Statement by Ángel Gurría, OECD Secretary-General,
to be delivered by Luis Echávarri, OECD/NEA Director-General,
at the International Ministerial Conference on Nuclear Power in the 21st Century
St. Petersburg, Russia, 27 June 2013

[Mr. President,] Dear Ministers, Distinguished Delegates,

I am very pleased that the Organisation for Economic Co-operation and Development (OECD) and its Nuclear Energy Agency (NEA) have once again been invited to play an active role in the International Ministerial Conference on Nuclear Power in the 21st Century.

I had the honour and pleasure of giving a keynote speech at the opening of the previous conference in Beijing in 2009, and regret that I could not be here in person with you today. But I am very pleased to be represented by Mr. Luis Echávarri, the Director-General of the Nuclear Energy Agency (NEA).

The NEA and the International Atomic Energy Agency (IAEA) are carrying out together extraordinary work in the very important field of nuclear energy, and will be following the outcomes of this conference very closely. I would like to thank the IAEA for organising this meeting, and the Russian authorities for hosting it in the beautiful city of St. Petersburg, where I was just last week to attend the annual international economic forum.

As many of you know, Russia is on its way to become a full member of the OECD. At the beginning of the year, a significant step was taken when Russia became a member of the NEA and its Data Bank. I look forward to the mutual benefits that this membership will bring, and I am particularly confident that further gains will be made in nuclear safety, research and technology.

The fundamental importance of nuclear energy

Nuclear energy has become a significant element in the OECD economic landscape, currently generating about one-fifth of the electricity produced in our Member countries. It is also an important asset in our journey towards sustainable, low-carbon economic growth.

We are all concerned by climate change, and the energy sector is the world's largest contributor to greenhouse gas emissions. Let's not forget that nuclear energy does not produce any CO_2 during operation and, along with hydropower, is the only low-carbon energy source that can provide baseload electricity.

We are far from achieving our environmental goal of limiting average world temperature rises. Bolder and more innovative efforts are required, and in this regard nuclear energy can and must be part of the solution.

For countries that wish to continue to use nuclear power, to further develop it, or to introduce it for the first time, it is essential to do so in a safe and economically competitive manner. Only by doing so, will it be possible to take advantage of the long-term, carbon-free security of supply and stable prices that this energy source has to offer.

Nuclear safety lessons and challenges

The current debate is of course focused on safety. We were all impacted by the 2011 Great East Japan earthquake and tsunami. We should never forget that the combined natural disasters led to serious hardship for the people of Japan, including the loss of many lives. And although not a single life was lost as a result of the Fukushima Daiichi nuclear power plant accident that followed, it had a dramatic effect on the local population, particularly in terms of the displacement of people, the economic and financial costs, and the associated stress.

The OECD Nuclear Energy Agency has supported Japan from the beginning, and continues to do so. It has been conducting extensive analyses of the accident and its impact. It has also been drawing on the work of its standing technical committees and expert groups to prepare a report that is due to be published this summer and will also provide input to the report that the IAEA plans to issue at the end of 2014. Without pre-empting the conclusions of the report, a number of **key messages** can already be highlighted.

Even though the safety of operating nuclear power plants has been confirmed by comprehensive safety reviews, **additional safety enhancements have been identified** to help better cope with external events, such as combined natural disasters. These additional safety enhancements **are being implemented to further strengthen nuclear safety defence-in-depth.**

Let's be clear: there is no room for complacency in implementing nuclear safety practices and concepts. **Nuclear safety professionals have a shared responsibility** to hold each other accountable to effectively implement these practices and concepts. Indeed, the primary responsibility for nuclear safety remains with the operators of the nuclear power plants, but fully independent regulatory authorities have both individual and collective responsibility to ensure that the public and the environment are protected from the harmful effects of radiation.

Through **international co-operation**, regulatory authorities can identify additional best practices. International research projects – such as those carried out under NEA auspices on source term evaluation, mitigation of the potential impact of hydrogen build-up, melt coolability or other safety issues – further support these efforts.

Despite the minimal incidence on public physical health from the release of radiation, the Fukushima Daiichi accident had a large societal, economic and psychological impact that raises questions about safety programmes, practices and regulations. The good news is that, based on some of the lessons already learnt from the accident, **current nuclear safety practices and approaches do not require significant changes at the *conceptual* level.**

National and international requirements already in place provide an effective framework for accidents within design bases. Efforts are already under way to enhance these frameworks to better address accidents beyond the design basis that, although unlikely, can have very serious consequences if unmitigated. **The key factor is the effective implementation** of these nuclear safety practices and approaches.

Safety culture, maintaining a questioning attitude and learning from one another are part of the key to success, and are something that we can all be encouraged to continue nurturing.

Additional challenges for the future

In addition to nuclear safety, a number of other challenges also need to be met by the nuclear sector, let me mention them briefly.

First of all, financing the large capital investments required for the construction of a nuclear power plant is a major concern for many countries, especially in relation to lower-priced energy alternatives that nonetheless carry a higher carbon price tag. Investment and funding is also a hurdle for a number of developing countries, where access to nuclear energy can help tackle the challenge of energy poverty.

Second, for all countries using nuclear energy, qualified human resources must be available at both the regulatory and operator levels. Here we also face potential shortages. This will require long-term investments and forward planning which need to be carried out with government and industry consultation and co-operation if the most effective results are to be achieved.

And finally, although some progress is being made to implement solutions for high-level radioactive waste and spent nuclear fuel disposal, more needs to be made at the global level. It is widely agreed that disposal in deep geological formations provides a technically feasible and safe option for the long-term management of such waste. Certain countries are taking the lead in implementation, for example Finland and Sweden, and I hope that more will follow. Resolving this question is a condition for nuclear energy's sustainability and fundamental to obtaining public trust, by showing that the nuclear energy sector is assuming all its responsibilities, from the front end to the back end of the fuel cycle.

Dear Ministers, Delegates and Officials,

We will need to think carefully about the various issues that this international conference will be addressing in the coming days with the help of many eminent speakers from around the world. We need to make significant new strides in energy and the environment; nuclear safety and reliability through international co-operation; infrastructure, technology and institutional development; and drivers for deployment of sustainable and innovative technology.

I strongly encourage you all to take part actively in these discussions, bringing your experience and your enthusiasm, so that we may achieve positive change together.

Thank you for your attention. I wish you a very successful conference.