

Energy Regulation Insights

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From the Editor

The French competition watchdog, the Conseil de la Concurrence, recently found EDF guilty of imposing a “margin squeeze” on one of its competitors in the French market; and required EDF to propose remedies. EDF has proposed to auction new 10-15 year contracts based on the costs of its fleet of nuclear power stations. In this Energy Regulation Insight, Sean Gammons of NERA’s energy team reviews the Conseil’s decision in the light of the available evidence and our own modelling of the French market. He finds that the Conseil may have mis-diagnosed the source of the problem, and in doing so invited EDF to propose the wrong solution. As such the Conseil’s decision may do more harm than good to the prospects for real competition in the French electricity market.

—Mike King, Editor

French Conseil de la Concurrence Finds EDF Guilty of Charging Market Prices

By Sean Gammons

Background

On 28 June 2007, the French Conseil de la Concurrence (“the Conseil”) ruled that EDF was guilty of abusing its dominant position on the French electricity market in a case brought by one of EDF’s competitors, Direct Energie.¹ The source of Direct Energie’s complaint to the Conseil was a five year contract for baseload electricity supply that it entered into with EDF in December 2005. This contract was struck at a fixed price of €52.6/MWh, which according to EDF reflected forward prices on the Powernext power exchange at the time.² Although the contract price turned out lower than the average Powernext price in 2006 and 2007, Direct Energie was unable to compete with EDF’s competitive market offering on the small business retail market in France (known as “EDF Pro”), prompting Direct Energie’s complaint to the Conseil.³

Specifically, Direct Energie accused EDF of abusing its dominant position in four ways:

- Setting a wholesale price that prevented Direct Energie competing on the retail market (“margin squeeze”);
- Discriminating by setting a higher wholesale price to Direct Energie than EDF charged to its own retail arm;
- Refusing to offer Direct Energie a 15 year contract reflecting EDF’s costs of production; and
- Refusing to offer Directe Energie non-discriminatory access to EDF’s nuclear production capacity.

The Conseil found no substance to the latter two claims, and asked for further investigation of the claim of discrimination before giving a ruling. Hence, the Conseil’s 28 June 2007 ruling is principally concerned with the claim of “margin squeeze”.



The Conseil's Ruling

The Conseil defines a range of relevant product markets, but focuses its assessment on the wholesale market and the market for sales to small business customers who have exercised their right to switch supplier, as these are markets where Direct Energie is active.⁴ Without much analysis, the Conseil concludes that both markets are national in scope due to the persistence of congestion at the French border, the small share of imports in total injections to the grid, and the specificities of exercising eligibility rights in France.

To frame its assessment of margin squeeze, the Conseil relies on precedents set by the European competition authorities. For example, the Conseil cites the European Commission's decision in *Deutsche Telekom* for a definition of margin squeeze.⁵

"An insufficient margin between the price of intermediate services [i.e., the wholesale price] and the retail price offered by a vertically integrated undertaking that occupies a dominant position on the market constitutes an anti-competitive practice, when other undertakings find themselves unable to compete on the retail market."

The Conseil notes EDF holds 87% of production capacity in France and produced 88% of total production in 2006. On the non-domestic market, EDF supplies 88% by volume of customers who have exercised their right to switch supplier, and 61% of the small business customers in this segment.⁶ On the basis of these market shares, the Conseil has little trouble concluding that EDF is indeed dominant on the relevant markets.

Having satisfied itself this first condition is met, the Conseil then sets out two additional conditions that must also be met for a finding of margin squeeze⁷:

- First, that Direct Energie had no effective alternatives to buying from EDF on the wholesale market; and
- Second, that the price EDF charged Direct Energie is too high to allow a supplier that is at least as efficient as EDF to compete with the "EDF Pro" retail price offer.

To test whether the first condition is satisfied the Conseil assessed whether alternative sources of supply on the French market were sufficiently abundant, and concluded they were not:

- Virtual Power Plant (VPP) contracts⁸: the Conseil mentions that all players agree these contracts have boosted liquidity, but then cites evidence from CRE that suppliers must pay market prices for these contracts as they are sold in open auctions, as if that somehow restricts their availability. It also mentions that VPPs are being used by grid

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companies to cover their network losses and are traded on the wholesale market, which was not envisaged when they were first mandated;

- Imports: discarded by the Conseil on the basis that they represent only about 5% of total injections to the grid, and that there remains significant congestion at the border;
- Bilateral contracts and purchases on Powernext: the Conseil cites testimony from EDF's competitors who all agree they cannot compete effectively with EDF. However, the reasons they give are their lack of access to low marginal cost nuclear baseload capacity and the fact wholesale prices are too high compared to regulated retail prices, rather than the lack of baseload and other contracts on the market; and
- Investment in generation capacity: the Conseil cites evidence that

EDF has a legal monopoly on nuclear investment in France, and the fact that it is too capital-intensive for most players to take on, as grounds for concluding that Direct Energie is not able to invest in its own baseload capacity. All independents interviewed by the Conseil testified they were only able to invest in mid-merit and peaking fossil-fuel plants in current conditions, as, for example, Poweo and GDF have done.

To test whether the second condition was satisfied, the Conseil relied on calculations made by the Government Commissaire (a service of the Ministry of Economy), which compared Direct Energie's actual energy purchase costs with the "EDF Pro" offer to small business customers. These calculations show that Direct Energie would have earned a negative margin in most tariff categories in the period prior to 2 April 2007, which is when EDF introduced a new offering to small

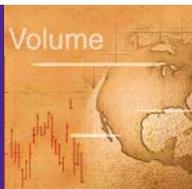
businesses called "Electricité Pro", and hence the Conseil concluded the second condition was also satisfied. (Interestingly, the Commissaire's calculations show that Direct Energie could have earned a gross margin of roughly 5%-12% after 2 April 2007 when competing against the higher priced "Electricité Pro" offer.)

In its defence EDF cited two main arguments. First, the wholesale price it offered Direct Energie matched the Powernext forward prices at the time. And second, it has to set its "EDF Pro" price to compete with the regulated "Bleu" tariff offered to eligible small business customers, like all other suppliers. The Conseil disregarded the first argument on the basis that Powernext is too illiquid to provide a reliable reference and that it does not quote 5 year contracts like the one EDF signed with Direct Energie. And it rejected the second argument on the basis that EDF's recent introduction of its "Electricité Pro" offer shows its pricing is not constrained by the regulated tariffs, and also that a

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“margin squeeze” test must simultaneously take account of the wholesale price.

Hence, considering all the evidence, the Conseil concludes that it is likely EDF is guilty of “margin squeeze”, which constitutes an abuse of a dominant position. This conclusion creates the possibility that EDF could face fines of up to 10% of its turnover last year (circa €6Bn), although the Conseil must have regard to the gravity and duration of the infringement. However, as an interim measure, before ruling on any fines, the Conseil instructed EDF to submit an offer of baseload supply (or any other technically and economically equivalent measure) that allows alternative suppliers to compete effectively with the retail offers of

EDF to consumers on the liberalised market – the Conseil does not specify the small business segment of the market.

EDF’s Proposed Remedy

In response, EDF has proposed to auction 1,500 MW of baseload power in 10 to 15 year contracts, but with a number of complicated conditions attached:⁹

- Two pricing phases: a fixed priced of €36/MWh in the period 2008-10, designed to allow alternative suppliers to compete with the “Bleu” regulated tariff. A multi-part price in the period post-2010 with energy and capacity prices designed to reflect the variable and fixed costs of EDF’s nuclear generation mix.¹⁰

- Contract-for-differences (sort of): buyers who sell their power on the wholesale market will have to pay EDF a “complementary price” equal to the (positive) difference between the Pownext hourly spot market price and the contract price. This arrangement, which is intended to deter suppliers from using the contract for profitable arbitrage on the wholesale market, will continue for as long as regulated tariffs remain in place.

The Conseil is currently running a “market test” of EDF’s proposal on its website with a 15 September 2007 deadline for comments.

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NERA helps companies develop strategies for exploring new opportunities and minimising new risks, including issues related to climate change and other environmental initiatives. We also help our clients to develop new regulatory strategies, and support them with analysis and testimony before regulatory commissions, antitrust and competition policy agencies, and domestic and international courts.

Our work includes designing and conducting energy auctions and providing strategy and valuation advice on mergers and acquisitions, the financing of energy companies, and the financial restructuring of distressed companies.



An Alternative Assessment of The Tests Applied by the Conseil

We have briefly examined the tests applied by the Conseil in the light of the available market evidence and our own analysis of the French market.

Sufficiently abundant alternative supplies

As shown in the table we calculate that there was a total of 61TWh of wholesale supply available through imports (at approximately 5% of total injections) and the VPP auctions (using the average quantities auctioned each year) in 2006. This volume compares with just 37TWh of consumption supplied by independents in the French market, leaving a surplus of 24TWh available for expansion, even ignoring the volumes available on the Powernext/OTC markets and the production owned by independents themselves.¹¹ It is possible that congestion at the border prevents Direct Energie from getting access to enough imports when it needs them most, for example during peak times. However, in that case investment in mid-merit and peaking plant may provide Direct Energie with an effective alternative.

However, this volumes calculation alone does not address the “sufficiently abundant alternative supplies” test in its entirety, at least not in the way the Conseil seems to interpret it. In commenting

		2006
Available alternatives		
Imports	TWh	28
Baseload VPPs	TWh	29
Peak VPPs	TWh	4
Total	TWh	61
Volumes supplied by independents		
Consumption of eligible sites	TWh	310
% Volume supplied by new entrants	TWh	12%
Volume supplied by new entrants	TWh	37
Surplus available	TWh	24

Source: NERA calculations.

on the VPPs, the Conseil seems to have assumed their availability was restricted partly because they were sold at prevailing wholesale market prices, and hence that the VPPs volumes should be discounted in some way. And of course, with most eligible customers remaining on regulated tariffs and most others buying at the “EDF Pro” tariff, having alternative supplies available at wholesale market prices well in excess of these retail prices may not provide effective alternative sources to buying from EDF. But in that case, the question the Conseil should have examined is whether EDF has used its dominant market position to bid-up wholesale market prices, thereby transforming VPPs (and imports and Powernext/OTC contracts) into ineffective alternatives for independent suppliers.

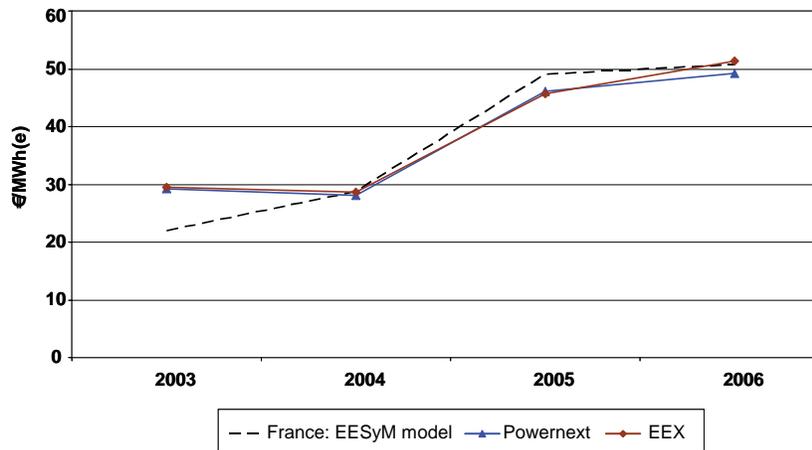
EDF’s incentives to bid-up wholesale prices

EDF generates much higher volumes of electricity than it needs to serve its domestic retail customers. It sells most of this surplus production as exports to neighbouring systems at market prices set by international arbitrage. In contrast, EDF’s sales to its French retail customers are virtually all at regulated retail prices.¹²

Hence, a marginal increase in the wholesale price benefits EDF on its export sales, but has little direct impact on the profitability of the production it sells to its French retail customers. In practice, therefore, the continuation of regulated retail tariffs in France significantly dampens any incentive EDF might have to raise market prices to increase short-term profits.¹³ In terms of its export

sales, EDF's incentive to bid up the French market price is tempered by the competition it faces on international markets. If EDF bids up the market price, it gains extra profits on the volumes it retains but may earn lower profits overall due to some export customers switching to other competing sources of supply within their home market or from abroad. At some point, therefore, price increases may reduce the profitability of EDF's export sales.

The evidence from market prices is difficult to interpret. For example, the recent trend has been for the French and German wholesale market prices to track each other very closely in most periods of the year, which is reflected in a close match between baseload prices as illustrated in the graph to the right. However it is unclear whether this is the result of EDF pricing up to the level of the marginal cost of the marginal German plants, or some co-ordinated behaviour involving other players, or just the result of cost optimisation between the two systems.



Our own modelling of the European system assuming marginal cost bidding predicts a close price match between French and German market prices in most periods of the year, and hence a close match between baseload prices. As can be seen from the above graph, the observed market prices on Powernext and the German European Energy Exchange (EEX) over the period 2003-06 match fairly closely to the marginal cost prices predicted by our EESyM model¹⁴, with no systematic differences between them.

Hence, our modelling results are at least consistent with the hypothesis that the match between observed market prices is the result of cost optimisation between the two systems.

In addition, the French energy regulator, CRE, conducted an investigation of the high prices seen on Powernext in March 2005 and during the winter 2005-06, the results of which it summarised in its 2006 annual report.¹⁵ It found no evidence

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of market manipulation, concluding instead that tight supply-demand conditions together with the steepness of the market supply curve in peak demand conditions caused the price spikes.

Maybe the Problem was the “EDF Pro” Tariff?

A possibility not examined by the Conseil is that Direct Energie was unable to compete solely because the “EDF Pro” tariff did not reflect wholesale market prices. In evidence to the Conseil, EDF stated it had to set its retail prices to match the competing regulated tariffs like other suppliers. The Conseil disregarded this argument partly because EDF had recently raised its prices with its “Electricité Pro” offer. However, it remains to be seen whether “Electricité Pro” is a profitable offering and hence whether it is maintained by EDF. In theory, it is at least possible that EDF had to set “EDF Pro” in line with the regulated tariff to match Direct Energie and its other competitors who, as new entrants, needed to do so to expand. In this analysis, the root of the margin squeeze suffered by Direct Energie would be the regulated tariffs themselves. However, the Conseil did not examine these issues in any detail.

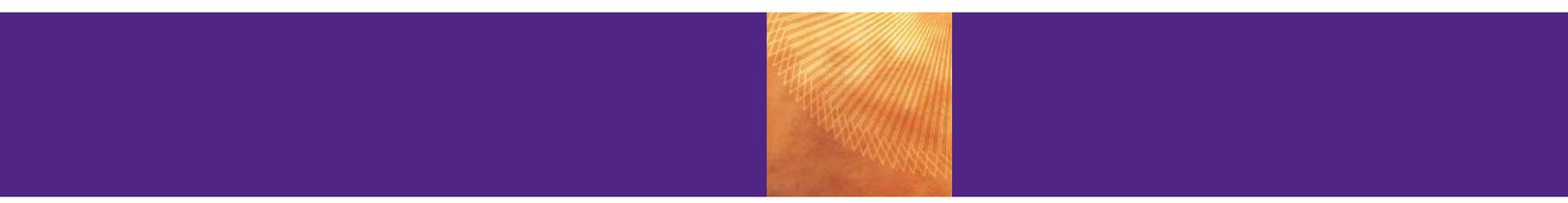
Conclusion

Our analysis suggests that the Conseil may have mis-diagnosed the source of the margin squeeze suffered by Direct Energie, which might be more easily explained by the continuation of regulated tariffs and EDF’s decision to match these tariffs with its “EDF Pro” offer. If so, implementation of EDF’s proposed remedy may have unforeseen consequences. For example, rather than improving competition on the French market, it may result in EDF providing subsidies to new entrants who may be less efficient than EDF. In addition, it may serve to entrench EDF’s position as the dominant generator on the French market by locking independent suppliers in to long-term contracts, and may eventually see EDF installed as a Single Buyer for the French market. In the end, neither French wholesale markets nor French retail markets will be characterised by anything recognisable as competition.

The costs of such a scenario for French consumers are potentially high and hence the complaint brought by Direct Energie deserves a more thorough analysis than the Conseil has conducted to date. Based on our own analysis, it appears the Conseil may have found EDF guilty of charging market prices for wholesale supplies. Many observers of the French market will find a certain irony in this possibility!

End Notes

- 1 Conseil de la Concurrence (2007b), “28 juin 2007: Marché de la fourniture d’électricité / saisine de Direct Energie”, Communiqué, 28 June 2007.
- 2 Our own review of the market evidence at the time indicates that the average year-ahead baseload price on the French OTC market in December 2005 was €52.8/MWh.
- 3 Directe Energie’s losses were €12.2 million in 2005 and €9.5 million in 2006. According to Directe Energie these losses are directly related to its sales activities to retail customers. (See Conseil de la Concurrence (2007a), paragraph 150.)
- 4 All non-domestic or business customers have enjoyed eligible customer status (i.e., freedom to switch supplier) since 1 July 2004. All domestic or household customers were given eligible customer status on 1 July 2007.
- 5 Deutsche Telekom, para 108, Commission Decision, 21 May 2003.
- 6 The biggest new entrant supplier had just 2% by volume in 2006 of the business customers who have exercised their right to switch supplier.
- 7 The Conseil derives the first of these conditions from French precedent, in particular the Conseil’s Decision 04-D-48 on margin squeeze in fixed to mobile telecommunications market, and the subsequent decision on appeal of the Cour de cassation (Arrêt of 10 May 2006), stating that margin squeeze may occur when “alternative existing sources of supply are ineffective in the sense that they are insufficiently abundant to allow suppliers to avoid buying from the supplier who is accused of margin squeeze”.
- 8 When EDF acquired the German electricity utility EnBW in 2001, it agreed to auction off 6,000 MW of generation capacity as a condition of the merger being approved by the European Commission. Our calculations indicate that EDF sold an average of 3,300MW of baseload and 980MW of peak capacity each year between 2001-05, with at least some of the balance tied up in 3 year VPPs and longer-term PPA contracts.
- 9 EDF, “Engagement Proposé par EDF le 13 Juillet 2007 – Décision 07-MC-04”, 13 July 2007. Available at http://www.conseil-concurrence.fr/doc/prop_enga_edf_13juil07.pdf, visited on 2 August 2007.
- 10 The reservation price for auction will be set to reflect the development cost of the new Flamanville 3 EPR nuclear power station, which has been estimated at €45-47/MWh (see Agence France Presse, “EDF fait une nouvelle offre de gros aux fournisseurs alternatifs”, 19 July 2007).

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- 11 Figure for imports taken from RTE's "Electrical Energy in France 2006". VPP volumes calculated assuming the annual capacities auctioned in 2001-05 (3,300MW of baseload and 980MW of peak capacity) were also auctioned in 2006 and ignoring volumes tied up in longer-term contracts. Consumption of eligible sites and the volume market share of new entrants ("fournisseurs alternatifs") taken from "Observatoire des marchés de l'électricité et du gaz", Q1 2007, Commission de Régulation de l'Énergie.
 - 12 In 2006 EDF supplied the vast majority of eligible customers who had not switched supplier as well the vast majority of non-eligible customers (some of these customers are supplied by other small incumbents such as Electricité de Strasbourg). Hence, we calculate EDF sold 92% of its supplies at regulated tariffs in 2006.
 - 13 Which may provide one of the only justifications for keeping regulated retail prices at present in France.
 - 14 EESyM is NERA's in-house model of the European electricity market. It is a least cost optimisation model that calculates the market price as the sum of an energy price that reflects the marginal cost of meeting energy demand (measured in MWh) and a capacity price that reflects the marginal cost of meeting a defined reserve margin requirement, taking into account constraints on available generation capacity, interconnection capacity, etc.
 - 15 Rapport d'activité 2006, pg 62, CRE, June 2006.

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