

Aswan High Dam Gets Modern Controls

Challenge

Spanning the Nile River with twelve hydroelectric turbines that can generate 2.10 million kilowatts of electrical power, the Aswan High Dam Power Station remains Egypt's largest single source of energy. But by the 1990's, the instruments and controls that monitor the performance of the turbines and all station facilities had become obsolete since installation in the 1960's.



Photo: USAID/Egypt

Control system at the Aswan High Dam

Most recently, USAID provided \$13.5 million to help the Egyptians install a state-of-the-art control system at the Aswan High Dam. USAID funded \$154 million in improvements to the High Dam since the late 1980's including six major upgrades which have replaced or rehabilitated the vital components of the station. Besides the physical improvements to the station, more than 100 operations and maintenance staff received comprehensive training at manufacturers' factories in the United States.

Results

After a three-year replacement project, the power station is now run with microprocessor-based controls and data acquisition systems that let maintenance personnel identify and prevent potential problems. Circuit breakers were replaced, as well as the controls and instrumentation that both regulates and monitors the transfer of power from the generation station to the 500 KV transmission lines.

The completed facilities were dedicated in September 2003. The efficiency of the station has been improved and the life of the plant has been extended by more than 30 years. The projects have increased generator performance, overall station safety, and efficiency, and therefore service to the Egyptian public.

Initiative

After Egypt's Ministry of Electricity determined that key equipment in the station needed to be repaired or replaced, the U.S. Agency for International Development was asked to provide assistance. In the early 1980's, an agreement was signed with the Government of Egypt for the rehabilitation and modernization of the High Dam power station.

For more information, please visit www.usaid.gov.