

Sberbank – Moskow (RU)

Siemens BMS for HVAC system
of the largest data centre in Europe



“Sberbank Data Center, winner of the
“Innovation in the Mega Data Center” for the
high level of efficiency, is TIER III certified and
one of the largest in Europe ...”

Sberbank is one of the largest financial institutions in Russia. Their data centre, the largest datacenter in Europe, is constructed within an existing campus facility in Yuzhny Port in Moscow.

The Data Centre consists of three floors of white space, a floor with electrical installations and a floor of support facilities. The solutions supporting the datacenter are based on the most effective energy saving technologies available. These are in line with global best practices. Very strict requirements are met regarding reliability and sustainability.

The Datacenter reliability:

- meets and exceeds Tier I and Tier II requirements;
- is designed with multiple independent paths for IT Equipment;
- achieves expected availability of 99.982%.

The total area of the datacenter facility is approximately 16,500 m², while the total IT room space covers 5,000 m². Successful cooperation of Russian and Irish construction teams has made it possible to build a unique complex datacenter in a very short 15 month period.

The system consisted of 27 Primary Air Handling Units (PAHU) for the cooling of the data centre across 5 floors.

Building Energy Solutions

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CLIENT

RMI, Ireland

FINAL CLIENT

Sberbank

LOCATION

Yuzhny Port, Moscow Russia

SERVICES PROVIDED

Siemens Controls: 1700
hardwired I/O;
216 VSD drives on Primary Air
Handling Units;
Integration with local vendor into
BMS front end.

DURATION

March 2011 to Sept 2012

REFERENCE CONTACT

Mr. Cem Sayinsoy
Project Manager
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PARTNERS

RMI
Mercury

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Each PAHU has its own electrical and control panel with Siemens PX BMS controllers.

Each PAHU consisted of a primary and secondary air supply, through a heat exchanger. One of the main challenges was climate: extreme temperatures, from -30°C to +40°C, mean that the BMS needs to be a well commissioned system.

Each PAHU contains:

- mixing section
- heat exchanger
- adiabatic cooling
- humidifier
- two DX coils supplied by DX units with Turbocor compressors
- 8 fans (4 on the primary and 4 on the secondary)

The BMS communicates using BACNET over LON and BACNET over IP.

Dynamic control of PAHU's supply and return fans is achieved using integrated variable speed drives for control of flow rate.

The BMS is integrated with a site data historian.



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