Generalitat de Catalunya
Departament de Territori i Sostenibilitat

GREEN PAPER
A 2030 framework for climate and energy policies

Contributions from the Government of Catalonia

1. QUESTIONS

1.1. General

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

First of all, it should be stressed that it is quite likely that not all the 2020 targets regarding energy and climate are going to be met, as the European Union itself admits.

In the field of renewable energy, as the European Commission's Green Paper states, 'new measures will be needed for most Member States to achieve their 2020 targets reflecting the scaling back of support schemes and more difficult access to finance in the context of the economic crisis'.

Similarly, with regard to the objectives established for energy saving and efficiency, the Green Paper mentions that that the Energy Efficiency Directive adopted in 2012 will help drive progress in this area, although the Commission's preliminary analysis suggests that under current policies the 2020 target will not be met. In fact, the Commission's Energy Efficiency Plan 2011 (COM [2011] 109 final) states that recent Commission estimates suggest that the EU is on course to achieve only half of the 20% objective.

Along these lines, to avoid a further failure to meet objectives in this area for 2030, these targets must be made obligatory.

This should be combined with the development of reliable methods for assessing the results in order to avoid using concepts such as 'gross final energy consumption' to justify objectives that appear more ambitious than they really are. In this respect, it is better to use as a reference variables or indicators directly associated with the global standard energy balances.

1.2. 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?

European energy and climate policies are of key importance in driving economic recovery and improving competitiveness. The objectives must be ambitious in order to drive the transition towards an efficient, low-carbon energy model, encouraging progress towards innovation, transnational infrastructures, local solutions, the creation of jobs and energy at low, stable and predictable prices.

European objectives regarding renewables, energy efficiency and the reduction in GHG emissions should be both integrated and consistent.

The objectives must be defined using a matrix scheme. The sector-based approach must be combined with the sharing out of work between the Member States, both are necessary. Some sector policies have a community component and require major agreements or legislative action on a European level. Others depend on the Member State in question. Along these lines, it is important to remember that in many cases the State lacks the power to act in all the important areas, and this necessary jurisdiction is held by other levels of the public administration. To guarantee the effective application of public policies, a mechanism for the territorialisation of objectives must be implemented, accompanied by the territorialisation of resources, such as for example the income from the auctioning of emission allowances.

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

A binding target for energy savings and efficiency needs to be set for 2030. As stated in the European Commission's own Green Paper, unlike the targets for greenhouse gas (GHG) emissions reduction and for renewables, the current approach to energy efficiency is based purely on a combination of aspirational targets and binding measures.

This objective should be broken down by economic sector. Along these lines, it would be a good idea to maintain a common target for the whole EU with regard to each industrial subsector as well as the other sectors (domestic, commercial, primary and transport). Sector objectives could be defined for each Member State, addressing the specific requirements of each member.

These objectives would have to be defined in absolute terms (ktoe energy savings for 2020 in comparison with the consumption at base year) to avoid any argument over the choice of the so-called baseline or reference scenario used to calculate energy savings.

When defining the objectives, it is essential to bear in mind the future evolution of the economy in the EU Member States. Thus, within the current framework of global financial and economic crisis, the GHG emissions reduction target could be met without meeting any of the energy policy objectives.

However, although the European Commission's Green Paper mentions that 'while an absolute target might better ensure the overall savings objective, a relative target might better take into account the dynamics of the EU economy and the reality of economic development', the solution is not to establish a relative objective, but rather to carry out a periodic revision of the initial objectives, based on the real possibilities (evolution of the economic scenario, capacity for investment, etc.) for developing the identified sectoral savings potential.

- 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_2 reductions for passenger cars and light commercial vehicles?

The sectoral objectives must be based on a cost-benefit type of analysis, so that priority is given to strategies that produce more energy and lead to a greater reduction in GHG emissions at a lower economic, social and environmental cost to society.

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

In order to achieve this, these sectoral technological objectives must be calculated properly and by means of energy and technological prospective analyses (such as a roadmap), consistent with the medium and long-term global objectives.

Bearing this in mind, it should be stressed that this Green Paper and its associated documents reflect a worrying inconsistency in the approaches adopted by the EU's energy and climate change policies. The EU is committed to the global implementation of an international policy that attacks the underlying global problems associated with climate change. At the same time, there are serious doubts about the impact of the energy policy measures adopted by the EU itself to deal with climate change (renewable energy and energy savings and efficiency) on the European domestic energy market, even if the latter is a fragmented, inefficient market

that has a long way to go before it meets the target of becoming a true European single market.

Thus, on the one hand the European renewable energy targets are not being met and, while on the other, requests are being made to reform the aid mechanisms that guarantee growth, in order to avoid distortions in the market and prevent their likely impact on energy prices, something which could cause the divergence from the objectives to become even more pronounced.

The current financial and economic crisis should not be used as an excuse to limit the objectives set. On the contrary, renewable energy together with energy savings and efficiency form part of the solution to our planet's energy and climate challenges, and should not be seen as part of the problem.

For example, rather than reducing the work devoted to developing energy efficiency and savings policies and promoting renewable energy, detailed studies should be made of the Member State fossil fuel subsidies.

The European Commission itself, in its communication, '*Renewable Energy: a major player in the European energy market*' (COM [2012] 271 final) of 6 June 2012, states that in order to ensure renewable energy technologies become competitive and ultimately market driven, the policies that hinder investment in renewables should be revised and, in particular, fossil fuel subsidies should be phased out.

Moreover, within the framework of a strong boost to the new green economy as an emerging sector, policies aimed at changing the energy paradigm may mitigate the adverse effects of the current economic crisis. However, beyond the current context, the long-term strategy must be a firm commitment to a new energy sector as a vector towards economic growth for the European Union.

The consolidation of its own renewable energy technology—which requires greater implementation—the overhaul of industries such as the automobile industry in order to make the most of the opportunities created by electric or hybrid vehicles, and commitment to companies and services linked to energy savings and efficiency, are all economic policies that generate employment and wealth in the medium and long term.

The generation of employment is a key element that should form part of current and future responses to the challenges brought on by the economic and energy crises. Current experience in Europe and the rest of the world shows the great potential that new energy polices based on energy savings and efficiency and renewable energy have for job creation. The key to this capacity for generating employment is the greater labour intensity of these activities, since it is calculated that, for an equal investment, renewable forms of energy generate twice as many jobs as conventional ones.

- 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?

The importance of energy saving and efficiency policies and of the promotion of renewable energy must be underlined, not only in the fight against climate change, but also for addressing the future challenges posed by the growing scarcity of fossil fuel resources, which among other things leads to a progressive rise in the prices of fossil fuels. Thus, these policies are also of key importance for the security of energy supplies in the EU.

In this respect, energy and climate change polices should be dealt with at the highest strategic level in the field of political decisions, in a coordinated manner, so that they can contribute effectively to converting the European economic system into a new model based on sustainable development. For this reason, the strategies should focus on two objectives: low energy intensity and low carbon emissions.

1.3. Instruments

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

Yes, one of the reasons why the targets set out in the EU Climate and Energy Package are not being met is that within the EU policies are being applied that pull in the opposite direction.

A clear example of this is that of fossil fuel subsidies, which clearly contradict the aims of the Climate and Energy Package, in its objective of cutting GHG emissions, in the promotion of national renewable energy sources and in its aim to drive forward energy management and efficiency practices in industry.

Moreover, the mechanisms favouring the transparency and effectiveness of these measures need to be improved by carrying out comprehensive analyses of the application of the different policies.

The political instruments applied must take into account all the public administration's levels of jurisdiction. The top-down policies applied have not been sensitive enough to ensure their effective application, in other words at local and regional levels.

A clear example of this is the allocation of the income from the auctioning of emissions allowances, where, in Spain at least, only a limited amount is being applied to climate change mitigation and adaptation projects.

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

Action should be taken at different levels, in accordance with the requirements, opportunities and potential of each Member State.

The period of return on investments in carrying out the actions is a fundamental indicator for defining the means of implementation.

For those that involve payback periods on low investments: it is essential to improve the technical training of and information available to the target public, as well as access to funding, which in some cases should be accompanied by some kind of legislative action to regulate consumption, ban certain products, etc.

For those that require payback periods on high investments: they should form part of the EU's major strategic areas of action. In the case of emerging renewable energy technology or major rail transport infrastructure, for example, their introduction does not generate a tangible economic return in the short term, but instead helps create a more competitive Europe, with greater energy independence, with lower and more predictable energy prices and lower carbon emissions.

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

If the Member States do not show a willingness to develop a single internal energy market, this market will never exist and the current fragmentation and diversity of instruments in each of the Member States for dealing with specific problems in their own energy policies will continue.

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

First of all, there is a need for excellent diagnoses of the initial information and to offer as much information as possible to the consumer sectors to enable them to make the optimal strategic decisions on medium and long-term investments in energy from the point of view of the cost-benefit analysis. As indicated in one of the replies given above, the strategies and actions that should be given priority are those that offer higher profits in terms of energy and the environment and lower global economic, social and environmental costs to society.

- How can EU research and innovation policies best support the achievement of the 2030 framework?

At present, European clean technologies represent one third of the global market, generate economic growth and employment, and create new markets and new business models.

In order to maintain and improve this positioning, a clear indication of the 2030 targets is required and their legislative security must be guaranteed. This is essential in order to ensure continued progress is made in the EU's research and innovation policies.

In the case of immature technologies, support from the public administration will be required through a combination of measures including tax incentives and, in specific cases, direct subsidies.

1.4. 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?

The development of climate and energy policies is closely linked to job creation, economic growth and competitiveness, and it is precisely for this reason that it is one of the basic constituents of the European construction process.

The key is to give a clear, unmistakable indication of Europe's ambitions in terms of energy and climate policies. The private sector will then incorporate it fully as a strategic factor and investments will be planned, and economic growth and employment generated, thus increasing competitiveness.

Along these lines, elements that that could be strengthened include:

- Clear regulatory development favouring energy saving and efficiency actions
- Clear regulatory development to facilitate actions that promote the generation of indigenous renewable energy sources
- Clear regulatory development favouring domestic consumption and distributed generation.
- Exemplification of the administration in the purchasing and use of goods and services.
- In special cases, the provision of support to the private sector, to favour its transition from traditional activities to innovative activities within the framework of a low-carbon economy.

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

Europe's energy reality is an increasing scarcity of fossil fuel resources, which will lead to a rise in the price of energy. With regard to indigenous energy production, the European Union is not committed to domestic carbon and cannot increase its conventional oil and natural gas production, since its indigenous production is in decline. Nor can it resort to significant production of unconventional fossil fuel resources (as mentioned in the next question). Moreover, the European Union does not have a joint future commitment to nuclear energy, leaving this option in the hands of each Member State.

Thus, energy policies designed to meet the challenge of high energy prices must be based on energy savings and efficiency and on the promotion of renewable energy, as long as they are considered an investment in the future beyond the short term. The economic cost of the introduction of these policies (energy savings and efficiency and renewable energy) is clearly good value in terms of the long-term benefits that they would bring our society.

Moreover, bearing in mind the likely increases in the price of energy in the future, European energy policy should consider the situation of vulnerable consumers. The correct policy to deal with the problem of vulnerable households in terms of the affordability of energy is the creation of social housing, low-cost, energy efficient construction, as well as the promotion of technologies that favour energy savings and the introduction of renewable forms of energy in the domestic sector.

- 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 implementation of energy and climate objectives is a strategic issue in European integration. It is a factor required for economic growth, improved competitiveness and job creation. The transition to this new energy model will help bring about lower, more stable and predictable energy prices. An improved energy model is essential for Europe's survival.

Over the past few years, the EU has shown considerable leadership in working to achieve a global agreement on climate change. However, this has been insufficient and not as successful as expected. It remains to be seen whether this agreement can be reached at the 2015 Summit. However, in addition to exercising this leadership, Europe must also implement its own energy and climate policy without it being totally dependent on the achievement of this global agreement.

It is clear that global negotiations are not advancing at the required pace. Nevertheless, many countries that are not facing up to their responsibilities when it comes to international agreements are developing their own energy and climate policies.

Europe has to design and implement its own plan for the economic, social and environmental polices that it generates and this policy should not be linked to the achievement of a global agreement.

- 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)?

The climate and energy policies that need to be established for 2030 are linked to the EU being able to move towards achieving a low-carbon economy by 2050. In this respect, if we

want to attain this objective, the 2030 targets must be sufficiently ambitious to allow it to happen.

Europe must design and implement its own energy and climate policies and not link them to the achievement of a major global agreement.

Nevertheless, European industry also needs to show a certain amount of flexibility, so that its competitiveness is not compromised within the framework of a global market.

Within the industrial sector, measures that improve the quality of life and of the environment, as well as becoming more efficient as a result of an increase in the competitiveness of European industry (lower costs for energy savings or a reduction in emissions) need to be applied. The most expensive and least certain measures in terms of technical and economic viability should only be carried out as international negotiations are clarified or as a sufficient degree of maturity is achieved because only in this way will competitiveness with respect to reduction in emissions and energy consumption be maintained.

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

Clear and stable energy and climate policy objectives.

Eliminate subsidies for the consumption of certain fossil fuels or technologies that can damage the environment.

Regulatory security, since innovation polices are intrinsically political in the medium and long term.

In the case of certain emerging technologies, these should be supplemented with financial support.

In this context, Europe will maintain and improve its innovative capacity since the capacity, technology and know how already exist.

The current context of economic crisis means that a large number of actions aimed at generating renewable energy, energy savings and efficiency and reducing GHG emissions are not carried out due to a lack of funding, since in many cases they involve very short payback periods.

These actions will favour the creation of jobs and revitalise the economy in addition to helping achieve the energy and climate objectives.

In the case of the Spanish Government, the jurisdiction to act in these areas is often held by the autonomous communities or the local authorities. Unfortunately, the funds generated by auction are not distributed amongst these competent organisations or applied to these types of projects.

The income derived from auction plays an essential role, since in the current context of economic crisis it represents one of the few new sources of funding. However, to date, the way in which this funding has been applied suggests that it is a good opportunity that has been missed.

- 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?

The European energy policy should not count on a spectacular development of shale gas in Europe. The Joint Research Centre (JRC), in its report 'Unconventional Gas in Europe: Potential Energy Market Impacts', says that only according to the most optimistic hypotheses regarding reserve sizes and production costs, could shale gas have a significant impact on the natural gas market in Europe. In this scenario, the reduction in the production of conventional natural gas would be made up for by an increase in the new production of unconventional natural gas, maintaining the dependence on external energy at the current level.

Moreover, according to the assessment of energy resources presented in the recent report published by the U.S. Energy Information Administration, the technically recoverable shale gas resources in the whole of Europe are very limited, amounting to only 6.5% of the world shale gas resources, far lower than the amount available in North America, China, Algeria and Argentina.

Thus, as indicated in the previous answer, the indigenous energy production policy should focus on promoting renewable forms of energy, which, unlike fossil fuels, also help reduce greenhouse gas emissions.

- How can the EU best improve security of energy supply internally by ensuring the full and effective functioning of the internal energy market (e.g. through the development of necessary interconnections), and externally by diversifying energy supply routes?

One of the strategies that should be promoted is the development of new energy interconnections between Member States, particularly in the case of the Iberian Peninsula. The Green Paper states that: 'A strong accent should be put on investments in infrastructure, in particular in networks, that will deepen EU market integration and ensure sustainability, competitiveness and security of supply."

Along these lines, in the future the planned international MIDCAT interconnection between Spain and France via Catalonia may become a high-capacity interconnection, through the French gas system and with networks located in the centre and north of Europe, leading to a significant improvement in the integration of the Iberian and European natural gas markets.

It is important to bear in mind that the increase in the gas interconnection capacity between France and Spain may contribute considerably to the security of natural gas supplies in Europe, through diversification in the supplier countries by increasing the means of supplying the gas from Africa (Algeria or, in the future, Nigeria, through the Trans-Saharan gas pipeline), reducing dependence on Russia and making it easier to deal with possible contingencies in the supply of Russian gas.

1.5. Capacity and distributional aspects

- 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?

For the equitable distribution of effort, the potential of each Member State should be weighed alongside its capacity for a) energy savings and efficiency, b) renewable forms of energy and c) a reduction in GHG emissions.

The socioeconomic status of each Member State should also be considered, since it defines the country's capacity to cope with large investments.

The different types of action carried out should be considered, in accordance with their cost.

Some of these actions involve very short payback periods. In the case of Member States that are in an economic recession, the major barrier to their development is access to funding. Thus, financial mechanisms must be implemented that allow access to credit, so that these projects can be executed.

With regard to actions that involve major investments in infrastructure, the Member States that are in economic recession cannot cope with these expenses right now and European cross-border funding mechanisms must be defined.

Moreover, and in order to guarantee the effectiveness of the policies, it is also important to consider that because the capacity within each State varies depending on the region, the States must be encouraged to distribute the effort with regard to both objectives and resources between the different parts of their country. In addition, as we have noted in other replies, it will be important to ensure that the management of the measures necessary to apply to achieve the objectives and the resources is carried out by the competent organisation within the State, since this is often a regional or local body.

- 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?

The distribution of effort must be accompanied by the distribution of resources.

The energy and climate objectives must be shared out on a territorial basis among the competent organisations within the State. This territorialisation must be accompanied by the territorialisation of resources.

These competent organisations have the knowledge and management capacity to identify which actions will allow them to achieve the objectives and at the same time maximise economic growth and job creation.

- Are new financing instruments or arrangements required to support the new 2030 framework?

In order to carry out any action, it is always preferable to have additional funding. However, we believe that it is important to ensure that the existing financing instruments work properly first.

This is not the case for the income generated by the auction of emissions allowances in Spain, since only a small percentage of this income is used to help achieve the Climate and Energy Package objectives.

The application of any current or future financial instrument must be finalistic, so that citizens can visualise and understand the purpose of the effort they are being asked to make. Transparency and traceability of the origin and the application of the funding are also necessary.

At present, in Catalonia it is apparent that one of the major barriers to the development of projects is that of access to funding. There are opportunities, the technology and the know-how are all available, but there is very little funding to go beyond the initial investment.