

# Conclusions and recommendations of the National Audit Office

## Promoting the battery value chain

The audit was targeted at the state's role in promoting the battery value chain. The battery value chain refers to those steps of the industrial processes enabling the electrification of transport where minerals are refined for the needs of battery production. The state can promote the implementation of the battery value chain through investment-promoting ownership and marketing and by supporting research in the industry and commercialisation of innovations, by maintaining the national logistics and energy infrastructure and by ensuring the availability of labour. The conditions of the permits granted by the authorities play a key role in reconciling smooth and predictable permit practices with ensuring sustainable industrial activities.

The battery industry cluster can bring work and export income to Finland already in the near future. The Finnish battery industry, which is based on low-carbon production of minerals and energy, can also reduce the dependence of the European battery and car industry on the global market and impact the environmental requirements set for the international battery industry. The aim of the audit was to produce information on the development of and obstacles to the objectives and measures of the battery value chain and on the roles of the different central government functions in promoting the battery value chain.

## The continuous battery value chain described in the battery strategy will not be realised in the next few years

The National Battery Strategy 2025, drawn up under the leadership of the Ministry of Economic Affairs and Employment, defines the ambition for the development of the battery industry in Finland. The strategy identifies the national strengths on which the national battery cluster can be built and describes the path and strategic objectives to achieve the desired result. The key objective is to achieve a continuous battery value chain, where minerals extracted from the Finnish soil are refined in Finland and used for batteries that are produced in Finland and installed in electric cars assembled in Finland.

The implementation of the battery strategy has not been monitored systematically in a manner that would verify the progress of the objectives set out in the strategy. According to the assessments made in the audit, the strategic objectives set for the battery industry have mainly developed favourably. The ecological, social and economic goals pursued with the battery value chain have also made progress.

There are business activities in Finland at the beginning and end of the battery value chain. Projects are also under way to set up battery chemical production plants in Finland. However, the continuous battery value chain will not be realised in the next few years, as the construction of a battery cell plant, required for the battery value chain, is only in the pre-study phase. Once such a plant is set up in Finland, the continuous battery value chain can be implemented, provided that there are such business and logistics structures that make it possible to steer the material flows of the associated companies of the Finnish Minerals Group in an economically and ecologically sustainable manner.

## The competition for government support challenges the role of the Finnish Minerals Group in promoting investments in the battery industry

The Finnish Minerals Group is a special-purpose company that is wholly owned by the state and steered by the Prime Minister's Office. The company has been assigned the task of developing and owning the battery and mining industry. The company is building the battery value chain as a project developer and minority shareholder. Its operating model is based on cooperation with private companies that bring capital and competence to development projects. In the absence of Finnish investors with industrial know-how, the companies' majority shareholders are international investors.

The advantage of this operating model is that through the Finnish Minerals Group, the state can promote the creation of large-scale industrial projects in Finland with reasonable capital contributions. The minority holding gives the Finnish Minerals Group influence on the associated companies while limiting the state's financial risk to the capital investment. New development projects can be financed in the future with the proceeds from the shareholding.

In autumn 2023, the USA decided on a USD 370 billion government support programme, the Inflation Reduction Act, targeted at clean transition projects. The European Union (EU) has also allowed such exemptions to government support rules that favour the battery industry, and many EU countries have granted large amounts of government support to battery industry actors. The competition for government support has weakened Finland's relative position as an investment target.

Finland is unable to respond to the support granted by large economies. In order to attract investments, Finland will have to provide more support to investments in clean transition. The allocation of different support forms must be monitored in a centralised manner to manage the risks associated with them. In order to promote the environment, the climate and the competitiveness of sustainable Finnish production, it is necessary to make choices that enable the creation of added value based on the national strengths at different stages of the battery value chain. In addition to granting direct subsidies, Finland must resolutely take efforts to enhance the investment environment.

Finland's strengths, especially the low-carbon raw material production and energy, must be further strengthened. The state's active ownership, such as the activities of the Finnish Minerals Group, also plays a role in attracting capital and expertise to Finland. On the other hand, ensuring predictability of the permit process and ensuring the availability of labour and competence are critical factors in the promotion of the battery cluster, and failure in them can prevent the growth of the battery industry.

## Environmental permit procedures ensure the sustainability of the battery industry but also involve problems

The environmental impact assessment and permit procedure related to industrial projects are an essential part of ensuring a sustainable battery value chain. The sustainability of production is a significant strength of the operating environment of the Finnish battery industry. The environmental permit granted by the Finnish authorities is considered even internationally as a guarantee of sustainable production.

However, there are also problems with the environmental impact assessment procedure and the environmental permit procedure. The duration of these procedures is often too long. From the perspective of companies, it is important that the duration and outcome of the permit process are to some extent foreseeable. Fixed-term environmental permits and the permit practice that is based on many different environmental permits may cause an administrative burden to companies.

So far, the experiences gained from the priority procedure applied to clean transition projects have been positive. The environmental permit processes of battery industry plants can be made more efficient, for example, by placing plants in industrial parks and areas whose environmental values have already been mapped at the planning stage.

There is currently no provision in the Environmental Protection Act that would make it possible to revise the permit conditions by, for example, changing the limit value indicated in the permit at a later stage. Such a provision could also be useful in the application of the Water Framework Directive and the precautionary principle.

Companies in the mining and battery industries have recognised the importance of the approval of the local community, the so-called social licence, for their activities. The companies have strived to achieve the local residents' approval through an active dialogue.

## Failure to ensure the availability of labour limits the growth of the battery industry in Finland

The actors of the national competence development system have had sufficient foresight information on the development of the battery industry. However, the Ministry of Education and Culture has not used this information to ensure the availability of labour in the battery industry but has assigned the responsibility for meeting the competence needs to education providers and companies.

Meeting the competence needs of the battery cluster does not necessarily require a completely new kind of competence, education or training. It is rather a question of how existing competence can be converted or how parts of qualifications can be combined to meet the needs of the battery industry.

Predictable availability of labour is a prerequisite for the growth of the battery industry. There are already serious mismatch problems in the battery industry. When investments in the industry are made in Finland and the neighbouring regions, there will be more competition for skilled labour. Failure to take determined efforts to ensure the availability of labour will limit the growth of the battery industry in Finland. This would mean that the support allocated to investments, innovations and competence would be wasted.

## Recommendations of the National Audit Office

Based on the audit, the National Audit Office recommends that

1. the Prime Minister's Office, in cooperation with the Ministry of Employment and the Economy, should ensure that the steering of the Finnish Minerals Group takes into account not only the objectives related to the state's ownership role but also the social impacts that the special-purpose company aims to achieve;
2. the Ministry of the Environment should investigate the impacts that reinstating the possibility of revising the environmental permit would have from the perspectives of safeguarding the companies' business continuity and burden caused to public authorities;
3. the Ministry of Education and Culture should, on the basis of foresight information on the technology sector, assess and determine the competence needs that the education system must respond to in order to ensure the availability of labour force in the battery industry;
4. the Ministry of Economic Affairs and Employment should define procedures to ensure centralised monitoring and consistency of the government support, grants and measures targeted at the battery industry.