PP1 A11

Political Platform

Proposer: Protests, Vihreät nuoret, Grønn Ungdom

Title: **PP1 A11: Political Platform**

Political Platform text

From line 737 to 760:

~~Although nuclear energy (see Glossary 111) emits less carbon emissions, it raises high risks and many serious long-term concerns that by far outweigh the benefits and we strongly take a stand against any attempt to frame nuclear energy as a climate change solution. These include issues regarding the extraction of uranium (see Glossary 181), the disposal of nuclear waste, the safety of nuclear installations, the security measures and level of state control required, the huge consequences of potential accidents, the link with nuclear weapons, the long time it takes to build, the fact that it does not improve the stability of the electricity grid and the significant cost, which could much more efficiently be used to pay for renewable energy sources. Potential solutions such as nuclear fusion (see Glossary 112) will be unable to provide a concrete response in time to solve the climate crisis. We therefore believe that the construction of new nuclear plants should be avoided at all cost, and that nuclear energy should be phased out as soon as possible across Europe. The phase-out of nuclear energy should be carried out in a way that does not endanger climate objectives and if fossil fuels are no longer used for electricity production on the same network. The phase-out of nuclear energy should be carried out in a way that does not endanger climate objectives and if fossil fuels are no longer used for electricity production on the same network. Thus, FYEG strongly supports the development of renewable solutions to replace the output from nuclear power plants. This helps to limit dependence on fossil fuels from Russia and other authoritarian states. A nuclear phaseout must be reliant on renewables instead of fossil fuels. European countries should not export their nuclear technology or build nuclear plants outside of~~

~~Europe.~~

We acknowledge that nuclear energy will not be a solution to the climate crisis, as well as its clear problems with the cost and time needed to develop these power plants. However, we cannot ignore the need for a carbon-neutral energy mix. Nuclear power plants, just like other thermal and hydroelectric power plants, contribute to electric grid stability through turbine frequency and inertia. The turbines spin at a frequency, which matches that of the grid. Whenever the demand for electricity and power increases, it is immediately met by turbines slightly sacrificing their rotational energy. This allows the power plant and grid operators to make the necessary modifications to power plant output to keep the balance between supply and demand.

Intermittent renewables, such as wind and PV solar, cannot contribute to grid stability because of the way they produce electricity. Unlike the turbines of hydroelectric or thermal power plants, including nuclear ones, wind turbines are asynchronous to the grid: the frequency, at which they generate electricity, is determined by wind speed. Photovoltaic (PV) solar panels generate direct current (DC) instead of alternating current and, therefore, they cannot contribute to the stability of electric grids, since they are using alternating current or AC. The integration of wind turbines and PV panels require the use of power electronics. Invertors are used to transform the DC, produced by PV panels, into AC, while rectifiers are used to transform the AC, generated by wind turbines at an asynchronous frequency, to DC, before it can be transformed back into AC at grid frequency. These same power electronics can be used to create artificial inertia in the grid, but this comes at a cost: it requires some of the electricity generated to be curtailed. Nevertheless, as soon as the Sun sets or the wind slows, artificial inertia becomes extremely hard to sustain, thus threatening the stability of the grid.

Therefore, hydroelectric and nuclear power plants are the only zero-emissions sources of electricity that contribute to natural and sustainable electric grid stability. However, since hydroelectric power plants require specific geographical features to be built, which are not present in all countries and regions, nuclear is the best option for ensuring a climate-friendly and stable electric grid.

Despite major advances in battery technologies, they are not applicable on a large scale. As a result, most countries and regions revert to natural gas to balance the supply with demand, when intermittent renewables are not producing enough electricity.

Although the role of nuclear power plants has traditionally been to provide baseload power to the electric grid, they are capable of load-following and in some

European countries, such as France and Germany, this is already the norm. As such, small nuclear can both contribute to grid stability and complement wind and solar, when their output falls, without the need to rely on natural gas.

It should also be noted that realistically decarbonization of both the European and global economies will take decades. Although the electricity sector can be decarbonized relatively quickly, transportation, industry, and housing will take much longer and, importantly, the decarbonization of these sectors will also significantly increase the electricity demand. Recent studies on the decarbonization of Germany's chemical industry have found that the country's electricity consumption would have to double or even triple. Furthermore, an industry report from 2017 estimated that full decarbonization of the European chemical sector would require more electricity than the total European electricity generation from renewables, as estimated by the IEA for 2050. The decarbonization of both transportation and industry, particularly the metallurgical and chemical sectors, will require zero-emissions sources of industrial heat and electricity for hydrogen production.

After the spent nuclear fuel (SNF) has been removed from the reactor, it is placed in cooling ponds within the nuclear power plant for 5 to 7 years. Once the SNF has sufficiently cooled, it is placed in lead-lined concrete casks, which protect people and the environment from the radiation within. These casks are a sufficient, efficient, and above all safe means of storing the SNF. The radiation dose next to casks containing SNF is near the background radiation levels.

Over its entire existence of around 70 years, the nuclear power sector has produced only around 600 000 tons of spent nuclear fuel. Compared to volumes of household, electronic, and construction waste, which are produced every day, this figure is truly small. The management of nuclear waste and the hazards that it poses is similar to that, which is done in other sectors, including everyday ones. The chemical industry, for example, produces much more hazardous waste than the nuclear sector does, but with the right regulations and technologies, these hazardous materials can be stored and utilized in a manner that is safe both for people and the environment.

We also acknowledge that biomass is not a sustainable source of energy and heat. Mass closure of nuclear power plants, especially in Northern Europe, would increase the rate of logging and make countries more reliant on either fossil fuels or forest-based biomass.

Reason

This amendment to the political platform brings a more science-based approach to our nuclear position. The original text in the political platform falsely claims that nuclear does not contribute to grid stability. Moreover, this text adds a section focused on Northern European issues related to heating and criticizes the greenwashing of biomass heating sources. Greens and Young Greens claim to be the political movement of science, however, this approach should be overarching without any cherry-picking to support our political identity