

TOOL: QUESTIONNAIRE FOR ENGAGING SMES

Abstract

In this tool we present a standardized questionnaire for service providers to identify potential small and medium enterprises (SMEs) for participation in demand response programs. The collected answers should help you form a decision which companies are appropriate for your demand response (DR) program. The questionnaire is intended for service providers offering demand response services.

What is it?

The questionnaire for small and medium enterprise (SME) engagement is a set of questions which a SME candidate for demand response fills in together with the service provider. The aim of the questionnaire is to make SMEs and service providers aware of the DR potentials of the SME. If in the process the SME is identified as an appropriate candidate for participation in the demand response programme (DR), further steps such as the detailed feasibility study can be done. The questionnaire for SME engagement is a tool for gathering information for the potential of implementation of smart grid technologies, which can be used for peak levelling and electrical energy adaptation. It is practical tool sourced from the guideline [Introducing demand side management to SMEs](#), which is recommended to be read first.

When to use?

The questionnaire is a tool for estimation of DR potentials of SMEs, to see whether they can could be a potential participant in a DR program and benefit from this by reducing electricity costs or for increasing revenues coming from participation in a DR program. The questionnaire is used at the first assessment of a SME, for which the corresponding person (i.e. energy manager or person in charge for electrical energy consumption or production) is approached.

What do you need to do?

The necessary steps for filling in the questionnaire:

1. Meet with the SME: The energy manager of the SME must be present; all other relevant or interested personnel are welcome.
2. Explain the purpose of the demand response project, describing the concepts and emphasizing the technological parameters of peak levelling and/or electrical energy adaptation solutions, the tariff system and possible benefits for the SME. The benefits are presented in a generic manner. After that present the questionnaire to the SME representatives.

3. It is recommended to complete the questionnaire as much as possible during the meeting, because questions may be resolved on the spot.
4. After the reception of the filled-in questionnaire, the data are analysed to make a rough estimation about the SME demand response potential and to provide a decision to go forward or not.
5. The service provider communicates the decision and informs the SME about their adequacy for participation in DR.

Do's and don'ts

- **Fill in the questionnaire together.** It is advisable that the service provider and SME candidate answer the questionnaire together.
- **Collect all data prior to answering the questionnaire.** It is recommended that service provider collects all necessary information prior to the fulfilment of the survey.
- **Verify that all participants understand the data they have to look up.** If the person in question does not have all data that is needed when answering the questionnaire, he can provide these data later. But the service provider must be sure that the corresponding person understands the topic.
- **If needed, sign a non-disclosure agreement.** A non-disclosure agreement (NDA) should be signed in order to secure the data for SME, if required. Make sure to bring an NDA to the appointment for the case the user does not have his own forms.

Best practice example – Kibernet enhancement of adaptation capacity

This tool was used to review the adaptation capacity of the existing user in the KIBERnet project. The representative of the paper industry proposed to participate with one load (gas turbine) with maximal 4 MW of adaptation capacity. Using the [Introducing demand side management to SMEs](#) and this questionnaire showed an additional reduction capacity in grinding machines, chopping benches and others, with a total of 6.5MW of capacity that can be put to use flexibly.

Questionnaire

General information about the SME

1. General information about the SME:

a. Name:

.....

b. Address:

.....

c. Type of branch (*paper mill, foundry, food processing, metal, etc.*)

.....

2. Energy manager or contact person for energy management issues:

a. Name:

.....

b. Phone:

.....

c. E-mail:

.....

Monitoring and planning of electrical (energy) consumption/production

1. How often do you monitor electrical energy consumption/production?

- Real time
- Daily
- Weekly
- Monthly

- Occasionally (every 3 months)
- Yearly
- Never
- Other, please briefly describe:

2. In what way do you monitor electrical energy consumption/production?

- Through a monthly bill
- Manually writing energy data from meters
- Through an EMS (Energy Management System)/AMR (Automatic Meter Reading)
- With the help of distributor and/or supplier (a web page, an application)
- Other, please briefly describe:

.....

.....

3. What information do you use to monitor your electrical energy consumption?

- Amount of electrical energy consumption
- Energy costs (by tariffs)
- Key Performance Indicators (KPI) (e.g. energy consumption/product)
- We do not conduct special monitoring
- Other, please briefly describe:

.....

.....

4. What information do you use to monitor your electrical energy production?

- Amount of electrical energy production
- Energy revenues (by tariffs)
- Key Performance Indicators (KPI) (e.g. cost/kWh produced)
- We do not conduct special monitoring

Other, please briefly describe:

.....
.....

5. On what level do you monitor electrical energy consumption/production?

- Entire company
- Part of production, cost centre level: briefly describe
- Level of individual machines (working processes)
- We do not conduct special monitoring
- Other, please briefly describe:

.....
.....

6. Are you involved in forecasting your electrical energy consumption/production in the future?

- No,
- Yes, please briefly describe:

.....
.....

7. What is the share of electricity costs in respect to the total costs of your company?

.....%

8. What is the share of electricity production income in respect to the total revenue of your company?

.....%

Peak levelling

(Peak levelling is a process that enables to reduce demand during the peak usage periods.)

1. Do you already cooperate with your supplier regarding peak levelling?

No

Yes, please briefly describe in what way:

.....
.....

2. Do you already have a peak levelling system installed?

No

Yes, please briefly describe how it functions:

.....
.....

3. Are you satisfied with the installed peak levelling system outcomes?

Yes

No, please briefly describe:

.....
.....
.....

If you have the question 3. answered “yes”, you can skip the questions 4, 5, and 6.

4. Peak tariff system

(Peak tariff system defines the energy costs during predefined time periods)

a. Time interval to measure the peak (the reading period)

- 15 minutes
- Other, please fill in here:
.....

b. Accounting time interval of the peak (for billing purposes)

- per month
- per year
- Other, please fill in here:
.....

c. Does the supplier require from you daily electricity peak prediction?

- No
- Yes, please briefly describe:
.....

d. Please briefly describe your tariff system if it differs from the description shown above (1a - c) :

e. Peak price: EUR/kW

f. Additional peak penalty price, if the consumption is above contracted capacity, if applicable: EUR/kW

5. What is your average peak power and electrical energy consumption?

a. January: kW, kWh

b. April: kW, kWh

c. July: kW, kWh

6. Amount of process production working hours per month: h
(example: factory working two shifts of 8 hours, 6 days a week will result in 384 hours per month.)

Electrical energy adaptation

Electricity energy adaptation is a process using load control technology focusing on integration of SME (loads) in demand response program.

1. Are you willing to participate in electrical energy adaptation?

- Yes
- No, please briefly explain why:

.....
.....

2. In your view, what should be the lead time to request the flexibility?

- 15 minutes
- 1 hour
- 24 hours
- Other, please specify:

.....

3. What should be the time to provide the flexibility?

- 15 minutes
- 1 hour
- Other, please specify:

.....

4. How should you be informed about the activation of the flexibility system?
(more than one option can be filled in)

- By phone
- By E-mail
- SMS
- Computer to computer (automated system)

Other, please briefly describe:
.....

5. Concerning electrical energy adaptation, the quantity should be defined:

- Fixed - in the contract
- Variable - each time by negotiation
- Other, please briefly describe:
.....

6. Monetary benefits of electrical energy adaptation should be defined as:

- Fixed - in the contract
- Variable - each time by negotiation
- Other, please briefly describe:
.....

7. Are you willing to pay a penalty for not achieving the quantities of electrical energy adaptation, if the conditions of the penalty are defined in collaboration with the supplier?

- Yes
- No, please briefly explain

why:.....
.....

Own electrical production units

1. Do you have any electricity production units?

- Yes
- No

2. What types of electricity production units do you have?

Note: please leave this table empty if you do not own or manage any electricity production units.

Flexible power is portion of the production unit capacity power, which could be changed for electrical energy adaptation.

Electricity production unit	Installed capacity (kW)	Flexible power (kW)

Electrical loads

Note: please list the largest electrical loads in the table below. Percentage of working time is the ratio of working time of the load and total factory working time. Example: factory is working from 6 a.m. to 10 p.m. and in that period the load operated 10 hours. Percentage of working time is 63 %.

Load	Average working power (kW)	Percentage of working time (%)

Business case

1. Which factors are important to you when making a decision about participating in peak levelling/electrical energy adaptation?

Note: please rate each answer from 1 (least important) to 5 (most important).

Factor	Relevancy
Preserving nature and environment	
Economic benefits	
Subsidies/grants	
Payback period of investment	
Introducing new Smart Grid technologies	
Understanding own consumption and production profile	
Other, please briefly describe:	
1)	
2)	
3)	

2. In your view, the payback period of energy investments should be..... years.

This guideline was developed in the S3C project, and is freely available from www.smartgrid-engagement-toolkit.eu.

S3C paves the way for successful long-term end user engagement, by acknowledging that the "one" smart consumer does not exist and uniform solutions are not applicable when human nature is involved. Beyond acting as a passive consumer of energy, end users can take on different positions with respective responsibilities and opportunities. In order to promote cooperation between end users and the energy utility of the future, S3C addresses the end user on three roles. The *smart consumer* is mostly interested in lowering his/her energy bill, having stable or predictable energy bills over time and keeping comfort levels of energy services on an equal level. The *smart customer* takes up a more active role in future smart grid functioning, e.g. by becoming a producer of energy or a provider of energy services. The *smart citizen* values the development of smart grids as an opportunity to realise "we-centred" needs or motivations, e.g. affiliation, self-acceptance or community.

S3C performed an extensive literature review and in-depth case study research in Smart Grid trials, resulting in the identification of best practices, success factors and pitfalls for end user engagement in smart energy ventures. The analysis of collected data and experiences led to the development of a new, optimised set of tools and guidelines to be used for the successful engagement of either Smart Consumers, Smart Customers or Smart Citizens. The S3C guidelines and tools aim to provide support to utilities in the design of an engagement strategy for both household consumers and SMEs. The collection of guidelines and tools describe the various aspects that should be taken into account when engaging with consumers, customers and citizens. More information about S3C, as well as all project deliverables, can be found at www.s3c-project.eu.