

## Summary

This paper is a response from Transport & Environment<sup>1</sup> to the consultation in the context of the European Commission Green Paper 'A 2030 framework for climate and energy policies'. The response focuses on the framework for EU climate and energy policies in transport.

It makes the following points:

- By 2030, 90% of Europe's oil consumption will be imported. The EU currently imports oil at a cost of about €1bn every day. This implies that for the EU, policies to cut transport energy use and to substitute oil with truly sustainable alternatives will remain a win/win from both an energy and climate standpoint;
- The Transport White Paper target for transport sector greenhouse gas (GHG) reductions for 2030 – a 20% reduction from 2008 levels - is woefully inadequate. It should be tightened to a 45% reduction, if required annual improvements to 2050 are to remain constant;
- At a general level, inclusion of surface transport in the ETS would be counterproductive; instead we recommend intensification and reform of the way transport fuel is taxed (pay where you drive, not where you fill up) as well as further progress in road user charging;
- CO<sub>2</sub> and efficiency standards for vehicles (cars, vans, lorries, ships, aircraft) remain a key instrument and should be further intensified;
- In parallel a strategy for electrification of transport should be developed that minimises dependence on batteries;
- Transport fuel policy is in urgent need of reform. Quantity targets for renewables in transport – primarily biofuels – have been a proven failure. Post-2020, the technology-neutral approach of the fuel quality directive should steer investment;
- Europe's strategy for making rail transport more efficient and competitive needs further development if rail is to play a major role in transport decarbonisation;
- The granting of EU funds for energy and transport (Cohesion, CEF, Horizon2020) must be conditional on contributing to EU climate targets;
- Last but not least, direct and indirect subsidies to carbon-intensive forms of travel should be stopped, starting with aviation and company cars.

---

<sup>1</sup> Transparency Register Id., European Federation for Transport and Environment : 58744833263-19

## General

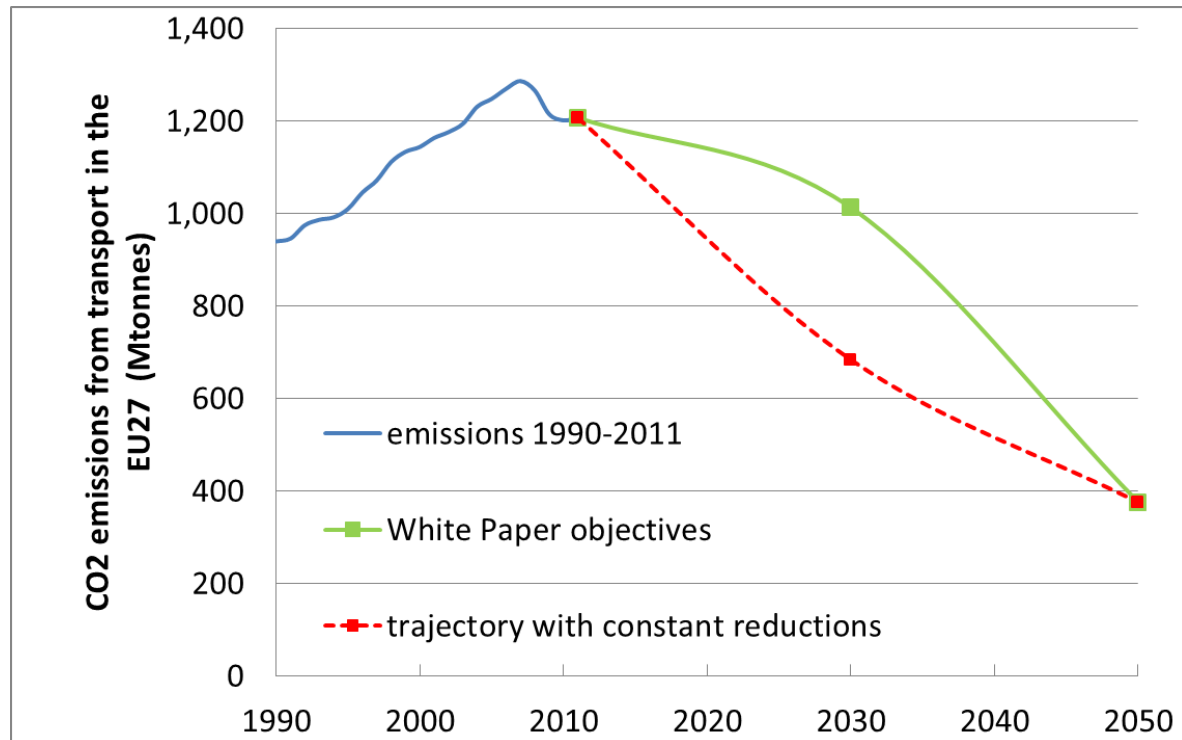
*'Which lessons from the 2020 framework and the present state of the EU energy system are most important when designing policies for 2030?'*

The main lessons with regard to transport are:

- After a 7% drop in the period 2008-2011, transport emissions were up again in 2012 by 1%. Transport CO<sub>2</sub> emissions now represent 32% of the EU's total CO<sub>2</sub> emissions, and are 29% above 1990 levels.
- The monetary value of the EU's oil imports keeps breaking new records despite a small drop in oil use since the start of the economic crisis.
- The Effort Sharing Decision (ESD) is a tool that can work in principle but is not working in practice for reasons similar to the ETS – too generous emission allowances and use of credits.
- Fuel taxation is a key tool but its effectiveness has stalled for several reasons, including diesel 'tank tourism' particularly for lorries which drives a race to the bottom in terms of tax rates. Several strategies exist to tackle this problem, we would recommend seriously considering the North American 'tax where you drive, not where you fill up' approach, and strongly oppose inclusion of surface transport in the ETS.
- CO<sub>2</sub> emission standards for vehicles have the potential to become a very effective tool to cut emissions. To date, the results of the policy have been very modest because the standards are too lax and flexibilities in testing methods are routinely abused. It is essential to set targets for 2020 and beyond. As a matter of urgency, the test method must be changed so that the promised 40% CO<sub>2</sub> reduction from 2007 to 2020 (from 158g/km to 95 g/km) is actually delivered on the road.
- Transport fuels policy has backfired so far. The 10% renewable energy target for transport for 2020, together with the omission of indirect land use change (ILUC) emissions from biofuels sustainability standards, is leading to an *increase* in emissions. This is proving a costly mistake. The solution is clear: post-2020 quantity targets should be scrapped in favour of the technology-neutral approach used in the Fuel Quality Directive (FQD) and ILUC emissions should be properly accounted for according to the best available science. Only then will EU fuels policy give consistent signals to invest in the lowest-carbon options.
- The current zero rating of emissions from bioenergy and biofuels (in overall emissions accounting as well as in instruments like the ETS) is extremely damaging as it creates perverse incentives leading to higher emissions. This must be urgently corrected.
- Emissions from freight transport have risen faster than those of passenger transport and this trend is expected to continue. A clear strategy is needed to reduce emissions from freight transport in particular, and should address vehicle emissions and demand management measures in all modes based on the polluter-pays principle.
- Arguably international aviation and shipping represent the greatest long term challenge. Fear of conflicts with trade partners must not dictate the EU's policy approaches. We must truly prioritise these issues and design mitigation strategies that are ambitious in terms of geographical scope and targets, as well as fair to our trading partners. There is a real need to strengthen EU coordination towards the International Maritime Organisation (IMO).

## Targets

*'Which targets for 2030 would be most effective in driving the objectives of climate and energy policy? At what level should they apply (EU, Member States, or sectoral), and to what extent should they be legally binding?'*



The Transport White Paper (March 2011) set a target to cut transport GHG emissions by 60% by 2050 compared to 1990 levels. Regrettably, it also sets a very weak interim target for 2030; a 20% reduction compared to 2008 levels. This implies a 1% reduction per year is required until 2030, whereas after 2030 until 2050 a 5% annual reduction would be needed. This is unrealistic and counterproductive; by postponing substantial emissions reductions beyond current investment horizons, we consign ourselves to higher-cost reductions later and miss out on powerful incentives.

The 2030 target should be tightened to a 45% reduction compared to 2008, in order to create a pathway of constant emissions reductions of around 3% per year to 2050.

We recommend also setting a target to reduce energy use in transport. Energy efficiency in transport should be stimulated for all energy sources. This is regrettably missing from the current target framework, because many energy sources in transport (biofuels, electricity, hydrogen) are falsely accounted as zero emissions.

We do not support a renewable energy target for transport. This policy has increased emissions, largely because of false accounting of emissions, and should be stopped as a priority. The EU should move to a Low Carbon Fuel Standard (LCFS), as enshrined in the FQD, as soon as possible. Accordingly, we also object to the target of 40% alternative fuels in aviation, as this is not sufficiently clearly defined to deliver emissions reductions. It should be replaced by a GHG reduction target.

*'Have there been inconsistencies in the current 2020 targets and if so how can the coherence of potential 2030 targets be better ensured?'*

We agree with other NGOs that the EU should set three targets, for energy use, GHG emissions, and renewable energy. All serve their own purposes.

Lessons from the current policies must be reflected. For example, the volume of biomass / bioenergy in overall renewable energy targets should be capped in order to avoid crowding out lower-carbon renewable energy sources.

*'Are targets for sub-sectors such as transport, agriculture, industry appropriate and, if so, which ones? For example, is a renewables target necessary for transport, given the targets for CO<sub>2</sub> reductions for passenger cars and light commercial vehicles?'*

Whilst overall GHG targets for the transport sector are already in place, they are non-binding, ignore real emissions from biofuels, and the 2030 interim target is woefully weak. The 2030 target should either be a 30% reduction from 1990 levels, or a 45% reduction from 2008 levels in order to arrive at a trajectory with constant annual emissions reductions.

We would suggest examining inclusion of the GHG target in a re-invigorated ESD. The fundamental weakness of the ESD is that it enshrines low ambition. The Effort Sharing cap was set to drive just a 10% emissions reduction, despite covering 60% of emissions. By contrast, the ETS, covering approximately 40% of EU emissions, does two-thirds of the heavy lifting for the 2020 GHG target.

Just as with the ETS, the economic crisis has had a detrimental impact and further undermined the ambition, and therefore effectiveness, of the ESD. In particular, the demand for surplus Effort Sharing allowances (AEAs) is expected to be low in light of EEA projections that the EU will over-reach its Effort Sharing 2020 target by 8% (with the implementation of planned measures)<sup>2</sup>. Analysis of recent studies of mitigation potential reveal that raising the ambition in Effort Sharing sectors is an opportunity to aim far beyond the 40% milestone for the 2030 GHG target, and towards a target that is supported by science.

European Commission studies demonstrate that non-ETS sectors are capable of making significant additional reductions by 2020 at high levels of cost effectiveness, paving the way for ambitious reductions by 2030. The non-ETS part of the economy contains many untapped abatement opportunities. Many come with powerful co-benefits (such as recovery and use of methane gas in agriculture and improved access to cleaner modes of transport) and some at net cost savings (such as building retrofits and renovations). Indeed the ESD captures all 6 Kyoto GHGs and covers Energy Supply, Industrial Energy Use and Processes, Energy Use in Built Environment (in particular heating), Energy Use in Transport (road and rail), Waste and Agriculture.

The 10% renewable energy target in transport in the absence of proper GHG accounting has been a major mistake; there is an urgent need to switch to the 'low carbon fuel standard' model as enshrined in Article 7A of the FQD, and include full life cycle emissions including ILUC. For this reason we also oppose the target of 40% alternative fuels in aviation; this should be replaced by a GHG reduction target.

---

<sup>2</sup>Greenhouse gas emission trends and projections in Europe 2012. Tracking progress towards Kyoto and 2020 targets. EEA Report No 6/2012

Another problem is that aviation and shipping have been consistently ignored in emissions reporting, distorting the picture. These should be routinely included in transport sector reporting, as both are fast-growing sources requiring further policy action urgently.

*'How can targets reflect better the economic viability and the changing degree of maturity of technologies in the 2030 framework?'*

This is a chicken-and-egg problem. Technologies will not develop and mature in the absence of long-term investment certainty. However the current requirements of impact assessments, which typically require detailed costing of any policy measure, is in practice a barrier to setting technology-forcing long-term targets. Whilst we don't advocate scrapping impact assessments, they should be able to support and take into account of the value of clear guidance and targets for the longer term future and the provision of certainty for industry and investors.

*'How should progress be assessed for other aspects of EU energy policy, such as security of supply, which may not be captured by the headline targets?'*

As far as we are aware, security of supply has never even been properly defined at EU level. A broadly endorsed quantitative definition would be a prerequisite to attempting to assess the current situation and future progress.

Security of energy supply cannot be seen in isolation from climate and environment objectives. To wit the current debate over shale gas, or the EU's poor track record on biofuels which may have made a slight dent in oil imports but at the cost of increased food (notably vegetable oil) imports and without delivering climate benefits.

### **3 Instruments**

*'Are changes necessary to other policy instruments and how they interact with one another, including between the EU and national levels?'*

Robust pricing of carbon in transport is absolutely vital. Europe's relatively high fuel taxes are a key asset and have encouraged comparatively fuel efficient cars and mobility patterns (compared with, for example, the USA). However, in real (inflation-corrected) terms fuel taxes have fallen by about 10 cents per litre over the past decade.<sup>3</sup>

In an earlier consultation submission<sup>4</sup> we argued why inclusion of road transport in the EU ETS would not make a useful contribution to a higher carbon price in transport.

Instead we believe that a reform of the EU's fuel tax regime would be more promising. One suggestion to achieve progress on the Energy Tax Directive could be to make EU minimum taxes to a limited extent dependent on GDP per capita. This would mean that rich countries cannot become even richer by keeping their fuel taxes low and attracting foreign vehicles by doing so, while fuel tax rises would be restrained in line with purchasing power in lower-income countries.

---

<sup>3</sup> See <http://www.transportenvironment.org/publications/report-fuelling-oil-demand-what-happened-fuel-taxation-europe>

<sup>4</sup> [http://ec.europa.eu/clima/consultations/0017/organisations/t\\_and\\_e\\_en.pdf](http://ec.europa.eu/clima/consultations/0017/organisations/t_and_e_en.pdf)

But an even smarter way of reforming fuel taxes would be to move away entirely from the current system where trucks pay national fuel tax where the tank is filled, towards a system where fuel taxes are paid according to where the vehicle drives. Such a system for lorries, the 'International Fuel Tax Agreement' (IFTA) has already been working successfully for many years between US states and Canadian provinces. This allows state governments complete autonomy in setting fuel taxes, without being constrained by their neighbours' policies and concerns about revenue leakage to fuel-tax havens. The agreement avoids a race to the bottom in fuel tax rates, as is currently the case in the EU.

Regarding EU spending, the Institutions have agreed to commit 20% of the 2014-2020 EU budget to climate action in support of the targets. It remains to be seen how this will be implemented or 'mainstreamed' across the various funds. Without close scrutiny and follow up we fear this is a hollow promise.

Infrastructure investments are critical in locking the EU into high-carbon development or creating a transition to a low-carbon, resource-efficient economy. The use of EU funds for transport and energy, particularly Cohesion Funds and the Connecting Europe Facility must demonstrably support climate and energy policy goals. This has not been the case to date, where EU-supported projects have in many cases led to dramatic overall emissions increases compared to business-as-usual or viable alternatives. To date climate impacts have not been taken into account, even for major projects (neither mitigation nor adaptation). Note, for example, the role of EU funds in Spain in constructing what is now the densest motorway network in Europe, many regional airports and one of the longest high-speed rail networks in the world (the promise of EU funds is seen by some commentators to have been a factor in overriding negative assessments of financial viability).

The new CEF, TEN-T and Cohesion regulations require life-cycle GHG impacts to be taken into account as part of the appraisal and funding allocation process for projects and programmes – but this needs proper oversight, follow-up, assessment and monitoring by the European Commission, with closer cooperation between the DGs for Regional Development, Energy, Transport, Climate and Environment, including relevant agencies. In contrast to previous funding periods, this should allow a clear assessment of the projected and actual overall climate impact of the different EU funds, and EU spending as a whole for 2014-2020 and beyond.

*'How should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?'*

The ESD is a key tool that has to become more effective to drive domestic action. Post-2020, international credits should not be allowed for ESD compliance. Pre-2020, there is a need for quality restrictions to ensure that, at bare minimum, only those credits eligible under the ETS are eligible under the ESD.

As a means to enhance overall cost-effectiveness of the ESD commitment, Member States are currently permitted to make use of a set of flexibilities which includes freely transferring Effort Sharing allowances (Annual Emission Allocations/ AEAs) between years, the ability to trade surplus AEAs between Member States, but also the purchase of international credits (CDM and JI). The effect is that Member States at risk of non-compliance are provided with several easy escape routes. The overall share of the necessary EU reduction effort that can be met simply by recourse to international credits is unacceptable: calculations show that up to two-thirds of the overall reduction required by 2020 can be met by international credits.<sup>5</sup>

---

<sup>5</sup> If the sum of reductions over the whole period is taken as the total reduction effort (roughly 1200 MtCO<sub>2</sub>eq.), CDM/JI credits can make up 2/3 of this reduction (roughly 700 MtCO<sub>2</sub>eq).



The alternative of buying cheap international credits gives Member States a powerful disincentive to domestic policy action. Additionally, the EU risks locking in high-carbon infrastructure in key sectors (especially transport, buildings and agriculture) as a result of the failure of the ESD to ensure domestic action.

The post-2020 ESD must therefore seek to reframe the flexibilities into a set of tools that drive investment towards domestic emission reductions, instead of away from them. This means that CDM and JI credits (as they operate today) do not have a place in the ESD after 2020. Other kinds of flexibilities, such as transferring or trading surplus reductions, and bilateral emission reduction projects across borders within the EU, require improved governance if they are to be part of the ESD beyond 2020. The objective must be to move towards new or improved flexibilities with less risk of undermining climate ambition than the current recourse to the international offset market. If trading between Member States is to be preserved post-2020, structural changes will be required to ensure liquidity of the AEA market and establish a minimum amount of domestic action in all Member States. Replacing the free transfer of future allowances into a given year (carry forward) and the free transfer of surplus allowances (carry over) with the mandatory sale of surplus AEAs in any given year is another option to help improve the liquidity of the AEA market. Ultimately however, AEA trading between Member States will only ever occur if Effort Sharing targets are tight enough to ensure sufficient demand for the purchase of AEAs. Trading should not be relied on as the primary means of financing reductions in Effort Sharing sectors. Lessons from the ETS demonstrate that, in the absence of regulatory powers to adjust the cap in response to changing circumstances (such as economic recessions, overachievement of complimentary policies) maintaining scarcity cannot be assured.

Another serious problem is the lack of quality restrictions for international offsets eligible for surrender under the ESD. For example, controversial industrial gas credits (HFC23 and N<sub>2</sub>O from adipic acid) have now been banned from the ETS market<sup>6</sup> but have not yet been banned for Effort Sharing compliance. This inconsistency in EU policy is incomprehensible and unacceptable. Furthermore, to try to avoid problems regarding the additionality and integrity of international offsets, the Commission has reduced eligibility, only allowing project credits from Least Developing Countries (LDCs)<sup>7</sup> for ETS compliance. By contrast any CDM and JI credit is eligible in the ESD which has no quality controls. This must be fixed before 2020. At the very least, the ESD must match the ETS' international credit policies, on a 'same rules apply' basis.

Simple fixes, pre- and post-2020, like those above will help to move Europe away from the do-nothing trap which exists for most Member States in the current ESD, and towards cost effective emissions reductions that come with powerful co-benefits and in many cases, net cost savings. The do nothing option that exists in several Member States regarding several sectors also undermines the EU's standing in international climate change negotiations, where parties are fully aware that many EU climate policies are failing to deliver. Rethinking the approach and structure of the ESD, covering over half the EU's emissions with much potential untapped, could allow the EU to strengthen its negotiating mandate.

*'How can fragmentation of the internal energy market best be avoided particularly in relation to the need to encourage and mobilise investment?'*

---

<http://www.europarl.europa.eu/committees/en/studiesdownload.html?languageDocument=EN&file=22071> at page 10, Figure5.

<sup>6</sup>Article 11a(9) of Directive 2003/87/EC allows the Commission to implement measures that restrict the use of specific credits from project types. Commission Regulation (EU) No 550/2011, as of 1 January 2013, prohibits CERs and ERUs from projects involving the destruction of trifluoromethane (HFC-23) and nitrous oxide (N<sub>2</sub>O) emissions from adipic acid production.

<sup>7</sup>Article 11a(4) of Directive 2003/87/EC

In transport the opposite is true – there is an effective monopoly of liquid (fossil) fuels. More competition would be welcome, in particular with regard to the supply of sustainable (renewable, low-carbon) electricity.

### *'Which measures could be envisaged to make further energy savings most cost-effectively?'*

Setting effective CO<sub>2</sub> standards for all types of vehicles – from cars to ships – is proven to be an extremely cost-effective abatement strategy. The strategy is in progress for cars and vans, but for other vehicles (lorries, aircraft, trains, barges) it is still lacking. Certifying, labelling and regulating components (eg. tyres, air conditioning systems) is an important additional tool.

Ending subsidies and preferential tax regimes which incentivise carbon-intensive transport (and punish cleaner transport, discourage innovation) is equally a win-win. Most urgently, company car tax regimes, the many tax loopholes for aviation, subsidies and mandates for high-emissions biofuels, all need to be dealt with.

Smarter fuel taxation is extremely important too (see above).

Despite a target in the 2011 Transport White Paper for modal shift for both passenger and freight transport for 2050, with interim targets for 2030, very little research has been done into the most cost-effective strategies to promote and improve the competitiveness of cleaner transport modes, particularly rail. This is another area where large gains can be made. A clear starting point would be to quantify where the biggest potential emissions reductions can be achieved (urban / inter-urban / commuter / regional / international / passenger / freight), considering shift potential from road and aviation in particular.

Electrification of transport is seen as one of the most promising avenues for energy savings and carbon abatement. As yet, little research has been done into cost-effective strategies – strategies that get the most emissions cuts for the buck. It is important to look beyond electric cars, to the whole urban and inter-urban mobility system. A holistic e-mobility strategy should include focusing on smaller vehicles including e-bikes, commercial and public fleets, shared vehicles (and changing ownership models), and intermodal hotspots (noting that the electricity network already intersects with transport infrastructure, for example, at railway stations).

Last but not least, a revamped Effort Sharing policy is key in unlocking cost effective measures in transport (see below).

### *'How can EU research and innovation policies best support the achievement of the 2030 framework?'*

As raised to in the previous section, a lot of work needs to be urgently done here. It is simply incomprehensible that over half of the EU's current transport research budget goes into aviation, by far the most climate intensive mode of transport. This includes a flagship research programme, the JTI. Hardly any of this is targeted at reducing the GHG footprint, and even supersonic aircraft research is heavily subsidised.

Rebalancing is urgently needed into low-carbon areas to reflect policy priorities. Research and innovation funding can be a powerful instrument contributing to the development a low carbon economy. Accordingly, we welcome the decision to orient EU's main research and



innovation funding mechanism for the period 2014-2020 to address the "societal challenges". More specifically we would like to underline the need of the pledge for 35% of the Horizon 2020 budget to be climate-related expenditure to be fully achieved.

However, we raise concerns in the specific case of transport and the allocation of scarce resources among competing priorities. For example, recent experience with European R&D programmes has shown that most EU investment has been focusing on aviation. According to a report by the Joint Research Centre published in 2011, more than half (54%) of European funded public investment in R&D is dedicated to aeronautics and 22% to road research.<sup>8</sup> Waterborne and rail research account for only 9% and 5% of the total EC transport research funding. According to European Commission figures, air transport is responsible for a small share of transport activity (8% of intra-EU passenger transport and a very low share of freight), the share of employment in transport is 4.5% and 10.9% for turnover. Accordingly, there seems to be a serious disproportion between the societal role of air transport and its share of EU transport R&D funds. Such disproportion is also not justifiable in terms of other societal challenges as air transport performance in safety, security or social inclusion does not appear to differ substantially from its specific weight within the transport sector.

Accordingly we believe there is room to rebalance EU's R&D investment in transport research away from aviation, towards modes that are more climate and energy efficiency and that may bring added value not only by internal improvements but also by attracting more passengers / freight from other modes. For example, we suggest that the Commission ensures that a larger share of the funding is oriented towards the promotion of energy efficiency in transport, the electrification of road transport, the promotion of walking and cycling or solutions to internalize the external costs of transport.

Moreover, we would like to express our concerns about the increasing reliance of the EU on the private sector for the allocation of resources, through schemes such as the public private partnerships (PPP) and the Joint Technology Initiatives (JTI). Although this approach may well serve the interests and the global competitiveness of the European industry, it remains unclear how adequate instruments will be put in place to make sure that the 35% target of expenditure on climate-related topics and the focus on societal challengers remain properly served. At the very least, improved tools for monitoring and scrutiny of public spending and follow-up of the results of EU-supported R&D should be developed.

#### **4 Competitiveness and security of supply**

*'Which elements of the framework for climate and energy policies could be strengthened to better promote job creation, growth and competitiveness?'*

All of the policies we promote – smart transport pricing, exacting CO<sub>2</sub> standards, energy efficiency, improving fuel quality – have positive effects on job creation and competitiveness.

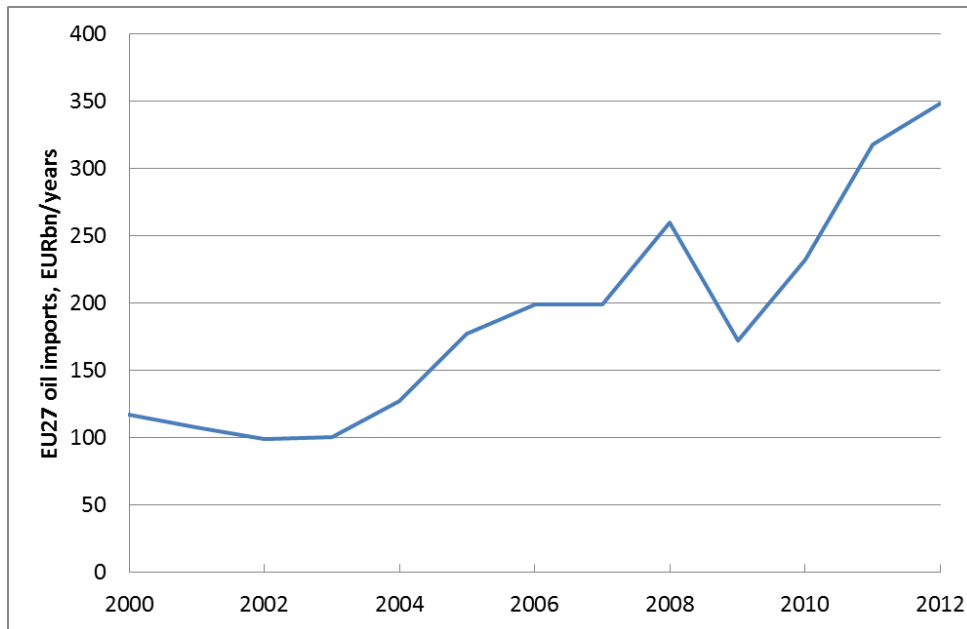
An important reason is the EU's ever-increasing oil import bill which now stands at about €1bn every day. See the graph below for the trend over time. Transport represents 60% of oil use. Money spent on oil imports is lost to the EU economy – a more energy-efficient and transport-efficient economy will cut this bill and be able to spend on other goods and services to boost the domestic economy.

---

<sup>8</sup> JRC (2011) T. Wiesenthal, G. Leduc, P. Cazzola, W. Schade, J. Köhler, 2011. *Mapping innovation in the European transport sector*. European Commission, Joint Research Centre, Institute for Prospective Technological Studies. Seville.

Smart pricing can create jobs through using the proceeds to lower labour taxes. For every billion where the tax burden is shifted from labour to pollution, over 10,000 jobs can be created.<sup>9</sup>

Smart CO<sub>2</sub> standards can create jobs because it is smarter to spend resources on low carbon technology than on oil imports. Recently new evidence emerged that demonstrated that investing in low carbon cars can create over a million jobs.<sup>10</sup>



*'What evidence is there for carbon leakage under the current framework and can this be quantified? How could this problem be addressed in the 2030 framework?'*

There is no leakage in surface transport, and if policies are well designed i.e. are route-based, negligible leakage in aviation and shipping, as studies for the Commission have convincingly demonstrated.

*'What are the specific drivers in observed trends in energy costs and to what extent can the EU influence them?'*

It is of paramount importance to distinguish between (1) pre-tax prices, (2) after-tax prices, and (3) after-tax costs.

The EU should strive to minimise its pre-tax costs, and high after-tax prices are a vital tool to achieve that. The table below shows the differences between these terms.

<sup>9</sup> <http://www.transportenvironment.org/publications/report-fuelling-oil-demand-what-happened-fuel-taxation-europe>

<sup>10</sup> <http://www.europeanclimate.org/index.php/en/news/116-fuelling-europe-s-future>

	Without tax	With tax
Per unit of energy	<b>Pre-tax prices</b>	<b>After-tax prices</b>  <b><i>Should be high in order to achieve low pre-tax costs</i></b>
Over total energy use (i.e. including efficiency)	<b>Pre-tax costs</b>  <b><i>To be minimised</i></b>	<b>After-tax costs</b>

Road transport is a good example. The EU's pre-tax energy costs per head are half those of the US, largely as a result of high after-tax prices. Despite the EU's relatively high after-tax fuel prices, Europeans end up paying roughly the same after-tax transport energy costs as the Americans because we use fuel dramatically more efficiently (half the fuel consumption).

*'How should uncertainty about efforts and the level of commitments that other developed countries and economically important developing nations will make in the on-going international negotiations be taken into account?'*

The EU has a very strong case to go for the most carbon-efficient transport sector in the world; it has to import 90% of its oil, and has a world-leading automotive industry capable of leading on fuel economy and electrification. Europe is also well-placed to be leading provider and exporter of intelligent transport systems (ITS), to manage mobility more efficiently, both in terms of infrastructure use and emissions impacts.

*'How to increase regulatory certainty for business while building in flexibility to adapt to changing circumstances (e.g. progress in international climate negotiations and changes in energy markets)?'*

See previous questions. Long planning horizons are key. The EU can afford to lead by putting in place long-term goals, fuel efficiency standards and a supportive policy framework to provide planning and investment certainty.

*'How can the EU increase the innovation capacity of manufacturing industry? Is there a role for the revenues from the auctioning of allowances?'*

As above, long-term targets are key in attracting investment and focussing resources.

*'How can the EU best exploit the development of indigenous conventional and unconventional energy sources within the EU to contribute to reduced energy prices and import dependency?'*

For the transport sector, the most robust bet is a move to sustainable low carbon electricity, with zero emissions, low marginal costs and local production. Small scale local bioenergy production may also play a role in areas with ample (waste) biomass resources.

At the other end of the spectrum stands unconventional oil, which is dirty and expensive.

The technology-neutral approach of the FQD should be pursued to achieve the most cost-effective transition.

## 5 Capacity and distributional aspects

The responses in this chapter focus on possible improvements to the ESD post-2020.

*'How should the new framework ensure an equitable distribution of effort among Member States? What concrete steps can be taken to reflect their different abilities to implement climate and energy measures?'*

See next question.

*'What mechanisms can be envisaged to promote cooperation and a fair effort sharing between Member States whilst seeking the most cost-effective delivery of new climate and energy objectives?'*

Accepting that targets will need to be distributed at a national level may require a fresh look at Member State splits in achieving a 2030 GHG targets. In addition to raising ambition to make non-ETS targets meaningful and relevant for 2030, unlocking the higher end of Effort Sharing potential may also mean looking at different ways of distributing targets.

The current model is based primarily on ability to pay - measured by GDP per capita. Ultimately the choice of burden sharing model is a political decision. However, it is useful to realize that a number of alternative options exist, and some have the potential to lower overall cost at EU level. A recent IEEP analysis evaluated burden sharing based on geography of most cost efficient mitigation potential. The results showed that 7 Member States (Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania and Malta) hold the highest amounts of untapped low cost CO<sub>2</sub>e reduction potential. A burden sharing split that correlates national effort with low hanging fruit could be reflected in a more ambitious target for these countries. However, these countries, with largest 'bang for buck' also face considerable challenges of access to capital. Therefore, it may be necessary to pursue a combined metric of both GDP per capita and location of cost-effective potential (or indeed another combination that can work with the MAC model). In practical terms, this will mean coupling targets with new financing solutions that direct capital across borders, with a higher proportion flowing to less wealthy Member States with higher amounts of cost effective options. It will probably not be enough to rely on trading mechanisms already enabled by the ESD.

A more prescriptive approach could move away from a system where the market partly determines the location of reductions within the EU. The architecture of targets could be designed such that wealthier Member States with lower amounts of cost effective potential are required to achieve a small portion of their reduction target by financing investments in less wealthy Member States with high amounts of low hanging fruit. Such a burden sharing model could lower the cost of necessary reductions for all Member States.

For the EU as a whole, a burden sharing model based on combined metric of ability to pay AND location of low marginal abatement cost (MAC) is a possible option to lowering the overall cost of climate change mitigation and could provide a political route through to higher ambition. It is therefore worthy of exploration and should be one of a number of burden sharing models outlined in the forthcoming 2030 White Paper.

## *'Are new financing instruments or arrangements required to support the new 2030 framework?'*

New and/or improved financing mechanisms are needed to help unlock reductions in Effort Sharing sectors, and particularly if new effort sharing models based on location of cost effective potential are pursued. The ESD contains a number of untapped opportunities for innovative financing solutions. It contains its own potential revenue streams that are likely to be underutilized in the current scheme. More can be done to leverage capital from AEAs, either monetizing them, or if trading is to be part of the ESD post 2020, by reinvesting revenues via an intermediary (such as the EIB or national bank) to co-invest and unlock private sector capital.

In framing solutions, analogies and improvements can be made on existing national Green Investment Schemes. These are voluntary measures that many European countries (including Slovakia and Hungary) are using to reinvest profits from the sale of their Kyoto allowances (AAUs) into mitigation investments in Effort Sharing sectors. Mandating GIS within the Effort Sharing Decision could be a way to achieve emission reductions according to burden sharing principles, channeling and leveraging a portion of profits from AEA trades. The problem with existing national GIS, however, is the lack of a streamlined, transparent and robust approach to carbon accounting. In order to provide an acceptable standard, any mandatory GIS would need to come with Commission implementing legislation or guidelines for project eligibility criteria and accounting guidelines. Standardized baselines and narrowing project eligibility (for example: limiting to types of building retrofits or cleaner transport investments, or based on specific savings thresholds in the building sector) can ensure that emission reductions lend themselves easily to the monitoring, reporting and verification process.

The problem with this approach to financing is that it depends on AEA transfers occurring between Member States- which is currently unproven in Effort Sharing Decision, and will depend on scarcity being maintained in the face of changing economic and policy environments. Other options exist that do not require trading. One such option is that, similarly to the NER300, a small portion of AEA's could be auctioned or sold to Member States to create a pool of capital that can be leveraged/scaled up by the European Banks and reinvested into mitigation projects either according to burden sharing principles or as open tender across Member States (e.g. a quantitative performance approach is a way of rewarding ex-post mitigation). The advantages to utilizing the European banks to channel and leverage these funds relate to the possibility to improve trust through a centralized approach guided by Commission implementing legislation. Additionally, a centralised approach can assist investors in choosing the opportunities with the lowest cost over time rather than with the lowest capital intensity. There may be less confidence and consistency in approach if funds are simply channeled directly to national banks. Another advantage is the ability to unlock private capital by minimizing risk for a range of investors.

Finally, doing more with Effort Sharing revenue streams is unlikely to be enough. It should be proposed in the White Paper as part of a broader package of climate financing for Effort Sharing sectors, together with the direction of Cohesion and Structural Funds and other measures. The ESD contains untapped financing opportunities.

More could be done with Effort Sharing allowances to either monetise them or leverage revenue from their sale. Not all reinvestment options depend on trading. Together with Cohesion Funds, new financing options should be proposed as part of a package of innovative financing to spur reinvestment in building retrofits, transport electrification and other measures that are good for the green economy and protect consumers from rising energy bills.