

INTEGRATION OF ENERGY MARKETS IN THE EUROPEAN UNION

HISTORY, POLITICS AND ECONOMICS OF FORMING THE INTERNAL MARKET FOR ENERGY

Report EUROPEAN UNION (Module 2)

Executive Summary

FOREWORD

This executive summary is part of the Final Report (Module 2): "Integration of Energy Markets in the European Union – History, Politics and Economics of Forming the Internal Market for Energy", which has been prepared in the framework of the project "Institutional Co-operation with MERCOSUR" of the SYNERGY Programme of the European Commission.

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The opinions expressed in the report and in this summary are those of the authors and do not represent in any case the official viewpoints of the European Commission or of the MERCOSUR authorities.

1. ECONOMIC INTEGRATION IN THE EUROPEAN UNION

The integration of energy markets has always been - and still is - an ambiguous phenomenon, as it is torn between two different ratios, namely the free trade paradigm and the independence paradigm. On the one hand there is the economic rationale, which highlights the efficiency and welfare gains of specialisation and international division of labour. Accordingly, the various types of energy forms should be produced in those countries, which are able to provide those requirements at the lowest relative cost. This requires that energy can be traded and transported freely from one country to another.

Yet, historically, international and national trade in energy has been restricted by all kinds of rules, regulations, conditions and concessions. It was (and sometimes still is) customary that countries devote large amounts of capital and resources to the indigenous production of comparatively expensive energy, while more convenient and low cost substitutes are readily available in the world market or even in neighbouring countries. This pursuit of independence stems from the objective of 'security of supply', which is, however, often motivated by the endeavour to protect specific national energy sector activities and interests.

The European Union developed out of the European Coal and Steel Community (enacted 23 July 1952), the European Atomic Energy Community (Euratom, enacted 1 January 1958) and the European Economic Community (EC Treaty, in its original version the 'Treaty of Rome', enacted 1 January 1958). The 'Treaty of Rome' establishes a customs union of the Member States and defines "four economic freedoms" that should be attained within the Union: free movement of goods, people (labour), services and capital. The development of the customs union was paralleled by the establishment of regional and sectoral support systems, aiming at the achievement of economic and social cohesion among the Member States.

The Single European Act (enacted 1 July 1987) outlines the Common European market in which the "four economic freedoms" had to be accommodated by 1 January 1993. The 'Treaty of Maastricht' (enacted 1

November 1993) incorporated the Single European Act into the EC Treaty, but also included further steps of political integration (European Union).

Despite the fact that the European Union developed out of the European Coal and Steel Community and the European Atomic Energy Community, both dealing with energy, the European Community has been notoriously weak in respect of its grip on energy sector developments. The Member States' governments were - following the independence paradigm - not prepared to cede any sovereignty in this respect to the Community's institutions.

Reflecting this legacy, the Single European Market in principle does not provide for any special treatment of energy with respect to the "four economic freedoms". This, however also, implies that the creation of a Single (competitive) Market in principle also extends to the energy industries, despite the fact that national governments have given extensive monopoly rights to utilities in network industries.

By 1988, the European Commission decided that it should actually extend its free market initiative towards the energy sector and considered it necessary to clarify the competition rules in the gas and electricity sector, through the development of specific Directives (secondary legislation).

2. EUROPEAN ENERGY INTEGRATION PRE-1988

It has become usage to associate the concept of *energy market integration* in Europe with the developments that unfolded following the publication of the EU Commission's report "The Internal Energy Market" in 1988.

However, the process of energy integration in the European Union was initiated long before the topic was treated in the political agenda, mainly driven by technical considerations as, for example, the management of demand by electricity exchanges between neighbouring countries and the bilateral trade between producers and consumers of natural gas. The energy companies have been the main motors of the development of the interconnected networks of electricity transmission of Western Europe (UCPTE) and of Scandinavia (NORDEL), as well as of the infrastructure of transport of natural gas inside Europe, and with the producing countries outside the region. In this period, cross-border trade took place under a regime in which the exchanges were undertaken in a controlled manner, strongly co-ordinated by a limited number of public and private actors: *controlled integration*.

Before the 1988 EU initiatives, the situation in the European *gas industry* is best characterised as a 'managed market', in which governments and 'gatekeepers' (i.e. transmission companies and local/municipal distribution companies) controlled and constrained the development of the continental gas market, which evolved under a pattern in which gas producers, gas transmission and wholesale companies and local gas distribution companies became tied together in a system of long-term take-or-pay contracts¹. In this well-managed market, in which no 'free' volumes of gas could be offered to 'free' customers, there was never gas-to-gas competition. This resulted in a virtually riskless expansion of the supply system and the gradual growth of markets, without jeopardising the other national and industrial interests involved - such as state revenues, the oil and the coal industry, nuclear power generation etc.

In the case of the *electricity industry*, the European interconnected electricity system (UCPTE) and the Scandinavian interconnected system (NORDEL) have been managed and controlled largely independently of each other, for geographical reasons². The associations of interconnected utilities have the function of, inter alia, internationally co-ordinating information on forecast developments in national demands and plant capacity additions in order to allow for an optimisation of the entire system. What is important to note from the perspective of the driving force of integration is that in essence, the development of international interconnections has not been politically mediated, but has remained under the self-control of utilities.

Reasons for interconnector trade in this period include: (i) seasonal exchange between hydro based and thermal systems, (ii) short term exchanges to stabilise the interconnected system and make mutual use of

¹ The development of this market started with the discovery of enormous reserves of natural gas in the Netherlands' Groningen field in 1959, and the subsequent decision to export gas to neighbouring countries. In later stages, other suppliers, like Algeria, the Soviet Union and Norway began to sell gas into the European market while a number of European countries (Germany, Italy, France, Denmark) discovered moderate exploitable indigenous gas reserves.

² The Nordic and UCPTE systems are interconnected by links between Germany and Sweden and between Germany and Denmark. Most EU countries are interconnected with neighbouring countries.

generation reserves, (iii) generation capacity shortages and (iv) systematic exchange due to optimisation of generation systems (economy exchanges).

Unlike electricity and natural gas after 1988 - the *oil industry* has never been subject to an actual EU policy of deregulation and liberalisation. This is because the sector has always been relatively competitive and - despite some episodes such as the oligopoly of the Seven Sisters' cartel and OPEC - the world oil market has traditionally been rather integrated. Notwithstanding this, the European Commission was rather instrumental in assisting Member States and the sector in overcoming barriers to the free trade, which still existed in Europe and in providing a platform for the restructuring of European oil in the 1970s and 1980s, before the IEM initiative for liberalisation got underway. A more recent exemption is the application of competition legislation to the upstream part of the oil and gas exploration in the Hydrocarbons Directive (1994); an issue which had been considered traditionally as a crucial element of countries' sovereignty.

3. EU-LEGISLATION SUPPORTIVE OF ENERGY MARKET INTEGRATION

Following a decision of the Energy Council in June 1987, the European Commission prepared the report "The Internal Energy Market" (May 1998), in which the main obstacles to free trade in the energy sector were identified. This was the first actual step in a series of EU initiatives towards the achievement of an Internal Energy Market (IEM), the most important of which were:

The 'Price Transparency Directive' (July 1990), aimed to improve transparency in gas and electricity prices to large industrial consumers;

The 'Electricity Transit Directive' (December 1990) and the 'Gas Transit Directive' (May 1992), provided a framework of arrangements which should induce more international trade in gas and electricity between the entities responsible for the gas and electricity grids. Although their actual impact was fairly low³, the 'Transit Directives' have been an essential preparatory stage in the process of liberalisation, in terms of the abolishment of exclusive rights to trade and distribute electricity and gas in particular, and by gradually opening-up the respective markets.

Guidelines for the development of 'Trans-European Networks (TENs)' and for granting support to TENs were introduced in Decisions of the Council and the European Parliament in 1996 and 1997, aimed at providing the necessary infrastructure for (i) the effective operation of the Internal Energy Market, (ii) economic and social cohesion, by reducing isolation of disfavoured regions and (iii) the promotion of security of energy supply. On the basis of these objectives, priorities for interconnections in the electricity and gas sector were defined.

After a process of almost ten years, which was often characterised by controversial positions among Member States and energy enterprises, the process towards the creation of the Internal Energy Market culminated in the adoption of the Directives concerning common rules for the Internal Markets in Electricity and Natural Gas, the 'Electricity Directive' (December 1996) and the 'Gas Directive' (June 1998). Both directives reflect the principle of competitive market opening, while, at the same time, incorporating the - sometimes diverging - positions of Member States and industry brought forward during the reform debate.

The development and preparation of the Directives can be described as a dialectical process in which the proposals were modified time and again, in order to secure a maximum of consensus and effectivity. Instead of a legal solution, based on the application of competition law, a political solution was chosen, seeking to construct a common denominator, acceptable to all parties involved, and reconciling conflicting interests as far as possible⁴.

4. ENERGY MARKET INTEGRATION BY LIBERALISATION

The Internal Electricity Market Directive (96/92/EC) defines the minimum requirements for a competitive opening of the national markets, concentrating on the following aspects: (i) free competition in electricity

³ Towards the end of the 1980s, a tendency became visible in which relatively small amounts of energy were traded outside the prevailing system, upon certain conditions. Hence, very gradually, a kind of *market-driven integration* developed.

⁴ Notwithstanding this, the threat to recur to competition legislation was frequently used, in particular in the early stages of development of the Directives.

generation, admitting two alternative procedures for new generation capacity (the authorisation and tendering procedures, respectively); (ii) gradual opening of the supply market to final consumers, according to the principle of reciprocity; (iii) accounting separation for vertically integrated companies; (iv) transparency of grid access charges to transmission and distribution networks; and (v) criteria for the application of public service obligations.

There are two options for the opening of the supply markets to final consumers: Third Party Access (TPA), either as negotiated or regulated TPA, or the Single Buyer (SB) model, which means the appointment of a single buyer and seller of electricity by the national Government⁵. Other options for the Member States include the imposition of public service obligations, as well as the creation of protected parallel markets for national fuels (i.e. coal), co-generation and renewable energy.

Irrespective of which model to organise competition is chosen, the 'Electricity Directive' also defines minimum degrees of opening of national markets in order to ensure comparable degrees of competition. Most Member States have committed themselves to open up their electricity markets more than these minimum requirements. It is very likely that also in the future the opening will be ahead of schedule.

It is worth mentioning that the integration of the electricity markets by liberalisation in Europe is not limited to the implementation of the European Directive. Examples of processes independent of the European legislation include: (i) the liberalisation of the energy markets in England and Wales; (ii) the Nordic Electricity Market (Norway, Sweden and Finland); as well as (iii) the spot trade in electricity between Germany and Switzerland.

Similar to the 'Electricity Directive', the Directive on the Internal Natural Gas Market establishes the minimum requirements for the competitive opening of the natural gas markets, including the aspects of (i) non-discrimination among natural gas companies; (ii) access to the transport systems ('negotiated' or 'regulated'); (iii) gradual opening of the markets by definition of eligible consumers; (iv) accounting separation for vertically integrated companies; and (v) derogations for specific conditions, as the existence of 'take-or-pay' contracts, or the existence of a main supplier in the case of emerging markets.

Basically, the 'Gas Directive' takes over the principles of the 'Electricity Directive', while taking account of the specific features of the gas market. The fundamental difference is that Member States will have to make a choice between a system of 'negotiated access' and 'regulated access', while the 'single buyer' concept is not referred to.

While the Electricity Directive was already implemented in most of the Member States, the 'Gas Directive' should be implemented by August 2000. Taking in consideration that the European natural gas market is dominated by a reduced number of large actors, it is supposed that the effective opening of the gas market will develop at a slower pace than that of the electricity sector.

Problems related to the implementation of the Electricity Directive mainly refer to issues related to actual market opening (access to networks and transparent tariffs), the effective separation of transmission and distribution services of vertically integrated enterprises, public service obligations (including consumer protection and protection of the environment), transitional regimes with regard to the so-called 'stranded costs' due to obligations imposed on electricity companies in the past (including long-term supply contracts) and the promotion of renewable energy in the internal electricity market. Issues related to cross-border trade, like: tariffication of cross-border transactions, the management of available transmission capacity and the harmonisation of environmental and other standards, have been addressed by the Commission as priorities.

Central issues related to the implementation of the 'Gas Directive', among others, are: (i) the access to the transport systems, (ii) 'unbundling' of vertically integrated companies and (iii) the problem of long-term 'take-or-pay' contracts.

⁵ During the reform discussion, the initially proposed Single Buyer model was deemed to be obstructive to competition and therefore amended in a way, that it actually incorporates 'virtual' TPA in the form of exemptions for eligible customers and independent generators. As a matter of fact, all Member States have eventually opted for TPA, in particular regulated and - to a lesser extent - negotiated TPA.

5. ENERGY MARKET INTEGRATION, ENERGY EFFICIENCY AND ENVIRONMENTAL SUSTAINABILITY

Since the beginning of the 1970s, the majority of European governments have been intervening, more or less actively, in the energy sector to stimulate the efficient use of energy and to substitute non-renewable energy sources. Initially, these policies emerged from the objective to achieve security of (national) energy supply, which actually favoured state intervention. During the 1980s, however, a gradual shift towards the acceptance of a more liberal approach took place.

The Internal Energy Market initiative of the European Commission in 1988, together with the emerging problem of climate change, following the report of the United Nations Commission on Environment and Development (the so-called "Brundlandt Report", 1987), mark the beginning of a new era of energy policy in Europe, in which both issues, the IEM and the problem of climate change, are dominating the agenda. The discussion on how to reconcile the objectives and the consequences of more competition (including lower energy prices and enhanced economic growth) and the Kyoto commitments to reduce the emissions of greenhouse gases has emerged as one of the central issues in the process of the implementation of the internal energy market, all the more so, because of the fact that pre-Kyoto objectives to stabilise CO₂-emissions in the European Union were not achieved.

The traditionally strong interaction between national and Community policies in the area of energy efficiency and environmental sustainability⁶, has been intensified by the simultaneous objectives of energy market integration, while achieving the Kyoto commitments for the reduction of greenhouse gas emissions. Cases in point are the directives on energy efficiency labelling and standards for household appliances, which illustrate the interrelation between the objectives of free circulation of goods and services (the Internal Market) and sustainable development.

The need to intensify Community policies with regard to energy efficiency and renewable energy has been addressed by two recent Communications from the Commission: the White Paper "Energy for the Future: Renewable Sources of Energy" (1997) and the Communication "Energy Efficiency in the European Community - Towards a Strategy for the Rational Use of Energy" (1998)⁷. Both documents recognise the need for a more active role of the EU and of the Member States to promote sustainable energy, by intensifying the use of proven instruments and by the introduction of new instruments, including a better co-ordination among the EU and Member States, and the development and implementation of Community action plans in both areas.

A specific issue is the need for common rules to promote renewable energies in the competitive internal electricity market, which has been addressed by the Commission's "First Report on Harmonisation Requirements in the Internal Market for Energy" (1998). The report identifies "a clear need for common rules in this area", taking into consideration the increasing role of renewables in the EU in the coming years (following the Kyoto commitments) and the potential market distortions which might arise from the existence of different renewable support schemes in the Member States. The Commission advocates the application of support schemes, which are as compatible as possible with the internal (competitive) market, calling for the "proactive creation of a single market (for renewables)" through an explicit legal Community framework.

6. EUROPEAN EXPERIENCE OF PARTICULAR RELEVANCE TO MERCOSUR

The development of the Internal Energy Market in Europe features a number of specific issues of particular relevance to the emerging integration of energy markets in the MERCOSUR. These issues, which are discussed in detail in chapter 6 of the Module 2 report, refer to the following subjects:

Company driven and politically mediated integration

Interconnection trade has existed long before intentions to integrate European national energy markets by liberalisation. Electricity interconnections have been established to improve plant dispatch and reduce plant reserve margins by making a wider range of plants accessible and by making use of shifted demand

⁶ A typical example is the Community legislation on rational use of energy in the built environment, heating systems etc, which has been introduced since the late seventies and which had a strong influence on policies and regulations in this field in the Member States.

⁷ The Communications are part of a series of initiatives following the publication of the White Paper of the European Commission: "An Energy Policy for the European Union" (1996).

peaks between regions. Benefits have been large in particular where hydro based systems could be connected with thermal systems. The development of gas networks has followed a different logic, defined by the need to transport gas from the wellhead to the consumer, which rendered the concept of an 'interconnected network' for gas less obvious.

Experience from electricity market liberalisation in Scandinavia (the Nordic Electricity Market with the power exchange NordPool) shows that not only political influence can lead to market integration by liberalisation. There are also commercial interests of companies to liberalise their incumbent markets in order to be able to participate in a geographically wider competitive market⁸.

The natural gas market in Europe has developed in a mode strictly controlled by the industry involved, as well as by governments. No market has been involved in this process, until very recently. To date, the further extension of gas transmission and distribution networks into new areas in Europe takes place under the supportive aegis of, firstly, the Trans European Networks initiative and, secondly, under the protective provisions provided by the EU Gas Directive. It is, in fact, only in the more mature markets in Europe (UK, the Netherlands, Germany) that additional capacity is constructed under a - more or less - competitive regime.

Role of information, practical experience and consensus building for the integration process and integration results

The process of decision-making regarding both EU Directives has shown that it was a dialectical process in which the proposals were modified time and again, in order to secure a maximum of consensus and effectivity. Instead of a legal solution, based on the application of competition law, a political solution was chosen, seeking to construct a common denominator, acceptable to all parties involved, and reconciling conflicting interests as far as possible. The European Commission was highly aware of the political content of the issues involved and has made intelligent use of the factor time, which worked in favour of the changes envisaged. An important role was given to a strategic supply of information, which made the several (potential) actors aware of their position in the light of market developments and the strategies of other actors.

Subsidiarity and competition exemptions

Competencies with respect to industry organisation and the elaboration and application of national competition rules are to an important extent left to the Member States in order to accommodate national policies such as certain social policies (public service obligations), environmental programmes or policies of security of supply. Competition exemptions - sometimes limited in time - have overcome much of the resistance emerging from social and security of supply considerations, while Member States have a high degree of freedom in introducing market oriented instruments into their environmental programmes.

Reciprocity of energy trade

The 'reciprocity clause' of the EU Electricity Directive is aimed at ensuring mutually equivalent degrees of market opening between countries. Access to the network and thus final customers may be denied to foreign electricity suppliers, if the targeted customers would not be eligible for competitive purchases in the country from where the competitive supplier originates. This structuring of the 'reciprocity clause' in principle has a very limiting effect on competition: countries are not obliged to open their markets to the degree of the most liberalised electricity market, but can restrict competition from third countries to the degree of competitive opening in respective third countries.

The applicability of reciprocity clauses in practice is doubted, however. Effective commercial trading may be hard to detect (in particular in situations where commercial trades physically cancel out) and the origin of electricity traded may be hard to follow. This leads to the conclusion that the reciprocity clause may not be enforceable.

Harmonisation requirements and level playing field

In its Second Report on Harmonisation Requirements, the European Commission has emphasised the need to eliminate obstacles to cross-border trade of electricity and to ensure a level playing field in the

⁸ Other 'market places' for electricity trade are the Swiss-German Interconnector (Laufenburg) and the Amsterdam Power Exchange (APX).

European electricity market. Available interconnector capacity, cross-border transmission pricing and environmental, accounting and taxation standards have been identified as main issues.

In many cases, the available interconnector capacity between Member States is considered as insufficient for the expected increase in power trade after liberalisation in Europe. Harmonisation of allocation rules of network capacity (in particular with regard to potential conflicts between short-term exchanges and long-term capacity reservations) and the construction of new interconnection capacity are of particular concern.

Regarding cross-border trade, practical problems arise from the co-existence of two systems of access to the network: negotiated third party access (opted for by Germany and Greece) and regulated TPA (chosen by all other Member States). Major efforts are made to harmonise both systems to the degree necessary to secure effective access to transmission networks.

Harmonisation of legal standards of electricity production mainly refer to environmental standards (including specific EU legislation in this field), accounting standards for storage of nuclear waste and decommissioning of nuclear power plants, as well as direct and indirect taxation of electricity and electricity companies.

Market opening and strategic objectives

Although a central issue in European energy policy, market integration by liberalisation is not an end in itself. Underlying objectives are competitiveness, security of supply, environmental protection and social development.

Competitiveness is one of the main pillars of European policy, aiming at reinforcing the competitive position of European companies and providing consumers with the benefits of competitive choice and low prices. While it is too early for final conclusions, it has to be carefully observed, to which extent the ongoing concentration process in the European energy industry will safeguard the interests of consumers and small market players, like regional and municipal energy enterprises.

While medium and long-term *security of supply* is a major issue of concern in the European Union, there are no indications that energy market integration by liberalisation may endanger this security. Although import dependence for fossil fuels is expected to increase significantly until 2020, diversification of supply sources is expected to contribute to the 'manageability' of this dependence.

Energy efficiency and renewable energy are given a major role in the evolution towards an *environmentally compatible energy system*, in addition to their potential contribution to security of supply. Quite to the contrary to what is generally held, market integration can work in favour of both options, provided that an enabling market context and adequate 'rules of the game' are put into place. While a broad consensus exists that energy efficiency and renewable energy need some 'special treatment' - at least in the short and medium term - a range of instruments exists which are compatible with the paradigms of a competitive market.

Finally, there is an apparent need for policy makers to address the *social dimension* of the Internal Energy Market. This includes the need to find a (local and regional) balance between the threat of job losses in established industries and job creation and preservation due to new economic activities emerging from market liberalisation.