

THE INSTITUTION OF ENGINEERS, MALAYSIA

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Technical Visit to TNB National Load Despatch Centre

(Organised by: Seniors Special Interest Group, IEM)

| Date | : | 8 th November 2022 (Tuesday) |
|---------|-------|---|
| Time | : | 9:00 am – 12:00 pm |
| Venue | : | Grid System Operator, NLDC Building, TNB, 129 Jalan Bangsar, 59200 Kuala Lumpur |
| Transpo | ort : | Own transport |

SYNOPSIS

TNB GSO's **National Load Despatch Centre (NLDC)** manages on a continuous 24/7 basis the secure and optimized operations of an extensive network of 500, 275 and 132kV high voltage substations, transmission lines and cables, the real time despatch of thermal, hydro and solar power plants and the operations of the high voltage grid interconnectors to Singapore and Thailand.

The NLDC control room is continuously manned by 4 engineers and supported by a host of power system security and despatch optimization applications. Real time power system monitoring and control, complete with advanced visualization and near real time situational awareness tools are provided to these 4 engineers via a world class network management system. Digital grid monitoring data, supervisory control and generation despatch commands are securely communicated between NLDC and the remote equipment at substations and power plants via TNB's extensive private fibre optic network.

TNB and GSO has invested significantly to ensure business continuity of NLDC via resilient disaster recovery implementations, including relevant control, equipment and system redundancies, and robust cyber security defence of the NMS and NLDC infrastructure against being incapacitated by either physical or digital attacks.

PROGRAMME

| Time | | |
|-------------|---|----------|
| 9.00am Re | egistration and Welcome Refreshment | BEM A |
| 9:30am | 1. Introduction to NLDC Operations | Ref N |
| | 2. SalientApplicationsabs Tools for Grid Security and | |
| | Generation Despatch Optimisation | |
| | 3. The Network Management System Technology | <u>C</u> |
| | supporting NLDC | <u>.</u> |
| | 4. Business continuity: Disaster recovery: Defense of | (No |
| | NLDC against cybersecurity threats | |
| 11:30am Q | 0 & A | IEM M |
| 12.00 pm Er | nd of Session | Non M |

BEM Approved CPD hours: 3 Ref No: IEM22/HQ/370/V

<u>Commitment Fees</u> (inclusive GST) (Non refundable & non transferable) IEM Member : RM 50.00 Non Member : RM 70.00

- The visit is strictly limited to only <u>25 participants</u> registered on a "first-come first-served" basis.
- Interested participants are to register and pay online at www.myiem.org.my or register by returning the appended registration form before **<u>1 November 2022</u>** together with the payment.
- Cheques are to be made payable to The Institution of Engineers, Malaysia.
- Please note that the commitment fee must be settled prior to the visit. Payment on the day of the visit is not acceptable.
- After this closing date, IEM reserves the right to allocate seats on first come first pay basis.
- Members are also reminded that if a place is reserved, IEM may cancel the reservation if payment is not received.

"IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion". For intending participants who choose to 'walk in without prior registration', IEM SHALL NOT be responsible for any direct or consequential losses".

Ir. Chow Sei Ying, Raymond Chairman 2022/2023 Seniors Special Interest Group (SSIG)

| REPLY SLIP | | | | | | | | | | |
|--|-----------------------|---------------------------|--|------|--|--|--|--|--|--|
| Chairman Seniors Special Interest Group, The Institution of Engineers, Malaysia PO Box 223 (Jalan Sultan), 46720 Petaling Jaya, Selangor | | | | | | | | | | |
| (Fax to: 03-7957 7678) (Email: suriani@iem.org.my) | | | | | | | | | | |
| | Technical Visit to TN | IB National Load | Despatch Centre | | | | | | | |
| I wish to participate in the above visit. I enclose herewith a cheque no for the amount of RM as my commitment fee for the visit. | | | | | | | | | | |
| Name of Member | : | | M'ship No.: | | | | | | | |
| | | | Grade : Tel (Office) Tel (Mobile): | | | | | | | |
| Company's Name | : | | Email.: | | | | | | | |
| <u>PERSONAL DATA PROTECTION ACT:</u> I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at http://www.myiem.org.my and I agree to IEM's use and processing of my personal data as set out in the said notice. I will be participating in the visit at my own risk and hereby indemnify fully the IEM from all claims arising from any injury, damage or loss | | | | | | | | | | |
| | that | t may be sustained by me. | | | | | | | | |
| (Dat | e) | | (Signati | ure) | | | | | | |
| Photocopies are acceptable – | | | | | | | | | | |
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