



CEEP feedback on Smart Sector Integration strategy

Smart Sector Integration represents an important part of the process of transformation of European economy towards climate neutrality and as such can contribute to the European Green Deal, if properly planned and executed. Similarly to many other strategies the integration of the energy sector with industry and consumer's needs, should take into account the characteristics and restraints of sectors, businesses and technology. Therefore, there is a need to develop a comprehensive set of measures and incentives to create proper investment signals but also to encourage the right consumer behaviour.

For the sake of this paper we understand the smart sector integration as an interlinkage between energy, transport, building, industry sectors and final consumers. These links and relations which are currently rigid and often one directional, will evolved in the multidimensional areas and will impact the conduct of market participants.

In order to achieve a well-integrated clean energy system with better links between the different sectors, it is necessary to ensure that all sectors fully contribute to decarbonisation. To design this process in a cost-efficient way, the energy sector needs a cross-sectoral (electricity and gas) and holistic approach, keeping in mind all aspects: wholesale, networks, retail and potential impacts on infrastructure development.

First of all, different starting points in the energy transition journey should be taken into account. EU member states differ significantly in terms of their energy mixes, level of RES deployment and structure of heavy industry and transport sector. The strategy should be adapted to the local circumstances and offer various pathways of achieving it. There is no one-size-fits-all approach to sector integration and different starting points for Member States shall be respected.

Smart sector integration should address various policy objectives, this is to say: decarbonisation, energy security, sustainability, environmental priorities, social welfare and inclusion. Therefore, the strategy should take a holistic approach and not concentrate too much on the one aspect.

The overarching goal of the strategy should be to contribute to the future proofed EU energy system which is ready to deliver 2050 net zero emissions goal and provide EU citizens with competitive energy prices, secure energy supply and cost-effective decarbonisation.

Within the decarbonisation process, the smart sector integration should encompass the new forms of low carbon energy, their interlinks with the current system and the potential impact



on the transformation and the way how they can contribute to the better integration of the internal energy market and how they can compete on the market in the future.

CEEP would like to underline the need of inclusion of the energy efficiency first principle in the strategy. It is the cheapest, most sustainable form of energy. Sector integration can bring much more into this area – both on the supply and demand side.

The key for smart sector integration seems to be electrification, since there are already many ways to decarbonise energy production. Many other sectors also witness the development of new low-emission technologies, i.e. the industrial production. However, it is crucial not to forget that in some cases it will be hard to make further progress i.e. in fertiliser production. Here, we would like to point out the need of inclusion of CCS/CCUS in the strategy.

The strategy should also look at the options how the changes to the energy systems caused by high RES penetration and the possible excess of production can be efficiently curtailed or stored. Today, EU countries spent a lot of resources for the curtailment which should be avoided in the long run. A closer look at the energy storage option, including batteries, vehicle to grid, home batteries and heat pumps, hydrogen, DSR as well as other forms of storage including PHS should be study in detail.

High penetration of intermittent renewables will require new solutions for safe operation of the power system. Changes in the behaviour of energy consumers will bring additional challenges. Thus, the digitalisation of electricity networks will be an essential factor for energy system integration bringing the flexibility solutions.

The more, investments into grid and networks of electricity and low carbon gases will be needed to make it reality. We cannot forget that high electrification of the European industry can potentially bring more bottlenecks as infrastructure limitations exist and networks are not enhanced in time, or the adaptation of energy users facilities might not be sufficient.

In general, sector integration assumes significant increase in electricity production. Consequently, the energy network needs to be adapted to the changing patterns of production and consumption. This will require massive investments not only in the infrastructure itself but also in R&D.

Electricity from renewable sources will be the basis of the EU's future energy system. However, it will not be able to meet all the EU's zero-carbon energy needs. CEEP believes that gaseous energy carriers should be treated as a part of the solution for the future climate neutral economy and not only as a transition technology.

Renewable gases and hydrogen should be developed on the market basis and operate on an equal level-playing field. CEEP believes that all forms of hydrogen production should be acceptable if they contribute to reaching the targets.



Until 2030 it would be unlikely for green hydrogen to be introduced to the market without subsidies. Also, in some regions access to water required for electrolysis could pose a challenge. At the moment, it is not possible to estimate future relative costs of different form of hydrogen technologies with certainty. Thus, there is a need to invest a lot in research and development and demonstration projects in the coming years in order to have some of the pilot industrial projects by the end of the decade.

Therefore, the support schemes should be used with cautions as in this wide variety of technologies it is not yet clear which ones will provide the best economic output and in which regions they will be suitable to be deployed. The strategy should rather concentrate to create a framework which will facilitate entering the market and scaling up of hydrogen and low carbon gases production and use.

The smart sector integration includes a variety of technologies and services and many of them are at an early stage of development and deployment (i.e. power-to-X). Its production capacity and technology readiness remain at a very low level and at the same time the costs are relatively high. There are also some concerns over the life-cycle energy losses and the form of the market for these products.

Part of the issues related to the smart sector integration should be addressed at the EU level such as the coordination of network expansions (electricity, gas, hydrogen), the development of definitions for renewable and decarbonized gases and a framework for their cross-border trading.