



Research Area

Integration of Renewable
Energies in the Energy System

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TradeRES

New Markets Design & Models for
100% Renewable Power Systems

Tools for the Design and Modelling of New Markets and
Negotiation Mechanisms for a ~100% Renewable European
Power System

Motivation

The TradeRES project will develop and test innovative electricity market designs that can meet society's needs for a (near) 100% renewable power system. A long-term sustainable market design needs to provide efficient operational and investment incentives for an electricity system that is characterized by a high share of variable renewable energy sources (VREs) by increasing integration with other energy sectors, e.g. transport and hydrogen, and by increasing participation of flexible electricity demand from households to industrial consumers.

Furthermore, this market design needs to provide security of supply by ensuring sufficient controllable electricity generation capacity whilst being economically efficient.

This project aims at finding market designs that are economically efficient in the above setting. To achieve these goals the project will use an iterative methodology and involve the key players from the energy sector in order to achieve and test the most suitable market designs.

Objectives

The main objectives of this project are:

1. To develop **new electricity market designs for ~100% renewable power systems**;
2. To **model and simulate the new market** agents, procedures and mechanisms;
3. To develop **open-access tools for analyzing ~100% renewable** electricity markets;
4. To **engage key stakeholders** in the development, improvement and use of the new market simulation tools;

Structure and Workplan

The work plan will be developed in 4 main steps and organized in 7 work packages: one (WP1) for coordination and management and another (WP7) for efficient dissemination and exploitation of results.

Partnership

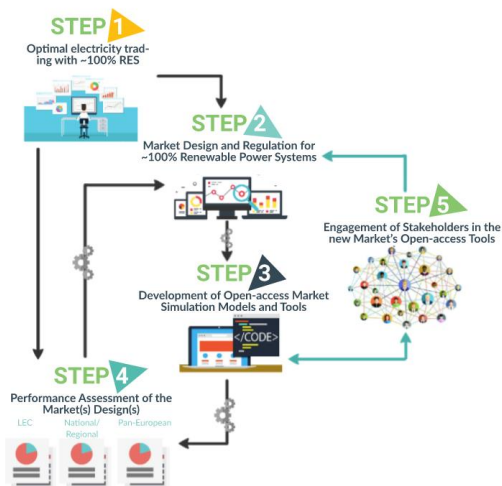
LNEG (coordinator), Imperial College London, TNO, Smartwatt, EnBW, ISEP, TUDelft, DLR, bityoga, VTT.

Web page

<https://traderes.eu/>

Project Duration

48 months



The research and development are concentrated in four work packages (WP2, WP3, WP4 and WP5) that interface closely with the stakeholders (operators of market, aggregators, VRE power plants, energy network communities) through a dedicated work package (WP6). For a detailed information on the workplan, access the projects site *tradeRES.eu*

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