The Institution of Engineers, Malaysia
(Southern Branch)
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Half-Day Talk on "Basic Off-Grid Solar Photovoltaic (OGPV) Design for Non-Electrical Personnel"

Date : **Saturday, 21st October 2020**
Venue : **IEM (Southern Branch) Training Centre, 24B, Jalan Abiad, Taman Tebrau Jaya, 80400 Johor Bahru.**
Speaker : **Dr. Jasrul Jamani Bin Jamian, UTM**

Synopsis

An Off-Grid Solar Photovoltaic (OGPV) Power System is made up of several key components. To be truly Off-Grid, our system needs to have batteries to store the energy that been generated. It will also need some other equipment to tie it all together, such as Solar Charger Controller, Inverter etc. Without the proper design, the OGPV system might fail due to limited energy that can supply to the load. This short course will focus on the basic methods of designing the OGPV system for non-electrical personal. Participants will be exposed to the basic electricity terms (Voltage, Current, Power, Energy, AC and DC) before involving in simple calculation to determine the PV Module Size, Charger Controller size, Battery size and other components related to OGPV design using approximate method. Participant will get some idea why the size of Off-Grid is multiple time larger than load size.

The main objective of this technical talk is to provide some fundamental and practical aspects of basic Off-Grid Solar Photovoltaic (OGVC) Design for Non-Electrical Personnel.

Time	Tentative Programme
8.30 a.m. – 9.00 a.m.	Registration
9.00 a.m. – 9.10 a.m.	- Welcome Speech By IEM (SB) Organising Committee
9.10 a.m. – 10.30 a.m.	Session 1 : Electrical Fundamentals - Production & Distribution of Electricity - DC and AC - Voltage, Current, Power and Energy
10.30 a.m. – 10.45 a.m.	- Coffee Break
10.45 a.m. – 12.30 p.m.	Session 2 : Off grid PV design - Peak Sun Hour (PSH) - Autonomy days - PV module – technology and size - Charger controller – MPPT vs PWM - Inverter - Battery
12.30 p.m. – 1.00 p.m.	- Case study and Discussion - Question & Answer Session
1.00 p.m.	Closing & End of Talk

About the Speaker:

Dr. Jasrul Jamani Bin Jamian had received Bachelor of Engineering (B. Eng. Hons) degree, Master of Engineering (M. Eng.) and Ph.D degree in Electrical (Power) Engineering from Universiti Teknologi Malaysia in 2008, 2010 and 2013 respectively. He is currently Director for Power Engineering Division, School of Electrical Engineering, Universiti Teknologi Malaysia (UTM). Dr Jasrul is actively involved in research as a Principal Investigator as well as leader in consultancy projects with several companies such as Petronas and Tenaga Nasional Berhad, which focuses on Relay Coordination projects and Off-Grid Solar PV design & implementation. He has obtained Certified Designer for Off -Grid and grid connected PV system from SEDA Malaysia. He is the Author and Co-Author of more than 80 publications in International Journals and Proceedings in the area of Power Systems and Energy. Up to now, he has successfully supervised 2 PhD, 1 Master (by research) and 15 Master (by course work project) candidates. His research interest includes Network Reconfiguration, Optimization technique, and Renewable Energy.

Participant Fees:

Grade	Online	Normal
IEM Corporate Member & Graduate Members (30 years and above)	RM 70.00	RM 90.00
IEM Senior Engineers (60 years and above) & IEM Graduate Members (Below 30 years)	RM 60.00	RM 80.00
IEM Student Members	RM 40.00	RM 50.00
Non-Member	RM 120.00	RM 150.00

Closing Date: 16th November 2020

The seminar is strictly limited to **30 participants** only. Registration will be on a first-come-first-serve basis. Kindly return the reply slip to the IEM (SB) office before **16th November 2020** together with a non-refundable cheque for the participant fees made payable to ***The Institution of Engineers, Malaysia (Southern Branch).*** Alternatively, you could bank-in the participant fees into the Institution's Maybank Current Account (No. 5-013920-15708), and to facsimile both the Bank-in and Reply Slips to the Institution. The Institution requests all members co-operation in ensuring fees are paid in advance to the seminar. Please also be reminded that fees will not be refunded to absent participants who have paid, and to also note that all reservations must be paid despite participant cancellations. Thank you for your continuous support of the Institution.

Chairman, Sub-Committee on Seminar and Technical Talk, IEM (SB)

BEM Approved
CPD/PDP Hours:
Ref No: IEM20/SB/

REPLY SLIP

To: Hon. Secretary, The Institution Of Engineers, Malaysia (Southern Branch) **Fax: 07 – 3363406**

Half-Day Talk on "Basic Off-Grid Solar Photovoltaic (OGPV) Design for Non-Electrical Personnel"

Saturday, 21st October 2020, 9.00 a.m. – 1.00 p.m.
at IEM (Southern Branch), Training Centre, 24-B , Jalan Abiad, Taman Tebrau jaya, 80400 Johor Bahru, Johor

I wish to attend the above talk. I enclosed herewith a cheque no. ..... for the amount of RM.....as payment for the participant fee.

Name of Member: ..... Membership No:..... I/C No: .....
Address: ..... Tel(O): .....(Fax).....
.....Tel (H/P): .....
.....E-mail : .....

Company's Name: .....

Signature: ..... Date: .....

Note: *For IEM members, membership cards should be presented for identification purpose. Failure to present the card, one will be declared as a non-IEM member and he/she will be required to pay the non-IEM member fee.*

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