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Valid Till  
30 Nov 2013

# FEED-IN TARIFFS FOR PV SYSTEMS

An essential & comprehensive course on feed-in tariffs for solar PV systems, covering cost & performance of PV systems, the design of PV feed-in tariffs and experience to date in Australia, Europe, Indonesia and USA

23<sup>rd</sup> to 24<sup>th</sup> January 2014, Singapore

Experience with PV  
feed-in tariffs In

Australia

Indonesia

Europe

USA



Expert Course Faculty  
**Dr Hugh Outhred**

Hugh has 35+ years' experience in energy industry research, consulting & teaching



**Dr Maria Retnanestri**



# FEED-IN TARIFFS FOR PHOTOVOLTAIC SYSTEMS

23<sup>rd</sup> to 24<sup>th</sup> January 2014

## Course Overview

This course will provide a comprehensive discussion of solar energy resources, trends in PV system cost, performance, production and deployment, electricity industry avoidable economic and environmental costs, integration issues, design of feed-in tariffs for successful outcomes and experience to date with PV feed-in tariffs in Australia, Indonesia, Europe and the USA

## Course Learning Outcome

- Characteristics of solar energy resources
- Conversion of solar energy resources to electricity using PV systems
- Trends in PV system cost, performance, production and deployment
- Electricity industry avoidable economic & environmental costs and integration issues
- Design of feed-in tariffs for successful outcomes
- Experience to date with PV feed-in tariffs in Australia, Europe, Indonesia and the USA

## Who Should Attend

The course is designed for government policy makers, PV developers, non-government organisations and the electricity industry. Participants should have relevant professional qualifications and some knowledge of the electricity industry.

## Unique Features with **powerEDGE** Training

- Pre-Course Questionnaire to help us focus on your learning objectives
- Detailed Course & Reference Manual for Continuous Learning and Sharing
- Practical Exercises & Case Examples to better understand the principles
- Limited class size to ensure One-to-One Interactivity
- Assessment at the end of the course to help you develop a Personal Action Plan



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23<sup>rd</sup> to 24<sup>th</sup> January 2014

## 2 Day Course Outline

### Solar energy resources

- Solar energy resources characteristics
- Estimating the solar energy resource available for a particular array at a particular site

### PV systems

- PV cells, modules & arrays
- Balance of PV system components
- PV system technology status & prospects

### Electricity industry economics & integration issues

- Basic structure of the electricity industry – generation, transmission, distribution & end-use
- Avoidable economic & environmental costs associated with solar PV
- Integration issues for solar PV

### Design of feed-in tariffs & the associated policy context

- Stakeholder perspectives – electricity industry, PV industry, PV system purchasers & installers
- Objectives for feed-in tariffs & associated policies
- Design of feed-in tariffs for successful outcomes

### Experience with PV feed-in tariffs in Australia

- Relevant aspects of the Australian electricity industry & Australian energy policy context
- Design & deployment of PV FiTs in Australia
- Outcomes to date & future prospects

### Experience with PV feed-in tariffs in Indonesia

- Relevant aspects of the Indonesian electricity industry & Indonesian energy policy context
- Design & deployment of PV FiTs in Indonesia
- Outcomes to date & future prospects

### Experience with PV feed-in tariffs in Europe

- Relevant aspects of the European electricity industry & the European energy policy context
- Design & deployment of PV FiTs in Europe
- Outcomes to date & future prospects

### Experience with PV feed-in tariffs in the USA

- Relevant aspects of the US electricity industry & the US energy policy context
- Design & deployment of PV FiTs in the USA
- Outcomes to date & future prospects

## Your Expert Faculty

### Dr. Hugh Outhred

In a 35-year research career, Hugh Outhred (PhD) has contributed to electric power system analysis and control, the theory of electricity industry restructuring and electricity market design, renewable energy technology, renewable energy integration, energy sector policy and sustainability policy. He has taught more than 100 short courses on electricity industry restructuring and sustainability in a range of countries since 1988.

In 1993 and 1994 he co-authored a report on electricity industry restructuring for the California Energy Commission that highlighted the complexity of electricity restructuring in that context.

In 1995 and 1996 he led a project for the Australian National Grid Management Council to undertake electricity-trading experiments according to the proposed National Electricity Market trading rules prior to their formal implementation.

From 2004 to 2007, he was the founding Presiding Director of the Centre for Energy and Environmental Markets at the University of New South Wales. From 2009 to 2011, he was a Lead Author for the International Panel on Climate Change (IPCC) Special Report on Renewable Energy Sources and Climate Change Mitigation, published in 2011.

Hugh has been a Fulbright Senior Fellow at the University of California Berkeley, USA and has held visiting positions at Massachusetts Institute of Technology in the USA, the University of Liverpool in Britain and the Universidad Pontificia Comillas in Spain.

He has been a Board member of the Australian Cooperative Research Centre for Renewable Energy and an Associate Director of the Centre for Photovoltaic Devices and Systems at the University of New South Wales. He was a member of the NSW License Compliance Advisory Board and a member of the National Electricity Tribunal throughout their existence from 1997 to 2000 and 1998 to 2006 respectively.

Hugh is a Fellow of the Australian Institute of Energy, a Life Member of the Institute of Electrical and Electronic Engineers & was, prior to his retirement in 2007, Presiding Director of the Centre for Energy & Environmental Markets at the University of New South Wales, Sydney Australia.

### Dr. Maria Retnanestri

Dr. Maria Retnanestri is a Visiting Fellow in the School of Electrical Engineering and Telecommunications at the University of New South Wales.

She holds the degrees of Bachelor of Electrical Engineering (STTNAS Jogjakarta), Master of Engineering Science in Electrical Engineering (UNSW) and PhD in Electrical Engineering (UNSW).

In her PhD research, Maria Retnanestri developed the I3A (Implementation, Accessibility, Availability and Acceptability) Framework to investigate overall sustainability of renewable energy projects, considering their institutional, financial, technological, social and ecological sustainability dimensions. From 2008 to 2011, she then further developed and applied this research to identify ways to overcome barriers to renewable energy for sustainable development in Indonesia with financial support from an Australian Development Research Award.

With that financial support, she conducted more than 20 workshops, seminars, public lectures, field visits and study tours in Indonesia involving various kinds of renewable energy stakeholders in knowledge sharing and capacity building activities.

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## 23<sup>rd</sup> to 24<sup>th</sup> January 2014

### REGISTRATION FORM

	NORMAL PRICE	Early Bird SAVE SGD 200 Ends 30 Nov 2013	GROUP OF 3 or More
2 Day Programme	SGD 3,899 Per Participant	SGD 3,699 Per Participant	SGD 3,599 Per Participant

### ATTENDEE DETAILS

Name ..... Job title .....

Tel ..... Department ..... Email .....

Name ..... Job title .....

Tel ..... Department ..... Email .....

Name ..... Job title .....

Tel ..... Department ..... Email .....

Name ..... Job title .....

Tel ..... Department ..... Email .....

Name ..... Job title .....

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Postcode..... Country.....

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Payment is due in full at the time of registration. Full payment is mandatory for event attendance. I agree to Asia Edge Pte Ltd. payment terms

### CANCELLATIONS & SUBSTITUTIONS

You may substitute delegates at any time. ASIA EDGE PTE LTD does not provide refunds for cancellations. For cancellations received in writing more than seven (7) days prior to the training course you will receive a 100% credit to be used at another ASIA EDGE PTE LTD training course for up to one year from the date of issuance. For cancellations received seven (7) days or less prior to an event (including day 7), no credits will be issued. In the event that ASIA EDGE PTE LTD cancels an event, delegate payments at the date of cancellation will be credited to a future ASIA EDGE PTE LTD event. This credit will be available for up to one year from the date of issuance. In the event that ASIA EDGE PTE LTD postpones an event, delegate payments at the postponement date will be credited towards the rescheduled date. If the delegate is unable to attend the rescheduled event, the delegate will receive a 100% credit

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 ✉ [info@poweredgeasia.com](mailto:info@poweredgeasia.com)  
 ☎ (65) 6741 9927  
 📠 (65) 67478737

### RELATED COURSES

- ✓ Renewable Energy Integration
- ✓ Solar Photovoltaics
- ✓ Introduction to Power Systems
- ✓ Fundamentals of Power Generation

### On Site Training

Can't make it for the Course?  
We'll make the course come to you!!

Simply let us know your preferred time and dates and we will meet you at your schedule and venue.

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