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Project Title:

New Buildings Energy Renovation Business Models incorporating dual energy services

NOVICE

Grant Agreement No: 745594

Collaborative Project

Title	
Deliverable No.	D4.3
Work package	WP4
Task	Task 4.3 End Users requirement and provisions
Lead beneficiary	Apleona
Authors	Stephan Hoerster, Tim Modzien, Michele Vavallo
Delivery date	13/02/2018
Status	Report
File Name:	D4.3 End User Survey FINAL

Dissemination level		
PU	Public, fully open, e.g. web	X
CO	Confidential, restricted under conditions set out in Model Grant Agreement	
CI	Classified, information as referred to in Commission Decision 2001/844/EC.	

Deliverable administration			
No & name	Task 4.3: End Users requirements and provisions		
Status	Final	Due	M8
		Date	31/01/2018
Author(s)	Stephan Hoerster, Tim Modzien, Michele Vavallo		
Description of the related task and the deliverable in the DoA	<p>Experience has shown that building user behaviour is a crucial aspect for the achievement of demanding energy efficiency targets. Therefore, the behavioural aspect has to take a relevant role. Training or even information and dissemination of “best in class” experiences is part of the success. The Aggregator role has to be investigated and defined in order to extract the maximum value in the interaction with end users, understanding their requirements, their behaviours and the potential dynamics over time. This task will define and describe the main requirements and provisions of the end users, particularly with regard to visual and thermal comfort parameters and use of the building services equipment. By means of occupants involvement, NOVICE will ensure to cover social and behavioural aspects. One of the main objectives is to make end users understand the new EPC model, and to ensure that financing structures and requirements are presented in a timely and acceptable manner. Informational aids, including basic financial information and the mechanisms created to increase the impact of the retrofitting project will therefore be developed (input from T2.4 on comfort requirements and control techniques). That objective will be addressed by a survey amongst end users (FM companies and building owners associations) which will gauge their standing towards the dual energy services scheme.</p>		
Comments			
V	Date	Authors	Description
1.0	20/12/2017	S. Hoerster	First draft questionnaire
2.0	08/02/2018	S. Hoerster	Second draft incorporating all comments from partners

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Building Owners and Managers Questionnaire

The International Energy Research Centre (IERC), located in Cork, Ireland, is coordinating NOVICE – New Buildings Energy Renovation Business Models incorporating dual energy services, a project funded by the European Union’s Horizon 2020 research and innovation programme (for more information you can visit <http://www.novice-project.eu/>).

The aim of the NOVICE project – over its 3-year duration – is the development and demonstration of an innovative business model that will provide energy savings to buildings and demand response services to the grid after renovating buildings or blocks of buildings. A dual revenue stream shall thus be enabled that can reduce payback period and improve the return on investment for buildings renovation projects and accelerate the much-needed market uptake of the Energy Performance Contracting (EPC) based financing model.

This survey is quite brief and should take no more than 10 minutes to complete.

Disclaimer: All information gathered in the questionnaires will be anonymised at the acquisition time. The final version of this project derivable will be public but all the input data will be aggregated and we will not identify any participant.

In order to reward you for your participation, we would like to share with you the results of our research (analysis of the questionnaires). In order to receive these results, please enter your email address in the final section of the survey.

Start this form over.

A. Business Activities

Energy services and facility management

1. In which European countries are you operating?

Check all that apply.

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- United Kingdom

2. How large is the building portfolio you manage?

Mark only one oval.

- < 50 buildings
- 51 to 200 buildings
- 201 to 500 buildings
- 501 to 1000 buildings
- > 1000 buildings

3. Please estimate what percentage of these buildings have electricity consumption falling in the following ranges (total across the 4 categories should equal 100%)

Mark only one oval per row.

	None 0%	Less than 25% of buildings	25% to 50% of buildings	50% to 75% of buildings	Greater than 75% of buildings	All 100%
Less than 100,000 kWh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 100,000 kWh and 1,000,000 kWh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 1,000,000 kWh and 10,000,000 kWh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greater than 10,000,000 kWh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Which building types are the focus of your current and future Facilities Management operations?

Mark only one oval per row.

	Low	Medium	High
Data Centers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hospitals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. How much floor area in square meters do you manage in total?

Mark only one oval.

- Less than 10,000 sqm
- 10,000 to 100,000 sqm
- 100,000 to 1,000,000 sqm
- 1,000,000 to 10,000,000 sqm
- Greater than 10,000,000 sqm

6. What kind of technical assets do you operate?

Mark only one oval per row.

	None	Rarely	Common	Very Common
Heat Pumps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thermal Energy Storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standalone Generators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Backup Generators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Combined Heat and Power (CHP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Photovoltaics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy Storage Systems (ESS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electric Vehicle Charging Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HVAC Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chillers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Is it usually your sole responsibility to ensure that technical assets are fully operational on building sites?

Mark only one oval.

- Yes
- No

8. If no, who else has operational responsibility?

B. Energetic renovation measures - Energy Performance Contracts:

9. Are some of the buildings you manage already involved in the following types of Contracting projects? (please select all that apply)

Check all that apply.

- Energy Performance Contracting
- Energy Supply Contracting
- Financing and Leasing

10. **Are you aware of Energy Performance Contracting projects within the buildings you manage? If yes, please select which systems are included in the contracts.**

Check all that apply.

- None
- Heat pumps
- Thermal Energy Store
- Standalone Generators
- Backup Generators
- Combined Heat and Power (CHP)
- Photovoltaics
- Energy Storage System (ESS)
- Electric Vehicle Charging Infrastructure
- HVAC Systems
- Chillers
- Building Management Systems
- Other: _____

11. **Do you see many optimization potentials in the buildings you manage?**

Mark only one oval.

- Yes
- No
- Maybe

12. **If yes, can you specify which potentials you have identified?**

13. **What are the main barriers to implementing the energy saving potentials you have identified?**

Check all that apply.

- Lack of interest from client/management team
- Lack of finance
- Poor return on investment
- Lack of in-house expertise
- Other: _____

C. Metering & Monitoring and data handling

14. **Do you have monitoring systems with real-time data in place to observe energy usage?**

Mark only one oval.

Yes

No

15. **Are data security and data confidentiality an issue in your buildings?**

Mark only one oval.

Yes

No

Depends on the client

Other: _____

16. **Do you provide load curve analyses for your clients?**

Mark only one oval.

Yes

No

D. Energy Procurement and current Demand Response activities

17. **Do you optimize energy procurement processes in your building portfolio?**

Mark only one oval.

Yes

No

18. **Do you operate systems whose operating times and running hours can be managed flexibly? (E.g. production processes, storages, emergency generators, pumps, HVAC systems etc.) ?**

Mark only one oval.

Yes

No

19. **If yes, what percentage of buildings within your portfolio have flexible operating times?**

20. **Do you participate in flexible models for electricity procurement?**

Mark only one oval.

Yes

No

21. Which demand response activities are already happening in buildings you operate?*Check all that apply.*

- Peak shaving
- Load shifting
- Flexible energy tariffs
- Ancillary services (e.g. power balancing)
- None
- Other: _____

22. Do you see potential in remote controlling selected assets to participate in flexible energy tariffs or further DR- activities?*Mark only one oval.*

- Yes
- No
- Maybe
- Other: _____

23. What are the barriers that prevent you from implementing demand response services in buildings you currently operate?*Check all that apply.*

- Client/management is not interested
- Lack of financing for projects
- Lack of in-house expertise
- No suitable buildings in portfolio
- Regulatory barriers
- Other: _____

E. Company Details**24. Company Name**

25. Company Address (Head office)

26. Number of employees*Mark only one oval.*

- < 10
- 10 - 50
- 50 - 100
- > 100

27. Number of offices*Mark only one oval.*

- 1
- 1 - 3
- < 3

28. Name of person completing the survey

29. Would you like to have access to the results of this survey once they are available?*Mark only one oval.*

- Yes
- No

30. If yes, please provide your email address

31. Would you be interested in participating in a short interview to expand some of the ideas in this survey?*Mark only one oval.*

- Yes
- No