

DER Integration and Future Perspective for MV grids in Croatia

Siemens Croatia
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DER - actual situation

DER finished projects - 2011

	Type	Rated power (kW)
1	Wind PP	78.750
2	Solar PP	148
3	Small Hydro PP	30
4	Biomass	5.740
5	Biogas	4.000
6	CHP	10.493
	TOTAL	99.161

80%

DER - actual situation

Wind PP in function

	Project Name	Rated Power (MW)
1	Brdo Ravne – Pag	6
2	Trtar Krtolin – Šibenik	11,2
3	Pometeno Brdo	1
4	Orlice – Šibenik	9,6
5	VE Vrataruša	42
6	Velika Popina - ZD6	9,2
	TOTAL	79

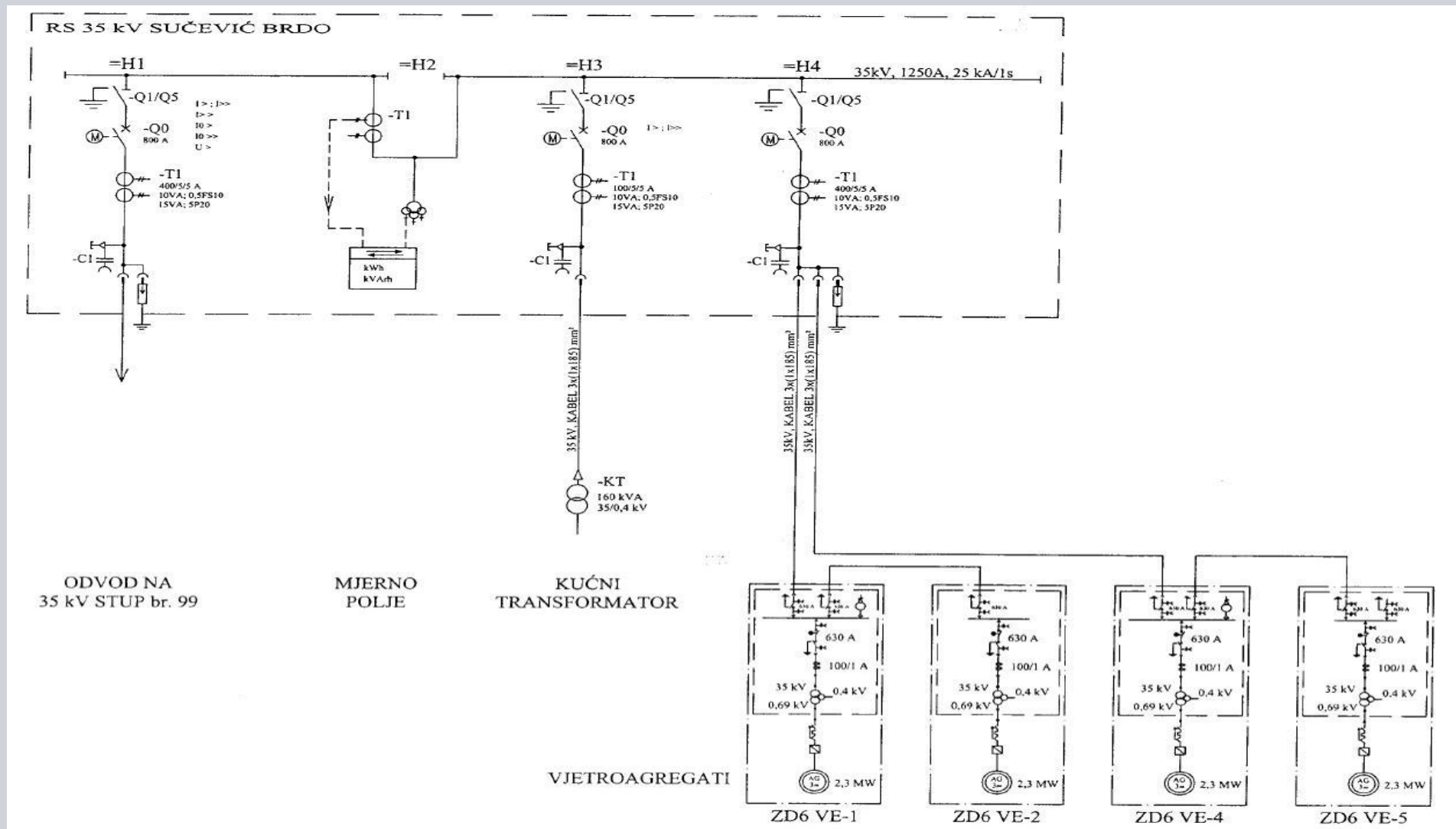
Wind power plant – VE Velika Popina

VE Velika Popina (ZD6)

- Total investment: 16.2 mil EUR
- Rated power: 9,2 MW (4 x 2,3 MW)
- Production: 26.000 MW/h per year
- Investors: Dalekovod & EKO
- Suppliers: Siemens Denmark, Siemens Croatia
- In operation: January, 2011.
- Location: Gracac, Croatia
 - Site elevation: 730m – 980m
 - Wind cut-in speed: 3-5 m/s
 - Wind cut-out speed: 25 m/s



VE Velika Popina - SLD



VE Velika Popina

Siemens equipment

- Turbines: SWT 2.3 – 82 VS,
WepWPS SCADA
- MV switchgear: NXPLUS, NXPLUS
C Wind
- Relay protection: SIPROTEC
7SJ62
- Transformer: 2500 kVA, 36/0,69
kV, oil type (step-up trafo)
- Aux. transformer: 100 kVA, 36/0,4
kV, dry type



Future Perspective

Active projects – wind PP

	Project Name	Rated Power (MW)
1	VE ZD2	18
2	VE ZD3	18
3	VE Ponikve	34
	TOTAL	70

New projects

- National strategy: 5,8% production from renewables
- 145 registered projects for wind PP - total power 6600 MW
- 145 registered projects for biomass, CHP, geothermal – total rated power 300 MW
- Simplified administrative procedure
- Network capacity (?)

Thank you for your attention!

