

# ERSCP 2012: Workshop Design Sheet

## Workshop Design and Content

### **Title of Workshop \***

Sustainable energy systems in the food processing sector

### **Subtitle**

Improving the energy performance of industrial processes by renewable energy and energy efficiency

### **Objectives**

Identify opportunities and synergies for and integration of the topic of renewable energy and energy efficiency in current key challenges of the food processing industry

### **Short Description of Workshop Outline (max. 2000 characters) \***

The food processing industry has a considerable potential for integrating renewable energy in its processes. There is a relevant amount of low-temperature heat demand (i.e. below 100-150°C) which might be covered by solar thermal energy. Moreover, biogenous waste streams are a potential resource for biogas plants. At the same time, many plants show a high potential for efficiency improvement, in particular by a more effective use of waste heat streams and cascade heat utilisation. Under current economic conditions the economic incentive to invest in renewable energy and energy efficiency projects for industrial applications is limited. However, there might be synergies between measures improving the energy performance and current, hot topics and challenges to be solved in the companies. Therefore, in this workshop we want to find answers to the following questions:

- 1) Where are we able to identify synergies between current crucial decisions, challenges and topics in food processing companies (e.g. waste water treatment, biogenous waste flows, re-structuring of production processes, investment in new production facilities, ...) and the integration of renewable energy and energy efficiency?
- 2) Where are the largest synergies between an improvement of energy efficiency and renewable energy in the food processing industry (e.g. with respect to the decrease of required temperature levels and solar thermal)?
- 3) What can we learn from practical (international???) examples of the integration of renewable energy in the food processing sector?
- 4) What are new and innovative options of integrating renewable energy and energy efficiency measures in the food processing sector?
- 5) How is it possible to overcome barriers for improving the energy performance in the food processing sector?

### **Expected Outcomes and Results**

Documentation of specific options for the integration of renewable energy and energy efficiency in processes of the food industry  
Documentation of required steps to overcome barriers

**Input 1:** Smart production in the food and beverage industry - methodologies, tools and case studies  
Presenter: Christoph Brunner

**Input 2:** Solar process heat plant at a brewery - Experience and outlook  
Presenter: Bastian Schmitt, Universität Kassel

**Input 3:** Brewing beer - efficient and sustainable technologies in regard to energy and raw material input  
Presenter: Ludwig Scheller, GEA Brewery Systems

### **Additional Inputs – Comments, Ideas:**

Waste water treatment and the options for biogas, Günther Bochmann, BOKU IFA-Tulln