

Statement by NGVA Europe
regarding the Commission proposal for a “Council Directive amending Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity”

Introduction:

The European Commission has been pursuing the modification of the Energy Taxation Directive for quite some time. The motor fuel tax shall be split between a CO₂ based and an energy based component. The recently presented new version of the draft suggesting a maximum flat tax for all fuels to be implemented stepwise by 2018 would, if accepted, have disastrous consequences for the Natural Gas Vehicle (NGV) industry. The next tables intend to compare the current situation with the proposed text:

- Current situation:

Current minimum levels of taxation		Equivalence €/GJ (LHV)
Petrol	359 €/1.000 l	11,396
Gas Oil	330 €/1.000 l	9,311
Kerosene	330 €/1.000 l	9,372
LPG	125 €/1.000 Kg	2,741
NG	2,6 €/GJ	2,886

- Proposed:

	CO ₂ Related Tax			Energy Related Tax			Total (CO ₂ +Energy Related Taxes)		
	Proposed Tax from 2013 (€/tonCO ₂)	Fuel emission factor (tCO ₂ /TJ)	Impact €/GJ	Proposed Tax 2013-2015 (€/GJ)	Proposed Tax 2015-2018 (€/GJ)	Proposed Tax from 2018 (€/GJ)	€/GJ 2013-2015	€/GJ 2015-2018	€/GJ from 2018
Petrol	20	77,6	1,552	9,6	9,6	9,6	11,152	11,152	11,152
Gas Oil	20	74,3	1,486	8,2	8,8	9,6	9,686	10,286	11,086
Kerosene	20	71,8	1,436	8,6	9,2	9,6	10,036	10,636	11,036
LPG	20	65,8	1,316	1,5	5,5	9,6	2,816	6,816	10,916
NG	20	55	1,1	1,5	5,5	9,6	2,6	6,6	10,7

This new proposal represents a tax increase of roughly 400 % for NG and LPG, while more or less maintaining the current tax level for petrol and slightly increasing for diesel and kerosene. Consequently this proposal would not only destroy the entire European NGV market, but would also be **in conflict with the new White Paper on transport, published by the Commission on 28th March 2011, which clearly demands to grow out of oil.** In this light, the current proposal would not only have negative consequences for the EU in its progress to achieve a diversified and low carbon based transport, and also improve air quality in big cities, but **this imbalanced attempt would mean a manifestation of oil in transport for a long time.**

In connection with this, we need to point out that the Heavy Duty sector only has Natural Gas as a “Current Low Carbon Fuel” as a replacement for diesel and with this transport sector producing the most CO2 emissions, it would be very critical to stop the development of new technology at this stage.

NGVA Europe would now like to follow the Commission’s animation to provide a statement on the planned approach. As a preliminary remark, it is important to take a look at the different CO2 reduction potentials of the different fuels affected by the current proposal:

Fuel	% hydrogen (weight)	LHV MJ/kg	LHV kWh/kg	g CO2 per kWh	Theoretical % CO2 reduction
Methane (NG/biomethane)	25,0%	50,0	13,89	198,0	29,2
Propane (LPG)	18,2%	45,6	12,67	236,8	15,3
Butane (LPG)	17,2%	45,3	12,58	241,2	13,7
Diesel	13,5%	42,7	11,06	267,5	4,3
Gasoline	13,5%	42,4	11,77	279,5	0,0

Conclusion: The above shown table compares the CO2 reduction potentials against petrol when looking at tailpipe emissions of different fuels. The mentioned NG figure of 29,2% gives the saving potential from the reference natural gas. In reality NG saves 24%-25% CO2 vs. petrol (considering the whole WTW cycle) and is therefore the cleanest alternative. This fact needs to be taken into account when talking about motor fuel taxation. A technology neutral approach would have to acknowledge this fact.

Furthermore, any action on fuel taxation matters must be consistent with other actions taken by the Commission regarding sustainable mobility and measures to support the market development of low carbon and energy efficient vehicles.

The Communication (COM(2010)186 final) ‘A European Strategy on clean and energy efficient vehicles’, in the par. 2.3 ‘Market uptake and consumer information’ clearly states that the (...) ‘Commission will work on the revision of the energy taxation Directive, to better incentivise the efficient use of conventional fuels and the gradual uptake of alternative low-carbon emitting fuels’(...) and natural gas and biomethane are listed among them (pag. 3, par. 2, 1st bullet point).

Following the bilateral meeting between delegations from the Commission (represented by DG TAXUD) and NGVA Europe on 30th March 2011, **the following two approaches discussed could help finding a solution to a treatment of fuels in different stages of market introduction:**

Scenario 1. Market share principle

The Commission shall consider the national market shares of different fuels before applying the proposed new taxation levels for all fuels. This approach would allow alternative fuels currently having a much smaller market share than conventional fuels to compete for a bigger market share over time. Petrol and diesel had more than one century for penetrating the market, whereas first ex-factory Natural Gas Vehicles only came up in the mid 90s. It also has to be taken into account that the state-of-the-art Natural Gas combustion engine, which meets the customers needs of today in terms of efficiency and power, is only some three years old (downsized and turbo charged engines first entered the market in 2009).

It is therefore a completely wrong assumption that NG vehicles already had enough time to enter the market by benefitting from a low minimum motor fuel tax since mid of the 90s. Thus, with the exception of very few countries, in which NGVs had a longer presence in the automotive market, the NGV market share has not left a very low niche level (far below 1% for a long time) yet, due to the **high development costs and slow changes in customer behaviour**. Market take-up for CNG and LNG vehicles is growing, although in fact at its beginning. Another important reason to mention is that the build-up of the refuelling infrastructure requires substantial financial efforts and time. This fact is also very important as **infrastructure investment costs are not reflected in the Energy Taxation Directive**. There are already about 3.000 filling stations for NG/biomethane and 1.3 mio vehicles across the EU resulting in cumulative investments of approx. 2,5 billion Euros. Further investments are required to fully connect Europe with this clean alternative fuel. NGVA Europe's members already contribute their part, but a European action plan for a network of filling stations in supported by a favourable taxation policy until a self-standing market is created will be essential.

Natural Gas Vehicles still have a very small market share in the different European vehicle markets (only 0,4 % market share in Europe total). Looking at the EU and EFTA countries the market shares, in terms of total number of NGVs, are:

Bulgaria (2.20%), Italy (1.79%), Sweden 0.67%), Lichtenstein (0.37%), Switzerland (0.21%), Germany (0.21%), Austria (0.11%), Iceland (0.08%), Luxembourg (0.07%), the Czech Republic (0.05%), Slovakia (0.05%), the Netherlands 0.04%), France (0.04%), Finland (0.03%), Latvia (0.02%), Norway (0.02) %, Spain (0.01%), Lithuania (0.01%), Belgium (0.01%), Poland (0.01%), Estonia (0.01%), Greece (0.01%), Portugal (0.01%), Croatia (0,01%), Estonia (0,01%) and finally Hungary, Slovenia, the UK and Ireland (all with less than 0.01%). The only EU country with no NGVs at all is Denmark.

For details, please refer to the NGVA Europe statistical update on <http://www.ngvaeurope.eu/european-ngv-statistics>

NGVA Europe suggests to link the market share of different vehicle fuels on a national level to the proposed increment of CO2 and Energy related taxes in the following way:

- ➔ Appliance of the proposed tax level in 2015-2018 only after having reached a market share of 7% in the national vehicle market.
- ➔ Appliance of the proposed tax level from 2018 only after having reached a market share of 10% in the national vehicle market.
- ➔ Introduction of a “safety clause” for both cases, meaning if after the adoption of the proposed tax level, the market share starts decreasing again below 7% and 10% respectively (based on a suitable survey done by the national Ministry of Economy), the tax level has to be decreased accordingly.

Explanation:

Introducing a bigger share of NG (not oil derived) and promoting it as one of the main urban fuel options for heavy urban vehicles would mean the automatic replacement of more than 2 Mtoe of diesel oil. Furthermore, **a market share of 20 % of natural gas in transport fuels would give a 5 % reduction of the total CO2 emissions from all European road vehicles.**

Assuming that 20 % of the gas used would be made up of bio-methane, the CO2 reduction would even increase to 7 %. Over time, the share of biomethane in the overall natural gas supply could increase gradually and ensure further decarbonisation of methane powered vehicles. In a 2030-2050 perspective, locally produced bio-methane could account for a considerable part of the total volume of methane used in Europe.

Scenario 2. Prolongation of the time frame for introducing the proposed tax

The commission could consider instead of applying a market share approach an adequate timeframe for market development of Natural Gas vehicles:

- ➔ Prolongation of the current minimum tax level in force for NG at least for 10 years from now.
- ➔ Appliance of the proposed tax level 2015-2018 after the first period of at least 10 years and providing the market share has reached 7 %.
- ➔ Appliance of the proposed tax 2018 only after 20 years and providing the market share has reached 10 %.

Explanation:

The market for CNG and LNG vehicles will only grow if developing the needed refuelling infrastructure first, and this takes time, Germany is leader in number of filling stations, it took however 15 years to reach a number of now close to 900 filling stations. The fact that a country like Germany only still has some 90.000 vehicles shows that it takes even more time to penetrate the market.

Our experience has shown that the mere speculation that the favourable fiscal treatment structure will change in the timeframe of typical vehicle ownership (6-8 years), is already enough to discourage a potential customer to switch to alternative fuels.

We therefore come to the conclusion that a **prolongation to maintain the minimum tax level of 2,6 €/GJ for at least another 10 years has to be considered as an obligatory target, if the EU doesn't want to risk complete destruction of the cleanest alternative fuel today, methane.**

The fact that there are markets as Belgium now starting to build up the infrastructure, but with no legislation in force for NG as a fuel, or a country like the Netherlands where CNG is taxed as a household cooking gas, whereas LNG (the same product only liquefied) is taxed in the same way as LPG (a completely different product mostly coming from oil distillation), shows that **the market is not yet mature to discuss tax increases before a substantial market harmonisation.**

A key aspect in this is a harmonisation of price declaration: Some countries price in m³, but the majority of the EU member states and EFTA countries sell in kg. The customer is simply not aware of the fact that 1kg CNG corresponds in terms of energy content with 1,5 litre of petrol, meaning a fuel like LPG, which is in fact more expensive, always appears to be the cheaper alternative in the perception of the customers. When comparing the price of 1kg CNG with 1 litre LPG at the price pole, the result is as simple as clear: Let's assume 70 €cents/litre LPG and 1 €/kg CNG. The customer is not realising that CNG costs are only about 60 € cents/litre. Moreover, the fuel consumption is also less: 15kg CNG cover the same distance as 40 litres LPG. This crux is a very tough challenge to sell to the final customer. Now imagine what happens if raising the minimum tax by nearly four times as suggested in the Commission proposal, this would mean a price increase of approximately 40-50 €cents for the kg CNG at the pump and consequently bury all market hopes for natural gas. **Proposing a energy based tax scheme requires a energy based price declaration at the filling station to avoid customer irritation.**

NGVA Europe estimates a possible market share for NGVs of 5% by 2020 (some 16 million vehicles, currently 1 million). This could only be achieved if accepting the above mentioned approach to maintain the current tax level in force at least for another 10 years from now. Since a 5% market share should be the very minimum requirement for NG as an alternative fuel, the final customer needs to keep the belief in a favourable taxation for NG as the only real effective and lasting incentive for a longer period of time, which would mean to maintain the minimum tax level in force until NGVs have reached a share of 7% in the markets, possible by 2025. Only then the first proposed tax step would apply (5,5 €/GJ).

As a conclusion, the infrastructure build-up phase of at least 10 years from now, will be followed by another ten years, which could be described as the market penetration phase for NGVs, provided that 7% and 10 % respectively have been reached as market share.

Relation European/worldwide NGV market growth:



Our suggestions support the approach of the European Commission, but do not disregard the benefits of natural gas at the same time. Transport changes very slowly, but tax policy will always result in very quick reactions, which will decide between market prosperity or decline. In case of natural gas as a transport fuel, the outcome would be destructive if submitting such a taxation proposal to increase the minimum tax for NG by nearly four times. The industry would immediately stop its investments in the infrastructure build-up and current natural gas vehicles will be rendered worthless. So even if this proposal will take more time to be implemented, please be aware that the political signal the Commission will send out will cause direct market impact immediately.

Methane is the most accessible alternative fuel, it is clean and it is cheap. There are many vehicle models available already. What it needs is a clear political signal to encourage OEMs to offer more CNG vehicles and to do better marketing and promotion for these vehicles, and hence a European action plan for further development of the NG/biomethane refuelling infrastructure will be essential. Methane via CNG and LNG can practically cover all transport modes. Unless the political push would be strong enough, diesel and petrol will remain the traditional choice. And this would be contrary to the White Paper 2011 declaration of phasing out of the “traditionally fuelled” vehicles.

Madrid & Brussels, 5th April 2011

NGVA Europe... for sustainable mobility