Commissioner Adina-Ioana Vălean

Meeting with GD4S

Date /07/12/2021

Brussels

Member of Cabinet responsible:

Member accompanying:

DG participant(s): (including contact number):

[redacted] GD4S and other GD4S representatives

Scene Setter

You will meet with [redacted] accompanied by other representatives.

GD4S representatives met Energy Commissioner, Kadri Simson, on October 12th

GD4S represents the leading natural gas distributors in France, Italy, Ireland, Spain, Portugal, Greece and Romania. Together, they represent 28 million customers in Europe (around 30% of the European market). Gas distributors are responsible for operating the gas distribution network, ensuring its maintenance, and its development. Gas distributors are also responsible for safely distributing natural and renewable gas to consumers.

GD4S's stated position on relevant files:

- GD4S argues for a dedicated regulatory framework to accelerate the achievement of the climate agenda targets in the gas sector; this should follow a holistic approach, support renewable gas production and Power to Gas technology, and ensure Energy Systems Integration to accelerate the decarbonisation of gas infrastructure and increase the integration of gas and electricity systems through power-to-gas as well as gas-to-power.
- GD4S supports an approach based on life-cycle assessment (LCA) rather than on a tailpipe analysis under the CO2 emission performance standards for road vehicles, in a way that would recognise the benefits of natural gas.
- GD4S argues that a sufficient level of support towards compressed natural gas (CNG) and LNG should be implemented in the transport sector, as they would reduce emissions compared to diesel and allow integration of renewable gas in the longer term.
- Furthermore, GD4S opposes the introduction of a definition of "Alternative Fuels for Zero-Emission Vehicles" in the AFIR proposal, and its replacement with a sub-definition dedicated to low carbon fuels
- They note the need to create the conditions for preferential tax treatment in the Energy Taxation Directive for (bio)NGVs (natural gas for vehicles) and fuels listed in the Alternative Fuels Infrastructure Directive. They consider that the current Energy Taxation Directive favours diesel mobility despite the EU and Member States' goals to phase out this fuel and develop sustainable biofuels. Instead, they call for this preferential tax treatment to also apply to renewable gases defined in Renewable Energy Directive II and used as heating fuels.

Objectives

- Present the Fit for 55 package and discuss the role of natural gas in transport, as noted under the SSMS.
- Receive information about GD4S's plans for the scale-up of renewable gases blending such as biomethane, e-gas and hydrogen in its gas networks.

Speaking Points

[GENERAL]

- Transport accounts for a quarter of EU GHG emissions; we need to accelerate the shift to sustainable and smart mobility in order to reduce these emissions by 55% by 2030 and by 90% by 2050 as foreseen in the **European Green Deal**, and **Climate Law**.

- For this, we need our mobility system as a whole to become much more sustainable and efficient, and all transport modes to reduce their GHG emissions: road, rail, aviation and waterborne transport must all do their part.
- The European Commission published a new **Sustainable and Smart Mobility Strategy** in December 2020. We set out a broad vision for a new mobility system, which is safer, more sustainable and more inclusive, in the context of the overall ambition of the EU to become the first carbon neutral Continent in by 2050. To this end, 2021 and 2022 are important years, with the adoption of key initiatives.
- On this pathway, the Commission earlier in July 2021 presented the **"Fit for 55" package**. This package includes a set of policy initiatives to operationalise the 2030 legally binding objective of reducing at least 55% of net domestic greenhouse gas emissions by 2030 compared to 1990. It includes many proposals contributing to the decarbonisation of Transport, such as a revision of the CO2 standards for cars and vans, a new Alternative Fuels Infrastructure Regulation, and proposals for revision of the EU emissions trading system (EU ETS), of the Renewable Energy Directive and of the Energy Taxation Directive, as well as specific initiatives for the deployment of alternative fuels in aviation and maritime transport.
- In this context, we need to look at different transport modes, what their decarbonisation options are, and how we can ensure that they all contribute to the emission reduction target for the transport sector.
- In **road transport**, zero-emission options, such as hydrogen and electricity, are already available. For both light- and heavy-duty vehicles, we expect the progressive replacement of internal combustion engines with zero-emission alternatives to continue and gain momentum. Our strategy anticipates that by 2050 almost all cars in operation are zero-emission at tailpipe.
- The timeframe is slightly longer for trucks and for hydrogen vehicles. From our side, we expect at least 80.000 zero-emission trucks in operation by 2030, but ACEA and all the main manufacturers predict substantially higher figures.

[AFIR]

- Hydrogen vehicles will play an important role in this context, in particular for long-haul freight. To accompany and accelerate their deployment, in our proposal for a new **Alternative Fuels Infrastructure Regulation** we set mandatory targets for the deployment of hydrogen refuelling stations for both light- and heavy-duty vehicles along the TEN-T network as well as in every urban node.
- In the meantime, market data show that LNG trucks are fully mature, and operators are purchasing more of them. Our scenarios also suggest a continued role of gaseous fuels in heavy-duty road transport in the short term, while zero-emission trucks are expected to start playing a significant role on the market in the period from 2025 onwards.
- Based on these considerations, we think it is important to ensure the continued availability of a minimum LNG infrastructure along the TEN-T core network at least in the coming years. This is why have included provisions to to this end in our AFIR proposal.
- On the other hand, CNG refuelling infrastructure is already available in the EU, while the share of CNG vehicles is expected to go down significantly post 2035 and not play a relevant role by 2050. When looking at these trends, it does not seem appropriate to include specific mandatory requirements for CNG infrastructure in the Regulation.

[FuelEU, REFUELEU]

- WE need to ensure that all transport modes decarbonise their operations. **Aviation and maritime transport**, in particular, have limited alternatives: they do not have market-ready zero-emission technologies, and they critically depend on renewable fuels (aviation) or high blends of natural gas with biogas/e-gas (deep-sea shipping).
- Therefore, we need to prioritize the use of renewable fuels such as e-fuels and biometane in these modes. By 2050, we need to see a massive deployment of alternative fuels and clean options for planes and ships, as well increased operational efficiency.
- This is why we have also presented, as part of the Fit for 55 Package, the RefuelEU Aviation and FuelEU Maritime proposals.
- The **FuelEU Maritime** proposal will stimulate a gradual increase in demand for renewable and low-carbon fuels in maritime transport. This is the first legislative initiative of its kind for maritime transport. It introduces average yearly limits on greenhouse gas intensity of energy used on-board of ships, starting with a 2% reduction by 2025, and going up to a 75% reduction by 2050.
- In this context, the future role of LNG is particularly evident in maritime transport. The share of LNG in shipping is predicted to be 5.1% (of which 25% will be biogas or e-gas) by 2030, which will go up to 25.3% (of which 83% will be biogas/e-gas) by 2050. In the mid-term, hydrogen can also support the decarbonisation of the inland waterways sector and short sea shipping, as well as the deep sea shipping in the long term.
- The **ReFuelEU Aviation** proposal will oblige jet fuel suppliers to provide progressively higher blends of sustainable aviation fuels in jet fuel uploaded at EU airports; these will include sustainable biofuels and synthetic aviation fuels, excluding feedstocks where there is competition with the food and feed sector.
- As the role of renewable gas and hydrogen becomes more relevant for various sectors, including transport, the existing gas grid should be used for their transport, including by being partially repurposed for the transport of renewable hydrogen over longer distances. The development of larger-scale hydrogen storage facilities will also be necessary.
- Finally, we are setting up a **Renewable and Low-Carbon Fuels value chain Alliance**; this Alliance should become operational early in 2022, with the objective of ensuring that all modes of transport have easier access to renewable and low-carbon fuels and particularly focusing on waterborne and aviation sectors.

Role of gas in decarbonisation

- In line with the fit for 55 commitments, natural gas will have a role to play in the transition, but the gas sector will need to be decarbonised to reach climate-neutrality by 2050.
- This has been recognised in the Energy System Integration and Hydrogen Strategies published last year by the Commission.
- Natural gas, which is not accompanied by the abatement of its emissions, will need to play a decreasing role in the energy mix of Member States. It will be increasingly replaced by renewable and low-carbon gases, in line with technological developments.
- We expect that biogas, biomethane, hydrogen and e-gases will provide sustainable options for decarbonisation across a wide range of sectors

- We see, however, a role for coal-to-gas switch in some regions of Europe, especially in the heating sector. Gas will play a transition role here in the next years. However, it is important to avoid lock-in effects into this technology.
- We see that gas distribution networks will play a key role in the decarbonisation of gases, in particular in replacing natural gas with biomethane.
- Most of biomethane installations is connected to the DSO grid. We are looking into possibilities how to make the access of biomethane to the wholesale market easier from the DSO level too.
- To reach better integration of the energy market that supports decarbonisation we need to ensure that the development of our energy infrastructure progressively reflects synergies between gas and electricity sectors. We need a more holistic approach to the energy system, covering electricity, heat and renewable energy production, as well as both transmission and distribution networks.

[DECEMBER PACKAGE]

- On 14 December, the European Commission will present the Hydrogen and Gas Markets Decarbonisation Package. The main aim of the package is twofold:
- First, facilitating the integration of renewable and low-carbon gases in the existing gas grid. This concerns biomethane injected at distribution level, gas quality in the existing networks, access of renewable gases to LNG terminals, and topics around integration of network planning between electricity, gas and hydrogen networks.
- And second, enabling a hydrogen market in a dedicated infrastructure, allowing hydrogen to become a key component of the energy sector.
- We have carried out an extensive consultation on this package, including open public consultation and large stakeholder events. This allowed us to gather a necessary input from a broad range of stakeholder that will help us in preparation of the legislative proposals.

[METHANE]

We also need to focus on methane emissions along the value chain. Methane is the second biggest contributor to climate change, after carbon dioxide. It is also a potent local air pollutant that causes serious health problems. Tackling methane emissions is essential to help reach our 2050 climate neutrality goal and contributes to our zero-pollution ambition.

- Following the publication of the EU methane strategy in October 2020, the Commission is currently working on a legislative proposal to reduce methane emissions in the energy sector as part of the “Fit for 55” package and scheduled for adoption on 14 December.
- The objective of the proposal is to reduce methane emissions from fossil energy produced or consumed in the EU. This needs to be done by improving the accuracy of information on the main sources of methane emissions associated with energy consumed in the EU, ensuring further effective mitigation of methane emissions across the energy supply chain in the EU, and reducing methane emissions related to fossil energy imported into the EU.
- The Commission is currently working on the compulsory measurement, reporting, and verification (MRV) for all energy-related methane emissions at company-level building on the methodology of the existing global voluntary Oil and Gas Methane Partnership (OGMP), Requirements to mitigate methane emissions, including improved leak detection and repair (LDAR) on all fossil gas infrastructure, as well as limits on venting and routine flaring.

- The sectoral scope of the proposal is also under assessment, covering the oil, gas, and coal sectors. The possibility to incentivise methane emission reductions beyond the EU is being explored by the Commission. It could be addressed through additional measures related to our imports of fossil fuel when more accurate and reliable data becomes available.
- Energy diplomacy on methane emissions has already yielded important outcomes. In October 2020, the EU together with the United Nations Environmental Programme, the Climate and Clean Air Coalition, and the International Energy Agency, created the independent International Methane Emissions Observatory (IMEO). The Observatory has been launched on 31st October at the G20 meeting. We believe that it will represent a powerful tool to drive global action to reduce emissions of methane.
- Furthermore, in September 2021, the EU and the United States announced the Global Methane Pledge, a political commitment to reduce collectively global methane emissions by 30% by 2030.
- As you know, the Pledge has been presented by leaders at the UN Climate Change Conference (COP26) in November in Glasgow. Countries joining the Global Methane Pledge committed to a collective goal of reducing global methane emissions by at least 30 percent from 2020 levels by 2030 and moving towards using best available inventory methodologies to quantify methane emissions, with a particular focus on high emission sources. So far, 110 countries have signed up to this initiative.

ENERGY TAXATION

- One of the proposed measures is the revision of the Energy Taxation Directive (ETD), which complements the other measures in the Fit for 55 package. On the one hand, the revision of the Directive will remove favourable treatment of fossil fuels. On the other hand, it will aim to promote greenhouse gas emission reductions through energy efficiency and a higher uptake of less polluting alternative. It will also incentivise investment in alternative fuels and in clean technologies.
- In particular, the revision will make energy content and environmental performance of products the basis of taxation, ending the current approach of taxing fuels according to volume, which discriminates against biofuels in favour of conventional fossil fuels.
- The Commission proposal also aims to remove tax exemptions that currently undermine the policy objectives of the Energy Taxation Directive – the exemption of fuel used for aviation and maritime transport are among those that should be removed.
- Moreover, the current favourable treatment of diesel will be removed. Currently the minimum rate for gas oil is at 330 EUR/ 1000 liters and for unleaded petrol is 359 EUR/1000 liters, clearly favouring gas oil mobility. Albeit most Member States tax both fuels above their ETD minima, the advantage of gas oil is reflected in the national rate of all but one Member State. The new proposal would equalize the rate for gas oil and diesel, withboth fuels being taxed at the same rate, 10.75 EUR/GJ (Gigajouel) in 2023. Sustainable biogas and biofuels would be taxed at two-thirds of this rate and advanced biofuels would be taxed at the much lower rate of 0.15 EUR/GJ. Additionally, Member States would have the option to exempt advanced biofuels and biogases for the first 10 years.
- To sum it up, in order to promote a transition towards the use of greener products, the use of sustainable and advanced fuels will be exempted from the tax for 10 years. After the 10 year period these fuels will continue to have reduced tax rates.

- The revised Directive will set clear rules, so that investors can plan their long-term investment in renewables. It will incentivise the transition towards cleaner, reliable and affordable energy sources, providing EU companies with an incredible economic opportunity: to make the right investments now, which will allow the EU to remain competitive, foster innovation and ultimately strengthen its economies.

Defensives – 1. Policy recommendations 1.7/1.9 in GD4S White Paper

1.7 Develop and apply a life-cycle analysis or well-to-wheel methodology, as referenced in Regulation (EU) 2019/1242 to calculate GHG emissions. Emissions can not only be measured at the tailpipe, as doing so is too restrictive and does not take into account the GHG emissions reduction of renewable gases, fuels that can rapidly decarbonise vehicles. In order to optimise investment decisions, which reduce globally greenhouse gas emissions, application of life-cycle analysis is critical.

- There is a conceptual merit with an approach based on Well-to-Wheel (WTW) or life-cycle assessment, but there are also serious practical concerns. The possibility of applying mechanisms to account for renewable and low-carbon fuels from a well-to-wheel perspective was analysed in the Impact Assessment underpinning the Proposal for new CO2 emission performance standards for cars and vans.
- Such an accounting would reduce the planning certainty for automotive manufacturers and their suppliers, with the risk of hampering the transition towards zero-emission vehicles. As a consequence, the market deployment of zero-emission vehicles would be lowered, with negative impacts also on air pollution.
- The mechanism would create an incentive to direct to road transport those fuels that are needed to decarbonise sectors with less alternatives, like aviation and maritime.
- In addition, if a voluntary fuel crediting system were to be established between fuel suppliers and vehicles manufacturers, the compliance costs for manufacturers would increase and thereby impact the total cost of ownership for consumers.
- Finally, the mechanism would increase the administrative burden and complexity, blurring the responsibilities between fuel suppliers and vehicle manufacturers.
- For these reasons, the proposal keeps the current approach based on tailpipe emissions, and it does not include a mechanism to account for renewable and low-carbon fuels to assess vehicles manufacturers' compliance with the CO2 standards.

1.8 Support both NGVs and bioNGVs in the scope of the upcoming revision of the Alternative Fuel Infrastructure (AFI) Directive. The AFI Directive facilitates investments in (bio)NGV refuelling infrastructures. The European Commission should consider setting targets on the roll-out of alternative fuel infrastructures.

- For road transport, we see a continued role for LNG trucks in the short and medium term, while noting the growing relevance of zero-emission alternatives. We consider it necessary to ensure that the minimum infrastructure required to support these LNG vehicles along the TEN-T core network is in place. However, current Member State planning already suggests that most of this infrastructure will develop through market forces and legal requirements will only be needed until 2025 to fill remaining gaps.
- On the other hand, a CNG refuelling infrastructure is already available in the EU; additionally, while the number of vehicles are expected to increase in the next years, the share of CNG vehicles is expected to go down significantly post 2035 and not play a relevant role by 2050. When looking at these trends, it does not seem

appropriate to include specific mandatory requirements for CNG infrastructure in the Regulation.

1.9 Create the conditions for preferential tax treatment in the Energy Taxation Directive for (bio)NGVs and fuels listed in the AFI Directive. Today, the Energy Taxation Directive favours diesel mobility despite the EU and Member States' goals to phase out this fuel and develop sustainable biofuels. This preferential tax treatment should also apply to renewable gases defined in RED II and used as heating fuels.

- I agree that the current Energy Taxation Directive (ETD) does not provide sufficient incentives to promote the use of renewables. And without the right signals, we simply won't reach our climate objectives.
- This is why, as part of the Fit for 55 Package, the Commission has proposed a revision of the Energy Taxation Directive, which introduces a new structure of minimum tax rates based on the energy content and environmental performance of the different fuels.
- The new ETD proposal sets the lowest possible minimum rates for advanced sustainable biofuels and biogas, and renewable fuels of non-biological origin such as renewable hydrogen, and somewhat higher rates for sustainable biofuels. The latter are still at 50% of the rate of competing fossil fuels.
- In this way, the proposal will facilitate the transition away from fossil fuels towards clean fuels and help us deliver on the ambitious 2050 climate targets we set in the European Green Deal.

Defensives – 2. Other defensives

Are you proposing a date to ban internal combustion engine cars and vans in Europe? Is this a technology neutral approach?

- We have clear, scientific evidence showing us the level of emission reduction that we need to achieve to help keep climate change within acceptable limits. Achieving climate neutrality by 2050 means that nearly all cars and vans on the road will need to be zero emission by then.
- In this context, being technologically neutral means promoting technologies that contribute to these objectives, in a way that is proportionate to the level of their contribution. The market will then determine which of the technologies that are compatible with our need to become carbon-neutral will play a stronger role in each sector.
- The Commission therefore proposes more ambitious targets for cars and vans starting to apply from 2030 onwards. By 2035, all new cars and vans will need to be zero-emission.
- It will be for manufacturers to decide which technologies they choose to use to achieve this target. They have already started increasing their offer of battery electric vehicles, and in the longer term we can expect other options to gain prominence, such as fuel cell electric vehicles. It will be for industry and market actor to decide in which zero-emission technology to invest: the legislation is technology neutral.
- The proposal therefore sends a clear signal to the EU industry to invest in innovative zero-emission technologies, which will also be key for maintaining its technological leadership as well as for the employment of highly-skilled workers.

Why is there a distinction for light-duty and heavy duty recharging infrastructure but not for hydrogen infrastructure in AFIR?

- The recharging requirements for cars and vans and heavy-duty vehicles are different as the latter need significantly more power to charge. This is why we propose to develop infrastructure of at least 350 kW per recharging point for HDV that will even be much higher and can go up to 1 MW or more once the technology will be fully mature. In contrast, only a few cars can currently charge at 350 kW and most recharging is done at much lower power levels.
- In contrast, the refuelling of cars and vans and heavy-duty fuel cell vehicles is not different and the vehicles can use the same infrastructure. We assume that we will see in particular long haul heavy-duty vehicles coming into the market whereas the market uptake of fuel cell passenger cars and vans is not yet certain. So instead of building up two distinct infrastructures for hydrogen it is prudent to just mandate the roll out of a single infrastructure network for heavy-duty vehicles that can also be used by cars and vans.

What types of fuel will FuelEU Maritime incentivise?

- The proposal requires the reduction of the greenhouse gas intensity of the energy used by ships and is therefore technology neutral. It accommodates all sustainable alternative fuels in maritime transport. These include: liquid biofuels, e-liquids, decarbonised gas (including bio-LNG and e-gas), decarbonised hydrogen and decarbonised hydrogen-derived fuels (including methanol and ammonia) and electricity. On the other hand, biofuels of first generation are not considered sustainable and are treated like fossil fuels.
- By leaving the choice of fuel to market actors, we expect some variety in the technology mix, to accommodate for different types of businesses and operating conditions. This would have the advantage of not creating dependence on a single feedstock and of stimulating further research in multiple fuels and technologies.
- The proposal includes the possibility to pool results of different ships and reward those that have gone beyond the target through use of advanced technologies, such as those based on renewable hydrogen. The proposal also requires big emitters to use on-shore power supply in ports or alternative zero-emission technologies, which could also encourage fuel cells and hydrogen-based fuels.

What role do you see for hydrogen in reducing shipping emissions?

- On shorter distances and in ports, lower energy density is sufficient, already opening additional decarbonisation and zero-pollution pathways (e.g. hydrogen and electrification). However, currently, these solutions remain limited to very specific market segments (such as short-distance ferries) with relatively low power requirements and the ability to bunker frequently. For other types of operations, a higher energy density is required – but neither electricity nor hydrogen yet offer this.
- Hydrogen and hydrogen-based fuels (synthetic liquid or gaseous fuels, such as synthetic LNG, or ammonia) will however certainly play a role in the longer terms as primary sources of energy or as blends. Hydrogen is seen as a stepping stone to the production of synthetic “drop-in” fuels, which can be used with existing technology and infrastructure.
- Changes to infrastructure and energy conversion equipment (engines / machinery on board) are also important to consider. Technologies such as hydrogen or ammonia would require a dedicated infrastructure for distribution.

The proposed criteria to account hydrogen under the renewable energy target for the transport sector are too strict.

- The Commission is requested under RED II to set out methodologies ensuring that the use of renewable fuels of non-biological origin (RFNBOs) is contributing the decarbonisation effort. This concerns in particular rules for the production of renewable hydrogen from grid electricity as well as a methodology to determine emissions savings.
- The delegated act is specific for renewable hydrogen counted towards renewables target in the transport sector under REDII, and will need to consider how to implement additionality requirements, including requirements for temporal and geographical correlation, and the fact that the electrolyser needs to be built ahead of any renewable power capacity used to power the electrolysers.
- We are aware of the importance of this topic for the uptake of the renewable hydrogen market. And we are looking at it in a way that supports the achievement of the goals of the EU Hydrogen Strategy which gives a key role for renewable hydrogen to achieve climate neutrality.
- This delegated act is part of the existing legislation, and therefore needs to be implemented. At the same time, however, there is an ongoing revision of the renewable energy directive. Irrespectively of the outcome of the revision of the renewable energy directive, the delegated act is important because it will determine at least the next 3 years until a revision of REDII is in place.
- We are making sure that the revision of REDII will be in line with the delegated act, as well as principles outlined in ESI and hydrogen strategy. Policy stability is key.

Do you consider concrete targets on renewable and low carbon hydrogen to decrease GHG-emissions of the gas sector?

- The decarbonisation of gas is not an end-goal in itself. The objective is to achieve decarbonisation of the energy system at large, whether through energy efficiency, electrification, or use of certain fuels.
- In this context, the Energy System Integration and Hydrogen strategies foresee targets or quotas focusing on specific end-use sectors, where decarbonisation is more difficult, rather than on specific energy carriers.
- This is also the approach followed under REDII, where the targets are set for broad sectors (heating and cooling, transport), but are allowing for a variety of energy carriers and technologies to compete against each other.

The COM is inconsistent: supporting hydrogen, but at the same time placing strict criteria on the "additionality" of renewable hydrogen production.

- The 'additionality' requirement for the production of renewable hydrogen for the use in the transport sector is already part of the existing renewables directive.
- Its aim is precisely to ensure the promotion of renewable energy. In this way, the increased demand of electricity to produce hydrogen leads to additional renewable electricity production and not to additional fossil-based electricity production.
- The additionality criteria will be made operational in a delegated act that we plan to publish later this year.

Will you propose a separate legal act for hydrogen networks and markets or will you integrate it into the existing legal acts for natural gas?

- Several factors play a role here. We have to strike the right balance between the usability and reader-friendliness for addressees of the new rules and conveying the right political message on the future of gaseous energy carriers.

- Alongside hydrogen there are also biomethane related improvements envisaged for the existing legislation. We should not only focus on hydrogen in isolation.
- Accordingly, it seems most logical to integrate all proposals into the existing legal acts for methane gas.

What's your view on the role of low-carbon hydrogen in the future energy system?

- The Hydrogen strategy recognises that in a transitional period low-carbon hydrogen is needed, primarily to rapidly reduce emissions from existing hydrogen production and to support the parallel and future uptake of renewable hydrogen.
- Therefore, the revision of the European emissions trading scheme as well as the proposed Energy Taxation Directive provide generic support for both renewable and low-carbon hydrogen to replace fossil-based hydrogen.
- The projects collected under the European Clean Hydrogen Alliance show that the majority of projects (85%) are pursuing the production of renewable hydrogen, with 15% coming from low-carbon hydrogen produced from natural gas.

You promised a certification system for low carbon hydrogen as well?

- Our definition of low-carbon hydrogen will be based on life-cycle GHG-savings, so any upstream emission related to the production of the gas will be counted in.
- The proposal on the revision of the RED II extends the certification regime and the associated database to all renewable fuels. This includes renewable hydrogen.
- As low carbon hydrogen is not a renewable fuel, its certification will be addressed in the hydrogen and gas decarbonisation package.

How do the proposed rules change the tax treatment of natural gas?

- The current ETD allows Member States to exempt natural gas and LG in transport. The new proposal would end this exemption. The proposal would increase the rate on natural gas, CGN and LPG to 7.17 EUR/GJ immediately and to 10.75 EUR/GJ by the end of a 10- year transition period. The transitional period serves to acknowledge the temporary benefits natural gas can bring to decarbonize sectors that are currently reliant on more polluting fuels.
- Under the current ETD, natural gas for heating is taxed at the same level of electricity; 0.15 EUR/GJ for business and 0.30 EUR/GJ for non- business. The new proposal would change this situation. The rate on natural gas would increase immediately to 0.6 EUR/GJ and to 0.9 EUR/GJ by the end of a 10- year transition period. The new proposal would also end the possibility of distinguishing business and non- business use. The same, above mentioned, rate would apply to all users.

The revised directive does not sufficiently reflect CO2 emissions of each energy sector

- The new ETD proposal does not include CO2 taxation. It is a tax on output fuels/energy content for all sectors of the economy, across industry, transport and households. The Emissions Trading Scheme (ETS) remains the EU's tool for CO2 pricing.
- In simpler words, both subscribe to the environmental objective but target different scopes.
- The two instruments have co-existed since 2005 and are complementary. The economic sectors/energy uses can be subject to ETD and ETS at the same time.

Background notes

1. Key information about revision of gas market legislation – Hydrogen and Decarbonised Gas Markets Package

The Roadmap and the initial impact assessment for the review of the Gas market legislation is organised along the following major topics:

Hydrogen infrastructure is important. Here we look on the issue of infrastructure dedicated to pure hydrogen. Infrastructure might turn important for renewable hydrogen as: (i) favourable locations for high volume RES production are unlikely to be always located next to existing demand centres; (ii) pipeline transportation may prove to be a relatively low-cost option, in particular when existing pipelines are no longer needed for natural gas. Early regulatory intervention in this area may provide an opportunity to avoid the costs and sunk-investments created by ex-post harmonisation and create regulatory predictability for investors. It may also facilitate the development of infrastructure in third countries that is aligned with the EU regulation from early stages, thus avoiding stranded assets, facilitating the energy transition and enabling connection to the EU market for imports of renewable and low-carbon hydrogen to the EU.

There is a need for a level playing field for renewable and low carbon gases. The vast majority of today's bio-methane plants in the EU are connected at the distribution level. However, the current regulatory framework does not anticipate decentralised gas injections, meaning that the tradability and access of renewable and low carbon gases to markets and the gas grid is not on a level playing field with fossil natural gas, affecting the business case of renewable and low carbon gases producers and the costs for achieving the EU's climate objectives. Likewise LNG terminals are not necessarily fit for receiving renewable and low carbon gases and granting access in a transparent way.

The growing volumes of bio-methane and hydrogen will affect gas quality (i.e. the physical characteristic of gas) and thereby the design of gas infrastructure and end-user applications and entail the risk of market fragmentation which we will need to address.

There is a need for a more integrated approach to network planning. The progressive integration and emergence of new energy markets means that infrastructure becomes more interdependent. This may require a more integrated approach to infrastructure network planning that will ensure coherence with the proposal for the TEN-E Regulation, in particular on how the EU planning and scenario building is reflected in national planning.

Last but not least, consumer rights could be strengthened. In comparison to the electricity sector, the gas market framework lags behind on consumer protection. We will see how this can be addressed.

Role of natural gas in transport

Our reference scenario and all internal analysis suggests that LNG will continue to have a role to play at least in the heavy-duty segment and in maritime transport. However, with a view towards 2050 a shift to bio-methane or sustainable e-gases – which can be used in existing CNG and LNG infrastructure – will need to materialise in order to be coherent with the Green Deal ambition.

For road transport, the European Green Deal and the Sustainable and Smart Mobility Strategy both foresee a gradual transition towards zero-emission vehicles. At the same time, internal combustion engine cars will remain part of the fleet for more than 20 years, especially for heavy-duty vehicles.

Currently, three OEMs manufacture LNG trucks for sale in the European market (IVECO, SCANIA and VOLVO). According to NGVA, 6.802 new CNG and LNG trucks were registered in Europe in 2020. There are currently 456 LNG filling stations in operation in the EU and neighbouring countries, of which 106 in Italy, 80 in Germany, 76 in Spain and 54 in France. In the short term, LNG is expected to still play an important role, and this is reflected in the setting of requirements in AFIR until 2025.

As regards CNG vehicles, the number of CNG vehicles remained stable in the last years at around 1.4 – 1.5 M, with Italy being the dominant market, served by more than 4.000 filling stations, of which 1,492 in Italy, 902 in Germany, 222 in Czech Republic and 154 in France. The share of CNG vehicles is expected to go down significantly post 2035 and not play a relevant role by 2050; given that the current infrastructure is already sufficient, no mandatory target is set in AFIR.

The future role of LNG is more evident in maritime transport. The number of maritime vessels powered by LNG in use in the EU is increasing: industry coalition SEA-LNG recognizes significant growth in liquefied natural gas (LNG) fuelled vessel orders in 2021, while according to the latest report from Clarksons LNG vessel orders are approaching 30% of gross tonnage on order, representing a substantial part of shipping's overall capacity when these vessels are delivered.

The share of LNG in shipping is predicted to be 5.1% (of which 25% will be biogas or e-gas) by 2030, which will go up to 25.3% (of which 83% will be biogas/e-gas) by 2050.

Fit for 55 package

In order to meet the 2030 climate target of at least 55% reduction in net emissions of greenhouse gases compared to 1990, the Commission tabled a Fit for 55 package of legislative proposals on 14 July 2021. The package includes legislative proposals for:

- EU Emissions Trading System (ETS), including maritime, aviation and CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation) (revision) and a proposal for ETS as own resource;
- Carbon Border Adjustment Mechanism (CBAM) (new instrument) and a proposal for CBAM as own resource;
- Effort Sharing Regulation (revision);
- Renewable Energy Directive (revision);
- Energy Efficiency Directive (revision);
- Regulation on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry (LULUCF) (revision);
- Reducing methane emissions in the energy sector (new instrument);
- Energy Tax Directive (revision);
- Directive on deployment of alternative fuels infrastructure (revision);
- Regulation setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles (revision).

Each of the legislative proposals was accompanied by a comprehensive impact assessment. The impact assessments describe the models used to evaluate costs and benefits, including for industry. They also assessed cross-linkages among the proposals. Information on the models can also be found on the website of the Commission's Joint Research Centre.

Revision of CO2 emission performance standards for Cars and Vans

The proposal for a revision of the CO2 emission performance standards for Cars and Vans is part of the Fit for 55 package. It improves the ambition of the 2030 emission reduction targets for OEMs: by 2030, the average emissions of new passenger cars are required to be 55% lower, and the emissions of new vans to be 50% lower, compared to the limits applicable in 2021. By 2035, all new cars and vans will need to be zero-emission.

Because of the rapid increase in the share of zero-emission and low-emission vehicles in new registrations, and of the greater role they will have to play in the future, the proposal removes the incentives for zero- and low-emission vehicles from 2030 onwards. It also removes the possibility for manufacturers responsible for between 1,000 and 10,000 new passenger cars or between 1,000 and 22,000 new light commercial vehicles in a calendar year to apply for a derogation; however, manufacturers responsible for less than 1,000 new vehicle registrations per calendar year continue to be exempt.

Current CO2 standards for light duty vehicles (Regulation 2019/631)

Average emissions of the EU fleet in 2030 will have to be 37,5% lower than in 2021 for cars and 31% lower than in 2021 for vans. An intermediate target of 15% emission reduction is set for 2025, both for cars and for vans, in order to ensure swift action.

Current CO2 standards for heavy-duty vehicles (Regulation 2019/1242)

The Regulation sets binding CO2 emission targets for lorries: a 15% reduction by 2025 compared to the 2019 baseline emissions and 30% reduction by 2030. A review is foreseen in 2022, to extend the standards to cover other HDVs (other lorries, buses, coaches) and to ensure the ambition is in line with the Green Deal objectives.

AFIR proposal

The proposal to replace the current Alternative Fuels Infrastructure Directive with a Regulation was published on 14 July as part of the Fit for 55 Package. The revision shall ensure that we will have sufficient, interoperable and user friendly recharging and refuelling infrastructure throughout the EU to support the expected and required uptake of alternative fuel vehicles, vessels and aircrafts. To this aim, the proposal introduces mandatory tarets for electric recharging infrastructure for light and heavy duty vehicles, hydrogen refuelling infrastructure as well as shore side electricity supply at TEN-T maritime and inland waterway ports and electricity supply to stationary aircraft in all TEN-T airports.

Those targets are accompanied by provisions that ensure full interoperability of the infrastructure by allowing the Commission to continue to adopt technical specifications developed by the European Standardisation Organisations through delegated acts.

User friendliness of the infrastructure is ensured through a common payment method to be made available at all recharging points as well as full price transparency, no matter if payment is done by bank card or through a contract. We also propose clear provisions on the kind of data that needs to be made available through National Access points so users can easily find recharging and refuelling points.

Targets for **Electricity Recharging for LDV** (Art 3):

- **Fleet-based target**: minimum power installed per registered electric vehicle (1kW per battery electric vehicle, 0.66kW per plug-in hybrid vehicle)
- **Distance-based target along the TEN-T network**: maximum distance of 60km between recharging pools in each direction, individual charging points offering at least 150kW, total installed power in each charging pool of at least 300kW by 2025 and 600kW by 2030 on the core network, and of at least 300kW by 2030 and 600kW by 2035 on the comprehensive network.

Targets for **Electricity Recharging for HDV** (Art 4):

- **Distance based target along TEN-T network**: maximum distance of 60 km in each direction on the core network, 100 km on the comprehensive network, individual charging points offering at least 350kW, total installed power in each charging pool of at least 1.400 kW by 2025 and 3.500 kW by 2030 on the core network, and of at least 1.400 kW by 2030 and 3.500 kW by 2035 on the comprehensive network
- **Location based targets**: at least one 100 kW recharging station at every safe and secure parking by 2030 (for overnight recharging), recharging stations at urban nodes, with individual charging points offering at least 150 kW and a total installed power of at least 600 kW by 2025 and at least 1.200 kW by 2030

Targets for **Hydrogen Refuelling for HDV and LDV** (Art 6):

- **Distance based targets**: maximum distance of 150 km on the TEN-T core and comprehensive between refuelling stations offering hydrogen at 700 bar (minimum capacity of 2t / day) by 2030; maximum distance of 450 km between refuelling stations offering liquid hydrogen by 2030
- **Location based target**: at least one publicly accessible refuelling station in each urban node by 2030

Targets for **LNG** (Art. 8):

- Member States to ensure that an appropriate number of publicly accessible refuelling points for LNG are put in place, at least along the TEN-T core network until 1 January 2025 (Art 8)

Financing Instruments to support infrastructure roll out

According to the AFIR impact assessment, we assume that on average until 2030 50% of co-financing from the public sector will be needed for the construction of charging and hydrogen refuelling stations. In addition to the RRF, we have a number of EU financial instruments available to support clean and sustainable fuels and the related infrastructure:

- Under InvestEU, private investment in transport infrastructure and fleet renewal can be supported.
- For research and innovation, our Horizon Europe programme offers further opportunities, for instance for research on sustainable and competitive hydrogen, electricity and low carbon fuels.
- Extended support from our Connecting Europe Facility (CEF) will remain available during the 2021-2027 period for the deployment of alternative fuels infrastructure. (1,5 billion for the Alternative Fuel Facility for 2021-2023)
- The Cohesion and Structural Funds also support our Green Deal agenda by reinforcing sustainable regional development (particularly in cases where alternative fuels infrastructure play a crucial role in public transport).

FuelEU Maritime proposal

The FuelEU maritime proposal sets a GHG intensity limit (expressed as CO2eq/MJ) for energy used on-board ships. Targets are established in 5-year intervals from 2025 until 2050, to ensure regulatory predictability, requiring the GHG intensity to be 2% lower than 2020 fleet average from 2025, 6% lower from 2030, 13% lower from 2035, 26% lower from 2040, 59% lower from 2045, and 75% lower from 2050.

These requirements apply to ships above 5000 GT, for intra-EU traffic and 50% of international, and EU ports.

The proposal also introduces a requirement for three categories of vessels (in essence, larger ferries, cruise ships and containerships) to link to OPS when they berth in EU ports (with certain minor technical exemptions). This requirement aims to break the "chicken and egg" situation of missing demand, which in turn made investment in OPS not economically attractive for ports.

RefuelEU Aviation proposal

The Commission adopted a legislative proposal as part of Fit for 55. It consists of a SAF blending obligation on aviation fuel suppliers with increasing targets over time, starting in 2025 (see ramp up below). An obligation on airlines to uplift aviation fuel prior to departures from EU airports aims to ensure a level playing field between airlines and airports for intra and extra-EEA flights.Tamp-up SAF binding targets:

Total shares in the fuel mix (in %)	2025	2030	2035	2040	2045	2050
SAF ramp up out of which:	**2**	**5**	**20**	**32**	**38**	**63**
Specific sub-mandate on e-fuels	**-**	**0.7**	**5**	**8**	**11**	**28**

Renewable and Low-Carbon Fuels Alliance

The Renewable and Low-Carbon Fuels value chain Alliance focuses on the aviation and waterborne transport sectors, and will complement the legislative proposals ReFuelEU Aviation and FuelEU Maritime.

The ultimate objective of the alliance is to ensure that all modes of transport have easier access to renewable and low-carbon fuels. Currently, supply of these fuels is concentrated on road transport leaving other transport modes far behind. To rebalance the supply and enable that all transport modes have access, we need to particularly focus on the development of fuel production, storage and distribution capacity for aviation and waterborne transport

The alliance will be a voluntary collaboration of stakeholders from across the value chain, from sourcing of feedstock to end-users, as well as technology providers for each step in the value chain. Membership will be open to all organisations, irrespective of their ownership (private/state-owned, EU based or outside the EU).

The proposal from DG MOVE was endorsed by the Industry Strategy Project Group of Commissioners on 9 November. Immediately DG MOVE launched stakeholder consultation to validate the proposal with businesses and other stakeholders and seek expression of interest for secretariat function. The consultation was open till 30 November. The next steps include signing the Memorandum of Understanding (December/January), preparing the Alliance Declaration (January/February 2022), and launching the kick-off meeting (February/March 2022).

ENERGY TAXATION DIRECTIVE: Main elements of the Commission's proposal

The update of the EU's Energy Taxation Directive (ETD) centres on two main areas of reform, which together will maximise their impact in driving forward our common green goals. First, the proposal introduces **a new structure of tax rates** based on the energy content and environmental performance of the fuels and electricity. Second, it **broadens the taxable base** by including more products in the scope and by removing some of the current exemptions and reductions. In detail:

- For **structure of tax rates**, the proposal puts forward a new structure for minimum tax rates based on the real energy content and environmental performance of fuels and electricity, rather than on volume as is currently

mostly the case. Minimum rates will be based on the energy content (expressed in euros per gigajoules) of each product. This will provide clearer price signals to businesses and consumers alike, helping them to make cleaner, more energy efficient and climate-friendly choices. For example, under the current rules, a lower minimum rate is applied to diesel used as motor fuel than petrol used for the same purpose. Under the new proposal, this would change.

- The proposal groups energy products and electricity in general categories per type, which are ranked according to energy content and environmental performance. In this way, the new system will ensure that **the most polluting fuels are taxed the highest**. Member States must ensure this ranking is replicated domestically.
- The previous minimum rates were set in 2003 and have never been updated to reflect current prices. The proposed minimum rates will also be adjusted to **reflect the most recent prices**, and will be automatically adjusted annually, based on Eurostat consumer prices figures.
- As regards the taxable base laid out in the Directive, its scope will be enlarged to include energy products or uses that had previously escaped the EU's energy taxation framework, such as mineralogical processes. At the same time, a number of **national exemptions and rate reductions will be removed**, with much less margin for Member States to set rates below the minima for specific sectors. That said, certain reduced rates will remain possible, such as those for electricity or advanced energy products produced from renewables and for primary sector industries such as farming.
- **Kerosene** used as fuel in the aviation industry and **heavy oil** used in the maritime industry will no longer be fully exempt from energy taxation for intra-EU voyages in the EU. This is a crucial measure given the role of these sectors in energy consumption and pollution. Over a period of ten years, the minimum tax rates for these fuels will gradually increase while sustainable fuels for these sectors will benefit from a minimum rate of zero to foster their uptake.

More specifically on biofuels and biogases

The new proposal will introduce a nuanced taxation for biofuels. The higher the GHG abatement of a biofuel category compared to the fossil fuel it replaces, the lower the applicable rate. In other words, the less CO2 a biofuel emits during its life- cycle, the lower rate is assigned. This is a novelty compared to the current Directive, which was adopted in 2003. At that time, biofuels were limited in their market presents and variety. Since the adoption of the last directive, a huge number of biofuel technologies emerged. The new proposal reflects this by setting 4 different rates for 4 types of biofuels. These are:

1. Non- sustainable biofuels and biogas: the highest rate applicable to gas oil and petrol;

2. Sustainable food and feed crop based biofuels and biogas: half of the above/mentioned rate applies in the beginning of a transition period; thereafter the full above-mentioned rate applies;

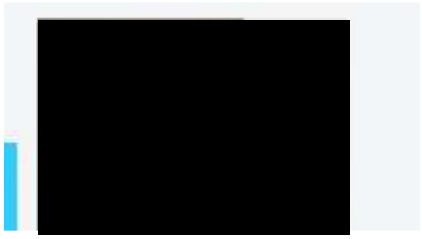
3. Sustainable biofuels and biogas (non- food and feed crop based): half of the above rate applies permanently;

4. Advanced sustainable biofuels, biogas and renewable fuels of non- biological origin (for example renewable hydrogen): a significantly lower rate than that of fossil fuels applies permanently. In addition, Member States have the option to tax exempt these fuels for the first 10 years.

Alignment with other EU policies tackling clean mobility

The revised ETD aims to decrease to price advantage of fossil fuels over less polluting alternatives, which are in most cases more costly to produce. The proposed tax design is also fully in line with the Renewable Energy Directive, the EU Taxonomy and the Alternative Fuels Infrastructure Directive, ensuring coherency across EU policies that aim to foster clean mobility.

CV



[redacted]

[redacted]

Contacts: [redacted]