

# Case study: Backup power generators



### Benefits

- O Fewer service trips needed.
- Access to real-time data about the power station.
- Alarms when something is wrong.



"Netbiter has spared us a lot of service trips which means savings in time and money, but more importantly we have better control of the generators and can monitor all parameters in real time through a web browser."

**Yashar Mailov** Service Manager, NetService.

## Keeping Azerbaijan talking

How the Netbiter remote management solution is used to monitor diesel generators supplying the Azerbaijani mobile network with backup power.

The Republic of Azerbaijan constitutes the largest and most populated region in South Caucasus. Whilst the capital, Baku, has rapidly transformed itself into a highly developed modern city, the surrounding countryside has remained largely untouched and archaic.

For a mobile telecommunications company like Azercell, these conditions pose challenges when it comes to keeping mobile base stations supplied with power at all times. Therefore, Azercell have trusted the Azeri company NetService to install diesel generators at 450 mobile base stations all around Azerbaijan. These diesel generators supply backup power to the base stations whenever the regular power should fail.

#### The problem

Since the diesel generators are located outdoors, they are subject to the very varied Azerbaijani climate where temperatures may vary from -20 to +40 degrees Centigrade. Consequently, it is very important to do regular checkups to make sure that the generators are ready to start when needed – a task which can be time-consuming and involve a lot of travelling.

Yashar Mailov, Service Manager at NetService explains:

"We have 25 people working with generator maintenance and previously, they had a hard time keeping up with checking generator engine status, battery power, fuel levels and so on. We often had to drive to remote generators just to see if they were operational or not. More importantly, it was hard for us to know when there were any malfunctioning generators."

NetService works with generators from the Turkish supplier Cukurova and when Cukurova first introduced the Netbiter remote management solution, NetService was more than happy to try it out.



The Netbiter is connected to the control panel using the internal Modbus network.

All relevant information is sent to a web interface using GPRS.



The generator parameters can be monitored in Netbiter Argos. It is also possible to start or stop the generator.

#### The solution

A Netbiter remote gateway is connected to a DEIF - GC-1F genset controller, communicating via the Modbus protocol. The Netbiter remote gateway transmits the data from the generator via the mobile GSM/GPRS network to the Netbiter Argos data center at www.netbiter.net.

By logging onto Netbiter Argos, NetService's dispatch staff can view all parameters from each generator such as oil pressure, fuel levels, battery status etc. in a graphical dashboard.

From the Netbiter Argos web interface, NetService can also remotely start and stop the generators to see that they start as they should and that all parameters are at the expected levels. If something is wrong, a service technician is sent to the site to look into the problem.

#### The results

"The Netbiter remote management solution has made generator service much easier and less expensive," says Yashar Mailov at NetService.

"Now we immediately see which generators that have fuel and we can also start and stop generators without going to the actual site. The Netbiter solution has spared us a lot of service trips which means savings in time and money, but more importantly we have better control of the generators and can monitor all parameters in real time through a web browser."

Yashar Mailov has no hesitation in recommending the remote management solution to others.

"If you haven't started using remote management already, you definitely should. The solution can be used not only for power generators, but for most things that need to be monitored remotely. It's a very smart solution which has saved us a lot of time and money," concludes Yashar Mailov.

