



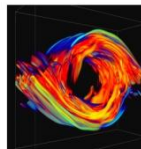
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THERMAL POWER PLANT VUKOVAR

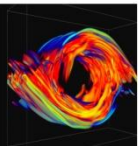
OWNER AND INVESTOR:

SPARTAMATRIX ENERGY INC.



Summary

- (3) Basic technical data of the plant
- (4) Site
- (5) Layout of the TPP
- (6) Connection to the grid
- (7) Power transmission lines
- (8) Connection to the gas transportation system
- (9) Gas transportation lines
- (10) Time schedule
- (11) Investment and other fixed costs
- (12) Natural gas price/CO2 emission unit price
- (13) Power production costs
- (14) Croatian power market
- (15) Baseload year electricity prices
- (16) Possible strategy
- (17) Future industrial zone - Borovo
- (18) Road network
- (20) Railway network



Basic technical data

Natural gas fired combined cycle thermal power plant 530 MW (alt. 420 MW):

- Gas turbine GE 9H – 355 MW (alt. GE 9FB – 279 MW)
- Heat recovery steam generator (HRSG)
- Steam turbine 175 MW (alt. 141 MW)
- condenser, grabbing and returning the cooling water
- centralized system of control and managing the plant
- corresponding electrical equipment, transformers (network and personal consumption)
- reduction measuring gas station
- Chemical water treatment
- ancillary equipment and systems (auxiliary boiler, diesel generator, compressed air system, fire alert and gas detection etc..)

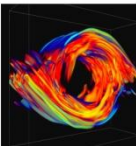
Total efficiency 60% (58%)



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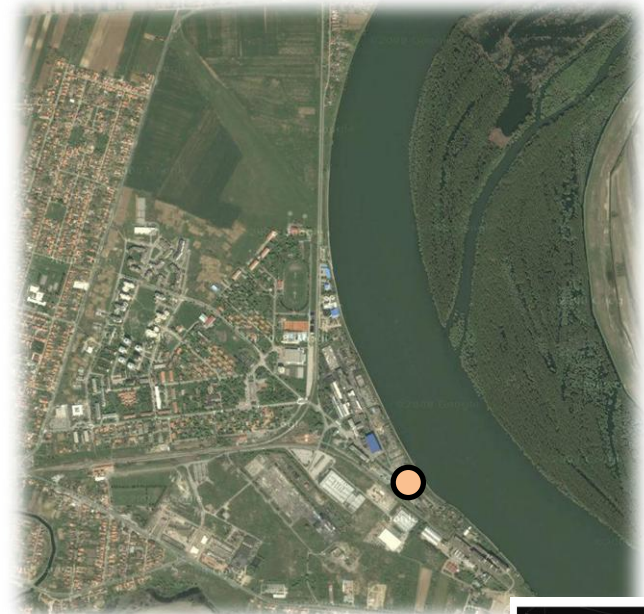
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Site

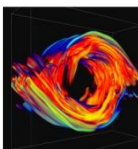
- Borovo industrial area, near Vukovar
- 6 ha reserved for TPP in the city zoning plan (in the final stage of approval).
- 6 ha (approx. 646.000 ft²) of land bought by SpartaMatrix Energy Inc. from former owner, state-owned company Borovo
- On the coast of the Danube river (river water cooling system)
- Proximity to another industrial zone (north) - opportunity for heat supply of various industries and improvement of the energy efficiency of the plant
- Connection to TS Ernestinovo by future transmission line 2×400 kV TPP Vukovar-Ernestinovo, at 30 km distance
- Connection to MRS Lužac in the property of Plinacro (Croatian gas TSO) by a future gas pipeline (40 bar, distance 2.5 km)
- Good traffic connections by railway, highway, river



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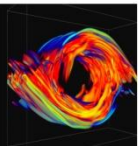
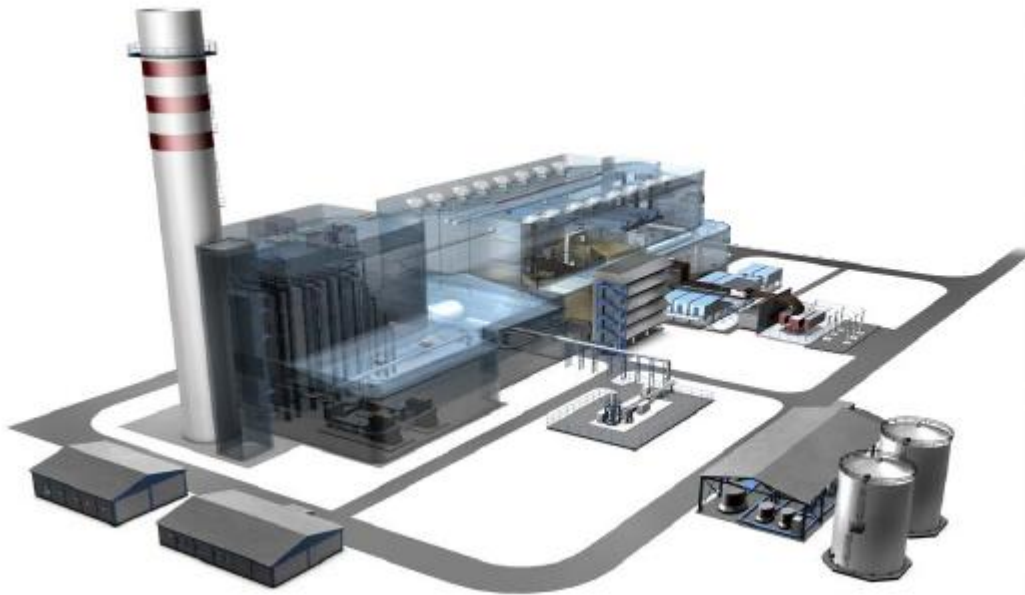
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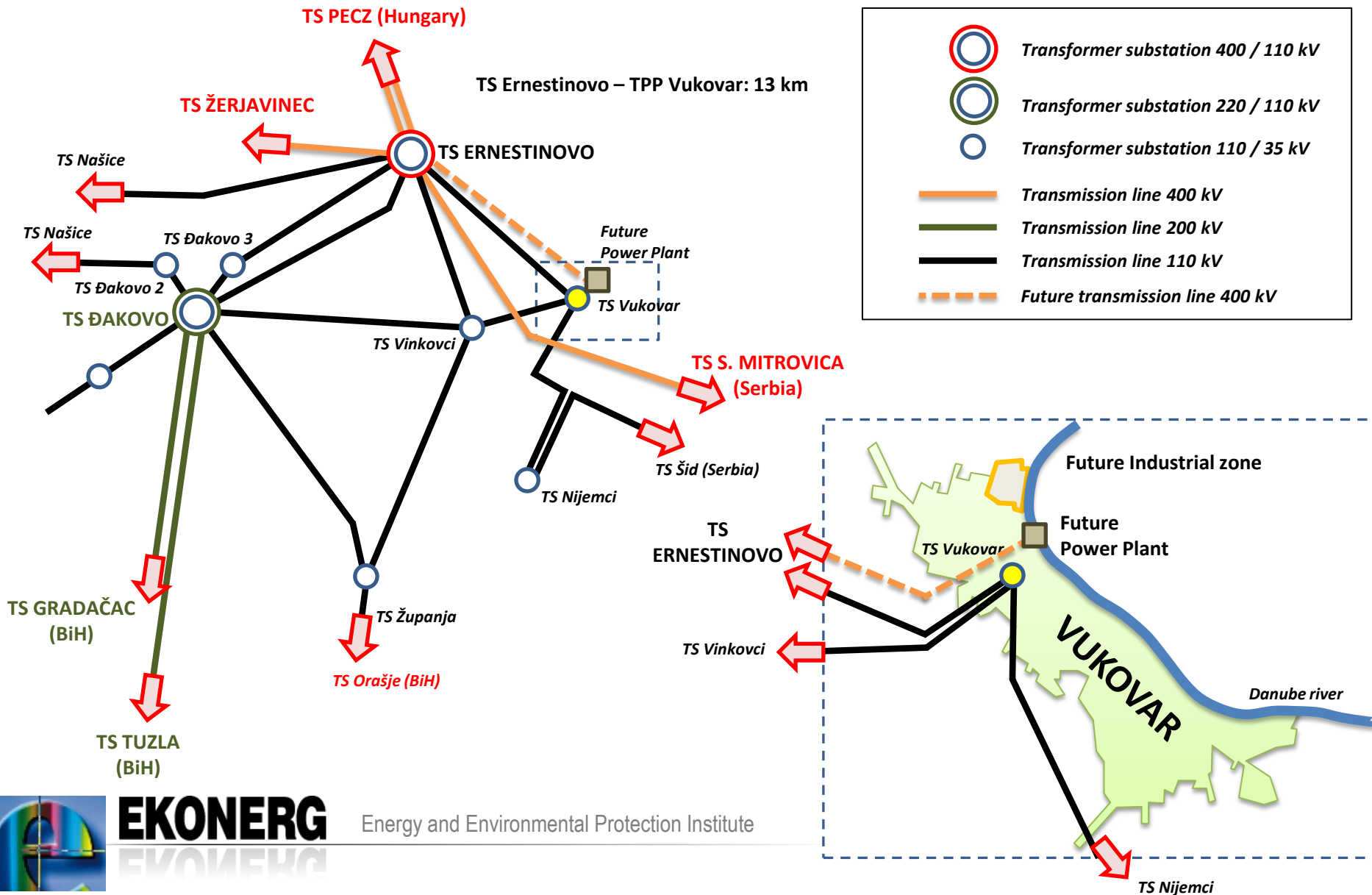


Layout of the TPP

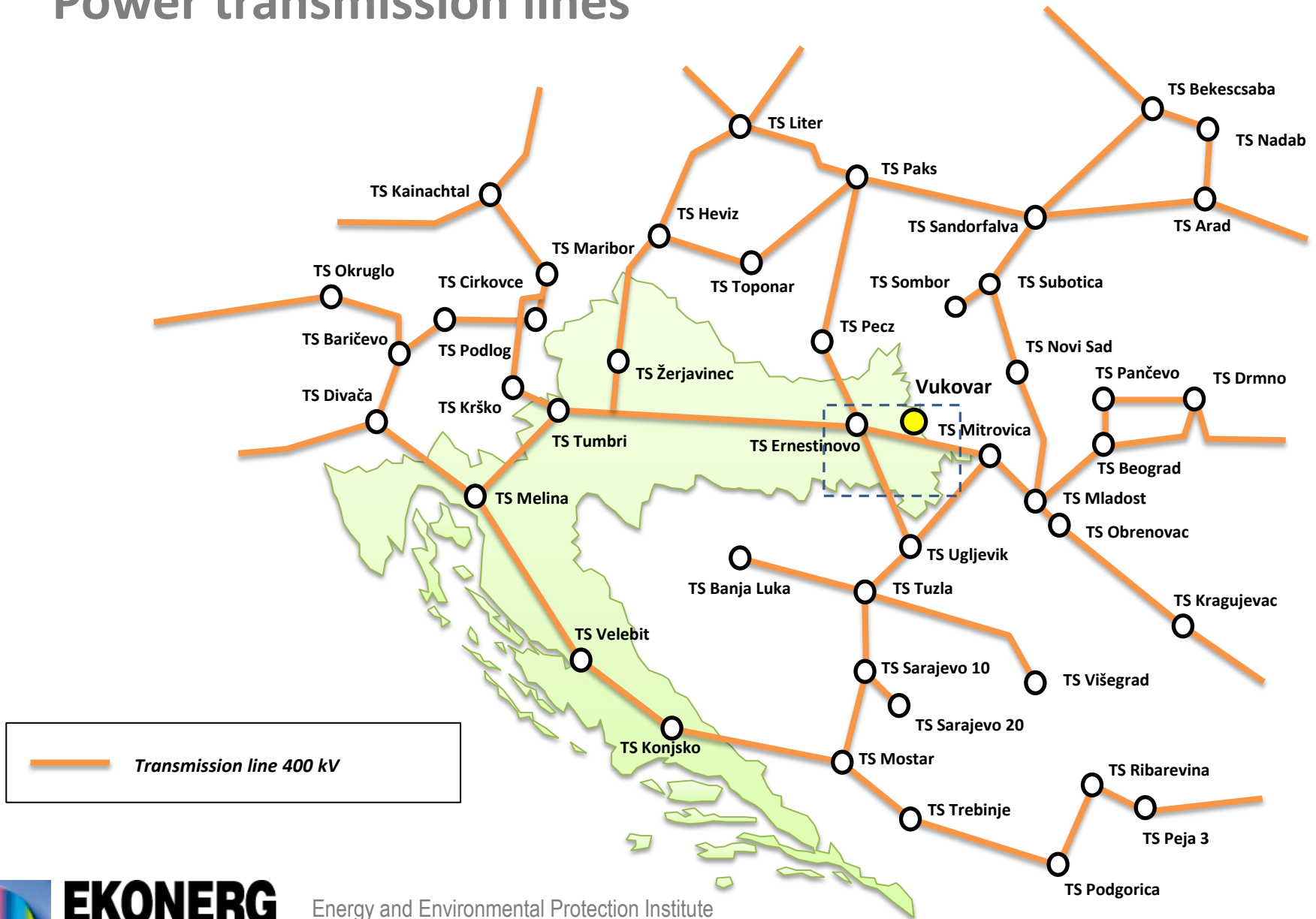
- Simple setting of the TPP and all necessary accompanying facilities in the area of 6 ha
- TPP layout area is 2.6 ha
- Demolition of existing dilapidated buildings is necessary for preparation of the site for new construction



Connection to the grid



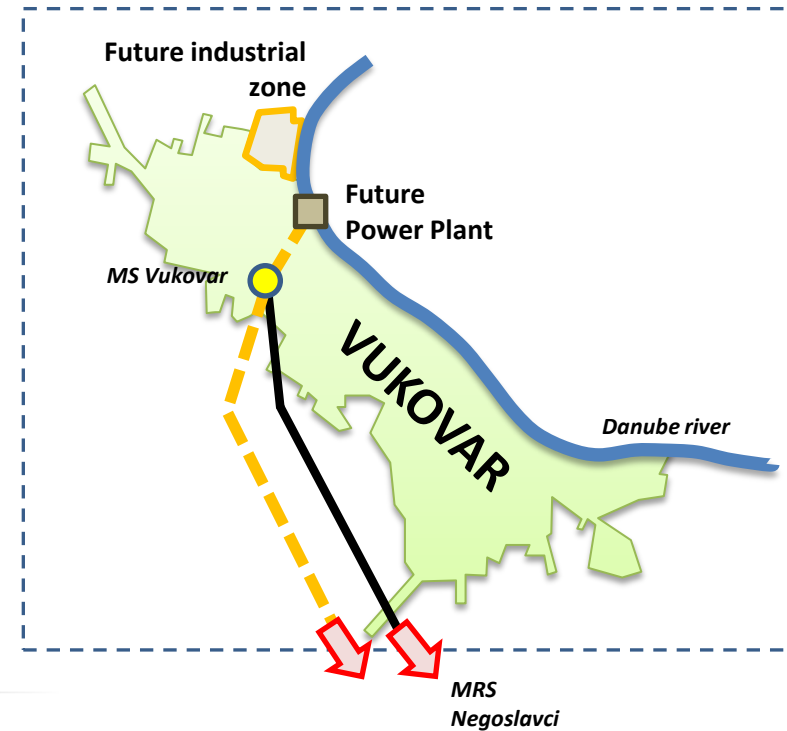
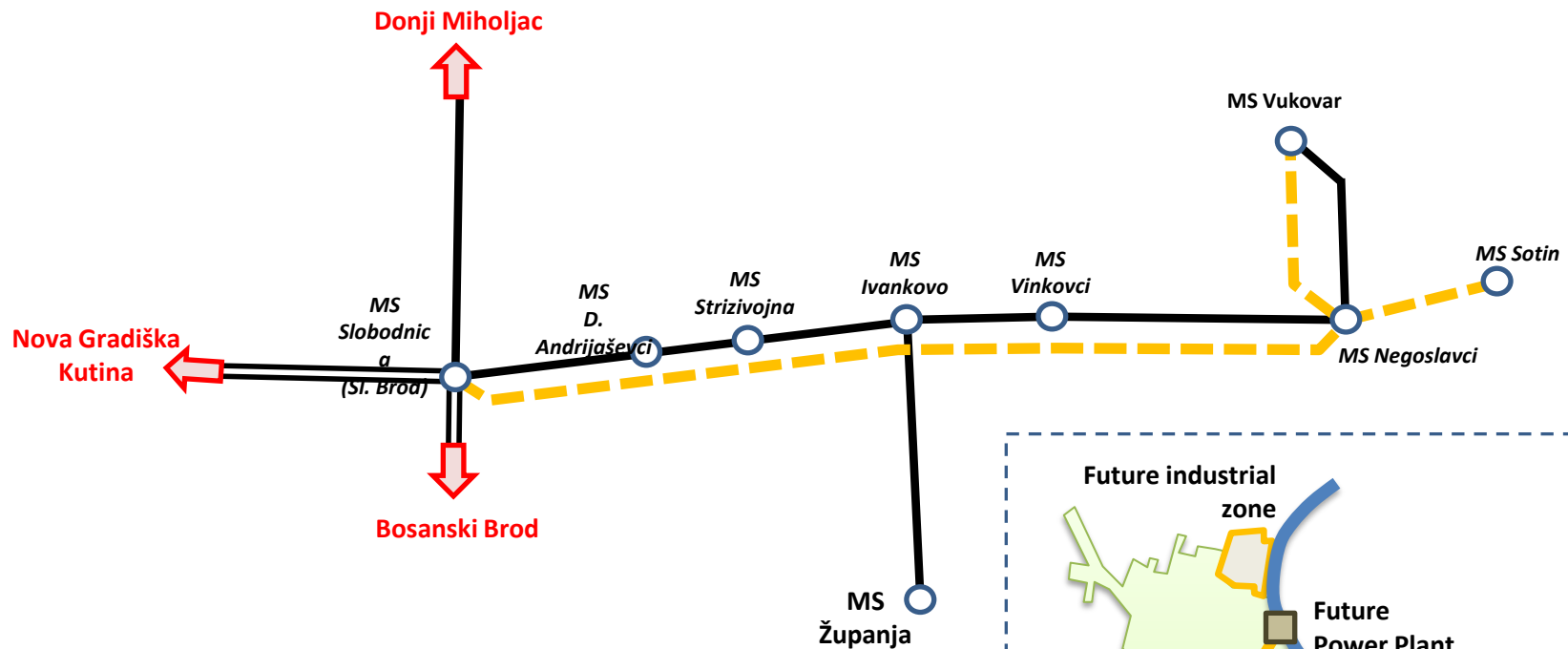
Power transmission lines



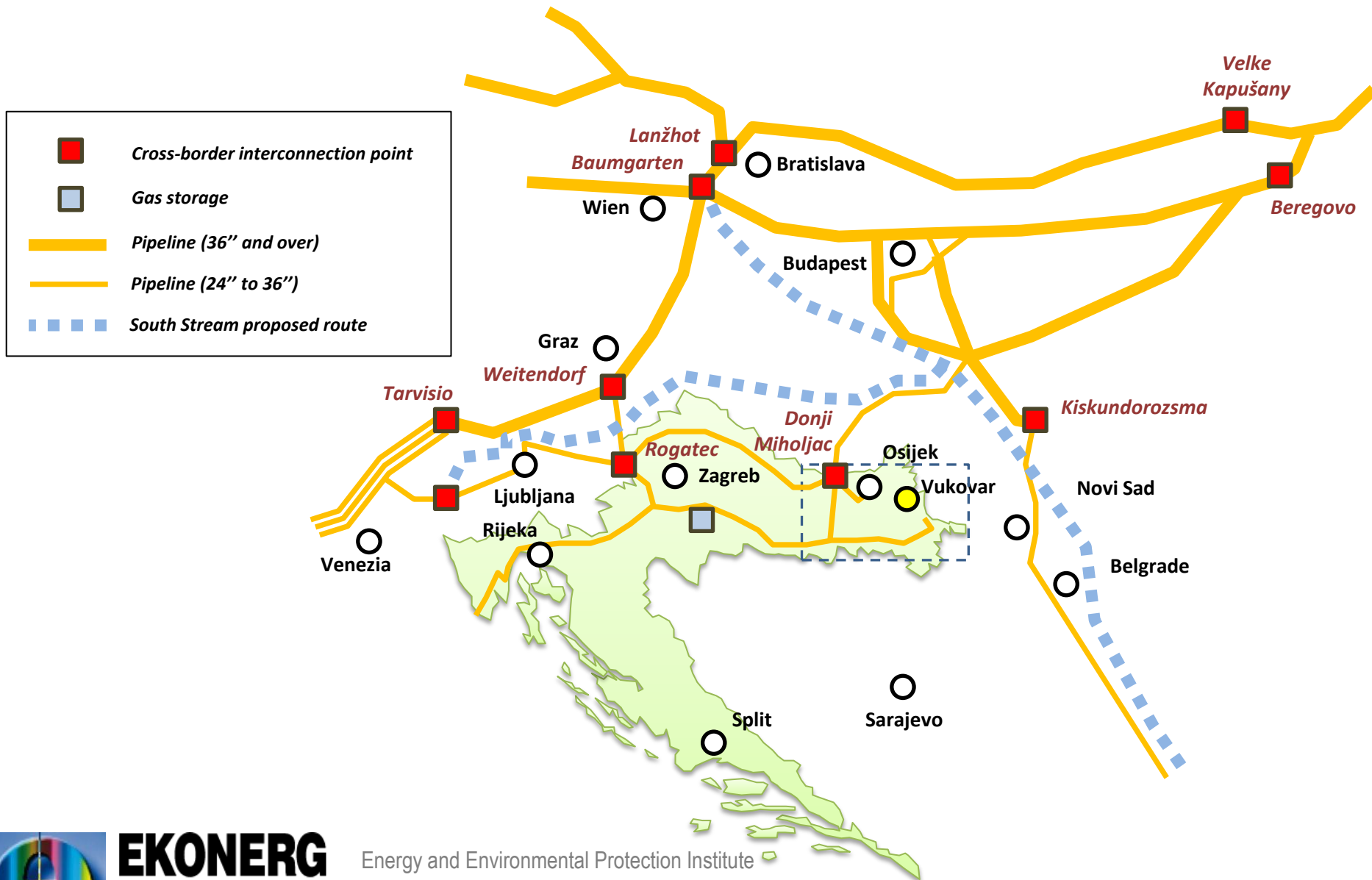
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Connection to the gas transportation system



Gas transportation lines

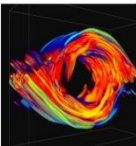


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Time schedule

ID	Task Name	Duration	Start	Finish	2012				2013				2014				2015			
					Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
1	TPP Vukovar	0,2 wks	Mon 3.10.11	Mon 3.10.11																
2	LOCATION PERMIT OBTAINING	57,2 wks	Mon 3.10.11	Mon 5.11.12																
3	INVESTIGATION WORKS	4 wks	Mon 3.10.11	Fri 28.10.11																
5	CONCEPTUAL DESIGN	8 wks	Mon 3.10.11	Fri 25.11.11																
10	ENERGY LICENCE	16 wks	Tue 4.10.11	Mon 23.1.12																
13	PHYSICAL PLANNING	32 wks	Mon 3.10.11	Fri 11.5.12																
20	REMOVAL OF EXISTING BUILDINGS	24 wks	Mon 3.10.11	Fri 16.3.12																
25	ENVIRONMENTAL IMPACT	41 wks	Mon 24.10.11	Fri 3.8.12																
30	BASIC DESIGN FOR LOCATION PERMIT	36 wks	Mon 28.11.11	Fri 3.8.12																
45	LOCATION PERMIT OBTAINING	13,2 wks	Mon 6.8.12	Mon 5.11.12																
50	TENDER PREPARATION FOR EPC CONTRACTING	12 wks	Mon 12.3.12	Fri 1.6.12																
55	EPC CONTRACTING	26,2 wks	Mon 4.6.12	Mon 3.12.12																
81	CONSTRUCTION OF TPP	140,2 wks	Tue 4.12.12	Tue 11.8.15																
73	COMMERCIAL OPERATION	0,2 wks	Wed 12.8.15	Wed 12.8.15																



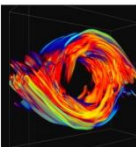
Investment and other fixed costs

Estimated total investment in the TPP 530 MW:	450 mil. EUROS
alt. 420 MW:	380 mil. EUROS

The investment includes these charges:

— power transmission line TPP Vukovar-TS Ernestinovo	20 mil. EUROS
— gas pipeline MRS Lužac-TPP Vukovar	2 mil. EUROS
— purchase of the TPP located land	4 mil. EUROS
— feasibility study, market analysis and obtaining location permit	2.5 mil. EUROS

The lifespan of the TPP is 20 years, the invested capital interest is 10%, maintenance costs/investment 5%, the number of employees/MW 0.4, employees' gross salary is 1500 EUR/month, other expenses/gross salary wages 30%, insurance/investment 0.6%, depreciation/year 5%



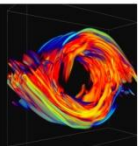
Natural gas price

Oil is the basis of the energetics world. Oil prices have an impact on the price of all fossil fuels. Future oil prices cannot be predicted.

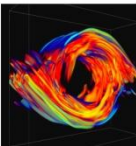
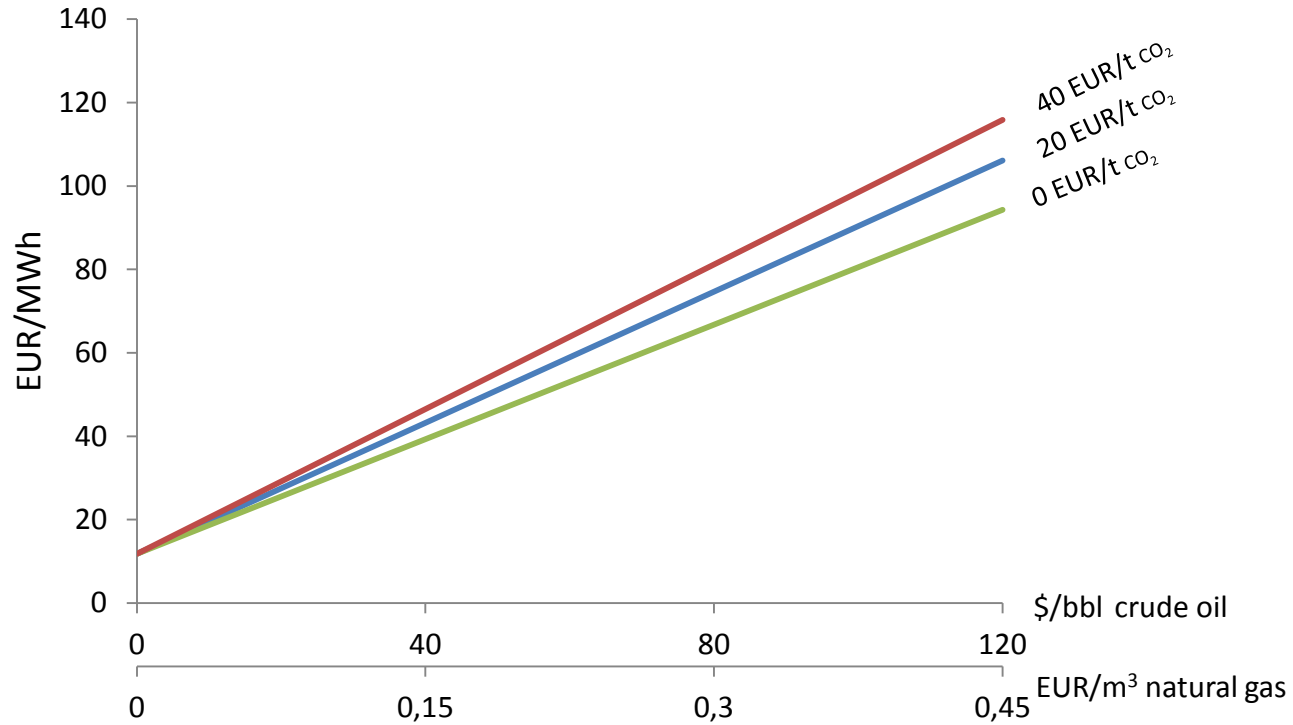
Croatia imports crude oil, natural gas and coal at world market prices. The price of natural gas, used in production of electric energy, is impacted by contracts determining the price of oil (indirectly). However, for long-term projections it could be established with the common price of natural gas per MWh for continuous FCO delivery. An experienced buyer can achieve a lower price.

CO2 emission unit price

After 2013., power plants will have to buy CO2 emission units at auctions (according to the ETS - EU emission trade scheme and Kyoto). Future prices of emission units and the amount of emission that TPP will have to buy is uncertain. It is estimated that the average cost will range from 20 to 40 EUROS/tCO2 per total CO2 emitted.



Power production costs



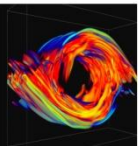
Croatian power market

The Croatian electricity market is a part of internal EU market. Croatia incorporated the EU energy legislation.

Under the Third Energy Package of the EU legislation, control of business operation of the power transmission and distribution companies shall give the investors access to the power grid on a non-discriminatory basis.

The power plant investors have to assume full responsibility for the project as well as all the power placement risks.

Before making a decision on project construction, an investor has to evaluate the price at which it will be possible to sell the power on the market. This evaluation is very complex and shall be analysed in the Feasibility study.

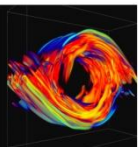


Baseload year electricity prices

The Croatian or southeast region energy exchange does not exist. As indicator of the power prices EEX (www.eex.com) can be used although import power prices to Croatian market are a little bit higher.

HEP is presently the only power supplier in Croatia responsible for supply of all customers. In recent years, about 30% of electricity has been imported to meet the demand of Croatian energy market. In 2010 HEP imported 40% of total Croatian consumption of electricity. Import is based on annual contracts for baseload power. The contract's price (2008-2011) has been between 45 and 90 EUROS/MWh depending on the crude oil price and other market circumstances.

Estimation of future baseload year electricity prices requires a complex risk analysis from the aspect of both sides - production and demand. These prices will increase due to: ETS and taxes on CO2 emission, shutdown of German nuclear power plants, decreasing hydropower share in the EU power production, increasing gas share in the EU power production energy mix, shortage in new power production capacities.



Possible strategy

The rate at which new construction of power plants is planned shows that considerable shortages are expected in the Croatian and southeast region power system. This is an opportunity to develop a new project and prepare in advance the necessary documentation, permits and licenses.

Advised strategy is to go step by step in the development of TPP project. The first step would be the location permit. After the first step and current power market demands would determine the next phase.

The risk in the first step is purchase of land (approx. 4 mil. EUROS) in the industrial zone located on the Danube River bank. In case of an economic growth in Croatia, value of the land could increase, so the risk related to land purchase is small. The planning permission documentation (covering the power plant, transmission line, gas pipeline) would require approx. 2 mil. EURO investment (including the necessary on-site activities).

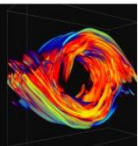
Ekonerg is willing to enter the project development (land acquisition and planning permission approval procedure) as a partner with up to 25% of necessary capital.



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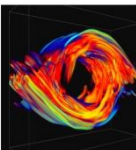


Future industrial zone - Borovo

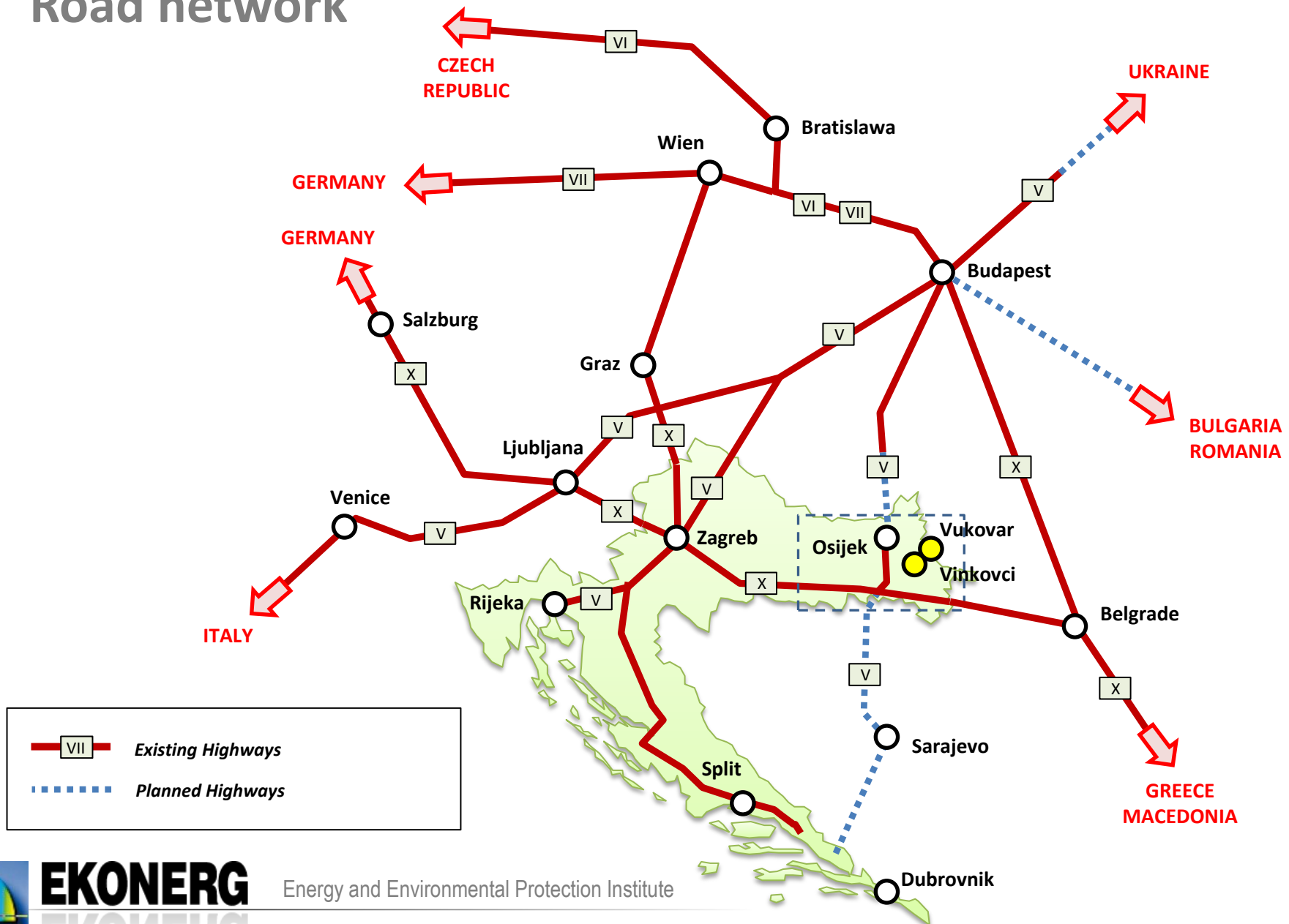
There is a new completely vacant industrial zone, further up north from TPP's site (70 ha/over 7,5 mil ft²).

TPP's efficiency and profitability can be improved by cogeneration process: using heat from the plant for supply of processing industry (paper industry, ethanol production, food industry etc.).

There are some advantages for an investment in this area (good traffic connections, lower taxes, support by the government through investment in infrastructure)



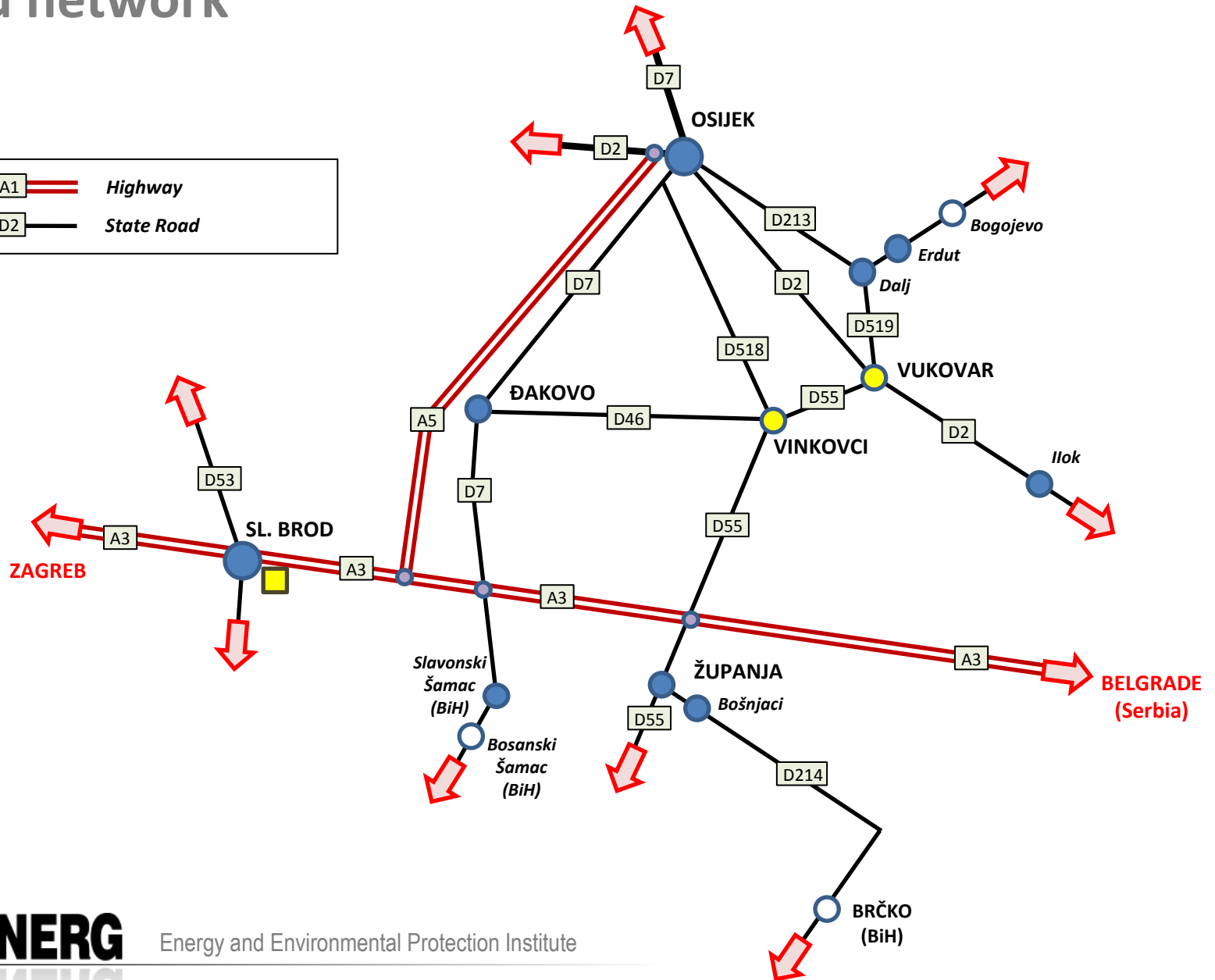
Road network



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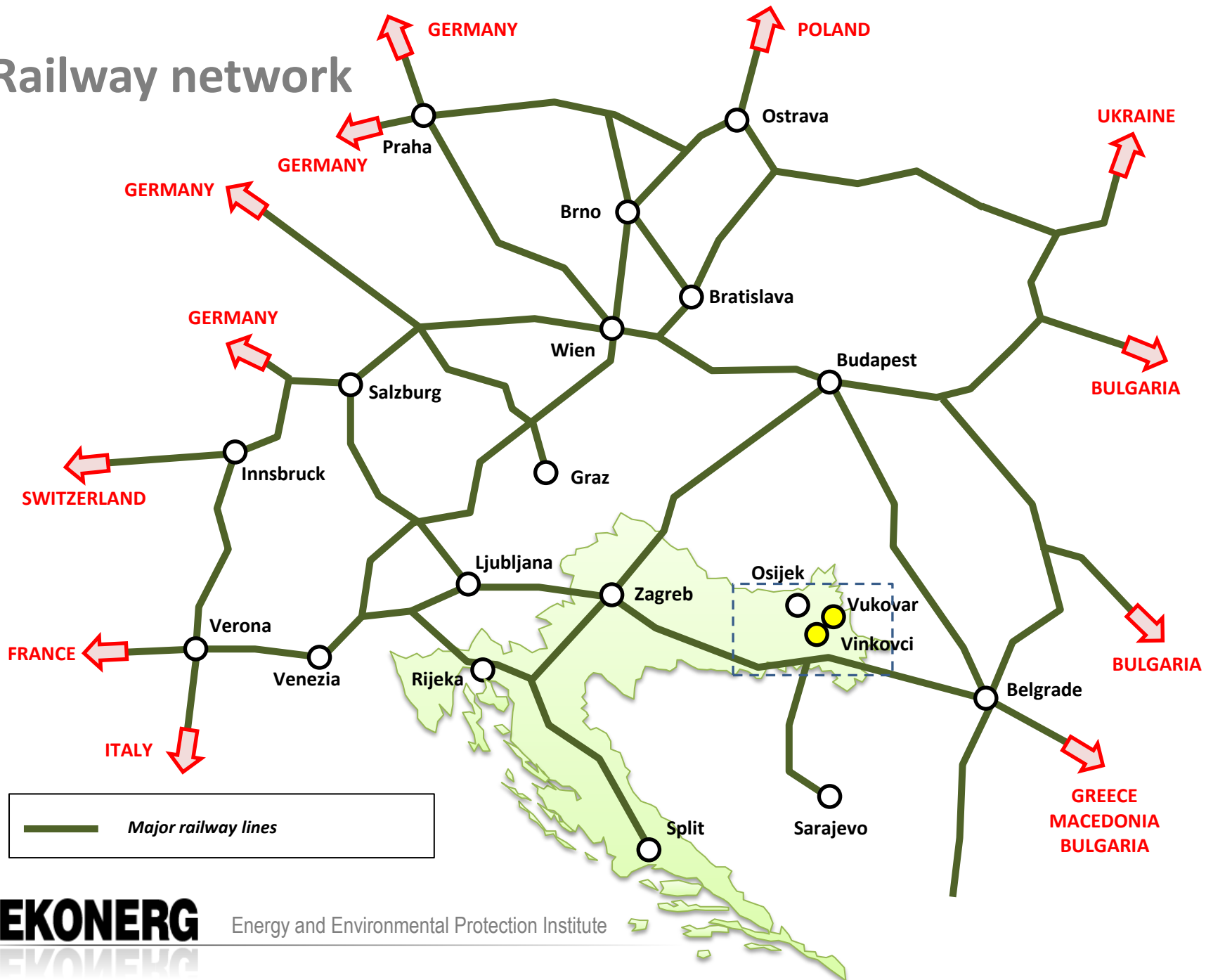
Road network



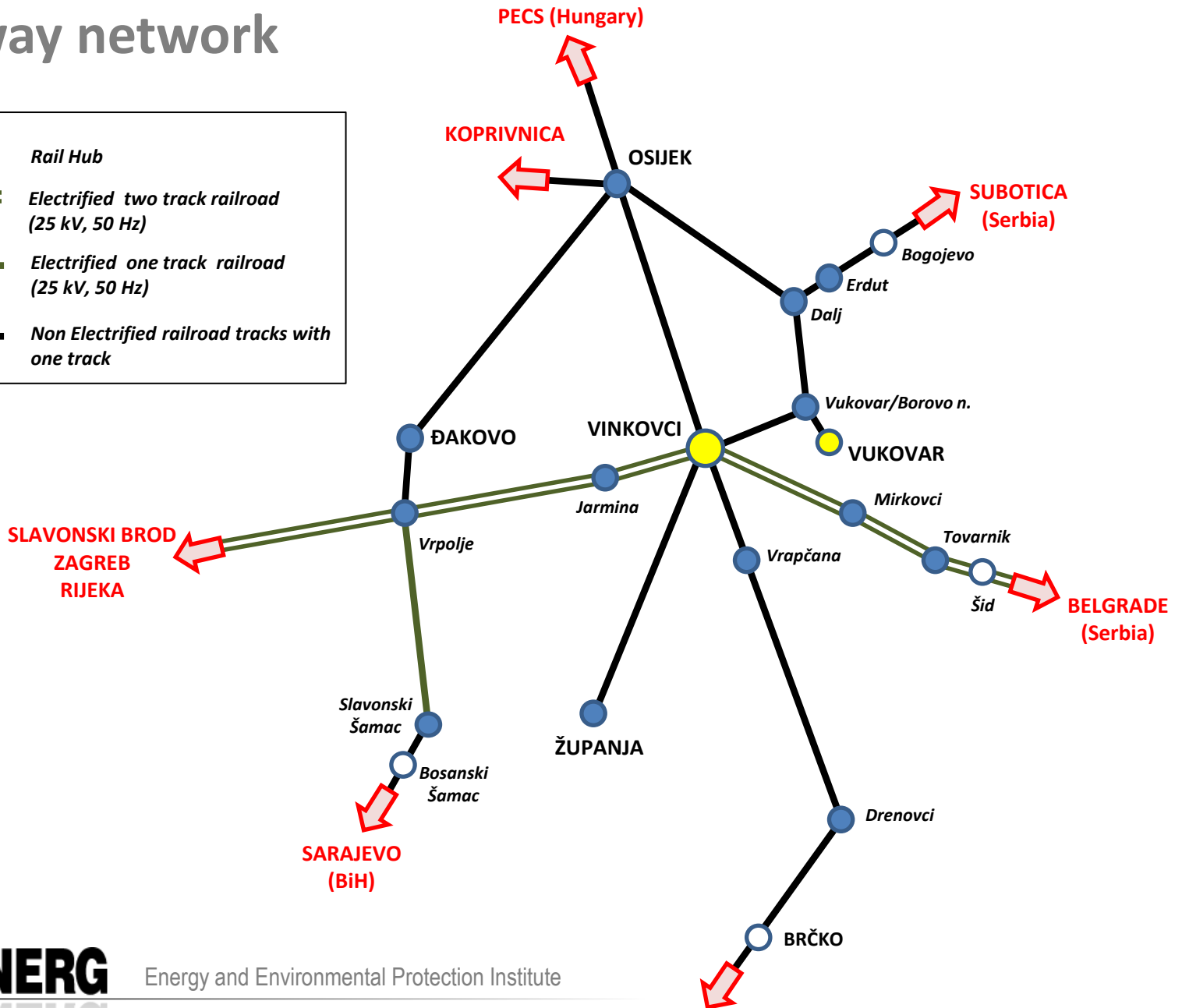
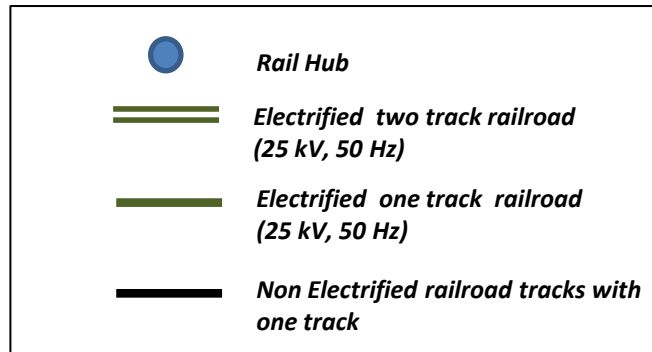
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Railway network



Railway network



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