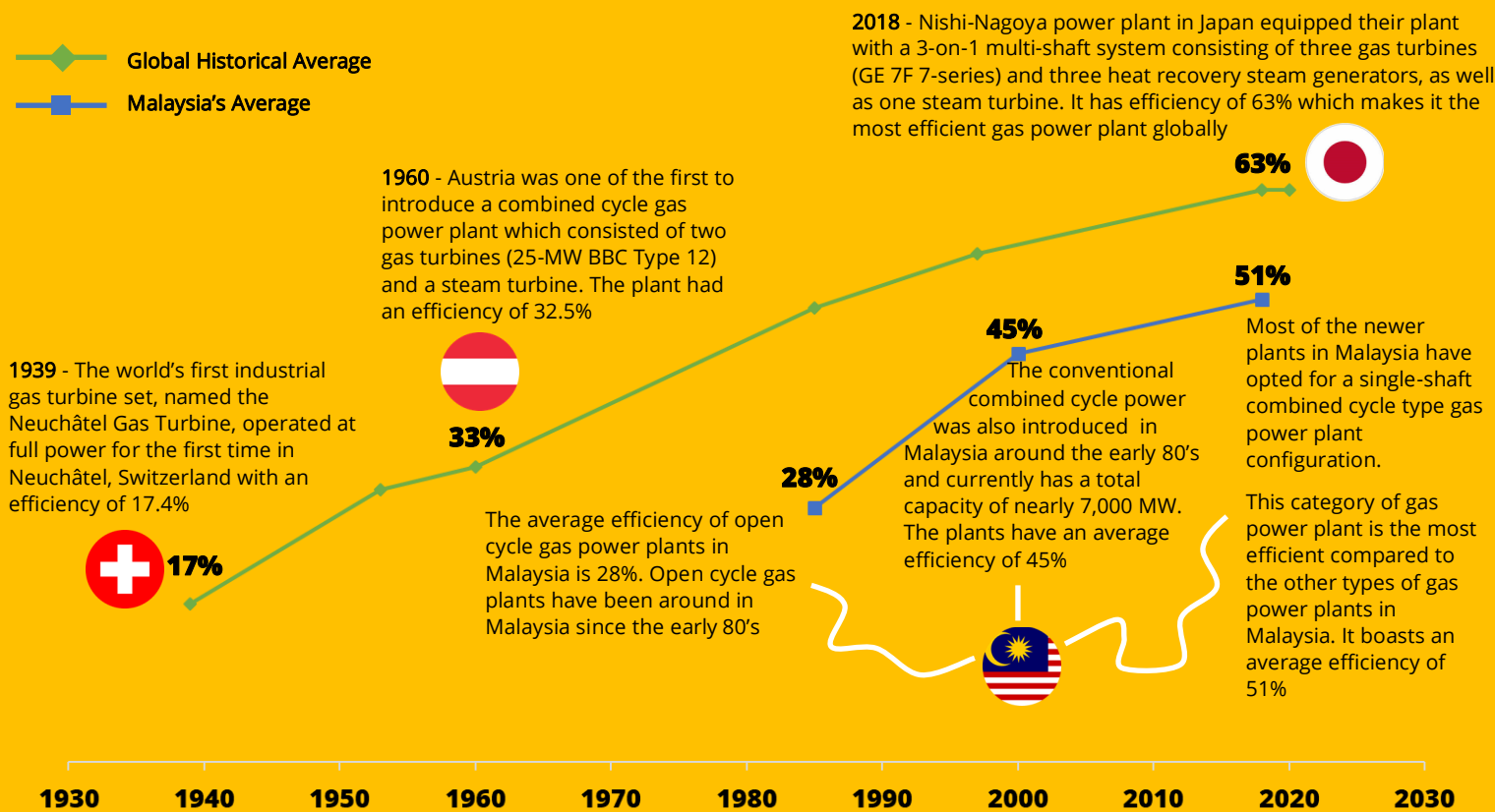
Please email us at sbet@singlebuyer.com.my

DISCLAIMER

Disclaimer: The contents of this newsletter are of a general nature and is intended for informational purposes only. You are advised to seek specific advice on any matter that may be affected by such information. The views of third parties set out in this newsletter are not necessarily the views of SB.

MARKET WATCH

EVOLUTION OF GAS POWER PLANT EFFICIENCY



Sources: www.powermag.com & www.theedgemarkets.com

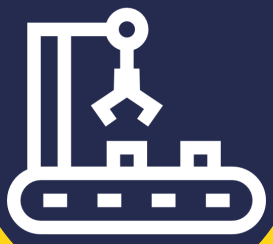
INDUSTRIAL REVOLUTION

Transforming Industries And Innovation

The Fourth Industrial Revolution (IR 4.0) is expected to change how we live, work, and communicate; it is also likely to change the things we value and the way we value them in the future. Since the 1st IR in late 1700s, we have evolved significantly through key industrial shifts, consequently changing business models and employment trends.

IR 3.0 (1969)

Automated production using electronics, programmable logic controllers (PLC), IT system and robotics



IR 4.0 (TODAY)

Autonomous decision making of cyber physical system using machine learning through cloud technology

IR 5.0 (COMING SOON)

IR 2.0 (1870)

Mass production assembly lines using electrical power

IR 1.0 (1784)

The industrial revolution begins. Mechanization of manufacturing with the introduction of steam and water power