

October 1999

Rises in Pool Prices in July

A Decision Document

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Note:

On 16 June 1999, the former regulatory offices, Ofgas and OFFER, were renamed the Office of Gas and Electricity Markets (Ofgem). References in the text to documents and events before this date use the name of the original regulatory office

1 Introduction

1.1 The Purpose of this Document

This document sets out Ofgem's conclusions following our consultation¹ into the high level of prices in the wholesale electricity market of England & Wales, the Pool, during the first two weeks in July 1999. The document sets out for further consultation Ofgem's proposals to:-

- introduce a new condition into the licences of a number of large generators to curb any exercise of market power; and
- amend the calculation of capacity payments in the Pool.

1.2 Ofgem's July 1999 Consultation Paper

In July 1999, in response to a number of complaints from customers and suppliers, Ofgem published a consultation document on the very high level of prices experienced in the Pool during the first two weeks of July. Ofgem concluded that the high prices were the result of two factors. First, two of the major price setting generators, National Power and PowerGen, increased the prices at which they offered their coal-fired plant into the Pool, raising energy prices, known as System Marginal Prices (SMP). Second, the capacity element of Pool prices was very high, an apparent reflection of plant unavailability.

The combination of high SMPs and high capacity payments led to Pool Purchase Prices (PPP) spiking at over £120/MWh and an average PPP in the period 1 - 13 July of £32.52/MWh, some 80% higher than the same period during the previous year. Of the increase, around 62% was attributable to an increase in SMP and 38% to an increase in the capacity element.

Ofgem expressed concern that the recent Pool prices did not reflect underlying supply/demand fundamentals and were not representative of the prices that would be seen in an orderly market. Capacity margins had not been lower than usual over the

¹ 'Ofgem Consultation on Rises in Pool Prices in July', Ofgem, July 1999.

period, but with the different mix of plant on the system, under the complex rules by which capacity payments are calculated, capacity payments were higher.

Ofgem noted National Power and PowerGen's views on the need to consider prices over a longer period. Ofgem also noted that average prices for the first six months of 1999 were over £24/MWh and that in any case, in a competitive market, it would not be possible to raise prices to compensate for perceived lower prices in earlier periods.

In May 1999, OFFER had published a decision document in response to concerns about price spikes in the Pool during the winter of 1998/99 and the ability of generators to manipulate Pool prices. Following the Pool Executive Committee's (PEC) initiatives to limit the incidence of price spikes, Ofgem decided at that time not to take any action, but made clear that we would continue to monitor prices.

Given the subsequent rise in Pool prices, we set out our initial view in the July consultation document that changes to the Pool's trading rules would be insufficient to address renewed concerns about the large increases in the level and volatility of Pool prices.

1.3 Pool Prices Since Ofgem's July Consultation Paper

Since the launch of the July consultation, Pool prices have fallen but have remained relatively high. Over the period 16 July to 17 September, PPP peaked at over £135/MWh and averaged £25.70/MWh, some 49% higher than the same period during the previous year. Of the increase, around 41% was attributable to an increase in SMP and 59% to an increase in the capacity element.

1.4 Respondents' Views

In total Ofgem received 29 responses to the July Pool price consultation paper. All responses, apart from 4 whose authors sought confidentiality, have been placed in the Ofgem library. These responses are available for inspection during normal working hours.

Generally, respondents expressed concern that the wholesale electricity market continues to be manipulated by generators to the detriment of customers. Concern was also expressed that Pool prices still fail to reflect the falling costs of generation. Several

respondents questioned the validity of the relationship between plant margin and capacity payments. Some respondents had additional concerns about the impact the high prices had upon forward contract markets.

Three generators expressed concern over the relatively short period in July that was the focus of Ofgem's initial investigation and pointed to the overall downward trend in Pool prices when viewed over a longer time period. One generator also pointed to the lower prices experienced in the Pool in April, May and June and noted the lack of customer complaints during these months. This generator also suggested that recent Pool prices were an expression of market volatility, which is to be expected in a commodity market.

Respondents put forward a variety of views as to the way forward, including:

- ◆ reform of the Pool Rules;
- ◆ modifying generator licences; and
- ◆ other proposals, including fining National Power and PowerGen.

1.5 The New Electricity Trading Arrangements

In July, Ofgem published proposals to introduce new electricity trading arrangements in England & Wales.² The Review of the existing arrangements carried out in 1998 by OFFER noted that, in some respects, they have worked satisfactorily, maintaining the quality and security of supplies and assisting competition in generation and supply.

However, the Review also found that many of the concerns about the present arrangements are justified. The Pool's bidding and price setting mechanisms are complex, reduce transparency and increase the options open to generators to achieve their commercial aims. Bids into the Pool by generators are not reflective of costs and movements in Pool prices have not matched reductions in generation costs. The complex, administered Pool capacity payments do not provide a very effective short-term signal to encourage generation and demand to respond to rapidly changing circumstances and provide a poor long-term signal for the need for capacity. More generally, the present trading arrangements have facilitated the exercise of market

² 'The new electricity trading arrangements – Volume 1', Ofgem, July 1999.

power at the expense of customers by enabling all generators to receive a uniform price which in practice has been set by just a few of them.

The new electricity trading arrangements will replace the Pool and bring electricity trading more in to line with trading in other commodity markets. Subject to new primary legislation to implement the Proposals, the new trading arrangements will be introduced in Autumn 2000.

1.6 Ofgem Decision

The history of the Pool in the ten years or so since Vesting has demonstrated the continuing market power of a number of generators and their willingness to exercise that market power at the expense of customers, which is facilitated by the present trading arrangements. Although the existing arrangements are due to be replaced with new arrangements in Autumn next year, which should help to address the issue, Ofgem is concerned to protect the interests of customers in the intervening period.

Ofgem therefore proposes the introduction of a modification to the licences of those generators who are likely to have substantial market power in the Pool. This 'good market behaviour' condition will allow Ofgem to take action against any generator found to be abusing its market power.

In addition, Ofgem is seeking changes to the complex calculation used to determine capacity payments in the Pool.

1.7 Outline of the Document

Chapter 2 outlines the regulatory environment in which the generators operate. Chapter 3 sets out evidence of Pool price rises, including over recent months, and the causes of the high level of prices. Chapter 4 covers respondents' views to our July paper and Ofgem's decisions in the light of the responses. Chapter 5 considers respondents' suggestions to change the Pool trading rules and Ofgem's decisions in relation to changes proposed. Chapter 6 sets out the rationale for Ofgem's proposed modification to certain generators' licence. Chapter 7 sets out the way forward. Appendix 1 sets out the proposed licence condition. Appendix 2 sets out draft guidelines that Ofgem would use in determining whether a generator was in breach of the new licence condition.

1.8 Views Invited

Ofgem invites the views of licensees and other interested parties to the proposed new licence condition, the proposed coverage of the new licence condition and the draft guidelines for enforcing the condition set out in this document. Ofgem also invites views on the proposal to amend the calculation of capacity payments in the Pool.

It would be helpful if comments on this document could be sent by 15 November to:

Dr Eileen Marshall CBE
Deputy Director General, Competition and Trading Arrangements
Office of Gas and Electricity Markets
Stockley House
130 Wilton Road
London SW1V 1LQ.

Respondents are free to mark their replies as confidential although we would prefer that, as far as possible, we are able to place responses to this paper in the Ofgem library. If you wish to discuss any aspect of this document, Stephen Smith (0171 932 5927) or John Saunders (0121 456 6264) would be pleased to help.

1.9 Way Forward

Subject to responses to this preliminary consultation, Ofgem will publish for a further 28 day consultation period, statutory notice of its intention to modify the licences of the relevant generators, and will make a formal request to the Pool Executive Committee (PEC) to amend the rules by which capacity payments are calculated.

2 The Regulatory Framework

2.1 The Electricity Act 1989

The general duties of the Director General of Electricity Supply ('the Director General') are set out in sections 1, 3, and 47 to 50 of the Electricity Act 1989. The Director General must exercise his functions in a manner he considers is best calculated to secure that all reasonable demands for electricity are met, that licence holders are able to finance their activities, and to promote competition in the generation and supply of electricity.

Subject to these primary duties, the Director General also has a duty to exercise his functions in the manner he considers is best calculated to protect the interests of consumers, to promote efficiency on the part of transmission and supply licence holders and the efficient use of electricity. In doing so, he has to take into account the effect on the environment of activities connected with the generation and supply of electricity, as well as the health and safety of those employed in the electricity industry.

2.2 The Electricity Act Licensing Regime

The Electricity Act provides for the licensing of transmission operators, generators and suppliers of electricity (subject to some limited exemptions in the case of generators and suppliers). These licences impose a number of obligations on their holders.

Where the Director General is satisfied that a licensee is contravening, or is likely to contravene, a licence condition, the Act requires him (except in certain specified circumstances) to issue an enforcement order against the licensee. Failure to comply with the order can expose the licensee to action (including a claim for damages) by any person who suffers loss or damage as a result of that failure.

Under the Government's proposed new utility legislation, the Director General's duties will be altered to make it clear that his primary duty is the protection of customers. The Government has also indicated its intention to enable the Director General to impose financial penalties on companies found to be in breach of their relevant licence under the Electricity Act. At present the Director General can impose financial penalties under the Gas Act 1986 (as amended by the Gas Act 1995) but not under the Electricity Act.

The Electricity Act empowers the Director General to modify a licence with the licensee's consent (and after consultation). If a licensee does not consent to a proposed modification, the Director General may refer the matter to the Competition Commission.

Unless covered by an exemption, all electricity generators operating a power station in Great Britain are required to have a generation licence. The generation licence in England & Wales obliges the holder, among other things, to comply with the Grid Code, be a member of the Pool and comply with the Pooling and Settlement Agreement (PSA)³ and submit relevant generating sets for central despatch.

Standard conditions in the generators' licences do not include any conditions intended to address the acceptability, or otherwise, of generators' behaviour in the Pool. However, a special licence modification, condition 9A, was made to the licences of PowerGen, National Power and Nuclear Electric⁴ in 1992 following a Pool price inquiry. The new condition was aimed at preventing monopolistic and anti-competitive behaviour by generators. The licence condition ensures that available generation capacity is offered in to the Pool by obliging the generators to publish information on plant availability, and to establish arrangements to discover whether other operators would be willing to buy stations that the licence holder intends to close.

2.3 The Pooling and Settlement Agreement

The Director General's powers in relation to the PSA are limited. A decision by Pool Members on a resolution can be appealed to the Director General, who can decide that the resolution should stand or fall: he cannot alter its wording.

The PSA provides that the Director General can refer a matter, in writing, to the Pool Executive Committee (PEC). PEC is then obliged to consider the matter and report back to the Director General. It is not obliged to take any other action on his suggestion.

³ The PSA is the trading contract between generators and suppliers which governs the Pool.

⁴ Following nuclear privatisation, the condition now appears in the licences of both Nuclear Electric and Magnox Electric.

2.4 UK Competition Legislation

The Director General has concurrent powers with the Director General of Fair Trading (DGFT) under the Fair Trading Act 1973 and the Competition Act 1980. In relation to these concurrent powers, the Director General works in conjunction with the Office of Fair Trading (OFT) under the terms of an agreement between the Director General and the DGFT. Under the Fair Trading Act the Director General may make a reference to the Competition Commission where it appears to him that a monopoly situation exists or may exist in relation to the electricity industry. Under the Competition Act 1980, where it appears to the Director General that a person has been or is pursuing an anti-competitive course of conduct he may make a competition reference to the Competition Commission, or accept undertakings in lieu of such a reference.

Under the new Competition Act 1998, which replaces the Competition Act 1980, the Director General will gain additional concurrent powers with the DGFT from 1 March 2000. These will include the ability to impose financial penalties of up to 10% of turnover on companies infringing the prohibitions under the new Act. The Act prohibits anti-competitive agreements (Chapter I) and abuse of a dominant position (Chapter II).

2.5 European Legislation

The prohibitions in Chapters I and II of the Competition Act 1998 are based on Articles 81 and 82 (formerly 85 and 86) of the Treaty of Rome. Those articles continue to apply to agreements or conduct that may affect trade between EU Member States. Those affected by such anti-competitive agreements or conduct can bring complaints to the European Commission. If complaints are upheld and undertakings are found to be in breach of Articles 81 or 82, the Commission may impose financial penalties of up to a maximum of 10% of turnover.

3 Evidence of Pool Price Rises

3.1 *Background Since Privatisation*

Ofgem's Review of the present electricity trading arrangements noted that the present arrangements had maintained the quality and security of supplies and assisted competition in generation and supply. However, the review also cited the large body of criticism of the Pool that has built up since its introduction. The main criticisms include:

- ◆ shortcomings associated with the trading rules, for example:
 - the complexity of bidding and price setting; and
 - the limitations of capacity payments to signal short and long term capacity requirements; and

- ◆ shortcomings in relation to market power, for example:
 - the lack of competition in price setting; and
 - the ability to manipulate, and the actual manipulation of, prices.

a) The Complexity of Bidding and Price Setting

The complexity of the Pool's bidding and price setting mechanisms make it extremely difficult to understand the relationship between the price bids submitted by generators and actual Pool prices. The structure of bids into the Pool (which can contain up to nine price related parameters), the use of an optimising scheduling tool and the complex methodology used for the calculation of the various Pool price components, all reduce the transparency with which the market operates.

The structure of a bid into the Pool was designed to reflect the underlying cost function of thermal plant relevant to bidding a price a day ahead of operation. However, generators now submit offers that reflect their overall commercial objectives. The wide range of data that generators submit to the Pool, which includes availability profiles, dynamic data and inflexibility flags as well as price data, increases the options open to them to achieve their commercial aims.

b) The Limitations of Capacity Payments

There is also evidence that the capacity mechanism has not operated as was originally intended. Capacity payments are the function of the Loss of Load Probability (LOLP)

and the Value of Lost Load (VOLL). LOLP was intended to provide both a short and a long term signal of capacity requirements and to encourage generators to make plant available in the short run and to build new capacity, when required, in the longer run.

However, in the short to medium term, rather than being a mechanism that encourages extra plant availability, capacity payments have tended to provide a further means by which generators can influence Pool prices to their own advantage. For example, the level of payments can be increased, possibly quite sharply, by withholding capacity from the market.

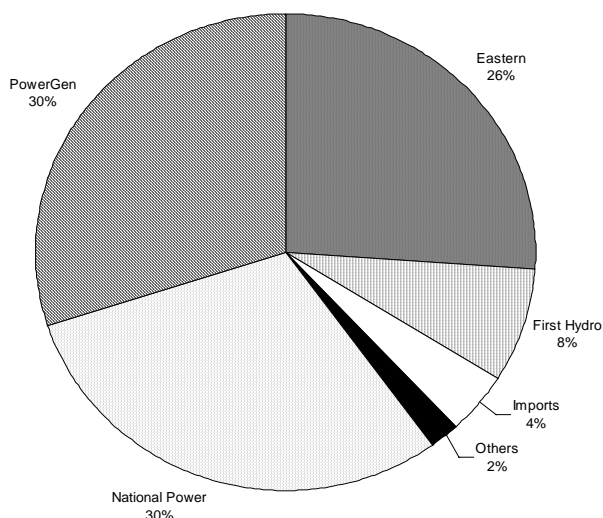
Capacity payments have also proved a relatively poor signal for the longer term need for capacity. Relatively small changes to plant margin (the margin of installed capacity over peak demand) can lead to very large changes in capacity payments. This has led to considerable year on year variation in capacity payments since the Pool was created.

c) Lack of Competition in Price Setting

OFFER's first Pool price inquiry took place in 1991, following complaints from customers. In December 1991 OFFER concluded that the two major generators, National Power and PowerGen, had been able to increase Pool prices significantly, particularly the capacity element of the Pool price. Offer imposed a new licence condition on the major generators (Condition 9A) to ensure that all plant that was technically available was offered in to the Pool. In February 1994, following several more Pool price reports, OFFER issued a decision document proposing that National Power and PowerGen dispose of 4GW and 2GW of plant respectively. Eastern purchased this 6GW of plant in June 1996.

The number of generators selling through the Pool has increased substantially from 8 at Vesting in 1990 to 38 in 1999. Competition in price setting however, remains limited. The vast majority of new entry has been by combined cycle gas turbines (CCGTs). As a result of the long term offtake contracts that most of the owners of these plant have signed, they do not compete at the margin and only rarely set prices (3% of the time in 1998/99). Consequently, price setting remains dominated by a few generators (see Figure 3.1 for price setting shares during 1998/99).

Figure 3.1 – 1998/99 SMP Setting Shares



Partly in response to evidence of the continuing exercise of market power in price setting, National Power and PowerGen were each required to divest a further 4GW of coal-fired power plant, with these divestments due to be completed by the Autumn of 1999. PowerGen has successfully completed the divestment of 4GW of plant with the sale of its Ferry Bridge and Fiddlers Ferry plant to Edison Mission Energy in July. National Power has announced its intention to sell its Drax plant (4GW) to AES, subject to the approval of the Secretary of State.⁵ Whilst these divestments should increase competition in price setting, past evidence suggests that concern about the ability of certain generators to influence the price setting mechanism will remain.

d) The Manipulation of Prices

Pool inquiries have been a regular feature of the post-privatisation industry. As noted earlier, the first took place in 1991⁶ and in the last two years OFFER has instigated two inquiries into Pool prices,⁷ besides the present one. The Reports have investigated both the pattern of prices over the years and their overall level.

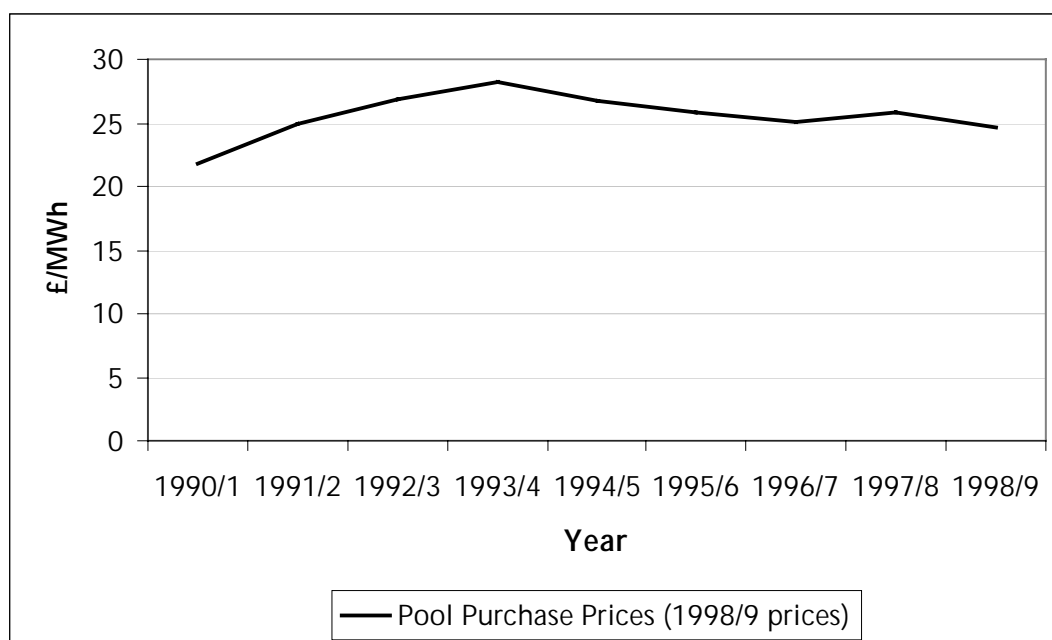
⁵ National Power gave the Secretary of State an undertaking to sell Drax in relation to its acquisition of Midland Electricity's Supply business.

⁶ 'Pool Price Inquiry', OFFER, December 1991.

⁷ 'Report on Pool price increases in Winter 1997/98', OFFER, June 1998 and 'Pool Price – OFFER Decision Document' OFFER, May 1999.

In general Pool Prices have remained largely unchanged in real terms since privatisation, despite limited demand growth, plentiful supply and reducing costs, leading to concerns that generators were manipulating prices and increasing margins. The long term evidence supports this view indicating that, despite a reduction in generating costs of nearly 50%, there has been no similar downward trend in prices (see Figure 3.2).

Figure 3.2 - Pool Prices Since Vesting



Each of the previous two Pool price investigations undertaken over the last two years have revealed evidence of the exercise of market power by price setting generators. The investigation into price increases in Winter 1997/98 concluded that the evidence strongly suggested that winter SMP levels were deliberately increased to compensate for lower capacity payments. Over the winter of 1998/99 there was a significant increase in the number of price spikes during periods of relatively low demand. The increasing incidence of such price spikes was sufficient to influence the overall level of SMP. The Report concluded that the increasing incidence of these price spikes was the result of certain generators deliberately submitting offers designed to produce spikes. There was also evidence that generators were manipulating inflexibility markers to ensure that their plant operated at specific times of the day, which further reduced price competition in these periods and compounded the price setting influence of the portfolio generators.

3.2 Pool Prices in the Period 1 - 15 July 1999

3.2.1 Overall Prices

Over the period 1 - 15 July SMP was 55% higher than the same period the previous year, capacity payments were over 400% higher, and PPP was up by around 84% (see table 3.1).

Table 3.1 - Pool Prices 1 - 15 July (August 1999 Prices) £/MWh

Year	SMP	Capacity Payments	PPP	Demand (MWh)	Availability (MWh)	Plant Margin (%)
1998	16.97	1.53	18.50	15104	20628	36.6
1999	26.23	7.83	34.06	15303	20937	36.8

The rise in SMP was not a function of increased demand. Year on year average demand growth over the period was 1.3%. Furthermore, while intuitively the large increase in capacity payments should be related to tightening supply, during the first two weeks of July 1999, plant margin appeared comparable with the corresponding two weeks in 1998 when capacity payments were significantly lower.

3.2.2 System Marginal Price Setting

The rise in SMP occurred as a direct result of the bidding behaviour of National Power and PowerGen who, between them, set SMP over 80% of the time over the period 1 - 15 July (Table 3.2).

Table 3.2 - Generators Responsible for Setting SMP (%)

	National Power	PowerGen	Eastern	Edison Mission Energy	French Interconnector	Others
May	36.6%	33.5	4.0%	0.6%	22.8%	2.5%
June	36.7%	33.8%	8.6%	2.5%	17.8%	0.6%
1 - 15 July	40.1%	41.4%	8.5%	4.9%	5.0%	0.1%

The two companies increased their share of SMP setting as the contribution of the French interconnector declined. At the same time, the price at which they set SMP rose markedly (Table 3.3).

Table 3.3 - SMPs (£/MWh) Set in August 1999

	National Power	PowerGen	Eastern	Edison Mission Energy	French Interconnector	Others
May	15.31	16.57	18.23	23.92	11.03	11.54
June	19.28	21.44	18.85	25.55	9.96	10.07
1 - 15 July	24.02	28.63	24.39	44.34	10.18	10.02

The rise in the price at which both PowerGen and National Power set SMP is directly attributable to the average bid prices of their coal-fired generation sets (the companies' coal sets usually set SMP). The price of the two companies' coal-fired generation rose between May and 1 - 15 July. Tables 3.4 and 3.5 show the rise in the price of PowerGen's and National Power's coal-fired plant for May, June and the 1 - 15 July for both 1998 and 1999.

Table 3.4 - Average Bid Price of National Power's Coal-Fired Generation (August 1999 Prices)

		Start Up (£)	No Load (£)	1 st Incremental (£/MWh)	2 nd Incremental (£/MWh)
1998	May	4489	4020	14.92	16.40
	June	4801	4104	14.15	18.32
	1 - 15 July	4877	3356	11.01	17.35
1999	May	6591	4999	23.38	23.75
	June	6678	5859	26.28	26.59
	1 - 15 July	6824	6861	24.88	26.75

Table 3.5 - Average Bid Price of PowerGen's Coal-Fired Generation (August 1999

Prices)

		Start Up (£)	No Load (£)	1st Incremental (£/MWh)	2nd Incremental (£/MWh)
1998	May	4495	2218	11.93	15.25
	June	5357	3302	11.47	16.04
	1-15 July	5709	2216	10.70	14.11
1999	May	4724	2385	13.42	18.34
	June	4838	3660	14.64	19.76
	1-15 July	4781	5588	16.57	23.13

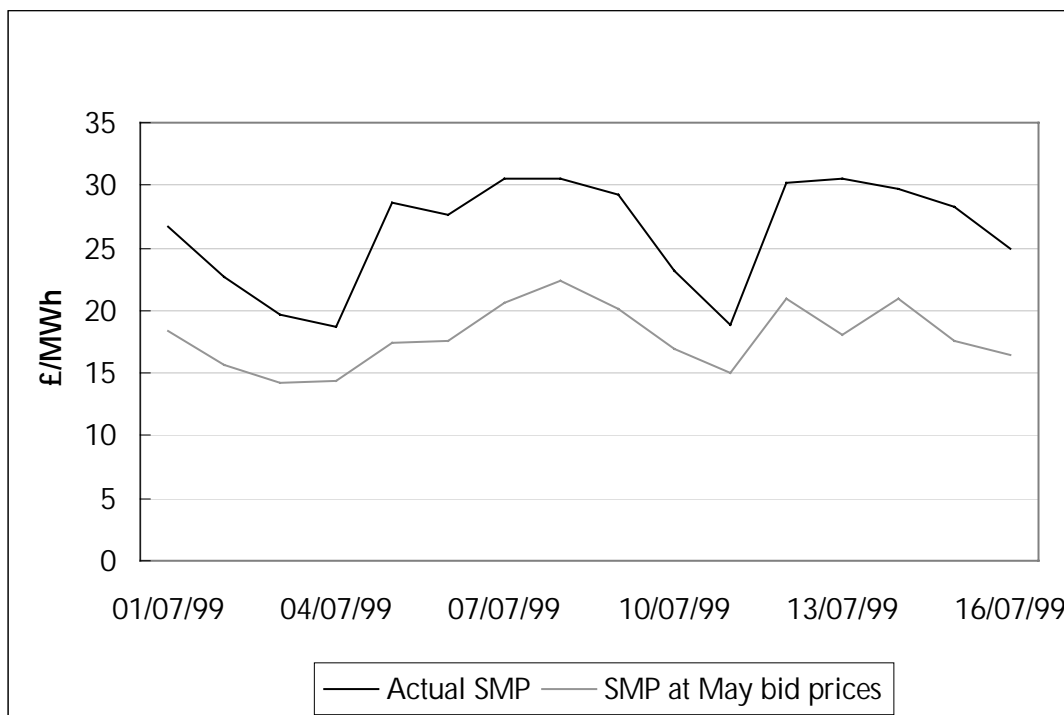
The tables show that the price at which the two generators offered their coal-fired plant increased substantially from 1998 to 1999. The also show that the two generators significantly increased the price at which they offered their coal-fired stations into the Pool over the period May to July 1999. This increase coincided with a reduction in competition from other price setting generators - in particular from the French interconnector whose output reduced from May to July by around 20%.

As part of our investigation, Ofgem asked the National Grid Company (NGC) to calculate what SMP would have been during the first two weeks of July had National Power and PowerGen bid their coal-fired plant into the Pool at their May bid prices. The results of this analysis are shown in Figure 3.3. Figure 3.3 shows that SMP would have been substantially lower if National Power and PowerGen had not decided to increase substantially the bid prices of their coal-fired plant.

The combination of reduced competition from other generators and the increased prices at which PowerGen and National Power offered their coal-fired plant into the Pool led directly to the rise in SMP and to higher Pool prices. Higher Pool prices this year may increase the level of future contract prices, to the benefit of generators. An increase in the volatility of Pool prices may also increase the risk premium over average Pool prices in any future contracts.

The higher Pool prices will also have led directly to higher revenues (and profits) for all generators whose output was not fully covered by hedging contracts. National Power and PowerGen had a combined share of generation output of 40% over the relevant period. Given their level of contract cover, their combined *increase* in profits over the two week period might have been of the order of £13m (based on an increase of over £155m in gross Pool revenues for all generators for the period of the 1 - 13 July 1999).

Figure 3.3 - An Analysis of Pool Prices in July at May Bid Levels



3.2.3 Capacity Payments

Ofgem also considered why, when plant margin did not appear particularly tight, capacity payments were so high during the first two weeks of July.

The rules used to calculate capacity payments are complex and there is no simple relationship between available plant, forecast demand and the Loss of Load probability used to derive the capacity payment.

One of the most significant factors determining LOLP and capacity payments is the so-called 'disappearance ratio'. The disappearance ratio is a measure of the reliability of a generator and expressed as a probability that a generator will actually be available on the day. In calculating LOLP, this disappearance ratio is applied to a generator's

maximum available capacity to determine a measure of its expected actual availability. Under the existing capacity payment rules, available plant with a high disappearance ratio (ie. a high probability of failure) will not significantly reduce LOLP and capacity payments. For a given plant margin, the level of LOLP and capacity payments may vary significantly depending on the mix of plant on the system.

A plant's disappearance ratio is a function of its age and its performance. Older plant, commissioned before 1992, generally has a low disappearance ratio that rarely changes. Newly commissioned plant is assigned a ratio of one i.e. a high disappearance ratio, on the assumption that the plant is totally unreliable. The plant's disappearance ratio will then fall over time as its performance and reliability improves, although disappearance ratios can rise or fall.

Ofgem concluded that the main cause of the higher capacity payments during the first two weeks of July resulted from the different plant mix this year. Although the plant margin was similar to last year, much of the available plant this year was recently commissioned. This recently commissioned plant had high disappearance ratios. This led to an increase in LOLP under the capacity payment rules and higher capacity payments.

3.3 Pool Prices Since 15 July

3.3.1 Overall Pool Prices

Immediately following Ofgem's announcement of a Pool price investigation, prices fell but remained relatively high for the time of year. Table 3.6 shows average Pool prices, demand, availability and plant margin for the second half of July, August and the first seventeen days in September for 1998 and 1999. SMP was considerably higher in summer 1999 than the same period in 1998. Also capacity payments remained at very high levels throughout August and particularly into September, despite an apparent widening of the plant margin in September.

Table 3.6 - Average Pool Prices (£/MWh) (August 1999 Prices)

	SMP	Capacity Payments	PPP	Demand (MWh)	Availability (MWh)	Plant Margin (%)
16-31 July 98	16.80	0.41	17.21	14696	20828	41.7
August 98	16.16	0.05	16.21	14541	20892	43.7
1-17 Sept 98	19.23	0.06	19.29	15712	21904	39.4
Average 16 July to 17 Sept 98	17.14	0.15	17.29	14891	21145	42.0
16-31 July 99	19.79	2.04	21.83	14756	20957	42.0
August 99	20.17	5.11	25.28	14813	20269	36.8
1-17 Sept 99	22.21	7.91	30.12	15652	21538	37.6
Average 16 July to 17 Sept 99	20.62	5.08	25.70	15022	20778	38.3

Figures 3.4 and 3.5 show daily Pool prices, demand and availability for the period 1 July to 17 September for both 1998 and 1999. The figures show the daily upward trend in SMP and capacity payments between summer 1998 and 1999.

Figure 3.4 - Daily Average Pool Prices – 1 July- 17 September 1998 (August 1999 Prices)

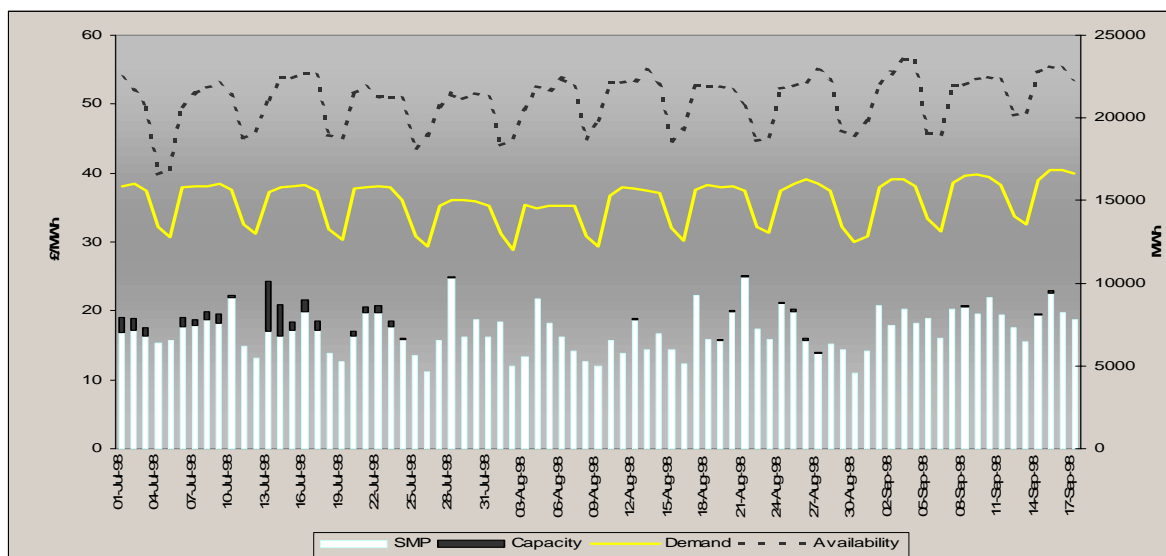
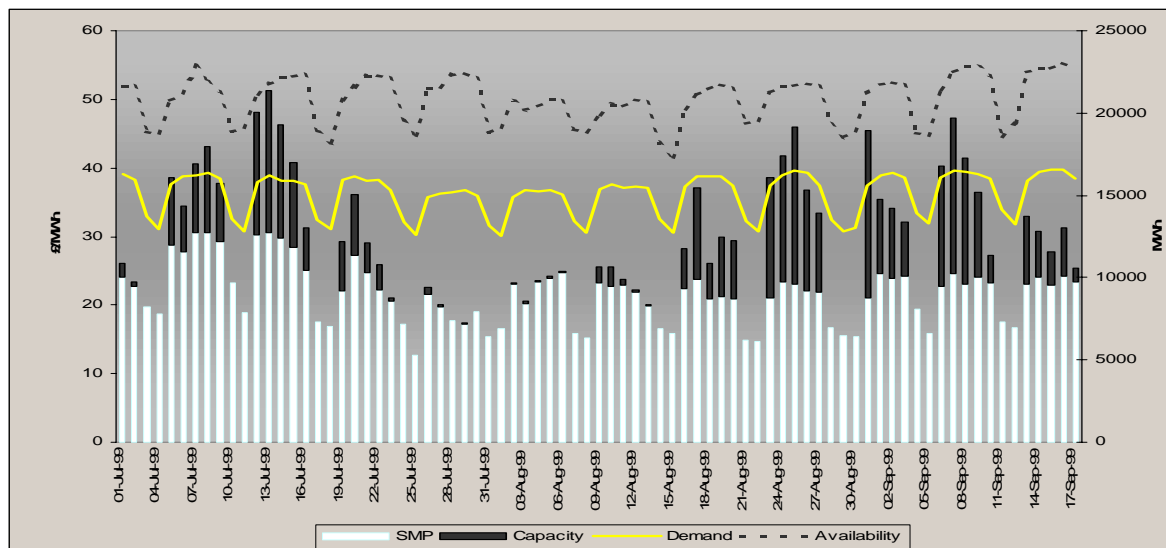


Figure 3.5 - Daily Average Pool Prices, 1 July- 17 September 1999 (August 1999 Prices)



3.3.2 System Marginal Price Setting

Average year on year demand growth over the period 16 July to 17 September was 0.9%, less than trend. However, despite this relatively low demand growth SMP was considerably higher in 1999 than 1998. This suggests that the continued rise in SMP cannot be attributed to a significant increase in demand.

Tables 3.7 and 3.8 show that from the second half of July, the average price at which National Power and PowerGen set SMP declined and their collective contribution to SMP setting also declined. Eastern increased its SMP setting activity, raising both its overall contribution and the price at which it sets SMP, partly due to the return of some Eastern plant from outage.

Part of the decline in PowerGen’s share of price setting since the second half of July resulted from the sale of Fiddlers Ferry and Ferrybridge in mid-July. Since Edison Mission Energy acquired Fiddlers Ferry and Ferrybridge, these stations have been active in setting SMP. Over the period from acquisition to 17 September, these stations set SMP 9% of the time (this compares with 8% in the previous year when they were under the ownership of PowerGen). Edison has changed the structure of the price bids for these plant (it has raised the incremental prices and lowered the no load and start up components) so a comparison of the level of its bid prices relative to PowerGen’s is not straightforward. The divestment of plant has not however, applied any significant

downward pressure on Pool prices to date, as they are still significantly higher than over the same period last year.

Table 3.7 - Generators Responsible for Setting SMP (%)

	National Power	PowerGen	Eastern	Edison Mission Energy	French Interconnector	Others
16-31 July	30.7%	28.5%	11.7%	10.0%	18.5%	0.5%
August	21.2%	16.0%	26.6%	15.3%	20.2%	0.7%
1-17 Sept	29.4%	22.9%	32.4%	10.2%	5.1%	0.0%

Table 3.8 - Actual SMP set (£/MWh) August 1999 Prices

	National Power	PowerGen	Eastern	Edison Mission Energy	French Interconnector	Others
16-31 July	20.91	23.44	25.29	19.15	9.22	16.94
August	20.97	20.81	24.28	25.08	10.11	7.60
1-17 Sept	18.80	20.83	27.13	25.68	10.05	-

Most major price setting generators, with the exception of the French interconnector, increased the price at which they offer their plant into the Pool in summer 1999 compared to 1998. Table 3.9 shows the average price of National Power's, PowerGen's and Eastern's coal-fired plant over the period 16 July to 17 September for 1998 and 1999. In addition the bid prices of the French interconnector and Edison Mission Energy are shown.

Table 3.9 indicates that the average price of National Power's and PowerGen's coal fired generation increased significantly in 1999. Similarly the average price of Edison Mission Energy's pumped storage stations also increased. Year on year comparison of Eastern's coal-fired generation sets is difficult due to the fundamental change in the configuration of its bid structure. However, as Eastern set considerably higher SMPs in summer 1999 than 1998, it appears that the result of the company's changed bid

structure was upward pressure on Pool prices. Only the offer price of the French interconnector fell slightly.

Table 3.9 - Average Bids – 16 July to 17 September – (£ August 1999 Prices)

		Start Up	No Load	1 st Incremental	2 nd Incremental
1998	National Power	4716	3893	11.77	18.08
	PowerGen	4294	2237	9.60	14.47
	Eastern	15621	5118	2.80	24.07
	EME (hydro)	916	1229	27.22	31.09
	French Interconnector	0	0	20.00	20.00
1999	National Power	6125	4437	18.35	21.85
	PowerGen	4790	3910	14.93	21.70
	Eastern	3803	4865	11.39	28.85
	EME (hydro)	838	1482	31.55	39.34
	EME*	3741	1549	15.81	23.37
	French Interconnector	0	0	19.23	19.23

* Includes only the 4 GW of plant purchased from PowerGen in August 1999.

3.3.3 Capacity Payments

Capacity payments remained at high levels in August (particularly the second half of the month) and during the first week of September, when capacity payments averaged nearly £8/MWh, substantially higher than the same period in 1998. Figures 3.6 and 3.7 show daily SMP, capacity payments and LOLP over the period 16 July to 17 September for 1998 and 1999. The high levels of LOLP and resulting high capacity payments throughout the period are clearly shown.

While plant margin fell in August (but not below levels previously seen), it rose in September. However, somewhat counter-intuitively, capacity payments *rose* in September as the plant margin increased. Following the conclusions of the analysis for the period 1 - 16 July, Ofgem analysed the disappearance ratios attributed to available generation over the period.

Figure 3.6 - Daily Average Pool Prices, 16 July- 17 September 1998 (August 1999 Prices)

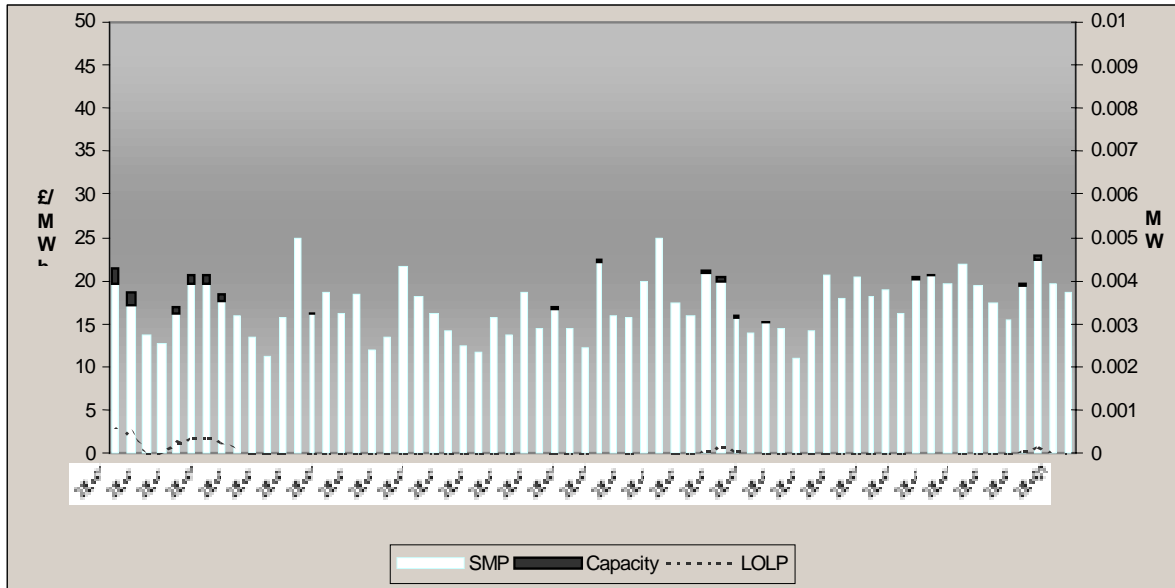
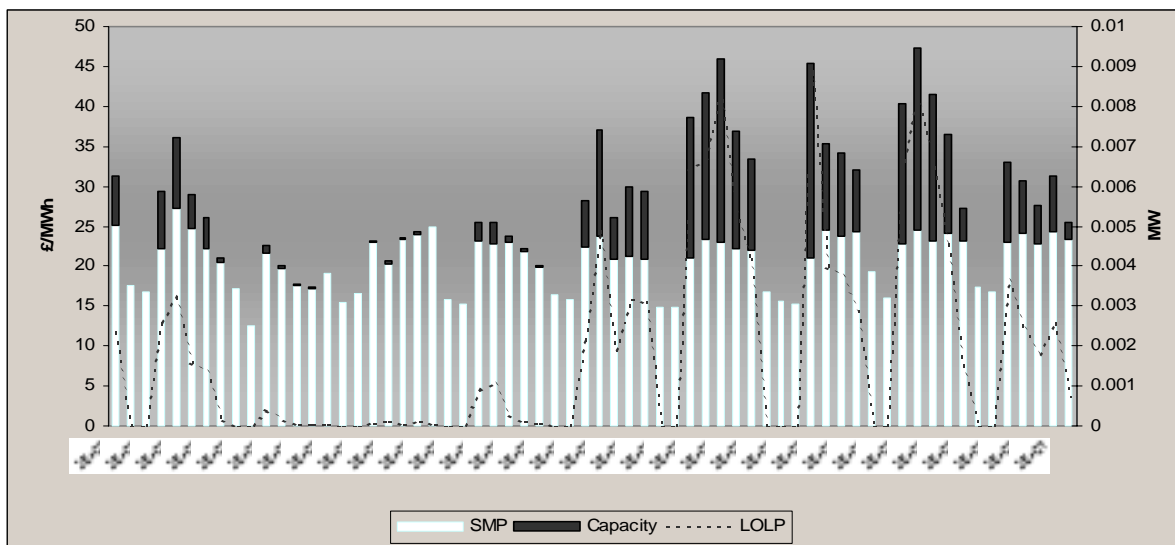


Figure 3.7 - Daily Average Pool Prices, 16 July - 17 September 1999 (August 1999 Prices)



Ofgem concluded from this analysis that there were two problems with the calculation of capacity payments:

- ◆ Stations commissioned before April 1992 had a fixed disappearance ratio for each standard season. As these older stations have closed, they have been replaced with new stations with disappearance ratios based on operating performance. These new plant tend to have higher disappearance ratios than the older plant, leading to the increases in LOLP for any given plant margin over time; and
- ◆ The method of calculation of disappearance ratios for new plant sometimes results in volatile and very high disappearance ratios that feed directly through to the LOLP calculation and higher capacity payments.

For its first month of operation a new genset has a disappearance ratio of 1. For each of the following 23 months the new plant's disappearance ratio is calculated according to its performance in the previous month. In its third and fourth year of operation, the year is split into standard seasons and the gensets disappearance ratio is calculated according to its performance in the previous season. After a genset's fourth year of operation, its disappearance ratio is calculated according to its performance in the corresponding seasons of the last two years.

This method of calculating disappearance ratios appears to be directly responsible for the higher levels of LOLP and the higher capacity payments seen over the last few months.

Summer 1999 Example

In spring 1999 (1 March – 31 May) a 1200 MW nuclear station, commissioned in 1996 was unavailable for 55 days. The result was a disappearance ratio for the station of 61.3% for spring 1999. Although this 61.3% disappearance ratio does not reflect the actual reliability of the station (as table 3.10 below shows) it filtered into the LOLP calculation for summer 1999.

Table 3.10 - Disappearance Ratio Example

	Spring	Summer	Autumn	Winter
1998	-	7.6%	0.5%	0.3%
1999	0.6%	61.3%	5.4%	-

It was estimated that the disappearance ratio of 61.3% during spring 1999 increased the system disappearance ratio by approximately 1.5% and contributed around 40% of the high LOLP during summer 1999. Under the current rules for calculating disappearance ratios, this summer's outage will affect the stations disappearance ratio next summer and will lead to higher LOLP and capacity payments.

Ofgem's analysis has highlighted that disappearance ratios can be significantly affected if outages happen to coincide with the calculation period. The analysis also indicates that there is likely to be a general trend of increasing disappearance ratios and higher LOLP and capacity payments as older plant with lower and fixed disappearance ratios have been replaced with plant with generally higher and live disappearance ratios, even though, once commissioned, these new plant may be expected to be very reliable.

Capacity Availability and Condition 9A Statements

Under Condition 9A of their generation licences, National Power, PowerGen, Nuclear Electric and Magnox Electric are required to submit to Ofgem an annual schedule of planned station outages in March of each year. The generators update these outage schedules in September for the winter months. The generators then present a reconciliation of actual outages to planned outages at the end of the year.

Condition 9A statements covering the period in July were submitted to Offer in March 1999. In addition to the analysis of disappearance ratios, Ofgem wanted to understand whether the higher capacity payments in July were caused by unplanned outages. Ofgem also wanted to be sure that generators had not withheld any capacity from the market during the period in July. Ofgem therefore asked the generators to look at actual station availability in the year to date relative to their declarations of planned outages in their Condition 9A statements.

PowerGen stated that when they recognised the system was under stress, signalled by NGC issuing Notifications of Inadequate System Margins (NISM), it took action to maximise the capacity that it made available to the system. Having reviewed the operating regimes for its plant and its immediate programme of outages, PowerGen offered two additional units that they had previously planned to shut down at nights and weekends, and deferred outages on another two units. PowerGen also managed to return a unit from planned outage sooner than expected.

National Power stated that they always liaise with NGC to determine the optimal timing of outages where there is flexibility in the commencement date of the outage. This was the case in August when National Power realised that an entire station would have to be shut down for approximately one month. If NGC does announce a NISM or, indeed if NGC informally approaches National Power to suggest that the system might be coming under stress, then National Power always does whatever it can to help the system by making plant available.

Nuclear Electric stated that this summer they had more plant outages than were anticipated earlier in the year. In every case, these unexpected outages were due to engineering problems or conventional plant failures that were outside of their control.

Magnox Electric stated that the difference between the forecast and actual availability of its plant was due solely to technical and not commercial reasons.

Ofgem will look in to this issue in more detail when generators make their end of year submissions, which reconcile and explain any differences between planned and actual outages.

3.4 Conclusions

The history of the Pool to date and previous OFFER investigations have demonstrated the ability of certain generators to manipulate prices in the Pool and provided evidence of actual manipulation of prices by generators to their own benefit at the expense of customers. The present detailed investigation in to Pool prices in Summer 1999, the third investigation in three years, provides more evidence of the ability and willingness of certain generators to exercise their market power. Generators are able to raise prices as a result of the limited competition amongst price setting plant, the lack of effective demand side participation and the complexity of the trading rules that determine Pool prices.

The present investigation has also highlighted the problems associated with the current rules used to calculate capacity payments. Under the current rules, capacity payments do not send appropriate price signals in the short or long term. The problems associated with the calculation of capacity payments are likely to increase over the

coming months because of the amount of capacity on the system commissioned in recent years.

4 Respondents' Views

4.1 Concerns About High Pool Prices

4.1.1 The July Consultation Document

Pool prices in the first two weeks of July were 80% higher than the same period in 1998. Ofgem concluded that the high prices were the result of two factors. First, two of the major price setting generators, National Power and PowerGen, increased the prices at which they offered their coal-fired plant into the Pool, raising energy prices, known as System Marginal Prices (SMP). Second, the capacity element of Pool prices was very high, an apparent reflection of plant unavailability.

Ofgem expressed concern that the recent Pool prices did not reflect underlying supply and demand fundamentals and were not representative of the prices that would be seen in an orderly market. Capacity margins had not been lower than usual over the period, but with the different mix of plant on the system, under the complex rules by which capacity payments are calculated, capacity payments were higher.

Ofgem said that both National Power and PowerGen were under-contracted and that from 1 – 13 July the companies had increased their combined profits by some £13 million relative to the same period last year. The unusually high prices in the first half of July forced some large customers to halt production and others to pay higher prices for their electricity.

Both National Power and PowerGen said that in their view prices in the Pool earlier this year had been unsustainably low and that they therefore decided, independently, to increase their price bids. They argued that it is more appropriate to consider Pool prices and profitability over a longer period than the fourteen days under consideration and that recent Pool prices should be viewed in the context of low Pool prices in May and June. Both companies also stressed the impact of very low plant margins on recent Pool prices.

Ofgem noted the generators' views on the need to consider prices over a longer period. Ofgem also noted that average prices for the first six months of 1999 were over £24/MWh. We expressed the view that in a competitive market it would not be possible to raise prices to compensate for perceived lower prices in earlier periods.

4.1.2 Respondents' Views

Most respondents agreed with Ofgem's concern that recent Pool prices were a direct manifestation of the major generators' continuing ability to exercise market power in the wholesale electricity market. Many also argued that generators' bids into the Pool bore little resemblance to underlying cost structures, and that Pool prices neither reflected underlying supply and demand fundamentals nor were consistent with an orderly market.

Several respondents pointed to the very high capacity payments and questioned the validity of the relationship between the plant margin and capacity payments. Concern was also expressed about the impact of recent Pool prices on future contract prices.

Three generators expressed concern over the relatively short period in July that was the focus of Ofgem's initial investigation and pointed to the overall downward trend in Pool prices when viewed over a longer time period. One generator also pointed to the lower prices experienced in the Pool in April, May and June and noted the lack of customer complaints during these months. This generator also suggested that recent Pool prices were an expression of market volatility, which is to be expected in a commodity market.

4.2 Proposals for Reform

4.2.1 The July Consultation Document

Ofgem said that in our view, in the light of experience, changes to the trading rules were likely to be insufficient to address our concerns about the large increase in the level and volatility of Pool prices over recent weeks and the potential impact on contract prices.

4.2.2 Respondents' Views

Most respondents argued that regulatory action was necessary to limit the apparent abuse of the Pool price mechanism and to reduce the incidence of very high capacity payments. Respondents suggested a range of options including:

- ◆ reform of the Pool Rules;
- ◆ modifying generator licences; and
- ◆ other proposals, including fining National Power and PowerGen.

4.3 Ofgem's Decision

Ofgem agrees with respondents that action is necessary to curb generators' ability to exercise market power in the Pool. Although the new electricity trading arrangements will address the more fundamental problems with the Pool, Ofgem believe that action is required now to prevent generators continuing to manipulate Pool prices in the year before the introduction of the new arrangements.

Some respondents suggested imposing fines on the generators. However, as set out in Chapter 2, neither under current competition legislation nor under the Electricity Act 1989 can the Director General impose fines. Furthermore, Ofgem does not believe that PowerGen or National Power breached any of their existing licence conditions by their behaviour in July.

In deciding what action to take Ofgem considered the following policy options, consistent with its regulatory powers and duties:

- ◆ action under the Fair Trading Act 1973 or the Competition Act 1980;
- ◆ reform of the Pool Rules; and
- ◆ a modification to the generators' licence.

Ofgem rejected the option to take action under existing competition legislation. Until the new Competition Act 1998 takes effect on 1 March 2000, Ofgem cannot fine generators, even if it was successfully demonstrated that the generators acted anti-competitively. Ofgem can only seek undertakings from the generators not to act in a similar manner again or, under the Fair Trading Act 1973, seek structural remedies (such as further divestment). Ofgem does not believe that either of these outcomes would be best suited to addressing the present problem.

As to Pool rule changes, we do believe that it is necessary to reconsider the basis for calculating capacity payments to ensure that they are not unjustifiably high when in practice sufficient spare capacity is available. However, more generally Ofgem is minded to reject the option of making specific reform to Pool rules. Whilst specific instances of manipulation, such as the creation of price spikes, can potentially be addressed by Pool rule changes or modifications to the software, many more opportunities are likely to remain, to be identified and exploited. Ofgem therefore

considers that a more comprehensive solution is required. These issues are discussed in more detail in Chapter 5.

Ofgem has therefore decided that the most appropriate course of action to prevent the exercise of market power in the Pool is to propose a modification to the licences of major generators which directly addresses the issue. We have therefore proposed a 'good market behaviour' condition which is discussed in Chapter 6.

5 Reform of the Pool Rules

5.1 SMP

A number of possible Pool rule changes were proposed by respondents, to curb the ability of generators to influence SMP, including:

- ◆ the introduction of simple bids into the Pool;
- ◆ a Pool price cap; and
- ◆ the removal of inflexibility markers;

5.1.1 Simple Bids into the Pool

In February 1999 OFFER launched a Pool price inquiry following the increasing incidence of unrepresentative price spikes in the electricity Pool over the winter of 1998/9 and the corresponding rise in SMP⁸. In the document OFFER expressed concern at the apparent gaming by generators within the Pool rules and suggested possible changes to the rules that might prevent these abuses. Following the consultation OFFER produced a decision document⁹, in which we concluded that the merits of introducing a *simple* bid structure into the Pool (ie. only one price parameter) would be outweighed by the potential disadvantages. However, OFFER also concluded that the introduction of a *simpler* bidding structure, possibly with only one price incremental instead of three, might have some merit in limiting Pool price manipulation. OFFER suggested that if the PEC initiatives, aimed at reducing the ease with which generators could engineer price spikes, were unsuccessful, then OFFER might find it appropriate to seek the introduction of a simpler bidding structure. The PEC initiatives have been successful at limiting the occurrence of very high, unrepresentative price spikes.

Respondents' Views

A number of respondents suggested that the introduction of simple bids into the Pool would reduce the generators' ability to game the Pool price mechanism by increasing the transparency of the pricing system. Some pointed to the apparent synergy between a simple bid structure and the new electricity trading arrangements.

⁸ Pool Price – A Consultation by OFFER, OFFER, February 1999.

⁹ Pool Price Decision Document, OFFER, May 1999.

Ofgem's Decision

The activity of National Power and PowerGen in the Pool, which instigated Ofgem's July investigation, was less the exploitation of a complex bidding structure than the simple exercise of market power. Therefore it is Ofgem's view that had a simpler bidding structure been in place during the period in question, the companies would still have been able to upwardly influence SMP.

National Power's and PowerGen's role in SMP setting has fallen considerably below the 80% dominance shown in the first two weeks of July. However, although price setting competition has increased, SMP remains relatively high – most price setting generators bid their plant into the Pool at a higher price in summer 1999 than summer 1998. It appears that the increased competition has had only a limited impact on the behaviour of generators. In light of this experience, Ofgem does not believe simply modifying the bid structure into the Pool will be sufficient to either promote competition or temper the recent behaviour of the generators. Moreover, under present Pool governance arrangements Pool rule changes can take a long time to implement. Ofgem does not therefore recommend the introduction, at the present time, of a simpler Pool bidding structure. We believe instead that a more comprehensive measure is necessary to seek to prevent the exercise of market power, including by the exploitation of the complex Pool rules.

5.1.2 A Pool Price Cap

Respondents' Views

Some respondents, in particular consumers, suggested that the introduction of a Pool price cap is necessary to protect consumers against the market power of the generators.

Ofgem's Decision

Ofgem does not believe that the introduction of a Pool price cap is appropriate. It would be likely to have a harmful effect on the development of competition in the wholesale market by limiting the incentives for efficient new entry in the longer term, and by having a detrimental effect on the contracts market.

5.1.3 The Removal of Inflexibility Markers

Respondents' Views

A range of respondents suggested that the removal of inflexibility markers could increase price setting competition in the Pool. They pointed to OFFER's proposal in its February 1999 consultation document to removal inflexibility markers as a means of increasing price setting competition in the Pool.

Ofgem's Decision

Ofgem remains concerned at the considerable volume of plant that bids with an inflexibility marker into the Pool and so must run and cannot set SMP. Some 50% of total generating plant during the summer months bids inflexible.

Following responses to our proposal to remove inflexibility markers made in our February document, OFFER concluded that considerable uncertainty surrounded the likely impact of removing inflexibility markers and commissioned work from the PEC.

The resulting report from the PEC was inconclusive and suggested that considerable further analysis was required.

Ofgem remains concerned that the impact of removing inflexibility markers is uncertain and that generators will simply alter the other dynamic parameters of their bids to have the same impact as an inflexibility marker. Again, Ofgem considers it preferable to consider a more comprehensive approach to preventing the exercise of market power in the Pool, including by the inappropriate use of inflexibility markers by generators.

5.2 Capacity Payments

Many respondents expressed concern at the level of capacity payments during the first two weeks of July and have continued to express concern to Ofgem during August and September over the continuing high level of capacity payments.

Table 5.1 shows that over the period 1 July to 17 September 1999 capacity payments averaged £5.61/MWh, the highest for this period of the year since Vesting.

Table 5.1 - Real Average Capacity Payments 1 July – 6 September

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Capacity payments	0.01	0.1	0.03	0.07	0.21	0.98	4.07	0.09	0.46	5.61

Some respondents suggested that the very high capacity payments experienced in summer 1999 were the result of generators manipulating plant margins. As a result, a number of suggestions were made, including:

- ◆ The publication in advance of planned outage information;
- ◆ Increased NGC or Ofgem influence over outage timing;
- ◆ the abolition of capacity payments altogether; and
- ◆ Modification of the LOLP Calculation;

5.2.1 Publication of Outage Information

Respondents' Views

A number of respondents pointed to the impact of generator outage patterns on the level of capacity payments and expressed concern over the potential for generator manipulation of plant margins and the corresponding impact on capacity payments. Concern was also expressed over the perceived advantage enjoyed by portfolio generators as a result of their market intelligence vis-à-vis outage information. In order to limit the alleged gaming of plant margins and increase information transparency to aid Pool price forecasting, it was suggested by some that planned and unplanned outage information should be made publicly available.

Ofgem's Decision

While Ofgem is concerned about the recent pattern of very high capacity payments and the corresponding impact on PPP, the pattern of planned plant outages does not suggest prima facie evidence of generator manipulation. Overall planned plant outages were over 20 GW during the period June to August 1999, compared with around 6.5 GW the previous summer, but no single company contributed to the higher outage pattern in 1999. In addition, as discussed in Chapter 3, although overall plant outages were higher in summer 1999, the overall average capacity margin was not particularly tight during the period in question, despite a number of warnings of insufficient plant margin by the grid operator.

As noted earlier, currently, four generators, National Power, PowerGen, Nuclear Electric and Magnox Electric, are required by their licence to provide Ofgem with planned and reconciled outage information. Furthermore, both Ofgem and the Grid Operator receive regular generator planned outage information. Although aggregate outage information is available publicly at a zonal level, Ofgem is concerned that the provision of more detailed planned outage information could give rise to opportunities for gaming by generators. Ofgem is therefore not proposing to seek to make detailed planned outage information publicly available.

5.2.2 Increased NGC or Ofgem Influence over Outage Timing

Respondents' Views

Some respondents suggested that, due to the impact on capacity payments of outage patterns, Ofgem or NGC should be given greater discretion over generator outage timings and levels.

Ofgem's Decision

As discussed above, the pattern of planned plant outages over the summer does not suggest prima facie evidence of generator manipulation. Furthermore, Ofgem does not believe it appropriate or economically efficient for it be given discretion to dictate the pattern of individual generators' outage plans. Nor does Ofgem believe it appropriate for the Grid Operator to be given such discretionary powers.

We do not propose therefore that either Ofgem, or the Grid Operator, be given any increased discretionary influence over the timing and level of generator outages.

5.2.3 Abolition of Capacity Payments

Respondents' Views

More recently, some market participants have suggested to Ofgem that the capacity payment mechanism be abolished altogether in order to limit the impact on electricity purchase prices of apparently arbitrary plant margins. Some have argued that the abolition of the present capacity mechanism would lead to greater compatibility with the New Electricity Trading Arrangements.

Ofgem's Decision

Ofgem is concerned by the operation of the capacity mechanism over the summer period and apparent lack of correlation between the plant margin and the level of capacity payments. However, Ofgem is not convinced of the rationale for abolishing the Pool's capacity payments mechanism at this time. In the absence of more fundamental reform, as proposed in the new electricity trading arrangements, the abolition of capacity payments could affect the availability of low load factor plant. Ofgem does not therefore propose to seek the abolition of the capacity payment mechanism for the remaining life of the Pool.

5.2.4 Modification of the LOLP Calculation

Respondents' Views

Some have pointed to the apparent lack of correlation between the prevailing high levels of LOLP, and thereby capacity payments experienced over the summer period, and the aggregate plant margin (as discussed in Chapter three). In order to simplify the Pool pricing mechanism and increase market transparency, some have suggested that the complex LOLP calculation be modified.

Ofgem's Decision

While Ofgem does not propose to abolish the capacity payment mechanism altogether, we remain concerned about the apparent lack of rationale underpinning recent levels of capacity payments, and the corresponding upward impact on electricity prices with clear disadvantages for electricity consumers.

It appears that differing plant disappearance ratios in summer 1999 were fundamental in influencing the high levels of LOLP and thereby the high levels of capacity payments. The disappearance ratios of the plant mix in summer 1999 were considerably higher than those associated with the plant mix in summer 1998. A number of factors have contributed to this outcome:

- ◆ the greater proportion of coal-fired plant on outage in summer 1999 and corresponding reduction in coal contribution to the plant mix;
- ◆ the correspondingly greater contribution to the plant mix of relatively new CCGTs which under the present rules have relatively high disappearance ratios; and

- ◆ the unplanned outages of some plant with a hitherto very low disappearance ratio and the subsequent sharp rise in that plant's disappearance ratio due to the basis of the calculation.

These factors point to the underlying sensitivity of the LOLP calculation to changing disappearance ratios. Ofgem is concerned that relatively small changes to the plant mix are resulting in disproportionately large changes to the LOLP calculation and therefore overall capacity payments. Ofgem is also concerned that, as the contribution of new capacity to the overall generation plant mix grows, the problems associated with live disappearance ratios will increase. The present basis for calculating disappearance ratios for new plant appears to suggest that they are less reliable after commissioning than they really are.

The PEC has recognised that the basis for calculation of disappearance ratios merits attention. It decided at its September meeting to conduct a targeted review to consider the period over which daily disappearance ratios are calculated. A recommendation is scheduled to be submitted to the Committee's November meeting.

Ofgem welcomes the PEC's decision to review an aspect of the disappearance ratio calculation. However, whilst encouraging the committee to press ahead with that review, Ofgem believes a more radical approach may be appropriate.

As a result, Ofgem is proposing to ask the PEC, under Clause 6.11¹⁰ of the PSA to consider:

¹⁰ Clause 6.11 says:-

At the Director (General's) requests: The Executive Committee shall:-
give due and prompt consideration to any matter referred to it in writing by the Director; advise the Director in writing of any decision or action of the Executive Committee in relation to such matter;
provide the Director in writing with an explanation with reasonable detail of the reasons for such a decision or action; and
if reasonably requested by the Director (having regard, in particular, to the resources available to the Executive Committee), in relation to any proposal by the Director for a change to any provision of this Agreement provide or procure the provision of advice and assistance to the Director as soon as reasonably practicable as to the implications of the change and the actions necessary to implement it (including any relevant feasibility study).

- ◆ allocating all plant an identical fixed disappearance ratio based on an appropriate assessment of the rolling average disappearance ratio for the aggregate plant mix;
- ◆ allocating all plant individual fixed disappearance ratios based on a rolling average of that plant's disappearance ratio over the preceding two years (or other relevant period)

6 The Proposed Licence Amendment

6.1 Rationale for the Proposed Amendment

The findings of this investigation, taken in conjunction with the history of price determination in the electricity Pool, continue to give rise to major concerns that the structure of the wholesale market facilitates the exercise of substantial market power in ways that are detrimental to the interests of consumers. A number of reforms are currently in the process of implementation which, in the future, will significantly enhance the ability of the Director General to prevent or penalise abuses of market power, in accordance with his statutory duties. The most important of these developments are:

- ◆ The New Electricity Trading Arrangements, due to be introduced in Autumn 2000; and
- ◆ The Competition Act 1998, which has a starting date of 1 March 2000.

Neither of these, however, is currently in place and, when they do become operative, there will inevitably be a period during which their precise implications and effects will need to be assessed.

Given this and the findings of the current investigation, Ofgem believes that it is appropriate to take action immediately by modifying the licences of a number of larger generators who have demonstrated an ability to exercise market power in manipulating Pool prices or who have a significant market share. This will provide a means of addressing problems of market power in the short term. In the absence of action now, consumers would continue to be at risk of harm from manipulation of Pool prices. Since evidence suggests that Pool prices can rise to very high levels, such harm can be significant, even when the exploitation of market power occurs for what, in other markets, might be thought of as a relatively short period of time.

If it eventually becomes clear that the proposed licence condition is redundant, in the sense that it does nothing more than duplicate the powers available elsewhere, Ofgem would not wish to retain the condition in generators' licence. It is proposed, therefore, that the Condition contains a disapplication provision that would permit a licensee to serve notice on the Director General to bring the Condition to an end, or refer to the

Competition Commission whether the cessation of the Condition may be expected to operate against the public interest.

6.2 The Competition Act and Longer Term Issues

Ofgem welcomes the introduction of the Competition Act on 1 March 2000 which we believe will assist us in further promoting competition in the electricity market. Where potential violations of the Act's Chapter I and Chapter II prohibitions occur, Ofgem will rely on the Competition Act powers where that appears to us to be the appropriate way forward. Ofgem is currently preparing guidelines, supplementary to those issued by the Office of Fair Trading, on how we will seek to apply the relevant general principles to electricity and gas markets.

Competition law is not static, however, but evolves as evidence accumulates and general principles are applied to new circumstances. Applications of the Competition Act 1998 to the electricity industry will raise a number of challenges because of factors such as the specific economic conditions to be found in the industry, the relatively advanced state of liberalisation in the UK compared with most other member states of the European Community and the associated lack of European cases that can usefully be used as precedents for tackling issues such as those raised by the current (and previous) investigations of the Pool. The UK may, as a result, be at the cutting edge of the development of competition law in energy markets, and it may take some time for the case law to develop.

Among the specific economic conditions that are relevant in this context are:

- ◆ The complex rules for determination of Pool prices, which can be used by bidders to manipulate price outcomes. (The New Trading Arrangements will address many of the problems, but evidence of the effects of the proposed balancing mechanism and cash-out arrangements will take time to gather and assess.)
- ◆ The limited storability of electricity, which has the effect of segmenting the market into short time periods.
- ◆ The low elasticity of demand for electricity, particularly over short periods.
- ◆ The relatively inelasticity of supply at some times of day and times of year.

In practice, these conditions open the possibility that even generators with quite modest shares of annual production and acting alone, can substantially influence market prices for periods that are long enough to cause significant harm to consumers. The ability unilaterally to influence prices can apply simultaneously to a number of generators.

In many markets, the ability to engage in such conduct would provide strong evidence that a firm which behaved in this way was dominant, and hence the provisions of Chapter II of the Competition Act or Article 82 of the European Community Treaty of Rome would apply. In developing the case law on dominance, however, the European Court of Justice and the European Commission have, in the circumstances of the cases considered to date, assumed that a dominant firm will be the largest firm operating in a particular sector. Market share indicators have played an important although not decisive part in the assessment of dominance. In the electricity sector, however, partly due to the characteristics of electricity and partly due to the structure of the current trading arrangements, a generator may have substantial influence over wholesale market prices, even though it is not the largest operator and its market share falls well below the thresholds that might normally be expected to indicate dominance.

Another specific characteristic of electricity is the time dimension of markets and market power. In defining markets, one of the standard procedures is to ask whether prices could profitably be sustained at levels significantly above competitive levels for a non-transitory period. By convention, non-transitory has tended to be interpreted as a duration of a year or more. In electricity, however, the time segmentation of the market associated with non-storability, coupled with the supply and demand inelasticities noted above, imply that much shorter durations are appropriate in defining relevant markets.

In summary, in deciding to seek licence modifications at this stage, Ofgem has been conscious of particular features of the wholesale electricity market, and the arrangements for setting wholesale electricity prices, the lack of established case law precedents on a number of key issues surrounding business conduct in wholesale electricity markets, the possible delays that this might cause in remedying and deterring abuse of substantial market power, and potential damage to consumers in the interim period.

The proposed licence condition will form a bridge between the Competition Act 1998 and the Electricity Act licensing regime in this area and is intended to facilitate a consistent regulatory approach under both pieces of legislation. Its use would also supplement the Ofgem Competition Act 1998 guidelines in providing information to companies as to the views Ofgem will take concerning some of the specific questions relating to the existence, extent and abuse of market power in the wholesale electricity markets. This should be of assistance to firms in developing within-company arrangements to comply with competition law, and in avoiding the potentially large financial penalties that might result from non compliance with the Competition Act 1998.

6.3 The New Licence Condition

Consistent with general competition law, the new licence condition requires each licensee to which it applies not to abuse a position of substantial market power in electricity generation. Its inclusion in the licence of any particular company does not imply that the company does, in fact, enjoy a position of substantial market power. As indicated in the condition, this will be a matter for determination in the light of the circumstances of the time. Ofgem recognises that these circumstances can be expected to change, so that a licensee that possesses substantial market power at one time may cease to do so at some later time, and that licensees that initially have little market power may acquire much greater strength later.

The initial list of licensees to whom the condition will apply is, therefore, simply an initial attempt to identify those companies most likely to possess the ability to influence Pool prices to an extent, and for a time long enough, to have an appreciable effect on consumer interests. Ofgem would prefer to introduce the condition into all generation licenses, but has identified the need to concentrate in the first instance on those licensees who are most likely to be in a position to exercise substantial market power. If, however, a licensee not on the initial list is, at a later date, judged to have increased its market strength to an extent where there was a significant likelihood that it could exert a substantial influence on wholesale prices, the Director General will take steps to incorporate the condition in to its licence.

Ofgem would also like to emphasise that:

- ◆ There is nothing in the condition to undermine the well established principle that it is the *abuse*, not the *existence*, of substantial market power that gives rise to problems.
- ◆ Where a licensee does not have a position of substantial market power, questions of abuse do not arise, irrespective of whether or not the condition is in its licence.

Thus, firms that either do not possess substantial market power or that, although they enjoy such power, do not seek to abuse it, will be unaffected by the condition.

The full legal text of the proposed licence condition is set out in Appendix 1.

6.4 Coverage of the New Licence Condition

The list of generators whose licences Ofgem will seek to modify have been determined on the basis of their share of total output and the frequency with which they have set SMP in the Pool. The list of generators is shown in table 6.1.

Table 6.1 - Coverage of the New Licence Condition

Company	SMP setting (1 Oct 98– 30 Sep 99)	Share of Output (Sep 98 – Sep 99)
National Power	27.3%	17.6%
PowerGen	27.9%	16.7%
Eastern	23.0%	7.7%
Edison	5.3%	1.4%
AES	5.0%	2.1%
Nuclear Electric	0%	16.5%
Magnox	0%	7.8%

Note: The table excludes the full impact of the divestment of Fiddler's Ferry, Ferrybridge and the planned divestment of Drax. AES' and Edison's share of output and ability to set SMP will rise and National Power's and PowerGen's share of output and ability to set SMP will fall.

6.5 Interpretation of the New Licence Condition

Draft guidelines on the interpretation of the new licence condition are set out in Appendix 2, but the following general points apply:

- ◆ Where concerns about possible breach of licence arise, the first step will be to determine whether the licensee does, in fact, hold a position of substantial market power. Under current trading arrangements, the test will be whether the firm can, unilaterally, via its own bidding behaviour, influence Pool prices to an extent that causes appreciable harm to those purchasing electricity in the relevant periods.
- ◆ The list provides examples of possible abuses, but is not exhaustive of possible abuses.
- ◆ Example (a) refers to straightforward restrictions of supply, and encompasses Pool behaviour such as bidding in less output than is feasible, bidding in part or all of output at high prices that bear no relation to costs, artificially restricting the capacity made available to the market, and the closure or mothballing of capacity that it would be economic to operate.
- ◆ Example (b) concerns discriminatory behaviour. In relation to the Pool, since a single price is set in each period, there can be no question of different prices being set for similar supplies (although this can be an issue in contracts markets, including, post-NETA, in any power exchanges that might be operating). There could, however, be a breach of licence if a company substantially varied the mark-up of bid prices on costs as between periods when market conditions were otherwise similar, which is one of the issues that has been raised by this investigation. Whether or not such conduct would amount to a breach would depend, among other things, on whether or not the licensee had substantial market power and on the extent of the effects of such conduct on Pool prices.
- ◆ The final example, (c), recognises the extra obligations that licensees have as a result of the requirement for secure operation of the electricity system. All licensees have responsibilities in this area, but companies with substantial market power are likely to be able to exert the greatest influence on system operation, the costs of system operation, and the resulting level of charges that are levied to recover those costs.

6.6 Enforcement Action Under the Condition

6.6.1 The Director General's Duties to Take Enforcement Action

The condition will be subject to the licence enforcement regime provided for in sections 25 to 27 of the Electricity Act. When exercising his investigation and enforcement powers under these provisions, the Director General intends to follow a procedure modelled on that used by OFTEL for investigating and taking actions against breaches of the Fair Trading Condition in telecommunications operators' licences. The procedure is described in more detail in the draft guidelines in Appendix 2.

6.7 Appeals

Under the procedure for investigation and enforcement, Ofgem intend to set up an Advisory Board. This panel will be chaired by a senior competition lawyer and is expected to consist of five members in total. The Director General may consult the Advisory Body, if he wishes, and must consult it if required to do so by the Licensee, before he makes any Final Determination that the Licensee has committed a breach of the proposed licence condition.

7 The Way Forward

7.1 Views Invited

Ofgem invites the views of licensees and other interested parties on:

- ◆ the proposed new licence condition;
- ◆ the coverage of the licence condition;
- ◆ the draft guidelines for enforcing the condition; and
- ◆ Ofgem's proposal to amend the calculation of capacity payments in the Pool.

7.2 Statutory Consultation on the Proposed Licence Amendment

Following this preliminary consultation on the proposed licence condition, Ofgem intends to give 28 days Statutory Notice of our intention to modify the licences of the seven generators identified in the previous chapter, under Section 11 of the Electricity Act. Ofgem will publish a final version of the guidelines when giving statutory notice.

Subject to this further statutory consultation, Ofgem will then seek the consent of the seven generators to the modification of their licences. If any of the licensees does not consent to the modification, Ofgem intends to make a reference to the Competition Commission.

If Ofgem refers the matter to the Competition Commission, the Commission is required to investigate and report as to whether any matters which relate (in the present context) to the generation of electricity and are specified in the reference operate, or may be expected to operate, against the public interest and whether the adverse effects could be remedied or prevented by modifying the relevant licence.

7.3 Changes to Capacity Payments in the Pool

Subject to consultation, Ofgem intends to write to the PEC under Clause 6.11 of the PSA, to consider:

- ◆ allocating all plant an identical fixed disappearance ratio based on an appropriate assessment of the rolling average disappearance ratio for the aggregate plant mix; or

- ◆ allocating all plant individual fixed disappearance ratios based on a rolling average of that plant's disappearance ratio over the preceding two years (or other relevant period).

Ofgem will ask PEC to report within four weeks of this request.

Appendix 1 The Proposed Licence Condition

1. The Licensee shall not do anything, whether by act or omission, which amounts to an abuse by the Licensee, either alone or with other undertakings, of a position of substantial market power in the setting of wholesale prices for electricity under the relevant trading arrangements.
2. For the purpose of this Condition such abuse may in particular be deemed to occur if the Licensee:
 - (a) limits generation or capacity availability to the prejudice of consumers of electricity;
 - (b) pursues discriminatory pricing policies by setting, or causing to be set, substantially different wholesale prices for electricity at times when market conditions are otherwise similar; or
 - (c) acts in such a way as substantially and persistently to prejudice the efficient balancing of the transmission system.
3. For the purpose of this Condition:
 - (a) “relevant trading arrangements” shall mean the arrangements from time to time in force for the sale and purchase of electricity under the Pooling and Settlement Agreement and any arrangements for the sale and purchase of electricity as may supersede them; and
 - (b) the Licensee shall be regarded as having a position of substantial market power in the setting of wholesale prices for electricity under the relevant trading arrangements if the Licensee has the ability, unilaterally, to bring about a substantial increase in wholesale prices for electricity for a sufficient proportion of the time over a sufficiently long period (but not necessarily continuously throughout the period) as to cause significant detriment to consumers of electricity.

4. The Licensee shall have regard to any guidance notes on this Condition issued from time to time by the Director General including any such notes describing his Office's procedures for the enforcement of this Condition.
5. This Condition shall apply so long as this Licence continues in force but shall cease to have effect if the Licensee delivers to the Director General a disapplication request made in accordance with paragraph 6 below; and
 - (a) the Director General agrees in writing to the disapplication request; or
 - (b) its application is terminated by notice given by the licensee in accordance with either paragraph 8 or paragraph 9.
6. A disapplication request shall be in writing addressed to the Director General and shall state the date from which the Licensee wishes the Director General to agree that the Condition shall cease to have effect.
7. Save where the Director General otherwise agrees, no disapplication following delivery of a disapplication request shall have effect earlier than that date ('the disapplication date') which is the later of:
 - (a) a date being not less than 18 months after delivery of the disapplication request; and
 - (b) the first anniversary of the coming into effect of trading arrangements which supersede the arrangements for the sale and purchase of electricity under the Pooling and Settlement Agreement.
8. If the Director General has not made a reference to the Competition Commission under Section 12 of the Act relating to modification of the Condition before the beginning of the period of 12 months which will end with the disapplication date, the Licensee may deliver written notice to the Director General terminating the application of this Condition with effect from the disapplication date or a later date.

9. If the Competition Commission makes a report on a reference made by the Director General relating to the modification of this Condition and such report does not include a conclusion that the cessation of this Condition operates or may be expected to operate against the public interest, the licensee may within 30 days after the publication of the report by Director General in accordance with Section 13 of the Act deliver to him written notice terminating the application of the Condition with effect from the disapplication date or later.

10. This Condition shall not limit or affect in any way the Licensee's obligations arising under any other Condition of this Licence.

Appendix 2 Draft Guidelines on Licence Condition Prohibiting Abuse of Substantial Market Power in the Setting of Wholesale Prices for Electricity

Introduction

Background to the Condition

The requirement for a condition to prevent possible abuses of market power in electricity generation derives from the findings of Ofgem's Pool price investigation reported in October 1999 and of previous Pool price inquiries. There is a history in the electricity industry of Licensees pursuing a variety of different courses of conduct that have in common the fact that they have each influenced Pool prices in ways that differ substantially from the evolution of prices to be expected in a competitive market.

One difficulty in dealing with the exercise of market power arises from the complexity of the price setting rules in the Pool. Changes to the Pool rules may sometimes, though not always, be effective in preventing certain types of inappropriate behaviour, but the result can often be that the exploitation of market power simply re-emerges in another form. In part, this is because the trading arrangements are not the only source of market power in electricity generation. Other factors, such as relatively inelastic supply and demand, coupled with the non-storability of the product are also important influences on business conduct.

Given the findings of the 1999 Pool price investigation and of previous inquiries, it is considered desirable that a non-prescriptive approach to problems of abuse of market power be introduced. Rather than seeking to constrain inappropriate behaviour by modifying the specific rules governing price determination – an approach that has the limitations outlined in the preceding paragraph – the October 1999 report concluded that a more general prohibition of abusive conduct by Licensees who possess substantial market power, which is consistent with the principles of EC competition law and of the Competition Act 1998, would better serve the interests of consumers of electricity.

In the course of time, it may become clear that other powers, for example in relation to the Competition Act 1998 provides the Director General with sufficient powers to respond adequately to any of the relevant problems. For this reason the Abuse of Market Power Condition (“Condition”) contains disapplication provisions which enable Licensees, to serve notice on the Director General to bring the Condition to an end or to refer the matter to the Competition Commission, to resolve whether the cessation of the Condition may be expected to operate against the public interest. Meanwhile, the Condition will afford a necessary degree of protection to consumers.

Summary of the Condition

The Condition prohibits Licensees from abusing market power in relation to the setting of wholesale electricity prices. The Condition contains an illustrative (but not exhaustive) list of conduct likely to fall within the scope of the prohibition: withholding production or capacity; pursuing discriminatory pricing policies (including temporal discrimination) or substantially and persistently prejudicing the efficient balancing of the system by the system operator. However, the Condition extends to any conduct which amounts to an abuse of price setting power under the Pool arrangements or the new trading arrangements.

The Condition applies only insofar as a Licensee has substantial market power in relation to the setting of wholesale prices for electricity under the arrangements deriving from the Pooling and Settlement Agreement or the new trading arrangements which are expected to replace the Pool arrangements. There is provision for the Licensee to seek to have the Condition disappplied in the light of experience of the operation of the new trading arrangements and of the Competition Act 1998.

Purpose of these Guidelines

These guidelines are being issued by the Director General to provide clarification and guidance to licensees and third parties on:

- ◆ the interpretation of key concepts such as substantial market power which arise in the Condition;
 - ◆ the way in which the Director General expects to interpret and apply the Condition;
- and

- ◆ the procedure the Director General expects to follow when investigating possible breaches of the Condition.

Under paragraph 4 of the Condition Licensees are required to have regard to the guidelines in the application of the Condition.

The Condition is framed as a general prohibition of abuse of market power in relation to setting of wholesale prices for electricity rather than as a prohibition on specific defined conduct. This approach has been adopted to allow the Condition to address new forms of abuse which may emerge, as well as those previously encountered. These guidelines set out the framework within which the Director General will exercise his discretionary powers in respect of these matters. They also explain how he will take into account relevant decisions and case law of the European Commission and the European Court of Justice, the Office of Fair Trading and the Competition Commission (reporting and appeal functions) in interpreting and applying the condition.

The Director General has indicated his intention to follow a formal, transparent procedure when enforcing the Condition which is modelled on the procedure adopted by OFTEL in connection with the Fair Trading Condition which has been included in the licences of most telecommunications operators. This procedure, and how it fits into the statutory procedure, for investigating and remedying breaches of licence conditions are outlined in Part 9 of the Guidelines.

Legal Status of the Guidelines

As indicated above, paragraph 4 of the Condition requires the Licensee to have regard to any guidance notes issued by the Director General in relation to the Condition. These guidelines constitute guidance notes for the purposes of paragraph 4. Licensees subject to the Condition must therefore take into account their contents in the operation of their generation businesses.

However, these guidelines do not form part of the Condition, and they do not affect its legal scope. The Director General will take them into account in applying the Condition. He would normally expect to follow them and give his reasons if he departed from them. However, he cannot legally fetter his discretion in advance and

therefore he retains the ability to depart from the guidelines where the circumstances warrant it. The guidelines are, therefore, not legally binding on the Director General.

The guidelines will need to be updated to take into account developments in the wholesale electricity trading sector in the future. In particular they will need to be reviewed on the introduction of the NETA reforms, and in the light of the Director General's experience in enforcing the Condition.

The guidelines will also need to absorb future developments in the application of Article 82 of the EC Treaty and the Chapter II Prohibition of the Competition Act 1998 to abuses of a dominant position. They will also be revised to ensure consistency with other guidelines such as Ofgem's forthcoming guidelines on the application of the Competition Act 1998 to the Electricity and Gas sectors, and the OFT's guidelines on the application of the Competition Act 1998 prohibitions.

It is strongly recommended that users of these guidelines ensure that they have the most up-to-date version. The latest version of these guidelines will be kept in the Ofgem library and will be available on Ofgem's web pages on the Internet at <http://www.ofgas.gov.uk>

Precedents and Case Law

The Condition does not precisely replicate Article 82 of the EC Treaty or the Chapter II prohibition under the Competition Act 1998. This is a reflection of the specific economic characteristics of the wholesale electricity market and the particular problems that have been found to arise from these characteristics. In particular:

- ◆ It is significantly narrower in scope than the general prohibitions, being directed specifically at the abuse of market power in the setting of wholesale prices for electricity under the arrangements laid down in the Pooling and Settlement agreement and any new trading arrangements which supersede the Pool arrangements.
- ◆ The pattern of market power in relation to the setting of wholesale electricity prices reflects characteristics of electricity and of the arrangements for supply and price setting and does not conform with existing case law decisions, drawn from other

markets with different characteristics, on the existence of individual or collective dominance.

The Director General is concerned nevertheless to ensure consistency of approach between the application of the Condition and the application of EC and UK competition rules, taking account of the differences identified above. In determining what conduct amounts to abuse of market power the Director General will therefore have regard to the general principles which arise from the application of competition law, notably the case law of the Court of Justice under Article 82 and of the Competition Appeal Tribunal, relevant decisions of the European Commission, the DGFT and other regulators under the Competition Act 1998 and conclusions of the Competition Commission. He will also seek to ensure consistency of approach with that outlined in the guidelines on the Competition Act issued by the DGFT and other utility regulators, taking due account of the particular circumstances of the electricity market which are discussed more fully elsewhere in these guidelines.

Relationship with Other Licence Conditions

The new Condition will not overlap to a significant extent with existing conditions in generators' licences. Where obligations arise or might arise under another licence condition the Condition does not remove the obligation to comply with other more specific conditions which may be applicable.

Relationship with Competition Legislation

The Director General has concurrent powers with the DGFT to apply the monopoly provisions of the Fair Trading Act 1973 and the Competition Act 1980 in relation to the generation, supply or transmission of electricity. With effect from 1 March 2000 the Competition Act 1980 will be repealed and the Director General will have concurrent power under the Competition Act 1998 in relation to:

- agreements, decisions or concerted practices; and
- conduct which amounts to the abuse of a dominant position.

which relate to commercial activities connected with the generation, transmission or supply of electricity. Further information about the Competition Act 1998 and the

concurrent powers of the utility regulators may be found in the guidelines issued by the Office of Fair Trading in conjunction with the utility regulators.

The concurrent powers under the Competition Act 1998 represent a significant extension of the Director General's powers under general competition law and in some cases will provide the possibility for the Director General to take action under a licence condition or under the Competition Act prohibitions. Where this possibility arises the Electricity Act provides that the Director General shall not take enforcement action in respect of a breach of a licence condition if he is satisfied that the most appropriate way of proceeding is under the Competition Act 1998.

The Condition has significant potential overlap with the Director General's powers under the Competition Act and it is therefore appropriate to give Licensees and third parties as much clarity as possible about the relationship between the two sets of powers. The following principles will guide the Director General's method of proceeding and the Director General will expect to explain any departure from them or any apparent difference in approach.

- ◆ If there is a breach of either of the prohibitions under the Competition Act 1998 the Director General would expect to apply his powers under that Act to investigate and if appropriate take enforcement action.
- ◆ Conduct which is the immediate subject of the new Condition – the abuse of price setting power under the Pooling and Settlement Agreement or the new trading arrangements - is not, in the absence of evidence of collusion or concerted behaviour within the scope of a Chapter I prohibition, expected to give rise to action under the Competition Act. This is because the circumstances which give rise to market power under the trading arrangements and the nature of that market power do not equate to the concept of a dominant position.
- ◆ Following the proposed introduction of the new trading arrangements the Director General expects to review the operation of competition in the generation market with particular reference to the effect of the new trading arrangements on the market power of generators. A Licensee may also serve a disapplication notice on the Director General, requiring the Director General to make a reference to the Competition Commission to prevent the Condition from lapsing. If the Competition Commission concludes that the disapplication of the Condition did not operate

against the public interest the Licensee will be entitled, within 30 days of the publication of the Competition Commission's report, to give notice terminating the application of the Condition.

Scope of the Condition

The Condition will apply to the setting of wholesale electricity prices under the relevant trading arrangements in England and Wales. The relevant trading arrangements will initially be the arrangements for the sale and purchase of electricity under the Pooling and Settlement Agreement but will also include the arrangements for the sale and purchase of electricity that replace them with the introduction of the new electricity trading arrangements, subject, as indicated above, to the possibility of disapplication.

Assessment of Market Power

As stated in the Condition, a Licensee will be regarded as having a position of substantial market power in the setting of wholesale electricity prices if the Licensee has the ability, unilaterally, to bring about a substantial increase in wholesale prices for electricity for a sufficient proportion of the time, and over a sufficiently long period, as to cause significant detriment to consumers of electricity.

The Condition does not, therefore, apply to behaviour whereby Licensees are able to achieve an increase in electricity prices by agreeing, whether explicitly or implicitly, to co-ordinate their pricing conduct (eg. their bidding strategies in the Pool). Such behaviour is clearly subject to the Chapter I prohibition of the Competition Act 1998, and the Director General will make use of his powers under that Act if such problems emerge.

In assessing the effects of unilateral action, therefore, the Director General will consider for the purpose of establishing whether the Licensee has market power, the impact on prices of actions taken by a Licensee in circumstances where co-ordination is absent. More specifically, in relation to the Pool, the conduct (bid profiles, capacity declarations, etc) of all other Licensees will be assumed given when evaluating the impact on prices of changes in the conduct of the relevant Licensees. A similar procedure will be followed in relation to strategies adopted for bids and offers in the NETA balancing mechanism.

In relation to the Pool, the exercise that will be conducted will be as follows. Benchmark bidding and capacity availability strategies will be established for all Licensees. These will be based upon estimates of how Licensees might behave in fully competitive conditions. Variations in the conduct of the relevant Licensee will then be assessed to determine whether, given the behaviour of other generators and given the trading arrangements in place, the relevant Licensee has the power to influence the resulting wholesale price to a substantial degree.

It is stressed that the only function of the benchmark strategies in this exercise is to provide a baseline against which effects of changes in the behaviour of any one Licensee can be assessed. They are not intended to be prescriptive and do not seek to specify how it is that Licensees are intended to conduct their businesses. It is recognised that such benchmark strategies can only be approximations to fully competitive behaviour, although this presumption will be tested in individual cases by checking the robustness of any conclusions reached to changes in the baseline assumptions.

The Condition is concerned only with the behaviour of Licensees who have the power substantially to affect wholesale electricity prices. Given the structure of generation and the nature of the Pooling arrangements, any Licensee controlling the price setting plant in a given period will have some degree of influence over the wholesale price, since, if the Licensee had bid in a slightly lower or a slightly higher price, SMP would, correspondingly, have been slightly lower or higher as a result. It is not, however, the intention of the Condition that it should apply generally to Licensees with such market influence.

What is deemed to be a substantial effect on prices will be both a function of the magnitude of the price effects in any half-hour and the duration for which those price effects can be sustained by the conduct of the Licensee. The underlying concern is with the potential effects on consumers, and hence 'substantial' may refer equally to a very large effect on prices that can be sustained for only a very short period of time, or to a lesser effect on prices that can be sustained for a much longer period.

One of the tests used by the European Commission to define markets according to its Notice on Market Definition takes the ability to sustain a 5% to 10% non-transitory

increase as its benchmark for determining the boundary of a relevant market. Under the legislation, it is possible that a firm could be determined to be dominant even if could influence prices by an amount that is lower than these thresholds (a dominant firm might have a 40% share of a market defined such that a firm with 100% of that market could raise prices by 5%). On the other hand, the EC test is usually, though not rigidly, considered to apply to price increases that can be sustained for a rather longer period than seems appropriate for a non-storable product such as electricity.

Taking account of these points, the test for determining whether a Licensee has substantial market power will be whether or not it can, unilaterally, bring about an increase in wholesale prices, in the relevant trading conditions, of 5% or more for a cumulative duration of more than 30 days (1440 half hours) in any one year. If total generation revenues were £600 million over such a period, it can be noted that the associated increase in total revenues over the month would amount to £30 million.

Where Licensees are judged able to influence market prices for shorter durations, the price increase threshold would be correspondingly higher. For example, for a Licensee who could influence prices for only 480 half hours (10 days in total), the threshold price increase would be 15%, whereas for a Licensee who could influence prices in 160 half hours (ie. a little less than 1% of the time), the threshold would be 45%.

The Licence Condition makes it clear that the relevant durations do not necessarily refer to continuous time periods. What is relevant is the proportion of the time over which the price effects can be sustained. This is because the non-storability of electricity serves to segment the market by time period, and the market power that any Licensee possesses can vary significantly from half-hour to half-hour and from day to day. Thus a Licensee who can influence market prices to a substantial degree at a daily peak, or on particular day, may have much less ability to do so during off peak hours, or on some other day.

By way of example of how the test will work, a Licensee with the power to raise prices by 20% for 8 hours of each day within a 30 day period will be deemed to have the power to raise prices by 20% for a 10 day duration. On the test criterion set out above, it would, therefore, be judged to have substantial market power.

Behaviour Likely to be Considered to Amount to a Breach of the Condition

1. Any behaviour designed specifically to exploit known or unknown shortcomings or loopholes in the Pool rules.

An example of such behaviour was PowerGen's availability re-declaration strategy embarked upon in September 1991, which was documented in OFFER's 1991 Pool Price Inquiry. PowerGen declared plant unavailable at the day-ahead stage, thereby leading to a very large increase in LOLP and hence capacity payments. The company then re-declared their plant available, enabling them to benefit from the high capacity payments. This strategy led to a Pool rule change outlawing such a tactic.

2. A significant increase or decrease in the price at which plant is offered to the Pool on occasions when there is no corresponding change in costs or level of output of the plant in question.

The generator behaviour witnessed since July this year would fall foul of this guidance. This summer generators have systematically increased their bid prices but have not claimed that the increases were associated either with changes in costs or changes in the output of the plant concerned.

3. A significant change to the structure or composition of bids, again with no corresponding change to the level of costs or level of output.

An example of this type of behaviour was presented in the February 1999 Pool Price Consultation. Although the output of the stations in question remained unchanged throughout the period analysed, very large changes in the structure of the bids used were revealed. In particular, the strategy adopted involved changing significantly start-up, no-load and incremental prices on a daily basis.

4. Bidding designed to exploit local market opportunities, some of which may be short-lived in nature.

Examples of this behaviour were revealed in OFFER's 1992 Constrained-On plant report. Faced with the prospect of the gradual retirement over a period of approximately two years of smaller coal and oil stations designed originally to provide

local system support, generators (and particularly PowerGen) significantly increased the price at which the stations offered their output to the market. Although the companies attempted to justify such actions on the basis of the relatively low levels of output of the stations, the tactic only worked because of the importance of the stations to NGC for system support reasons. Once NGC had reinforced its network, the stations were unable to benefit from such constrained-on running and were withdrawn from service. This strategy led to £88 million of electricity income which was shown as an exceptional item in PowerGen's annual accounts, on the basis that it was unlikely to be repeated.

Behaviour Likely to be Considered Acceptable

1. Changes in the prices at which generators offer their plant to the Pool when such changes are associated with changes in costs.

In considering changes to costs, consideration would be given to opportunity costs faced by generators, for example as might accompany changes to contractual terms associated with the purchase of fuel. In this way changes to the take or pay terms in fuel contracts would be taken into account when assessing whether changes in offer prices to the Pool were justified. Care would be required however as a generator might enter into a contract specifically to be able to justify a change of strategy designed to influence market prices.

2. Changes in offer prices of plant when associated with changes to output levels.

For example, if following new entry by generating plant into the market, the load factor of a particular station was anticipated to fall significantly, an increase in the offer price of the plant to the Pool may prove justified. Under such circumstances, even if there were no increase in fuel and operating costs, the avoidable costs when expressed per unit of output would be higher as the fixed cost components associated with the plant would be recovered from fewer hours of operation. Care would be required in this area as a portfolio generator could choose to operate one plant at a very low load factor (with correspondingly high offer prices) and other plants at very high load factors. In a more competitive market, all generators would compete such that output levels and prices would be similar for stations with similar costs. In other words, generators could exploit artificially such "acceptable" guidance to elevate prices from a relatively small number

of low load factor stations to levels above those that would be witnessed in a more competitive market.

Enforcement

The Director General's Duties to Take Enforcement Action

The Condition prohibits abuse of substantial market power in the setting of wholesale prices for electricity under the current Pooling arrangements or any future arrangements replacing the Pool. Such behaviour is a direct breach of the Licence. Where the Director General believes that a breach is taking place or is likely to take place (eg., where a breach has been committed in the past and is likely to reoccur), he must make an order setting out what the Licensee should, or should not, do to restore compliance. The enforcement provisions in Sections 25-27 of the Electricity Act provide for two types of Orders: provisional orders and final orders. Provisional orders last for up to three months, unless they are confirmed. Final orders and confirmed provisional orders remain in force until revoked.

The Director General is required to make a provisional order if it appears to him that a Licensee is contravening the Condition or is likely to contravene the Condition and where there is a risk of immediate loss to a third party. There is no notice requirement for the issuing of a provisional order. To make a final order or confirm a provisional order, the Director General must be satisfied that the Licensee is in breach or is likely to be in breach of the Condition. Before so doing, the Director General must give at least 28 days' notice and hear representations from the Licensee.

The Enforcement Procedure

As explained above, the Director General would expect to follow a formal and transparent procedure similar to that provided in the OFTEL Fair Trading Condition when exercising his investigating and order making powers in relation to a breach of this Condition, although he would retain the ability to depart from this procedure in exceptional circumstances.

This procedure would comprise the following procedural steps:

- ◆ initial investigation;
- ◆ initial findings;

- ◆ Licensee/third party response; and
- ◆ Final determination.

In addition, before making his final determination, the Director General will, if requested by the Licensee, seek an opinion from an advisory body of experts which he is proposing to establish. These steps are outlined in more detail below.

Initial Investigation

If the Director General believes that a Licensee is breaching or has breached the Condition, he will formally notify the Licensee that he is initiating an investigation into the matter. Such an investigation might be launched following preliminary investigation of a complaint or on the Director General's initiative as a result of the Ofgem's routine monitoring of licence compliance. The formal notification will give reasons why it appears that there is or has been a licence breach. The Licensee will be given the opportunity to comment before the Director General communicates his initial findings, as will other persons whom the Director General considers it appropriate to consult. The Licensee and other parties might also be asked to provide further information.

In circumstances where the Director General considers at the outset that he will be likely to be required to make a provisional order he will, whenever possible, include a draft provisional order with the formal notification. In particularly urgent cases, however, he may be required to issue a provisional order without first having circulated a draft.

Initial Findings and Provisional Orders

Following assessment of the further information and views provided by the Licensee and the parties, the Director General will produce his initial findings. These will set out reasons for the Director General's views and what steps he considers are necessary to remedy any breach. The Director General may be required at this stage to make a provisional order if he considers that there is a risk of immediate loss to a third party. In other circumstances the Director General may conclude that if a breach is established there is no risk of urgent loss justifying immediate action and may proceed instead towards a final order (see above).

In some cases the Director General may consider that it is sufficient only to make an initial finding since a finding that conduct amounted to a breach would be a sufficient deterrent, and there would be no grounds for enforcement action in the absence of grounds for considering that a Licensee would be likely to breach the Condition in the same way again.

Licensee/Third Party Response

Following publication of initial findings there will be opportunity for the Licensee and third parties to make submissions on the initial findings and to provide further relevant information. If requested by the Licensee or an interested third party one or more formal meetings with Ofgem may be held to allow the Licensee to make oral representations. The Licensee will have the chance to review any documents on which Ofgem was relying in reaching its initial findings.

Final Determinations and Final Orders/Confirmations of Provisional Orders

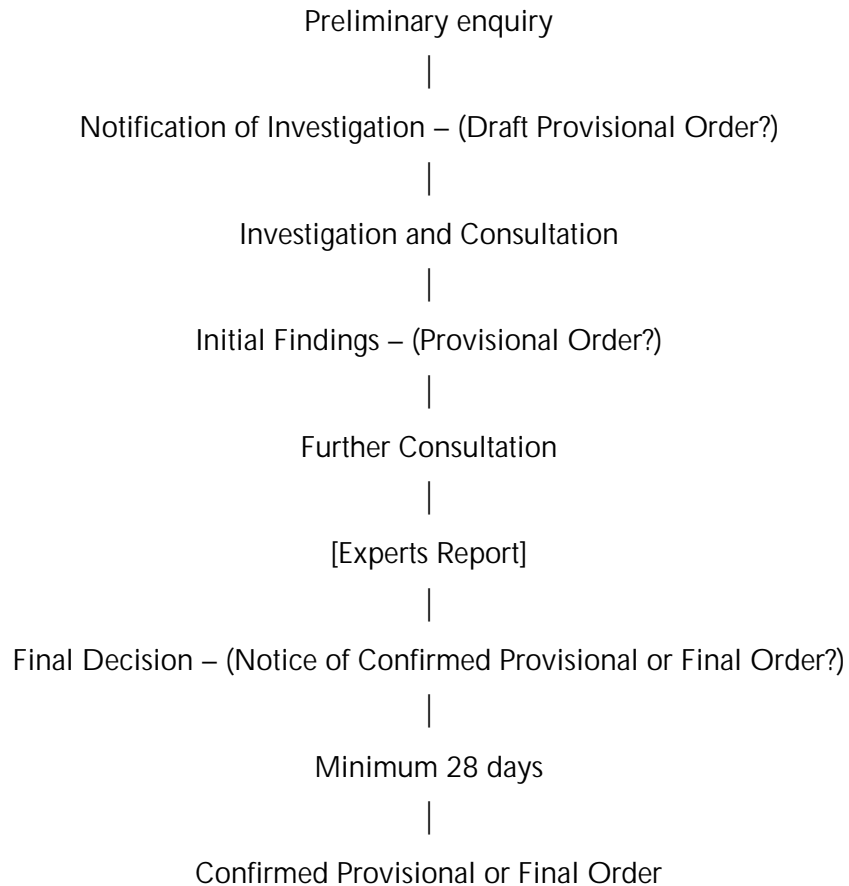
The Director General will then decide in the light of any further information and submissions whether a final or confirmed provisional order should be made. If he concludes that no further enforcement action is required, he will publish that final decision, setting out the reasons on which it is based. Otherwise, the Director General will issue the relevant statutory notice, again, explaining the reasons why he considers an enforcement order to be required. The notice would indicate a period of not less than 28 days within which interested parties, including the Licensee, could give their final comments. The Director General would then come to a decision on whether to issue an order in the light of that consultation, and publish his conclusions.

Advisory Body

The Director General proposes, drawing on the procedural model established for OFTEL's Fair Trading Condition, to establish an advisory body of experts who can be called on to give a formal opinion on the merits of a particular case.

Diagram of Enforcement Procedure

The diagram below illustrates the procedure described above which the Director General would seek to follow when carrying out investigations and issuing enforcement orders in relation to breaches of the Condition.



Effects of Orders

If a Licensee breaches an order (provisional or final), the Director General can bring injunction proceedings to enforce compliance. In addition, anyone who suffers loss as a result of the breach can bring an action for damages against the Licensee in accordance with Section 27(5) of the Electricity Act.

Appeal

As with any enforcement order issued under the Electricity Act, final or provisional orders for compliance with the Condition would be subject to the Section 27 Electricity Act appeal provisions. Under these, the Licensee subject to the order would be entitled, within 42 days of its issue, to apply to have the order, or part of it, quashed if it believed that:

- ◆ the Director General had acted outside the powers confirmed by Section 25 Electricity Act in making or confirming the Order; or

- ◆ the Director General had not followed the procedure laid down in Section 26 Electricity Act for issuing or confirming orders, and its interests had, as a result, been substantially prejudiced.