

Overview

Decent Work and Economic Growth

8 DECENT WORK AND ECONOMIC GROWTH



The nuclear industry supports SDG8 and works towards the promotion of sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. Global economic growth has been generally slowing down for the past decade; however, nuclear power can help increase long-term economic growth and meet key SDG8 objectives. Energy supply security and energy independence objectives have accelerated advancements in technological innovation and creation of a diverse range of decent jobs, in engineering, technical other specialist roles within especially safe workplaces.

In addition, world energy consumption is projected to rise by nearly 50 percent by 2050, with some developing countries predicted to become the largest electricity users. Nuclear power, providing access to low-carbon, affordable and reliable electricity, is part of the answer to a more sustainable energy supply, regional infrastructure development and economic growth for many developing countries.

Decent work, full and productive employment

The development, deployment and use of nuclear energy demands skilled capabilities. Including both on-site and off-site direct personnel, the average number of direct jobs for a typical Light Water Reactor (LWR) is around 500 – 700. The employment for skilled personnel goes much further than the nuclear power plant fence. The nuclear industry provides many long-term direct and indirect diverse employment opportunities from a wide range of fields and educational backgrounds, offering equal opportunities for all.

It creates high-paying jobs for engineering professions such as chemical engineers, civil engineers, mechanical and nuclear engineers, as well as technicians, radiologists, chemists, mechanics, reactor operators, radiation protection specialists and other scientists. Those skills are required during various stages, such as planning, construction, operation and maintenance, supply chain and decommissioning. All aspects of running a nuclear program demand a diversity of expertise with some 16% of this work force being truly nuclear experts, three-quarters being nuclear trained and some 10% being nuclear aware.

The nuclear industry provides more high-paying and highly trained jobs than other sectors, specifically providing a sustainable source of local jobs contributing to local and regional economic growth.

In addition, according to the UNECE report 'The Role of Nuclear Energy in Sustainable Development', the nuclear industry is one of the safest industrial workplaces. According to IAEA, health, safety, well-being, and the long-term improvement of workplace conditions are priorities for the global nuclear industry, which operates at the highest standards. Employees are respected for their skills and expertise and acknowledged for their contributions. Partnerships are made with educational institutions to provide further training and professional development. Furthermore, important aspects of the criteria for decent work are also addressed by many of the other 16 goals. For example, the nuclear industry is committed to attracting and retaining qualified women and men, including young people and persons with disabilities to the nuclear sector.



Nuclear power as a contributor to economic growth

Economic growth is a common indicator used to refer to an increase in aggregate production in an economy and can be a key measure of poverty reduction and quality of life improvement.

The nuclear power industry can play an integral role in supporting developing countries by contributing to short-term and long-term employment, sustainable investments, and infrastructure development.

Nuclear power is a zero-carbon electricity generation technology capable of producing large-scale, reliable baseload power, which is essential for developing countries that need both to build out their energy systems and reduce CO₂ emissions quickly.

In the United States, the average 1,000-megawatt nuclear power plant employs more than 500 skilled laborers for an estimated \$48 million in total labor income per year, a workforce income three times larger than a coal plant of the same size. Beyond direct jobs, nuclear plants can boost local tax bases and provide indirect economic benefits. These plants last many decades, providing jobs over many years.

Small modular and advanced nuclear plants are coming to the market before the end of this decade. They have the potential to be deployed in a wider range of locations, some of which would be unsuitable for large-scale reactors. Once available, they may help to cut the cost of electricity as production is scaled up.

New nuclear power plant construction also has a positive impact on local economies. Construction of new plants demands skilled laborers, including welders, electricians, heavy equipment operators and engineers. At peak construction, 3,500 workers are required to build the plant. Furthermore, a single new plant requires approximately 1,200,000 cubic feet of concrete and 66,000 tons of steel, a significant boost to suppliers of these materials.

In contrast to some fossil fuel-based industries, nuclear energy is a clean technology with no adverse consequences for air quality and very high safety standards. Investment in clean energy could and should be at the forefront of the post-Covid economic recovery, particularly in emerging markets. The long life of nuclear plants makes them stable employers who provide highly skilled and highly paid reliable work with excellent opportunities for women.

Worldwide, nuclear power has proven to provide substantial economic and environmental benefits. As users of a zero-carbon technology, these plants can continue to provide sustainable economic growth in a carbon-constrained world. The rapidly growing concern about climate change is likely to lead to more robust climate and energy policies, and thereby to greater investment in all forms of low-carbon energy. The sharp rise in the EU carbon price in the last three years is a sign of things to come and augurs well for the future of the nuclear industry. All those countries willing to seize this opportunity will reap rewards in the form of higher economic growth.



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