



COGEN EUROPE

BRIEFING FOR FUTURE COGEN

EU POLICY AND ITS EFFECT FOR COGENERATION

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THE POLICY AGENDA

For the cogeneration industry there are a great number of policy initiatives in the in-tray. The majority of these items are moving in broadly the right direction for our industry, some will have an important impact on the future of the sector and its growth potential. They can be grouped in three main categories: Internal Market (or Liberalisation), Climate Change and Pollution Control and Promotion of Clean Energy.

In this analysis the principal initiatives are presented, together with a comment about the relevance to the cogeneration industry.

Liberalisation

Commission to speed up completion of the internal electricity market

The European Commission adopted a communication on the progress and perspectives of the internal market for electricity, presented by Commissioner Loyola de Palacio. While highlighting the advances of liberalisation (65% of the market has been opened, as against 28% foreseen by the directive), the Commission is of the view that there is a need to go further. "We must reach a situation where all consumers will in time have the right to choose their supplier", commented de Palacio.

The Commission is considering coming forward with proposals to speed up the liberalisation process, which will include transit pricing, further opening of markets, greater unbundling of operational and accounting aspects and acceleration of third-party access to the regulated network, while taking into account the needs related to public service and a study of pricing of access to networks used in Member States.

Bearing in mind the comments earlier in this newsletter, COGEN Europe welcomes this initiative and will be pressing the Commission to ensure fair access for cogeneration to networks, customers and reductions of monopoly power of energy market incumbents.

State Aid

Competition Commissioner Mario Monti is reconsidering his approach to planned new guidelines for state aid designed to benefit the environment after some EU governments raised concerns about their impact on clean energy. Monti's proposals for new rules to replace the existing guidelines, which are due to expire at the end of June, have already been held up by numerous delays to Energy Commissioner Loyola de Palacio's plans for measures to boost the use of solar, wind and other clean energy. Although De Palacio's proposals were finally adopted by the full Commission this week, Monti's aides have voiced doubts that the revised state aid guidelines will be ready for publication next month in light of question marks raised over his strategy. For example in a recent draft of Monti's plan called for state aid to the renewables industry to be cut off after only five years. But this has been fiercely criticised both by member states such as Denmark, Germany and Greece and environmental groups, which claimed it would put firms in the nascent sector at a competitive disadvantage. The Commissioner has now decided to hold further talks with national experts on the issue next month. "Some member states want us to be more

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flexible," said one official. "It is important to have a very open debate on this so we avoid any potential misunderstandings."

COGEN Europe is working hard to ensure that the rules on State Aid create a level playing field. It can not be sensible to have the rules on State Aid developed independently of environmental and energy policy objectives, where the reduction of aid is targeted at modern, clean energy whilst not addressing aid to the transitional systems.

Climate Change and Pollution Control

Action Programme to combat climate change

This programme aims to bring together all interested parties (technical experts, non-governmental organisations, industry and other relevant actors) to work together toward a consensus on the practical steps to be taken to Climate Change Programme (ECCP) to identify and develop a strategy. The final report, after 12 months, will propose "policy-oriented" conclusions. The following are listed as new priorities: transport pricing and economic instruments for aviation, a fiscal framework for reducing carbon dioxide from cars, improvement of energy efficiency, reducing methane emissions, and CO₂ "capture" in underground reservoirs.

COGEN Europe is very pleased to see this programme and will co-operate fully with the Commission and other actors in the field.

Sixth Environmental Action Programme

This new long-term action programme aims to replace the existing one, due to expire in 2000. It is expected to be shorter, more focused and strategic, containing general rather than quantified objectives. A second stage containing thematic action plans, with objectives and broad targets will follow. These action plans will cover areas such as climate change, chemicals, health protection and managing natural resources, retaining some of the priorities of the Fifth Action Programme and focusing on integration, implementation, public participation and information and where necessary the strengthening of existing measures.

Emissions of certain pollutants from large combustion plants

This Directive will set emission limit values (ELVs) for NO_x, SO₂ and dust from new combustion plants for energy production whose fuel input is greater than 50 MW, regardless of fuel type (solid, liquid, or gaseous). It aims to amend Directive 88/609/EEC and tighten ELVs for SO₂ and dust from new plants with and lay down strict NO_x limits for gas turbines. It would require that all new projects are developed as cogeneration except where this is not technically or economically feasible.

This Directive should provide an important boost for cogeneration, ensuring that the next generation of large combustion installations maximise energy efficiency, thus leading to gains in CO₂ reductions as well as noxious pollutants.

Integrated Pollution Prevention and Control

The EU has a set of common rules on permitting for industrial installations. These rules are set out in the so-called IPPC Directive of 1996. In essence, the IPPC Directive is about minimising pollution from various point sources throughout the European Union. All

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installations covered by Annex I of the Directive are required to obtain an authorisation (permit) from the authorities in the EU countries. Unless they have a permit, they are not allowed to operate. The permits must be based on the concept of *Best Available Techniques* (or *BAT*), which is defined in Article 2 of the Directive. In many cases BAT means quite radical environmental improvements and sometimes it will be very costly for companies to adapt their plants to BAT. To impose new and considerably tougher BAT rules on all existing installations in the European Union could jeopardise many European jobs, and therefore the Directive grants these installations an eleven year long transition period counting from the day that the Directive entered into force.

This process has just begun for Large Combustion Installations, including cogeneration, where one of the Commission's Institutes (IPTS) is preparing a BAT Reference Note for LCPs. COGEN Europe is heavily involved in this process. As with the LCP Directive, IPPC recognises that cogeneration is BAT for large combustion installations where this is economically feasible.

National Ceilings for acidifiers and ozone precursors (proposal for a Directive)

Proposes national ceilings for each Member State, to be achieved by 2010, using 1990 levels as base. These national ceilings would aim to ensure EU-wide emissions reductions of 78% for SO₂, 55% for NO_x, 21 % for NH₃, and 60 % for VOCs by 2010.

These targets will mean that the European Union will need to modify its approaches to energy conversion and this, together with IPPC and the LCP Directives will facilitate a move towards cogeneration.

Emissions Trading

This Green Paper will help to prepare for an EU greenhouse gas emission trading system to be launched by a target date of 2005, 3 years before entry into force of an international regime. It defines emissions trading as a scheme whereby companies are allocated "quotas" for their emissions, according to national reduction plans. Those reducing more than their quotas can sell their surplus which should lead to one price for quotas traded by companies within the scheme. CEC suggest that the scheme should confine itself to large fixed point sources of CO₂ in the following sectors: electricity and heat production, iron and steel, refining, chemicals, glass, pottery and building materials, cement, paper and printing.

COGEN Europe believes that with the correct design such a system should benefit the cleanest and most efficient systems, which will include cogeneration.

Promotion of Clean Energy

Taxation of energy products (proposal for a Directive)

To impose minimum tax rates on all energy products. Base rates would be stepped up in 3 increments: 1998, 2000 and 2002. Would seek to broaden the application of directive on excise duties to include coal, natural gas and electricity. Would cover motor and heating fuels.

Energy taxation is a controversial issue. At the present time it is impossible to consensus in the European Institutions, however, with enlargement of the EU, unanimity for voting by Member States will be dropped and then it may have a chance. A properly designed tax

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regime, that incorporates energy efficiency and carbon/pollutant impact, should benefit cogeneration.

Action plan on energy efficiency

Indicates a preference for voluntary agreements over legislation. Addresses energy efficiency equipment standards and calls for negotiated agreements in the main manufacturing sectors (chemicals, steel, pulp and paper, cement, textiles and the energy supply industries). Calls for a 1% improvement of energy intensity per year compared to "business-as-usual". This is expected to meet two-thirds of the estimated savings potential (18%) by 2010 and contribute 40% to the EU's Kyoto target of 8% reduction by 2008-2010. The Action Plan would point out ways to co-ordinate activities within Member States and reinforce and refocus ongoing activities. Discusses options to promote energy efficiency through combined heat and power (CHP). New measures would cover public procurement, energy audits, and an EU-level Best Practice Initiative.

This paper has already been discussed in this newsletter, and although COGEN Europe would have liked a much stronger paper, we support the Commission with its proposed measures.

EU renewable energy Directive

The draft Directive aims to double the proportion of "green" energy from 6% to 12% of primary energy supply by increasing the share of renewably generated electricity from 14% to 22% by 2010. Member States will be able to keep current national financial support schemes for at least five years but should eventually adopt a harmonised EU system. Non-binding "indicative" national targets for renewables will be set to ensure the overall EU target is met. Member states will have to report annually on their progress, and the Commission will propose mandatory targets if national goals are "inconsistent" with the EU target. The directive proposes several other supporting measures for renewables. Member states would have to certify green energy schemes to enable producers to guarantee that electricity they sell is renewably generated. The certification requirements would ease green electricity trades if the EU eventually decides for such a system, the Commission said.

One important element of the renewables targets will be the use of biomass in cogeneration schemes. Although in overall terms biomass cogeneration will still only form a small part of total cogeneration by the year 2010, it has significant implications for the future. COGEN Europe, therefore, actively supports this initiative.

Enlargement

Hungary, Poland, Estonia, the Czech Republic and Slovenia are the countries that were included in the list of countries to join the EU in the first wave. This selection was made after a close examination by the EU Commission of all the conditions of membership and how each country could comply with them. The conditions are the following:

- Being a stable democracy which respects human rights;
- Have a functioning market economy;
- Being able to cope with competitive pressure and market forces of the EU;

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- Acceptance of the *acquis communautaire*.

The countries selected are those that the EU considered closer to complying all these criteria. The last point is the one of importance to the development of cogeneration. More in concrete, the *acquis communautaire* contains both environment and energy rules. Environmental conditions in all the countries are worse than in the EU, and major effort will be needed in terms of investment to reach the EU level. Air pollution has been identified as one of the main problems. The EU believes that most of this investment effort has to come from the private sector, but it has also put a number of financial instruments that can be use for investment in energy efficiency and environment. Two examples are the Phare Programme and the ISPA programme. The Phare Programme has the aim of helping countries of Central and Eastern Europe to rejoin the mainstream of European development through future membership of the EU. It does so by providing grant finance to support these countries through the process of economic transformation and strengthening of democracy. Development of energy infrastructure and development are among the priorities of the Programme. The ISPA Programme (Instrument for Structural policies for Pre-Accession) is designed to provide assistance to the 10 countries of Central and Eastern Europe that are candidates for EU membership in order to align them on Community infrastructure standards and provide financial contribution for environmental measures and transport infrastructure measures. The instrument has the same approach and structure as the Cohesion Funds.

The EU joining of the applicant countries will therefore affect more these countries in terms of obligations than EU countries. For EU countries it should be beneficial, because it will increase its investment opportunities, although it will require some financial effort from the EU.

The European Commission, when assessing the degree of compliance with the *acquis communautaire*, mentioned environment and in most cases energy, as points where each of the applicant countries should make special efforts. In terms of energy, these countries will have to liberalise the electricity and gas markets as the EU countries (in some cases they are already further than some EU countries). Another issue is nuclear safety. Some nuclear plants will have to be closed down, but the countries will receive financial aid for it. If these plants are really closed down, new investment opportunities for cogeneration should arise.

What has so far happened in the EU as a result of liberalisation?

COGEN Europe believes that liberalisation should be good for cogeneration, since it lifts many barriers to its development. However, the first results of it have not been positive. In the last two years we have seen a market stagnation, and in some countries, such as Germany, cogeneration plants are being shut down.

The over-riding cause for this market stagnation is uncertainty within the industry which has arisen through the implementation of the Electricity and Gas Directives introduced to

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liberalise the markets. In theory liberalisation should provide new opportunities for cogeneration through the elimination of many of the previous barriers. These included the monopolistic structure of the electricity market which resulted in low tariffs for the purchase of surplus electricity, no possibility of wheeling, high tariffs for stand-by and top-up supplies as well as predatory pricing against possible competition.

In practise what has happened is that through the incomplete way it has been implemented and with little safeguarding of other environmental policy measures in the EU Member States the market has become environmentally and economically distorted. As expected, electricity prices have fallen. In theory, the higher efficiency of cogeneration systems should put them in an advantageous position. However, access to the power grid for new and clean producers is often prevented by the setting of unscrupulous prices by former monopolistic utilities still owning the grid. Predatory pricing policies of some large electricity companies are targeting certain customers and competing organisations in a race to win market share. Old written-off power stations are being brought back on line without regard for environmental impact or sustainability. The price of electricity produced by such monoliths is so low that even new highly efficient cogeneration plants cannot compete with them, resulting in an actual reduction in cogeneration plant in use and an increase in carbon dioxide emissions.

A good example of what is happening all over Europe can be seen in Germany. Germany has plenty of cogeneration, accounting for about 10% of electricity generation. At the moment however, the cogeneration situation in Germany looks bleak. Although a few positive measures have been taken (eco-tax break for units with a yearly efficiency over 70%; premium for export to the grid in areas where it is not congested – with a ceiling based on network avoided costs), there were practically no new CHP installations in 1999.

Before the implementation of the Electricity Directive, everybody was waiting for the new Energy Law. This was finally approved in April 1998. The new Law liberalised (at least in theory) the electricity and gas markets completely. Now finally competition has intensified and since the summer, there has been a very sharp decline of electricity prices. The first reaction of the utilities has been to ensure their place in the market by reducing their prices (temporarily) below production costs. Now the prices are lower than the operating costs and nobody other than the big utilities can produce at these prices. Currently there is no fair competition in Germany, since these utilities possess big coal and nuclear power plants where costs have largely been written-off, and environmental costs are not included in the prices. This situation of prices below production costs is unsustainable in the long term, and is currently having a very harmful effect on environmentally friendly energy production. Every month, 300 MWe of cogeneration plants are shut down.

However it isn't all negative, some countries have managed to integrate liberalisation and climate policies ensuring a favourable market for cogeneration.

In the UK, the share of electricity produced from cogeneration is not among the highest in Europe, about 5.6%, but the future looks hopeful. The liberalisation process started earlier than elsewhere in Europe and has indeed encouraged other countries to use the same

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model when organising their own electricity and gas systems. Currently, the UK government is one of the few that acknowledges the need to specifically support cogeneration in a liberalised market due to its environmental advantages. Although cogeneration is a competitive technology, current market conditions are completely distorted and consequently not fair.

The UK government supports its cogeneration industry using several initiatives:

- Last year, the government decided to apply a “stricter consent policy” to new gas-fired generation plants. This effectively means banning new gas-fired power plants, but cogeneration of a certain minimum efficiency was exempted from this prohibition. The measure was not established with the aim of protecting cogeneration, but with the aim of protecting the coal generation industry, however, the result has also been positive for cogeneration development;
- A new Climate Change Levy has been established, and cogeneration of a certain quality has been exempted from this levy. The government is currently working on the definition of the quality criteria.

Another country which supports its cogeneration industry through the combination of liberalisation with other policies is Denmark. Denmark is one of the leaders of cogeneration development in Europe, with about 50% of its electricity production being cogenerated. This has been the result of a very supportive government policy made up of a combination of energy planning, legislation and subsidies. The liberalisation of the electricity market obliges changes to be made within the legal framework and support measures. However, advantages for the time being have been maintained. The following types of cogeneration can be distinguished:

- Centralised large-scale cogeneration: a special guarantee has been given which makes it possible to prioritise its production up to 2006;
- Industrial and decentralised cogeneration based on fossil fuels: the present settlement rules will continue, including a fixed rate for selling electricity to the grid (as well as the obligation upon the grid to purchase). The fixed rate is 0.06-0.07 Euro/kWh.
- Decentralised cogeneration based on renewable fuels: the energy administration is encouraging the development of cogeneration based on biomass through a number of R&D activities as well as favourable framework conditions. This type of cogeneration will moreover participate in the certification system for renewable energy that will be put in place. Details are still being worked out.

Despite the fact that a supportive legal framework has been kept, the liberalisation process has resulted in uncertainties and the gas prices have increased considerably. This has slowed down the implementation of new cogeneration units. As in the other Scandinavian

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countries current market electricity prices are extremely low (below production costs), but for the moment cogeneration is protected from these price downfalls.

In essence Member States across the EU have reacted to liberalisation with a range of different policy measures, with varying effects on their cogeneration industries. The overall effect has been negative. What is needed is a directive on cogeneration together with comprehensive strategies and action plans at the EU and Member State level. It was hoped that the recently published "Action Plan to Improve Energy Efficiency in the European Community" would provide such a policy measure. Though what has been delivered is not as good as we had hoped. It does incorporate many good ideas and measures including a number proposed by COGEN Europe and the Energy Consultative Committee, but it lacks boldness.

According to the Commission the Action Plan should refocus attention on promoting energy efficiency, to realise the potentials for cogeneration and energy efficiency and to establish a foundation for continuous long-term improvement. The need to integrate energy efficiency into other non-energy policy instruments and to establish a time frame for the Action Plan of 2010 with regular monitoring of progress is clear. Nevertheless, for cogeneration at least, the table of measures is mostly repackaging existing activities, with little that is radical or new. The measures proposed are insufficient to drastically change the market conditions and are unlikely to deliver the long-term doubling target.

One specific omission is the need for a European Cogeneration Directive, that integrates cogeneration properly into EU and National energy policy, ensuring fair access to fuel supplies and electricity systems, to harmonise rules and regulations and to remove unnecessary institutional obstacles.

If the cogeneration industry is to prosper bringing with it economic competitiveness and environmental benefits, the policy makers of the EU institutions have to be bold and make cogeneration a higher priority to ensure that EU targets are met.

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