

POSITION PAPER: THE BOUNDARIES IN EUROPEAN REGULATORY FRAMEWORK FOR POWER-TO-GAS DEPLOYMENT

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Power-to-gas relates to many dimensions of European energy and environmental law and the unbundling rules in current European energy law apply. As first dimension, the cross-sectoral nature of power-to-gas links it to both electricity and gas networks and markets, and thus correlated EU legislation included under the 2009 Third Energy Package and proposed Clean Energy for all Europeans Package of 2016. Secondly, Power-to-Gas anticipates under the proposed legal framework on energy storage which has proposed under Clean Energy for all Europeans Package. As power-to-gas cannot only be considered to be an *energy storage technology*, but also an energy conversion activity which *produces a gaseous energy carrier*, more legal issues are raised under the Renewable Energy Directive.

New package for legislative framework

On 30 November 2016, the European Commission presented a new package of measures with the goal of providing the stable legislative framework needed to facilitate the clean energy transition and thereby taking a significant step towards the creation of the Energy Union. With regard to the two abovementioned functions of power-to-gas, the frameworks on “energy storage” in Recast Electricity Directive, as well as the framework on renewable gas in Recast Renewable Energy Directive are of interest for power-to-gas.

In the proposal for a Recast Electricity Directive, it is stated that system operators shall not be allowed to own, manage or operate energy storage facilities. There are however exemptions possible for system operators, if approval has been given by the national regulatory authority and if the energy storage facility is necessary for the task of the system operator. Besides, the definition of energy storage may be interpreted

in different ways. There are inconsistent differences in the definitions of energy storage between the European Commission, the European Parliament and the Council of the European Union. This inconsistency may lead to unclarity about the role system operators can take in power-to-gas.

Nevertheless, the new rules for unbundling of energy storage facilities from network operation are *complementary* to existing unbundling rules. The energy storage framework seems to focus on the relation of the electricity system operator to energy storage, but the unbundling rules work cross-sectoral. Consequently, also gas system operators must, as a basic rule, refrain from operating a power-to-gas installation.

Generally, there is no outcome yet on the exact role of power-to-gas in the European Regulatory Framework. The proposed unbundling framework for energy storage awards certain discretion to national regulatory authorities to consider the role of regulated companies in their power-to-gas activities.

Four strategic pillars

To facilitate power-to-gas deployment and maximize their functionalities, services and products, the European Power to Gas platform proposes four strategic pillars to integrate in regulatory frameworks.

1. Consideration of all functionalities

The Platform appreciates that the Recast Electricity Directive includes a definition of energy storage that allows for the *conversion* of electricity into ‘other energy carriers’. The Platform remarks, however, that not all functionalities of power-to-gas might be covered by this definition as power-to-gas can also be implemented for the conversion of electricity into



Page 2 of 2

renewable fuel or feedstock, defined as production. It's currently unbiased if this falls under the energy storage or production principles of the Recast Electricity Directive. Therefore, an extension of the power-to-gas definition with a conversion or production component should be considered.

2. Cross-sectoral legal framework

As power-to-gas interlinks the currently siloed gas and electricity networks, and correlated fragmented legislation, it requires for a cross-sectoral legal framework. Looking beyond the traditional electricity and gas sector paves the way towards an integrated energy regulatory framework. The definitions of power-to-gas and the ownership must be aligned in European electricity and gas legislation.

3. Clearness on exemptions for SO's

The European Power to Gas Platform is concerned about the lack of consistency in the definition of power-to-gas, the clearness of the exemptions and the very strict limitations for system operators (SO's) with respect to ownership of power-to-gas installations. The Platform

stretches that this technology still is in piloting phase. As there is no direct business case yet for private investors, the development of this technology might be severely inhibited. Since TSO's and DSO's have the obligation to balance their grids and aim to ensure security of supply and affordable and sustainable energy, the regulatory framework should allow openings to balance between energy carriers; electricity, heat and gas. Also, storage facilities for grid balancing may be considered to be integrated in such regulatory frameworks.

4. Allow piloting for regulated companies

The European Power to Gas Platform suggests to include Power-to-Gas as alternative in the cost-benefit analysis of every electricity grid extension. This allows the electricity and gas networks to function as a single hybrid network. Technology piloting and demonstrations will allow CAPEX reduction of immature system components, improving the competitive position of power-to-gas with alternative storage applications. Therefore, exemption is required to allow regulated company to pilot with power-to-gas projects.



About The Platform

Established in 2012, the European Power to Gas Platform is a joint body, based on an integrated network of stakeholders, which aims to explore the viability of power-to-gas in European countries. The Platform takes an independent position when pursuing its objective: the Platform aims to present unbiased data and views, and does not for instance promote technologies. The Platform actively involves their stakeholders in exploring the possibilities for power-to-gas to line them up for supporting R&D and demonstration projects.

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