The socio-economic benefits of nuclear energy

As the global recession slowly relents the economic spotlight has fallen on those industries best equipped to provide a platform for sustainable growth. The nuclear industry is one of those. The socio-economic benefits that a growing nuclear industry brings are clear and significant.

Europe's nuclear industry currently employs around 500,000 people, including those in the associated supply chain. In France around 100,000 people are employed in the nuclear industry. In the UK the figure is around 85,000 of which 45,000 work at the power plants and 40,000 in the supply chain. In Finland, around 6,000 people work at the five nuclear reactors.

The jobs are well-paid jobs and attract qualified people with a broad range of skills such as engineers, physicists, chemists, IT specialists, administrative and security staff. Because the average operational duration of a nuclear power plant is up to 60 years, jobs in the industry are secure and long-term, offering excellent career opportunities. Long-term operation extensions and new build programmes will ensure even greater job security.

On average for every job at a nuclear power plant there are three jobs in the supply chain. The latter includes specialised workers like electricians, mechanics, cleaning and maintenance staff, transporters, etc. For specific events at a power plant, such as outages for safety controls and refuelling, additional external staff is employed on limited contracts to work alongside permanent staff.

Outages at the Temelin and Dukovany power plants in the Czech Republic typically involve the hiring of an additional 1,000 external staff. For the third "decennial inspection" that recently marked thirty years of operation of EDF's Fessenheim (France) power plant around 1,500 extra staff were employed.

Recruitment across Europe is on the increase as the nuclear industry's revival gathers pace. EDF hires 500 engineers and 500 technicians every year. AREVA recruited 10,000 jobs in 2009 alone and will continue to recruit as new build kicks in. So, employment figures are rising exponentially. Nuclear new build will add significantly to this upward trend.




New build, new jobs

Flamanville 3 construction site

In the UK the 10 new plants that will be built will provide around 9,000 highly-skilled jobs and a further 7,000 supply chain and local service jobs (around 700 per power plant). In France EDF will hire 400 engineers for the UK new build market over the next 5 years. During the five-year construction period of the EPR reactor at Flamanville, in France, a total of up to 2,300 people will have worked on-site. Once built, the EPRs at Flamanville and Penly (also France) will create 800 new operational jobs - 300 permanent ones and 100 supply chain jobs per plant. In Finland, 4,000 people will have been employed during the construction phase of Olkiluoto 3. Once operational, it will create 300 new jobs. In Sweden, the construction of the underground waste repository at Forsmark will create around 400 jobs and provide added economic stimulus to the region.

Contributing to local, regional and national economies

However, the economic benefits of nuclear energy are not just expressed in terms of jobs. Another key measure of the economic benefits that the industry brings is the major financial contributor it makes to regional and national economies. In the Czech Republic, for example, the nuclear power plants at Temelin and Dukovany contribute together €5.7 million every year to their regions' economies. In addition, they contribute €2.5 million of property tax to the Czech government. The nuclear power plant at Tihange, in Belgium, pays taxes equivalent to 30% of the total budget of the neighbouring town of Huy (20,000) inhabitants) and significantly contributes to the regional budget and that of the Walloon government. The plant employs 1,400 people. This represents more than 500 families living within a 10 km radius of the plant, all consuming goods and local services and supporting the local economy.

The nuclear industry contributes significantly to local economies

The nuclear industry also has a beneficial economic knock-on effect on other business sectors. According to the Mayor of the Swedish Municipality of Östhammar (where the Forsmark repository will be located), Jacob Spangenberg: ..."the construction of the repository at Forsmark will lead to the building of new roads, will attract visitors and encourage people to work at the facility and live in the municipality, will create extra jobs and transport links and will promote increased use of municipal services, etc." Clearly, these projects, like similar ones across Europe, will bring economic benefits to local communities and regions, as well as to national economies.

Europe also exports nuclear science and technology around the world, as witnessed by increasing new build projects in Asia, Latin America and Africa. This significantly reinforces Europe's position at the forefront of nuclear science and technology.

More, better paid and long-term jobs; sustained financial contributions to local, regional and national economies; support for local businesses and services... the economic benefits delivered by an industry that is going places are there for all to see.