



SISTEMSKI OPERATER  
DISTRIBUCIJSKEGA OMREŽJA Z  
ELEKTRIČNO ENERGIJO



# SINCRO.GRID PROJECT

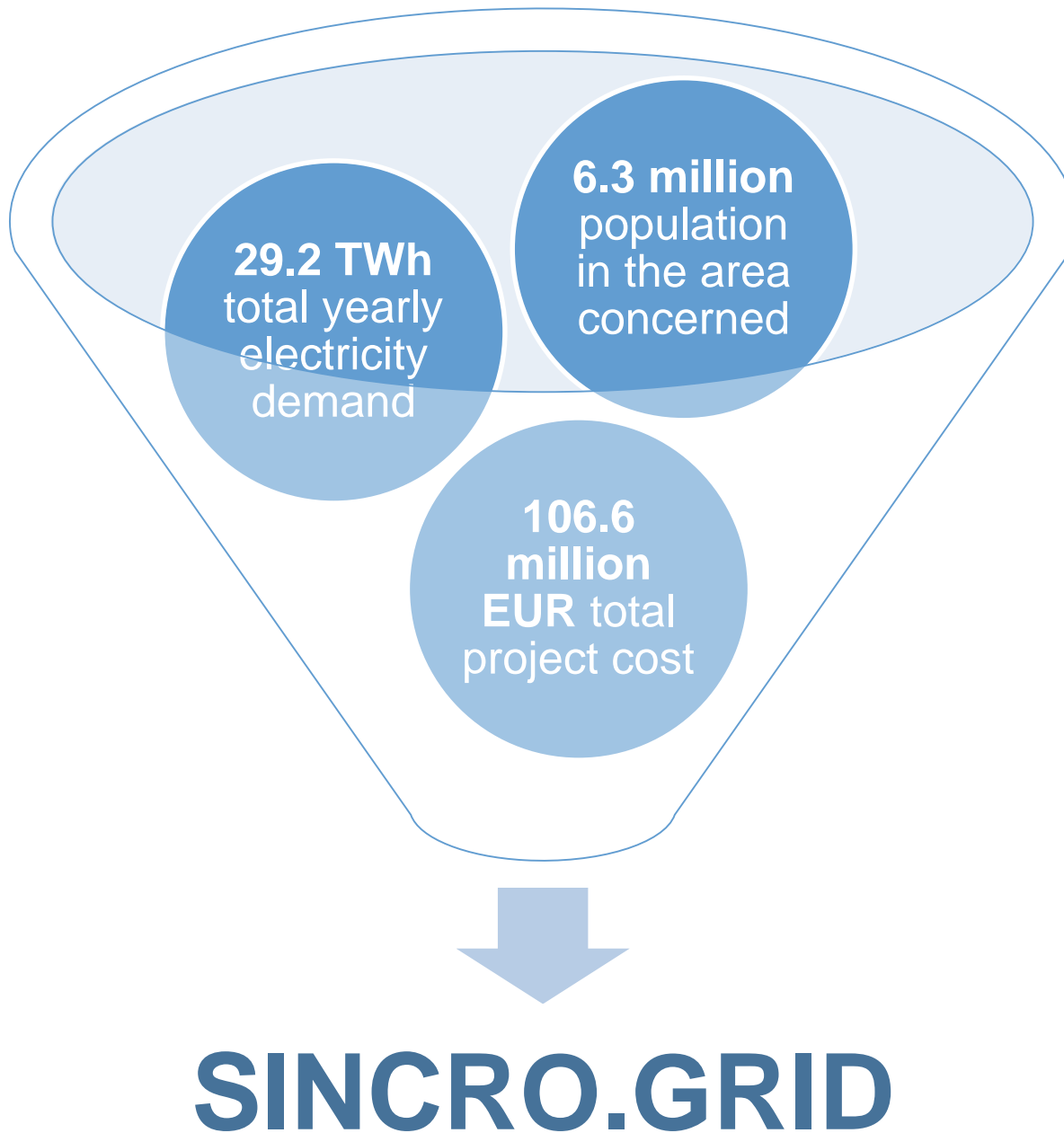
---

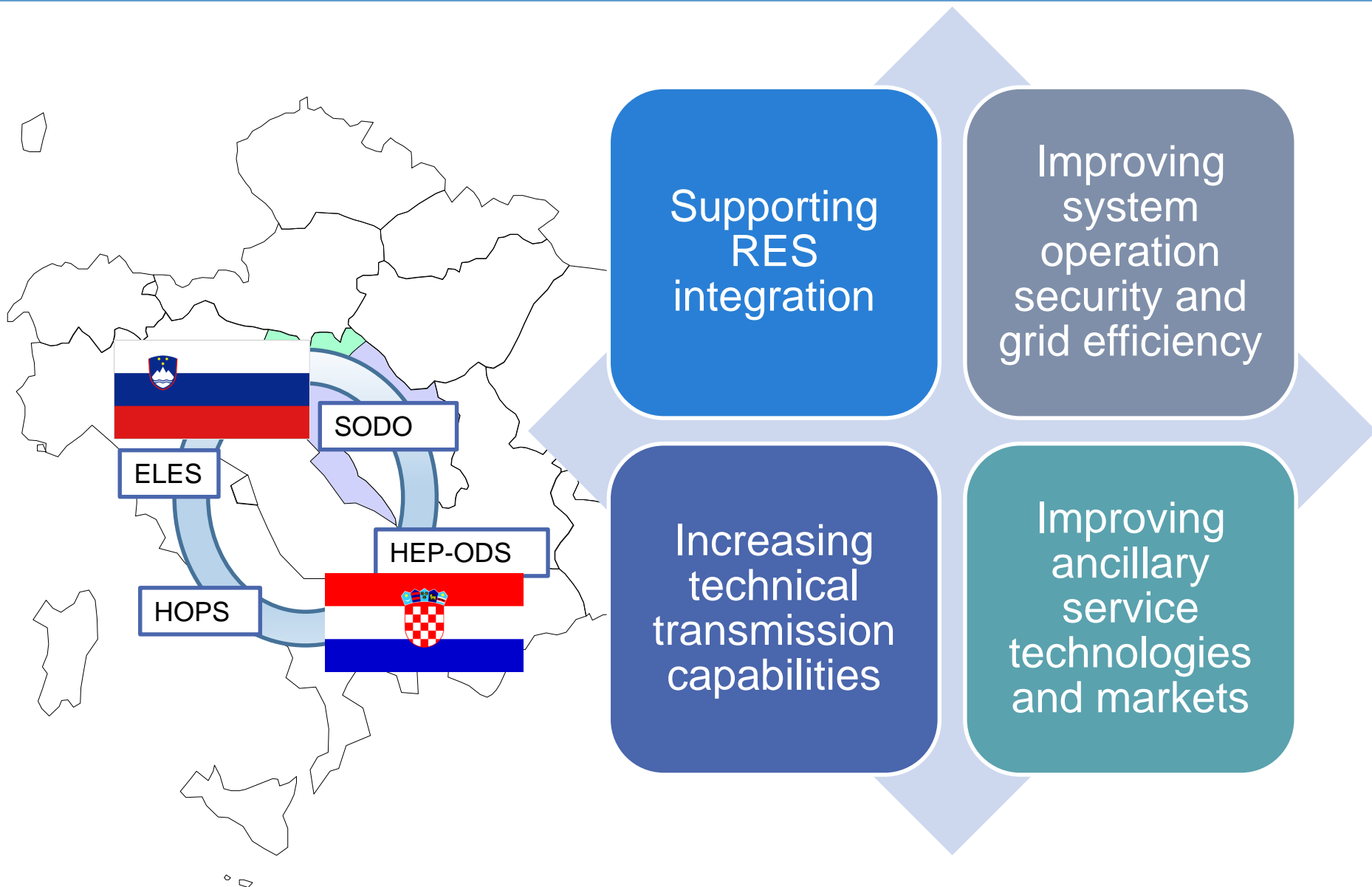
Saša Jamšek, M.Sc.

SINCRO.GRID Project Coordinator

Assistant Division Director, Asset and Project Management Division (ELES)

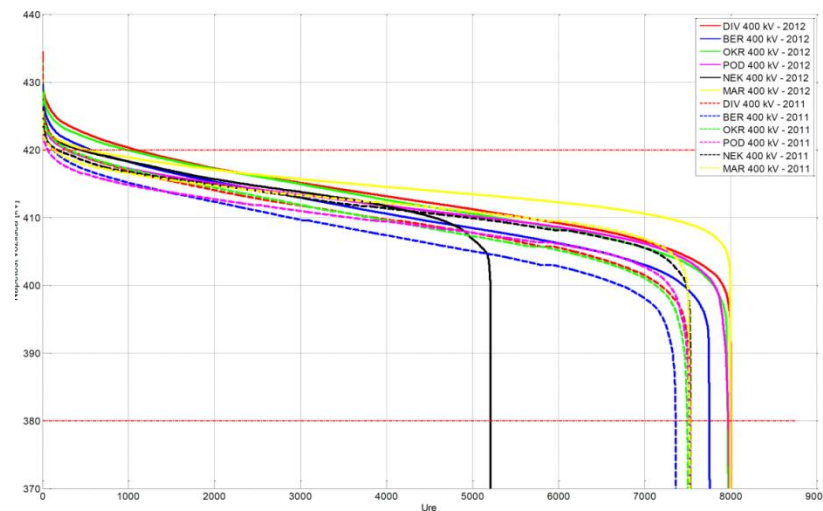
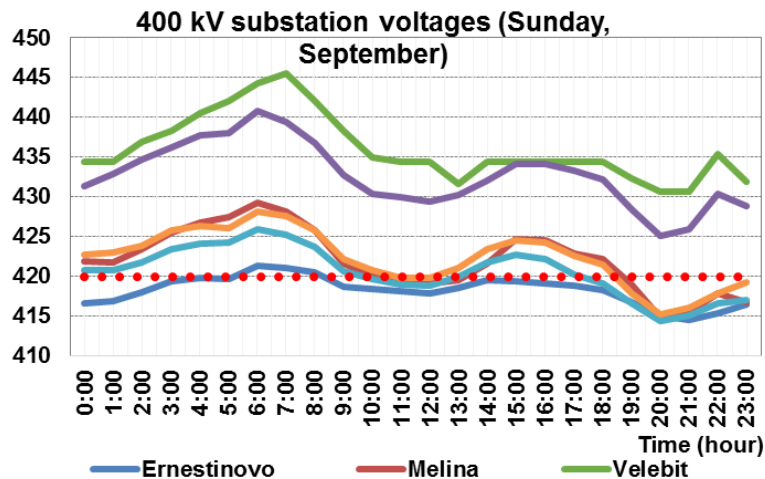
Ljubljana, 07.04.2016





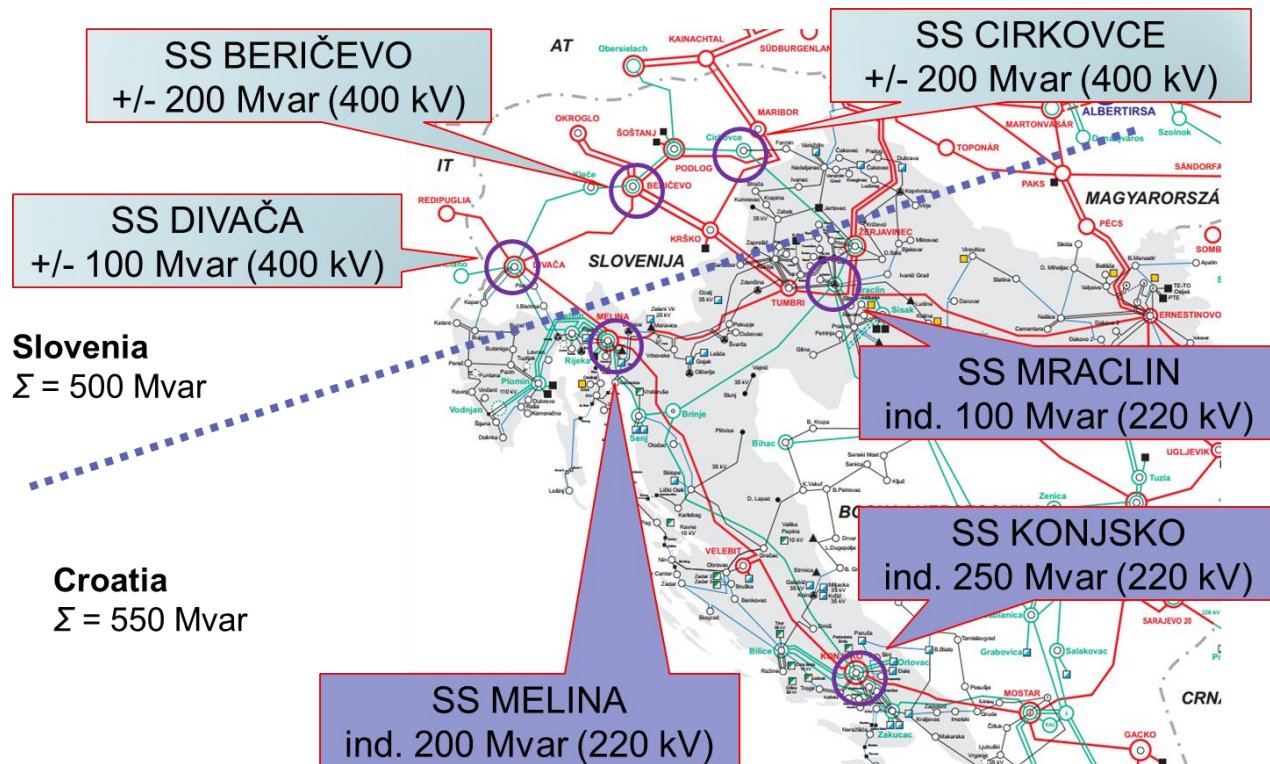
## SINCRO.GRID - Project of Common Interest

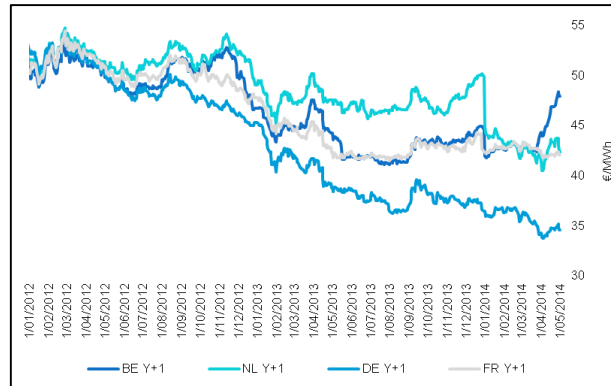
- SINCRO.GRID was proposed as PCI smart grid project in the beginning of 2015
- Evaluation report was positive
- PCI list was approved and published in November 2015  
(COMMISSION DELEGATED REGULATION (EU) 2016/89  
of 18 November 2015 amending Regulation (EU) No 347/2013)
- Project became one out of three Smart Grid PCI projects
  - **Nord Atlantic Green Zone Project** (Ireland, UK/Northern Ireland)
  - **Green-Me** (France, Italy)
  - **SINCRO.GRID** (Slovenia, Croatia)



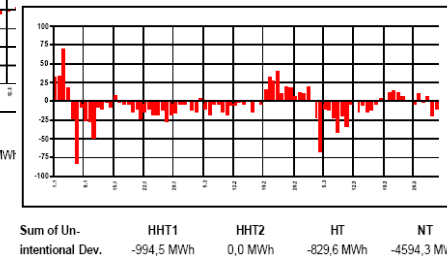
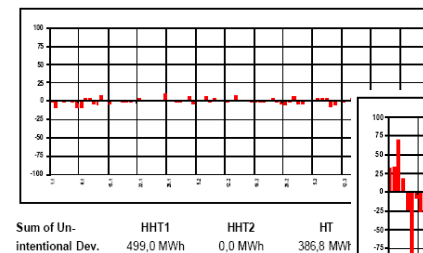
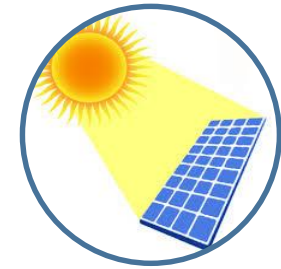
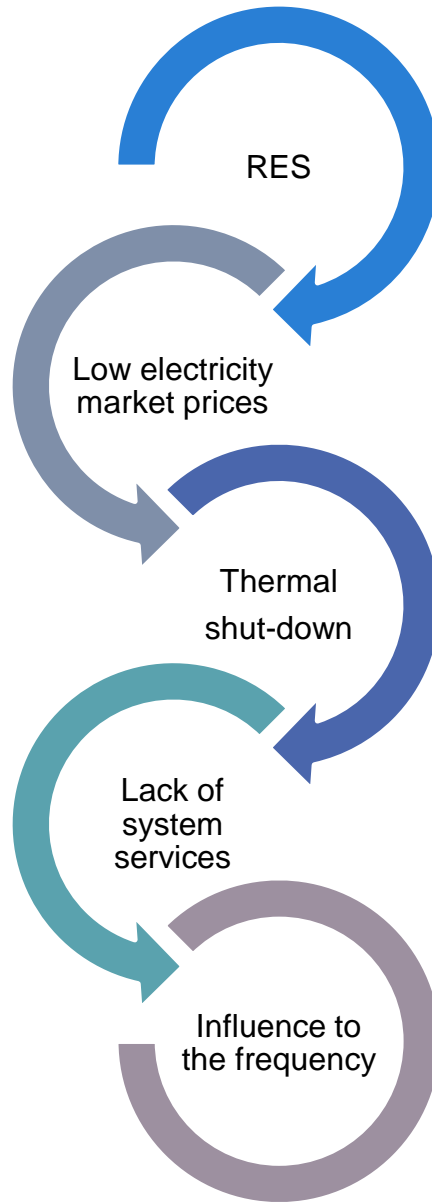
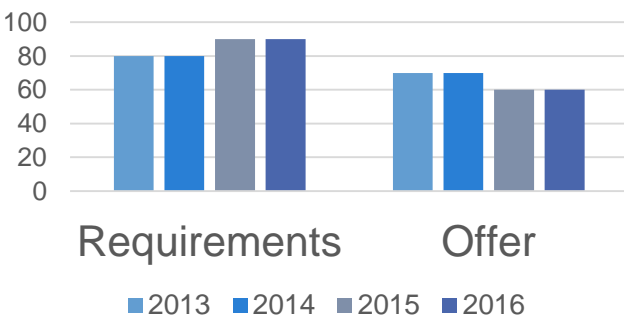
## Main issues

- High voltages in 400 kV and 220 kV network during low load periods – unavailability of conventional sources
- RES penetration (wind power plants in Croatia)

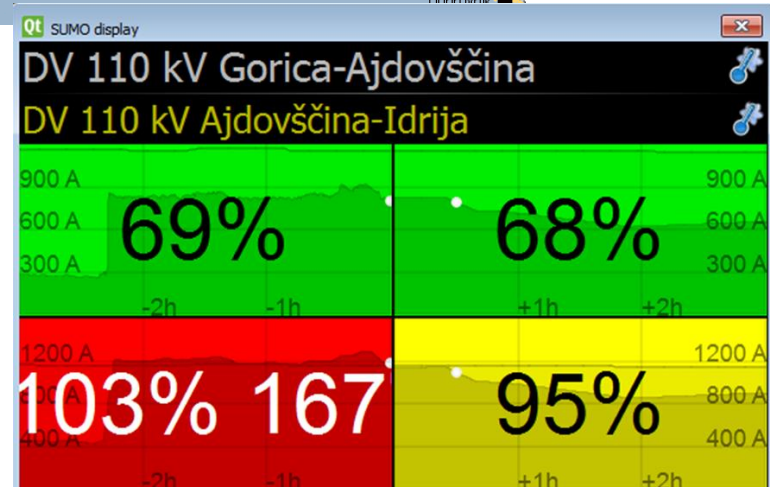
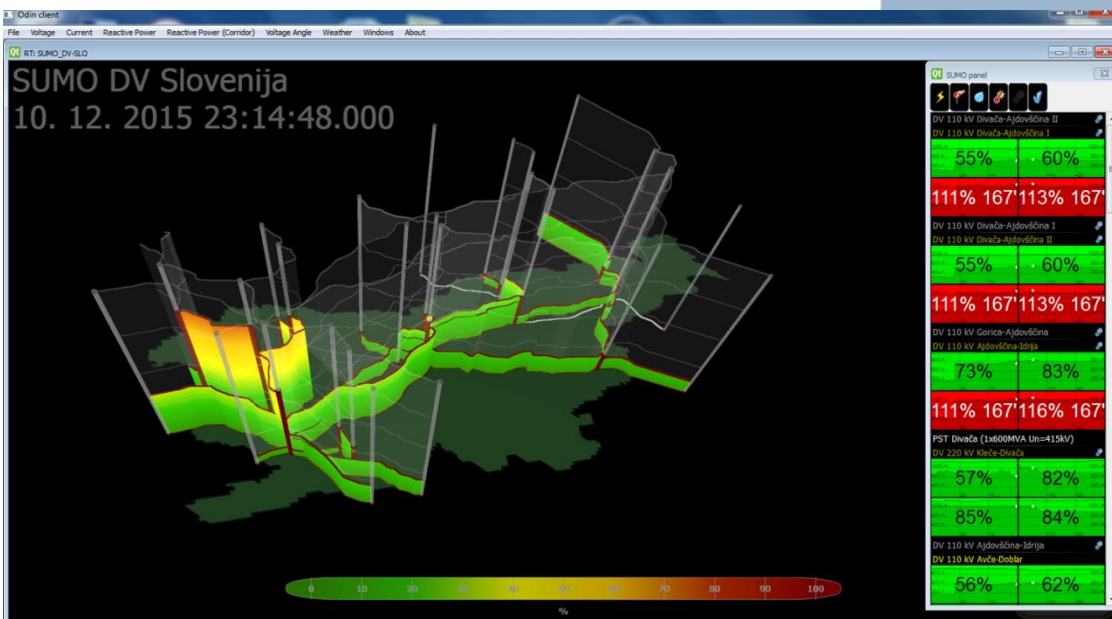




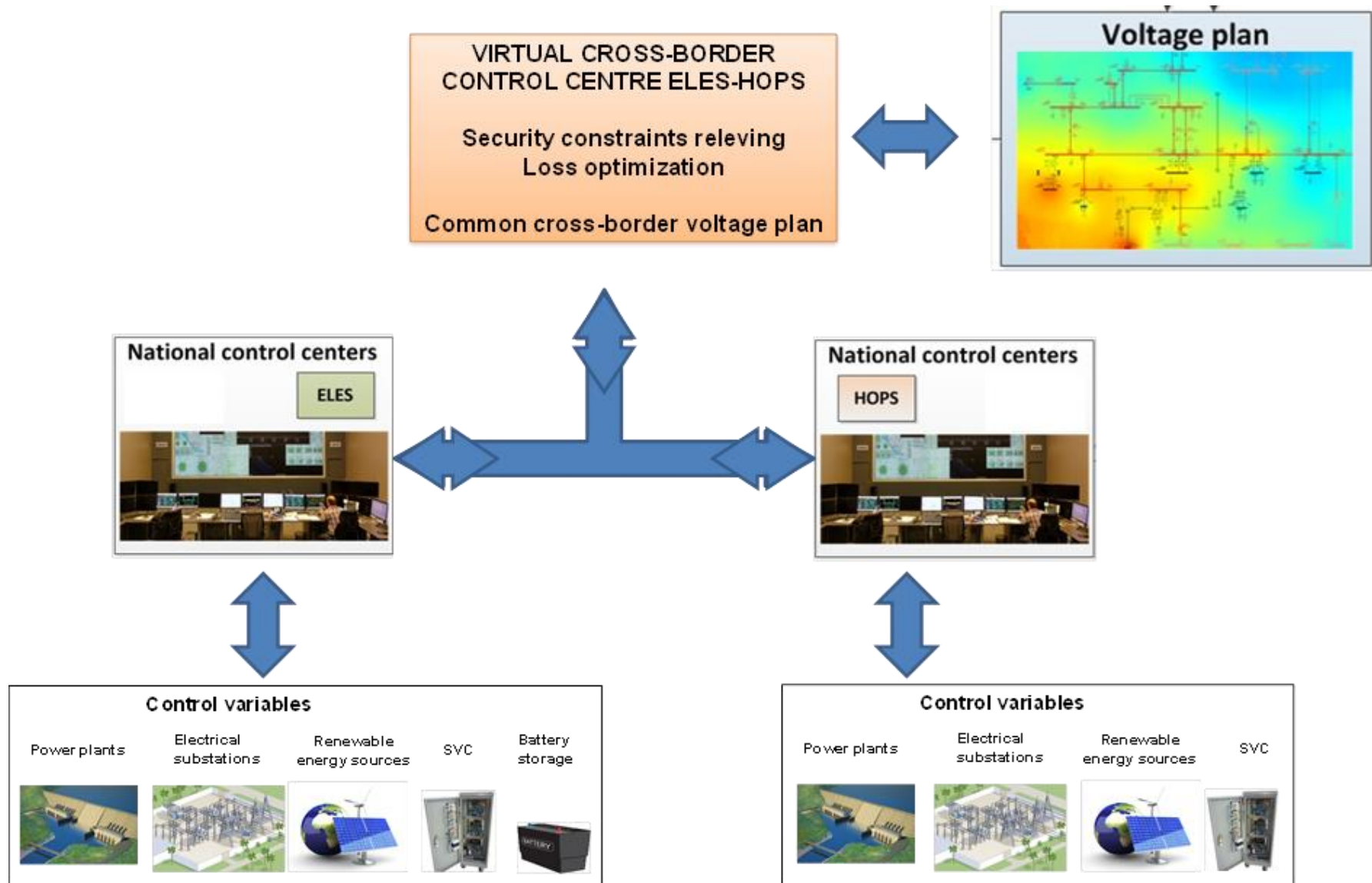
Reserves for Secondary Frequency Control



area	number of 400 kV and 220 kV transmission lines with DTR
internal Slovenian	12
internal Croatian	3



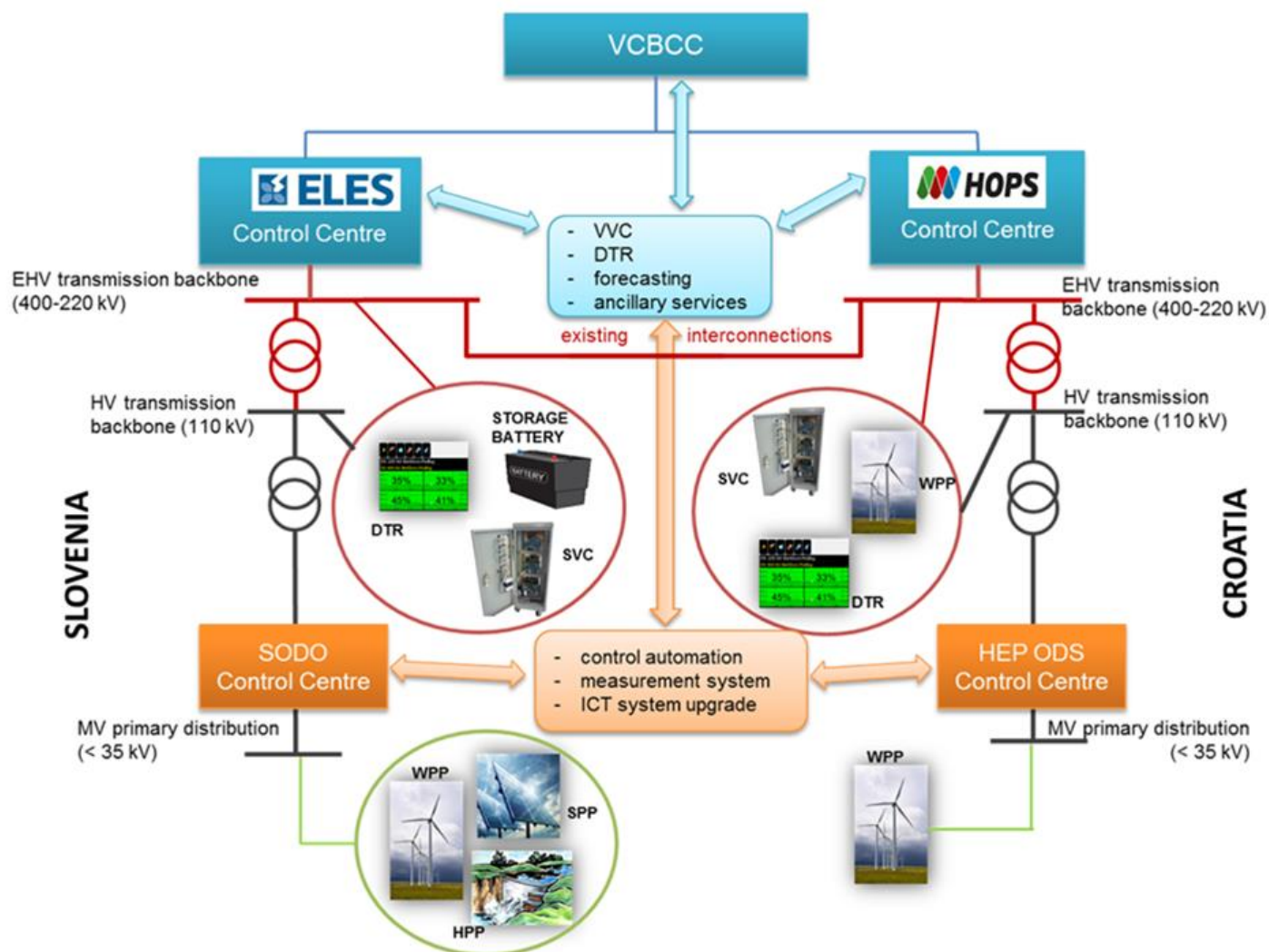






## The consortium

TSO↔DSO alliance for resilient operation in new environment



## **SINCRO.GRID**

- June 2016 – application for CEF funding
- 2017 tendering procedures
- 2020/2021 project completion

## **COMPENSATION DEVICES**

- 6 compensation devices  $\Sigma = 500 \text{ Mvar SLO} + 550 \text{ Mvar CRO}$
- Operation of first unit(s) expected in 2018

## **STORAGE**

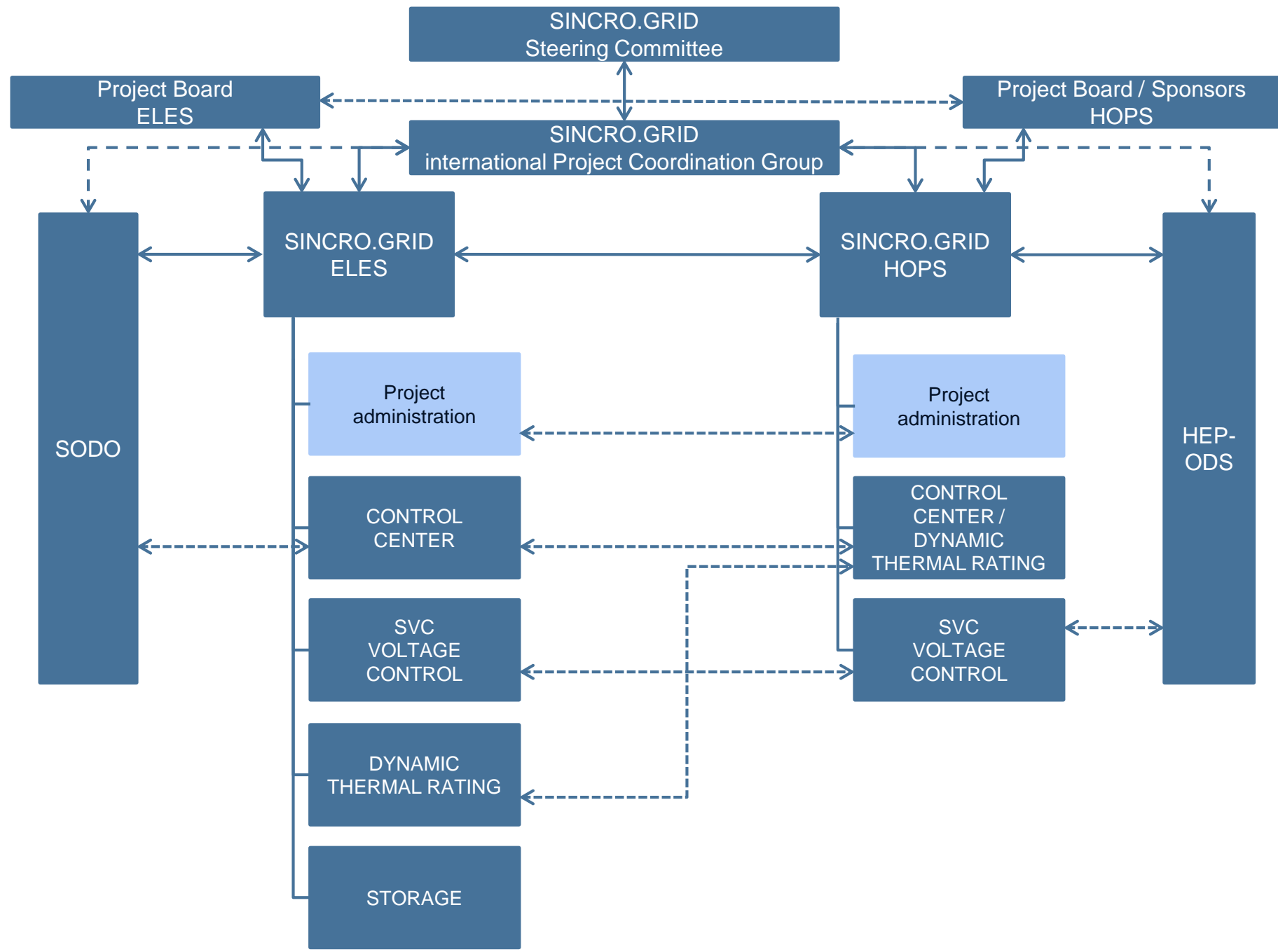
- 10 MW of batteries in 5 stages (5 x 2 MW)
- Operation of first unit(s) expected in 2017/2018

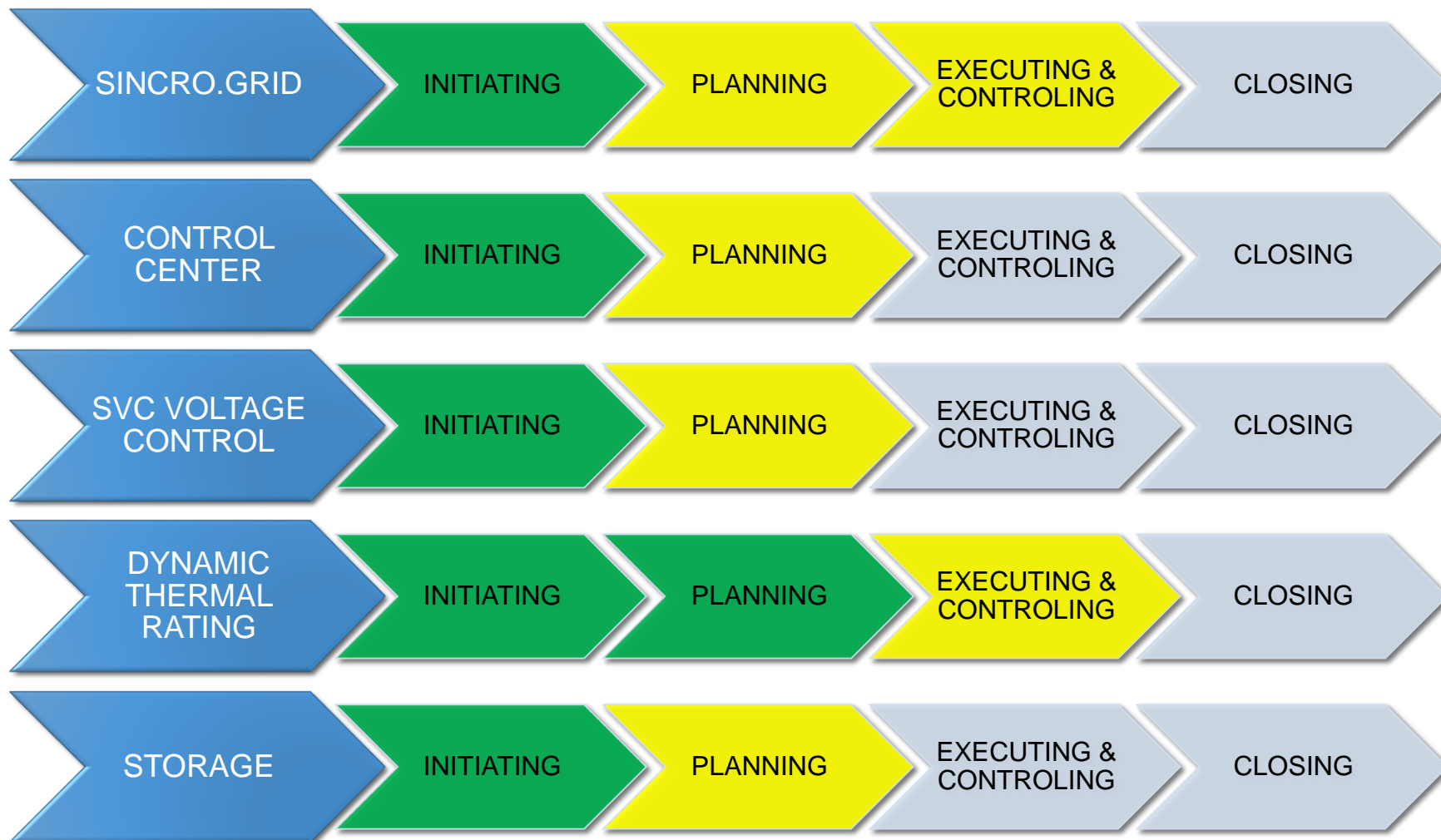
## **DTR**

- Implemented for 15 lines in Slovenia and Croatia
- Partly already in operation

## **VCBCC**

- Implemented in ELES and HOPS control centers





THANK YOU FOR  
YOUR ATTENTION

