



Recovery from the Covid-19 crisis

Vision of the Estonian Academy of Sciences

We are witnessing the birth of history. The world is suffering a crisis nobody could expect. At the same time climate issues have not disappeared anywhere. Consumption of fossil fuels, pressure on the ecosystem and overexploitation of the Earth's resources are continuing. Economic recession due to the Covid-19 outbreak has only mitigated climate concerns for a while through decreased production and consumption of energy and goods.

The coronavirus Covid-19 pandemic has hit hardest those who have been suffering most due to the climate crisis: low-income members of society and the young, who find it difficult to enter the job market. The price of the emissions of greenhouse gases and hazardous substances into the environment is often paid not by producers or consumers but other, often the weakest, members of society, who pay both in money and their health. We owe them not only well-paid jobs but also clean air, undamaged nature and good health.

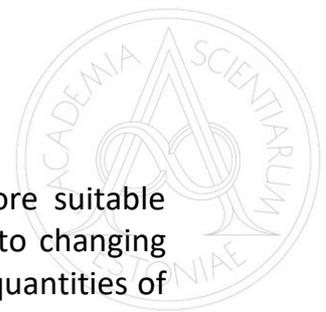
It is up to us to choose how to move on. We may try to continue as previously and restore the collapsed businesses. **The standpoint of the Estonian Academy of Sciences is that now is the time to start structural changes through which with a longer perspective the state and society will become stronger and more sustainable.**

We prioritise creation of jobs that are necessary for the future economy and require good education and much more sparing use of the environment. Let us build a future that is worth living in. Let us invest into jobs that support a cleaner environment and manage economic recovery so as to mitigate the climate crisis.

The reduced consumption of energy, especially of fossil fuels, coupled with large investments into transportation infrastructure is opening a unique window of opportunity in a way that is similar to crises in the past, that have motivated societies to give up out-of-date concepts and fostered introduction of innovative solutions and technologies.

The appearance of the future depends to a large extent on whether we will be able to replace the energy supply based on fossil fuels by renewable energy sources. Estonia has an opportunity and the capability to become the pathfinder for implementing Europe's new strategy of economic growth – Green Deal. Large-scale production of energy from biomass is a dead end. Wind farms on the land and in the sea and solar panel systems are rapid and affordable solutions under Estonian conditions.

Modern society is in continuous need of a high-quality energy supply. Energy security is an important cornerstone of the whole country. It is impossible to produce electricity into storehouses. However, by making smart investments it is possible to significantly decrease energy consumption.



To guarantee energy security we have to be able to produce and store suitable energy carriers. Pumped-storage hydropower facilities respond quickly to changing energy demands. The logical role of wind farms is to produce industrial quantities of hydrogen. Hydrogen is an ecologically clean, easy to transport and store energy carrier with a high content of energy, which can replace fossil fuels in the transportation sector.

The Estonian Academy of Sciences recommends that the economy be enlivened by investments into improving communication systems and radical restructuring of the energy sector. To this end the following activities are important:

1. Covering the whole of Estonia with a rapid data communication system, which will result in lower transportation needs and energy use, favours continuing telecommuting and will reduce regional inequality.
2. Deep renovation of existing buildings: reduction of energy consumption, improvement of indoor climate (incl. minimisation of danger of infection with improved ventilation systems) and on-site production of clean energy.
3. Removal of obstacles to the establishment of wind farms and making investments into energy storage systems (incl. pumped storage hydropower stations).
4. Large-scale production of hydrogen from difficult to manage renewable energy sources such as offshore wind farms that are difficult and expensive to integrate into the electric grid.
5. Change of public (especially rail) transport to use hydrogen, the creation of the required infrastructure and introduction of tax allowances for the use of hydrogen-based energy.
6. Tuning pollution taxes and emissions trading so as to influence consumer behaviour, proceeding from the effect of hazardous by-products of the generation and consumption of energy during their whole lifecycle, incl. effects on human health.

Environmentally friendly energy production and storage, use of efficiently produced and easy to store energy carriers in transportation and industry combined with reduced energy consumption through smarter building and offering rapid data communication will support our energy independence, will mitigate the pressure on our forests, and will enable us to safely give up the use of polluting energy sources.

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