energyPRO Energy Systems Modelling Training

Date: 26th and 27th September 2013

Venue: London, UK. Address TBC

Day 1   Agenda

09:30   Arrival/ Setup/Coffee

10:00   Introductions, overview of agenda

10:05   energyPRO Overview

- Explanation of each module
- Installing energyPRO & upgrades
- Getting Help: accessing help menu, tutorials, technical support

10:25   Design Module

- Creating a simple project - using natural gas, a boiler, CHP, a heat demand, flat rate electricity market
- Modifying heat demands using fixed profiles and temperature files
- Economy - adding in revenues and operational expenditures
- Understanding operational strategy

11:30   Coffee Break

11.40   Electricity & Thermal Stores

- Modelling electricity: adding in an electrical demand, fixed tariff market
- Adding a thermal store

1:00   Lunch

1.30   Emissions and Reports

- Environment – adding emissions , CO_2, NOx, SOx
- Understanding the reports – energy conversion etc
- Creating a custom report

3:00   Coffee

3:10   Modelling Heat Rejection & Cooling

- Adding heat rejection
- Adding cooling demands, absorption chillers and electric chillers
- Adding associated revenues and costs
- Understanding the operational strategy for cooling

4:15 Finish

Day 2 Agenda

09:45   Arrival/ Setup/Coffee

10:00   Overview of agenda day 2

10:05   Other generation & storage technologies: Solar Thermal, PV, Wind & Heat Pumps, different fuels

- Adding solar thermal - setting up a project with solar thermal, a thermal store and a heat demand
- Adding PV
- Adding Wind
- Adding biogas and biomass
- Island operation, battery storage & electric car charging

11:30   Coffee Break

11.40   Finance, Accounts & Region Modules & Formulae

- Understanding Finance Module - capital investments, loans
- Understanding Accounts Module - balance sheets
- Understanding Region Module - adding a new site, adding an interconnection, other uses of sites
- Using formulae

1:00   Lunch

1.30   More Formulae, Multiple Units and User Defined Operational Strategies

- Formulae: Power led control strategies, user defined energy conversion units, parasitic loads
- Dual fuel, Adding multiple CHP, dependency of units, user defined operational strategies

3:00   Coffee

3:10   Advanced Electricity Markets

- Modelling ESCos and spot markets

4:30   Finish