



Scenarios for a transition pathway: Resilient, innovative, sustainable and digital energy-intensive industries ecosystem – Comments and demands

Key Points

The AK calls for

- A prosperity-based economic approach to the digital and green transitions (the “twin transition”)
- A meaningful integration of decarbonisation efforts with questions of employment policy
- A key focus on distributional aspects
- The recognition of the importance of an active involvement of national and European social partners in transformation management, which must revolve around people
- An emphasis on vulnerable regions
- The recognition of the necessity of an active labour market and regional policies to enable close coordination of measures – for income security, qualifications, basic training and further training – with the social partners in order to support workers in the transition process
- A targeted, mission-oriented research, technology, and innovation (RTI) policy
- The commitment that financing the “twin transition” is a societal and political task that have to ensure a fair and just distribution of costs and benefits

Background

To achieve climate neutrality by 2050 and to place Europe at the vanguard of global climate policy, our means of producing and consuming must be independent of fossil energy sources. That necessary change in how we power our economic activities poses major challenges for the European industrial sector, especially for energy-intensive industries.

Industrial policy needs to be strategic and mission-focused in order to enable and shape the necessary transition – including with the active engagement of civil society and trade unions. Particular emphasis needs to be placed on the transformation of regional industrial clusters of energy-intensive industries. Potential imbalances between regions that will benefit from the transition due to their economic structure and those that face major challenges in the fields of development and employment need to be actively addressed to ensure a fair and inclusive transition to climate neutrality. That calls for the well-coordinated interaction of European, national, and regional initiatives for the purpose of providing targeted support to particularly vulnerable regions, enterprises, and employees.

Main Findings

1. Resilience

By disrupting international supply and value chains, the Covid-19 pandemic has thrown the dependence of the European industrial sector into sharp relief. For the purpose of increasing the resilience of the European economy, there is not only a need for comprehensive analysis of dependencies. There is also a need for measures to expand strategic capacity, the promotion of the circular economy in order to conserve resources, and an active public sector that reduces vulnerability to crises by means of infrastructure, public services, and well-developed state welfare services. Furthermore, recent research findings show that active public participation models can contribute significantly to managing major social challenges by supporting innovation. Strategic public participation management, using existing and newly created public participation models, should certainly be included in the set of instruments applied.

Furthermore, the strengthening and development of production capacity and regional circular flows of economic activity should be promoted and supported by industrial policy initiatives. It is particularly important to promote production capacity within the EU in fields of strategic importance, to safeguard critical infrastructure, and to reinforce social capacity, such as basic public services. The aim has to be to ensure security of supply and high quality of supply. The diversification of value chains promoted by EU trade policy to date does not go far enough.

2. Digitalisation

Just like decarbonisation, digitalisation – as the second major driver of change in the “twin transition” – presents both challenges and opportunities. Here too, policy-making needs to revolve around people and their needs. According to the principle of digital humanism, digitalisation processes and technological progress can be addressed systematically as ethical and legal regulatory challenges. Essentially that means responding to socio-technical problems arising from monopolisation tendencies, concentration of capital and power, and the use of potentially discriminatory algorithms and Artificial Intelligence.

In addition, digital technologies can play a substantial role in meeting climate targets at the crossover points with decarbonisation. That is particularly true with respect to using resources more efficiently. Digitalisation can help to reduce material costs and optimise processes, thereby enabling resources to be conserved. Moreover, digitalisation can enable

the partial backshoring of production capacity. That can potentially contribute to a significant reduction in environmentally harmful transport routes. However, digitalisation also has great potential in fields of the circular economy since it can foster the sustainable regionalisation of the economy in Europe.

Nevertheless, digitalisation requires high computing power and energy-intensive processes. The growing dependence – including the industrial sector – of IT infrastructure, especially of data centres, also means that the sector is currently increasingly dependent on fossil energy sources. That makes it necessary to transition at the same pace to purely renewable energy sources so that data centres and IT infrastructure can be powered by renewable electricity.

3. Institutional framework

An active and preventive structural policy is needed in order to meet climate targets and allow for an inclusive transition to climate neutrality. Using coordinated mission-driven strategies and sets of measures, it must be aimed at transforming Europe as an industrial location into a high-quality location with sustainable, potentially circular, industrial value creation systems and circular flows of economic activity characterised by high employment and good working conditions as well as a high degree of legal security (for example, in terms of job security and data protection).

For that to succeed, there is a need for viable governance with strategies and measures that are closely linked at the various political levels. The institutional framework must be geared towards focusing on the social dimension of a fair transition and ensuring codetermination and participation at all levels. The involvement of all stakeholders in region-specific transformation management is urgently needed since otherwise opaque and unbalanced decisions will be made, with the associated social ramifications. The active involvement of national and European social partners is of great importance to enable the coordination of measures – for income security, qualifications, basic training and further training – with the social partners in line with the relevant aims and needs and to develop and pursue transition pathways together with workers.

For highly vulnerable regions, industries, and professional groups, further elements should also be taken into consideration in order to achieve a socially balanced transition path:

- Structural development processes tailored to the respective region and the ability to plan ahead thanks to binding and adequate multi-year funding and regular monitoring.
- Supported regions also require non-investment instruments, such as regional development concepts, regional management, regional budgets, cooperation networks, and innovation clusters.
- Close coordination of European, national, and regional initiatives and instruments
- Support for and development of regional innovation systems, i.e. the network of relations and interaction between enterprises, universities, research centres and, not least, civil society

Innovation must be broadly conceived and not limited to technological innovations. Social innovation is of particular importance with respect to matters of governance. Socio-technical innovation systems can likewise help to kick-start necessary innovation processes in companies themselves, as well as at the regional and state level. It is necessary to cushion against unintended effects and to foster cooperation, codetermination, and exchange. The forward-looking strengthening of social infrastructure is of particular fundamental economic importance.

4. Infrastructure and energy requirements

The development of a sustainable and resilient energy system is pivotal to the decarbonisation of energy-intensive industries. Only the provision of sufficient renewable and sustainable energy will enable industrial production to be decarbonised to the extent necessary for meeting climate targets. The economical and efficient use of renewable energy resources will be key. Priority must be given to the principle of “Energy efficiency first” and the produced amounts of renewable energy need to be used efficiently and effectively for the purpose of decarbonisation.

Decarbonisation of energy-intensive industries requires large quantities of renewable energy to supply the necessary amounts of green hydrogen. Hydrogen and other green gases, such as biomethane (renewable natural gas), should primarily be used in fields where they are needed for decarbonisation. That applies to the production of green steel, the production of chemical products, and drive systems in heavy goods transport.

In addition to prioritisation of the fields of use for green gases, a fair allocation of costs must be a central element of the energy transition.

The expansion of production capacity – including for green hydrogen – and ensuring security of supply and the high-quality supply of renewable energy will result in an increase in system costs. As a societal and political task, the costs need to be distributed among all actors in order to ensure the continued affordability of clean energy for households. The affordability of green energy is therefore an important criterion in the energy transition.

From the perspective of Austrian workers, nuclear power – whose generation and final storage cannot be considered sustainable in either theory or in reality – should not be funded or otherwise promoted. The AK categorically rejects classing nuclear energy as on a par with renewable energy sources.

5. Skills, qualifications and the just transition

The transition to a climate-neutral Europe will only succeed if it is “fair and inclusive”. Given the importance of the industrial sector for the economy and employment, the implementation of a just transition needs to be more ambitious and involve a wide range of labour market, education/training, and health policy measures.

In countries with a strong industrial base, employment relations are less conflict-prone and are more stable. The industrial sector also plays a central role in high-quality and up-to-date training and further training. That in turn has a key influence on the innovation process, since well-trained people working under good conditions are also innovative in the production process. That function of the industrial sector needs to be retained and consolidated in the transition process.

During the transition, some existing qualifications and skills will no longer be of value or will be devalued by the structural change, while other qualifications and skills will gain in importance. Some job profiles or professions may disappear entirely, while new ones will be established. In addition to creating the relevant legal and regulatory framework and establishing incentives and obligations for enterprises, there are also further transition-related tasks requiring active policymaking in the fields of the labour market, employment, and health. Employees, unemployed people, and disadvantaged groups on the labour market should be supported by low-threshold and inclusive basic and further training offers, as well as qualification measures and working models geared to the specific life phase of workers. The public sector must itself play an active role and provide employment in socially important fields to a greater extent.

Demands

- A high-road approach and implementation of a quality-based strategy with a mission-oriented and targeted legal framework for the coordination and linking of strategies and measures at the various political levels
- Close involvement of national and European social partners in the strategy and development of measures for active transformation management
- Strengthening and expansion of participation and codetermination, especially at the company level
- Development and implementation of active structural development processes for particularly vulnerable regions
- Support and funding for non-investment instruments at the regional and local level
- Fair distribution of the system costs and production costs of renewable energy and the related infrastructure
- Nuclear power should neither be considered a sustainable energy source and nor should it be used as a bridge technology
- The use of green gases, such as hydrogen, should be prioritised in line with the principle of energy efficiency
- Adoption and observance of the principle of digital humanism in the development and implementation of digital technologies, with the involvement of social partners and civil society and with particular emphasis on the company level
- A right to transition-related vocational training/qualification and further education
- Development and expansion of transition-related work foundations (outplacement)
- Training campaigns for specialist workers in fields that are in demand in the transition
- Improvement in apprenticeship and training conditions
- Focus on women and girls in basic vocational training and further education for transition-related jobs
- An appropriate guaranteed living income for training and retraining periods
- Expansion of public employment programmes, e.g. in the form of job guarantees
- Expansion of models for shorter working hours in combination with integrated training/education offers

Literature

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