



Consumers as Guardians of the Power System

Vienna, 15 October 2019

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Coordinator of the FutureFlow Project



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 691777

2050 EU Goal
(Energy Roadmap 2050)

The EU is committed to reducing
greenhouse gas emissions
to 80–95% below 1990 levels
by 2050

2050 EU Goal
(Energy Roadmap 2050)

1990

2050



Basic solutions



physical assets



infrastructure

Additional measures



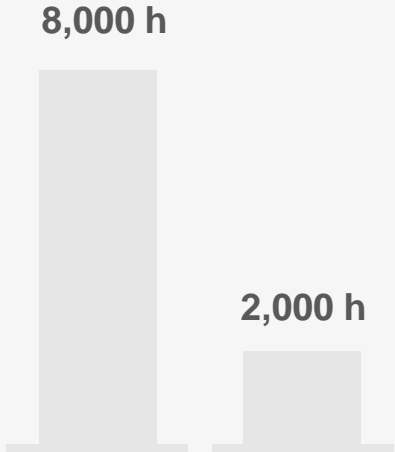
- Energy Efficiency
- Activation of consumers
- Smart Grids
- Cross Sector action

2050

What is happening today?



Lowering of operational hours of thermal power plants (coal power plants)



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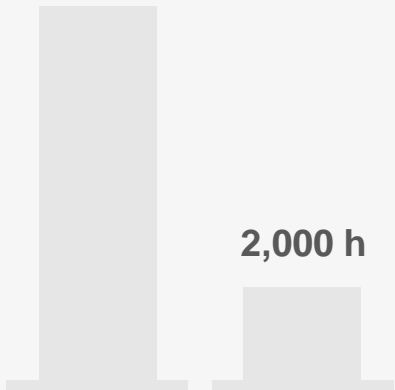


Lowering of operational hours of thermal power plants (coal power plants)

Introduction of capacity mechanisms for ensuring stability of operation with lower share of coal power plants

8,000 h

2,000 h



What is happening today?



Lowering of operational hours of thermal power plants (coal power plants)

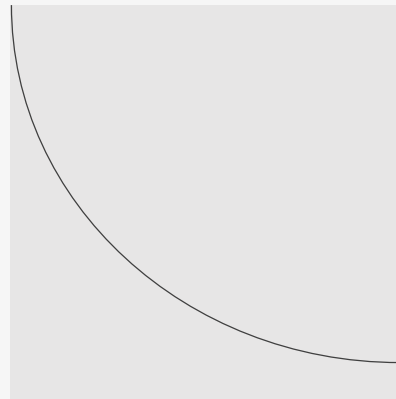
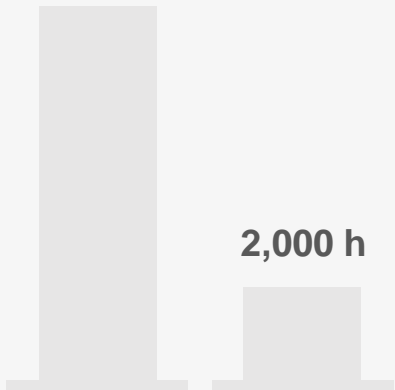
Introduction of capacity mechanisms for ensuring stability of operation with lower share of coal power plants

Switching thermal power plants to system services

Lowering the prices of system services

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2,000 h



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Switching thermal power plants to system services

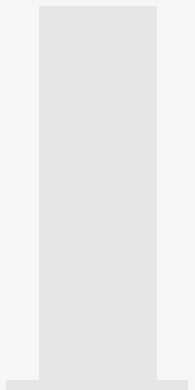
Lowering the prices of system services



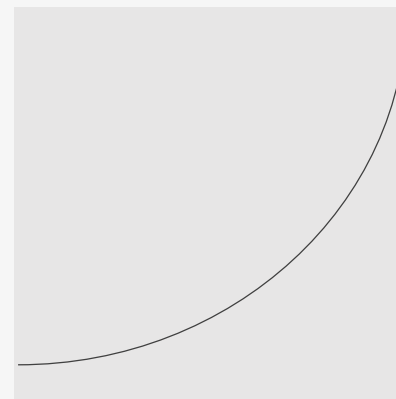
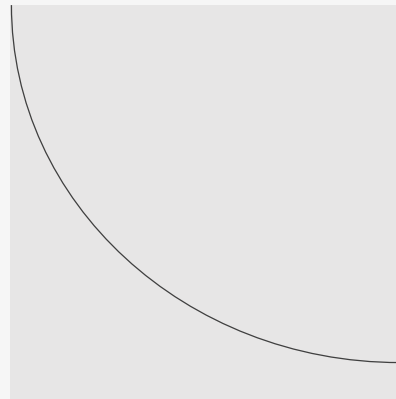
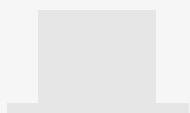
Closing of thermal power plants

Raising the prices of system services

8,000 h



2,000 h



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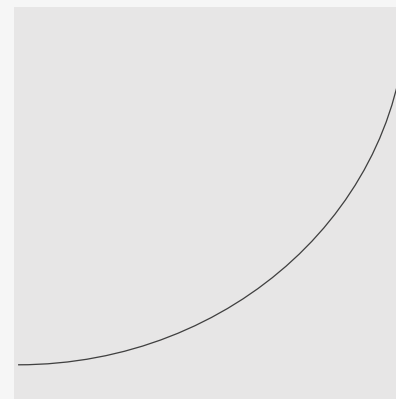
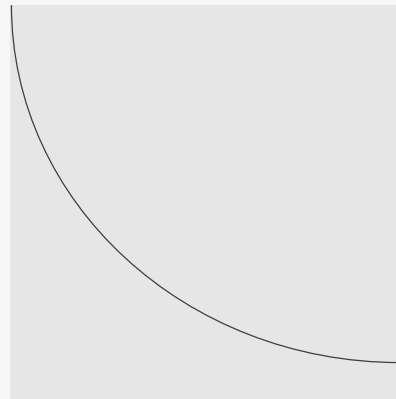
Centralised storage

Gas

 **FutureFlow**

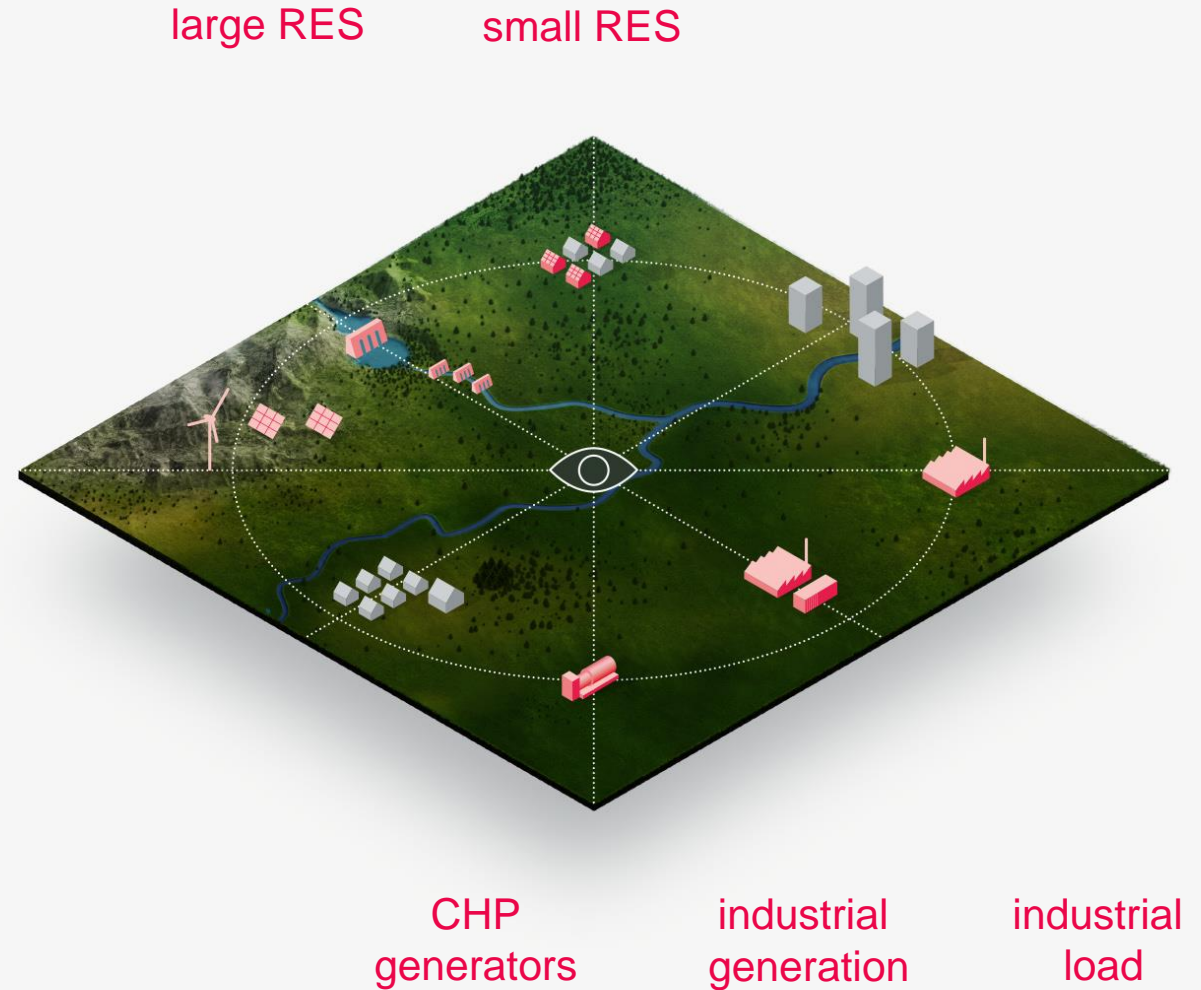
8,000 h

2,000 h



1

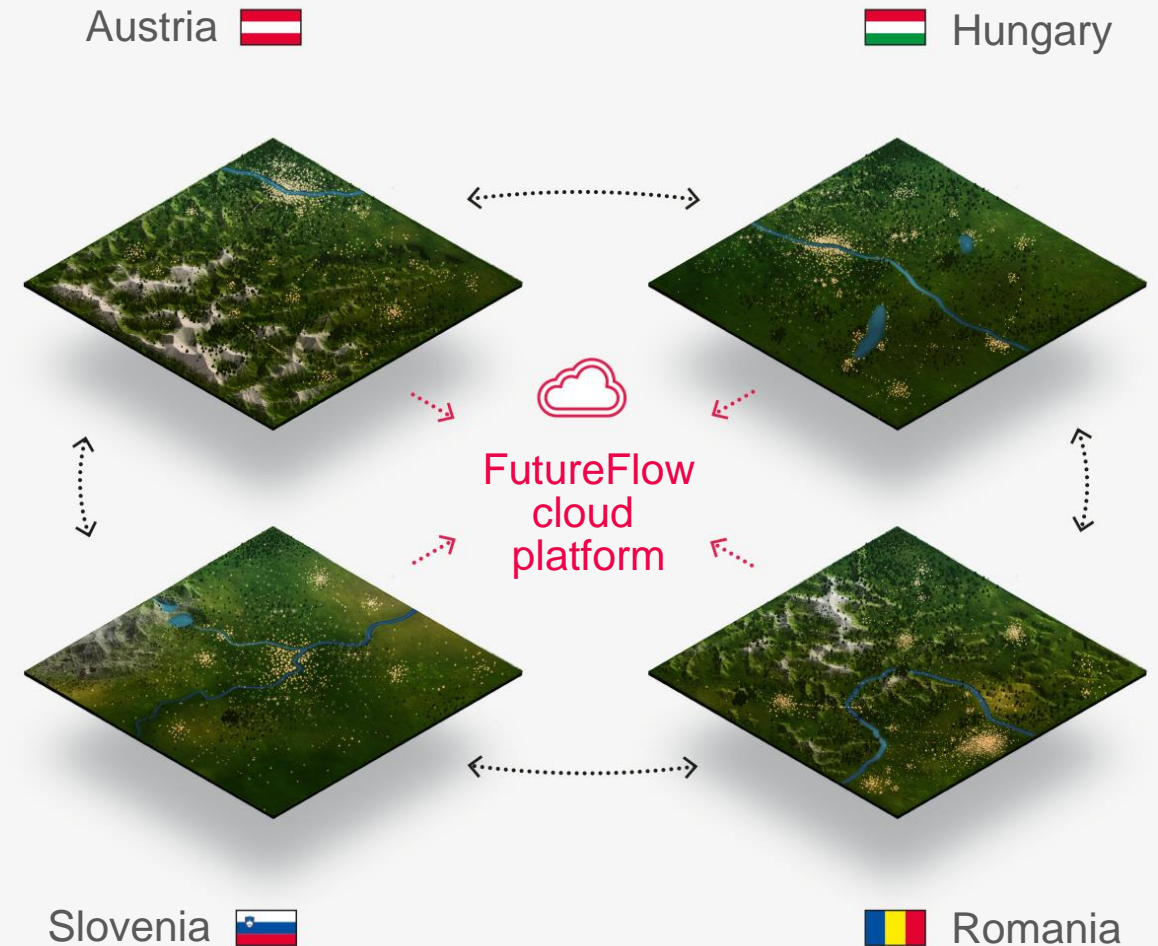
FutureFlow can solve the challenge of energy transition through gas and excessive investment in storage by activating distributed sources.



Key findings

2

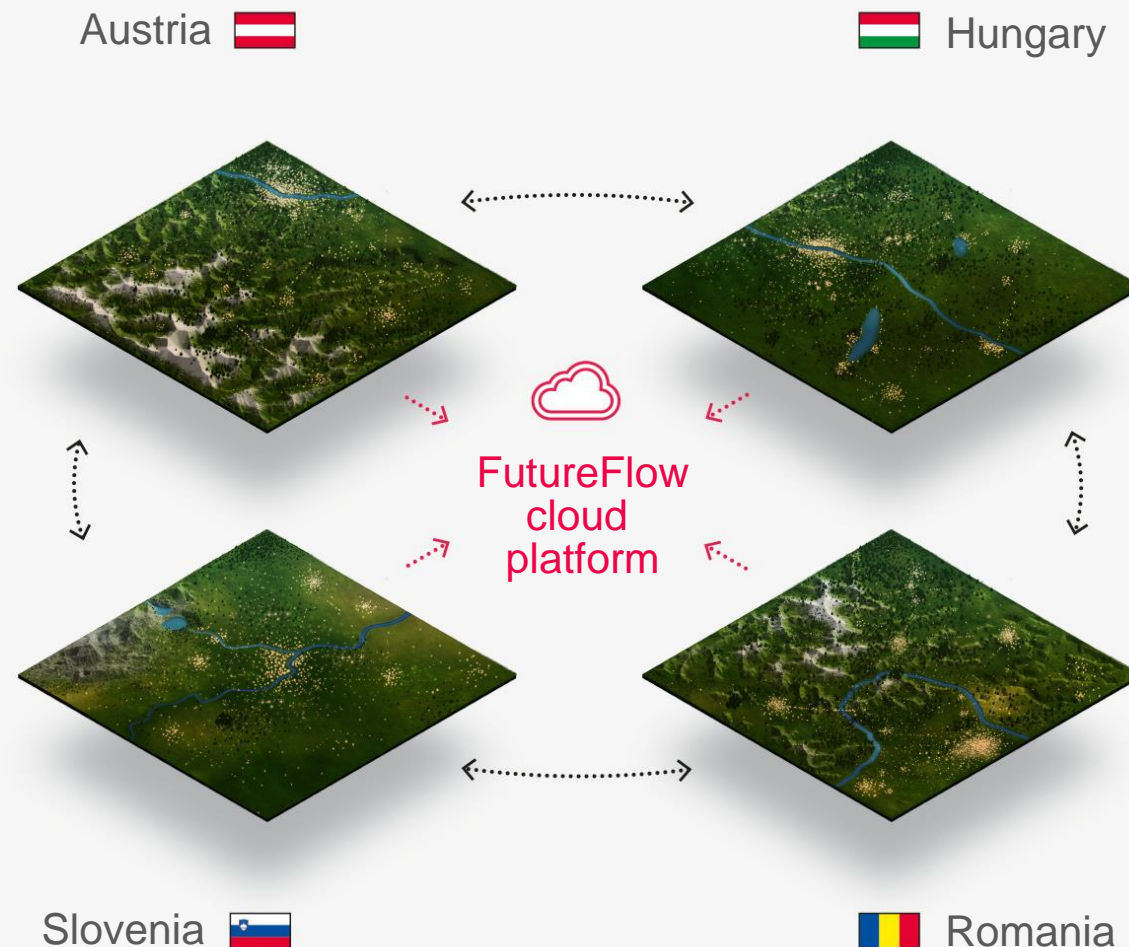
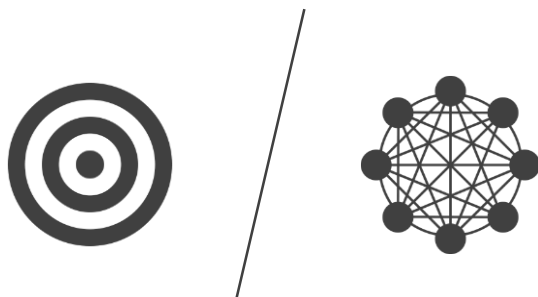
Connecting the new flexibility sources **across the borders of EU member states** is the key to success of new technologies.



Key findings

3

Centralization of such platforms is questionable as energy ecosystem is very diverse and because it would decrease competition, market opportunities and innovation potential for key stakeholders.

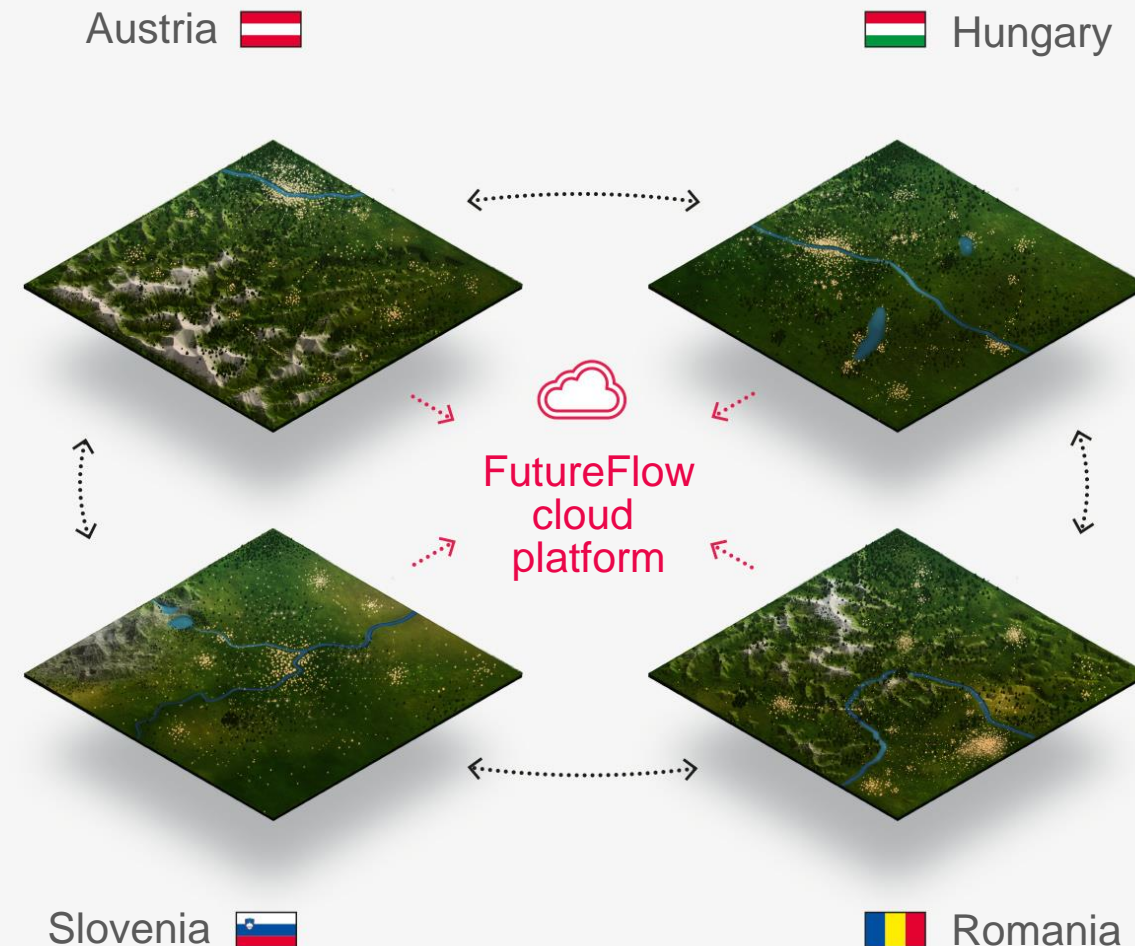


Key findings

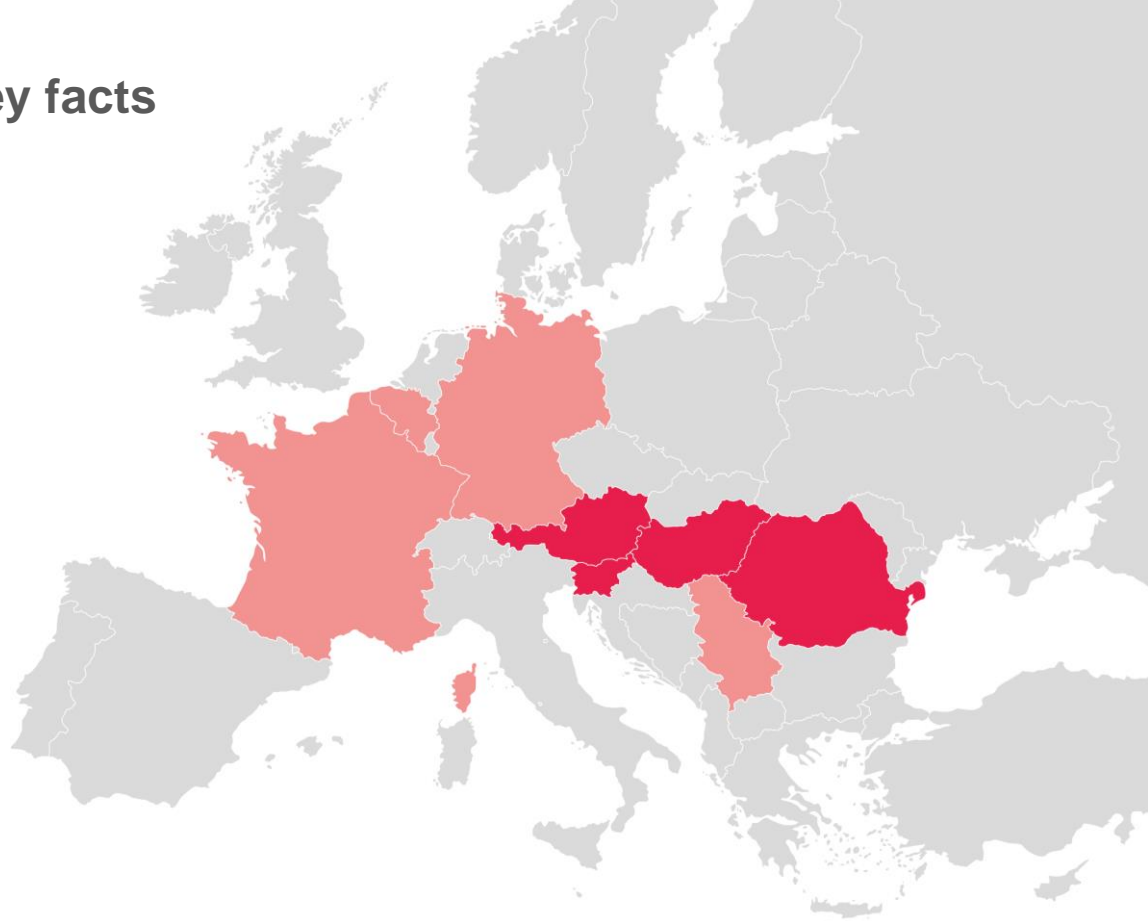
4

The challenge of FutureFlow is not so much on the investment part but more on **scalability of solutions, science, culture, mentality,...**

We need a collaborative action on the technical and political level!



Key facts



HORIZON 2020, Call

H2020-LCE-2015-3 Advanced architectures and tools for pan-European markets for ancillary services and balancing

Project title:

Designing eTrading Solutions for Electricity Balancing and Redispatching in Europe

Project acronym:

FutureFlow

Grant Agreement No.:

691777

Duration:

4 years (1.1.2016 - 31.12.2019)

Coordinator:

ELES d. o. o., Slovenia

Consortium:

12 partners from 8 countries

General objective:

To design and pilot test for access of advanced consumers and distributed generators to a Regional Platform for balancing and redispatching services

Maximum grant amount:

12,9 mio EUR



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