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Public consultation on draft ETS State aid Guidelines

In view of the proposed Guidelines on certain State aid measures in the context of the system for greenhouse gas emission allowance trading post 2021, Polish Chamber of Chemical Industry, representing the chemical industry in Poland, would like to draw attention to the following key issues.

It is understood that in case of EU ETS phase IV the sole authority on State Aid is with DG COMP. However, in order to safeguard an integrated approach to consistency, stability and predictability, the methodology used for indirect costs compensation eligibility list should be consistent with the approach developed by DG CLIMA for EU ETS phase III in terms of the quantitative and qualitative methodology applied to indirect cost eligibility and the assessment of the risk of carbon leakage. Proposed approach to quantitative assessment seems methodologically correct, although it is very stringent (all three criteria to be met). New proposal uses free allocation methodology as a basis, however with indirect emission data only. The criteria, proposed in the guidelines, determining whether a given sector is eligible for indirect emission cost compensation are much more stringent than the criteria in the ETS phase III (two additional criteria: about Trade

Intensity and Indirect Emission Intensity). The approach to qualitative analysis should be multidimensional and forward-looking. The European Commission is also advised to consider in the assessment whether factors that are not included in the quantitative analysis might cause carbon leakage (as investment leakage or production leakage) due to rising ETS costs of electricity. On the one hand, that means that the quantitative criteria according to which the European Commission selects sectors eligible for state aid and the thresholds for these indicators should be as current as possible (joined to the future events). On the other hand, quantitative analysis should not be used automatically to select sectors, but should be only one of many factors used to predict future events. Such analysis is only provided by qualitative analysis, due to its ability to correctly assess the probabilities of future events. The qualitative assessment should take into account the exchangeability between fuel and electricity. It is worrying that the consultants do not consider that. Certain products, including e.g. the most important high value chemicals under NACE 20.14, can be produced through both fuel- or electricity-driven processes. The exchangeability is used to set these product benchmarks in order to avoid distortion between EU producers. Otherwise, installations interchangeably using heat or mechanical energy from electricity would be in a significantly worse situation than those using heat or mechanical energy from fuel combustion, even if the overall emission efficiency of both installations is at the same level.

As indirect emissions from electricity consumption are not eligible for free allocation, the share of indirect electricity emissions is subtracted from the calculated free allocation. Therefore for consistency reasons, all sectors with product benchmarks which face exchangeability should be eligible for full indirect cost compensation to avoid distortion between EU producers. The logic was followed during qualitative criteria setting for indirect compensation in phase III: for indirect compensation eligibility in case of a higher trade intensity, a lower cost criterion has been accepted for sectors where fuel/electricity exchangeability is a key factor. Just like in case of direct and indirect carbon leakage list for 2021-2030, a qualitative assessment should be considered for borderline sectors and sub-sectors with at least $TI \times EI > 0,15$.

It is important to stress that extending the list of eligible sectors is unlikely to cause undue distortions of competition in the internal market. Indirect cost compensation schemes have been introduced in the majority of industrialized EU Member States, with economies that the sectors deemed to be at the risk of carbon leakage play an important role in. Additional governments, including Poland and Czech Republic, have also recognised the advantages and implement the indirect compensation schemes.

The state aid should not be limited to the proposed 75%. The European industry sectors with serious indirect risk of carbon leakage are going to be exposed to increasing indirect carbon costs while facing competitors from third countries. In our opinion, increasing the intensity level and, if necessary, reducing it later will provide better protection on industry sectors with serious indirect risk of carbon leakage and may strengthen companies efforts to electrification of production processes.

We believe that the condition of limiting the carbon footprint of electricity consumption should take into account environmental restrictions that make it, very often, impossible to install renewable energy installations on site. We consider it unjustified to impose obligations on beneficiaries to implement the recommendations of audit reports, to install RES to cover at least 50% of their electricity consumption or to invest in significant (below the benchmark) reduction of direct emissions. In case of emission factor we think that calculation methodology based on 'marginal plant approach' based on average of fossil fuel plants should remain unchanged until 2030.

Industrial on-site renewable energy generation facilities have many advantages when it comes to speeding up Member States' energy transition as they require no political agenda, are likely to get cheaper financing and could be balanced within internal industrial grids, without posing additional burden to the National Power System. However, it is not always viable to install on-site renewable energy generation facility due to various weather-related or land limitations. The proposed threshold of 50% is also too high given high absolute values of electricity volumes consumed and intermittency issues given still prohibitive costs of sustainable energy storage solutions at scale required by industry. We estimate that increasing renewables share in our onsite autoproduction facilities cannot be higher as 20% - and such a share would be an ambitious target.

Actually, energy audits and energy management systems are already introduced in indirect cost compensation scheme in Poland. The condition for investing aid in energy efficiency measures with a proposed payback period of [5 years] should be questioned. Investments in improving energy efficiency in energy-intensive industries often last for many years and are carried out in stages. As another approach, we recommend introducing a longer payback time to avoid discriminating against projects that generate significant cash inflows in later years.

The draft also proposes too ambitious indication of substantial reduction of direct emissions. Due to the methodology used in benchmarks update, they are reduced to the levels not achievable by the industry at large. It is important to stress that each subsequent emissions reduction achieved costs more and the increasing number of companies reach economic and technological limitations of production assets. Too ambitious benchmarks lose their motivational goal, as the companies not able

to meet benchmarks and burdened with increasing direct emissions costs, tend to limit or simply end the production.

It should also be borne in mind that the challenges of industrial transformation mean high R&D needs for the chemical sector and long-term investment in completely new low carbon process technologies.

Proposed limitation of state aid, in the context of the greenhouse gas emission allowance trading system, to 8 major sectors is definitely insufficient and counter-effective in relation to the objectives of reducing global CO₂ and greenhouse gas emissions.

We find it disturbing that the list lacked many important energy-intensive sectors. This can significantly hinder the transition to a low-carbon economy - so important from the point of view of European Green Deal. These sectors are subject to strong competitive pressure from products manufactured in regions other than the European Union, where their producers do not incur costs due to CO₂ emissions, and have lower production costs, due to lower prices of primary energy sources in these locations, as well as lower prices of raw materials. This strong competition causes that EU chemical producers cannot transfer the costs of EU climate policy to their customers. The in-depth analysis that accompanies the Clean planet for everyone message states: "It is expected that the renewable energy market outside the EU will grow even faster than in the EU. (...) It should be expected that these changes will bring European industry benefits in the form of new business perspectives. As for the types of electricity from renewable sources where EU companies have a competitive advantage, the once strong EU position in solar energy has been significantly affected by China in recent years. " Failure to offset rising electricity costs is a threat to competitiveness and creates another risk for the transition to a low-carbon economy, because more products with a larger carbon footprint will be imported to meet the increased demand in the EU

Taking into account the above, the following sectors should be included in Annex 1:

a) 20.14. – Manufacture of other organic basic compounds,

The Petrochemical industry accounts for some 50% of the chemical industry manufacturing output. The organic base chemicals are strategic components of everyday use products. They are widely used in production of clothing, packaging, consumer goods, car components, airplanes, computers, paints, solvents, cosmetics and pharmaceuticals. They also provide solutions to CO₂ emission reduction of many downstream sectors - from insulation materials, lighter materials for transport to advanced materials for renewable technologies. The main groups of high-volume organic compounds are: aliphatic compounds (ethylene, propylene), aromas (benzene, toluene, xylene cyclohexane, cyclohexanone), heterocyclic compounds as caprolactam, OXO alcohols and oxygen compounds such

as ethylene oxide, ethylene glycol, formaldehyde and methanol. Some stages of the production across the value chain are very energy intensive and intermediate products have high emissions. In many cases, it is not possible to reduce emissions due to the fact that almost 75% of the energy used in the chemical industry is used as a raw material. Petrochemicals are trade-intensive - they give important components in many value production chains throughout all EU economic sectors. Excluding petrochemicals from Member States' indirect cost compensation of EU indirect carbon costs may threaten both their competitive position and investments needed e.g. in electrification or new low carbon technologies.

GVA numbers and selected reference years are not representative for petrochemicals: Sensitivity analysis and business cycles of recent decades show that unreflected use of years and parameters misinterpret petrochemicals' business dynamics and underestimates indirect cost exposure (cyclical profitability). Moreover, retrospective COM evaluation disregards most recent dynamics such as massive investment in petrochemical capacities outside EU (US, China, Middle East) that will challenge EU's petrochemicals' global trade position.

b) 20.15 - Manufacture of fertilizers and nitrogen compounds

The fertilizer industry is a global industry, with main production of key raw materials (gas), intermediate products (ammonia, nitric acid), final products and main consumption outside the EU. Consequently, EU producers are price-takers on a global commodities markets both in terms of inputs as well as products such as ammonia and urea. Furthermore, the international competition is distorted as third countries' manufacturers not only face no comparable climate policy costs (in other words they are fully carbon emitting on their electricity source, production and transport and more NOx emitting on their production), but also benefit from dual-pricing of gas.

The EU fertilizer producers are among the most efficient in the world in terms of electricity consumption, but energy and gas can still account for up to 85% of the cost of production of ammonia, the key building block of all nitrogen fertilizers. Therefore, increasing indirect emission costs instead of pushing the industry to further investment will deprive it of cash necessary to fund the investments. However, if the NACE 20.15 sector was eligible for compensation of such costs, the industry would be able to continue its emission reduction efforts driven i.a. by high direct emission costs as two thirds of the natural gas that are used as feedstock for ammonia production and the related process CO₂ emissions are not eligible for compensation.

If compensation of indirect emission costs in the NACE 20.15 sector was discontinued because of revised Guidelines, it would also affect intersector competition due to energy interchangeability i.e. the fact that ammonia plants may use three sources of energy: gas, steam and/or electricity or any

mix thereof. The energy configuration of an ammonia plant is set during design phase and changing it later leads to massive costs resulting from the need to reconfigure the entire plant, making it practically impossible.

The benchmark used for free allocation of ETS allowances for ammonia plants is based on energy consumption (not directly affected by energy source), but the allocation itself is based on actual direct emissions (affected by energy source, as gas has direct emissions, while electricity has only indirect emissions). This leads to a perverse result in which an ammonia plant that uses less gas and more electricity will incur an increased ETS costs of indirect emissions due to its reliance on electricity as opposed to gas. In other words, ammonia plants that use electricity and have indirect emission would be disadvantaged as compared to gas-based plants that have direct emissions, which runs counter to EU climate policy objectives and drive to promote electrification of EU industry.

The exclusion of NACE 20.15 sector from the list of sectors eligible under the revised Guidelines on State Aid for Compensation of Indirect ETS Costs may be last competition distortion that will drive more production of fertilizers and nitrogen compounds out of the EU and such a change would increase a carbon footprint globally. This is actually already happening as illustrated by the mega euro billion investments made by fertilizer producers in i.a. USA, Algeria and Egypt.

c) 20.16. – Manufacture of plastics in primary forms and 20.17. - Manufacture of synthetic rubber in primary forms

In Poland, these are large industries producing several hundred thousand tonnes of products per year (according to the Central Statistical Office, only in 2018, 260,000 tonnes of synthetic rubber in its basic form and 146,000 tonnes of styrene polymers were produced in Poland), employing almost 230000 employees and bringing specific revenues to the state budget and at the same time they feel strong competition in regions other than the European Union - according to Eurostat, imports from outside the EU of only two basic groups of synthetic rubber, i.e. styrene-butadiene rubbers and polybutadiene rubbers to the EU amounted to 580000 tonnes, and polystyrenes and polystyrenes for foaming 200000 tonnes.

Rubber is one of the most important materials used in industry. It is of key importance in the automotive, aviation, chemical, machine industry and many others. Rubbers and resins are appropriate for production of floor finishes and coverings in light colours, tires, cables, toys, hoses and microporous rubber for footwear industry and hard rubber articles.

Polymers are often an essential part of climate solutions in other sectors and only a competitive plastics sector is able to fully support other sectors in achieving the overall goal of European Green

Deal. Plastic insulation materials consume about 16% less energy and emit 9% less greenhouse gases than alternative materials. Plastics often have a better carbon footprint than other types of materials (e.g. Glass, aluminum, steel, paper / cardboard, etc.), especially for packaging or automotive applications. With the exception of glass, all these types of materials would be eligible by design, but polymers would be excluded and therefore disadvantageous for a low-carbon solution. This is not in line with the objectives of the European Green Deal. Moreover plastic products typically require less energy to produce than alternative materials, especially in applications such as transport, building and construction, packaging and electronic devices.

d) 24.44 - Copper production and 07.29 - Mining of other non-ferrous metal ores

The implementation of a climate neutral Europe can only be achieved if sufficient non-ferrous metals are provided. Already in 2017, the World Bank forecasted that by 2050, developing wind turbine production would need 300% more metals, 200% more metals would be needed for solar panels production, and the demand for metals needed for batteries production would increase by 1000% (source: World Bank - The growing role of minerals and metals for a low-carbon future, 2017). It is estimated that in the years 2020-2050, technologies that are expected to reduce greenhouse gas emissions in the EU by 75%, will need 22 million tonnes of copper (estimate based, among others, on the EU's "High-RES" scenario 2050 and the EU Energy Road Map until 2050).

Over the past few years, global copper production has increased by 50%, but European copper production has not shown a significant increase. In turn, Asia's share in global copper production increased from 27% in 1990 to 61% in 2017 (source: International Copper Study Group).

According to the life cycle assessment study, the copper produced by European industry has on average half the unit emissions less than produced outside the EU, but - unlike its global competitors - must pay dearly for its emissions. Meanwhile, the growing demand for copper-containing products in Europe also increases (by 23%, according to the International Copper Research Group) import of finished products that have a larger carbon footprint than their European counterparts.

It is worth emphasizing that copper is a metal that is 100% recyclable and can be used and processed many times without losing its technical properties. In addition, the copper processing also produces rare and valuable metals for example in electronics (cobalt is a key by-product of copper metallurgy, and about 60% of global cobalt production is generated in copper processing; other copper accompanying metals include nickel, silver, gold).

Both copper and aluminum are very good electrical conductors necessary to enable Europe's energy transformation and must be treated equally. However, while aluminum production is expected to continue to be eligible for indirect CO₂ cost compensation in the future, copper is out of this list. Such



a step must obviously lead to a competitive disadvantage of this metal and its producers, and the effect would be, among others an increase in the costs of further processing of copper products, such as underground power cables, for example. Different treatment of aluminum and copper, when both metals can be used interchangeably in many applications, will also lead to distortions of competition in the EU internal market.

The chemical segment is one of the fastest growing industries of the Polish economy with 17% of the value of Polish industrial production sold (62,15 billion EUR, 2018), 12% of total employment in the entire Polish industry (315,000 employees) in over 11,000 enterprises. Despite growing regulatory costs, these sectors are constantly improving their environmental footprint - the value of chemical production sold in Poland over the past twenty years shows an over six-fold growth, while energy consumption was reduced by almost half.

In our opinion the extension of the proposed list of sectors should not cause distortions of competition on the Union market. An indirect cost compensation system has been introduced in most industrialized Member States where sectors at risk of carbon leakage play an important role. In order to support the objectives of the European Green Deal, the ETS State Aid Guidelines should strengthen the sectors' efforts to reduce carbon emissions through electrification. In times of recently significant increase of ETS carbon costs and further increases expected, the Guidelines should prevent indirect carbon costs-driven carbon leakage and relocation of industries.



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