

The background is a solid blue color. It features several faint, light blue geometric shapes, including rectangles and lines, some of which are overlapping. There are also several small, light blue arrows pointing upwards and to the right, scattered across the background. The overall aesthetic is clean and modern, typical of a corporate or technical presentation.

# Task XVII, Subtask 1

Workplan



Business from technology

# Subtask 1: Information collection on the characteristics of different types of DER in the integrated solutions (1)

The information to be collected and analysed is dealing with integrated solutions where energy efficiency/demand response is combined (or seen possible to combine) with at least one of the following technologies: distributed generation, energy storage or smart grid technology aspects. The exact definition of DG will be defined, but it includes both low and medium voltage level generation as well as large aggregated generation of small units at transmission system level (like wind farms).

The information is collected both by the OA and country experts based on research, pilot projects, demonstrations and other experiences.

OA prepares a list of projects/public sources on the available information and prepares a draft of questionnaire to country experts. This is discussed at the first expert meeting and agreed how country experts proceed with the information collection.

# Subtask 1: Information collection on the characteristics of different types of DER in the integrated solutions (2)

The exact form of the information collection will be defined at the first expert meeting, but information to be collected include at least

- technical information on the integrated use of DER (minimum requirement is DR or DSM in combination with one of the following technologies: DG, storages, Smart Grid Technologies)
- penetration levels of technologies
- market conditions
- economic impacts on different voltage and system levels

## Definition of DG

- max limit of individual units 20 MW
- Large variable output generation over 20 MW
  - windfarms
  - chp
  - run of river hydro
- But also aggregated DG systems connected to transmission networks (windfarms)
- (What about isolated systems?)

## What information is collected/produced by country experts on integrated solutions? (1)

- ❑ Country description on
  - Policies, driving forces
  - Market structure
  - Status and targets for DG, RES, DR/DSM
  - Network access of DER
  - Market access of DER
  - Problems caused by DER to electricity system (networks, TSO). Solutions?
  - Barriers
  - ?
  - Questionnaire?

## What information is collected/produced by country experts on integrated solutions? (2)

- ❑ Literature references
- ❑ Data base on ongoing activities in each country
  - Research projects
  - Case studies
  - Demonstrations/field tests/pilots
  - Existing practices
  - Business cases
- ❑ Technology status (penetration level, economy)?
  - What technologies (related to integration)
    - Generation
    - Storages
    - Network access
    - Metering and ict
    - Smartgrid
    - ?

## Format of country description

- Independent document of each country as an annex to the state of the art report? 5 -10 pages (or more depending on the country)
- Questionnaire included
  - OA prepares draft for comments on the basis of Task XIII questionnaire
- Country comparison report?

## Format of the description of projects/pilots/...

- power point slides (like in IRED pilots) with agreed information
- excel-format (like in Task XIII)
- word-document (like in Task XV)
- combination of these



## Input from the operating agent

- Collection and organising data
- Collection of information from international sources
- Country comparison report

## Time schedule

- Finland
  - Small updates, before Eastern
- USA
  - OK, updating pilot/case studies: 1st week of April
- Netherlands,
  - Fenix update: second week of April
- Spain
  - Questionnaire: this week
  - Country report: next week
  - Case studies: end of March
- Korea:
  - Country report: end of March
- Italy: ?