

EN

EN

EN



EUROPEAN COMMISSION

Brussels, 8.3.2011  
SEC(2011) 287 final

**COMMISSION STAFF WORKING DOCUMENT**

**EVALUATION OF THE ONLINE STAKEHOLDER CONSULTATION**

*Accompanying document to the*

**COMMUNICATION FROM THE COMMISSION  
TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN  
ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE  
REGIONS**

**A Roadmap for moving to a competitive low carbon economy in 2050**

{COM(2011) 112 final}  
{SEC(2011) 288 final}  
{SEC(2011) 289 final}

## TABLE OF CONTENTS

1.	Summary Highlights .....	3
2.	Introduction .....	4
3.	Basic Quantitative Description (Evaluation of Question 1).....	4
4.	Evaluation of Question 2.....	6
5.	Evaluation of Questions 3 and 4 .....	7
6.	Evaluation of Question 5.....	11
7.	Evaluation of Question 6.....	15
8.	Evaluation of Questions 7 and 8 .....	19
9.	Evaluation of Question 9.....	23
10.	Evaluation of Question 10.....	24
11.	Evaluation of Question 11.....	25
12.	Evaluation of Question 12.....	27
13.	Evaluation of Question 13.....	28
14.	Evaluation of Question 14.....	29
15.	Evaluation of Question 15.....	30
16.	Annex: Received Written Contributions.....	31

## 1. SUMMARY HIGHLIGHTS

In total, almost 300 responses have been submitted via the online questionnaire. The fact that the online consultation was available only in English did not limit the diversity of countries of origin of the respondents. Around half of the responses have been submitted from organized stakeholders, with very active participation from companies and professional associations.

According to estimations, the implementation of the climate and energy package, which will lead to 20% greenhouse gas (GHG) emissions reduction by 2020, will cost an average household approximately 12€ month. One of the key results of the online consultation is that most of the respondents indicated that they are ready to pay 12€ or more than 12€ on a monthly basis.

The daily choices that consumers make have impact on the climate and changing some habits and preferences could lead to reducing GHG emissions. According to the results of the online consultation, all respondents are willing to reduce waste, recycle and reuse as well as buy locally produced food. The least popular options are to buy carbon offsets and to use biofuels.

The main obstacles to reducing the EU's GHG emissions identified by respondents are the subsidies that support the obtaining and using of fossil fuels such as mining. Furthermore many organised stakeholders claim that we still do not have the technologies ready to reduce emissions in all sectors and that it is too risky to invest a lot of money in new low-carbon technologies that may not work or may not pay off in the long run.

In the context of helping developing countries to cope with the challenges resulting from climate change, most of the organised stakeholders prioritise supporting the countries that generate the most pollution, while individuals bring forward the need to support countries most likely to suffer from climate change. Most of the respondents choose the Emission Trading System (ETS) as the most effective EU legislation in terms of delivering emission reductions by 2020 and beyond, although it has been also extensively criticized by others.

## 2. INTRODUCTION

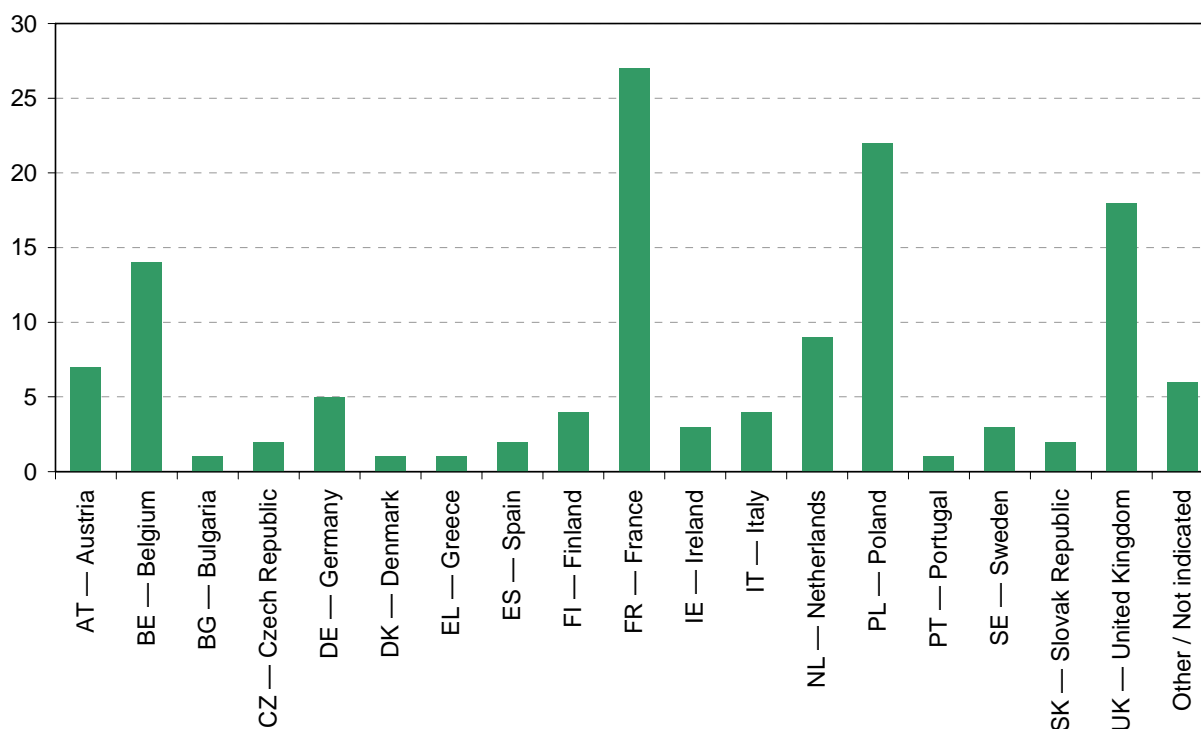
The Climate Action Directorate-General of the European Commission launched a public consultation as part of its preparation of a Roadmap for a low carbon economy by 2050. The consultation was opened from 27 October 2010 to 8 December 2010. It was conducted online through an interactive questionnaire which was posted on the website of DG Climate Action [http://ec.europa.eu/clima/consultations/0005/index\\_en.htm](http://ec.europa.eu/clima/consultations/0005/index_en.htm) together with additional documents as required in the stakeholder consultation guidelines (background note, protection of personal information note and specific privacy statement). This document accompanies the Impact Assessment and includes detailed evaluation of responses received.

## 3. BASIC QUANTITATIVE DESCRIPTION (EVALUATION OF QUESTION 1)

In total, 281 responses have been submitted via the online questionnaire. In addition, 7 answers have been sent by email and were also included in this analysis, which resulted in 288 evaluated responses in total.

In total 132 citizens have answered to the questionnaire. The fact that the questionnaire was available only in English did not limit the diversity of countries of origin of the respondents: submissions from every single Member State have been delivered. Most answers have been received from France, followed by Poland and the UK.

Figure 1: Received responses from citizens by country of origin indicated in the questionnaire

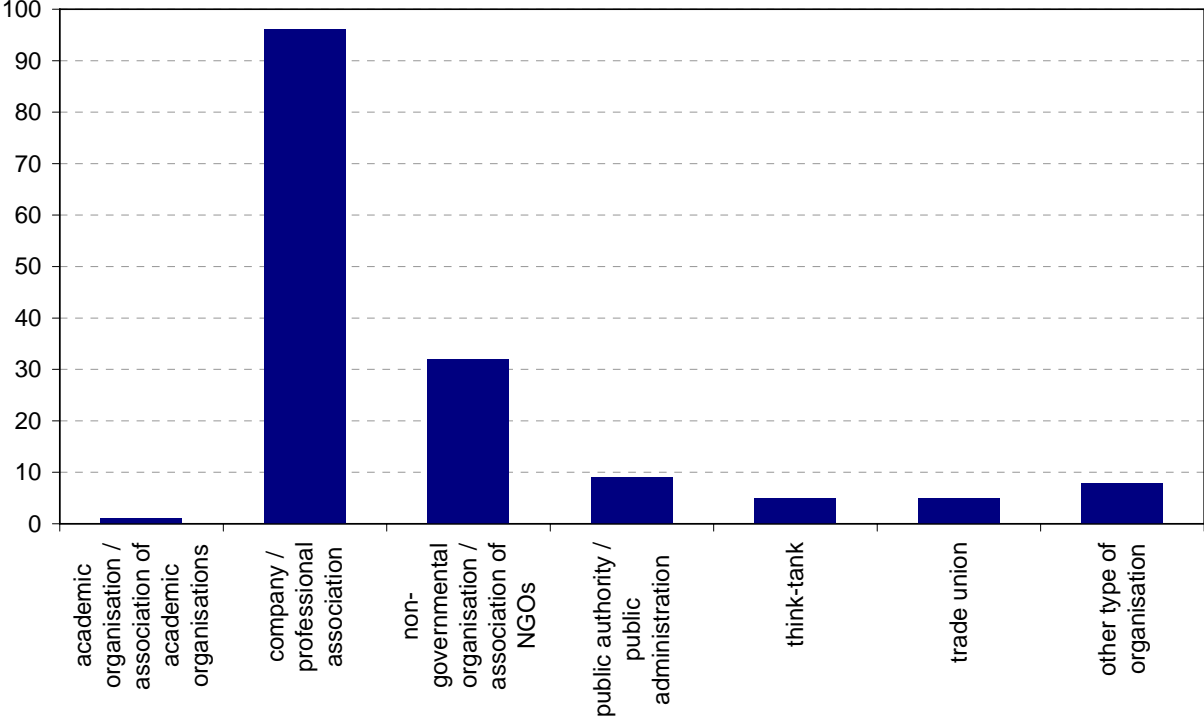


In total 156 organized stakeholders have answered to the questionnaire. Most of the contributions have been received form companies / professional associations, followed by NGOs and associations of NGOs. Slightly less than 13% of all responses received from stakeholders indicated that their contribution should be treated as anonymous (confidential).

Although the organised stakeholders could be separated in subgroups – academic organisation, company/professional association, non-governmental organisation (NGO)/association of NGOs, public authority/public administration, think-tank, trade union and others, in the evaluation of the online questionnaire it became clear that in terms of their positions and preferences they can not be divided under certain categories. There are differences of opinion among every subgroup, but nevertheless there are some broad lines that could be reproduced.

The highest number of respondents positioned themselves as company/professional association (96), followed by NGOs (32), public authority (9) and finally think thank (5) and trade union (5) – see figure below.

Figure 2: Received responses from stakeholders by affiliation



Individuals (citizens) mostly answered questions 2-6, while organized stakeholders focused on questions 7-15. However some individuals also responded to questions 7-15 and some stakeholders answered questions 2-6. Therefore results are shown for both groups.

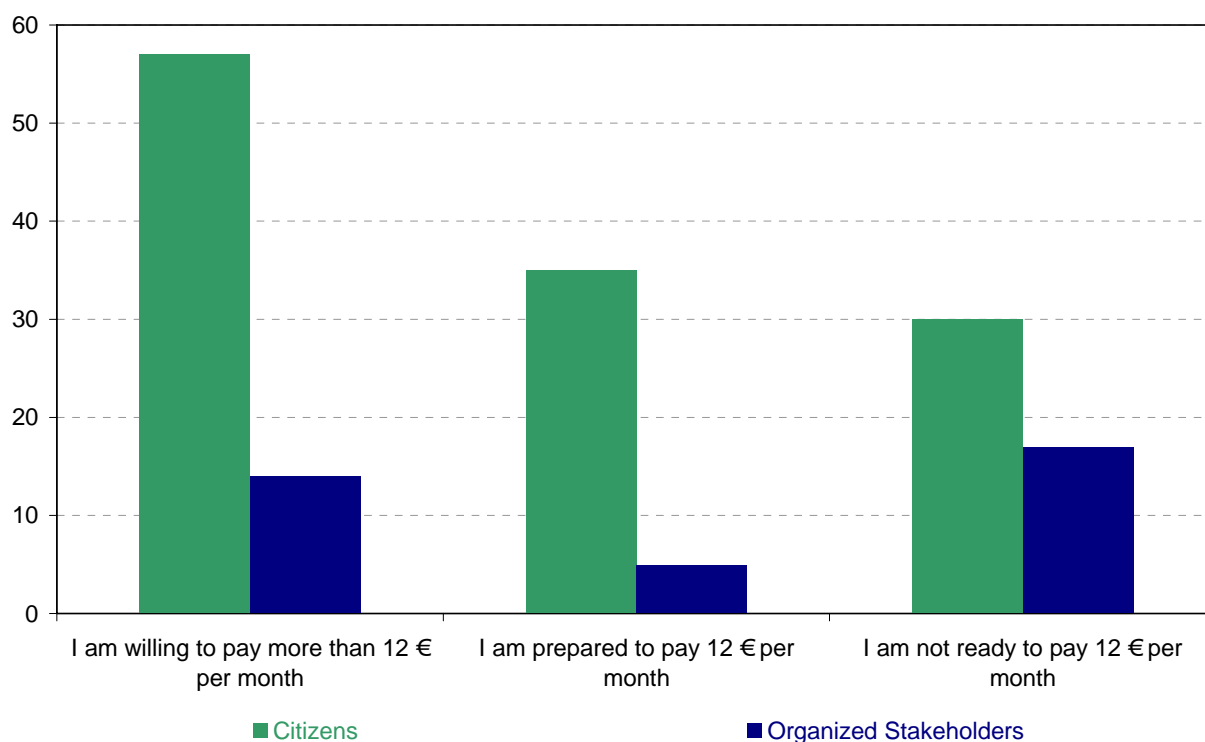
#### 4. EVALUATION OF QUESTION 2

##### Question 2:

Implementing the climate and energy package (achieving a 20% reduction in greenhouse gas emissions and 20% renewable in energy in 2020) has been estimated to cost an average household in the EU approximately 12€ per month in 2020. Avoiding dangerous climate change requires investments, by you as a consumer, by firms, and by governments. How much extra (on the total of your household costs) would you be prepared to pay on a monthly basis to build the future low-carbon society? (optional)

- I am prepared to pay 12 € per month
- I am willing to pay more than 12 € per month
- I am not ready to pay 12 € per month
- I don't know/no opinion

Figure 3: Responses to Question 2



Three quarters of all citizens that answered this question indicated that they are willing to pay 12 € per month or more to build the future low-carbon society. Although not all organized stakeholders answered this question and thus the result might not be statistically significant or representative, those that answered this question and specified that they are not ready to pay 12 € per month represent nearly half of the answers received.

## 5. EVALUATION OF QUESTIONS 3 AND 4

### Question 3:

Reducing emissions and saving energy is possible through your daily choices as a consumer. What do you already do to reduce greenhouse gas emissions?

- Reductions to your energy bill: roof insulation, window replacement, maintenance or upgrading of heating or air conditioning systems
- Choosing the most efficient appliances — with energy labels A(+) when replacing your fridge, dishwasher, washing machine, TV, computers
- An energy audit of your house or company
- Switching to a provider of renewable electricity or installing your own renewable energy generation system
- Checking your real-time CO<sub>2</sub> consumption with an IT application
- Commute to work on foot, cycling or by public transport (bus, train, metro)
- Using electric cars (optional)
- Using biofuel-blended petrol or diesel
- Diversify your weekly diet to reduce emissions in food production (e.g. replace meat for some meals)
- Buy locally-produced food and seasonal fresh products more often
- Encourage actions that reduce deforestation worldwide (e.g. buying products from certified forests...)
- Check your holiday plans and opt for the best transport connections which would reduce your CO<sub>2</sub> emissions
- Compensating for your greenhouse gas emissions by buying carbon offsets, i.e. financing projects to reduce emissions somewhere else in the world
- Get your neighbourhood / friends / family to make a pledge / take part in local challenges to reduce emissions
- Create or invest in a company putting new low carbon or energy-efficient product and services on the market
- Develop your skills so that you can get a job requiring knowledge or know-how about reducing emissions
- Find out what your local government does to save energy and money
- Reduce waste, recycle and reuse

### Question 4:

What else do you think you could do?



Figure 4: Responses to Question 3 from individuals:

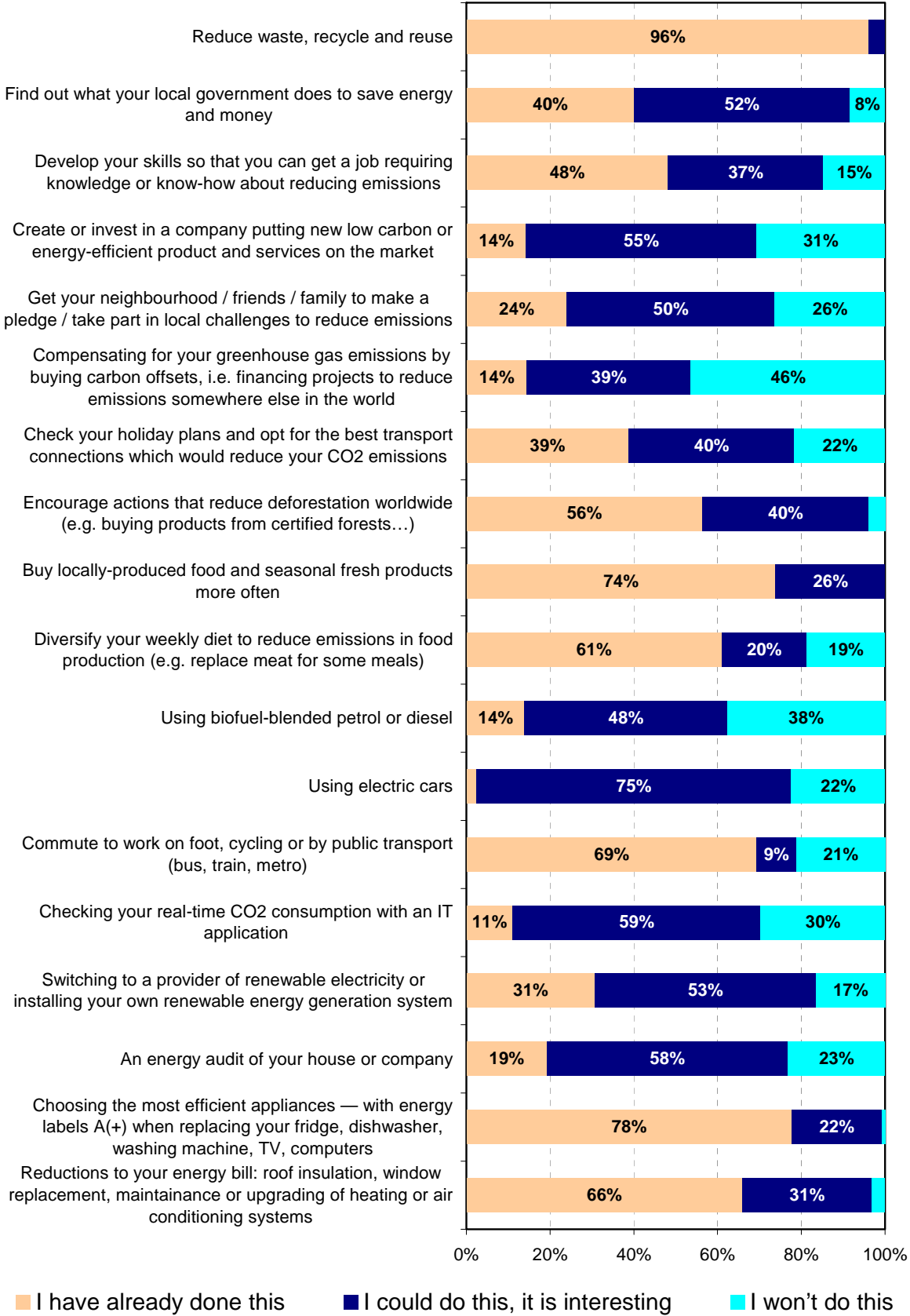
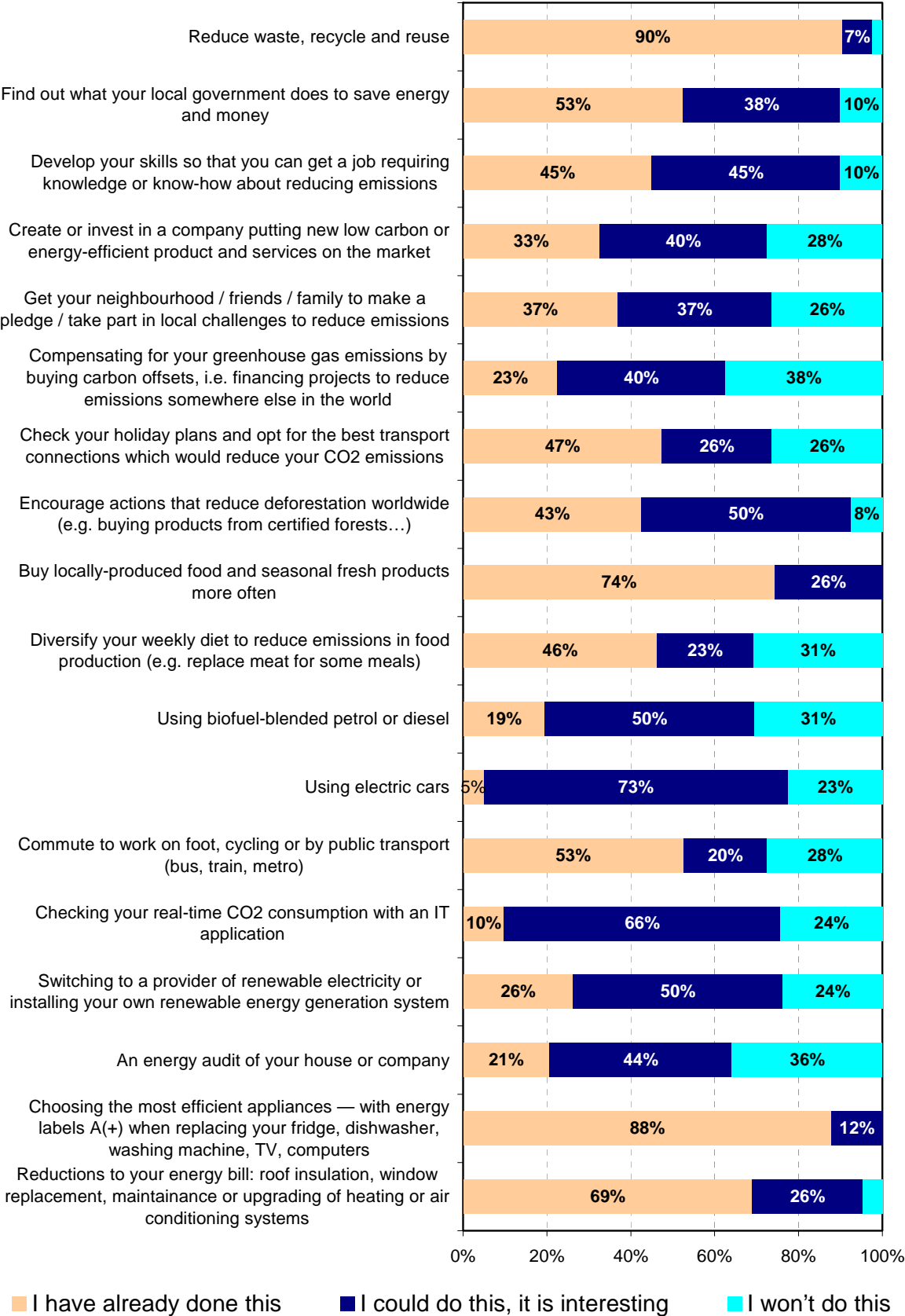


Figure 5: Responses to Question 3 from stakeholders:



Reduction of waste, recycling and reuse is a common daily practice of individuals 96% of the responses indicated that people are already doing this. Purchase of most efficient household appliances is also one of the things already done by vast majority of individuals (78%). Another daily practice is the purchase of locally produced food and fresh seasonal products (74% indicated that they are already doing this).

There are only 2 options that absolutely no respondent opposed doing: "Reduce waste, recycle and reuse" and "Buy locally-produced food and seasonal fresh products more often". It is important to highlight this result since the incentives for these actions are not linked to financial benefits and include some additional effort that individuals are willing to make.

Reflecting on reality, the answers are probably not representative of the whole society due to the amount of waste produced, appliances sold and international imports of "fresh" food. This might be due to the fact that climate sceptics probably did not participate in the consultations on climate change as much as individuals which are interested in the subject.

There are only very few daily actions that individuals are not already doing or do not consider interesting as an option for GHG reductions. Individuals are most reluctant to reduce GHG emissions by buying carbon offsets (i.e. financing projects to reduce emissions somewhere else in the world): 46% of respondents will not do it. This is followed by reluctance to use biofuels-blended petrol and diesel (38%).

Stakeholders give most support to the same options as individuals: "Reduce waste, recycle and reuse" and "Buy locally-produced food and seasonal fresh products more often". – Furthermore likewise individuals, stakeholders are also most reluctant to reduce GHG emissions by buying carbon offsets (i.e. financing projects to reduce emissions somewhere else in the world): 38% of respondents will not do it. Energy audit also does not seem to be preferred option for stakeholders, closely followed by the options of using biofuel blends and diet diversification.

In general, most of the options presented seem very attractive to both stakeholders and individuals, and in fact every single option has received more than 50% of positive response ("I have done this" + "I could do this").

In their responses to Question 4 many individuals underline the need for behavioural changes. These changes affect housing (limit the use of heating and air-conditioning, rational use of water, energy efficient lighting, insulation, better waste recycling etc), daily activities (avoid travelling by plane and replace driving a car through public transport, cycling or walking; buy second hand clothes and furniture) and nutrition (avoid food products with excessive packaging, eat less red meat etc).

Individuals are aware of the fact that they can raise the awareness about climate change through engaging in civil activities, lobbying local MPs and government agencies and becoming a member of a NGO. They stress also how important is the targeted education for children and the detailed information about the impact of daily activities on the climate. In this context some citizens propose the creation of consumer guide that gives information about the carbon footprint of different products.

## 6. EVALUATION OF QUESTION 5

### Question 5:

What do you think are the main obstacles to reducing the EU's greenhouse gas emissions? You can pick up to three of the options below.

- We do not have the technologies ready to reduce emissions in all sectors
- It is too complicated to upgrade all European energy and transport infrastructures
- International carbon markets are yet not fully developed, currently only EU producers and consumers pay a price for CO<sub>2</sub> emissions.
- There are still subsidies available that support mining and other means of obtaining and using fossil fuels at global level.
- It costs too much to replace high energy-consuming equipment and buildings. We will just have to wait until they wear out and are replaced.
- There are no tax advantages for companies and households that make an effort to cut their harmful emissions and save energy, so why should they bother?
- I/my company or organisation would like to invest in more modern, low-carbon technologies, but the banks will not lend money to help us do this; or if they do, the loans are too expensive.
- Markets are dominated by strongly established firms, so newcomers find it hard to break in with low-carbon innovations.
- It is too risky to invest a lot of money in new low-carbon technologies that may not work, or which may only pay off in the long run.
- It is a challenge to make sure that those who work in traditional energy sector jobs (oil, mining etc) develop new skills so that they stay in employment.
- Other, please specify

Figure 6: Responses to Question 5 [absolute numbers]

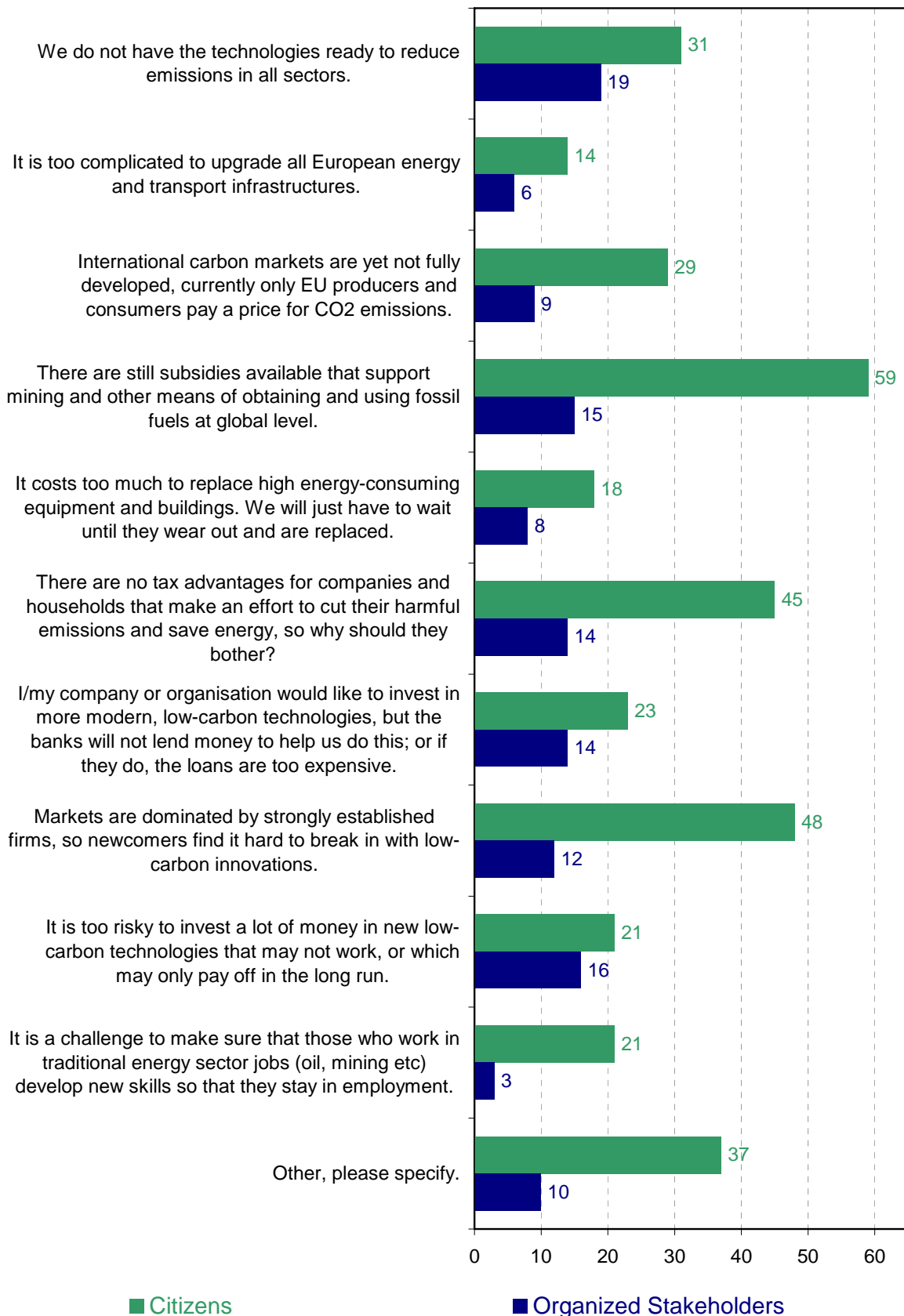
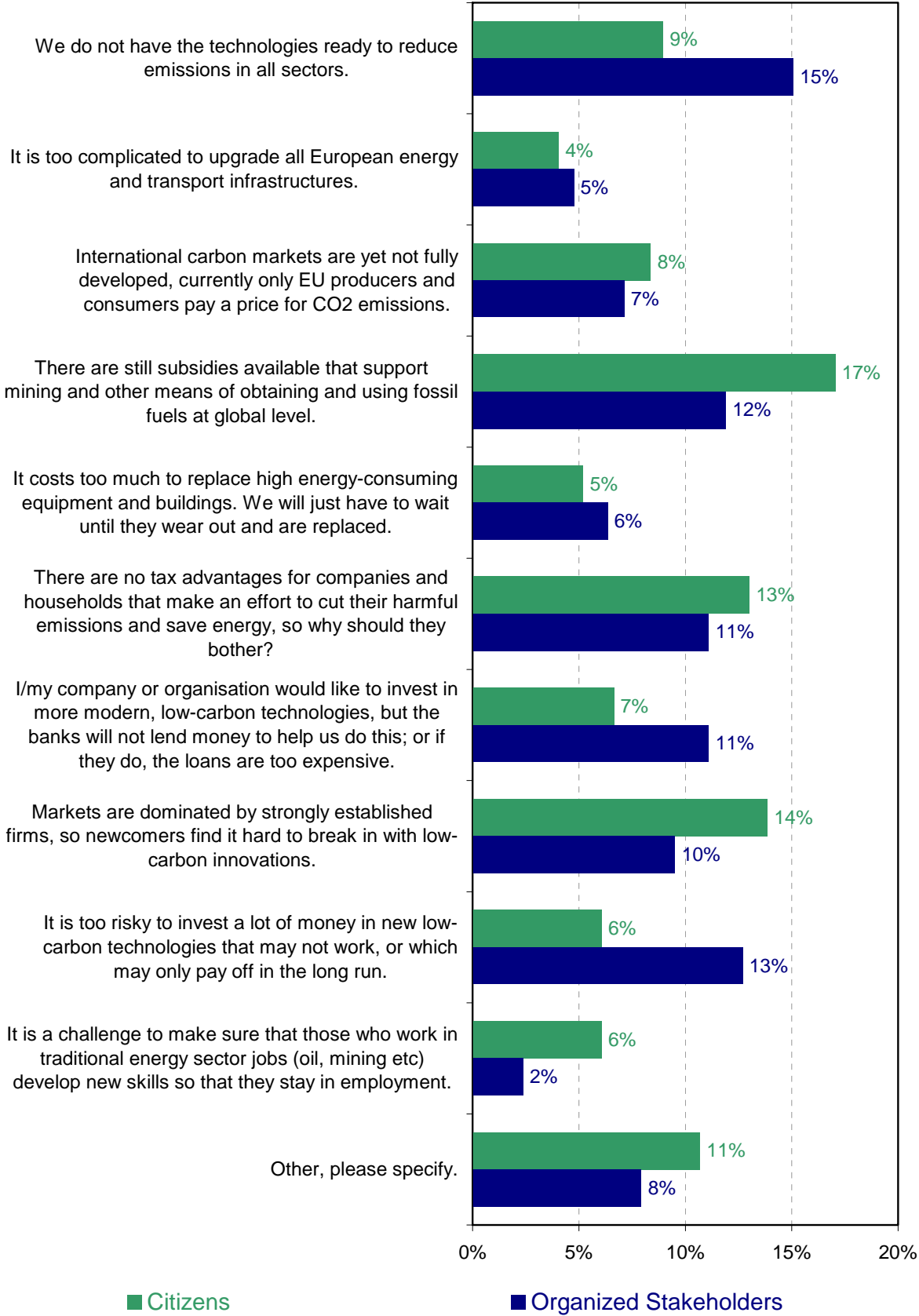


Figure 7: Responses to Question 5 [percentages]



Individuals and organised stakeholders identify different obstacles that impede the reduction of EU's greenhouse gas emissions. As the most severe problem individuals see the subsidies still available in support of mining and other means of obtaining and using fossil fuels at global level (17%) followed by markets dominated by strongly established firms (14%) and the lack of tax advantages for companies and households that make an effort to cut emissions and save energy (13%). Least importance is given to the options that it is too expensive to replace high-energy consuming equipment and buildings (5%) and that it is too complicated to upgrade all European energy and transport infrastructures (4%).

Organised stakeholders on the other hand suggest that the main obstacle for cutting GHG emissions is that we still do not have the technologies ready to reduce emissions in all sectors (15%) followed by the argument that it is too risky to invest a lot of money in new low-carbon technologies that may not work or which may only pay off in a long run (13%). Only 2% of organised stakeholders considered as a hurdle the challenge to make sure that those who work in traditional energy sector jobs (oil, mining etc) develop new skills so that they stay in employment.

By identifying the impediments for the mitigation of GHG emissions, obviously for organised stakeholders such as companies and public authorities the decisive factors are the cost-efficiency of mitigation measures and the returns on investment in new technologies. As main hindrance individuals see the position of public authorities that still subsidise traditional industries and do not provide enough incentives for companies and households to optimise their energy use.

As other major obstacle most of the respondents to the online consultation see the reluctance of consumers to change their lifestyle and behaviour. Other hindrances are the lack of information and awareness about the problem of climate change, the difficulties to align 27 member states around a common objective, the lack of political will, the lobby power of industry as well as the low CO<sub>2</sub> price.

## 7. EVALUATION OF QUESTION 6

### Question 6:

Rich and poor countries have to act together to avoid dangerous climate change. Developing countries want us to help them with two things: cutting their greenhouse gas emissions and adapting to climate change (e.g. building better flood defences and switching to more drought-resistant crops). What do you think the priorities should be for helping developing countries with these challenges? If we support them, what should the terms be?

- support the poorest countries
- support the countries that generate the most pollution by helping them to develop or buy climate-friendly technology
- support countries most likely to suffer from climate change
- support the development of technologies poorer countries can use, and launch pilot projects to see if they work there
- make sure that if we support poorer countries, we get them to show clearly what difference our funding makes in achieving improvements
- make sure developing countries work out an ambitious action programme in line with our aims before we give any funding
- helping developing countries fight climate change should not be a priority for the EU. We have plenty to do at home as it is.
- others, please specify



Figure 8: Responses to Question 6 [absolute numbers]

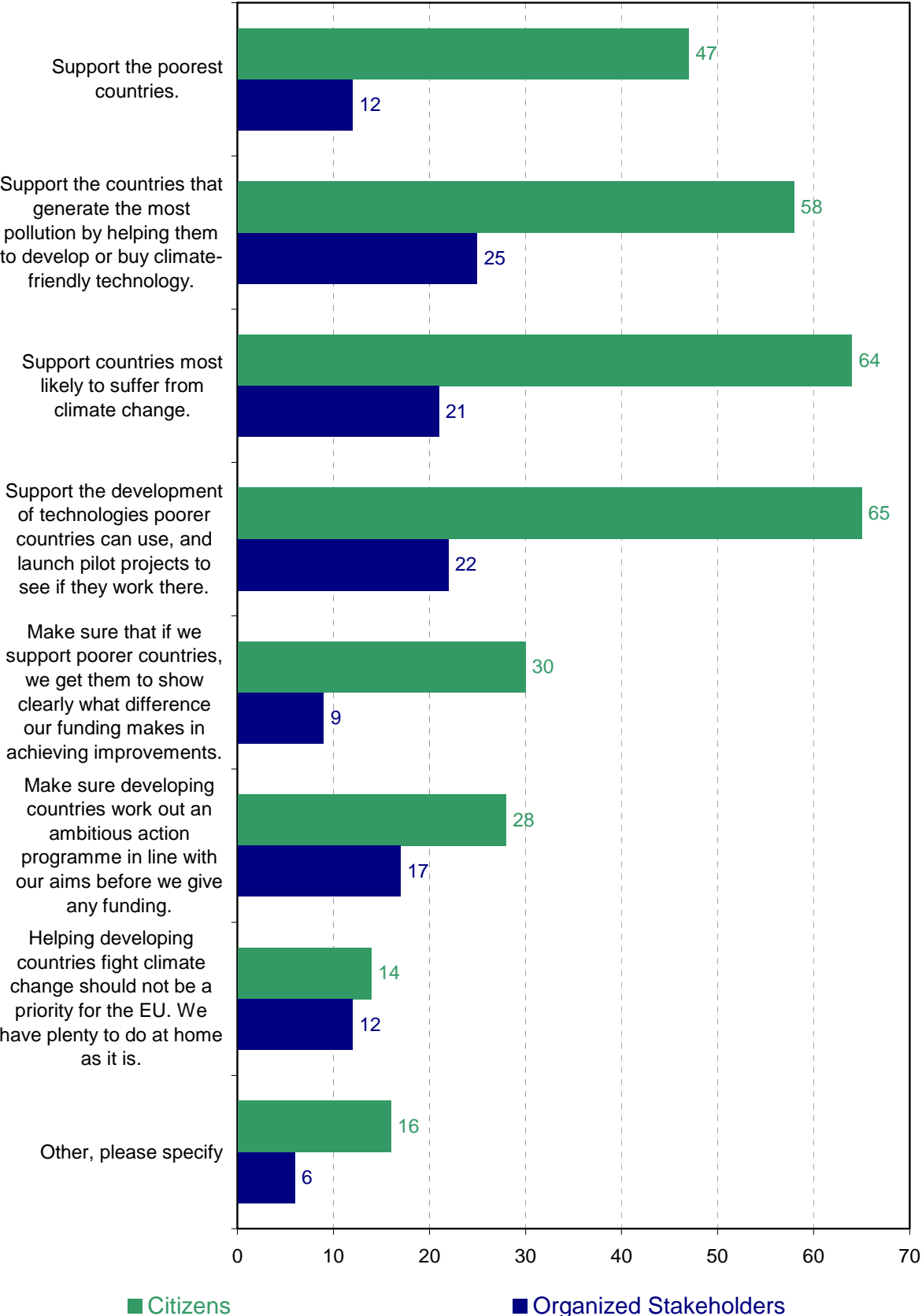
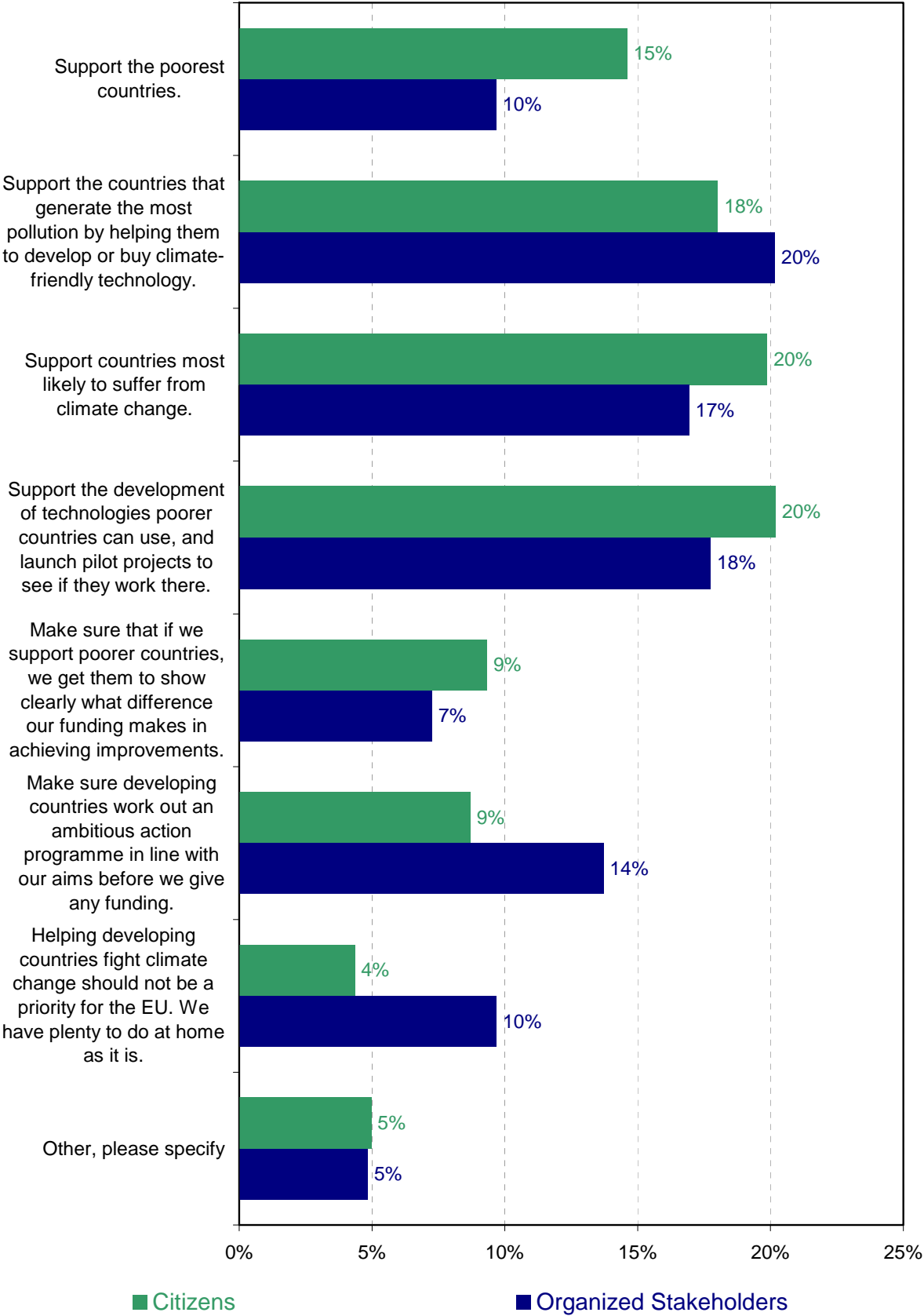


Figure 9: Responses to Question 6 [percentages]



Although there is no considerable difference in the way that individuals and stakeholders have set their priorities regarding the question what should be the priorities for helping developing countries to cut GHG emissions and to adapt to climate change, there are some interesting observations to make. According to individuals the focus should be on supporting the development of technologies poorer countries can use and launch pilot projects to see if they work there (favoured by 20% of the responded individuals) and support countries most likely to suffer from climate change (20% of the individuals responded to that question that correspond to 64 people). At the same time most organised stakeholders chose as their first option the support to countries that generate the most pollution by helping them to develop or buy climate friendly technology (20% of the responded stakeholders that correspond to 25 organisations).

One could draw the conclusion that individuals are slightly more concerned about climate action in least developed countries (the poorest countries) while organised stakeholders are more interested in initiatives in countries such as China, US, India and others, which are generating currently the most pollution.

Organised stakeholders tend to be more demanding regarding developing countries – while only 9% individuals think that it is important to make sure that developing countries work out an ambitious action programme in line with the EU's aims before they receive any funding, 14% stakeholders consider this essential. This difference becomes evident also in the answers to the option that helping developing countries should not be a priority for the EU, which was chosen by 10% of the stakeholders and only 4% of the individuals.

The respondents to this question specify that the terms for helping developing countries should be the establishment of international rules on measurement, reporting and verification of GHG mitigation and adaptation measures. In addition technology transfer has to observe the international standards and rules on international property rights. Other respondents hold the view that the EU's support should be rather unconditional and as generous as possible, but with efficient management of resources. Their argument is that developing countries are not responsible for climate change and should not bear the negative consequences resulting from it.

Furthermore many respondents stress the importance of education and training on all levels in developing countries so that they change their behaviour and do not contribute extensively to further pollution. Some respondents underline that differentiation between least developed countries and developing countries like China and India is essential and that priority should be given to the poorest countries that are most likely to suffer from the impacts of climate change and do not possess the resources to adapt.

## 8. EVALUATION OF QUESTIONS 7 AND 8

### Question 7:

The EU has put in place a regulatory framework related to climate and energy. Which of the following EU legislations you expect to be the most effective in terms of delivering emission reductions by 2020 and beyond? (select maximum 4)

- EU ETS (European Emission Trading Scheme) Directive
- Effort Sharing Decision
- Renewable Energy Directive
- Eco-design of energy-using products Directive
- Energy Labelling of products Directive
- Directive on Cogeneration (CHP)
- Directive on end-use energy efficiency and energy efficiency services (ESD)
- Recast Energy performance of Buildings Directive
- Fuel quality directive
- Regulation to reduce CO2 emissions from passenger cars
- Proposal for a Regulation to reduce CO2 emissions from vans
- Proposal for a revised Eurovignette Directive
- Proposal for a Car Labelling Directive
- Aviation in EU ETS Directive
- CCS Directive
- Regulation on substances that deplete the ozone layer
- Waste Framework Directive

### Question 8:

Do you have any comments on the policies evaluated in the previous question? Do you have any comments on any other policies?

Figure 10: Responses to Question 7[absolute numbers]

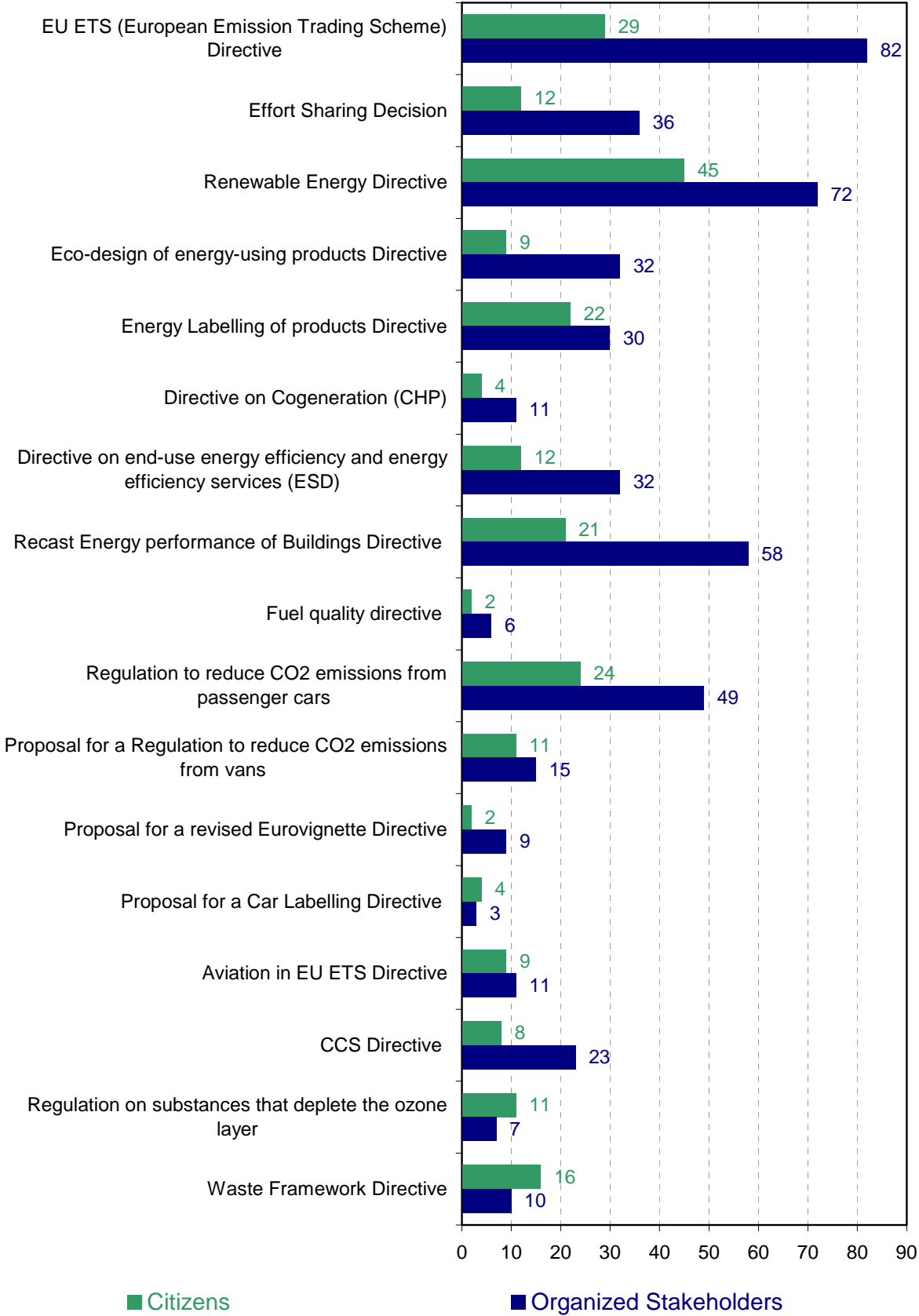
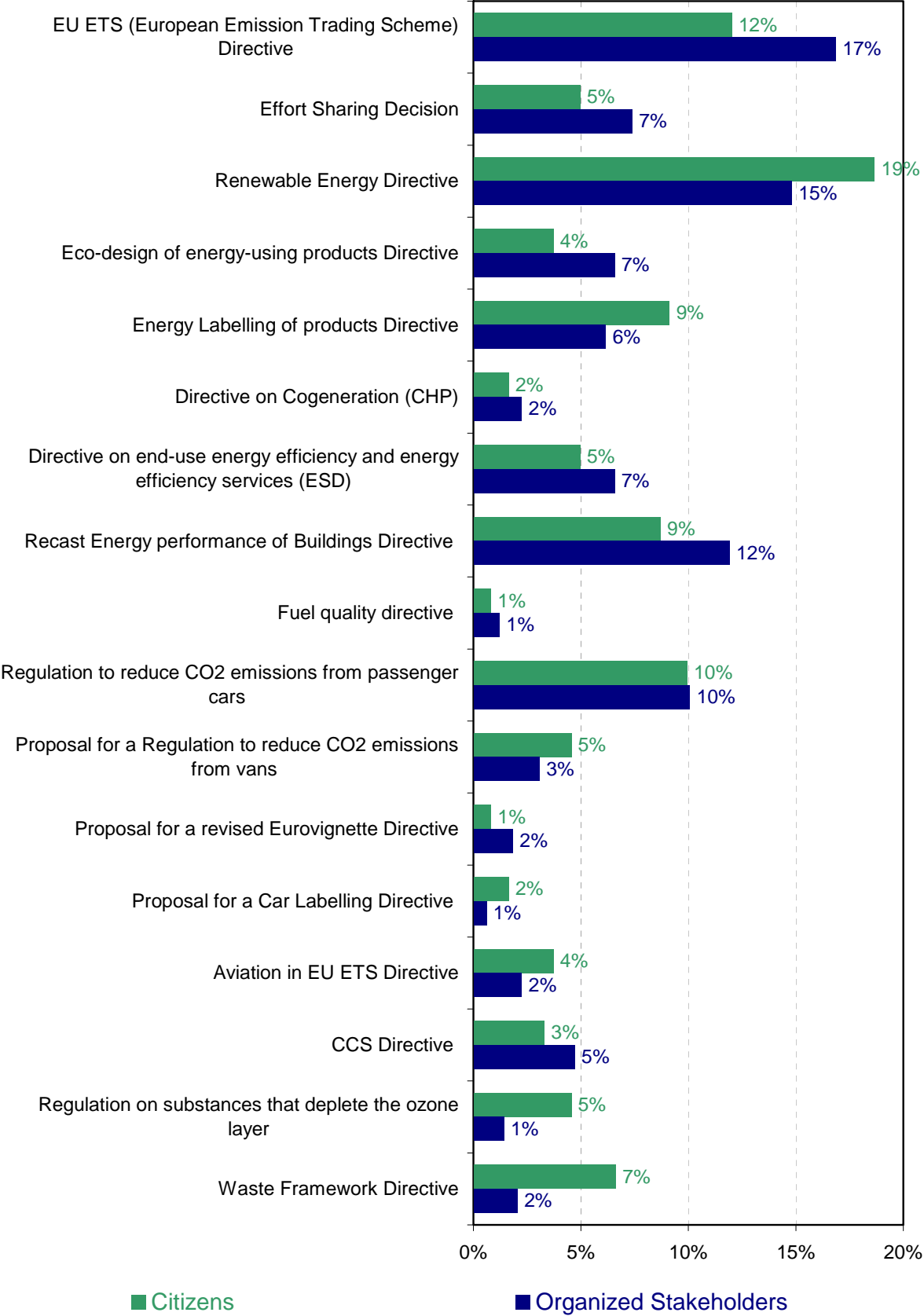


Figure 11: Responses to Question 7 [percentages]



In response to Question 7 individuals and stakeholders have presented different views about the most effective EU legislation in terms of delivering emission reductions by 2020 and beyond. The preferred option for organised stakeholders is clearly the EU ETS Directive – 17% which corresponds to 82 stakeholders chose this regulatory framework. Individuals on the other hand gave their preference for the Renewable Energy Directive – 19% of all answers which are equal 82 respondents indicated that choice. The third most favoured option for all respondents is the Recast Energy performance of Buildings Directive which would not only be beneficial for the climate, but would reduce also energy bills through energy savings.

According to the respondents, the least effective EU legislations in terms of delivering emissions reduction have been the Fuel Quality Directive (only 1% individuals and 1% stakeholders), The Proposal for a Car Labelling Directive (2% of all the answered individuals and 1% of the stakeholders) and the Proposal for revised Eurovignette Directive (1% individuals and 2% stakeholders). This result can be explained with the fact that while these legislations refer to very specific issues and have just a minor impact on the environment, regulatory frameworks such as the ETS Directive and the Renewable Energy Directive are much more comprehensive and encompass different sectors.

Interestingly, the Carbon Capture and Storage (CCS) Directive has not been evaluated as very efficient – only 3% of the individuals and 5% of the stakeholders have given their preference for them. Similarly the Aviation in EU ETS Directive received only 2% from organised stakeholders and 4% of the responses from individuals.

In response to Question 8, many respondents made additional comments on the EU legislations evaluated in Question 7 and proposed other policies.

Support for CCS and nuclear is one of the controversial issues, since most environmental NGOs and some companies consider them unsafe and expensive. Some stakeholders argue that nuclear continues to pose unacceptable risks for the environment, while CCS implies further dependence on fossil fuels. Business associations and most companies on the other hand favour a varied energy mix, where all energy sources play their role. They argue that nuclear is the best commercially available low CO<sub>2</sub> energy source to cover growing electricity demand and that coal in combination with CCS provides security of electricity supply throughout Europe.

Although according to stakeholders the Renewable Energy Directive provides the correct framework to boost renewable energy, some environmental NGOs would like to have more ambitious targets for solar and wind energy. In addition, strict sustainability criteria should be developed for all biomass. Many respondents hold the view that the 2020 energy efficiency target should be made compulsory.

Regarding the European Emission Trading Scheme (ETS) Directive the opinions differ. Some individuals consider the ETS ineffective due to lax targets and inefficient market mechanisms. In addition, the ETS has not driven the necessary investment on energy efficiency in the covered industry sectors. In order to improve, the total emissions allowances in the ETS should be reduced and emissions cutting should be allowed only within the EU. Some citizens suggest that the ETS should be replaced with other policies such as taxation (carbon tax), regulations, subsidies etc.

As other useful policies stakeholders point out the Strategic Energy Technology (SET) plan that promotes the deployment of low-carbon technologies. Other respondents underline that attention should be given not only to technological solutions, but also to energy saving and changes in consumption patterns. In this context energy labelling could play an important role raising consumer awareness and should be expanded to a wide range of products and services.

Many individuals indicated that they do not feel familiar with the EU's regulatory framework on climate and energy and find it difficult to compare the effectiveness of different legislations, without knowing all of them in detail. Moreover individuals are concerned that ambitious climate legislation is jeopardised through support for other sectors such as energy, agriculture, transport, industry, etc: "EU policies have been like driving a car while with one foot on the gas throttle and the other one on the break".

## 9. EVALUATION OF QUESTION 9

### Question 9:

The EU will need a diverse portfolio of technologies to build a low-carbon future. Some examples of potential technologies and energy efficiency solutions are carbon capture and storage, renewable energy technologies, electric vehicles, fuel cells, smart grids, heat pumps, cogeneration, next generation nuclear power, zero emission buildings, etc. Which technologies do you think will be the most important in achieving a low carbon economy by 2050 and how can the EU foster their development and deployment?

Organised stakeholders have different preferences regarding the portfolio of technologies to build a low-carbon future. Respondents consider energy efficiency (of houses, products, industry and transport), renewable energy (solar heat and power, wave power, geothermal, biomass) as well as cogeneration, heat pumps and smart grid as the most important solutions. In addition electrification or fuel cells are seen as a key technology, enabling for a decarbonised European energy and transport system. Some stakeholders point out other innovative technologies such as magnesium oxide cement clinker and coke free steelmaking.

Most of the NGOs are critical about nuclear energy and CCS, as they see them as risky and expensive solutions that would slow down a transition to low-carbon economy. Nevertheless there are some environmental NGOs that consider also these options, also in relationship with process emissions from industry. Business associations and companies on the other hand mostly support the development of CCS and the further use of nuclear. Not all of the stakeholders that responded to the questionnaire are convinced by biofuels, since they are linked to issues of land use, deforestation and biodiversity.

The EU could foster the development and deployment of this technologies portfolio through more investments in research and development (R&D) and awareness-raising. Furthermore the EU could provide financial support, develop facilitating regulations, codes and standards and ensure coherence among all its policy areas. Many stakeholders underline that a more ambitious emissions reduction target for 2020 would also accelerate the development and deployment of new technologies. More ambitious and binding targets for the use of renewables would play important role too.



Citizens acknowledge that one single technology would not solve all the problems connected to CO<sub>2</sub> emissions. Most of the citizens suggest keeping all technological options open and select technologies according to their economic efficiency and commercial readiness.

As preferred technologies to build a low-carbon future, individuals point out improving energy efficiency, renewable energy technologies, smart grids, zero emission buildings, cogeneration and electrical vehicles. According to most of the individuals the biggest potential lies by improving energy efficiency.

Least preferred options for individuals turn out to be CCS and nuclear power. CCS is a problem because it is too expensive and has limited availability of underground storage volume. Furthermore it would continue the dependence on fossil fuels. Nuclear is contentious because of security reasons and its radioactive waste. Biomass is also seen as problematic, since it might result in competition for land that could be used for forests or agriculture instead.

Nevertheless, there are individuals that consider all types of fuel including coal and nuclear with the argument that excluding some fuel would damage the EU's competitiveness, if the rest of the world still uses it.

Individuals give some proposals on how the EU could foster the development and deployment of new technologies. Firstly, they underline that even if we have all the technologies available, only the political will could bring a change. In this context some citizens suggest the introduction of strict regulations and standards. Secondly, communication, awareness raising and education about climate change issues would induce behavioural change and foster the deployment of new technologies. Thirdly, the EU should invest more in research and development, so that it can support the development of innovations.

## 10. EVALUATION OF QUESTION 10

### Question 10:

What are in your opinion the most important initiatives the EU should pursue in the next five to 10 years to secure a successful transition towards a low carbon economy by 2050?

Many NGOs suggest that the most important initiative for the next 5-10 years is to adopt a clear and credible timeline with interim emissions reduction targets for 2030, 2040 and 2050. Furthermore most of the NGOs insist on a more ambitious reduction target for 2020 - their proposals vary from - 30 to - 40% compared to 1990. Some stakeholders propose to introduce legally binding primary energy savings targets, to which all sectors will have to contribute. Many business associations on the other hand claim that the economic crisis made the achievement of reduction targets more difficult, because economic actors lack capital to invest in costly low-carbon technologies. Furthermore in the absence of international deal ensuring equally strong action from other economies, moving beyond 20% by 2020 would be counterproductive.

In addition, several stakeholders have indicated that the ETS system needs to be revised in order to limit the allowances carried over from the 2008-12 period into the post 2012 period, reduce the number of industries that are eligible for free allowances and implement much stricter rules for allowances from CDM projects in the EU-ETS.

Several stakeholders propose to use structural funds and other EU-funding more efficiently to support the transition to sustainable energy. In the next 5-10 years a lot could be done to improve the energy efficiency in the housing sector, which would bring benefits also to homeowners.

Furthermore many stakeholders indicated that the network infrastructure and especially the energy grids have to be adapted to allow flexibility for high levels of renewables generation, including decentralised sources. Professional associations recommend also to create positive feedback effects for equipment suppliers and industries through technically meaningful benchmark systems and R&D support.

Another recommendation from several stakeholders for the next 5-10 years is that the EU fulfils its ambition to support the building of CCS demonstration plants. In the transport sector, stakeholders recommend to remove unsustainable first generation biofuels from the EU targets for transport fuels.

The opinions of individuals regarding the most important initiatives that the EU should pursue in the next five to ten years in order to secure a successful transition towards a low carbon economy by 2050 differ. Some focus on the EU's emissions reduction target by 2020 and claim that it should be increased significantly, even in the absence of international climate agreement. Others look at the energy sector and suggest that the EU should invest much more in energy efficiency technologies and renewable energy. A mandatory energy savings target is expected to push down production costs and lead to more efficient and competitive products. Moreover individuals propose the creation of a competitive internal EU energy market. This will optimize the costs of power generation and CO<sub>2</sub> emissions reductions and will ensure security of supply.

Regarding the EU ETS, individuals assume that tougher offsetting standards should be implemented in order to ensure that companies are not able to trade and offset their emissions but rather change their business models. Also in the non-ETS sector tougher GHG reduction targets should be set.

As to transport, individuals have proposed to introduce taxes on kerosene for flights in the EU and make train prices comparable to low-cost flights. Furthermore some citizens suggested the internalisation of externalities in transport.

Additional proposals refer to investments of zero emissions buildings, fiscal changes to encourage climate friendly behaviour (i.e. no taxation for "home-grown" energy), labelling of products regarding their carbon footprint, limiting intensive livestock farming, tax on the border for carbon intensive goods, EU wide plan for future land use and others.

## **11. EVALUATION OF QUESTION 11**

### **Question 11:**

The EU Emissions Trading Scheme is a central element of EU climate policy. The EU wants to foster international climate action by reinforcing international carbon markets, e.g. by making links among emissions trading systems and by further developing crediting systems. What elements do you think should go into the EU low-carbon roadmap? (e.g. bilateral agreements to recognise international allowances and credits, sectoral crediting systems,

separate financing mechanism for the purchase of international credits from developing countries, etc.)

European business stakeholders expect the ETS to set a clear direction for companies and support long-term confidence in the value of low-carbon investments, especially in the power sector. At the same time however, the competitiveness of European industry should be protected. European business favours an ETS that contributes to emissions reduction but also provides adequate measures to mitigate competitiveness distortions and to prevent carbon and job leakage. As appropriate measures in this context are considered free allowances based on achievable benchmarks, compensation for indirect cost effects, ensured future use of offset credits and no imposition of border adjustment measures.

Some NGOs claim that market based solutions such as ETS and CDM have not been effective in reducing emissions. In order to make the ETS deliver real emissions reductions, firstly the cap should be tightened. Furthermore the EU should not allow that credits from action overseas become an alternative to domestic emissions abatement. Stakeholders underline that a carbon market can only be an instrument for emissions reduction if the stress is on the cap. Some stakeholders propose to use the ETS auctioning revenues to pay for emissions reductions in developing countries, while others prefer using these funds for financing the development of new energy technologies.

Some stakeholders consider the linking of different carbon markets as questionable proposal, as the modalities in the different markets vary. Consequently through linking them one could import the weaknesses of poor performing markets into originally better markets (as it happened with the linkage EU-ETS with the Kyoto Protocol through CDM). Instead some professional associations advise against bilateral crediting schemes, because they would dry up the CDM project pipeline. Other organisations highlight that linking carbon markets should not undermine domestic early action required until 2020 to stay on track with the 2050 targets. Some NGOs stress the fact that there are also other ways to foster international climate action, e.g. by co-operation with developing countries on technology transfer and sustainable forestry.

As to sectoral crediting systems, several stakeholders have focussed on the transport sector. Some stakeholders favour the inclusion of transport in the ETS or the creation of a new trading scheme especially for transport. Other organisations don't approve of such a measure, since they see more effective solutions for this sector such as vehicle standards. Many respondents consider the inclusion of aviation in the ETS from 2012 onwards as an improvement.

Individuals see the potential of international carbon markets as a measure to reduce CO<sub>2</sub> emissions differently. Some of them perceive the EU ETS as a very useful tool that could be extended also to other countries such as the USA, China and India. Others hold the view that CO<sub>2</sub> trading schemes are extremely expensive, mostly inefficient and prone to corruption. They claim that the instability of carbon markets deters actors from making long-term investment plans and that a carbon tax would provide more adequate condition for investments instead. Some individuals stress that the EU should rather focus on bilateral agreements with China and the USA, because multilateral agreements are not likely to bring any positive outcomes any time soon.

## 12. EVALUATION OF QUESTION 12

### Question 12:

Achieving a low-carbon future means investing in the medium to long-term. How can the EU roadmap help to create a stable environment to encourage investment in low carbon technologies? Would it be a good idea to consider a mid-term objective for 2030 and, if so, in what form?

Some stakeholders argue that a stable environment must be based on stable prices for GHG emissions, while others claim that investments cannot rely only on price signals. European Business suggests that most new technologies will require both "push" of R&D support and the "pull" of market development and consequently technology innovation should be pursued through a number of policies. Several industry stakeholders consider the EU Strategic Energy Technology (SET) Plan provides the right framing for a low-carbon and secure energy future, but that it still lacks financial resources. In addition, the EU should take responsibility about key improvements needed in the public sector: subsidies, tax credits and when necessary public sector financing. The EU should adopt appropriate legislation that encourages investments in renewables and energy saving.

Professional associations warn about the risk of carbon and job leakage, if the EU decides unilaterally to pursue ambitious climate policies. In order to ensure a fair international competition, some respondents suggest that a tax on imported energy intensive goods should be implemented, which is opposed by others. In addition, it is key to encourage well-working national support mechanisms such as the national feed-in tariffs for renewable energy. Some NGOs stress that public funding and a stable political environment are also very important for reducing the financial risk of investors.

Also in the context of creating a stable environment that encourages investments, many NGOs bring forward the argument of adopting legally binding midterm objectives for 2030, 2040 and 2050, which would show the way forward. The midterm targets assumed by NGOs vary from -40 to -70% CO<sub>2</sub> emissions cut by 2030. Also several business associations find the defining of interim targets useful, because this would provide European business with much needed predictability. Some organisations favour also the introduction of legally binding targets for the share of renewables in the energy mix. Nevertheless, other stakeholders advise against mid-targets. Some organisations adopt middle ground position and state that the debate on 2030 targets can start only after scientifically consistent 2020 and 2050 targets are set.

Individuals give different proposals on how the EU can encourage investment in low carbon technologies. Some individuals state that the Commission should firstly increase and meet its 2020 targets before looking ahead to 2030. There are suggestions that the 20% energy savings target for 2020 should become mandatory to deliver its major socio-economic and environmental benefits. As a key recommendation individuals point out to the need for stable policy environment that will provide investors with certainty.

As to mid-term objective, the opinions differ. Some individuals claim that since the investments in the power-sector are long-term, there is no need to introduce any mid-goals which could only disrupt the investment process. Other individuals consider intermediate targets as very helpful. They propose regular interim reporting on a three years basis and also

sanctions in case of non-compliance. As very efficient means to encourage investments some individuals state also EU-wide carbon tax with compensation at external borders.

### 13. EVALUATION OF QUESTION 13

#### **Question 13:**

We want to cut emissions in the EU by 80% to 95% by 2050. Some of the measures needed to achieve this could bring about more sustainable growth, extra jobs, accelerated innovation, cleaner air, increased energy security and lowering our vulnerability to external energy shocks. Which of these do you think should be top of the list? What should the EU do to maximise the benefits you think should be delivered in priority by future climate action?

For organised stakeholders the creation of new jobs is the top priority when it comes to additional benefits resulting from measures to cut emissions. Nevertheless some stakeholders are concerned that the new green jobs could be at the expense of existing positions. Professional associations look at the broader context and put emphasis on sustainable economic growth including maintaining manufacturing skills and technological excellence in the EU. The list of advantages resulting from pursuing low-carbon economy includes also energy security (less vulnerability of price shocks), cleaner air (important for health and biodiversity) and avoiding of humanitarian, social and economic catastrophe. Another advantage highlighted by stakeholders is the saving of costs – the sooner the EU takes on clear emissions reduction pathway, the cheaper it would be to meet them.

In order to maximise the benefits resulting from climate action the EU should go for solutions that clearly combine climate action with measures encouraging employment, security of energy supply and cleaner environment. Many of the already existing measures tackle successfully more than just climate change – e.g. renovation of houses, sustainable biomass from local sources, increased use of public transport, renewable energy produced in the EU. Energy efficiency and savings are recognised as bringing many benefits while being the most cost-effective and fastest means of meeting EU's climate objectives. NGOs underline that nuclear power and CCS lead to less employment and less improvement of security supply compared to other measures. The EU could maximise the benefits resulting from climate action also through binding targets and standards to support energy savings and renewable energy, stronger carbon and energy taxation and appropriate policy framework. Investments in innovation are recognised as very important for maximising the additional benefits from climate action.

As top priority for most of the individuals is the security of energy supply, that should be considered by future climate action. For most of the individuals it is important to lower the vulnerability of the EU to external energy shocks. Other individuals refer to the creation of new jobs that would result from the deployment of green technologies. In addition, health benefits of a climate-friendly future such as cleaner air, healthier food and more movement (due to walking and cycling) are very important for some citizens. Some individuals stress that even if co-benefits might be substantial, an emissions reduction strategy should focus on emissions reduction, because chasing other goals would only reduce its effectiveness.

## 14. EVALUATION OF QUESTION 14

### Question 14:

What sectors do you think may be most vulnerable to the negative impacts of climate change, and what policies do you think the EU should pursue to help them to adapt? Do you have any suggestions on the integration of adaptation policies in the Common Agriculture Policy, civil protection, environment, energy, transport, research and development policies?

According to NGOs agriculture and forestry are the sectors most vulnerable to the negative impacts of climate change. Professional associations and companies on the other hand focus on the impacts for energy-intensive industries. More concretely stakeholders point out that the most vulnerable industries are electro-intensive industries with international commodity markets. Other affected areas mentioned by stakeholders are biodiversity, environment (coastal and river-flood-prone areas), people with low income, the public sector (as immigration from threatened regions could rise).

In order to adapt, the CAP must be changed towards sustainable practices, such as preservation of natural resources and the limit of red meat consumption. Special focus should go to reducing total water consumption as well as pollution of water resources through taxes, charges and regulatory measures. As to energy-intensive industry, companies insist on protective measures – particularly in the form of effective support for the high costs that these industries have to carry.

Housing and transport should be adapted in order to ensure safety by extreme weather conditions. Stakeholders focus in particular on the need for infrastructure development, which would contribute to the creation of jobs. The EU structural funds should play a more important role in steering sustainable development in the most vulnerable to climate change regions.

Most of the individuals highlight agriculture as the sector that will be most vulnerable to the negative impacts of climate change. Extreme weather events such as floods and heat waves would threaten the agricultural production. Furthermore unsustainable farming practices and mono-crop production make EU agriculture vulnerable.

The energy sector is also considered by individuals as vulnerable to climate change. It is heavily dependent on CO<sub>2</sub> intensive fossil fuels and makes high transformation losses in electricity production. The energy sector would have to both mitigate its CO<sub>2</sub> emissions and adapt to climate change by improving efficiency and switching towards more renewable sources.

As other vulnerable sectors individuals have listed housing, forestry, fishery, biodiversity, health, fresh water supply and industry (especially oil and gas companies and automobile industry). Moreover people with low incomes will generally be most affected by climate change due to lack of resources to adapt.

As adaptation measures individuals refer to the creation of special funds dealing with climate related events. Furthermore species endangered by climate change should be protected. In addition, individuals propose to restructure the industry, so that skills and knowledge from undergoing industries can be re-used elsewhere.

## 15. EVALUATION OF QUESTION 15

### Question 15:

Do you have success stories that could lead to new initiatives for steering EU transition to a low-carbon economy you wish to highlight? Please add other further comments or suggestions here if you wish.

Organised stakeholders point out a number of success stories<sup>1</sup>. Some NGOs made a detailed analysis of best practices across the whole EU and argue that both successes and failures can be found in every EU member state. Highlights are for example the binding 2050 Climate Change Act legislation in the UK, the almost fossil-free electricity production in Sweden, the steady frameworks for renewable energy investments in Denmark and Germany or the ambitious forestry policies in Latvia. Other positive examples presented by NGOs are heavy urban vehicles running on bio-methane, free parking for methane vehicles in Swedish cities, efficient Combined Heat and Power and district heating used in Finland, programmes to increase the efficiency of governmental buildings in Catalonia and others.

Trade sectors inform about the initiative "Retailers Environmental Action Programme" that enables stakeholders to exchange good practices on subjects such as energy efficiency of stores and marketing campaigns. The electricity sector reports about "The Energy Wisdom Programme" – an initiative of electricity companies for reporting innovative projects aimed at reducing carbon emissions and improving energy efficiency. As another positive example industries point out that in several EU Member States, the food and drink sector is participating in Long Term Agreements (LTAs) on energy efficiency between government and industry.

Companies highlight also some other initiatives such as: "FREE" – Future of Rural Energy in Europe – that brings together various stakeholders to address energy issues affecting rural areas, including their high carbon footprint and connected poor energy efficiency; an energy efficiency campaign "Save more than fuel" where petroleum industry in collaboration with the European Commission informed consumers how to save energy and reduce CO<sub>2</sub> emissions; a project called CHANGE – Chambers promoting intelligent energy for SMEs, which helps SMEs to optimize their energy use and the EU coalition initiative where 30 companies have worked together to analyze the potential of different power-trains in road vehicles;

Some representatives from business mention also the co-processing of waste in the cement industry as a success story, because currently it leads to the equivalent of over 4 million tones of coal saved every year in the EU. Other companies highlight demonstration projects of so called "Zero Emissions Villages" which are 100% renewable energy villages in rural areas. Other companies inform about the training programme "European Energy Manager" whose aim is to promote energy efficiency in Europe.

Individuals point out several examples that they consider success stories in the context of the EU's transition to low-carbon economy. One example is the Energy Service Company (ESCO) which offers a broad range of energy solutions and in particular energy saving

---

<sup>1</sup> The examples of success stories have been provided by the respondents to the questionnaire on a voluntary basis and have not been verified by the Commission.

projects. Often the savings in energy costs are used to pay back the investments of the project over the period of several years and if the investment doesn't pay off, ESCO is often responsible to pay the difference. A second example is the initiative of the Danish Government to offer local communities the chance to co-invest in wind farm development. Since feed-in tariffs ensured more stable return than banks or stock markets, the public response on them was very positive.

## **16. ANNEX: RECEIVED WRITTEN CONTRIBUTIONS**

Please visit our website to see the specific contributions and position papers received. Only contributions from stakeholders which indicated that their contribution should not be treated as confidential are shown. All contributions have not been edited and are shown as submitted. They do not represent the opinions and views of the European Commission and are sole responsibility of those submitting the comments.

[http://ec.europa.eu/clima/consultations/0005/index\\_en.htm](http://ec.europa.eu/clima/consultations/0005/index_en.htm)