



# Master Class on Bio Renewable Energy

**Date** : 6<sup>th</sup> June 2013

**Time** : 8:30am – 5:00pm

**Venue** : Bangkok International Trade and Exhibition Centre (**BITEC**)  
88th Bangna - Trad Road , Bangna,  
Bangkok 10260, Thailand.

Bio Renewable Energy is an extensive ecosystem, spanning across biomass, waste-to-energy, biogas, biofuels etc. Understanding each technology, its applications, engineering benefits and constraints alongside risks and financial profitability of projects is critical for project developers and investors seeking to venture into this field.

Concurrent with the **Renewable Energy Asia/Entech Pollutec Asia 2013 Expo** in Bangkok, the Sustainable Energy Association of Singapore (SEAS) is organizing a 1-day Master Class on Bio Renewable Energy sources.

## Programme Outline

### Introduction

- Demystify bio renewable and how you can participate
- Why more participation is needed in this emerging market segment

### Feedstock

- Municipal Solid Waste: waste to wealth
- Agricultural waste: Palm, Cassava, Coconut
- Energy Crops:
  - Sweet Sorghum
  - Energy Grasses
  - Cassava
  - Eucalyptus
  - Willow
- Emerging Feedstocks:
  - CO<sub>2</sub> & Algae
  - Jatropha

### Technology Demystified

- Anaerobic Digestion
- Trans-esterification
- Gasification and Plasma Arcs
- Boiler and Incinerators
- Catalyst based conversion
- Fermentation
- Industrial Bio-technology

### Objectives

At the end of the course, the participants will understand:

- the sources and values of renewable fuels & materials in ASEAN markets
- how Municipal Solid Waste (MSW) and other feedstocks can be used for a variety of products including electricity, fuel pellets, chemicals and cosmetics
- the commercially available technologies to process the fuels & materials
- which technologies are most suitable under different regulations and incentives in South East Asia
- investment success in these markets with some real world examples.

### Target Audience

- Operation Managers
- Engineers
- Technical Staff
- project developers
- Consultants
- Strategic Planners
- Business Analysts
- Finance Managers
- Energy Specialists
- Agriculture Professionals

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### Products

- Electricity
- Fuels
- Plastics
- Chemicals
- Cosmetics
- Pharmaceuticals
- Heat for Process
- Combined Heat and Power (CHP)



### Project Development

- Non-ASEAN regulations (fuel)
- Corporate mandates and investment hurdles
- Development framework and global compliance

### Project Drivers, Markets and Regulations

- Energy Regulation overview
- Energy Incentives overview
- Fuel Subsidies
- National Industry Focuses

### Project Development & Case Studies

Organized by:



Supported by:



Sustainable Energy Association of Singapore (SEAS)

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## About SEAS

Sustainable Energy Association of Singapore (SEAS) an industry association launched in 2006, today has 160 members in the area of Energy Efficiency, Solar, Wind, Biomass, Carbon and Clean Energy Financing. SEAS aims to be the voice of sustainable energy industry and promote the business of its member companies.

Today, SEAS is also specializing in running trainings, courses and conferences only in the area of sustainable energy. SEAS aims to be the one stop, information and training provider, in the area of sustainable energy. Our trainers and lectures are not only highly qualified academic professionals but also industry specialists and professionals that are successful and sought after practitioners in the area of Sustainable Energy. Majority of Key Qualified Personnel (KQP) and Accredited Energy Services Companies are members of SEAS. They have, as a group successfully executed a multitude of energy projects with varying complexities both locally and regionally.

## About the Trainer



**Steve Peters** brings 25 years of engineering and social leadership to the development and delivery in the new energy economy - changing the way we think, build and operate our industries, products and lifestyles. With development experience throughout Asia Pacific varying from the roll-out of new telecom networks, development of rural bio-gas power in Cambodia to the renovation of a Mosque in Singapore, Steve brings extensive cross cultural understanding to development and social development. Steve works in a company that develops and delivers renewable and sustainable projects throughout the Asia Pacific region. He has recently published a book about transitioning to sustainable living without going crazy entitled "Greenotoxosis".

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## Registration Form

	Fee/Person	Number of Participant(s)	Fee Payable
Normal Fee	S\$ 500		
Early Bird (Registration & Payment made before 17 <sup>th</sup> May 2013)	S\$ 450		
Group Fee	S\$ 450		

- 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

- Name (\*Dr/Mr/Mrs/Ms): ..... NRIC: ..... Designation: ..... HP No: .....  
 Email: .....
- Name (\*Dr/Mr/Mrs/Ms): ..... NRIC: ..... Designation: ..... HP No: .....  
 Email: .....
- Name (\*Dr/Mr/Mrs/Ms): ..... NRIC: ..... Designation: ..... HP No: .....  
 Email: .....

### Organization's Details

Company Name: ..... Company Address: .....  
 Postal: ..... Contact Person's Name : (\*Dr/Mr/Mrs/Ms) .....  
 Tel: ..... Fax: ..... Email: .....

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

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