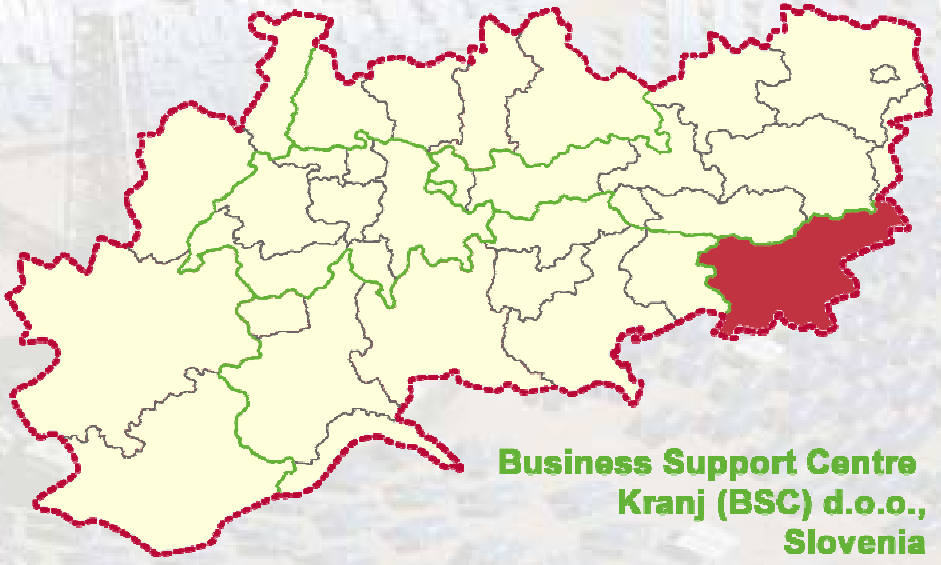
AlpEnergy

Virtual Power Systems as an Instrument to Promote Transnational Cooperation and Sustainable Energy Supply in the Alpine Space

European Territorial Cooperation 2007 – 2013



Business Support Centre Kranj (BSC) d.o.o., Slovenia

2nd Transnational Partner Meeting 27th May 2009

BSC

Alpine Space

ISKRAEMECO

elektro gorenjska

Z ENERGIJO

REGIONAL EFFECTS
CASE OF GORENJSKA REGION

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Energy distributor expectations and modalities of technical functions implementation

- Detection, allocation and reduction of technical and non-technical losses
- Error detection
- Consumption forecast
- Network analysis and resource managemet
- Network quality
- Change of electric energy supplier
- Remote meter test, parameterization and FW upgrade
- Security
- Clock synchronization

Energy Distributor expectations and implementation modalities of business functions

- Remote data reading of consumed / committed energy
- Local display of data
- Remote control / management of consumption
- Prepaid system feasibility
- Measurement of consumptions and other energy parameters
- Possibility for the customers to view consumptions, statistics and other information on the web portal

Expectations of household costumers of energy

- Free choosing of supplier, based on possibility of simple and quick choice and exchange of supplier
- Dynamic tariff (presentation on house indicating mechanism) and possibility of adjustment of own consumption to these tariff
- Effective programs for reduction of costs of electric energy consumption
- Joining of own local sprayed sources
- Stimulative programs for introduction of renewable energy sources
- Combined, transparent and intelligible receipt for consumption of electricity, gas, heat and water
- Feasibility of regulation of own consumption directly or with help of own system of house automation
- Feasibility of pre-payment system

Expectations
Producers and Community

Producers:

- Decreasing of the yearly peak with the use of dynamic tariff – lower costs of the production units for the cowering of the peak
- More precise data
- Possibility of more optimised adoption of the production

Community

- Decreasing of the use of the electrical energy leads towards lower costs of CO2 and towards easier attainment of the EU goals.

REGIONAL FACTS

Number of measuring points on the area of Elektro Gorenjska regarding the type of consumers

	AMR	Mannually	SUMA
Household - yearly settling	660	74.666	75.326
Multiple users - monthly settling	1.067	92	1.159
Retail users - monthly settling	651	7.814	8.465
SUMA	2.378	82.572	84.950

Number of measuring point, gas, water, and remote heat on the area of Elektro Gorenjske

	measuring points - yearly settling	measuring points - monthy	Suma
Gas	6.000	180	6.180
Remote heat	6.000	0	6.000
Water	39.535	1.945	41.480

Business process “Measuring, scooping and handling with itemized statement data about the use of Electrical energy” extends performing of the following functions:

- Measurement of itemized statement data at the customers
- Capture of the itemized statement data at the customers
- Transmitting of the itemized statement data into the centre for handling
- Collection, handling (checking, calculation, working out reports), safe storage and archiving the itemized statement data
- Interference of itemized statement data to all users of the data

Yearly value on the categories of costs of the current system connected with the data about he consuption of the electrical energy

Costs of the current system

Cost category	Value (€)
Cost of the regular exchange	546.317
Costs of the data reading	333.443
Other costs	872.226
Suma - 1 year	1.752.487
Suma in 15 years	26.287.305

COSTS OF THE CURRENT SYSTEM

Yearly and altogether (non discount) value of the individual categories of costs of new AMI system

	COSTS (€)	SUMA
Costs of maintenance	variable	2.491.963
Staff costs	variable	5.368.762
Costs of the data transmission	65.059	1.171.062
Dynamic tariff	50.000	750.000
Measurment of other energy products	50.306	1.006.125
SUMA	165.365	10.787.912

DIFFERENCE – OLD SYSTEM / NEW AMI

26.287.000
- 10.787.000
= 15.500.000

INITIAL INVESTMENTS COST

	On the measuring point	Yearly	SUMA
Purchase price of the system meters	228,15	3.797.451	18.987.256
Purchase price of controlling meters	5,61	93.452	467.258
Costs of the centres for collection and handling of the data	4,81	80.000	400.000
Costs of education of the employees	1,2	20.000	100.000
Costs of the transition on the new system	2,4	40.000	200.000
Costs of financing	65,27	variable	5.431.642
SUMA	307,44	4.030.903	25.586.157

Share of the single categories in altogether profitability

CATEGORIES	SUMA OF SAVINGS	SHARE
Savings stamping	2.753.230	5,60%
Savings exchange	6.184.785	12,50%
Savings staff cost at stamping	1.489.962	3,00%
Savings on the car driving on stamping	498.373	1,00%
Savings on the data reading - staff costs	4.048.898	8,20%
Savings of the data reading - car driving	1.953.078	4,00%
Savings of the costs on the filing of reprimands	1.734.534	3,50%
Savings of opportunity costs of interests	249.534	0,50%
Savings of costs on deviations	2.613.600	5,30%
Savings on the lower commercial lost	3.739.886	7,60%
Savings on the less končnega odjema	16.727.765	33,90%
Savings on the lower costs of the calling centre	720.000	1,50%
"Multi utility"	1.819.952	3,70%
Other benefits	4.753.360	9,60%
SUMA	**49.286.955**	**100%**

OTHER BENEFITS AND FACTS

- DECRISING OF THE USE OF ELECTRICAL ENERGY (ESTIMATED 1% YEARLY)
- DECRISING OF CO2 EMISIONS (55.000 ton/yearly)
- BENEFITS REGARDING DECREASION OF PEAK OF TRANSMISSION OPERATER AND PRODUCERS OF ELECTRICAL ENERGY

RETURN ON INVESTMENTS = 14 YEARS