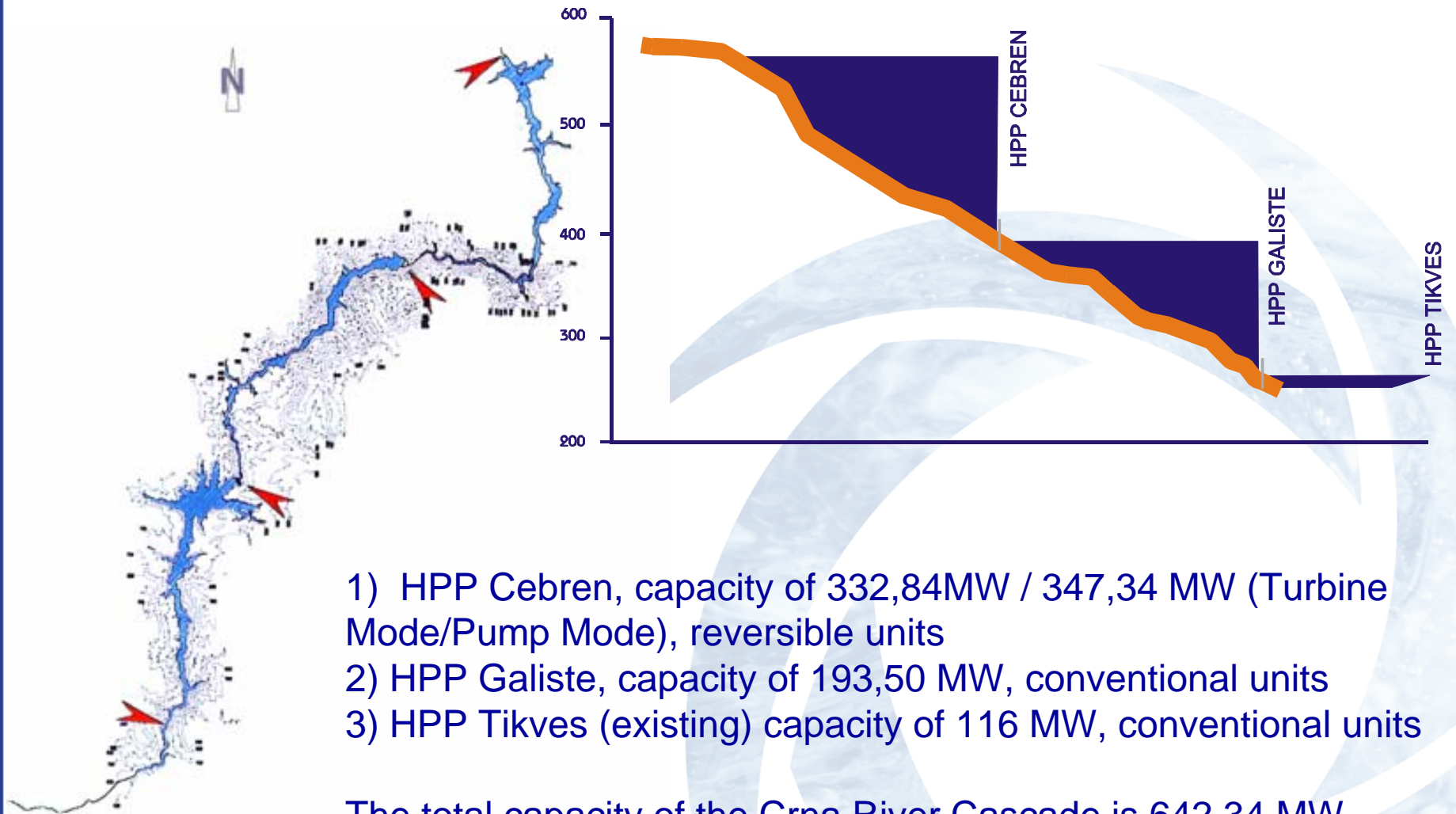


CRNA RIVER PROJECT

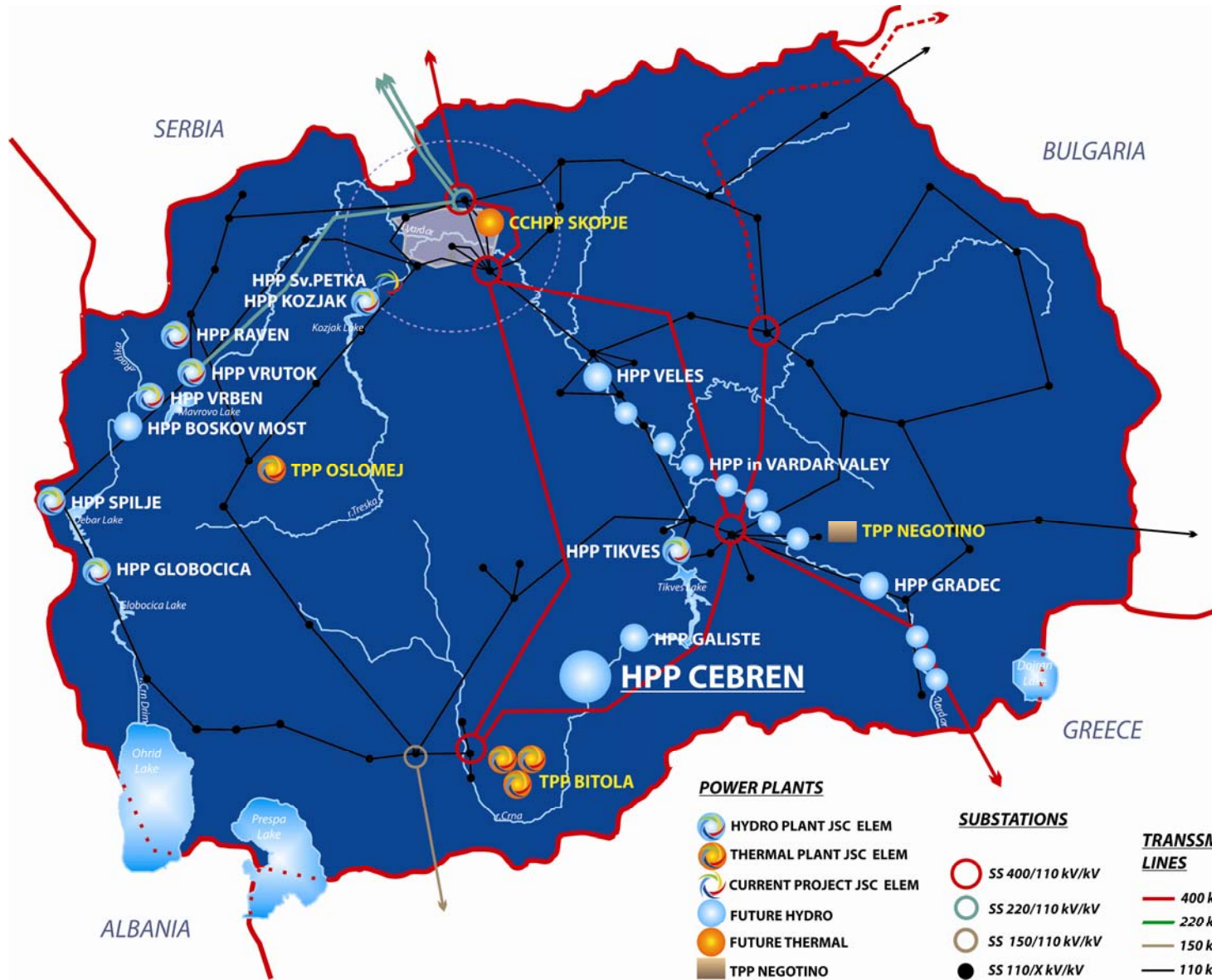
JSC Macedonian Power Plants (ELEM)

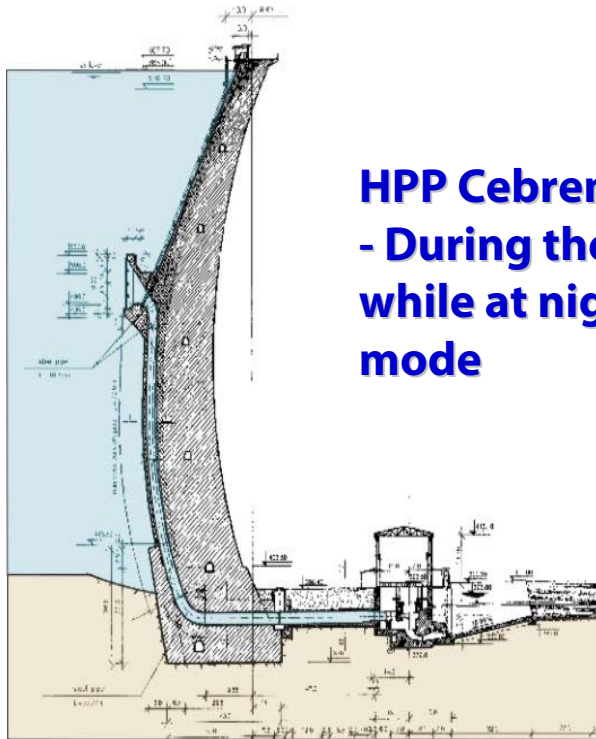
April, 2008

Crna River project main facts



The total capacity of the Crna River Cascade is 642.34 MW



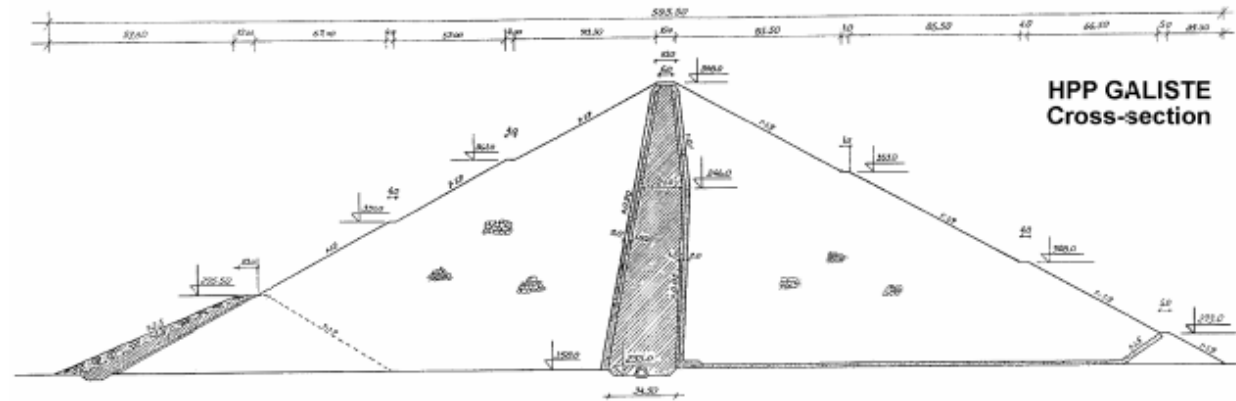


**HPP Cebren is designed as reversible hydro power plant
- During the pick hours it will work in turbine mode,
while at night at low load hours it will work in pump
mode**

Average water discharge	25.46 m ³ /s
Electricity production	292.00 GWh
Dam height	180.00 m
Installed capacity (turbine mode)	332.84 MW
Installed capacity (pump mode)	347.34 MW

Status of the the project
• Implementation

Undergoing tender for DBOT
Concession (DBOT)



Average water discharge	28.39 m ³ /s
Average production	270.00 GWh
Dam height	138.5 m
Installed capacity	193.5 MW

Estimated construction period (together with Cebren)

8 years

Status of the the project

Undergoing tender for DBOT

- Implementation

Concession (DBOT)



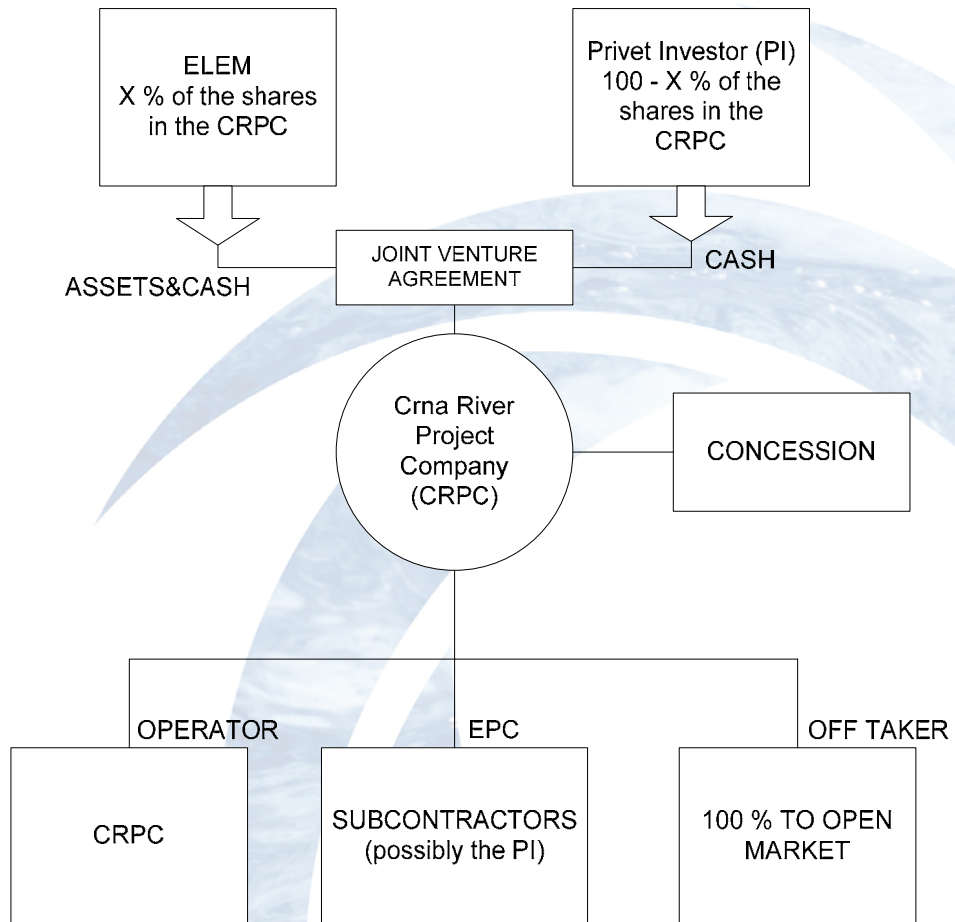
Average water discharge	30.40 m ³ /s
Average production	220 GWh
Dam height	105 m
Installed capacity	116 MW



Successful repayment of a foreign currency denominated loan of 430 Mio euros is deemed infeasible for ELEM, so under the PPP model the public funding (from AD ELEM) amounts 35.86 Mio euros which is possible for ELEM.

Investment	Interest During Construction			Total Investment	
	Equity	Loan	IDC	k €	€/kW
538,623	107,725	430,898	63,502	602,125	1,160

The project will be financed by PPP, where each party would finance a part of the project. Regardless of the split shares and scopes in the CRPC the whole project is built under single EPC contract to avoid interface problems.



For its shares into the project company ELEM will:

1. Do the land expropriation for the both sites and storages, HPP Cebren and HPP Galiste
2. Build the access roads for HPP Cebren, one at the crest level at the right side of the river and one at the level of the power house at the left side of the river
3. At the end of the construction period will include HPP Tikves in to the CRPC



Main project milestones:

Ø – End of April 2008

Ø – May/June 2008

Ø – June 2015

Ø – Depending of the bid

Bid submission and Evaluation of bids

JV, CRPC establishment, Concession Agreement

Start of commercial operation

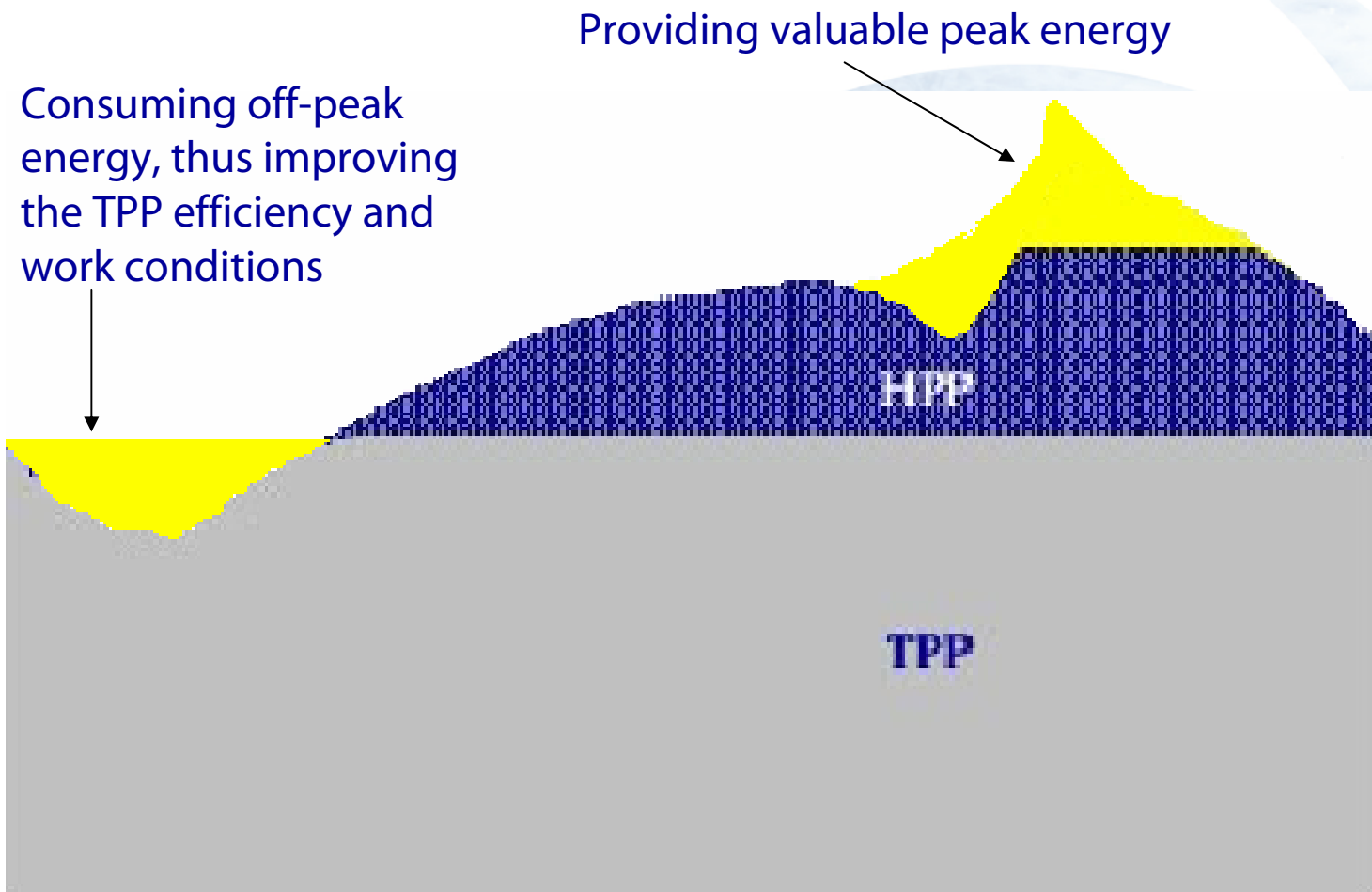
Transfer to Government of Macedonia



The project is considered in the frame of the electricity market of the region

1. The size of the local electricity market is not large enough to support such a large investment plan (602 mio.€).
2. The restructuring of all economies in South-eastern Europe are geared towards lighter non energy intensive industries and towards service sector industries. This has a diminishing effect on the overall power system annual load factor. Under these circumstances, more peaking capacity will be required as well as load management actions (642 MW).
3. The HPP reversible units will use low cost energy for pumping during night hours.

The HPP reversible units will use low cost energy (from the region) for pumping during night hours, this will improve the efficiency and prolong the life span of the TPP's





ELEM will care that the Crna River Company:

- Commits to minimal and acceptable environmental impact
- Commits to fair social treatment of the employees
- Secure timely granting of licenses and permits
- Has available existing historical data
- Facilitate expropriation procedures
- Respects the preset rules for use of water
- Set fair and balanced access to market
- Enforce rule of law
- Limit unjustified actions by NGO's
- Favor development of domestic investment funds

THANK YOU FOR YOUR ATTENTION

