



## SUSTAINABLE ENERGY EUROPE

### AWARDS COMPETITION 2011 APPLICATION FORM

Please send the completed form back to:

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EUROPEAN  
COMMISSION

### Project description

<b>Project title</b>	Recovery of waste heat by large capacity heat pumps for Riga city district heating system slogan: Riga substitutes fossil fuel with recovered waste energy	State the name/slogan/title of the project or programme, under which your Sustainable Energy Partnership will be identified throughout the Campaign (max 200 signs)
<b>Website</b>	<a href="http://www.rea.riga.lv">www.rea.riga.lv</a>	
<b>City</b>	Riga, Latvia	
<b>Start date</b>	11/01/2010	
<b>End date</b>	01/11/2011	

### Project details

<b>On sentence description</b>	Waste heat utilization using large scale absorption heat pump in the cogeneration plant in Riga city district heating network.	Describe in one sentence your project. Maximum 200 car
<b>Summary</b>	<p>The objective of the project is to implement best available technology in city district heating and cooling generation, promote climate tackling activities and to disseminate experience of energy efficiency achievements in both local and international level.</p> <p>Sustainable Energy Action Plan (SEAP) 2010-2020 was created by Riga Energy Agency and was approved by the Riga City Council on the 6th of July 2010. The first stage of SEAP 2010-2020 include the increase of the energy performance of heat generation equipment through the introduction of waste heat recovery by implementation of</p>	Provide a general description of the project, outlining its global aim, concrete objectives and actions. Maximum 2200 car

large scale heat pumps and heat recovery from waste water with consecutive supply of district heating and cooling for municipal use. It will allow to utilize waste heat in the number of cogeneration plants connected to Riga city district heating network without incineration of fossil fuel. The project has essential international replication potential.

The first action of SEAP 2010-2020 is implementation of absorption heat pump technology in Riga City District Heating company JSC RIGAS SILTUMS Imanta Powerplant. The energy efficiency of cogeneration station is increased by introduction of 2 MW absorption heat pump with closed-loop system to replace the existing open-loop cooling towers that were used to cool cogeneration station. The energy saving is gained by utilizing water of cogeneration cooling loop, which previously was drained in sewerage and heat lost in atmosphere. The technological process of absorption heat pump requires 3 MW of high temperature heat source, which is in the form of steam provided from existing steam boiler. The absorption heat pump not only provides chill water to cool cogeneration station, but additionally assists district heating network by providing hot water supply.

This first installation in Imanta Powerplant is already in place and it can be used as research unit for evaluation of technology suitability with the aim to generate more heat from recovered low potential heat waste sources. The future action plan includes waste heat utilization for district cooling implementation for Riga city.

The main project partners are: RIGA ENERGY AGENCY - the municipal agency with one of the missions to elaborate the Program for Increase of Energy Efficiency and to organize its implementation; LATVENERGO JSC (100% state owned National power company) - the main heat and power producer for Riga city; RIGAS SILTUMS JSC (49% municipality owned) - the main heat distributor and second biggest heat and power producer in Riga city. Its market share is about 3/4 of all heat demand in the city; RIGAS ŪDENS LTD is the main water supplier for Riga city.

**Expected and/or achieved results/deliverables**

This first installation in Imanta Powerplant is in operation since November 2010. The discounted payback period of project investment is 3 years. The expected results shows decreased gas consumption by 842 000 m3/year and saving in water consumption by 27 000 m3/year. Till November 2011, will be carried out monitoring and evaluation of the system performance. The results will be presented on the Riga Energy Days 2011 which Riga Energy Agency will organize in the October of 2011.

Please describe the main expected results of your project and milestones with implementation dates.

**Beneficiaries**

Individual consumers - increase in efficiency of production process gives not only better tariffs, but also for local environment diminishes the negative ecological impact;  
 Industry - know-how development in cogeneration station waste heat utilization;  
 Education - provides research base for evaluation of technology suitability with the aim to generate more heat from

Please describe the direct beneficiaries of your project (eg. Individual consumers, education, industry, commerce, agriculture, manufacturers, housing companies, etc.)

recovered low potential heat waste sources

**Main Category**

- Communicating
- Consuming
- Learning
- Living
- Producing
- Travelling

Please indicate the main category of your project (Awards Competition).

**Communicating:** Projects that raise awareness about energy and which aim at changing perceptions and behaviour.

**Consuming:** Projects, activities or services designed to help reduce energy consumption both for private consumers, public authorities and private corporations.

**Learning:** Projects designed to enhance knowledge and skills related to energy efficiency and renewable energy.

**Living:** Projects that aim to make buildings more energy-efficient or that incorporate the on-site generation of renewable energy.

**Producing:** Projects directly related to renewable energy production or the manufacture of energy-efficient products.

**Travelling:** Projects related to transport, whether of people or goods, that focus on energy-efficiency or the use of renewable energy sources.

**Sub Category**

- Communicating
- Consuming
- Learning
- Living
- Producing
- Travelling

Please indicate the sub-category of your project.

**Project keywords**

- |   |  |
|---|--|
| <input type="checkbox"/> Active house                 | <input type="checkbox"/> New buildings               |
| <input type="checkbox"/> Alternative fuels            | <input type="checkbox"/> Old buildings               |
| <input type="checkbox"/> Appliances                   | <input type="checkbox"/> Passive house               |
| <input type="checkbox"/> Biofuel                      | <input checked="" type="checkbox"/> Power generation |
| <input type="checkbox"/> Biomass                      | <input type="checkbox"/> Power grid                  |
| <input type="checkbox"/> Buildings/Construction       | <input type="checkbox"/> Public buildings            |
| <input type="checkbox"/> Certification                | <input checked="" type="checkbox"/> Renewable energy |
| <input type="checkbox"/> Commercial buildings         | <input type="checkbox"/> Residential buildings       |
| <input type="checkbox"/> Energy advice                | <input type="checkbox"/> Retrofitting                |
| <input checked="" type="checkbox"/> Energy efficiency | <input type="checkbox"/> Rural areas                 |
| <input type="checkbox"/> Geothermal                   | <input type="checkbox"/> Solar/Sun                   |
| <input checked="" type="checkbox"/> Heating/Cooling   | <input type="checkbox"/> Sustainable transport       |
| <input type="checkbox"/> Hydropower/Water             | <input type="checkbox"/> Telecommunications          |
| <input type="checkbox"/> Lighting                     | <input type="checkbox"/> Tourism                     |
| <input type="checkbox"/> Mobility                     | <input type="checkbox"/> Wind                        |

Please indicate from the following list, the Main Keywords that best reflects the context of your project. (Tick all that apply)

**Coordination**

### **Main Coordinator**

Please indicate the main organisation responsible for the implementation of the programme or project.

**Organisation Name** Riga Energy Agency  
**Organisation type** Public administration  
**Country** Latvia  
**City** Riga  
**Website** www.rea.riga.lv

### **Partners**

Please indicate below other organisations involved in the realisation of this programme or project.

**Organisation Name** Riga Technical University  
Heat Gas and Water Technologies Institute  
**Country** Latvia  
**City** Riga  
**Website** www.rtu.lv

**Organisation Name** Latvenergo JSC  
**Country** Latvia  
**City** Riga  
**Website** www.latvenergo.lv

**Organisation Name** RĪGAS SILTUMS JSC  
**Country** Latvia  
**City** Riga  
**Website** www.rs.lv

**Organisation Name** RĪGAS ŪDENS LTD

**Country** Latvia  
**City** Riga  
**Website** www.rw.lv

## Contact information

### Main Contact

Please indicate the contact details of the person making this application. The same person should also sign and return the Partnership Declaration form.

**Title** Mrs.  
**Lastname** Rubīna  
**Firstname** Maija  
**Function** Director  
**Tel** +371-67012350  
**E-mail** maija.rubina@riga.lv

### Organisation

**Organisation name** Riga Energy Agency  
**Organisation type** Other  
**Address line1** Brivibas street 49/53  
**Address line2**  
**Post code** LV-1010  
**City** Riga  
**Country** Latvia  
**Website** www.rea.riga.lv

## Financial Sources

Total budget	720 664 EUR	Please provide an overview of the financing of your project.
Budget source 1	JSC RIGAS SILTUMS turn key project	97 % of the budget
Budget source 2	Latvenergo JSC research project	2 % of the budget
Budget source 3	RĪGAS ŪDENS LTD researc project	1 % of the budget
Budget source 4		% of the budget

## Various Information

### How did you get information to apply to the Sustainable Energy Europe Partnership?

- Direct contact with Campaign Partnership Desk
- Media (Newspapers, TV, Radio)
- Online professional or social network (LinkedIn, Facebook, etc)
- Recommendation from colleague or friend
- Conference / Meeting / presentation of the Campaign
- Internet

Other (please specify)

