

# After long wait, Egypt sets nuclear deadline

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The International Atomic Energy Agency have announced in June that they would be “happy” to work with Egypt on its plan to develop four nuclear reactors by 2025. Ints Kalnins / Reuters

CAIRO // Fifty-five years after Egypt first announced its plan to build a nuclear power plant, energy authorities said this month they expect to launch an international tender for the project by the end of this year.

If everything goes according to plan, Egyptian authorities say, they will complete the country’s first nuclear power plant by 2019 in the Al Dabaa region on the Mediterranean coast. The facility is expected to cost about US\$4 billion (Dh14.7bn), not including operating costs and interest payments.

But even if the delays in building what was to have been the Arab world’s first nuclear power plant have seemed interminable, the usual suspects – the established nuclear powers and international non-proliferation organisations – are not to blame.

After all, it was the US president Richard Nixon who offered to help Egypt build eight nuclear reactors in 1974, several years before Egypt became the first Arab country to make peace with Israel, and US companies have always been among the top bidders for past nuclear technology tenders.

And it was Yukiya Amano, the head of the International Atomic Energy Agency (IAEA), who announced in June that he was “happy” to work with Egypt on its plan to develop four nuclear reactors by 2025.

Instead, it has been domestic political concerns that have dogged the project’s progress since the former president Gamal Abdel Nasser established the country’s Atomic Energy Commission in 1955.

Egypt’s disastrous loss in its 1967 war with Israel, followed by the Chernobyl nuclear meltdown in 1986, sapped the country’s appetite for what seemed an increasingly unpredictable and potentially disastrous energy technology. The discovery in the 1990s of natural gas – a form of fuel that still meets 80 per cent to 90 per cent of Egypt’s energy needs – made “going nuclear” seem too costly by comparison.

Lately, increasing demands for energy have all but silenced concerns over cost and safety that for years slowed Egypt’s nuclear plans. Now, Egypt joins a number of Middle Eastern nations – indeed, countries throughout the world – in a kind of nuclear renaissance for which energy experts and nuclear industry executives have been waiting.

“We don’t have any other forms” of energy, said Mounir Megahed, who retired in April as the vice chairman of Egypt’s nuclear power plants authority. “We have very small reserves of oil and our natural gas reserves will probably be completed within 30 years or so. And we have no coal.”

While Egypt was never an energy juggernaut on the same order as the UAE, it once claimed generous amounts of oil and natural gas. In the past decade, those resources have been depleted even as Egypt’s population expands and its economy industrialises, taxing what few resources the country has left.

Yassin Ibrahim, the executive chairman of Egypt’s nuclear power plants authority, estimates the country will run out of natural gas within 20 to 40 years. The country’s oil resources may expire even sooner, perhaps within 15 years, he said.

The dwindling resources could have a devastating effect on Egypt’s economy, but atomic energy proponents say switching to nuclear dovetails nicely with other energy goals.

Egypt’s government has set a target date of 2020 for the country to derive 20 per cent of its energy from renewable sources. Those sources will include the existing High Aswan Dam, a significant source of hydro-power, as well as several wind and solar projects. Mr Ibrahim said he expects Egypt to harness 7,000 megawatts of electricity per year from wind power alone by 2020.

“I personally consider burning oil in the 21st century as a crime. We are now mature enough to maximise our energy mix,” said Ibrahim al Oseiry, a former IAEA official and an energy and nuclear affairs consultant in Egypt’s ministry of energy and electricity. “Before, for example, we used wood to get energy. Now no one is using wood. Then they started to use coal and then they

started to use oil. Now, in the 21st century, it is a crime to burn oil when we have other energy resources.”

On the other side of the environmental argument for nuclear power is the demand for fresh water. Egypt’s growing population, as well as the rising needs of upstream nations such as Sudan and Ethiopia, have made desalination an increasingly attractive alternative source of fresh water.

The energy-intensive process of reverse osmosis is particularly well-suited to the clean and reliably constant excess energy produced by nuclear power plants. Egypt hopes to have four nuclear-powered desalination plants in operation by 2025, Mr Ibrahim said.

But before Egypt attempts to increase its energy capacity through nuclear technology, it must first focus on the ability of its own engineers and technicians to maintain and operate the plants.

That may be difficult for a country where some 40 per cent of the population is illiterate. Most Egyptians appear to know little or nothing about nuclear energy. But unlike energy consumers in the West, many Egyptians seem blissfully unaware of the technology’s potential risks.

“It’s not a bad thing. We are not a backward country, so we should catch up with our times,” said Mohammed Ahmed, 56, a grocery store employee in the middle-class Cairo suburb of Agouza.

Mr Ahmed admitted, however, that he was unfamiliar with the concept of nuclear energy and had never heard of the 1986 Chernobyl accident. Scientists and “people with big brains” are better situated to ponder such decisions, Mr Ahmed said. “Egyptian people are average people. Average people think about their livings and their food, not their energy.”

As it stands, said Mr Ibrahim, Egypt does not have enough native expertise to operate several nuclear facilities. Until it does, Egypt will hire foreign experts while waiting for Egyptian engineers to learn on the job.

“Here in Egypt we have limited energy resources but we have a lot of human resources. It’s our plan to operate our nuclear power plant after training these people and qualifying them according to international norms,” Mr Ibrahim said. “The key element is human resources. Without knowledgeable human resources, you cannot do anything. If you do have them, only then can you succeed.”