



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 764706.

## QUESTIONNAIRE – What are EU Flexibility needs?

**PUMP-HEAT PROJECT STAKEHOLDERS' GROUP GA n. 764706**

### GENERAL INFORMATION

NAME OF THE INSTITUTION	
COMPILER NAME	
ROLE IN THE INSTITUTION	
E-MAIL CONTACT	
TYPE OF INSTITUTION	<i>e.g Turbomachinery OEM, energy utility, DSO/TSO, academia, research centre, HP manufacturer, DHN Manager, energy agency, regulatory agency etc.</i>
Please briefly describe your company and your interest in PUMP-HEAT project outcomes	
Which PUMP-HEAT project Key Exploitable Results is of your most interest?	<ul style="list-style-type: none"><li>- <i>PCM Thermal Energy Storage (Cold and Hot)</i></li><li>- <i>Thermal Energy Storage control strategies</i></li><li>- <i>Electric Market targeted predictive control system</i></li><li>- <i>Innovative two-phase Turbo-Expander for HPs (and other applications)</i></li><li>- <i>Fast response high performance Heat Pump for Combined Cycle flexibilisation and other industrial purposes</i></li><li>- <i>PUMP-HEAT Combined Cycle Layout</i></li><li>- <i>High Temperature Heat Pumps, e.g. for steam generation</i></li><li>- <i>Fast Response Heat Exchanger</i></li><li>- <i>Data Driven/Physics Based Simulation Environment</i></li></ul>

### LOCAL ELECTRIC MARKET INFORMATION

LOCAL ELECTRIC MARKET ANALYSIS	
What is the cost of electricity on the local electric market (Production side – not end-user side)?	
What is the cost of natural gas on the local industrial market (Production side – not end-user side)?	
Can you briefly describe the electric market situation in your country specifically related to RES penetration, role of fossil fuel based power plants	
What are local market needs for what it concerns flexibility?	



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Is there present in your country any incentivation (feed-in, policies, regulatory facilitation etc.) for flexibility aspects?	
Is in your country present any incentivation (feed-in, policies, regulatory facilitation etc.) for non-dispatchable electric RES? And for dispatchable ones? And for RES?	
<b>ROLE OF COMBINED CYCLE IN THE LOCAL ELECTRIC MARKET</b>	
How many active Combined Cycle are present in your country? How many mothballed? How many of them are dedicated to CHP and DHN?	
What is the traditional role of Combined Cycle in your country electric market? What is their usual daily profile?	
Are Combined Cycle still remunerative in your country? Which challenges are currently facing?	

### **PARTICULAR INTEREST OF THE STAKEHOLDER**

<b>HOW TO ENHANCE FOSSIL FUEL PLANTS FLEXIBILITY VIA PUMP HEAT CONCEPT</b>	
Please briefly describe how you're targeting the enhancement of fossil fuel based power plants in your institution (via technological modification as an OEM, via proper plant management strategy as an energy utility/DSO/TSO etc.)	
How your innovation can be coupled to PUMP-HEAT project outcomes?	
What are in your opinion the main challenges of the PUMP-HEAT combined cycle concept for its effective marketability?	<i>e.g Regulatory, cost-benefit, technological etc..</i>

### **PRIVACY AND CONFIDENTIALITY POLICY**

#### **Scope & content**

This PRIVACY AND CONFIDENTIALITY POLICY explains how PUMP-HEAT Consortium handles your personal data and information collected through this questionnaire. Personal data is any information relating to an identified or identifiable person (e.g. e-mail address, name or phone number). Information are your answer to the questionnaire.

#### **Data we collect & how we use it**

PUMP-HEAT Consortium collects answers to this questionnaire and other relevant information voluntarily disclosed by the PUMP-HEAT Project External Stakeholder with the consortium in the framework of WP6 to collect wishes and needs of EU partners about fossil fuel based power plants flexibility needs and how to enhance it via the PUMP-HEAT innovations or other innovative approach. Data and information will be stored in an internal confidential repository and will be included in project reports in anonymized way. We aim to



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protect your personal and confidential data. PUMP-HEAT Consortium uses a variety of commercially available security technologies to protect your data.

**Disclosure to other institutions**

PUMP-HEAT will not provide your personal data and information to any third party outside the consortium without your prior consent. Furthermore any information collected via this questionnaire will be used only for PUMP-HEAT project purpose (WP6 related activities).

**Your right to access, correction and deletion of personal data**

You may opt out of the collection and processing of your personal data/collected information at any time informing project coordinator via email: Prof. Alberto Traverso – University of Genova – [alberto.traverso@unige.it](mailto:alberto.traverso@unige.it) . In addition, you have the right to correct or delete data/information we hold about your institution . You can contact the coordinator at the e-mail address listed above to request a change to your data or a copy of the data stored.