Westinghouse’s contribution to the
European Investment Bank Energy Lending Policy Consultation

Introduction

Westinghouse Electric Company is a world leader in commercial nuclear technology since its introduction in the US in the fifties. Nearly half of the operating nuclear plants worldwide and 60 percent of those in the US are based on Westinghouse technology. More than 50 percent of the plants in the EU are also based on it, having been built by the company or by its European licensees.

Westinghouse currently has a workforce of 15,000, of which 4,000 are based in eight EU Member States, serving the needs of the operating fleet as well as new build projects. The company’s support to the nuclear operating plants in Europe includes engineering of upgrades, safety studies, repairs, maintenance and the supply of nuclear fuel, which is manufactured in factories in Sweden, Spain and the UK.

The company is currently building eight reactors of its flagship type, AP1000 in China and in the USA, while participating in tenders and developments in several EU countries. Westinghouse has an established reputation as a strong partner in technology transfer, employing a “Buy where we build” approach to projects, in support of localization efforts.

As a leading actor in the European nuclear energy market, Westinghouse works with its utility customers and other stakeholders in its supply chain to ensure the success of nuclear power as a base-load, secure and competitive electricity source.

What role do you expect nuclear power to play in the European Energy Market?

Electricity demand is expected to grow faster than the energy demand because of the increase of its use as an energy vector. Nuclear power produces electricity as a low carbon source and is therefore a key complement to renewables for generation, as the EU Energy Road Map 2050 points out in its different decarbonization scenarios. Three out of five of these scenarios show a 15-20% share of nuclear electricity by 2050, equivalent to the addition of 100 new units to the existing fleet, even with current plant lives extended to 60 years.

The ENSREG final report on the post-Fukushima stress tests concludes that “a large increase of costs for new nuclear capacity is unlikely if the best available technologies are chosen”. The sector is expected to remain competitive and sustain growth and employment (currently 250,000 direct jobs in Europe).
Under these circumstances it is critical that EIB augment its role enabling the EU power sector to face the challenges of modernizing and extending the life of the existing reactors, as well as introducing financial instruments for capital intensive generation projects, in line with the EU policy of reducing CO2 emissions (20% by 2020), in a technology neutral fashion.

Decarbonization without nuclear would mean eroding EU competitiveness and security of supply.

As nuclear power stations are ageing, should their life be extended (where possible) or should they be replaced with other generation sources?

Most of the existing operating plants in those EU Member States that will continue to rely on nuclear energy in their mix are candidates for life extensions to 60 years. The majority of the 104 USA plants have obtained license extensions. They are of a similar design to those operating in Europe. In some cases this will require modernization programmes with important investments, but these will be very cost effective decarbonization steps. This will secure electricity supply for years to come when supplemented with new, stat-of-the-art technologies that implement post-Fukushima requirements readily and efficiently, while providing a highly attractive and stable cost base.

What will be the impact on electricity generation and climate action of the reconsideration of nuclear policies within EU Member States, in particular after the Fukushima accident?

Those Member States that have decided to phase out their nuclear plants will have to replace this capacity with other sources, notably by fossil fuels like coal and gas, and by renewables. This will have a negative impact on decarbonization and on the prices of these fuels in the neighboring countries, which will also see a growth in electricity export demands. CO2 reduction goals will be threatened and energy prices will rise, reducing EU industry competitiveness and accelerating customer inflation.

The increase in intermittent renewable energy will impact both grid stability and the need for back-up capacity, driving up capital requirements for the delivery of electricity.