

Financing and Management of Solar Photovoltaic Projects

A Master Class for Investors and Project Developers

Date : $6 - 7^{th}$ June 2013

Time: 8:30am – 5:00pm

Venue: Bangkok International Trade and

Exhibition Centre (BITEC) 88th Bangna - Trad Road, Bangna, Bangkok 10260, Thailand.

Target Audience

- Corporate Bankers
- Credit Managers
- Fund Managers
- Investors
- Project Finance Managers
- Venture Capitalists
- Private Equity
- Government authorities
- Security Managers
- Business Analysts

Course Overview

The Government of Thailand is set to raise renewable energy capacity to 25% of the total energy use in 2022. To make this a reality, the Board of Investments has rolled out numerous incentives such as tax holidays, investment grants and income tax reduction.

Among many of the renewable energy technologies, PV Solar projects make an attractive investment due to their high profitability, scalability and low maintenance costs.

Concurrent with the Renewable Energy Asia/Entech Pollutec Asia 2013 Expo in Bangkok, the Sustainable Energy Association of Singapore (SEAS) will be organizing a 2-day solar project financing workshop.

This workshop is designed for financiers and finance managers to understand the technology and de-risk projects based on many areas which are not common to conventional energy or infrastructure project investment.

About the Trainers



Mr. Saud Siddique has over 28 years of global experience in infrastructure and financial services. Mr. Siddique has served as the Joint Managing Director of Srei Infrastructure Finance, a leading infrastructure finance company in India. Previously, he worked with the International Finance Corporation (IFC) and Swiss Bank Corporation (now UBS) in New York. Mr. Siddique is a Member of Board and Chairman of the Credit Committee of the USD 800m Emerging Africa Infrastructure Fund, and also serves as Special Advisor to the Board of WaterTech in Singapore. He has experience in sectors such as power, water, , renewable energy shipping, aviation, roads, ports, logistics, etc. and holds an MBA from Cornell University, and B.Sc. in Computer Science from University of Maryland.



Mr. Daniel Yeung is currently the Principal at Odyssey Capital, a PE and advisory firm based in Singapore. Formerly Senior Vice President at Srei Infrastructure Finance and Vice President at Hyflux Water Trust, Mr Yeung also worked at IFC, based in Hong Kong, investing in power, water, ports, roads and renewable energy in emerging markets in Asia. He was investment banker at Credit Suisse First Boston and Bankers Trust in Australia. Mr Yeung holds a B.Ec. (Hons) from University of Sydney, LLB from University of New South Wales, Master of Science in Foreign Service from Georgetown University, and CFA.

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Course Objectives

At the end of the workshop, participants will learn:

- Insight to manage complex projects and to assess project proposals.
- The most crucial technical aspects and risks in PV projects without being an engineer
- How successful PV projects are managed from the first idea to full operation
- To estimate life-cycle costs, revenues in a PV project and its profitability
- Financing strategies and know how to identify the best financing sources
- Specific challenges in PV projects and how to solve them to mitigate risks



Programme Outline

Day 1: Thursday, 6 June 2013 Solar power – an introduction

- The Solar resource
- PV markets global trends, and development and prospects in Asia
- PV market segments (off-grid, residential, commercial & industrial, utility)
- Which PV technologies are on the market and how the technology is developing
- Trends in cost of PV
- Typical PV systems and an overview to their components
- Introduction to the main components
- (modules, inverters, structure, etc.)
- Sources for meteorological data
- Yield estimation and yield forecast

Developing and Managing solar projects *(with case studies)*

- Overview of project cycle from initial concept to operation and maintenance
- Developing PV project plans: Planning and commissioning, approvals, logistics, construction, gridconnection
- Identification (planning, construction and operation)
- Project implementation, coordination and controlling
- The installation process
- Grid-connection
- Technical project risks and how to avoid them
- Risk management of PV projects
- Identification (planning, construction and operation)
- Allocation and mitigation (Contracts, Insurance)
- Engineering, Procurement and Construction (EPC) contracts and contractors

Day 2: Friday, 7 June 2013 Economics and Financing of PV projects (with case studies)

- Appraising Investment Risks and Returns Framework Overview
- Fundamental demand and supply analysis
- Feed-in-tariff and offtake arrangements
- CAPEX and OPEX
- Cash flow behaviour in the project life-cycle
- Financing requirements and project financing
- Financing sources (international examples from commercial banks, other sources of financing, equity financing)
- Security arrangements and other considerations
- What happens when a project 'goes bad'?

Practical work with an Excel based cash flow/financing model

- Modelling of a MW PV project
- Net Present Value
- Pay-back period
- Project Internal rate of return (IRR)
- Leverage effect
- Sensitivity analysis

Local Project Presentations and Experience Sharing Sessions

Technical Guest Presentation and Case Studies from 2 local functioning PV Installations

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Financing and Management of Solar PV Projects Course Registration Form 6 – 7 June 2013



	Fee/Person	Number of Participant(s)	Fee Payable
Normal Fee	S\$ 900		
Early Bird (Registration & Payment made before 17 th May 2013)	S\$ 800		
Group Fee	S\$ 800		

- Fees are inclusive of all taxes.
- Fees quoted are in Singapore Dollars (SGD) and can be paid in SGD via Direct / Telegraphic Bank Transfer or Credited through PayPal.
- Fees include refreshments, lunch and course materials.
- Enjoy discount rates for 4 persons or more
- Only one type of discount scheme is applicable at one time.
- Please print and complete additional sheets where necessary.
- Important: All participations must make payment in Full before attending the course.

Bank / Electronic Transfer Details

Name: Sustainable Energy Association of Singapore

Account No: 033-901909-7

Bank: DBS

Swift Address: DBSSSGSG

Bank Code:7171 Branch Code: 033

Participant's Details

1.	Name (*Dr/Mr/Mrs/Ms):		Designation:		
	Handphone No	Email:			
2.	Name (*Dr/Mr/Mrs/Ms):		Designation:		
	Handphone No	Email:			
3.	Name (*Dr/Mr/Mrs/Ms):		Designation:		
	Handphone No	Email:			
Organization's Details					
Company Name:					
Company Address: Postal Code					
Contact Person's Name: (*Dr/Mr/Mrs/Ms): Tel: Tel:					
Fax	: [Email:			

* Please delete accordingly

To register online for the course, please click here. You can also send your registration to training@seas.org.sg or fax number below. Please call +65-6337-9886 for more information.

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