

ENERGY REGULATION BRIEF

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**"NEW ELECTRICITY
TRADING
ARRANGEMENTS"
FOR ENGLAND &
WALES:
A COMMENT
BY NERA ON
OFGEM's
PROPOSALS****Larry Ruff**
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The British energy regulator, OFGEM, published its long-awaited proposals for the new electricity market on 30 July 1999.¹ OFGEM and its predecessor OFFER have both made sweeping claims for their proposed reforms, which have led to questions being raised at a global level about the future direction of electricity sector liberalisation.

In this Energy Regulation Brief, Larry Ruff of NERA explains why OFGEM's proposals cannot be described as "leading edge" and why they provide no example for other countries to follow.

Introduction

OFGEM's July 1999 report, "New Electricity Trading Arrangements" (NETA), proposes a half-step forward and a giant step back on the road toward efficient and effective competition in electricity. It also performs several rhetorical side-steps and pirouettes that serve primarily to dizzy, confuse and frustrate readers. The overall result is a major setback, not only for competition and the interests of consumers, particularly small ones, but for the principle that regulatory policy should be based on some degree of logic, analysis and openness.

The Half-Step Forward

OFGEM is certainly correct when it says "the trading arrangements in England and Wales are no longer at the 'cutting edge' as they were when first introduced."² Later electricity markets have developed more flexible and efficient trading arrangements – but by refining and extending the basic concepts underlying the Pool, not by trashing them. NETA refers to these other markets to suggest that its proposals are in the mainstream, but in fact it is swimming strongly against the international tide in all but one aspect: market timing. And even here, NETA does not go nearly far enough to catch up with international best practice.

The Pool is the only electricity market in the world in which the last market-clearing process closes a day in advance. Most recent pool-based markets accept bids/offers within a few hours or less of real-time, combine these and last-minute data on system conditions (including transmission constraints) to determine physical operations, and then use a *central* market-clearing process to determine spot prices that reflect what actually happens – or happened – *in real time*. Some version of this model is used in Norway,³ Sweden, Spain, New Zealand, Australia, much of Latin America and in the new US markets. Moving to more-nearly-real-time pricing would therefore be an obvious and overdue reform, not a bold innovation.

In its July 1998 report,⁴ OFGEM's predecessor OFFER mentioned in passing that it is "debatable whether the time was ripe for real-time pricing"⁵ – and then dropped the idea without debating it. NETA makes no mention of real-time pricing, presumably because there is no good reason for rejecting it. In fact, however, real-time pricing was ruled out from the

¹ OFGEM (July 1999), *New Electricity Trading Arrangements*, London.

² OFGEM (July 1999), p4.

³ Norway has successfully operated an open access electricity market almost as long as the UK.

⁴ OFFER (July 1998), *Review of Electricity Trading Arrangements: Proposals*, London.

⁵ OFFER (July 1998), p36.

beginning by OFFER's ideological fixation on decentralized pricing as a process at the expense of efficient pricing as an outcome.

Virtually by definition, prices in a decentralized electricity market are determined some time, usually hours, before the associated physical transactions take place. Only a centralized process can determine market-clearing prices in or very close to real time. By demonizing any such process with epithets such as "centrally planned price setting"⁶, OFFER effectively excluded real-time pricing from discussion in polite society and unduly constrained the range of possible reforms.

OFGEM cites a few real and many imagined ills of the Pool and then declares that the NETA prescription must be swallowed whole to cure them all. But most of the real problems with the Pool cited by OFGEM (such as the limited ability of demand response to affect prices, the "non-firmness" of offers, and the difficulty of co-ordinating gas and electricity markets) are attributable to the specific flaw of day-ahead pricing. OFGEM's proposal, to move "gate closure" from day-ahead to four-hours-ahead, would help if it were separated from the rest of the NETA proposals. Even then, NETA would be no more than a half-step to real-time pricing, which is becoming the norm in electricity markets world-wide.

The Giant Step Back

The giant step back in NETA is OFGEM's outright rejection of the very concept that has made competition in electricity practical – a central spot market integrated with physical dispatch – in favour of the discredited idea of an electricity market based almost entirely on decentralized contracting. OFGEM cites no logic or experience to justify moving in this direction, and even misrepresents international experience to try to disguise the fact that it is moving against the trend.

OFGEM says correctly that "experience elsewhere in the world ... shows a trend towards market based solutions."⁷ What OFGEM does not say is that virtually all of the market-based systems it cites use *central spot markets* to price real-time events and even transmission congestion. OFGEM is being at best disingenuous by implying that scrapping even the rudimentary central spot market used in the Pool would be consistent with international trends.

In simple terms, NETA would eliminate the market-determined settlement or imbalance prices used in the Pool and replace these with penalties on the deviations or "imbalances" between (1) contract quantities notified to the system operator and (2) the quantities actually produced or consumed four hours later. The likely scale of imbalance penalties is unclear, given the arbitrary, unpredictable and even incomprehensible nature of the proposed Balancing Mechanism. But it is clear that OFGEM will be surprised and disappointed if the NETA proposals do not make system users incur higher costs in contracting and real-time control, to try to stay in balance.

OFGEM asserts – again and again and again – that destroying the Pool will increase rather than decrease the trading options available to system users and will not favour large, diversified players. It is unclear whether repetition of this mantra has convinced OFGEM or is intended to convince the reader, but either way it reflects poorly on OFGEM – because the assertions are patently false and are repeatedly contradicted in the NETA document itself.

For example, OFGEM acknowledges that the NETA proposals would make it risky for a generator to contract to supply a retailer's total load, because both

⁶ OFGEM (July 1999), p4.

⁷ OFGEM (July 1999), p4.

the generator and the retailer would be penalized separately for deviations from specific contract quantities (in MWh). OFGEM asserts that a generator contracting to serve an uncertain load can “mitigate ... [its] potential exposure by placing offers and bids in the Balancing Mechanism” and “should be able to use revenues from accepted Balancing Mechanism offers or bids to offset payments due to its contractual counterparties.”⁸ But this solution works only when the generator and the retailer face the same imbalance price without penalties, as they do in an open spot market such as the Pool.⁹ It does not work under the NETA proposals, because the generator and the retailer may face very different prices for imbalances and/or balancing actions, particularly when the generator and retailer may be in different locations. Either OFGEM is fooling itself or is trying to fool us. Take your pick.

The simple logic and fact of the matter is that the Pool provides a low-cost, hassle-free way for any player with access to the Pool price to administer and settle bilateral contracts and to share the diversification benefits of the entire system. Market participants with access to the Pool may do little very-short-term contracting, but only because it is so much easier to trade under longer-term contracts and settle imbalances automatically in the Pool, not because the Pool makes very-short-term contracting difficult. But OFGEM regards decentralized contracting as an end in itself, and hence proposes to destroy the Pool in order to force small players into complex and costly contracting with middlemen and oligopolists.

Ultimately, OFGEM cannot deny that the NETA proposals will force small traders to contract with large traders and aggregators who have their own diversified portfolios or mini-pools.¹⁰ Indeed, OFGEM’s cheekiest argument is that its proposed inefficiencies “will enhance the role of traders in the market ... [which] can be of benefit to small players”.¹¹ After creating unnecessary and artificial inefficiency, OFGEM tells small players to pay traders to help them deal with it, and then congratulates itself for creating enough inefficiency to assure that traders will be there when small players need them.

Some Sideways Steps

OFGEM tries some fancy footwork to dodge the landmine of transmission constraints. It takes a halting step forward by acknowledging that transmission constraints may have some implications for the energy market, stumbles over the possibility that some undefined type of tradable transmission capacity contracts¹² might be considered after NETA has been agreed, and then recommends charging full speed ahead and damn the transmission constraints. But the NETA proposals will not – or at least should not – move very far until transmission constraints are defused by making them an integral part of the energy market.

OFGEM’s dilemma is that its ideology again precludes the only logical solution – a centralized market in which scarce transmission capacity is priced and allocated in real time. Before transmission constraints can be managed by the market rather than by *ad hoc* actions of the system operator, energy prices must equate demand to supply at different locations, taking into account complex network interactions. This inherently requires a central, real-time spot market that determines energy prices for each location. OFGEM’s suggestion that tradable transmission contracts may be added later to a system based on decentralized contracting demonstrates how little OFGEM understands the transmission landmine – which now looks more like a ticking time bomb under the NETA proposals.

⁸ OFGEM (July 1999), p56, text and footnote.

⁹ In markets with locational pricing, financial transmission rights (FTRs) can be used to hedge the difference between prices at the buyer’s and seller’s locations.

¹⁰ See, for instance, OFGEM (July 1999), p142, discussing CHP schemes.

¹¹ OFGEM (July 1999), p57.

¹² OFGEM (July 1999), p101.

NETA also takes a large sideways step on the issue of market governance. The Pool governance arrangements, which give self-interested market participants control of rules changes and result in deadlock, are clearly inappropriate and out of step with international practice. But the NETA proposals are at least as inappropriate and out of step, just in another direction. Under the governance arrangements that appear to be favored, OFGEM would pick the rule changers, intervene in the rule change process, and then approve or modify the recommended rule changes. These governance proposals should be considered very carefully in light of the way OFFER/OFGEM has handled the current review process.

Conclusions

The current Pool procedures and governance were created ten years ago with little theory or experience to draw upon. The Pool has worked surprisingly well, but should be updated in light of the substantial advances in theory and experience that have been made over the past decade. Unfortunately, none of the NETA proposals (other than the timid move to four-hour-ahead pricing) are even in the right direction.

The clear trend in successful competitive electricity markets world-wide is toward *centralized* market-clearing processes that determine prices and quantities reflecting actual supply, demand and network conditions *in real time*. The more closely the real-time central market reflects physical reality, the more market participants can respond to the market prices rather than to instructions, payments and penalties determined by the monopoly system operator. The resulting spot prices can be used for spot trading and for settling imbalances in long-term or short-term contracts, with each market participant deciding for itself how much of what kind of contracting it wants to do.

The artificially simplified, decentralized markets proposed by NETA will force a lot of the frenetic trading activity that OFGEM so admires, but will actually reduce the extent to which the outcome is market-determined and will increase central planning and control by the system operator. Any sensible effort to reform electricity trading arrangements should begin by asking how real-time physical realities can be priced more accurately, not how decentralized trading can be promoted for its own sake.

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