

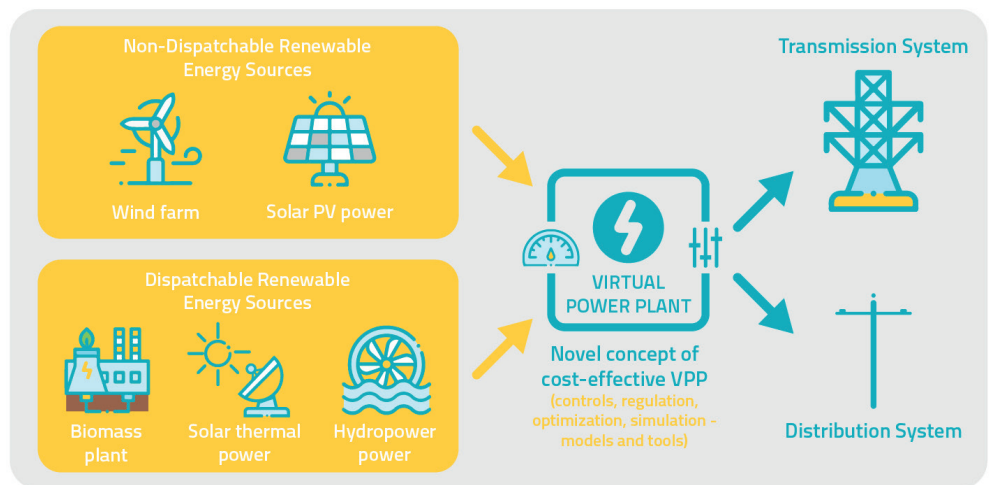
# POSYTYF PROJECT: POWERING SYSTEM FLEXIBILITY THROUGH DYNAMIC VIRTUAL POWER PLANTS



Today, ensuring power system stability is the main bottleneck to the further integration of Renewable Energy Sources (RES). A solution to overcome this is to increase the share of dispatchable RES, i.e. the ones which have a natural energy storage capacity (solar thermal or hydropower plants).

**POSYTYF intends to develop output methodologies to increase the performance of an integrated portfolio of dispatchable and non-dispatchable RES to be operated together as a Dynamic Virtual Power Plant, capable of providing flexibility and ancillary services to the energy system.**

The DVPP concept facilitates the integration of RES generators into the electrical network by offering their combined flexibility (ramping up and down at short notice for frequency control), internally balancing their fluctuations, and selling their aggregate generation output in the wholesale market.



## POSYTYF will:

- > Determine optimality criteria to define the DVPP perimeter for long term and real-time application
- > Develop new controllers to allow RES to contribute to ancillary services
- > Test the developed solutions by simulation and Hardware in the Loop (HiL) on realistic scenarios
- > Define new business cases for the optimal operation and configuration of DVPP
- > Propose regulatory recommendations to support the DVPP deployment
- > Assess economic competitiveness of the DVPP compared with solutions combining variable renewable energy with electrochemical storage
- > Propose new stability definitions and methodologies for stability analysis and assessment

The consortium gathers 12 partners including academics, TSO, DSO, RES generator and software developer.

## PROJECT ID

- > Call: LC-SC3-RES-16-2019- Development of solutions based on renewable sources that provide flexibility to the energy system
- > Project title: POvering SYstem flexibiliTY in the Future through RES
- > Duration: June 2020 – May 2023
- > Budget: 4,7 M€
- > Coordinator Professor B. Marinescu, École Centrale de Nantes

## CONTACT & INFO

[www.posytyf-h2020.eu](http://www.posytyf-h2020.eu)

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