

Demonstration Project of Redispatch and Marketing of Unused Small Flexibilities behind Intelligent Measuring Systems

### Overview

**Aim:** The Redispatch 3.0 aims to enhance the existing Redispatch 2.0 process by expanding its activities and outreach. A goal is to foster increased cooperation and information exchange between Distribution System Operators (DSOs) and Transmission System Operators (TSOs).

Duration: January 2022 - December 2024

## Approaches for Redispatch 3.0

Overall architecture that covers:

- Al-based forecast of controllable resources < 100 kW</li>
- Preventive and curative congestion management
- Aggregation of controllable resources < 100 kW</li>
- Smart meter gateways and grid automation
- Incentives and digital grid connection points
- Coordination of DSOs, TSOs, controllable resources and aggregators
- Integration of existing Redispatch 2.0 processes

## **Project Milestones**

# WP5 Analysis of potential Post marketing analysis WP4 Field tests Rural and urban areas WP3 Development of application Coordination interface, real-time cascade and optimization of network control system WP2 Development of technologies Incentive models, cascade communication optimization in operational planning and management

WP1 • Requirements analysis & conception Use cases, requirements, architecture and interfaces

### Key Challenges for a Redispatch 3.0

- Grid operators are expected to face an increased number of controllable resources < 100 kW, such as photovoltaic, electric vehicles, storage systems and heat pumps.
- Controllable resources < 100 kW are not part of Redispatch yet
- Operators of these resources do not forward schedules and their behaviours are not easy to predict
- Interaction between load & feed-in in the distribution grid

Redispatch		1.0	2.0	3.0
貫	Transmission System Operator	✓	~	~
ŧ	Distribution System Operator		~	~
	Power plants > 10 MW	~	~	$\checkmark$
	Power plants 100 kW - 10 MW		~	~
↑暉	All renewable energies > 100 kW		~	~
↑冊	All renewable energies < 100 kW			~
	Prosumer, batteries, heat pumps, electric vehicle, variable loads etc.			$\checkmark$
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