

Market definition

Summary

1. The evidence we have seen to date indicates that the relevant markets to this inquiry are those of the supply of domestic bulk LPG in Great Britain, and in Northern Ireland.

The product market—demand-side substitution

2. The standard test of a proposed market definition is whether a hypothetical monopolist (or all firms in the market acting in concert) could profitably sustain a price of 5 per cent above the competitive level. We begin by considering a product market defined as the supply of domestic bulk LPG. The closest functional substitute for LPG is natural gas. However, in Great Britain, almost all LPG customers are in locations that do not have access to the mains network, so they do not have scope to switch to natural gas.¹ Natural gas is substantially cheaper than domestic bulk LPG in both Great Britain and Northern Ireland.
3. The strongest candidate for demand-side substitution from such a market is heating oil, which is chosen by around one third of the 3 per cent of domestic LPG customers who stop using LPG each year. Heating oil performs a similar function to bulk LPG and, for customers who prefer to cook with gas, can be used in combination with LPG cylinders. It is seen as having some disadvantages compared to LPG, but it is also cheaper, and customers appear to make a price/quality trade-off between the two fuels (in fact, heating oil is more widely used than bulk LPG). However, switching from LPG to heating oil (or another fuel) requires a change in central

¹In Northern Ireland, the mains gas network has recently been extended, and LPG customers have been relatively slow to switch.

heating boilers, a costly activity² which a customer is very unlikely to consider before the existing boiler needs to be replaced (the hardware has an average life of around fifteen to twenty years). The rate of switching from LPG to heating oil (around 1 per cent) or to other fuels (at most around 1 per cent) is low.

4. Competition between LPG and other fuels may be stronger for new to market customers. However, as we have noted, the rate of new customers coming into the market is small relative to the size of the market overall, and suppliers have scope to charge prices to new customers which are to a degree independent of prices charged to established customers.
5. In the short run, a customer with a gas-run heating system (and other gas appliances) has little alternative but to continue buying LPG, whether from the current supplier or another, and limited scope to reduce consumption. In this respect a hypothetical monopolist would have considerable market power. It is likely that prices would, at some level, be constrained by heating oil, but we consider that the price level at which such a constraint would bind the monopolist would be more than 5 per cent above the competitive level.
6. In practice, the price relationship between LPG and heating oil is complex in that both depend in part on the wholesale price of oil. However, our understanding is that, while the retail price of heating oil was a factor considered by major suppliers in setting the retail LPG price, none of the changes made in the retail price of domestic

²Calor, on its website, estimates the typical cost of an oil boiler as £2,370, with a further cost of £1,285 for the oil tank and installation. BP quoted an oil heating publication (www.oilfiredup.com) which argues that Calor overstates the cost of oil installation by around £990.

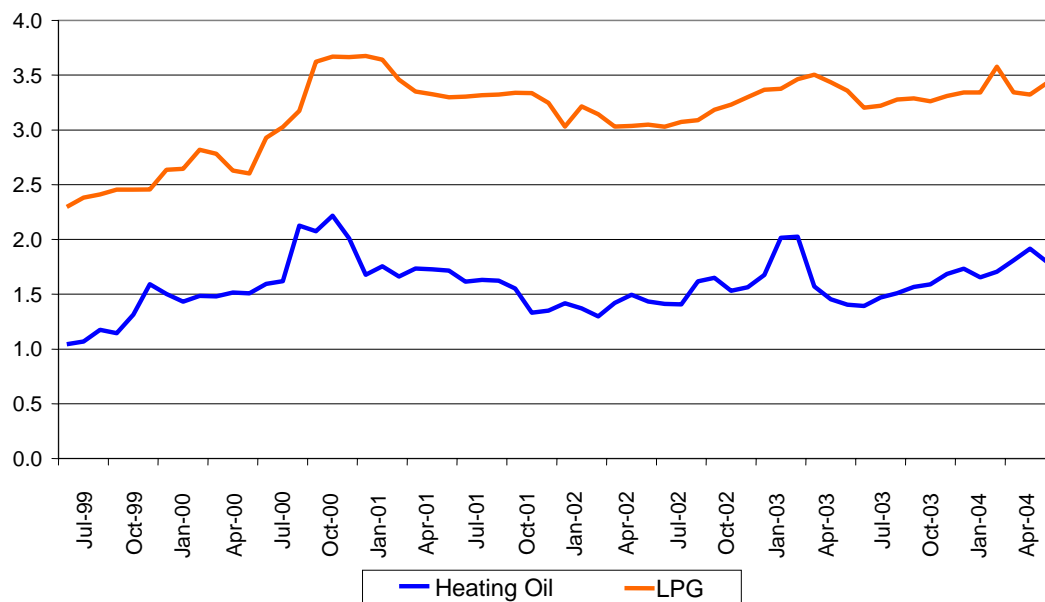
⁴Indeed, it could be argued that heating oil is a more important price constraint than other LPG suppliers: a customer who is considering changing to heating oil might be expected to compare prices over a longer period (ie the life of the boiler), and so to be less easily dissuaded from switching by a temporary discount. In practice, LPG suppliers lose around twice as many customers to heating oil as to each other.

bulk LPG in recent years had been in response to changes in the price of heating oil or any other fuel.

7. Historical prices of LPG and heating oil are shown in Figure 1. Average prices for domestic bulk LPG are based on data from the four major suppliers (one supplier provided data for part of the period only; data from another supplier was extrapolated from annual figures). LPG prices (per kilowatt hour) are around double those of heating oil. Two products with substantially different prices may be in the same market if consumers make a price-quality trade off. On the other hand, one could argue that an LPG customer paying a 100 per cent premium over the price of a product that performs the same function as LPG would be unlikely to respond to a 5 per cent change in the relative price (which would increase the premium by around 10 per cent).

FIGURE 1

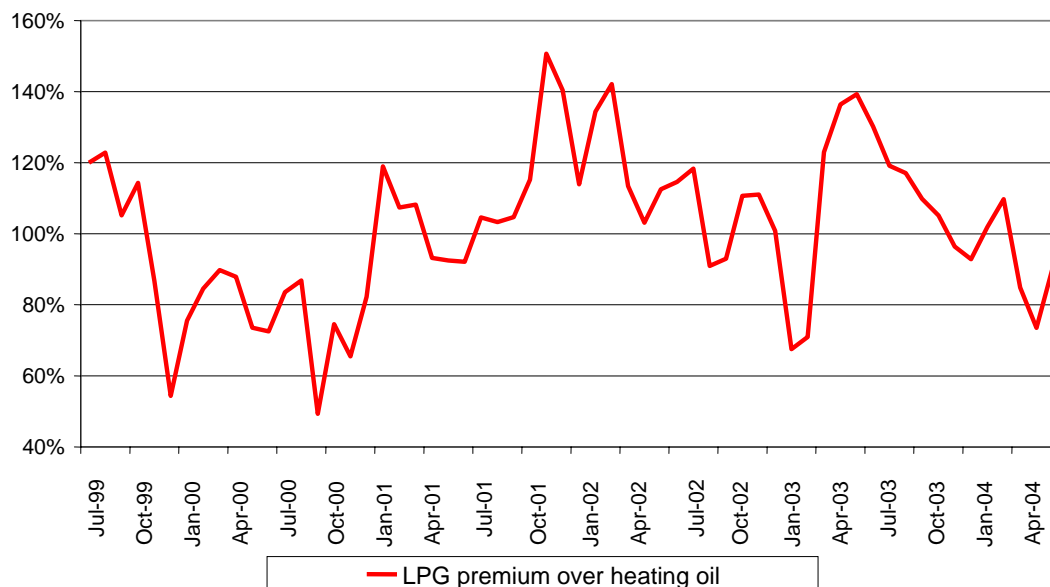
Retail prices of heating oil and domestic bulk LPG, July 1999 to June 2004



8. The two series clearly tend to move in the same direction, reflecting the co-movement in their input costs. However, as Figure 2 shows, considerable fluctuations have occurred in the average price of LPG relative to heating oil. The LPG premium

was below 90 per cent for fourteen consecutive months (throughout 2000). It was over 110 per cent for two separate six-monthly periods (over the winter of 2001/2002, and again over summer 2003). We have received no evidence that customers responded to these changes in the relative price by switching between LPG and heating oil.

FIGURE 2
LPG premium over heating oil, July 1999 to June 2004



9. Suppliers have generally argued that, in the long term, heating oil and (to a lesser extent) other fuels place some constraint on the price of domestic bulk LPG, but not necessarily that they are close enough substitutes to be considered part of the same market. [X], for example, argued that heating oil constrained LPG prices over the longer term, because of the need to maintain an acceptable differential between the prices of LPG and heating oil. In summary, the evidence indicates that domestic bulk LPG is a distinct market from heating oil.

10. One could ask whether the product market is in fact narrower than domestic bulk LPG. The level of switching between suppliers is very low, despite significant price differences: the fact that in some cases one supplier has sustained average price

levels of more than 5 per cent above others suggests that each supplier is in a separate market. In addition, the ability of suppliers to price discriminate—by introducing a general price increase and then ‘price defending’ customers who signal an intention to switch supplier—suggests that a supplier could profitably sustain an average price to customers above the five per cent level.⁴

11. [X] commented that the price difference ‘may well reflect the added value of other features of supply’. We have seen no evidence in support of this. Indeed, customers of the two major suppliers which charge higher average prices appear (on the basis of the ORC survey) to be less satisfied with value for money from their supplier, and less satisfied with their supplier overall. [X] also argued that in order to conclude that each supplier was in a separate market, the CC would have to show that each supplier was profitably able to raise its prices above competitive levels, ie that each supplier was earning excess profits. We note that the extent to which higher prices lead to higher profits depends on the efficiency of the firm. At least some firms appear to have made profits significantly in excess of the cost of capital (see Appendix J).

12. On the other hand, while noting the limited price constraint LPG firms place on each other, we consider that defining each supplier, or even each account, as a separate market in itself would be inappropriate. One reason for this is that we recognise at least some competitive interaction between suppliers. Another is that the price constraint is limited in large part as the result of features, specifically switching costs and price discrimination, which may not necessarily be intrinsic to the market. In addition, the respective sizes of LPG suppliers (in sales to, and number of, domestic customers) are in practice an important consideration in assessing competition in the supply of domestic bulk LPG. As such an over-narrow market definition, while

recognising the limitations on competition in this market, would not provide a useful framework within which to analyse the effects of market features.

13. We also considered whether supply of domestic bulk LPG should be seen as a distinct market from the supply of the bulk tanks themselves. We note that most suppliers of LPG to domestic bulk customers retain ownership of the tank, and charge customers for its maintenance. On the one hand, we noted that this practice was not universal and the two could, in principle, be carried out as separate economic activities. On the other hand, the practice was sufficiently widespread amongst almost all major suppliers, that separate consideration of tank supply and LPG supply would not greatly affect our analysis, for example of market shares. In Appendix I (Table 1) we have noted some differences, between the major suppliers, in the relative proportion of revenue derived from LPG supply and related activities.

Supply-side substitution

14. Supply-side substitution refers to the ability of other firms to supply, at short notice, an effective substitute without significant investment in plant, equipment, skills or marketing. The hardware and distribution systems required to supply commercial⁵ bulk LPG are similar if not identical to those of domestic bulk LPG. However, a commercial bulk LPG supplier could not readily respond to an increase in the domestic price by switching supply from commercial to domestic customers. This is largely due to the practice among domestic suppliers of retaining ownership of LPG tanks and supplying them exclusively. However, even without this practice, a commercial supplier would need to identify, and market to, domestic customers. As a result, such a supplier would face many of the barriers encountered by a new entrant into the domestic bulk market, albeit with some potential advantages due to its

⁵The following discussion also applies to the industrial and agricultural sectors.

infrastructure and marketing expertise. In practice, most suppliers of commercial bulk LPG (including all four major suppliers) also supply the domestic market and vice versa.

Metered estates

15. We also considered whether domestic customers in metered estates should be considered as belonging to a separate market. We note in this regard that the prices charged to such customers appear consistent with those charged to other domestic customers, and have seen no evidence to suggest that they should be treated as a separate market, albeit that they may have some distinct features.

The geographic market

16. The logistics of bulk LPG supply require the supplier to use a depot within at most around 100 miles of all customers who are served from that depot. Apart from a small amount of cross-border trade from the Republic of Ireland to Northern Ireland, we have received no evidence that any customers in the UK are supplied by companies located outside the UK, nor arguments that there is scope for such supply to take place.

Northern Ireland

17. Northern Ireland appears to be a distinct market, both from Great Britain and from the Republic of Ireland. Although LPG is internationally traded, at the domestic level supply from Great Britain, from a firm not already present in the NI market, would require substantial investment in marketing and distribution. This is also true of supply from the Republic of Ireland, albeit that a small amount of cross-border trade occurs at present. The two companies with a substantial presence in Northern Ireland do not supply outside Northern Ireland, although the parent companies of both also own companies which supply to other markets, including Great Britain.

18. Unlike customers in Great Britain, many LPG customers in Northern Ireland are in areas where natural gas is available. This is partly because the gas network has been extended only recently and some customers have delayed switching. However, suppliers also told us that some customers considered LPG stored in a bulk tank to give them greater security of supply than natural gas supplied through a pipeline.
19. On the whole, sales of LPG in Northern Ireland, and the customer bases of the two suppliers there—Calor and Flogas NI—have fallen over the past decade due to the extension of the natural gas network. However, we understand that the two suppliers have not responded to customer switching by reducing their prices. One reason for this appears to be that the difference in price between LPG and natural gas is such that a customer comparing the two on price will almost always prefer natural gas. As such, it does not appear that the availability of natural gas constrains the price of LPG—rather it has led to an inevitable reduction in the size of the LPG market in Northern Ireland.
20. We were told that heating oil had historically been more popular in Northern Ireland than in Great Britain. However, we have seen no evidence that the nature of the relationship between LPG and other fuels in Northern Ireland is different from that in Great Britain. Finally, both suppliers in Northern Ireland charge uniform prices, and we have not identified any distinct local markets within Northern Ireland. In summary, we consider a distinct market to exist for the supply of domestic bulk LPG in Northern Ireland.

Local markets in Great Britain

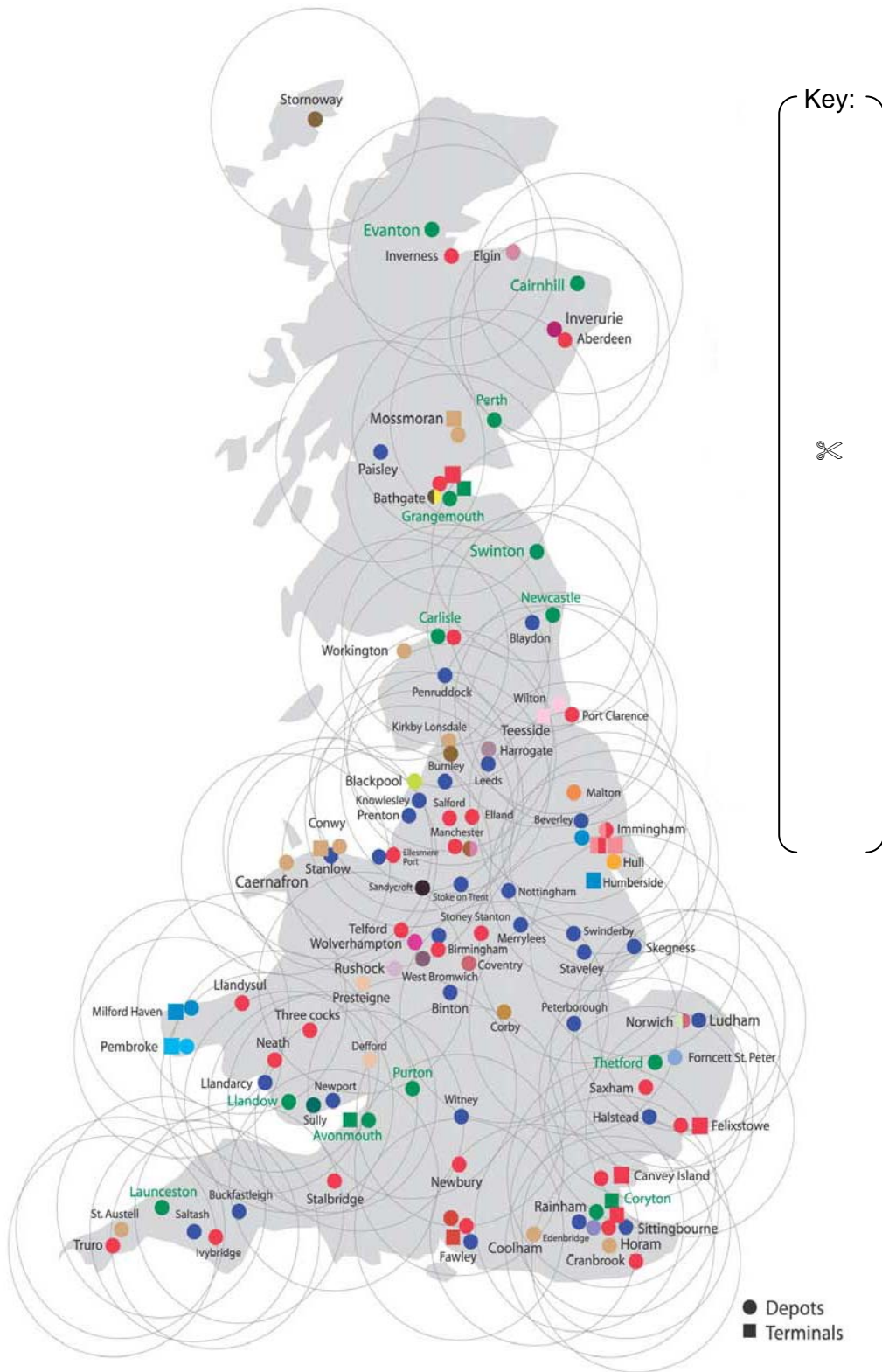
21. Supply of LPG has a local dimension in Great Britain, with smaller suppliers building reputations in their local area, and the larger suppliers recognising the importance of a local sales support presence. A depot can economically supply domestic

customers to a range of around 100 miles, although in practice they may focus their activities on customers who are closer than this, and perhaps on clusters of customers. However, with one exception, the larger suppliers generally decide price levels, pricing policies, and price changes on a national level. In addition, taking 50 miles as a conservative estimate of the range to which a depot supplies, data provided by the main parties indicate that there are few depots which do not overlap with others in their range of supply (see map), and there is a continuous chain through most of Great Britain.⁶

⁶We note, however, that the usual 'chain of substitution' effect—in which if firm A is close to firm B, and firm B close to C (but not A), all three can be seen as in the same market, with the price constraint from C transmitted to A via B—is likely to be considerably weakened or broken by price discrimination (ie B could charge one price in response to competition from A and another in response to competition from C).

FIGURE 3

Map of depots and terminals



Source: CC study.

22. In Figure 3, customers are divided on the basis of the depot which supplies them, and an average has been calculated. On the whole, average prices appear to be broadly similar across Great Britain. [X]

[X]

23. We conclude that, despite the local element, there is no evidence of distinct local markets, so the relevant markets for domestic bulk LPG are Great Britain-wide and Northern Ireland-wide respectively.