



Interest in nuclear power steady despite Fukushima

By Yukiya Amano

Director General, International Atomic Energy Agency

In June this year, participants from 89 countries attended an international ministerial conference on nuclear power in the 21st century in St Petersburg, Russia. In their Concluding Statement, they recognised “that nuclear power remains an important option for many countries to improve energy security, reduce the impact of volatile fossil fuels prices and mitigate the effects of climate change, despite the accident at the Fukushima Daiichi Nuclear Power Station.”

That represents a good summary of the state of play for nuclear power, more than two years after the world's worst nuclear accident since Chernobyl.

After the Chernobyl accident in 1986, nuclear power entered a period of stagnation. That did not happen in the aftermath of the devastating earthquake and tsunami which knocked out Japan's Fukushima Daiichi plant in March 2011.

In fact, construction of new nuclear power plants continued. Around 70 new nuclear power reactors are being built at the moment, in addition to more than 430 already in operation throughout the world. Most of the growth is taking place in Asia.

Existing users such as China, India, Russia and the Republic of Korea have significant expansion plans. The United Arab Emirates, the first new country in 27 years to launch a nuclear power programme, is presently building two reactors. Bangladesh, Jordan, Nigeria, Turkey and Vietnam are among countries which have decided to introduce nuclear power.

So it is clear that nuclear power will have an important part to play in Securing Tomorrow's Energy Today, to quote the theme of the 22nd World Energy Congress. To meet that challenge, it will be necessary to tap all available sources of energy. As the St Petersburg Concluding Statement noted, “nuclear power, as a stable baseload source of electricity in an era of ever-increasing global energy demands, complements other energy sources, including renewables.”

I believe that the number one challenge for the future of nuclear power is safety. We need to ensure that the most robust levels of nuclear safety are in place at every nuclear power plant in the world. Operators, regulators and governments must show an unwavering commitment to the principle of “Safety First.”

Since Fukushima Daiichi, effective steps have been taken to make nuclear power plants safer everywhere. I see this myself when I visit nuclear power plants throughout the world. Protective anti-flood walls are being raised, extra backup electricity generators are being installed and emergency

supplies of water for cooling are being put in place.

Public confidence in the safety of nuclear power was deeply shaken by the Fukushima Daiichi accident. We have made progress in the past two years towards winning back that confidence. The swift and comprehensive international response to the accident has helped. IAEA member states agreed a Nuclear Safety Action Plan within a few months and implementation began immediately. But this is no reason for complacency.

Openness and transparency on the part of plant operators, regulators and governments are essential for restoring and maintaining public confidence. It is important to be honest about the possible risks and problems associated with nuclear power – as with any modern technology – as well as the benefits.

Waste disposal is often cited as one of the major problems facing nuclear power. Of course, the problem of waste is not unique to the nuclear sector. Other forms of electricity generation, such as coal, generate large quantities of waste. They also cause substantial CO₂ emissions, which nuclear power does not.

The high cost of building a nuclear power plant is seen by some as an obstacle to future development. Nuclear power plants are expensive to build, but once they are up and running, they are relatively inexpensive to operate throughout a life cycle of 30 or 40 years – or even longer. A number of innovative new financing models have been developed. Other creative approaches to the high start-up costs of nuclear power are likely to emerge in the coming years.

So what is the role of the International Atomic Energy Agency in all this? The statutory objective of the IAEA is to “accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world.”

We do not attempt to influence any country in its decision whether or not to use nuclear power. But if countries decide to add nuclear power to their energy mix, our role is to help them do it safely, securely and sustainably. We accompany both experienced users and newcomers at every stage of their nuclear journey. We establish global nuclear safety standards and security guidance. However, responsibility for ensuring the highest standards of nuclear safety and security lies with each individual country.

The IAEA also provides practical assistance in many areas, from energy planning to site selection, legal and regulatory matters and technical training, all the way through to plant decommissioning. A key aspect of

the IAEA's work is preventing the proliferation of nuclear weapons. Member states conclude safeguards agreements with the Agency under which we have the right, and the obligation, to verify that all nuclear material is being used for exclusively peaceful purposes. IAEA safeguards are now implemented in nearly 180 States, the great majority of which fully comply with their safeguards obligations. There are problems with just a few countries.

It is also important to ensure that nuclear and other radioactive materials do not fall into the hands of terrorists and criminals. In July this year, the IAEA hosted an international conference on nuclear security at ministerial level in Vienna, which considered ways of strengthening the global nuclear security framework.

Non-power applications of nuclear technology, made available with the assistance of the IAEA, bring real benefits to developing countries in medicine, industry, agriculture and other areas. For example, we help countries to increase food production by using nuclear techniques to develop robust new varieties of crops. We work to improve access to clean drinking water and to combat deadly animal diseases such as foot-and-mouth. We provide training, expertise and equipment to developing countries so they can build comprehensive cancer control programmes.

Nuclear technology offers many benefits to humankind. I expect it to play an increasing role in all our lives in coming decades. I also believe that nuclear power will make a significant and growing contribution to sustainable development. 
