

# Clean Transport Systems (CTS) initiative

## Outline of the Initiative

In its Europe 2020 strategy, the European Commission proposes the Flagship Initiative 'Resource efficient Europe'. This states that the European Commission will work to present proposals to modernise and decarbonise the transport sector.

In line with this strategy, the European Commission has recently adopted the White Paper 'Roadmap to a Single European Transport Area –Towards a competitive and resource efficient transport system', which announced that the European Commission will develop "a sustainable alternative fuels strategy including also the appropriate infrastructure".

In this context, the European Commission has initiated the **Clean Transport Systems (CTS) initiative**, which should help the EU to put an end to oil dependency in transport in the longer term. Under the CTS initiative, the European Commission is preparing to launch, in the first quarter of 2012, a Communication on alternative transport fuels. The Communication will present a comprehensive long-term alternative fuel strategy for the EU covering the whole transport sector and will identify possible future actions in this area. The strategy should provide the industry, public sector and consumers with a clear and coherent vision, and should help to accelerate the use of alternative transport fuels in the EU. Action at the EU level should facilitate EU-wide circulation of vehicles powered by alternative fuels.

In order to facilitate the implementation of the strategy and to actively stimulate the market development of alternative fuels, the European Commission is considering putting forward, together with the Communication, a legislative proposal on alternative fuel infrastructure requirements.

## Personal data protection

This is an anonymous survey, and therefore, you are not obliged to give any personal details and the [rules on personal data protection](#) apply.

## Part I: Information about respondents

In what capacity are you completing this questionnaire? \* (compulsory)  
(at most 1 answer)

- My personal capacity
- Private sector company
- Industry association or NGO
- Local or regional public authority
- National public authority

Please indicate if your organisation is registered in the Transparency Register of the Commission  
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\* (compulsory)  
(at most 1 answer)

- Yes
- No

Please indicate the identification number \* (compulsory)

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Organisation or authority name\* (compulsory)

City of Stockholm. Environment & Health Committee

Contact details, personal or professional.

Even if you supply these details, you may choose to have your contribution be published anonymously.

(optional)

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Country or region in which you are based\* (compulsory)  
(at most 1 answer)

- Belgium
- Bulgaria
- Czech Republic
- Denmark
- Germany
- Estonia
- Ireland
- Greece
- Spain
- France
- Italy
- Cyprus
- Latvia

- Lithuania
- Luxembourg
- Hungary
- Malta
- Netherlands
- Austria
- Poland
- Portugal
- Romania
- Slovenia
- Slovakia
- Finland
- Sweden
- United Kingdom
- Europe – non-EU
- USA
- Canada
- South America
- Asia
- Africa
- Australia

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(at most 1 answer)

- The contribution may be published
- I object to the publication of my personal data (publication in anonymous form)
- I object to the publication of my reply (the contribution will not be published nor will its content be taken into account)

## Part II. The CTS initiative

Should policy actions be taken at the EU level to steer an EU-wide market introduction of alternative fuels? \* (compulsory)  
(at most 1 answer)

- Yes
- No

Which ones? \* (compulsory)

- A clear, harmonised method to calculate the climate emissions for the full system vehicle+fuel+infrastructure, Well-to-Wheel.
- A harmonised definition of Clean Vehicles, based on climate emissions Well-to-Wheel
- Make maximum low-blend of biofuels compulsory, where this is practically possible
- Make compulsory that all petrol-vehicles are prepared for E85

Additional comments (optional)

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Current legislation only takes tailpipe emissions into account. Tailpipe emissions is a very poor indicator on climate emissions – especially for biofuels and electric vehicles, but also for fossil fuels including diesel, petrol, natural gas and LPG. Focussing on tailpipe emissions also gives absurd consequences – e.g. according to the Directive 2009/33/EG, diesel vehicles are promoted before biogas vehicles, in spite of the latter having far better climate and local emission performance.

A Well-to-Wheel-measurement would need to include some default values – but such values are already agreed upon, e.g. in the Directives 2009/28/EC and 2009/30/EC and will be refined during the coming years when Member states report on the actual CO<sub>2</sub>-emissions from different fuels.

In order to incentivise or require Clean Vehicles in their procurements of both vehicles and transport services, national and local governments need a clear, undisputable definition of Clean Vehicles. It is advantageous both for the internal market and for automanufacturers if such a definition is harmonised all over the EU. An appropriate level for this would be 95 g CO<sub>2</sub>eq (WTW)/km, as this is already considered in the regulation 443/2009. In the longer run, also noise levels may be considered to be included in such a definition.

Low-blending is a way to quickly increase the demand and kick-start the production of biofuels, but is not enough to reach the long-term climate goals. Petrol vehicles can be prepared for E85 at a almost no cost at all if this is done already at the production. Having a big proportion of the vehicle stock prepared for E85 will increase the choices of fuel and hence the fuel security.

In addition to appropriate standards for CO<sub>2</sub> emissions from vehicles, do you consider it important to put in place requirements on energy efficiency addressing all types of propulsion systems alongside the progressive market penetration of alternative fuels? \* (compulsory)  
(at most 1 answer)

Yes

No

When should such measures be in place? \* (compulsory)

There is already an efficient energy efficiency measure in place. The regulations 443/2009 and 510/2011 states the maximum average Tailpipe emissions of CO<sub>2</sub> from cars and light commercial vehicles respectively. As Tailpipe emissions of CO<sub>2</sub> has almost no correlation with climate effect for the alternative fuels, but is a rather good indicator on the energy performance of the vehicle, the main effect of this regulation is to steer towards more energy efficient vehicles. There is no need for yet a measure on energy efficiency.

It would however be more transparent to convert this measurement into energy terms and additionally introduce a measure on the climate effect, i.e. Well-to-Wheel measurement.

(NB, according to Directive 71/354/EEC, EU should use the SI-unit: joule for energy.)

The experience from introducing the above regulations shows that such measures could be extended to all vehicle categories in just a few years time. For heavy duty vehicles this could be implemented as soon as there is a whole vehicle type approval procedure in place.

(optional)

In view of the current availability of fuel options with lower CO<sub>2</sub> emissions, what should now receive priority? \* (compulsory)  
(at most 1 answer)

- Research to improve existing fuel/vehicle technologies
- Deployment of new low-CO<sub>2</sub> fuel/vehicle technologies

Additional comments (optional)

There is no either or. We will need all the alternatives we can develop.

We need to develop the inherited potential in the existing alternative fuels - eg. ED95, E100, E85, FAME, HVO and DME. The vehicles using these fuels are still optimised for fossil fuels and to very little extent modified for the alternative. There are almost no vehicles optimised for alternative fuels. Pilots have shown that such an optimisation may result in up to 40 % lower energy consumption than corresponding diesel vehicle. There is obviously a large potential for improving the current technology.

New fuels/feedstock and technologies – like bio-butanol, algae, jatropha, cellulose, fuel cell etc. will also be needed.

Which approach should the EU take on the promotion of alternative fuels? \* (compulsory)



(at most 1 answer)

- Technology-oriented: giving preference to certain fuels and vehicle technologies (based on
- estimated cost effectiveness, market potential, long-term contribution to oil substitution and decarbonisation)
  - Performance-oriented: linking support to alternative fuels in a technology-neutral way to performance criteria, such as energy efficiency, reduction of CO<sub>2</sub> and pollutant emissions

Additional comments (optional)

Performance must be based on the climate effect – i.e. Well-toWheel of the full system car/fuel/infrastructure

All alternative vehicle systems need initial support to develop infrastructure, gain a sufficient demand to allow optimised vehicles to develop etc. the kind of support is however technology specific and also develops over time as the market penetration progresses and new target groups need to be addressed (cf BEST report 5.12 Promoting clean Cars [www.best-europe.org/Pages/Document.aspx?id=6](http://www.best-europe.org/Pages/Document.aspx?id=6)). This means that over time all technologies should be treated equal, but at a given moment, the support varies both in form and size for the different technologies.

In the technology-oriented approach would you give preference to: \* (compulsory)

(at most 1 answer)

- Alternative fuels standards
- Vehicle technology standards
- Infrastructure standards

Additional comments (optional)

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There is a need to develop the inherited potential in the current alternative fuels, adapting the vehicles to the relatively simple fuels available at the market today, rather than develop very advanced fuels some time in the future. Developing optimised vehicles for eg ED95 and biogas opens up for a wide source of feedstocks and a large variety of providers – hence reduces energy insecurity and lessens the risk for excluding less technically developed providers worldwide. As the development of optimised vehicles takes time and involve heavy investment, it calls also for stringent fuel standards but most of all a long-term public comittment to promote these fuels

A simple first step would also be, making compulsory that all petrol-vehicles should be prepared for E85

In the performance-oriented approach would you give preference to: \* (compulsory)

(at most 1 answer)

- Energy efficiency standards
- Cap on CO2
- Differentiated charging based on CO2 emissions

Additional comments (optional)

In practice there is already a cap on energy consumption for most vehicles (Regulation 443/2009 and 510/2011). No further cap is needed for these vehicle types, (though it should be extended to all types of vehicles and be expressed in energy term instead of CO2/km as is the current case.) As the fuel price increase, there will also be a natural pressure towards energy efficiency.

Instead the base should be climate effect of the vehicle+fuel+infrastructure system. Differentiated charging based on Well-to-Wheel performance will as a side-effect also reduce energy consumption.

As the vehicle market and taxation differs largely between member states, the very details of the system need still to be national, but there is a need for a harmonised method of calculating climate performance WTW and possibly a Clean vehicle definition.

Which fuels should be included in a long-term European alternative fuel strategy? \* (compulsory)

Electricity

Hydrogen

Biofuels

Synthetic fuels

Methane

LPG (Liquefied Petroleum Gas)

Other

Specify "Other" (optional)

Bio-methane, Bio-DME, ED95, E100, Synthetic fuels of biogene origin.

These are formally included in biofuels, but are often excluded when biofuels are discussed.

Only renewable fuels can be included if EU is to reach the long term objective to reduce climate effect with 80-95 %, laid down in the EC Roadmap for moving to a competitive low carbon economy in 2050 (COM(2011) 112 final). In the shorter term some of these fuels can be used as transition, eg. fossil methane could serve as back-up until the bio-methane production is fully developed. According to BP statistics, proven natural gas reserves will last for 59 years with current consumption ([www.bp.com/sectiongenericarticle800.do?categoryId=9037178&contentId=7068624](http://www.bp.com/sectiongenericarticle800.do?categoryId=9037178&contentId=7068624) ). It would be unwise to build a long-term strategy based on such a limited fuel.

Please observe that the categories are slightly un-precise. Biogas is both methane and biofuels. Electricity, hydrogen, methane and synthetic fuels could all be of both fossil and renewable origin.

Additional comments (optional)

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short (urban) <small>optional</small>									
Road-freight: medium <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road-freight: long <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water: inland <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water: short-sea shipping <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water: maritime <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Different transport modes may require different alternative fuels. Indicate which alternative fuels will be relevant for which transport modes on the time horizon 2030

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**BEV:** Battery Electric Vehicle; **HFC:** Hydrogen/Fuel-Cell EV; **Grid:** Grid powered electric vehicle (e.g. tram, metro, train, trolley bus); **CNG:** Compressed Natural Gas; **CBG:** Compressed Bio-methane Gas; **LNG:** Liquefied Natural Gas; **LPG:** Liquefied Petroleum Gas

	Electric BEV	Electric HFC	Electric Grid	Biofuels (liquid)	Synthetic fuels	Methane CNG	Methane CBG	Methane LNG	LPG
Road-passengers: short (urban) <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road-passengers: medium <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road-passengers: long <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road-freight: short (urban) <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road-freight: medium <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road-freight: long <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water: inland <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water: short-sea shipping <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water: maritime <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Different transport modes may require different alternative fuels. Indicate which



short-sea shipping <small>optional</small>									
Water: maritime <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Should actions be taken to privilege the use of particular fuels in particular transport sectors? \* (compulsory)  
(at most 1 answer)

Yes

No

Which actions should be taken? \* (compulsory)

Only renewable fuels should be promoted in the long term strategy.

Promote silent, low-emitting technologies in cities. (eg. BEV, Grid-powered, ED95, E85, biogas, biomethane-diesel etc).

Additional comments (optional)

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Do we need to accompany those actions with a coherent life-cycle approach for all fuels? \* (compulsory)  
(at most 1 answer)

Yes

No

Do you think that biofuels meeting the EU sustainability criteria could provide the major share of the transport energy supply in the long term? \* (compulsory)  
(at most 1 answer)

Yes

No

Additional comments (optional)

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Current research (WWF energy report, IPCC panel on renewable energy) shows that about 35-40 % of the energy need could be provided by biofuels. In addition a not neglectible share of the transport's energy need could be met by renewable electricity. For some applications these will be combined – Plug-in Hybrid vehicles running on biofuels.

This calls for considerable reductions of energy use compared to current situation, but also that biofuels and renewable electricity will provide the major sources of energy for transport. It is important to not let energy savings alone take precedence over the renewable ambitions. To reach the objective of 80-95 % CO2-reduction we need energy-efficient vehicles adapted for renewable fuels.

Do you think that biofuels meeting the EU sustainability criteria could deliver the required greenhouse gas reduction in the horizon 2050? \* (compulsory)  
(at most 1 answer)

Yes

No

Biofuels are considered to be an important part of alternative long term options for substituting oil as energy source in transport. Which approach(es) should get priority for further market build-up of biofuels reaching beyond 2020? (optional)

- Enabling progressively higher blending of bioethanol and biodiesel with conventional fossil fuels
- Faster market deployment of flexible fuel vehicles that can accept a much wider range of fuel specifications
- Faster market development of biofuels in transport sectors which are less dependent on fuel specifications than road transport passenger vehicles
- Faster market development of fungible biofuels, which can be blended at any ratio with conventional fossil fuels

Additional comments (optional)

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All pathways listed are necessary and cannot totally be excluded. However:

- Increasing low-blends as main measure will only work up to a very limited blending share for the main biofuels available (ethanol, FAME). Higher blends requires adapted vehicles. Preferably these vehicles should be optimised for the biofuel.
- It is necessary to target the road transport sector if we should meet the objective for the whole sector. The transition of the road transports will take time, as there are long-term investments in developing new vehicle concepts, and a fast transition is always more expensive than a longer one. Hence this development must start as soon as possible.
- Biofuels that can be blended at any ratio with conventional fuels require more advanced production technology, thus limiting the number of producers and possibly the diversification of feedstock.

Should the public sector intervene in accelerating the deployment of advanced biofuels technologies for the transport sector? \* (compulsory)

(at most 1 answer)

Yes

No

Which actions should be taken? \* (compulsory)

City of Stockholm's experience is that public intervention is necessary to introduce new transport technologies. The feedback from the transport industry is over and over again: Do provide guidance and over all long term rules.

The actions include:

- Testing new technology before market introduction
- Remove legal obstacles – changing obsolete legislation
- Setting a good example
- By big procurements making clean vehicles available at the market
- Promote infrastructure
- Demand Clean vehicles in contracts with the public entities
- Correct market failures through e.g. Carbon taxes
- Offer (temporary) incentives – monetary or factual (e.g. access to low-emission zones or silent areas/time)
- Offer neutral, reliable information

City of Stockholm's experience is also that local governments are one of the key stakeholders in this development, as being big local fleet owners, one of the biggest procurer's locally and influential in the localisation of infrastructure. Europe's local government must be allowed to take this role – e.g. by allowing putting climate requirements in their procurements.

Should the public sector intervene in the development of the refuelling/recharging infrastructures? \* (compulsory)

(at most 1 answer)

Yes

No

Additional comments (optional)

Experiences from introduction of the Swedish obligation for fuelling stations to provide renewable fuels is that it most likely have been helpful in regions that were not fore-runners, but had little implications in the big cities where there already was an emerging market driven by city requirements on transport providers. In addition the legislation coincided with a structural change of the fuelling stations, resulting in the closing of many small stations – necessary for rural development. In spite of generous possibilities to receive exemption from the obligatory the legislation was seen as the cause of the close-downs.

A prerequisite for the success of the Swedish measure was that it was a part of a wider strategy including both carrots and sticks. Implementing an obligation as the only measure would most likely not have been successful. We recommend a careful study of pros and cons of the Swedish system before proposing any EU-legislation. City of Stockholm's experience is that refuelling/recharging must be run by the industry. The drivers need to get the same additional services when they fuel renewable fuels as with conventional fuels.

Do you think that achieving a consistent and significant deployment of alternative fuels is possible through a better use of currently available instruments (large scale demonstration projects; funding and financing; information provision)?\* (compulsory)

(at most 1 answer)

Yes

No

Additional comments (optional)

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City of Stockholm has worked together with most of Europe's cities that are active in the field of alternative fuels and a common experience is that these fuels need a common initiative from both local and national level, together with private users and providers.

Initially renewable fuels are more expensive to use for the normal driver and that there is a need for an initial compensation of this cost, until the market has reached economy of scale. The easiest way to do this is through tax compensation – in most cases on the fuels but for designated vehicles possibly on the very vehicles. Local governments can add local incentives - but also put requirements in their transport procurements.

Most member states suffer from a market failure where the external climate effects are not included in the price on fossil fuels. The fuel taxation does not compensate for this, in the case of ethanol, the renewable fuel is even taxed higher per energy unit than the fossil equivalent. In addition there is an extra custom tariff on the most climate friendly ethanol.

Do you think that, in addition to currently available instruments, EU action to achieve a consistent and significant deployment of alternative fuels should be limited to ensuring the relevant infrastructure standards? \* (compulsory)  
(at most 1 answer)

Yes

No

Additional comments (optional)

See earlier comments - most important is to provide possibilities for local and national governments to incentivise and require the vehicles and to promote the development of vehicles optimised for these fuels.

First and foremost it comes down to driving economy - only if the total driving economy is equal to the conventional alternatives there will be a wide adoption of these vehicles. Initially the adopters/drivers need a risk premium - they are both taking a risk in testing a new technology and sacrificing their comfort. The EU must encourage measures that equals driving economy and allow member states' and local governments' possibilities to offer such risk premiums.

Do you think that voluntary action of industry alone could achieve the development of the

refuelling/recharging infrastructures required for travelling across the whole EU on alternative fuels? \* (compulsory)  
 (at most 1 answer)

Yes

No

Additional comments (optional)

The industry need a long term committment from the public that there will be a suitable, well defined fuel, available at a reasonable price to initiate the long and costly procedure to develop optimised vehicles, agreed fuel standards and develop both production and distribution capacity.

Also the industrial adopters of the renewable technology over and over again calls for public intervention - and long-term committment

There is no incentives for neither the automotive industry nor the oil industry nor the distribution industry to initiate this development on their own.

Should there be EU legislation requiring a certain minimum refuelling/recharging infrastructure for certain alternative fuels/energy carriers?

	Road	Rail	Water	Air
Electricity <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrogen <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biofuels <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synthetic fuels <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Methane <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LPG (Liquefied Petroleum Gas) <small>optional</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional comments (optional)

The experience from Sweden's introduction of a compulsory refuelling infrastructure is that the measure most likely have increased the number of pumps offering alternative fuels, but also that any system must be designed very carefully not to cause unwanted side-effects. A prerequisite for the success of the Swedish measure was that it was a part of a wider strategy including both carrots and sticks. Implementing an obligation as the only measure would most likely not have been successful.

We recommend a careful study of the pros and cons of the Swedish system before proposing any EU-legislation.

Some experiences from Sweden are:

- a technology-neutral system will almost exclusively favour one single technology – in the Swedish case this was E85
- it is important that the industry is driving and in charge of the infrastructure – to make the ambition level higher than minimum
- alternative fuels should be sold at the same place as conventional fuels - for vehicle drivers to have access to all the other services offered at fuelling station and the same opening hours

Should there be a build-up of a parallel dedicated bio-methane refuelling infrastructure or should bio-methane be injected into a single methane grid, supplying stationary and mobile consumers? \* (compulsory)  
(at most 1 answer)

Dedicated bio-methane refuelling infrastructure

Biomethane injected into general gas grid

Additional comments (optional)

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Injection in the natural gas grid can only be a temporary measure. As commented above - current reserves of natural gas will be depleted in 59 years, even shorter if we extend the use of natural gas also to traffic.

The important thing is to dramatically increase the production of upgraded biogas.

Should the market introduction of alternative fuels be supported by privileged access of alternative fuel vehicles/transport carriers to transport infrastructure? \* (compulsory)

(at most 1 answer)

Yes

No

Specify the preferred measures \* (compulsory)

(at least 1 answers)

Lower charging tariffs for infrastructure use

Privileged access to access restriction zones

Other

Specify "Other" \* (compulsory)

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Several different incentives are possible - but differently efficient in different environments, depending on e.g. the specific technology , the local culture, matureness of the technology, target groups' receptibility for incentives etc.

There is a wide spectrum of incentives that need to be used, changing over time for each technology and adapted to the local set of taxes and legislation - and also culture. This must normally be decided on national or local level. See further details on this subject in the BEST report 5.12 BEST report 5.12 Promoting Clean Cars ([www.best-europe.org/Pages/Document.aspx?id=6](http://www.best-europe.org/Pages/Document.aspx?id=6))

Do you have any other comments?

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Additional contributions through position papers are encouraged. They should be sent to [MOVE-FUELS@ec.europa.eu](mailto:MOVE-FUELS@ec.europa.eu) or uploaded here below.

(optional)

### Useful links

Europa website on Clean transport

systems: [http://ec.europa.eu/transport/urban/vehicles/road/clean\\_transport\\_systems\\_en.htm](http://ec.europa.eu/transport/urban/vehicles/road/clean_transport_systems_en.htm)