Elesovi inovacijski projekti

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1. Increasing cross regional electricity flows (Target)
2. Asset Utilization
3. Asset Performance
4. Network planning > Smart Grids
5. Coordination on a trans-national and TSO-DSO level

1. Trans national real-time control operation (TSCNET)
2. Expansion of system services to new market players, TSO-DSO integration (NEDO-ELES, FutureFlow
3. Transformation of Asset investments from traditional/non-controlable to fully controlable solutions (PST, SINCRO.GRID) based on large area optimization algorithms
4. Integration of Grid Diagnostics and Advanced workforce management into system operation and maintenance (DTR-SUMO)

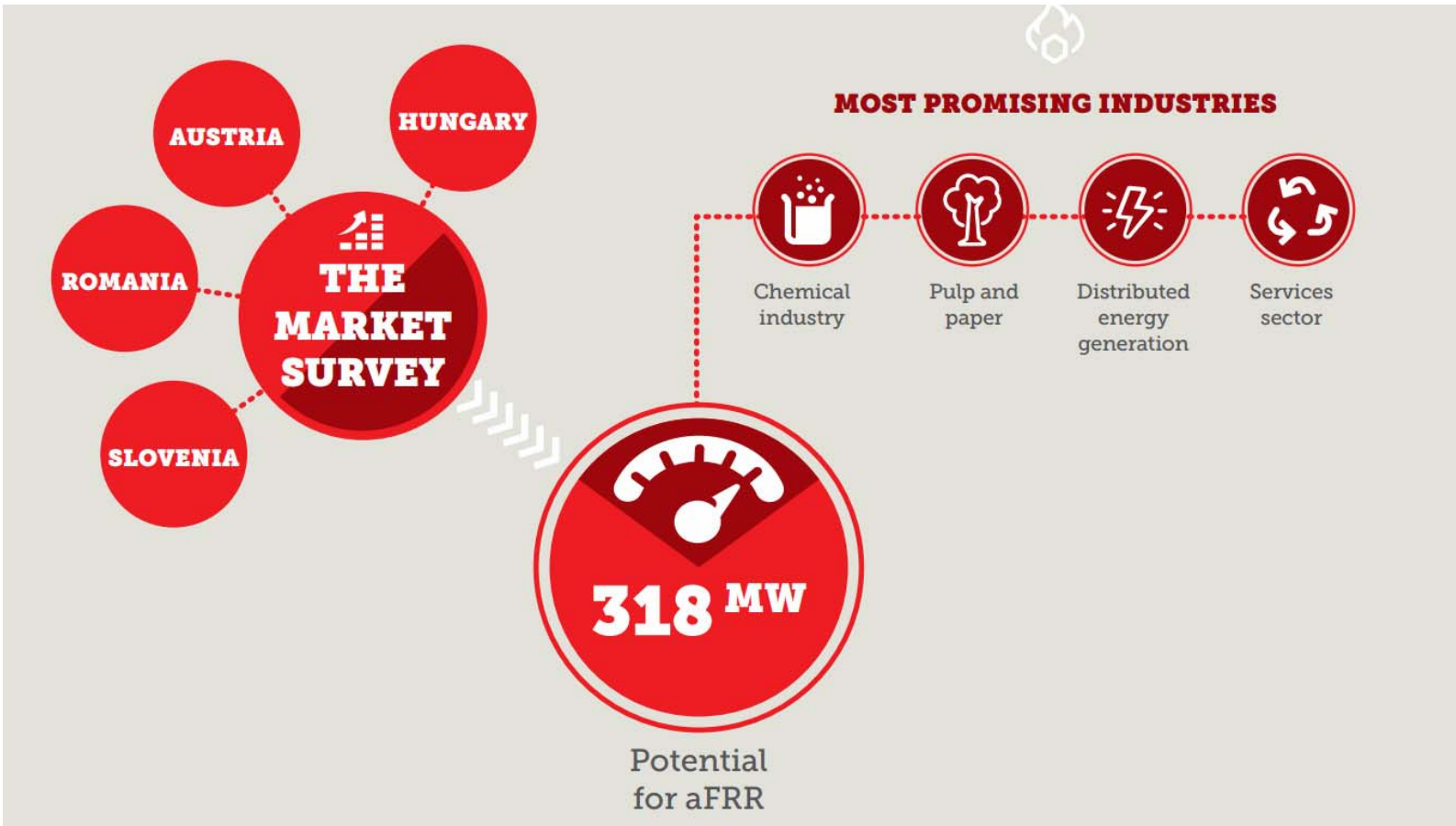
- **Partnerji: vsa Elektro distribucijska podjetja in izbrana mesta**
- **Sekundarna regulacija (Automatic Frequency Restoration Reserve) s sistemskimi hranilniki električne energije**
- **DMS (Distribution management System):**
  - Spoznavnost omrežja
  - Regulacija napetosti: ~ 100 % povečana možnost vključevanja OVE
  - FLISR in obratovanje v zaprti zanki: 10 – 50 % povečana zanesljivost
  - CVR (conservation voltage regulation – „tiha redukcija“): 1 % napetosti pomeni 1 – 1,5 % znižanja odjema
  - Ponudba jalove moči s strani distribucijskega omrežja: primer Elektro Celje (RTP Slovenj Gradec) 3 MVar
- **Demand side management**
  - Platforma, ki bo omogočala različne storitve: predvsem zmanjšanje končnega odjema
- **Energy management system**
  - Optimizacija lokalne rabe energije: 10 % nižja poraba električne energije
  - Vključevanje odjema v tržne storitve: možnost dodatnih prihodkov za odjemalce
  - Otočno obratovanje v primerih havarij
- **IKT in integracija sistemov**
  - Vzpostavitev dostopovnega omrežja do točk v NN omrežju in
  - Učinkovita in standardizirana izmenjava podatkov

FutureFlow

- **OBZORJE 2020**, Call: H2020-LCE-2015-3 Advanced architectures and tools for pan-European markets for ancillary services and balancing
- **Naziv projekta**: Designing eTrading Solutions for Electricity Balancing and Redispatching in Europe
- **Akronim**: FutureFlow
- **Grant Agreement št.**: 691777
- **Trajanje**: 4 leta (1.1.2016 - 31.12.2019)
- **Koordinator**: ELES d. o. o., Slovenia
- **Konzorcij**: 12 partnerjev iz 8 držav
- **Cilj**: To design and pilot test for access of advanced consumers and distributed generators to a Regional Platform for balancing and redispatching services
- **Višina financiranja**: 12,9 mio EUR



FutureFlow


AUSTRIA
HUNGARY
ROMANIA
THE MARKET SURVEY
SLOVENIA
318 MW
Potential for aFRR
MOST PROMISING INDUSTRIES
Chemical industry
Pulp and paper
Distributed energy generation
Services sector

SINCRO.GRID: Main pillars

1. **Deployment of compensation devices to address overvoltage and voltage instability issues**. Common approach and joint cross-border coordinated operation of these devices bring positive effects to electric power systems of the whole region.
2. **Deployment of advanced dynamic thermal rating (DTR) systems** in both the Slovenian and Croatian transmission grids, made more robust to work under alpine weather conditions.
3. **Deployment of electricity storage systems**.
4. **Integration of distributed renewable generation (DG)** - **Deployment of demand response services**.
5. **Deployment of a virtual cross-border control center (VCBCC) for renewable energy sources (RES)**. Operated jointly by the four partners with advanced algorithms for VVC optimization, secondary reserve, advanced real time operation of the grid using dynamic thermal rating and communication platform of the demand side.


Hvala za pozornost!