

Case story

Simple and efficient system for remote monitoring and control

Kopaonik, Serbia



Excellent

overview and control

of your heating system
with Danfoss ECL Portal.



Due to the long and very cold winter 2011/2012 heating season lasted longer than the previous one. In spite of this increase in demand for complex heating, we have achieved a saving which is represented in a 10% lower fuel consumption in comparison with the previous season.

Goran Lazic, Maintenance Manager,
MK Mountain Resort



Heating facility reconstruction Way to perform good energy management

Danfoss solutions on Kopaonik mountain, results in better energy efficiency and lower energy consumption.



Mountain Kopaonik is located in Serbia, 290 km² southward of Belgrade. Gifted with natural beauty, it is the largest and most important ski resort in Serbia.

MK Mountain Resort is a company that manages four tourist facilities on Kopaonik since 2009:

- Grand Hotel & SPA ****
- Family Hotel Angella ****
- Apartments lodgings Konaci **** deluxe
- Restaurant „Zvrk“.

All facilities are located in the middle of tourist center, at the height 1770 m above the sea level.

Considering that all of the above structures were built during the 80's of the last century, the new owner was faced with the extremely high energy costs for building heating. Also, due to the lack of automatic control for the heating installations, thermal comfort requirements within the complex were not in accordance with the actual needs of the user.

Solutions for the optimal energy use

Step-by-step reconstruction of the heating system was started in the year 2010 and involved the installation of Danfoss control equipment: straight-way and three-way control valves with motor drives, automatic balancing valves for hydraulic balancing

Overview of the installation:

- Seven control circuits were reconstructed
- ECL Portal was applied in Serbia for the first time

and appropriate electronic controllers ECL Comfort 310. Seven control circuits were reconstructed on the systems that supply the heat to the most important parts of the hotel complex.

The results are very encouraging. Systems are energy efficient and do not waste energy and money.

Goran Lazic, Maintenance Manager at MK Mountain Resort: „Due to the long and very cold winter 2011/2012 heating season lasted longer than the previous one. In spite of this increase in demand for complex heating, we have achieved a saving which is represented

in a 10% lower fuel consumption in comparison with the previous season. “

Quick response to heating demands

Managing the reconstructed parts of the heating system is simple, fast and effective since all seven ECL Comfort 310 controllers have been linked by means of ECL Portal system for remote monitoring and control. ECL Portal gives an integrated display of all relevant parameters of the heating system, via standard web browser. Installation and connection of the controllers to the ECL portal was performed by company TRACO, Danfoss partner and system integrator. The

possibility to use this application on the Smartphones as well proved to be very useful.

Goran Trišić, TRACO company, system integrator: “The hotel complex is a complicated and dynamic system where it is often necessary to react quickly and redirect energy where it is needed at that moment. ECL Portal applications for Smartphone enables quick and timely response because a physical presence in the substation is not necessary any more in order to change the parameters so that they are adequate to current needs. “

The analysis leads to the operation optimization

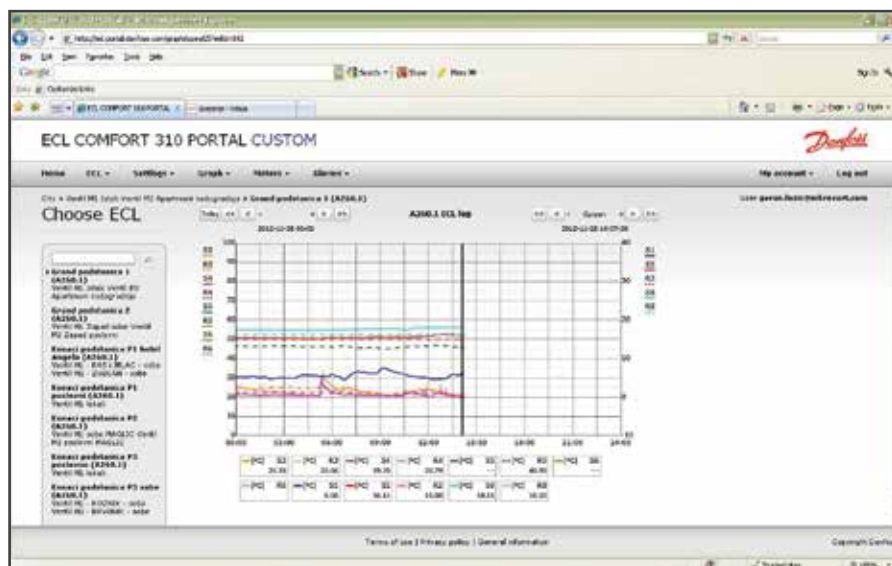
There are numerous advantages of the Portal ECL system. In addition to the monitoring and managing the system from one central point, all of the data and system parameters could be used to analyze and optimize energy consumption.

Data Log option allows the storage of all system parameters (temperatures and data from heat meters) over a longer period of time, in order to make an analysis of the heating system operation. This is a precondition for the solutions that lead to the operation optimization. Another fundamental characteristics is the possibility to obtain the data about alarm conditions automatically, by e-mail, what is a precondition for the quick service response.



About ECL portal:

- Remote monitoring and control for the ECL Comfort 310 controllers
- Easy system installation – it is only necessary to bring an ethernet cable to the controller
- Storage of data (Data log function) enables analysis and optimization



Logged sensor values at the selected date Graph

3 good reasons to choose Danfoss

Danfoss is more than a wide range supplier of premium solutions. Our customer insight and technical expertise also make us a strong partner for your business.



1 Broad application know-how and customer understanding



2 Supplier of solutions with a wide product range



3 A strong and dedicated business partner

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