



Federal Council for Sustainable Development (FRDO-CFDD) Advice on the Implementation in Belgium of the Kyoto Protocol to Curb Greenhouse Gas Emissions

Endorsed by the Council's Plenary Assembly, on September 28, 1998

SUMMARY OF THE FRDO-CFDD'S KEY CONSIDERATIONS

Preface

The Council points out that since 1992 several advice have been given concerning energy policy and curbing greenhouse gas emissions. This advice reflects the debate that was held during the symposium entitled "**The Kyoto Protocol: a constraint or an opportunity ?**" organised by the Council on May 19, 1998; the event was attended by nearly 300 people.

1. Introduction

1.1. General assessment of the Protocol

- The Kyoto Protocol fits into the context of the Framework Convention on Climate Change, which Belgium ratified. However it is but one step towards an effective climate protection policy.
- The industrialised countries **will be required to curb their emissions much more after 2012** (something on the order of **-50% by 2050**). So preparations have to be made forthwith.

1.2. What does Kyoto mean for Belgium ?

- For Belgium, the Protocol means a reduction in greenhouse gas emissions of 7.5% below 1990 levels by 2010 and this calls for a **genuine reversal of past trends**. **The Kyoto aim is not to exceed 126.6 million CO₂ equivalent¹ tonnes by 2010**, even though **1996 emissions already totalled 146.8 million CO₂ equivalent tonnes in 1996, meaning 16% more**.

¹ This figure does only take account of the three main greenhouse gases for which reliable information was available in 1990: CO₂, CH₄ and N₂O. The impact made by the last two gases is expressed as CO₂ quantities having an equivalent climate impact, hence the term "CO₂ equivalent" tonnes.



2. Lessons of the past: failure of half measures

- The national CO₂ emission reduction **programme, defined in 1994** in pursuance of the Convention, is **clearly inadequate**: CO₂ emissions in 1996 were 16.5% higher than the target set for 2000.
- The Council lists the **main reasons for the failure** of the Belgian climate change prevention policy: a lack of political commitment, shortage of funds, a scatter-gun approach to assigning responsibilities, a failure to reflect climate policy in the Government's other fields of action, an overly lax definition of the aims and measures contemplated, lack of regular assessment and remedial action.
- Without seeking to issue a verdict here (see section 3.4. of the advice) on the economic justification for the "**energy/CO₂ tax**", which was supposed to underpin the national measures at the European level, the Council notes that the tax **has never come into being**, even though the 1994 plan was based to a large extent on such a tax being applied.
- The Council has also here assessed the **progress achieved since its 1996 advice on seven themes**: energy taxation, transport taxation, sectoral-specific agreements, co-generation and discouraging the use of air-conditioning, renewable forms of energy, the profit mechanisms for energy distributors and development co-operation. The **achievements are mixed** to say the least.
- **The Council argues the need for the 1994 programme to be given a root-and-branch reassessment** in the light of the Kyoto Protocol requirements and **drawing lessons from past failures**. The revised programme should **feature specific measures making a genuine impact, a credible and clear timetable**, be backed up with **specific and sufficient budgetary and operating resources** and be seconded with **information and assessment** systems.

The Council wants to be fully involved in the **consultations** accompanying the preparation of this revised programme.

3. The council's climate policy recommendations

Aware of the risk that Belgium could once again suffer a setback by the year 2012 if fundamental changes are not initiated as part of the greenhouse gas emission reduction policy, the Council urges the Federal Government to incorporate climate change prevention considerations into its policy-making programmes and to do so in close cooperation with the other relevant public authorities. The revised greenhouse gas emission reduction programme should comprise: (a) a genuine political commitment, (b) support programmes, (c) continuing information, awareness-raising and training campaigns, (d and e) action and follow-up programmes.



3.1. Political commitment

- Hitherto the **political will has been inadequate** and the human and financial resources have remained insufficient.
- The Belgian climate policy should give rise to a **parliamentary debate**, should be more effectively co-ordinated and should be integrated in a comprehensive sustainable development policy based on a long-term approach.

3.2. Support programmes

- **Better resources are needed to be able to participate in international negotiations and conduct the required research** into climate systems, the impact and means of curbing emissions.
- The Council is anxious to draw attention to the fact that **Belgium is due to take over the European Union Presidency in the year 2001**, this will **coincide with an important session of the** Conference of Parties to the **Climate Convention**. Hence the need to be prepared.

3.3. Promoting awareness, information and training

- It is time to start taking action to promote a valid system for **education in sustainable development** at all school levels.
- People need to be **aware of the overall energy bill** for consumers (meaningful suggestions are offered on this subject).
- In a bid to guarantee the **credibility** of climate policy, the Council believes the **Federal Government should set an example in the context of its own activities** by developing and improving "local Kyoto Implementation Plans".

3.4. Action and follow-up programmes: general principles

The Council recommends using the following criteria to make a priori and retrospective assessments of what steps to take: **(1) Significant contribution** to reduce emissions; **(2) Integrated cost-benefit** assessment per tonne of greenhouse gases in environmental, economic and social terms; **(3) Identifying barriers** and ways of removing them; **(4) Implementation deadlines and results deadlines**; **(5) Positive spin-offs in other sectors**, such as employment or public health ("win-win" measures).

The Council also advises the Government:

Not to neglect, a priori, any kind of instrument when deciding what kind of policies to implement.

To be totally certain to consider what **long-term implications** the measures taken will have for **infrastructures, land planning and product standards**.



As for **energy charges**, the Council is, under certain conditions, in favour of increasing them. A minority within the Council² is opposed to the idea. This point is later on considered in more detail.

3.5. Action and follow-up programmes: sector-specific approach

3.5.1. Electricity

a) General framework for the sector: opening up the electricity market

The Council recommends that the law on the **transposition of the EU “electricity” Directive (96/92/EC)** should integrate a **chapter on long-term planning** for production facilities, **as part of public service requirements for the sector.**

b) Production

The Council advises the Federal Government to seek, in consultation with the social partners and the electricity sector, the most suitable way of using the **economic, regulatory and other instruments** resulting in particular from the transposition of the Directive 96/92/EC for the implementation of this policy.

c) Distribution and consumers

The Council would like energy distribution companies to focus more on the provision of **energy services promoting energy savings** (making the **Nega-Watt** profitable).

The Council also stresses the potential initiatives to be taken in terms of charges for residential electricity consumption and the system of energy charges for different categories of customers.

3.5.2. Transport

The Council would like to see a significant improvement in the measures taken in the passenger and goods transport sector. The strategies the Council thinks are necessary may be divided into four categories: 1) **reducing the level of demand** for road and air transport and bringing about a **change in users’ mentalities**; 2) ensuring a significant improvement in the provision of **alternative means (public transport, bicycle, inland waterway transport, multimodal transport³, telematics)**; 3) technical **improvement of vehicles and aircraft**; and 4) lending support to all these approaches via **suitable taxation measures** so as to **internalise, preferably in a European context, external costs** related to the various transport systems, including road and air transport. The

² Representatives of the employers and the energy producers.

³ A single term to mean integrating the different modes of transport.



Council calls for the valid implementation of the 1994 National Programme's measures provided for in this context and makes specific suggestions, in particular: a joint Federal/Regional air quality programme, curbing aircraft emissions, promotion of the complementary relationship between the bicycle and the train, development of telematic systems so as to reduce demand and manage the provision more effectively.

The Council also wants the Government to **consider the justification**, in ecological, economic and social terms, for **superimposing a "safety catch mechanism" in the system for setting fuel prices**. The general principle for this would be that the final selling price for fuels would reflect only the upward trend on international markets and not the downward one. A minority⁴ is opposed to the principle of such a safety mechanism.

3.5.3. Residential and tertiary

The Council draws attention to the important part **land planning** plays, in the long term, in emission' changes. In particular, it recommends encouraging the construction of "low-energy" properties, studying the building certification system, using structural measures to reduce the use of air-conditioning or promoting the use of efficient domestic electrical appliances.

3.5.4. Businesses

In particular, the Council is in favour of concluding branch **agreements** to reduce their specific energy consumption, with the understanding that more stringent conditions might be imposed should there be a need to meet new international obligations. Businesses should also seek to supply the market with goods, services and technologies that are much less energy intensive.

3.5.5. Agriculture, horticulture and forestry

The Council recommends schemes for encouraging the **conversion towards less energy-intensive systems of farming**, particularly by reducing the amount of chemical fertilisers used. It also calls for the use of **renewable forms of energy** to be promoted for agriculture, horticulture and forestry.

⁴ Representatives of employers; representatives of energy producers.



4. Specific recommendations for the implementation of the Kyoto Protocol

4.1. General measures

- The Council considers Belgium ought to **ratify the Kyoto Protocol within a period of time at least similar** to that of our main **EU** partners. This would display willingness to face up to the climate problem and send out a clear signal to the key players.

In the case of Belgium a minority of members⁵ believe that the 7.5% target can probably be fully achieved only if the United States and Japan ratify the Protocol. These same members consider that owing to the need for its businesses to be competitive, Belgium should, like the Netherlands for this specific point (according to the way these members interpret the position adopted by the Netherlands⁶), make its ratification and application of the Protocol on its territory conditional on the United States and Japan ratifying and applying the Protocol on the same terms.

- **The Council wants the responsibilities** related to the measures that need to be taken to implement the Kyoto Protocol to be **specified as a matter of urgency**, whether these apply to **the authorities or the different sectors** involved.

4.2. Flexibility instruments

- The Council sees advantage in considering the potential for using these instruments in addition to internal measures.
- The Council believes **the main effort for reducing emissions of CO₂ should be focused first of all within our own borders**, so as to ensure the Belgian economy (energy infrastructure, transport, means of production and consumption) is better prepared for the heavier cuts expected after 2012. However, on the basis of a minimum cost approach toward the effort, it might nonetheless be worthwhile making use of a joint implementation and a clean development mechanism.
- Numerous practical difficulties have to be discussed. **The Council will be returning to these matters in a later advice.**

⁵ Representatives of employers; representatives of energy producers.

⁶ Draft coalition agreement of July 18, 1998.



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Contributors to the drawing of this advice



Advice

- on the implementation in Belgium of the “Kyoto Protocol on the reduction of greenhouse gases”
- requested by the Secretary of State for the Environment, Mr Jan Peeters
- prepared by the work group on “Energy and Climate” of the Belgian Federal Council for Sustainable Development (FRDO-CFDD)
- Approved by the General Assembly of the Council on 28 September 1998

The Federal Council for Sustainable Development, hereinafter referred to as “the Council,” thanks the Secretary of State for the Environment, Mr Jan Peeters, for his request for an advice of 11 June 1998.

Preface

At the symposium “**The Kyoto Protocol: Constraint or Opportunity**” organised by the Council on 19 May 1998, the Secretary of State for the Environment, Mr Jan Peeters, announced that he would ask the Council for an advice on the measures to be taken in Belgium in order to implement the Kyoto Protocol. In his letter of 11 June 1998, the Secretary of State specified that *in its Advice, the Council must decide on the most appropriate instruments to meet, under acceptable socio-economic conditions, the commitments arising out of the Protocol, and in particular the objective of reducing greenhouse gases agreed in the Council of the European Union of 16 June 1998 (for Belgium: -7.5% for 2008 – 2012).*

The Council refers to several advices issued in connection with energy policy and the emission of greenhouse gases: the advice issued by the National Council for Advice on the Climate, the Environment and Development on “Climatic Change” (1992), and the advices issued by the National Council for Sustainable Development concerning: “the Belgian national programme for the reduction of CO₂ emissions” (1994), the “recommendations on energy policy in a sustainable development perspective” (1995) and the “advice on the draft First Belgian National Communication to the Conference of the Parties to the United Nations Framework Convention on Climate Changes and on the current state of the Belgian national programme for the reduction of CO₂ emissions” (1996).

The symposium organised by the Council on 19 May 1998 made it possible to prepare the advice properly. The symposium was a resounding success: 265 persons took part, a figure that shows that officials from many organisations consider that the Kyoto Protocol is both a constraint and a challenge for our country. The texts of the presentations, the summary, the speech of Secretary of State for the Environment J. Peeters, the minutes of the discussion, the conclusions and the list of participants are available in Dutch and French at the FRDO-CFDD.



- The Council pointed out that this advice was prepared under rather difficult conditions. In his letter of 11 June 1998, the Secretary of State for the Environment indicated that he wanted the advice by October 1st. This means that most of the seven preparatory meetings of the work group on “Energy and Climate” of the Council had to be organised during the summer holidays.
- The Kyoto Protocol provides “flexibility instruments” such as negotiable emission permits, so that the parties can achieve their objectives. Numerous practical difficulties should nonetheless be discussed in the Conference of the Parties. The Council will come back to these questions in a subsequent advice.

1. Introduction

The Kyoto Protocol to the UN Framework Convention on Climate Changes aims to reconcile humanity with the ultimate objective of the Convention, i.e. to preserve a “viable” climate by stabilising “the concentration of greenhouse gases in the atmosphere at a level that prevents all dangerous anthropogenic disturbance of the climatic system” (Article 2 of the Convention).

In the Kyoto Protocol, the industrialised countries undertake to reduce or limit their respective emissions of six (families of) greenhouse gases (CO₂, CH₄, N₂O, PFC, HFC and SF₆)⁸ between 2008 – 2012 so as to reduce the total of their emissions by at least 5% by comparison with their 1990 level. In this framework, the European Union has undertaken to reduce its emissions by 8% and Belgium by 7.5%.⁹

1.1. General evaluation of the Protocol

If implemented, the Protocol will constitute a real *trend reversal* for the industrialised countries. According to the Secretariat of the Framework Convention on Climate Changes, **their emissions are expected to increase by 24% in 2010 (compared with 1990) in the absence of the Protocol, whereas the latter provides for a reduction of at least 5%.**

Nevertheless, the **Protocol is only one step** on the road to the reduction of emissions needed to achieve the ultimate objective of the Convention. Some greenhouse gases accumulate in the atmosphere for a long time (some one hundred years for CO₂), and **their emissions must be significantly reduced** in order to **stabilise their concentration**. According to Prof. Bolin (1998)¹⁰, President of the inter-governmental party of experts on climate change (IPCC), the Protocol just manages to postpone by a year the time when a “dangerous anthropogenic disturbance” of the climatic system would have been caused by emissions of greenhouse gases.

⁸ In Belgium, in 1996 CO₂ accounted for 84% of the aggregated effect of these gases (according to the Inventory of Emissions of Greenhouse Gases in Belgium, 1990-1995/6. Report to the Conference of the Parties to the Convention concerning climate changes. Ministry of Social Affairs, Public Health and the Environment. ECS/206/17542f, June 1998, 51 pp.).

⁹ European Council decision of 16 June 1998.

¹⁰ B. Bolin, “The Kyoto Negotiations on Climate Change: A Science Perspective,” Science, 16 January 1998, pp. 330-331.



The Council therefore wishes to draw attention to the fact that far more substantial reductions of emissions will be required of industrialised countries after 2012 (of about 50% by the year 2050), as well as a limitation of emissions from developing countries. The relevant structures must therefore be put in place without delay, and the necessary measures taken to realise this first step constituted by the Kyoto Protocol. Care must be taken as of now however, to ensure that these structures and measures are consistent with the enhanced objectives that will result from the amendments of the Kyoto Protocol. **This calls for particular attention to consequences that decisions taken today may have by the year 2050.**

1.2. What does Kyoto mean for Belgium ?

Belgium, like the other members of the European Union, signed the Kyoto Protocol in New York on 29 April 1998. Each Member State must contribute to the achievement of the objective to which the European Union subscribed at Kyoto, i.e. to reduce average emissions of greenhouse gases between 2008 and 2012 by 8% compared with 1990. According to the decisions of the European Council of 16 June 1998, the specific contribution of Belgium to this effort means a reduction of 7.5%. This also represents a significant trend reversal. **The objective is actually not to exceed 126.6 million tons of CO₂-equivalent¹¹ for the year 2010,** whereas **emissions in 1996 already amounted to 146.8 MtCO₂eq, i.e. 16% more.** The CO₂ emissions of 1996 alone were already 16.5% above the objective fixed in 1991 for the year 2000 (reduction of 5% CO₂ emissions in 2000 compared with 1990). These figures put our country among the biggest emitters of CO₂ per inhabitant, nearly four times the world average per inhabitant.

Before broaching the questions of measures needed to achieve the objective set in the Protocol, it is useful to draw lessons from the past by evaluating the (limited) effect of measures taken previously to check emissions.

2. Lessons of the past: the failure of half measures

In conjunction with the preparation of the Convention signed in Rio in June 1992, our country had announced already in 1991 an objective to reduce its CO₂ emissions by 5% in 2000 from their 1990 level. To attain this objective, a "Belgian national programme to reduce CO₂ emissions" was adopted by the Federal Government and the three Regions in June 1994. This programme consists essentially of 14 topical data sheets which present measures to be taken by the competent federal and national ministers (energy, transport and the environment). The first 4 data sheets pertain to housing and the tertiary sector, the next six to transport, and the last 4 to industry and energy generation. These measures were to be accompanied at European level by an "energy/CO₂" tax, which never saw the light of day. The forecasts of the Federal Planning Bureau¹² show that under such conditions **the commitment undertaken by Belgium for 2000 cannot possibly be met**

¹¹ Figure based on Table 10 of the Inventory of emissions of green house gases in Belgium 1990-1995/6 (op. cit.) taking into account the three main greenhouse gases for which scarce data exist for 1990: CO₂, CH₄ and N₂O. The effect of the latter two gases is expressed in terms of quantities of CO₂ with an equivalent climatic effect, whence the use of tons of "CO₂-equivalent."

¹² F. Bossier, Th. Brechet, N. Gouzée, S. Mertens, P. Van Den Steen, S. Willems, "Politiques et mesures destinées à modifier les tendances des émissions anthropiques de gaz à effet de serre en Belgique" [Policies and measures intended to change the trends of anthropogenic emissions of greenhouse gases in Belgium], Federal Planning Bureau, Planning Paper 76, February 1996, 146 pp.



only with the non-fiscal measures contained in the programme, provided – and it is some supposition – that these measures are all implemented.

The National Programme was the subject of a Council advice in 1994, and should have been evaluated and reviewed every year. **The Council regrets that this was not done.**

A minority of members¹³ pointed out that in spite of the absence of the new tax on energy, Belgian industry virtually stabilised its CO₂ emissions (energy + process) between 1990 and 1996.¹⁴

The first national communication made by Belgium in carrying out its commitments under the terms of the Convention, which contain in particular a detailed inventory of emissions of the main greenhouse gases and a description of the measures taken and considered to reduce these emissions was submitted to the Convention secretariat in March 1997.¹⁵ The Council issued an advice on a draft of this national communication in September 1996. This communication and its update, published in 1998¹⁶ shows that the total CO₂ emissions in Belgium have continued to progress unabated between 1990 and 1996 by 1.7% a year on average. As shown in **Figure 1, in 1996, CO₂ emissions in Belgium were 10.7% higher than those in 1990** (not counting the emissions from fuels for aircraft and international vessels).

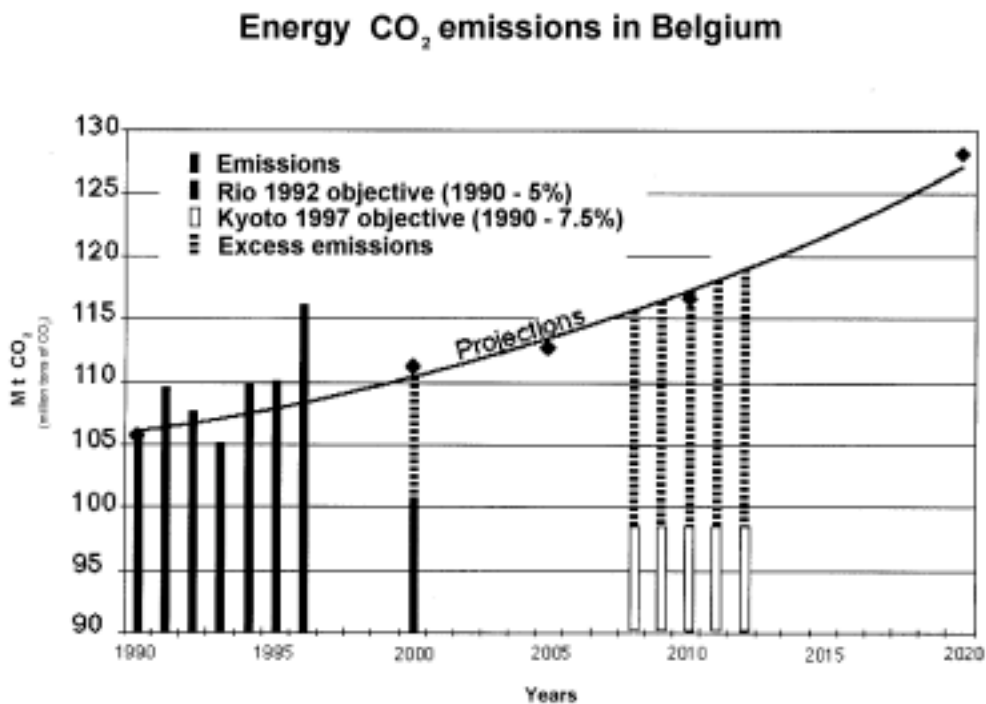


Figure 1: Development of energy CO₂ emissions in Belgium.

¹³ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representatives of the employers); J.N. Delanaye, S. Dutordoir (representatives of energy producers).

¹⁴ Inventory of emissions of greenhouse gases in Belgium 1990-1995/1996 (op. cit. note 8).

¹⁵ Or more than 6 months later than the date provided by the Convention.

¹⁶ Inventory of emissions of greenhouse gases in Belgium 1990-1995/1996 (op. cit. note 8).



(Source: Inventory¹⁷ of emissions of greenhouse gases in Belgium 1990-1995/1996, and First National Communication¹⁸ for the forecasts. These latter data were standardised so that the values correspond to 1990. The values corresponding to the Kyoto objective were calculated by assuming that the 7.5% reduction applies only to CO₂).

The Council is alarmed by this development and stresses the need to analyse the reasons for the failure of the Belgian Climate Change Prevention Policy so as to be able to remove pertinent obstacles. As the Council does not have the means and resources to conduct an exhaustive analysis of these reasons, it lists the main ones below, areas all in which an effort must be made.

The Council considers that:

- 1) The act relative to the co-ordination of federal policy on sustainable development of 5 May 1997 created the institutions needed to develop a sustainable policy : the Inter-departmental Commission, the Federal Plan and Report, and the Federal Council itself. This is a substantial step forward, but the Council considers nonetheless that **the political will on the prevention of climatic change has been insufficient up to now, as have the human, institutional, and budget resources** devoted to this problem.
- 2) **Concern** at Federal level for the prevention of climatic change **exists really only among a very restricted number of persons and services**, including those of the Secretary of State for the Environment who is responsible for co-ordinating climate policy, the Minister for Scientific policy who is in charge of a research programme on sustainable development, and the "Sustainable Development" Task Force of the Federal Planning Bureau.
- 3) The **division of competencies**¹⁹ between the different federal, community and regional ministries as well as the gulf between some government departments and the way they are run complicate the implementation of policies and measures, as does the **insufficient importance of the services of the Secretary of State for the Environment** by comparison with the other departments.
- 4) The **climate policy is not integrated sufficiently** in the other aspects of the governmental action, first because the climate problem is seen as too remote, and secondly because these ministerial departments are not very used to co-operating beyond "territorial" borders.
- 5) Particular attention should be given to **obstacles of an economic nature**. Aside from a minority fringe of economic actors and the population, the choices concerning investments, modes of consumption or behaviour are probably strongly influenced by economic interests and guided far too little by the prospect of reducing emissions of green house gases. Two examples:

¹⁷ Inventory of emissions of greenhouse gases in Belgium 1990-1995/1996 (op. cit. note 8)

¹⁸ First Belgian National Communication in accordance with Articles 4 and 12 of the UN Framework Convention on Climate Changes. Kingdom of Belgium, Ministry of social affairs, public health and the environment, Brussels, January 1997.

¹⁹ For energy, for example, the federal authority is competent for the supply sector, i.e. planning the equipment and facilities for electricity, the nuclear fuel cycle, the large storage infrastructures, the transport of electricity, rates, taxation and commercial practices. The regions are competent for the distribution of gas, electricity and heating, the rational energy use (RUE) and the promotion of renewable sources of energy.



- If the final price of energy is relatively low, the yield on investments earmarked to reduce energy consumption is lower (see also point 16 in Section 3.4 of the advice);
 - It is clear that the linkage of the profits of inter-municipal companies to the quantities sold is a factor that reduces their motivation to implement really effective policies for the rational energy use (REU).
- 6) Without taking a stand (see Section 3.4) on the economic expediency of the **“energy/CO₂” tax** which should accompany national measures at the European level, the Council has noted that this tax **was never introduced**, whereas the Plan for 1994 was largely based on the introduction of such a tax.
- 7) The national topical measures contained in the plan for 1994 are applied in different ways. Their very **wording** was often **not precise enough, nor were their objectives**, to allow for a rapid implementation. In a good number of cases, it was simply a mere exhortation to the departments concerned to “consider” this or that measure. Without more details on specific measures to be taken, their implementation **schedule**, and the **budgets** allocated to them, any detailed quantification of the impact of the various measures can only be of limited value.²⁰ The measures implemented are mainly promotional in nature, whereas **few constraining measures have been taken**.
- 8) In its advice of 1996, the Council considered that the **“Belgian CO₂ programme should be fundamentally reviewed”** and “call[ed] on the Government and its administrative services to draw up in the short term a series of new scenarios for introducing possible measures that would have a real impact, and to submit them for consultation and advice (...). In particular, the Council want[ed] the following themes explored:” **a list of 7 themes, which will be broached one by one below with some evaluation elements**, then followed two years later:
- **Theme 1:** *“Make energy taxation “greener” with a view to sustainable development. The Planning Bureau considers for example that, on the basis of econometric simulations, the increase in energy taxation in the recent past (1990-1994) had a positive impact on global CO₂ emissions in our country (Planning Paper²¹, 1996, p. 65).*
- 9) **Energy taxation** has not changed significantly since 1996, apparently for the following reasons:
- the difficulty of reaching an agreement at European level;
 - the difficulty of reconciling taxing energy and preserving the competitiveness of companies that consume large quantities of energy, which are exposed to international competition.

The recommendations concerning this theme are in Section 3.4, point 16).

- **Theme 2:** *“In a more general way, review the taxation on transport through a transport policy integrated in a policy for reducing greenhouse gases.”*

²⁰ Climate Change and the Energy Sector – A country-by-country analysis of national programmes. Vol. 1: The European Union. D. Anderson, M. Grubb & J. Depledge. Financial Times Energy Publishing, 1997, 258 pp.

²¹ Op. cit., note 12.



10) The Council has just been informed of the fact at a “Federal Sustainable Mobility Plan” is currently under preparation, and that a policy paper²² on this issue was submitted to the lower house of parliament. Since the 1996 advice, taxation on transport has not been reviewed, however. The Council has noted that emissions due to **the road transport** of goods and passengers continue to increase in the **absence of a real policy to reduce demand²³ (e.g. town and country planning, impact study in terms of traffic generated), serious consumer education programmes, inducements for technical progress (e.g. bonuses, green sticker²⁴) to improve very substantially satisfactory alternative offers** (public transport, bicycle policy, inland waterway transport, multi-modality²⁵) and **to internationalise the cost of external aspects due to the different modes of transport to supplement the measures above.** Other countries are much more advanced than Belgium on sustainable mobility. The recommendations concerning this theme are contained in Section 3.5.2.

- **Theme 3:** *“The introduction of sectorial conventions and agreements, in consultation with the different levels of power (Federal / Regions) and, where applicable, in relation with energy taxation (exemptions, compensation, etc.), taking due account of the potential impact of new investments on energy efficiency.”*

11) No **sectorial agreement** was concluded between companies and climate change authorities. Getting the competent authorities at different levels of power round the same negotiating table takes **political will**, which **seems to be lacking**. The recommendations concerning this theme are found in Section 3.5.4.

- **Theme 4:** *“Strengthening specific actions, like the introduction of co-generation on a small scale, or an action on the increasingly widespread tendency to use air conditioning.”*

12) Co-generation **on a small scale:** In recent years, co-generation has soared in Belgium, but the potential is far from exhausted. The recent recommendations of the Supervisory Committee (CC 98/20²⁶ and CC 98/22²⁷) are well received, although the quality criterion used remains a brake that some qualify as important to the development of small, decentralised co-generation (SMEs, collective buildings, hospitals, swimming pools, etc.). The recommendations concerning this theme are contained in Section 3.5.1, point 22).

13) Air conditioning: The Council has not been informed about projects on this matter. The Council is nonetheless **concerned by trends to use air conditioning in the home, the tertiary sector and private vehicles**. The recommendations concerning this theme are contained in Section 3.5.3., point 40.

²² Preparatory study for the definition of a federal sustainable mobility plan. Work carried out at the request of Michel Daerden, Minister for Transport, by the Transport Economics Department of the University of Liège (Prof. B. Thiry in co-operation with Prof. G. Blauwens (UFSIA) and CIRIEC. February 1998, 37 pp. + 3 appendices.

²³ Except locally, as in the city of Hasselt, for example.

²⁴ Green sticker: in France, a sticker for vehicles equipped with a catalytic converter or an LPG installation and for electric vehicles, which are allowed to drive even on days of pollution alert.

²⁵ A single term to say: integration of the different modes of transport.

²⁶ CCEG Recommendation 98/20 on the contract of repurchase of guaranteed electricity produced by quality co-generation units.

²⁷ CCEG Recommendation 98/22 relative to back-up and supplement rates for quality co-generation.



- **Theme 5:** *“Promotion of the use of renewable sources of energy.”*

14) In the general interest perspective (environment, energy dependence, employment, economic growth), support for **renewable sources of energy** is not subject to question. In November 1997, the European Commission published a White Paper²⁸ on renewable sources of energy. It defines a plan of action intended to double the share of renewable sources of energy in the Union’s energy balance by the year 2010. The Supervisory Committee on Gas and Electricity (known by the French acronym CCEG) recently issued the Recommendation 98/19²⁹, providing additional price support for wind power and hydraulic energy. Discussions are under way for other types of renewable sources of energy at the CCEG and both houses of parliament.

For their part, the Regions have also started to implement actions geared to subsidising renewable energy projects.

The recommendations concerning this theme are contained in Sections 3.5.1 (Electricity), 3.5.3 (Housing and the tertiary sector), 3.5.4 (Industry) and 3.5.5 (Agriculture).

- **Theme 6:** *“The adaptation of the **profit mechanism of power supply companies** (which are in large measure under the responsibility of the municipalities) geared to stimulating an REU policy, without however affecting their profits. In other words, develop a mechanism that rewards energy conservation measures so that power supply companies can extend their mission from being a supplier of energy to that of a provider of services in the energy sector (supply to and conserve energy at the customer).”*

15) The Council was not informed about projects on changing the profit mechanism. A recommendation of the Supervisory Committee on Gas and Electricity³⁰ defines REU plans for the different actors of the electricity sector. An initial follow-up document will be submitted to the CCEG in the course of October 1998. The Council wishes to be informed about the results of this evaluation and has drawn up recommendations in this regard in Section 3.5.1, point 25).

- **Theme 7:** *“Definition of a policy of **co-operation for development**, in particular within the AGCD, geared to and integrated in the aims of sustainable development, especially as regards the problem of climate. By ratifying the Climate Convention, Belgium is required not only to reduce emissions of greenhouse gases on its own territory, but also to help countries in the Southern Hemisphere in this area.”*

16) The Council has noted that on the multilateral front, the AGCD assumes 1.68% of the total budget of the Global Environment Facility – GEF). In 1997, a contribution of BEF 390 million was remitted. This fund was created to promote international co-operation in the field of environmental protection. One of its specific tasks is to contribute to the prevention of climate change. The Council has noted that the money to finance the GEF comes from

²⁸ “Energy for the future: Renewable sources of energy. White Paper charting a strategy and a Community action plan,” Commission Communication, Commission of the European Communities, COM(97) 599 final, Brussels, 26 November 1997, 64 pages.

²⁹ CCEG Recommendation 98/19 relative to aid for the development of renewable sources of energy from wind power and hydraulic origin.

³⁰ CCEG Recommendation 96/57 of 23 October 1996: RUE action plan for energy distribution
CCEG Recommendation 96/15 of 27 March 1996: RUE and supervision of CO₂ emissions concerning the electricity generation activity.



the existing aid budget and not, as provided by the commitment undertaken by industrialised countries in Rio, from new and addition resources intended to give developing countries the possibility to implement the Rio agreements. As to bilateral and indirect development projects, the reduction of emission of greenhouse gases has **not yet been integrated in the objectives**, although there are projects, which support partner countries to develop their capacities on environmental matters. The recommendations concerning this theme are contained in Section 3.4, point 17).

Conclusion of the evaluation

17) The brief evaluation of what the Government has done with the themes suggested above by the CNDD in its 1996 advice reinforces the demand already expressed at this time to review the Programme for 1994. The **Council insists that this Programme should be thoroughly reviewed** in the light of the obligations stipulated in the Kyoto Protocol, and by **drawing the lessons of past failures**. The revised Programme should **contain specific measures that have a real impact, a credible and clear schedule**, with **specific and sufficient budgetary and operating means and resources**, and be accompanied by **awareness raising and evaluation actions**. Without prejudging the results of consultations which will have to take place on this revision, the Council would like to issue the following recommendations:

3. Council recommendations on climate policy

Aware of the risk that Belgium is again running, namely that it will fail to meet its objectives for the year 2012 if fundamental changes are not carried out in the policy to reduce emissions of greenhouse gases, the Council recommends that the Federal Government integrate the prevention of climatic changes in its policy programme, in **close co-operation with the other competent public authorities**. The revised programme to reduce emissions of greenhouse gases should comprise: (a) real political will; (b) support programmes; (c) repeated information, awareness raising and training actions; (d and e) action and follow-up programmes.

The Council recommends that the Federal Government, in close co-operation with the other competent public authorities:

3.1. Political will

- 1) **Give a higher priority to the prevention of climate changes and show far more political will** on the matter, as any delay in decisions is likely to entail very sizeable costs for the future. The political difficulty of taking measures as of now comes in particular from the fact that the most serious consequences of climate change are expected here only in the medium or long term. The Council considers that this difficulty can be diminished by making the link in the analyses of strategies to be implemented with the prevention of consequences in the short term of other problems connected to climate changes: air pollution, health, mobility, employment, energy, waste, agriculture, co-operation for development or the preservation of the biodiversity. The climate policy **must be integrated in an overall sustainable development policy with a long-term vision**.
- 2) Submit to parliament a policy paper on the implementation of the Kyoto Protocol with a view to prevent dangerous climate changes and to sustainable development, and call for a **parliamentary debate on this issue**. This debate should broach in particular: a) **the energy policy, taking due account of the ecological limits of the burning of fossil fuels**; b) **the transport and infrastructure policy**. This debate would afford greater transparency in the preparation of energy, transport and infrastructure policies.



- 3) Stimulate the development of an **integrated European climate policy**. Defining **“common and co-ordinated policies and measures”** is a responsibility shared by several **European councils** and does not fall only, or even in the first place, under the purview of the Council of the Environment. The Council insists that the competent ministers take initiatives so that the Councils concerned, in particular those dealing with **transport, energy and finance**, approve the policies and measures needed to implement an integrated climate policy.
- 4) Accelerate the **transposition of pertinent European directives into Belgian law**, e.g. the SAVE Directive 93/76/EEC of 13 September 1993 and the Decision 96/737/EC of 16 December 1996 (SAVE II), the requirements of which include energy certification for buildings, the Directive 98/30EC of 22 June 1998 concerning common rules for an internal natural gas market, or the Directive of 19 December 1996 concerning the internal electricity market (see Section 3.5.1 for the latter);
- 5) Continue the search for a **better co-ordination of federal, community and regional policies** in the subjects concerned. The implementation of the act of May 1997 on sustainable development is a step in the right direction at federal level.
- 6) **Continue and develop the consultation** on the matter. As the CNDD pointed out in its 1994 advice (p. 21) “real consultation with the actors concerned underpins the effective implementation of the policy. Our country has a long tradition of socio-economic consultation and the policy to reduce CO₂ should also show its capacity to integrate all actors effectively.” **The Council wishes to be fully involved in the consultation that will accompany the drawing up of the revised programme for the reduction of emissions of greenhouse gases expected for 1999.** To clarify the stakes of consultation better, the **Council wishes that the levels concerned organise study days on specific aspects or sectors.** These days should cover scientific, technical or economic aspects as well as institutional aspects or obstacles to change. The Council is prepared to assist, within its means, in organising these days, in continuation of the Symposium it organised on the Kyoto Protocol on 19 May 1998.

3.2. Support programmes

- 7) As a consequence of 1), **boost the human and financial resources** allocated to monitor and participate in international **negotiations** and discussions on the matter, to draw up effective national **policies and measures**, to co-ordinate these as much as possible with the measures taken in other EU Member States, to implement the measures and evaluate and correct them until the objective is attained. The Council **wishes to draw attention to the fact that Belgium will assume the presidency of the European Union in the 2nd half of 2001, i.e. at the time of the 7th session of the Conference of the Parties** to the UN Framework Convention on Climate Change. These could also constitute the 1st session of the Meeting of the Parties (COP/MOP) of the Kyoto Protocol, which will require extensive preparation and human resources.
- 8) **Boost the human and financial resources allocated to research on climatic mechanisms** at work, the **potential impact** of climate change on business sectors in Belgium, the **possibilities of reducing emissions** of greenhouse gases, and the **economic and social costs and gains from climatic impact and possible reduction measures**. The Council asks that **an integration and a summary of the numerous studies already carried out** at the request of the different levels of power be likewise made public. (See also the 1994 advice, p. 18-19).



3.3. Awareness raising, information, training

9) To facilitate 1), obtain the support of the population and the actors by explaining to them the stakes and mechanisms at work. A **real education in the concepts and implications of sustainable development**, in particular as regards energy questions and the prevention of climate change must be promoted at **all levels of instruction**. This must be done in co-operation with the Communities which have ratified the Climate Convention because it contains an article (6) relative to education, but who have done little hitherto for its implementation.

10) Develop an awareness of the global energy bill of consumers. The bills must be comprehensible and help consumers to bring their use of energy under control. The

mentioning of energy equivalence factors between the different vectors should appear on the bills for fuel oil, gas and electricity. In order to be instructive, the bills should contain a comparison of consumption with other similar consumers and/or the same consumer in the past. The number of kg of CO₂ associated with the energy consumption could also be indicated.

11) **Ensure greater transparency and legibility of the rates of energy vectors.**

12) Develop **energy labelling** for all equipment that consumes energy. Disseminate the information on the energy consumption of this equipment on their life span. Publish comparative catalogues. Disseminate information on the energy content of products.

13) Pay particular attention to the **credibility of the climate policy**. It is actually “essential for society, if we want to evolve towards sustainable development. Without this large social base, the policy will fail over a series of reefs, over individual and collective interests. A justified and coherent policy on this matter will also determine the will of large segments of society to turn towards sustainable development in its numerous global dimensions. The Council intends to continue to develop its contribution in this respect.” (Advice 1994, p. 21). To develop this credibility, **the Council considers that the Federal Government should set the good example in its own activities** by developing a “**Kyoto plan for local application**” in each ministry or institution under its purview. This plan, which would be enshrined in the federal sustainable development policy, would include specific objectives, means and resources and continuous evaluation. The **consumption of non-renewable energy**, co-generation and use of renewable energy in **federal buildings** (existing, or to be built or renovated) could thus be targeted for particular attention, together with employee transport plans. The participation of the latter is indispensable, both for the preparation and for the implementation of these plans. An individual guide on the protection of the climate should be prepared for these employees.

3.4. Action programmes and follow-up: general principles

The action plan to reduce emissions of greenhouse gases will propose numerous measures. The Council would like to draw the Government’s attention on the **list of conceivable measures which were already contained in the 1992 Advice** of the National Council for Advice on the Climate, the Environment and Development. To maximise the effectiveness of the measures really taken, and to promote their support by the population, each of the measures will have to be evaluated according to relevant criteria. **The Council recommends that the following criteria be used to evaluate, a priori and a posteriori, the measures to be implemented:** (1) **Significant contribution** to the reduction of emissions (technical potential and potential limited by identified non-technological barriers); (2) Integrated **costs-benefits** analysis per ton of greenhouse gas



on the environmental, economic and social front; (3) **Identification of barriers** (interests of the public, interests of the actors concerned, technological maturity, potential, etc.) and the means for raising them; (4) **Implementation** and result-related timetables; (5) **Positive effects in other sectors**, such as employment or public health (win-win measures). In addition, care must be taken that the entire programme covers the different economic sectors and pertains to at least the 6 greenhouse gases controlled by the Kyoto Protocol.

The Council also recommends that the Government, in close co-operation with the other competent authorities:

- 14) **Does not neglect any type of instrument a priori** in the choice of policies to be implemented. In its 1994 advice, the CNDD wrote: "No democratic instrument at the disposal of the public authorities (regulatory and economic instruments, awareness raising, conventions, etc.) can be excluded a priori. The different instruments referred to must be subjected to an in-depth analysis and evaluation that can serve as a basis for policy options." (p. 10). More recently, the Declaration signed before Kyoto by 21 Belgian economists and climatologists, a Nobel Prize winner and four Francqui Prize winners pointed out): "There is wide agreement among economists as to the existence of means and resources capable of attaining the climate objective at lower cost, means and resources likely to contribute at the same time, for some of them, to a reduction of other failures of our technical and economic systems, such as the congestion of our cities and unemployment. Taxes or negotiable emission permits (part of the revenues from which could be used to reduce social security costs on employment), aid to R&D funding, and support to voluntary commitments are just some of the examples."
- 15) **Consider without fail**, in every action programme implemented by the Government, the **long-term effects of the measures taken** in fields such as **infrastructure, town and country planning** or **product standards**.

16) **Be attentive to the following considerations about energy prices:**

a) Non-realisation of tax measures considered at European level

The fact that the objectives fixed by the Belgian programme to reduce emissions of CO₂ of June 1994 were not achieved, is in large part due to the incomplete carrying out of the planned measures. For instance, among the different measures planned, those providing for a (relative) increase of the price of energy remained moot. In fact, the "energy/CO₂" tax that was to accompany national measures at European level, never materialised, whereas the Belgian programme explicitly provided that, in order to achieve a 5% reduction in the year 2000 compared with 1990, the introduction of an energy/carbon tax, such as proposed by the European Commission in June 1992, was necessary.

b) The price of energy as an economic obstacle to realise a REU policy (rational energy use).

- The price of energy is composed of:
 - the price of primary production (including the profit margin of the producers and distributors;
 - a variable percentage of the taxes levied by the governments.

Does it make any sense to say that the price of energy would be "too high" or "too low?" We can always find arguments to support one or the other point of view.



- The economic agents (the companies) and the consumers base their production, and therefore investment and consumption decisions to a large extent on economic parameters such as the price of energy.
- Energy is an essential consumer product.
- For companies (industry and the tertiary sector) energy is a production factor like labour and capital. The price of energy is therefore a parameter that influences investment choices and production behaviour, including the choice of transport. The search for superior energy efficiency is a factor for improving the competitive position of companies.
- The price of energy is not the only factor that influences the energy efficiency of the production or consumption process.
- Thus, for some consumers, environmental awareness is sufficiently strong for them to use energy rationally.
- For companies, and especially for industry, energy efficiency is also strongly influenced by such parameters as the rate of renewal of investments or, in other words, the rate of the rotation of capital. A higher price of energy would make additional REU efforts profitable and reorient the choices of transport to modes other than the road.
- The inducement to improve the energy efficiency of the modes of production and consumption will be greater if the (relative) price of energy is higher. For companies and consumers, the (relative) price of energy is therefore the main economic obstacle to a more rational use of energy and the reduction of greenhouse gases.

The current approach, based on information combined with awareness raising and regulation instruments, certainly yields too few results in terms of rational energy use for Belgium and the European Union to meet their Kyoto Protocol commitments within the prescribed time. The Council is consequently of advice that the introduction of economic or tax instruments may also prove apposite. The current level of energy prices is on the whole too weak an encouragement for a frugal behaviour toward energy.

c) The price of energy from the point of view of climate policy

- In order to encourage an REU behaviour, producers and users of energy must be placed in a framework where:
 - They are aware that energy is a precious commodity, because it is non-renewable and its use entails external costs;
 - They are therefore aware that the price of energy will integrate more and more external costs for the use of different energy vectors and will therefore become gradually higher;
 - They can associate with their energy costs, the uses which generate these and the actions which will enable them to do something about this expenditure.
- Governments can bring considerable influence to bear on the final price of energy, by adjusting energy taxation. It is obvious that any increase in energy taxes will generate additional public revenues. The way in which these revenues are used seems decisive for the acceptance of the increased taxation of the price of energy.
- A substantial and rapid rise in the absolute price of energy would indeed have negative consequences at the social and economic level. For low-income persons, the burden of heating/lighting and transport would become too onerous in the household budget. For companies, the cost of production would increase considerably, and they would suffer from a loss of competitiveness in the short term. Therefore, an increase *and nothing more* of energy prices through taxation – so that the global tax pressure on consumers and companies would rise drastically – is not desirable.



That is why **the Council is in favour of introducing economic or fiscal instruments, such as the energy/CO₂ tax for example**, which will increase energy prices. They explicitly link any establishment of this tax to certain conditions.

d) Conditions for the introduction of economic or fiscal instruments:

- The allocation of potentially sizeable rates from energy taxation opens up prospects for what are known as “double dividend” measures which bring both ecological and other benefits. The most well known example is the financing of a reduction of labour costs by means of revenues from an energy/CO₂ tax, which would stimulate employment while reducing emissions of greenhouse gases. Care must therefore be taken to ensure that the product of additional energy taxation is passed on to companies and the consumers by applying the allocated tax principle, i.e. using the tax revenues to finance measures that will make progress towards sustainable development (in particular the fight against poverty and social exclusion, against the deterioration of the environment and climate change and the promotion of alternative modes of production and consumption). As regards an energy/CO₂ tax in particular, tax revenues which are raised from it must, as a matter of priority, be allocated to reducing social security charges in order to promote job creation and appropriate REU measures.
- Concurrently with an increase in the price of energy – which will serve as a signal and catalyst for the behaviour of companies and the consumers – measures must be taken to remove political, legal or administrative obstacles in the way of adopting less energy-devouring modes of production and consumption. The introduction of economic or fiscal measures must be very well prepared and preceded by an impact study to check whether and with what methods such measures must be differentiated by sector or sub-sector.
- The open character of the Belgian economy calls for harmonised measures at European level and for taking into account the specific aspects of some particularly sensitive sectors when defining the terms and conditions of introducing an energy tax. Given the obstructions that have occurred at European level in the past, a revision of energy taxation at Belgian level must nonetheless remain conceivable. That said, the measures taken on this matter and in regard to climate policy must meet the conditions enunciated above, so that energy efficiency can be really improved, rather than simply relocating emissions, while taking into account the need to avoid any deterioration of the living and well-being conditions of households through appropriate social and advice and guidance measures.

The Council considers that this will give a strong and necessary signal for production and consumption patterns, which would contribute to the attainment of the objectives of the Kyoto Protocol.

MINORITY ADVICE³¹

The essential preoccupation for these members is the competitive position of companies. To this end, companies deploy substantial means and resources to improve their energy efficiency.

In this context, what would be the impact of introducing an additional tax?

³¹ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).



Favourable impact: the tax may have a regulating effect and thus influence certain decisions on investments in REU.

Unfavourable impact: the introduction of a tax will affect the resources available to companies for investments, including those to increase energy efficiency.

Furthermore, it will affect the competitive position of companies with the non-negligible risk of forcing them to relocate. This would have consequences not only for the economy and society, but also for the environment (if companies relocate to countries where environmental regulations are less strict).

The same members are convinced that the unfavourable consequences will outweigh by far the regulating effect expected from the tax. This is particularly true for energy-intensive companies.

A study on energy efficiency co-ordinated by the FEB has shown that it improved by 4.2% between 1990 and 1996 in a very representative sample of industry.

The recent inventory of the public authorities³² of emissions from greenhouse gases in Belgium confirms that CO₂ emissions from energy vectors have dropped by the same proportion between 1990 and 1996.

It is clear to these same members that, in the absence of a new tax, industry will continue its efforts on the REU front and consequently on limiting specific CO₂ emissions.

The most effective tools for rational energy use are a favourable climate for investments which automatically improve energy efficiency and voluntary agreements.

END OF MINORITY ADVICE

17) **Promote access to the necessary capital.** “It is important that access to capital does not constitute an insurmountable obstacle for investments in this regard. The policy to reduce CO₂ emissions must devote maximum attention to this aspect, in particular as regards third party financing. The foregoing considerations apply also to private individuals faced with a lack of information and expertise on pertinent measures to take and investments to make. The policy to reduce CO₂ emissions considered should tackle the attainment of these objectives by more effective means than general awareness raising campaigns.” (Advice of 1994).

Strengthen international solidarity through co-operation. “A world policy to reduce CO₂ emissions is inconceivable if the rich industrialised countries do not assume their responsibilities in their own regions. And yet, developing countries are already responsible for 35% of CO₂ emissions, a figure that keeps rising. Efforts to reduce emissions to a minimum in developing countries will have to give priority to integrating the environment and development in policy planning and management. There is no doubt that energy consumption will necessarily increase in these countries. So developing countries must have the widest access to information and to the **transfer of sustainable energy technologies**. The **capacity building** of the public authorities, and of the world of science and industry must be strengthened in developing countries. The **co-operation policy**, in particular foreign trade, must endow these objectives with the appropriate structures. Technology transfers cannot

³² Inventory of emissions of greenhouse gases in Belgium 1990 – 1995/1996, op. cit. note 8.



be left up to the traditional commercial channels because the needs in most developing countries are inversely proportional to their financial means. Furthermore, a plethora of sustainable technologies are protected by patents, which poses an additional problem to developing countries.” (Advice 1994, pp. 16-17).

For the Council it is clear that to enable developing countries to implement the Rio agreements, **an additional effort from industrialised countries**, and thus from our country as well, **is absolutely essential**. There are several reasons for increasing public funds for this type of co-operation. Aside from the commitments undertaken in Rio, there is a need to contribute to world management. Only a common effort can guarantee a better balance in an open and interdependent world and thus prevent violence perpetrated against man and the environment. A country that grows richer every year has the duty to contribute in an increasing measure to this common effort.

The **Council hopes that the inter-sectorial strategic note on the environment** announced in the “Policy plan for international co-operation” will be available soon and will **integrate** the provisions of the Framework Convention and of the Kyoto Protocol, in particular those concerning the Mechanism for “clean” development. Otherwise, our country runs the risk of missing out on the most innovative programmes for lack of preparation.

All the above general principles constitute the framework in which sectorial measures must be taken. Five sectors will be considered: electricity, transport, housing and the tertiary sector, industry and agriculture.

3.5. Action programme and follow-up: sectorial approach

3.5.1. Electricity

a) *General framework of the sector: liberalisation of the electricity market*

19) While aware of the need to introduce a new efficient and competitive electricity system in Belgium, the Council insists that the different options³³ provided in the Directive (96/92 EC) are effectively used and that the regulating and supervisory structures are implemented so as to allow the establishment of a framework and objectives for limiting emissions of greenhouse gases in the electricity sector.

³³ To impose or not to impose **public service obligations** on companies of the electricity sector which could pertain in particular to supply security, quality and price, as well as to environmental protection (Art. 3):

- To keep or abandon a **perequitated pricing** on the national territory with the inevitable consequence in the affirmative of having to strengthen or improve measures already taken or under consideration on Rational Energy Use by the Supervisory Committee on Gas and Electricity (or any regulating body of the electricity sector designated in the future);
- To keep or abandon a **long-term planning** as a means for meeting the aforementioned public service obligations (Article 3);
- To fix or not to fix criteria for environmental protection, energy efficiency and public service obligations in case of the (probable) authorisation procedure for the construction of new electricity generating installations (Article 5);
- To require or not to require the operator of the network to give priority to **co-generation installations** and/or installations which use **renewable sources of energy** (Article 8).



The Council recommends as of now that the act of **transposition of the European “electricity” directive** include a **chapter devoted to the long-term planning** of production installations as **part of the public service obligations of the sector**.³⁴

- 20) **Integrated resource planning**: the liberalisation of the electricity market will require a new approach to the definition of the means of production and management of consumption for our country. **The objectives of limiting demand of the Infrastructure and Facilities Plan of 1995-2005 are a step in the right direction.**

The Council is of opinion that the new framework fixed by the European **Directive authorises the maintaining of a planning** of the means of production of electricity (Article 3 of the Directive) and **a connection between the options of this planning and the procedure for building permits** for new generation installations on Belgian territory (Article 5).

A minority³⁵ does not share this opinion.

b) Production

The Council has noted that production and investment choices in the electricity sector are likely to make a substantial contribution to the policy for reducing emissions of greenhouse gases and must be implemented in Belgium. The **Council recommends** that the Federal Government, in consultation with social negotiating partners and the electricity sector, proceed to a more appropriate use of economic, regulatory and other instruments arising in particular out of the transposition of European Directive 96/92 CE for the implementation of this policy.

- 21) **Promotion of renewable sources of energy**: renewable sources of energy can make a **considerable contribution** to the efforts to reduce emissions of greenhouse gases. Some of them are economically and technically viable at this time; others still require voluntary actions in terms of pricing, technological development or promotion.

The framework established at European level will in particular make it possible to approach the promotion of renewable sources of energy through **public service obligations** which will be set in regard to environmental protection and prices.

The Council recommends also making use of the possibilities of the Directive for renewable sources of energy in terms of giving priority to power plants in the network (Article 8 of the Directive 96/92).

A minority³⁶ does not share this opinion.

Some concrete objectives can be enunciated as follows: Projects for preparation and introduction on the market; promotion and wide dissemination of information; R&D,

³⁴ “The Member States may impose on companies in the electricity sector public service obligations in the general economic interest, which may pertain to security, including security of supply, regularity, quality and prices, as well as to environmental protection. These obligations must be clearly defined, transparent, non-discriminatory and verifiable; (...) As a means for fulfilling the afore-cited public service obligations, the Member States which so wish may introduce long-term planning.” Article 3, 2nd paragraph, Directive 96/92 EC.

³⁵ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).

³⁶ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).



development of products and systems; demonstration actions, support for the export of technologies connected to renewable sources of energy.

The solid reputation of Belgium in R&D in renewable sources of energy **is an opportunity not to miss**, both for the internal market and for exports.

The Council recommends that the development of renewable energies be **stimulated more voluntarily**, in particular through the introduction of **demonstration and production projects**. All sectors are concerned, with nonetheless more substantial technological potential in (1) the tertiary and housing sector (bioclimatic architecture, biomass, solar heating) and (2) electricity generation (wind power, biogas, co-generation making efficient use of biomass, hydraulics and photovoltaic solar energy).

In this context, the Council has welcomed the recent recommendation of the CCEG (98/19³⁷) according new, extra-tariff aids to renewable wind, hydraulic and photovoltaic sources of energy, **and calls for a study of extending aids to other renewable sources of energy** with a potential for development, such as the biomass. The Council recommends that particular attention be paid in this context to the connection conditions of the installations and to the stability of the legal framework.

22) Promotion of co-generation

The Council wishes to see measures taken to provide a **favourable framework** so as to capitalise on the sizeable potential of reducing CO₂ emissions offered by **co-generation** between now and 2010 in industry, the tertiary sector and household applications, while remaining attentive to the real savings of the different projects considered.

The Council welcomes the recommendations of the CCEG proposing more attractive gas and electricity rates to quality co-generation³⁸. The quality criterion³⁹ continues to be a brake that some qualify as important to the development of small, decentralised co-generation.

The Council recommends that, in the context of evaluating resources for energy generation, all the low-temperature heating needs (both for industrial processes and for individual and collective heating) be booked as potential sources for co-generation applications.

³⁷ CCEG Recommendation 98/19 on aid for the development of renewable wind, hydraulic, and photovoltaic sources of energy.

³⁸ CCEG Recommendation 97/35, allocating more attractive rates to gas used by quality co-generation units.

CCEG Recommendation 98/20 on the contract of repurchase of guaranteed electricity produced by quality co-generation units.

CCEG Recommendation 98/22 on back-up and complement rates for quality co-generation.

³⁹ The quality criterion used in these three recommendations aims to give priority to co-generation projects that entail a real conservation of energy and reduction of CO₂ emissions compared with separate generation (electricity being produced in a GST with 55% efficiency, and heat by a gas boiler with 90% efficiency). This quality is quantified by an efficiency rate "ER" which is defined as follows:

$$ER = (\alpha_E/0.55 + \alpha_{II}/0.90 - 1) * 1/0.20$$

Where α_E is the electricity output of the co-generation unit and α_{II} the calorie output.



23) Nuclear energy

As regards nuclear Energy, the Council points out that there are no construction projects for new nuclear power plants. Although these plants do not emit CO₂ the Council considers that the evaluation of the **nuclear energy problem entails other considerations than climate-related ones**. The time allotted for a sufficiently in-depth discussion of this item in the Council did not allow including it in this advice.

24) Means of production using fossil fuels

If the use of fossil fuels should prove necessary, the use of high efficiency units such as GST (gas-steam turbines) or coal fired ASC (Advanced Super Critical) is recommended, taking into account the economic, social and supply diversification constraints.

The Council is of opinion that these constraints must also guide the investment choices.

A minority⁴⁰ does not share this opinion.

c) *Distribution and consumers*

25) REU and distribution companies

Beyond their role of suppliers of energy, distribution companies have to play a role of provider of energy services, in particular through the promotion of rational energy use, among their customers. The Council wishes that the offer of energy distribution companies should attach greater importance to the provision of **energy services promoting energy conservation** among their customers (cost-effectiveness of the *Negawatt*).

Without wishing to diminish the benefits provided by municipalities through the distribution of energy, the Council considers that a profit mechanism that links profits less to the quantities sold should be studied, for example by remunerating actions aimed at promoting more rational energy use among their customers (Negawatt bonus).

A minority⁴¹ does not share this opinion.

26) Progressive pricing of electricity

This problem is currently being discussed in the Supervisory Committee, which is competent for pricing.

The electricity pricing parameters can constitute a possible instrument for consumption orientation. This is how new rates were created or tried by the Supervisory Committee on Gas and Electricity (night rates, tri-schedule rates, etc). The Supervisory Committee is at present examining low voltage prices and in particular, the advisability of a reform of the residential prices in Belgium.

⁴⁰ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).

⁴¹ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).



The Council wishes that the Supervisory Committee and the competent public authorities conduct a more precise analysis of the potential effect of these different proposals on consumer behaviour and the purchase of low-energy consuming equipment by the customers concerned. The Council wishes that an experimental application of these proposals could be carried out in support of this analysis.

The Council wishes to be kept informed of the work of the CCEG on this subject.

3.5.2. Transport

- 27) The mobility of persons and goods has been increasing for many years. This increase is concentrated mainly on road and air infrastructures.

As regards **passenger** road transport, the major causes are a town and country planning which creates a structural demand for road mobility (dispersed residential areas, shopping centres at the edge of urban centres) and the extension of the road network it brings about, an increase in the living standard, and a modification of the "sustainable mobility" criteria. As to the **goods** road transport, the upward trend comes mainly from the opening of the European market (and the geographic position of Belgium necessarily makes it a transit country), the extension of the "just in time" mode of production in companies, and the lack of alternatives. At the same time, Belgium has experienced a pronounced desertion of public transport. Furthermore, air transport, highly energy consuming, continues to increase too.

In view of forecasts that show the substantial and increasing share of road and air transport in the development of emissions if appropriate measures are not taken between now and 2010, the **Council wishes to see measures in the transport sector**, of goods and passengers alike, **significantly strengthened**.

The strategies that the Council considers are needed can be grouped in four categories: 1) **reduction of the demand** for road and air mobility and **change of the mentality of users**; 2) significant improvement of the **alternative offer (public transport, bicycle, inland waterway transport, multimodality, data communications)**; 3) **technical improvement of motor vehicles and aircraft**; and 4) support for all these steps through **appropriate fiscal measures** in particular to **internalise, preferably in a European context, the external costs** linked to the different modes of transport, including road and air transport.

In concrete terms, these strategies must be based on a set of instruments that are at once inductive (promotion of public transport or renewal of the car pool) and regulatory (restriction of access or parking, emission standards), or technical (clean fuels and vehicles, data communications, logistics). These strategies must be charted in perfect synergy with those needed to improve transport **safety** or to fight against the excesses of tropospheric ozone and other pollutants.

- 28) In addition to the **real introduction** of measures concerning certain types of transport provided by the **1994 National Programme**, the Council considers that adjustments are needed in the areas mentioned above.
- 29) The Council insists on the need to **improve significantly the offer of public transport** (routes, frequency, timetables, punctuality, price, accessibility, multimodality, etc.) so as to offer a credible alternative to road transport.
- 30) The Council considers that it is **high time that the external costs due to the different means of transport are internalised, so that the total cost of mobility is**



more apparent. In this vein, the Council is of opinion that the themes for **varying the tax and insurance costs**, the encouragement for a reasonable and rational use of **company vehicles, the charging for parking** and road pricing⁴² be studied along with their ecological, economic and social effects. The Council wishes moreover a reduction of the difference the price between petrol and diesel.

A minority⁴³ does not share this opinion.

31) The Council would like to draw particular attention to the **effects on public health** of the large number of accidents on the roads and fumes from motor vehicles. A limitation of road traffic would have positive effects on greenhouse gases, but also on air pollution and public health. **The Council suggests that the quality of air be broached in a common programme by the federal and regional authorities, comprising concrete measures to be implemented at the levels concerned.**

32) **The Council wants** the Government to **study the advisability**, from an ecological, economic and social point of view, of **superposing a “catch”** in the fuel price fixing mechanism. The general principle would be that the final selling price of fuels would follow their quotation on the international markets only upwards, not downwards.⁴⁴ The recent drop in the price of fuels, after the collapse of the international oil prices, does not encourage consumers to consume less.

A minority⁴⁵ is opposed to the “catch” principle.

33) The Council wishes to attract the Government’s attention to the fact that any revision of the road taxation (taxes or rates) aimed at **accelerating the population of vehicles must without fail be accompanied by measures to accelerate the definitive decommissioning and recycling of vehicles.** If this were not the case, the renewal of the Belgian automobile population would swell the export market of the most polluting vehicles to southern or eastern countries, which would simply relocate the problem of polluting emissions.

34) As air transport is not part of the 1994 Programme, the Council considers that an **objective to reduce emissions of greenhouse gases in the air transport sector** must be set. This objective could be achieved by the following actions: introduce a European tax on kerosene; introduce a tax on emissions (for example, by adjusting the airport fees paid by airlines in relation to the emissions of the aircraft they use); promote modal transfer from the plane to the train for short distance travel (less than 500 km); adjust the airport fees in relation to the length of the travel (proportional higher fees for shorter distances, and strengthen the technical standards of aircraft emissions.

35) For shorter distances, the Council considers that the use of the bicycle must be encouraged. Reforms of the Traffic Code favourable to the bicycle must be continued.

⁴² Price paid to use road infrastructures.

⁴³ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).

⁴⁴ This would not be a tax added irreversibly from the moment that the price fell, which would stay in place after the recovery of prices, but of a temporary tax which would serve to prevent the final price from dropping when the quoted prices dropped. The amount of this tax would be automatically reset to zero as soon as the quoted prices regained a level of reference to be defined.

⁴⁵ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).



The **complementary qualities of train and bicycle** must be developed by the SNCB (Belgian Rail): left-bicycle facilities, transport (including international) with less formalities, rental. Associations that promote the bicycle should be supported. VAT on bicycles could be reduced or done away with, and additional **tax advantages** should be granted to employers who encourage travel by bicycle. The network of bicycle tracks should be extended and safety measures strengthened.

- 36) The potential impact of different **data communication** applications (telecommuting, telemarketing, videoconferencing, traffic management, road information, guidance, etc.) on the reduction of emissions should be studied.

3.5.3. Housing and the tertiary sector

- 37) The housing (tertiary and domestic) sector has considerable potential for reducing greenhouse gases. The results from a change in trends or behaviour in this sector will be felt mainly in the long term. Here once again, **town and country planning** (dispersion of residential areas, party walls, etc.) play a very important role for developments in the long term.
- 38) The generalisation of “**low energy**” **buildings in all new constructions** (climatic architecture reducing the demand for heating, air conditioning and lighting while providing heat comfort and air quality⁴⁶), the use of renewable sources of energy and the development of rational energy use (REU) should be stimulated actively by advice and support measures. The renovation of buildings also creates opportunities to promote a reduction of their energy use.
- 39) The **Council wishes** to see a study conducted on the potential impact of **energy certification of buildings**, and the use of these certificates in all **real-estate transactions**.
- 40) The Council insists on the need to reverse the trend of increased **use of air conditioning in the home, the tertiary sector, and private vehicles** by reducing demand through structural measures (climatic architecture, plantings, etc.).
- 41) The purchase of **efficient household appliances** must be encouraged.
- 42) Furthermore, changes in trends resulting from REU actions require repeated and numerous information and **awareness raising** actions among the actors of the sector (households, companies).

3.5.4. Industry

- 43) The contribution of companies to the objectives of the Kyoto Protocol regarding industry can be resumed as follows:
- a) Continue to reduce their specific energy consumption within certain economic and technological limits. The **Council is in favour of sectorial agreements concluded with the authorities**, provided that **stricter conditions** than those contained in such agreements **could be imposed** if new international obligations had to be fulfilled. The means to this end include in particular the development of

⁴⁶ Model homes exist in the residential sector, such as the Pleiade House in Louvain-la-Neuve. In the tertiary sector the Berlaymont 2000 project can be cited (future building of the European Commission).



co-generation of heat and electricity and the systematic use of **energy accounting** in companies connected with occasional energy audits to increase the energy efficiency of production and encourage the use of renewable sources of energy;

- b) Place **increasingly less energy-consuming goods**, services and technologies on the market;
 - c) **Reduce the transport of goods and raw materials** and choose cleaner mobility strategies, provided that alternative solutions are available and encouraged by the public authorities.
- 44)** Specific measures should be taken to reduce the **non-energy emissions** of industry (1/3 of all emissions of the Belgian industry for the three main greenhouse gases according to the national inventory of emissions).

3.5.5. Agriculture, horticulture and forests

Insofar as the Belgian national Programme to reduce CO₂ emissions in 1994 contained no measures concerning agriculture, the Council suggests to:

- 45) Encourage and provide advice and guidance for reconversion to **less energy-consuming agriculture**:

The intensification of agricultural production has led to an increase of certain gases, the most important of which are methane (CH₄), ammonia (NH₃) and dinitrogen oxide (N₂O). Both methane and dinitrogen oxide contribute to the greenhouse effect. Intensive agriculture and livestock breeding also consume⁴⁷ fossil energy and thus contribute indirectly to the deterioration of the environment.

Farmers who change their practices and reconvert towards a **less energy-consuming agriculture** more beneficial to the environment deserve advice and assistance, mainly in the form of increased support for agricultural measures to **reduce the use of chemical fertiliser** pursuant to European order 2078.

The nitrate Directive 91/676/EEC concerning the protection of waters against pollution by nitrates from agricultural sources must be adapted so that it no longer pertains solely to the problem of fertilisation by liquid manure but includes concern for the protection of water and the reduction of emissions of greenhouse gases, while also considering organic and chemical fertilising.

- 46) Promote the production and use of **renewable sources of energy** in the agricultural, horticultural, and silvicultural sectors:
- a) by stimulating the cultivation of plants that can be used as a source of renewable energy according to production systems whose global energy balance sheet is satisfactory and whose impact on the environment (and more particularly on water and the biodiversity) is not harmful;

⁴⁷ The energy used in agriculture comprises, as for the other sectors, the energy consumed directly in the form of fuel or electricity to run the machines, but also indirect energy used to produce the inputs. Intensive agriculture consumes non-renewable fossil fuels, in particular for the production of fertiliser, which constitutes the main energy consumption item in agricultural production.



- b) by supporting the public authorities to valorise plant biomass (agricultural, horticultural, and silvicultural sectors). This support must not however depart from the “polluter pays” principle and must not encourage production systems that are discouraged elsewhere;
- c) by offering appropriate and fair financial compensation for the generation of electricity from agricultural, horticultural or silvicultural biomass;
- d) by helping with the use of solar energy, hydraulic energy and wind power in specific sub-sectors of agriculture and horticulture.

4. Specific recommendations for the implementation of the Kyoto Protocol

In addition to the general recommendations above, the Council considers that to facilitate the implementation of the Kyoto Protocol, the Government should take the following measures:

4.1. General measures

47) In order to guarantee a sufficient number of signatory countries, Article 25 of the Protocol provides that for the Protocol to come into force, at least 55 countries must ratify it, including industrialised countries, whose CO₂ emissions in 1990 together represented at least 55% of the CO₂ emissions of the industrialised countries. This guarantee avoids too high a number of “bad players.” Furthermore, the exchange of different flexibility instruments, such as the negotiable permits, will be possible only between countries that have ratified the Protocol. The participation of the largest possible number of countries to the agreement, and in particular the United States, is important both for the environmental efficacy of the Protocol and in order to avoid excessive distortions of competition. The Council therefore considers that Belgium must **ratify the Kyoto Protocol within a period at least similar to that** of our main partners in the EU, so as to show our willingness to face the climatic challenge and give a clear signal to the actors. A minority of members⁴⁸ considers that the 7.5% objective will most likely not be attained fully by Belgium unless the Protocol is ratified by the United States and Japan. The Council considers that such a ratification by Belgium is indispensable if the country is to continue to participate fully in international discussions.⁴⁹ It will contribute to constrain the United States to ratify the treaty too, because it is difficult to imagine that the latter would have to abandon the flexibility mechanisms while the rest of the world was learning them.

A minority of members⁵⁰ nevertheless think that for the sake of the competitiveness of its companies Belgium should on this point follow the example on the Netherlands (as the position of the Netherlands⁵¹ was interpreted by these members) and make the

⁴⁸ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).

⁴⁹ The Framework Convention on Climate Change was signed by Belgium in June 1992, but was ratified only in January 1996. As a result, the Belgian delegation to the first Conference of the Parties in Berlin in March 1995 had only an uncomfortable observer status.

⁵⁰ J. Vermoes, J.P. Jacobs, H. Latteur, C. Bosch, L. De Cordier (representing the employers); J.N. Delanaye, S. Dutordoir (representing the energy producers).

⁵¹ Draft Coalition Agreement of 18 July 1998; Coalition Agreement Kok II government (3 August 1998).



ratification of the Protocol and its implementation on its territory dependent on the equivalent ratification and implementation by the United States and Japan.

- 48) Insofar as the Kyoto Protocol is legally more constraining than the Framework Agreement, it is all the more important to realise what was asked by the CNDD in its 1994 advice: **“Specify urgently the responsibilities connected to the measures to be taken, whether in regard to the authorities or the different sectors involved”** (Page 7). “In the current Belgian institutional context, the contributions of the Federal Government and those of the three Regions must be quantified and accompanied by measures assessable afterwards. The CNDD insists that the Federal Government should give its contribution concrete form within its competencies. Similarly, it is also up to the Regions to specify their contributions better, likewise in relation with their competencies.” (p. 8). “The governmental measures as such will not suffice to reach the global objectives and the partial or specific objectives. The partial objectives will have to be specified at the level of all the actors and sectors concerned as part of constructive consultation. The responsibilities must be specified here too and submitted for subsequent evaluation.” (p. 8).

4.2. Flexibility instruments

- 49) The Kyoto protocol provides the possibilities for the Parties to reach their objectives through different “flexibility instruments” such as negotiable emission permits, joint implementation and the mechanisms for “clean” development. If applied rigorously, the principle seems interesting, because it makes it possible to use international disparities in terms of marginal cost for the reduction of emissions. Moreover, as the attainment of the objective assigned to Belgium (-7.5%) is a real trend reversal, given the current situation compared with 1990 (+ 10%), **it seems useful to examine the potential** that these flexibility instruments can offer **over and above internal measures**.
- 50) **The main effort to reduce CO₂ emissions must first be waged within our borders.** This will make it possible to prepare the Belgian economy better (energy infrastructure, transport, modes of production and consumption) for the more substantial reductions expected beyond 2012. But, on the basis of an approach of minimum cost of the effort, **it might be useful to opt for joint implementation and the mechanism for “clean” development.** Numerous practical difficulties will have to be discussed however (regulatory framework, responsible actors, supervisory bodies, contribution to sustainable development, etc.) before a definitive advice can be forged on the value of the concept.
- 51) **The Council will come back to these questions in a subsequent advice**



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