

It is time for Germany and France **to clearly join forces**

Jean-François Conil-Lacoste^(*)

Chief Executive Officer of Powernext, France

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^(*)Jean-François Conil-Lacoste is Chief Executive Officer of Powernext SA, the Paris based Power and CO2 Exchange, since its inception in July 2001. He is also Vice-Chairman of the board of Belpex, the Belgian Power Exchange since July 2005.

From 1997 to 2001, he served as Chief Executive of Euronext Ltd in London and is a member of the Consultative Working Group of CESR since 2004.

Graduated from ESSEC in 1976, he spent ten years as a commodity trader at Louis-Dreyfus in Paris and Buenos-Aires before moving to stockbroker Ferri, where he managed the fixed income and futures department.

Powernext SA
25, rue Louis Le Grand
75002 PARIS

France

Tel : 01 73 03 96 00 - Fax : 01 73 03 96 01

Tel.dir : 33 1 73 03 96 30

jf.conil-lacoste@powernext.fr

1. Introduction

It would be tempting to say that the first challenge to face is political. Regulations and technicalities will find solutions once the European energy and environmental policy is clearly established. Politics are challenging because we are all facing an unprecedented situation, where three major constraints, somewhat antagonistic, are forced to co-exist.

The first one is the “industrial competitiveness”. It is by essence the ultimate goal of the liberalisation process: introduce competition to foster economical efficiency and strengthen the European industry in a global world. This calls for the cheapest energy cost, i.e. the lowest megawatt hour (MWh) and ton of CO₂ prices. Focus is primarily national and short term. Government representatives and MP’s are all concerned by the risks of delocalisation and unemployment in their jurisdictions, especially ahead of elections! So far, liberalisation has not delivered the expected benefits, essentially because it has been conducted half way in a bullish fossil prices context, but also because new constraints have emerged.

The second constraint is more recent. It is the “security of supply”. A few years ago, nobody would have expected blackouts and serious incidents in Europe. When the California crisis occurred in 2001, there was a perception that something similar could hardly happen at home. It proved wrong and now “security of supply” is high on the agenda of the European Commission as well as of the member States. The French Senate has, after the Nov 4th 2006 incident, ordered an official “mission to evaluate the French situation in terms of security of supply and the means to preserve it». Security of supply calls for high enough electricity prices to favour investments in new generation assets. Focus is necessarily European through the development of interconnections and market coupling. Time horizon is rather medium and long term.

Another layer has been added with the latest constraint, “the combat against climate change” which reflects a very recent awareness of the necessity to reduce GHG emissions, immediately. This constraint calls for the highest MWh and CO₂ prices to push for energy consumption efficiency and investments in cleaner technologies. Focus is not national, neither European, but worldwide. Time horizon is long and very long term.

The piling up of these three antagonistic constraints in various space and time dimensions creates a very difficult mix for political decisions, albeit the

natural complexity of these fields and the lack of an appropriate constituency. For example, drastic measures for emissions reduction would lead to higher CO₂ prices with a risk to inflate energy prices, thus hurting in the short term the competitiveness of many industrial sectors. The risk is to establish weak compromises which will lead nowhere. The key question is to define a coherent long term energy and environmental policy, at the European level, which will give visibility to all actors. This long term policy should be accompanied by transitory measures to avoid fatal big bangs. It will also require adequate market instruments of risk management allowing for responsible and dynamic attitudes rather than assistance and short sighted lobbying. This requires vision, courage and pragmatism. Too many countries or corporations are still mainly driven by their own interests and overexploit the principle of “subsidiarity”. It is time for Germany and France to join forces. France will be in charge of the presidency of the European Council in July 2008. Let’s hope it will seize the opportunity to give a critical push for the integrated energy market.

In this paper, the first chapter reflects on the current European energy market situation, emphasizing the main negative and positive recent developments. In the second part, I will consider the “10th January European Commission” package. Finally, a few – personal – suggestions are presented to improve the functioning of the European energy market. I will focus on the electricity sector, from the viewpoint of a market operator.

2. The state of play 80 days ahead of the full opening of the market

2.1. The liberalisation process is incomplete or unsatisfactory, notably in France and Germany ...

The two major continental power markets, Germany and France, with more than 1000 TWh yearly consumption combined, are not coupled yet and present quite different profiles in the liberalisation process.

In France, as of January 1st, 2007, only 16% of the eligible sites had subscribed a supply contract at market price. Those are essentially small professional consumers and two thirds of them are still supplied by the historical suppliers. The main reason is the existence of regulated tariffs

which are totally disconnected from the market reality. French electricity tariffs have indeed decreased in constant euros by 24% over the last ten years (source INSEE), digging a growing gap with bullish market prices. Such low tariffs are certainly sustaining the industrial competitiveness – albeit artificially and in the short term –, but they clearly convey the wrong signals in terms of security of supply and climate change mitigation. Another consequence has been the introduction of a competitive bias among the French eligible consumers, between those who had genuinely exercised their option and those who staid under the comfortable shelter of obsolete tariffs. Such a discrimination was politically unsustainable, especially ahead of major elections, and a new law has been hastily introduced on December 7th 2006 to allow a “return to the tariff”, the so-called “Transitory regulated tariff of market adjustment” (TaRTAM). It is worthwhile to note that the subtle objective of the administration and the Parliament is to “adjust the market”, not to “adjust to the market”. Interestingly, the State Council (Conseil d’Etat) is considering the TaRTAM contrary to the European law. As a result of this long standing interventionist political stance, the French wholesale power market is shrinking and represents less than 1/10th of the German one, leaving to the German market the leadership in terms of European power price formation, based on more polluting and expensive German coal or gas plants and without the benefits of the cheaper and CO₂-free French nuclear component! There is undoubtedly a long road ahead of us, before the market instruments are truly accepted and promoted in France. In this respect, the recent reflection initiated by the European Commission regarding the benefits of market instruments is highly welcome.

In Germany, the recent row about the power exchange EEX members market shares leak and the suspicion of price manipulation show that the liberalisation process is also there far from being fully accepted. Consumers’ trust in price formation is not achieved yet and the very legitimacy of a forward power market is not convincing enough, while numerous industrialists are still looking for locking in direct contracts with their supplier over very long periods at fixed prices. The situation is nevertheless less critical than in France with a booming wholesale market, an 8 time multiplier of the domestic consumption, a quarter out of which is channelled through the exchange. But it is interesting to emphasize the fact that only 13% (14 TWh) of the volume of the exchange were directly traded in March 07 on the futures market platform, i.e. on a multilateral basis. 94 TWh resulted from the so-called OTC clearing, which consists in clearing through the exchange clearing house, bilateral trades executed on the over-

the-counter market, i.e. outside the futures platform. Another 150 to 200 TWh were probably traded on a pure bilateral basis outside the scope of the exchange. In other words, what is surfacing in a transparent manner is a modest percentage of the total wholesale market, in a country where there is a 100% opening and where tariffs are closely linked to market prices. Given the non storable nature of electricity and the high degree of concentration at the supply side, this situation cannot be considered as trustworthy and satisfactory, whatever the size of the market.

It is essential that the two major hubs in the European continent evolve towards a more transparent functioning of their markets and allow for a truly diversified competition at the supply side by progressively eliminating regulated tariffs. Exchanges could then fully deliver what they are initially designed for: organising the largest possible confrontation of supply and demand in a transparent, auditable and secured framework to bring the most economical price.

2.2. But some progress has been made recently which may pave the way for more integration

First of all, day-ahead power exchanges have become a key component of the market integration process. Let's remember that not so long ago, they were not even mentioned in the Congestion management guidelines. Although the power exchanges present very different corporate structures and somewhat different market designs, they are all facilitating the balancing of the networks by providing pools of liquidity, where supply and demand for each of the 24 hours of the following day can easily match, by the means of a daily auction. Maybe there are not enough liquid power exchanges across Europe, but talking about the core of its western part, they are certainly now in a position to increasingly contribute to the efficiency of the market. Taking the example of the 5-year old French day-ahead market, daily volume was in March consistently above 120 GWh, a very significant share of the "free" consumption, and the second largest truly voluntary market on the continent.

This increasing liquidity has allowed the Dutch and French day-ahead power exchanges to join forces late 2003 in order to foster the concept of implicit auctions, to support the creation of the Belgian power exchange, Belpex, and simultaneously to launch the first ever market coupling initiative in the continent, in close partnership with the corresponding

TSOs. The Trilateral market coupling, TLC, is a reality since 21st November 2006 and is delivering the expected optimization in terms of the available capacity utilization and price convergence. The success of this pioneering market coupling has undoubtedly blown a fresh wind of optimism among all stakeholders, including the European Commission.

2.3. The findings of the sector inquiry do not reveal anything unexpected in the electricity sector but stress the need for a more stringent and complete European regulation to allow for a truly efficient financial market

Market concentration is closely linked to the very nature of the highly capital consuming electricity sector. In a way, it is desirable to see national champions merging into a few stronger European champions, as long as the access to the domestic markets is truly open. After all, in the field of international trading of grains and oilseeds, a handful of large shippers, namely Cargill, Louis-Dreyfus, Nidera, Philip Brothers, Continental Grain or Bunge Born...were numerous enough to create a truly competitive worldwide wholesale market in agricultural commodities, the grandfather of the liberalised markets. It also gave birth in the late 19th century to the first futures market, the Chicago Board of Trade, still a benchmark in terms of transparency and risk management.

The high level of concentration gives scope for exercising market power. And this permanent suspicion prevents to some extent the development of the wholesale market and the joining of the demand side.

Of course, the electricity sector has an exceptional characteristic, the non-storability of electric energy, which creates particular constraints, calling for an even more demanding regulation. This is perfectly feasible if the political will is commonly shared among the key countries, more specifically at the heart of Central Western Europe, in France and in Germany.

The coupling of day-ahead and intraday physical markets through implicit auctions is an efficient way to progress towards an integrated market which by definition will greatly reduce the risks and temptations of market abuse in a dominated domestic market and at the same time contribute to the security of supply. As far as the forward curve is concerned, it is essential to understand that, to the contrary of a financial or a commodity market where the future price is set through the spot price via a pure interest rate arbitrage

or takes into account the risk of shortage of a storable commodity, the price of an electricity “future” results from a pure anticipation of the supply and demand balance sheet over time, but not much beyond 3 to 5 years. Therefore, the need of a large spectrum of participants (voters), suppliers having free access to the grid as well to the retail market, and consumers alike, is of the utmost importance.

This is not incompatible with long term bilateral contracts to suit specific needs of the energy-intensive industry. But a liquid and reliable medium term energy futures market including gas, power and CO₂ would offer a lot of flexibility and add significant value in terms of risk management up to a 3 to 5 year horizon.

3. The European Commission 10th of January package at a glance

Introduced at the same time as the final report on the inquiry into the European gas and electricity sectors, the European Commission Communication presented a global set of measures designed to establish a new Energy policy for Europe, in order to fit with the three objectives of the Green Book: fight against climate change, security of supply and competitiveness of the European Union.

The European Union is challenged by an overloaded agenda: energy efficiency, GHG emissions reductions, gas and electricity market liberalisation, interconnections capacity enhancement, renewable energy development, low carbon technologies for fossil based generation, the nuclear role....A striking point of this review is the commitment to reduce unilaterally by at least 20% below the 1990 levels of GHG emissions by 2020, also the call for a 20% minimal share of renewable in the EU energy mix.

3.1. Climate change at the heart of the European energy policy

One objective takes the lead: the CO₂ emissions reduction. The European Commission aims at “transforming the European Union in an economy with high energy efficiency and at the same time low **carbon** intensity, thus favouring the emergence of a new industrial revolution”. No energy policy can afford today to wipe out the Kyoto protocol accepted constraints. No energy policy can avoid the necessary coherence between its energy targets

and those induced by the climate change risk. On the contrary, such a complete policy, where energy and environment objectives are closely linked, should be beneficial for the overall economy and even lead to a new kind of economic growth. According to the Stern report, a 1% investment of the worldwide annual GDP to stabilise GHG emissions, could save between 5 and 20% of GDP, with a positive effect on developing countries. The risk-reward profile is clearly balancing towards this combined action. This is a new situation which requires a new political approach where the national interests have to give room to a more open dialogue.

The European Commission also states the fact that one third of the electricity and 15% of the energy consumed within the Union stems from the nuclear generation and that this type of generation is –de facto- an efficient instrument for CO2 emission reductions. But the Commission also notes that the energetic mix policy is in the hands of the member States.

3.2. Security of supply is the second objective of the EU

Regarding the foreign energy dependency, the Commission proposes:

- To adopt a foreign energetic policy to actively defend the European interests;
- To improve the dialogue with the producing and transit countries;
- To coordinate and speak with “one voice”;
- To build a strategic partnership with neighbouring regions;
- To diversify the supply sources and routes;
- To develop new infrastructures;
- To reinforce the solidarity mechanisms

On the internal front, the Commission proposes to set up long term balance-sheets related to electricity and gas supply and demand in each of the member States, then consolidated at the European level. This should allow to anticipate shortages and build new storage, transport and production infrastructures in time.

The Commission is also proposing to adopt a priority interconnection plan, to nominate European coordinators to help market coupling projects and to control their timing and procedures.

Security rules harmonisation will be dealt with through the creation of a European structure for TSO's, in charge of elaborating common security rules for the whole Union and to enhance their coordination.

3.3. Lastly, the industrial competitiveness should be improved in several ways

- (i) By reinforcing the unbundling process in gas and electricity transport: This can be achieved in two ways: Firstly, the ownership unbundling, an option preferred by the Commission and secondly, the creation of an ISO.
- (ii) By reinforcing the regulators power, with three options:
 - (a) A better cooperation between the national regulators, the extension of their mission towards certain European objectives and the introduction of an approval mechanism, by the European Commission, regarding measures significantly impacting the internal market.
 - (b) ERGEG +: more power for ERGEG to monitor decisions about cross border transactions from national regulators and market participants.
 - (c) The creation of a European regulator empowered to regulate all cross border mechanisms.
- (iii) By reinforcing market transparency with request of a minimal information list from the market operators.

3.4. The ways and methods to match these objectives should be precised and strengthened

The objective of a 20 to 30% reduction of GHG emissions by 2020 from the 1990 levels should be indeed placed at the core of the global policy. This should be considered as the major constraint and clearly dominate the other objectives.

To achieve this properly, the CO₂ market has to be extended to other economical sectors beyond the initial first six, including the airline transportation (expected to join partially in 2011). Its functioning has to be fine-tuned without any negative interference such as price ceilings or undue taxation. This is an opportunity as the market is European wide from scratch and really relies on political decisions endorsed by 27 sovereign nations. In a way, this is maybe the fuel which was so far missing to restore the European impetus and federate the European citizens around a well understood and accepted ambition. It is creating opportunities and challenges for the European Commission and the Member States. The European Emission Trading Scheme (EUETS) has created incentives for many European companies to become leaders in Clean Development Mechanisms (CDM) and Joint Implementation (JI) projects in developing countries. As the credits generated by these projects (CERs/ERUs) become the thread that ties together diverse emission markets around the world, the EU will benefit if it maintains its leading position. But the EU governments are seriously underestimating the importance of IT infrastructure (linking national registries to the International Transaction Log) and the effects of the strict application of the Kyoto Protocol article 17 “eligibility to trade” as well as of the restrictions on the Annex 1 Designated national authorities (DNA) authorization capacity.

The objective in renewable should take into account the non carbon production sources such as the nuclear and hydro power. To achieve the global target of 20% renewable in 2020 seems very ambitious especially in France where only a boom in the wind farms could match the deadline. In parallel, a policy in terms of energy efficiency or consumption guidelines is missing while it would introduce the necessary leverage to the supply-side measures.

The objectives in terms of security of supply appear less ambitious. The European Commission calls for a prospective balance sheet for capacity investments, as the one already existing in France, and a better development of the grids.

4. The integrated electricity market is at reach ...

4.1. ... as long as planning issues and priorities are properly dealt with

In the wake of the Trilateral Market Coupling (TLC) between France, Belgium and the Netherlands, a number of market coupling projects have suddenly flourished, some of which were anticipated while others not. The 700 MW NorNed cable between Norway and the Netherlands was planned before the TLC became operational, but this project, supported by the national regulators, now impacts and involves – de facto – all the TLC partners, not only the Dutch TSO and power exchange. Besides the already quite challenging –if not unrealistic – planning for the implementation of the so-called “interim” NorNed market coupling solution by October 2007, the project has to be made compatible with another –somewhat unexpected– initiative of a market coupling between Denmark and Germany, also due by the end of 2007.

Alongside this North Western Europe bursting activities, a very demanding “action plan” for Central West Europe has been issued on Feb 1st 2007 by the regulators of Benelux, France and Germany, entitled “Load Flow Based Market Coupling in Central Western Europe”. A Memorandum of Understanding between the governments, regulators, TSOs and power exchanges, is expected to be signed on June 6th, 2007.

This flurry is not without risk for the overall process. Governance needs to be placed on top of the agenda, but it requires time for reflection and a shared vision. While TLC succeeded in establishing a decentralised contractual approach, an efficient decision and working process requires, in the framework of an extension to more markets, a large degree of centralisation to a Market Coupling Office. The question of control and ownership of such an entity between the TSO and the Power exchanges on one hand, and the respective weights of the participating countries on the other hand, is critical. It is doubtful that being the first mover, whatever the project is, could be good enough to set the ground for the ultimate governance for all.

The impact of changes such as the necessary harmonization of the gate closure time (GCT) is not to underestimate. As an example, moving the French GCT from 11 am to 12 pm, as requested by the promoters of the

NorNed cable, requires an in-depth analysis and the backing of the market participants and the regulator through a detailed consultation process. What would be the consequences on the VPP activity, the liquidity and the resilience of the French and Belgium markets? If the VPP declarations have to be moved to 1 pm, what would be the impact on the TSOs nomination process? In other words, a 700 MW NorNed “interim” market coupling, not even directly linked to the French and Belgian hubs, could force a major and costly review of their existing wholesale market infrastructures and organisations. This, of course, is highly subject to caution and any decision in that matter should not let us to drop the bigger picture.

What are the priorities? As soon as the NorNed and Denmark-Germany projects become operational, France and Germany will be indirectly linked. But not in the most efficient way! A **market coupling** between France and Germany is indeed a must for the success of the single, integrated power market. Efforts should in priority be gearing towards the direct coupling of the several thousand MW between these two largest hubs through an “enduring solution”, which could be put in place in a reasonable time frame. The harmonization of the gate closure time, say at 12pm, will undoubtedly put an end to the arbitrage currently operated by the market participants between the French and German hubs, through their respective exchanges. But this should be positively replaced by a direct market coupling between the two countries.

In other words, it is risky and uneconomical to harmonize the GCT of the CWE (Central Western Europe) for the sole purpose of a coupling to Norway, within a non negotiated timeframe, dictated by the interests of the promoters of the NorNed cable. It is legitimate and desirable to harmonize the GCT if a market coupling between France/TLC and Germany is implemented at the same time. Liquidity and price resilience will then be preserved and above all, this key step forward will give a fantastic and definite kick off to the European integrated market.

4.2. Governance issues more than technical ones are at the heart of any lasting solution

Any coupling solution, which would seek at optimizing both the capacity allocation and the best execution of participants’ bids, requires centralizing certain critical functions: determination of the cross-border flows and, to a large extent, determination of the power exchanges prices and the selection

of the executed block bids.

As the number of parties involved increases, there is a growing need to centralize the contractual approach as well through a central entity, namely a Market Coupling Office. This MCO will develop and operate the coupling, with interfaces to local exchanges and the TSOs.

Each exchange will keep its local responsibility on its pool of liquidity, products, services and prices, also the transfer of anonymous order books to the market coupling system and clearing. Each TSO will keep its responsibility in terms of allocation of capacity which is a regulated activity supporting the security of supply.

Both exchanges and TSOs are legitimate to claim for an appropriate control of the MCO as their respective functions need to be clearly identified and preserved in order to avoid any conflict of interests to the detriment of the market participants and ultimately the consumers.

Beyond this question of relative control/ownership by Exchanges and TSOs, there is the sensitive political question of the control/ownership of the countries involved in the coupling process. One realistic approach would be to reflect the weight of each coupled zone, based for instance on electricity consumption in each country. The ownership of the MCO should be open to new partners on the same basis.

4.3. Towards a super power exchange, Europool!?

As market coupling appears more and more as the preferred day-ahead congestion management solution, there is also a growing desire among market participants for a rationalization of the Exchanges, something probably easier to accomplish than merging TSOs or regulators! There is will to diminish the structural costs due to the large diversity and number of Exchanges and finally to reduce the fees.

Two obstacles have to be overcome. The first is to unbundle the spot (day-ahead, intraday) power markets when they are mixed with other activities such as futures markets or markets of other products.

The second is to cope with the very different nature of the spot exchanges, in corporate or legal terms, some being fully or essentially owned by the

TSOs, some being regulated or acting as a pool, some being private companies....

But should there be a chance to consolidate exchanges, notably in the CWE area, this chance, as slim as it could be, should be bravely seized to dramatically accelerate the pace of the realisation of the integrated power market!

5. Conclusion

The Europe of energy is at a crossroads. It failed so far to convince the consumers and many politicians. Nostalgia for the old times and integrated models prevails in many minds and some lobbies are pressing to reconsider the whole concept of electricity and gas liberalisation. Curiously enough, the gas markets could overtake the power markets as competition in gas could grow faster than in power. All what you need is long term supply and storage gas contracts, not necessarily huge investments in production assets likewise in power. And most power generators are getting more and more involved in the gas activities. Central question is whether a reliable, liquid, transparent price reference could soon emerge in continental Europe, allowing for short and medium term risk management.

As far as electricity is concerned, the main achievement of these first years of liberalisation is clearly not the increase of industrial competitiveness thanks to lower prices. It is the emergence of market coupling, allowing for the optimal use of the allocated interconnection capacities and stimulating price convergence. In this respect, the pioneering coupling between France, Belgium and the Netherlands, do mark a significant step forward. Nordpool paved the way in the early 90's, though in a different context. This model of exchange and clearing functions centralisation, wholly owned by the TSO's, has shown its limits. We believe that a new model needs to be invented, where the Exchange's and TSO's functions and responsibilities are clearly identified and separated, where TSO's are not involved in the financial structures, such as the clearing house or the futures market. Some centralisation and consolidation should indeed take place as the coupling involves more and more countries, but the governance has to be properly established first.

The long awaited coupling between France/TLC region and Germany will undoubtedly be the catalyst for the emergence of this new continental model.

Let's not miss such a historical "rendez-vous"!