



**PUC BEOGRADSKE
ELEKTRANE (BE)
DISTRICT HEATING (DH)
BUSINESS**

Petar Vasiljević
General Manager Assistant

Fourth South-East European Climate Outlook Forum (SEECOF-4) Belgrade, 22-26 November 2010

Basic data about PUC BE

- Yearly production of heating energy: 3.700 GWh
- Number of residential customers: 310.000 (1,0 mil.people)
- Number of commercial customers: 9.500
- Total heating floor area: 21.000.000 m² – 50% of total floor area in Belgrade
- Length of pipelines: 1.200 km
- Number of substations: 7.300
- Fuel consumption: 320 mil. m³ natural gas, 50.000 t oil, 5.000 t coal-biomass

Fourth South-East European Climate Outlook Forum (SEECOF-4) Belgrade, 22-26 November 2010

Annual planning of primary energy consumption- heat energy production

Current situation

- Based on the long-term - six-month forecasts of temperature and precipitation(month to month in winter time)
- As a large consumer of primary energy we provide for the gas supplier an annually, monthly, weekly and daily nominations of gas consumption. For this are needed more precise long-term, medium-and short-term forecasts of temperature, precipitation and wind.
- Experience with November 2010 !We order 40 mil. m³- will be 29 mil. m³ !!!
- Therefore an accurate hour forecasts during the day are required

Present situation and Future plan:

- We Install an effective SCADA program tools(Termis real time).The softver collecting all necessary data, processing them and use for effective production and distribution heat energy for Konjarnik area (25% of Belgrade heat sistem).Managing and controlling with DHS in real time, we make temperature and pump optimization (heat and electriscity consumption)
- Temperature forecast for 3 days in advance will be the basis for planning production of heat and will be directly linked to the SCADA.
- Plann for 2011 is to install and activate SCADA program and Manag and controll all Belgrade DHS in real time

Conclusion:

- Precise temperature forecast becomes the most important input parameter for the optimal planning and managing of heat energy production .
- By successful cooperation with RHMS of Serbia for the last year we have saved 1.3% of primary fuel consumption(gas and heavy fuel oil) worth € 1.5 million and less emission in the atmosphere 4.500 t of CO₂.

**Fourth South-East European Climate Outlook Forum (SEECOF-4)
Belgrade, 22-26 November 2010**

Thank you for your attention

Petar Vasiljević, M.Sc.M.E.

e-mail: p.vasiljevic@beoelektrane.rs

mob: +381 64 8998 007