

## 3.31 EGYPT

Egypt's present requirements for electricity are met by 40 interconnected power stations with a generating capacity of about 13,000 MW of which thermal steam accounts for 50%, combustion turbine, combined cycle 26%, and hydropower 24%. The transmission system consists of a unified grid totalling 7,400 km of high and low voltage overhead lines which connect Upper Egypt and the High Dam Hydro Plant to the Delta area of Lower Egypt.

The Government's five-year development plan forecasts investment of US \$3 billion for the construction, rehabilitation and expansion of generation, transmission and distribution facilities. Several thermal generating power stations are currently being upgraded and or constructed in an effort to increase overall capacity by 800 MW per year until the year 2000. Four hydropower generating projects are being developed and implemented currently. Some tenders have already been let and more will come for cable, insulators, conductors, fittings, towers, substations and transformers.

In addition to its own internal developments, Egypt is a major partner in three electrical grid projects. These include the Egypt Zaire Interconnect, the North Africa Network which will link up eventually to Europe through Spain, and the Europe/Islamic Countries grid linking Egypt, Jordan, Syria, Iraq and Turkey.

The Government of Egypt has placed a priority on reducing imports by increasing local manufacturing capability whenever possible. Indeed Bechtel Egypt and AECL Canada were commissioned to carry out a study to identify local companies capable of joint venturing with foreign partners to produce equipment for the nuclear industry, when and if nuclear power development becomes a reality.

Nuclear power repeatedly comes up as a means of meeting future needs. However, existing financial constraints, the desire not to incur crushing new debt, the population's reticence about this form of energy creation following the Chernobyl incident and the recent earthquake, are keeping the project on a back burner for the present. Nevertheless, on the research side Egypt has signed for a \$60 million mini-research reactor and is expected to invest up to \$200 million in further projects and research in order to take advantage of the latest advances of modern nuclear technology.

## 3.32 IRAN

## OVERVIEW

Iran's energy production capacity can currently generate 16,600 megawatts of electricity. However, given Iran's demographic explosion (3.5% increase per year), the accelerated urbanization of the country and the renovation and expansion of the local industry, the demands upon the power generation system fall well short of what it is able to supply. While the economy is experiencing growth, its ability to expand is in fact hampered by an insufficient or unreliable energy source. Although recently improved, daily power outages of at least one hour or more are still common in many parts of the country.

These conditions have led Iranian authorities to make the energy sector one of the top priorities (along with the petroleum industry) in the 1989-1994 Five-Year Plan. With this in mind US \$5.8 billion has been allocated to energy sector development for the 89-94 period with approximately 60 percent of this allocation having been spent to date. The Ministry of Energy reports that energy production has increased approximately 13 percent per year since the commencement of the Five-Year Plan. By the end of the century authorities hope to have reached a goal of approximately 36,300 megawatts of installed capacity.