

Canadians participate in Saudi Arabia electrification project

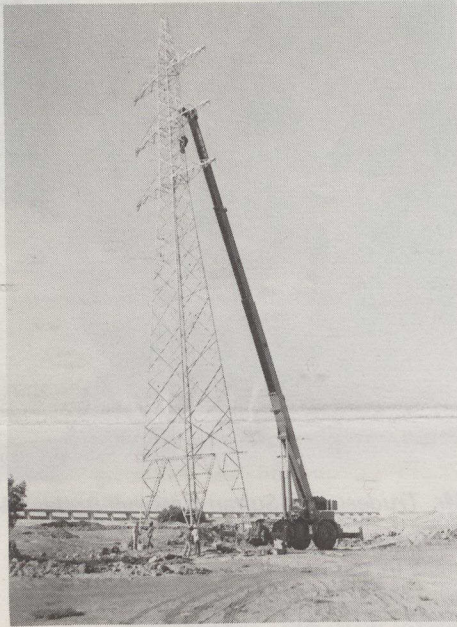
The first units in a 600 megawatt powerhouse, the heart of a vast Canadian-engineered electrification program in central Saudi Arabia, have begun to produce power. The project, now at the peak of construction, will bring electricity to more than 300 towns and villages and thousands of farms in the El Qaseem region, ancestral home of the Saudi royal family.

From the power station, some 965 kilometres of transmission lines are now fanning out to all corners of El Qaseem, and 6 800 kilometres of distribution lines are going up rapidly. The transmission and distribution network will bring electricity to a population of 350 000 in a region slightly larger than Austria.

Some 100 Canadians of the SNC Group are at work on the project in Saudi Arabia, with another 200 SNC employees recruited mainly from the Far East.

The SNC Group's mandate, from Electrico of Saudi Arabia, is engineering, procurement and construction management of the power plant, substations, transmission lines and distribution network.

According to present forecasts the electrification program for the entire 80 000 square-kilometre region should be completed in 1985. The generating station is built on flat desert near the main highway linking the province's two largest towns, Buraydah and Unayzah. On three sides it is bordered by sand dunes and on the fourth by a wadi. To protect the



A transmission tower, one in some 965 kilometres of transmission lines now going up as part of a major electrification program in the El Qaseem region.

station against floods and shifting dunes, SNC engineers raised the level of the building. When the station is operating at full capacity, power will be generated by nine 100-megawatt gas turbine units each derated to 66.4 megawatts to offset the elevation and high temperatures. They can burn natural gas, crude oil or diesel fuel.



This distribution pole, mounted in a central Saudi Arabian town, is part of a major electrification program in the El Qaseem region, for which Canada's SNC Group is providing engineering, procurement and construction management services. Some 6 800 kilometres of distribution line and 965 kilometres of transmission lines are being built.

University where computer is king

Canada's University of Waterloo, situated 100 kilometres west of Toronto, celebrated its twenty-fifth anniversary in 1982 and in that short time has earned itself a world-wide reputation for excellence in mathematics.

The university has become so well known for its work in research, computer languages now used throughout the world and technological innovations that bring in millions of dollars annually, that Honeywell Inc., a leader in US high technology, rates it first among high tech schools. (Second is Stanford University, the breeding ground for geniuses working in California's Silicon Valley. The fabled Massachusetts Institute of Technology, ranks seventh.)

Despite its relative youth, Waterloo has managed to forge links with the industrial world and was a leader in what is now called "post-industrial education", with an emphasis on computer literacy. In 1959, two years ahead of MIT, it decreed that computer science was mandatory for engineers. Today, it is determined to expose 100 per cent of its students to computing.

Co-operative education

Waterloo's success is based on its able foresight — the school's founders saw where education was going and set up the machinery to get there. Also, they decided to proceed on an old-fashioned apprenticeship basis, called co-operative education — something they pioneered in Canada. Most of Waterloo's 20 000 students study on the semester system, with four months at school followed by four months working in industry enabling students to graduate with two years on-the-job experience. A large number of students are signed up by high tech companies even before they earn their degrees.

Though older, more traditional universities, such as the University of Toronto, claim to be at the graduate level, Waterloo still holds an impressive record: it has a higher percentage of Ontario scholars among its students than any other university in the province — 54.4 per cent compared to 48.7 for U of T. "We're the only new university in the English-speaking world that's getting the very best students," says Waterloo's president Douglas Wright.

John Dellandrea, director of development and university relations, is typical of the energetic and committed staff at