

**EoI – Expression of Interest
PARTNER SEARCH**

**AREA OF INTEREST:
Answers expected before:**

GENERAL INFORMATION		
NAME OF ORGANISATION*: NATIONAL TECHNICAL UNIVERSITY OF UKRAINE “KYIV POLYTECHNIC INSTITUTE”, FACULTY OF ELECTRONICS		
TYPE OF ORGANISATION*: University		
<input checked="" type="checkbox"/> Public body (Research organization/university/lab)		
CONTACT PERSON		
NAME*	Anna	
COUNTRY	Kyselova	
ADDRESS	16, Polytechnichna str., room 313, 03056, Kyiv, Ukraine	
TEL*	+38 0990219910	
FAX		
E-MAIL*	a.g.kyselova@gmail.com	
TYPE OF PARTNER SEARCH*:		
<input checked="" type="checkbox"/> FP7 /HORIZON 2020 SPECIFIC CALL		
CONSORTIUM*		POSITION WITHIN CONSORTIUM*
<input checked="" type="checkbox"/> Create a new consortium		<input checked="" type="checkbox"/> As a Partner
<input checked="" type="checkbox"/> Join an existing consortium		
IF FP7 RELEVANT CALL: AREA OF INTEREST		
COOPERATION	CAPACITIES	
<input checked="" type="checkbox"/> 3 – ICT	<input checked="" type="checkbox"/> Research infrastructures	
<input checked="" type="checkbox"/> 5 – Energy	<input checked="" type="checkbox"/> Research potential	
	<input checked="" type="checkbox"/> International cooperation	
PEOPLE	IDEAS	
<input checked="" type="checkbox"/> Initial Training networks Networks (ITN)	<input checked="" type="checkbox"/> Starting Independent research grant	
<input checked="" type="checkbox"/> International Outgoing Fellowships (IOF)		
<input type="checkbox"/> EURATOM	<input type="checkbox"/> JRC	
CALL DETAILS		
CALL IDENTIFICATION (according to WP): N/A	DATE OF PUBLICATION: N/A	CLOSURE DATE: N/A
PROJECT INFORMATION		

ACRONYME & TITLE: Context-aware energy management control system	
SUMMARY*: Through the last years we have seen increased interest in the area of energy management system (Microgrid control system). Today they are highly distributed, can manage large amounts of energy related data and have to be able to react rapidly (but smartly) when conditions change. This project seeks to develop the energy management system with energy efficiency and will be create a control system that will be able to predict and react smartly to the actions of all electrical facilities (loads and generators) connected to it, by means of converters in the unified information environment. The consortium aims to develop a tool which should be able to rationally utilize energy, efficiently control normal and emergency conditions and to take into account the user comfort. Microgrid control system as a complex information processing system integrates such organization levels as: Renewable sources of energy; Electrical devices; Digital sensors; User tasks. The project will focus on developing of a new mathematical approach to create the information and decision-making model of energy management system. For this a methodology will be develop for the energy efficient control of metadata based on a Raw Context module, Ontology Module, and Context Reasoning Module. In the Raw Context module processing techniques will be created for static and continuous data from heterogeneous source or other patterns in big collections of data because the context information influenced by environment status may be imperfect. Ontology Module represents a description of the concepts and relationships of energy management sys and builds reasoning of large datasets. Context Reasoning Module is interpreting context information based on artificial intelligence methods. This approach enables the effective management of diversity in knowledge that can significantly enhance the human capacity to take effective actions in varied and uncertain situations.	
KEYWORDS: Energy management system, Microgrid, Energy efficiency, Context, Ontology model, Data mining, Reasoning.	
TYPE OF PROJECT Funding scheme : H2020 funding program for the international research cooperation	
PARTNERS ALREADY INVOLVED (Contact Name, Name of organization, e-mail address): No partners involved at present	
PARTNER SOUGHT	
COUNTRY (IES) (if relevant): EU countries	
EXPERTISE REQUESTED*: Type of partner sought: Academic/industry/public sector; Specific area of activity of the partner: Microgrid and energy efficiency; Task to be performed by the partner sought: A lead partner to take on overall project management; development and testing of new software.	
ROLE: <input checked="" type="checkbox"/> Technology development <input checked="" type="checkbox"/> Research <input checked="" type="checkbox"/> Training <input checked="" type="checkbox"/> Dissemination <input checked="" type="checkbox"/> Demonstration	
ORGANISATION TYPE: <input checked="" type="checkbox"/> Public body (Research organization/university/lab)	
HOW MANY PARTNERS ARE REQUIRED?	Three partners