

Outstanding Reference in Moscow

Reliable and energy-efficient building technology in the Federation Tower

Winner
KNX Award 2010
Category
International – Europe



Currently, the “Federazija” in the Moscow International Business Center is probably the most spectacular building complex in the Russian capital. The skyscraper, with its 243-m-high towers “Zapad”(West Tower) and “Vostok” (East Tower), was completed in 2010. Originally the planned height of the East Tower was 360 m, with an antenna of 506 m. Of the 64 floors in the West Tower, 33 stories with an area of 60,000 m², are occupied by the Russian Bank VTB and used as different kinds of offices, including those for the top management, and conference rooms. The importance of the bank for the Russian financial market is best illustrated by the fact that the national market leader maintains branches in 114 cities and is represented in 21 countries worldwide. KNX has therefore won quite an outstanding reference in the true sense of the word. Modern technologies for comfort, energy conservation and security are increasingly in demand in Russia, following the trend of new developments in the construction sector. With this project, KNX has met all conditions for openness, compatibility, efficiency and scalability in an ideal manner.

Functions for comfort and efficiency

Engineering and system integration of the extensive KNX installation with its approximately 3,600 bus sharing units was carried out by the EcoProg Company in Moscow. This engineering company was formed in 1990 and is a very competent building automation provider with several years of KNX experience, based on prominent projects



On 33 floors of the “Zapad”, in the rooms of Bank VTB, KNX is used to control building services functions.

monitoring and visualization of all processes are carried out via the Building Management System (BMS). It combines all building services systems, including the KNX installation, via an RS 232 interface. The system allows central monitoring, setting and operation of all KNX functions in addition to their local manual operation via buttons or touch panels, as well as the automatic functions via movement sensors, light sensors, room temperature controllers etc. The highlight of the building control technology is the display of technical information on four 46” LCD monitors.

all over Russia. In the VTB contract, the company had to create a comfortable and secure environment for staff and customers using building services functions and facilitate efficient operation of the technical installations. For example, a constant lighting control system which takes daylight levels into account was installed in order to provide reliable and yet economical lighting. In the top management offices and conference rooms, adjustable scenarios with switch and dimmer functions for the lighting, solar screening and black-out functions for presentations and conferences. In order to reduce energy costs, it is

possible to activate different operating modes for air conditioning and heating using the KNX control system via manual operation, presence sensors or the BMS. Likewise, the valves and control of the additionally-installed fan-coil units are efficiently operated via a control algorithm, depending on the ventilation and air conditioning operating modes.

Interface to the Building Management System

The functional reliability of the different bus lines is ensured through additional USV units. In addition, the lines of the different floors are linked via LWL.

Central management, mo-

Benefits provided by KNX in this project

- High degree of dependability, reliability and quality for the operation of the lighting and air conditioning systems
- Reduced power consumption through optimization of operating processes
- Comfortable operation for customers and staff
- Central control through integration with the BMS

Technical refinements

- Constant lighting control in the offices
- Automatic lighting control via movement sensors and BMS in public areas
- Manual and remotely controlled temperature setting in the offices
- Controlling lighting scenes in the conference rooms and top management offices in combination with media technology
- Central visualization of all KNX functions via the BMS

Companies involved

Building owner:
Bank VTB, Moscow
Architect:
NPS Tchoban Voss, Berlin/Hamburg/Dresden
Engineering and system integration:
EcoProg Ltd, Moscow
www.ecoprogru



Multiple tasks for KNX: energy conservation, reliability, control and representation