

# Retail markets and vulnerable consumers: issues in the UK and South East Europe

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*FSR Summer School on Regulation of Energy Utilities, July 2010*

# The issue

- ✦ Electricity is an essential need for industry and households
- ✦ Politically sensitive both in supply and demand
- ✦ Tradition of monopoly/ government involvement/ownership
- ✦ How far is energy a ‘special industry’ (eg compared to food or housing) to which different rules should apply?

# Household demand for energy...

Energy demand increases with income, but at a decreasing rate

- ★ Low income consumers use less energy but it is a higher proportion of their total spending
- ★ Poses problems for raising level and changing structure of tariffs: particularly SE Europe
- ★ And in competitive markets ‘vulnerable’ consumers less likely to change supplier so may be charged higher prices: UK issue
- ★ **What is the role of the regulator in distributional issues? How should the regulator determine this?**

# Exploring the issues

- ✦ UK example first (no issues about levels or structures here, but can use information from open market for SE study)
- ✦ Based on new license conditions introduced by regulator last year
- ✦ SE Europe: look at the effect of changing tariff levels and structures on 3 countries: member, candidate country, potential candidate
- ✦ Use household level surveys to explore likely effects

# The UK issue

- ✦ Considerable switching (around half of consumers are no longer with incumbent electricity or gas supplier, three quarters have switched at least one)
- ✦ Incumbents able to charge around 10% higher prices in areas where they are incumbent (i.e. to those who hadn't switched)
- ✦ A higher proportion of (most categories of) vulnerable consumers had not switched supplier
- ✦ Continuing pressure from lobby groups and politicians to 'do something'

# Market structure in UK retail energy



Electricity market open for competition for at least 10 years

- ★ Before opening, 14 regional electricity incumbents
- ★ Each region is a well defined market

Entry:

- ★ All incumbents entered each others' markets

M&A and exit reduced numbers to 5 consolidated descendents of electricity incumbents

# Prices and market share

Firms free to set retail prices

- ★ Last retail price caps removed 2002

Firms charge higher prices “in-area” [where incumbent]

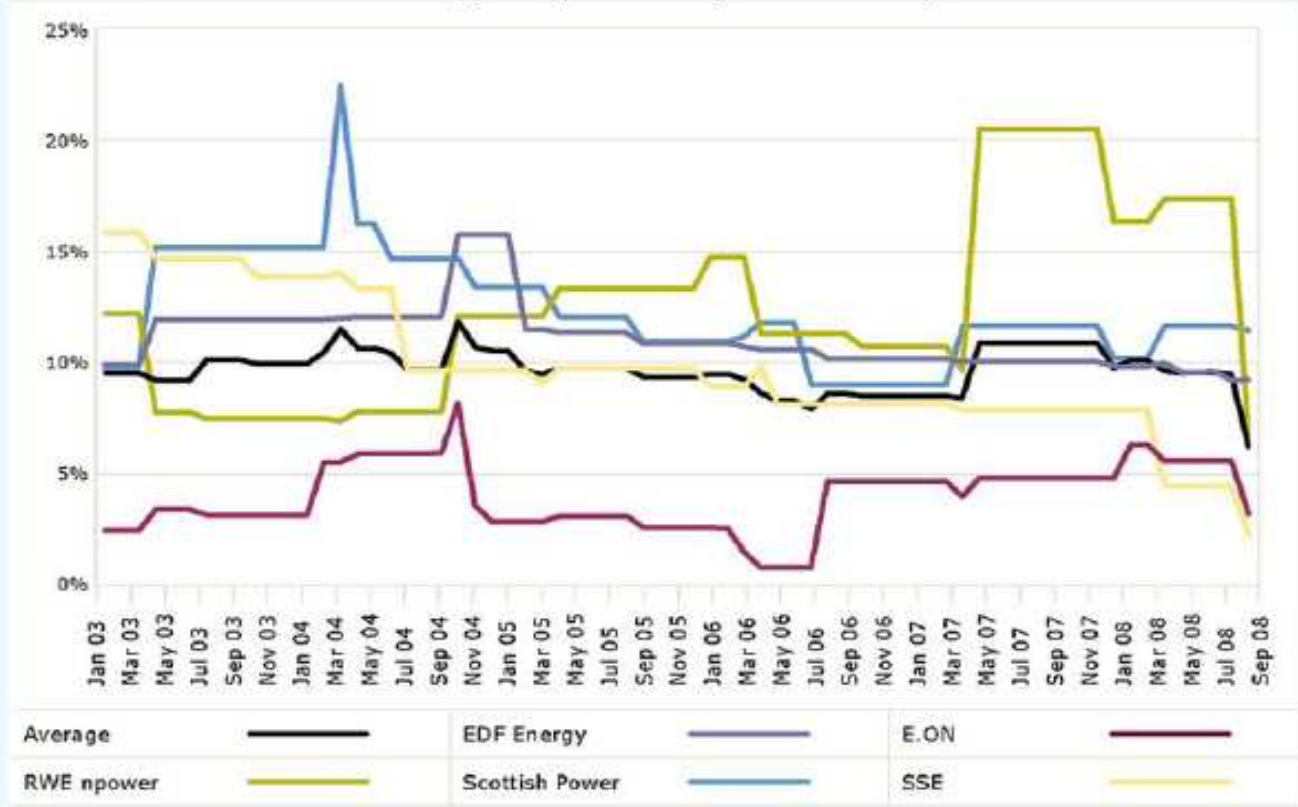
- ★ Between 2003 and January 2008 on average 10-12% more in-area
- ★ Significant potential gains from switching

But many do not

- ★ Incumbents retain about 40% of the market:
  - Large loyal consumer base
- ★ An electricity entrant attracts market share of 5-10%

# Companies charge more ‘in area’

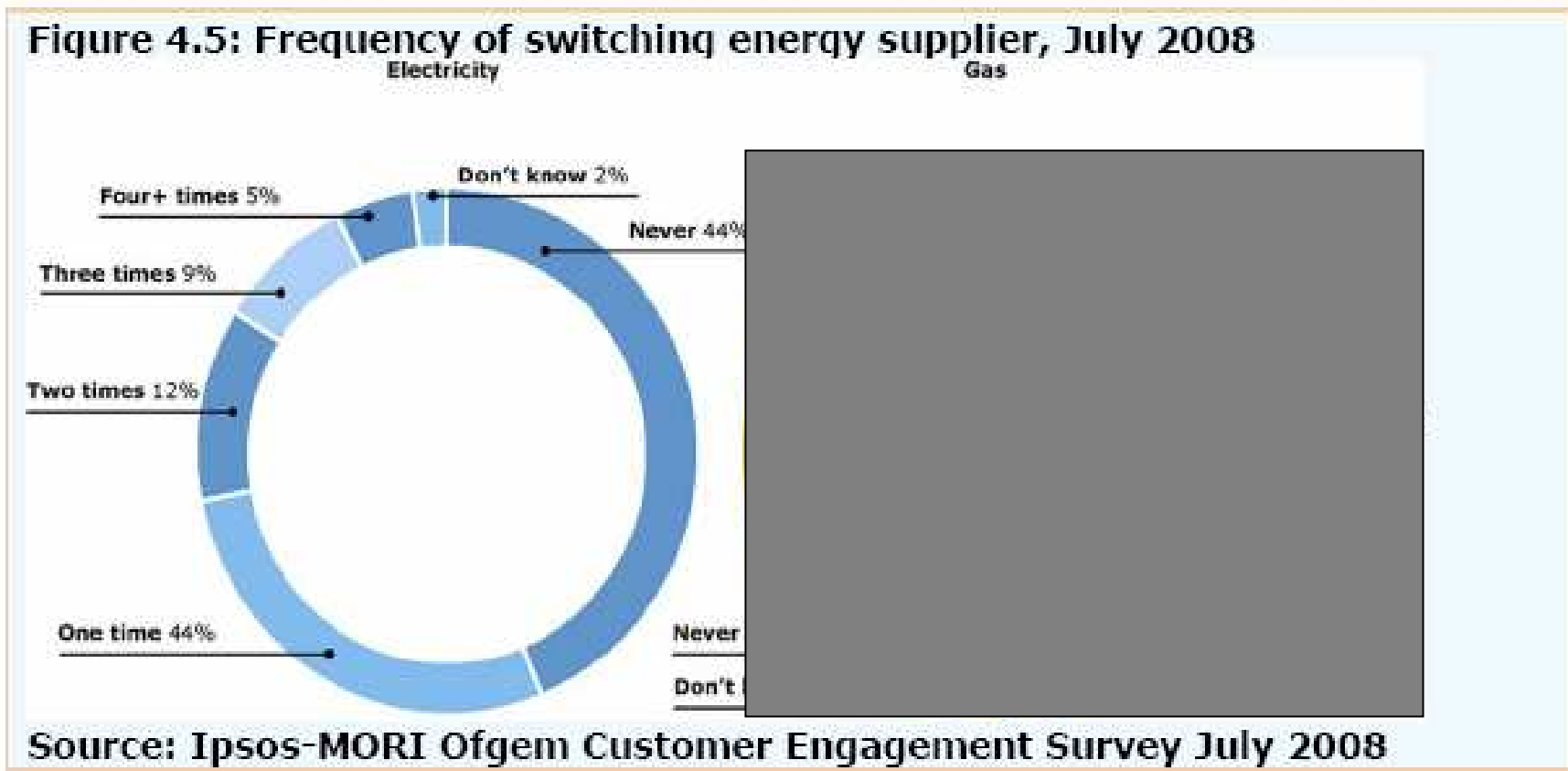
**Figure 7.4: Average percentage difference between in-area and out-of-area standard credit electricity bills, January 2003 – September 2008**



Source: Ofgem

So there are significant potential gains from switching...

# But many don't switch



44% have never switched electricity supplier

Who are they?

Many still with the incumbent are in groups for which the regulator has special duties..

Vulnerable group	Incumbent	British Gas	Entrants
Over 65	46	28	26
Low inc	47	31*	22
Disabled	44	28	28
Rural	60*	20*	20
Low educ attain	52*	27*	22*
<b>At least one</b>	<b>47*</b>	<b>29*</b>	<b>24*</b>
<i>All consumers</i>	<i>42</i>	<i>32</i>	<i>26</i>

*From 2005 CCP survey*

\*Signif'tly different from non vulnerable at 1%

✦ Is this a well functioning market?

For most categories (and aggregate) fewer than half are still with the incumbent

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# Regulator's concern

Those who have never switched supplier clearly pay a significantly higher price than other consumers

There is a disproportionate number of people in this group for whom the regulator has special duties

Aim of regulator:

- ★ To get the price of firms down in areas where they are incumbents
- ★ Introduced clause preventing firms from charging different prices to consumers in different areas
- ★ **What is the likely effect of such clauses?**

# What do we know about non discrimination clauses (ND)?

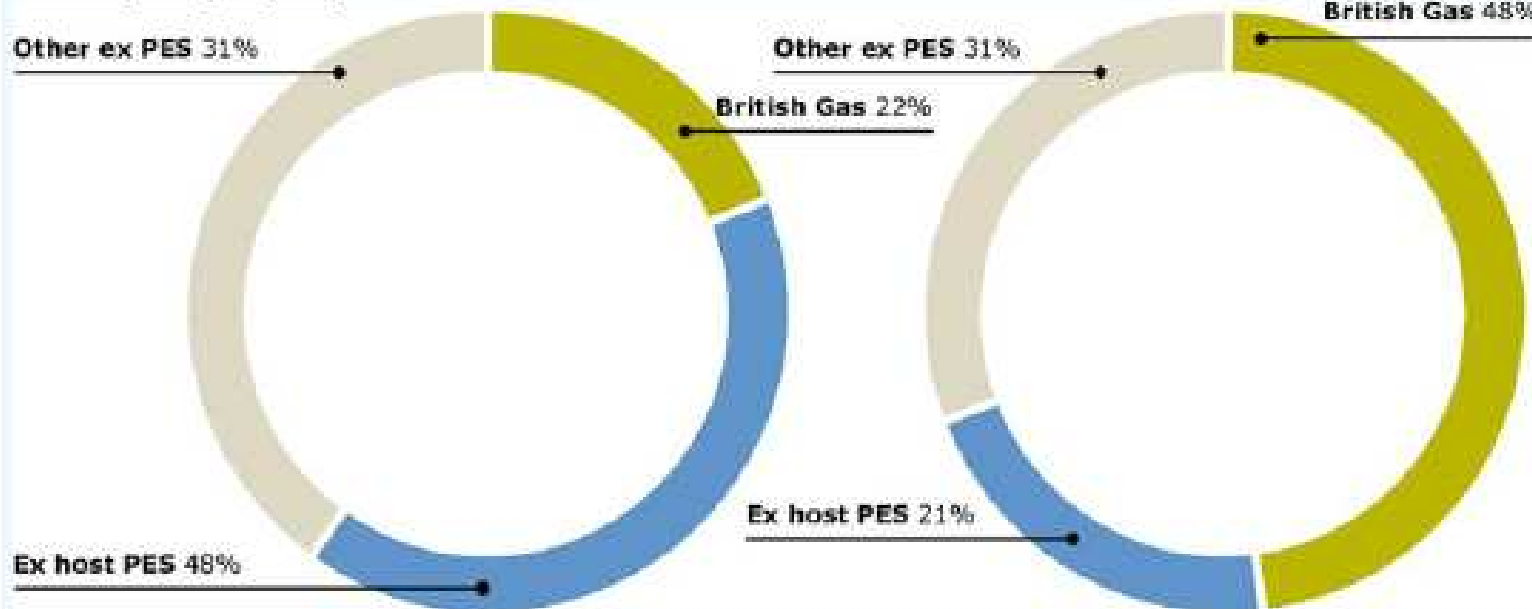
Recent insights (summarised in Stole) focus on which markets are viewed as ‘strong’ by the competitors.

In particular:

- ★ if one firm’s ‘strong’ market (low price elasticity) is another’s ‘weak’ (high elasticity) market
  - ★ ND is anti-competitive
  - ★ All prices rise!
  
- ★ Seems to fit the story so far:
- ★ **But which other actor should we consider?**

# The gas incumbent is also present

**Figure 3.4: Current average regional supply market shares electricity (left) and gas (right)**



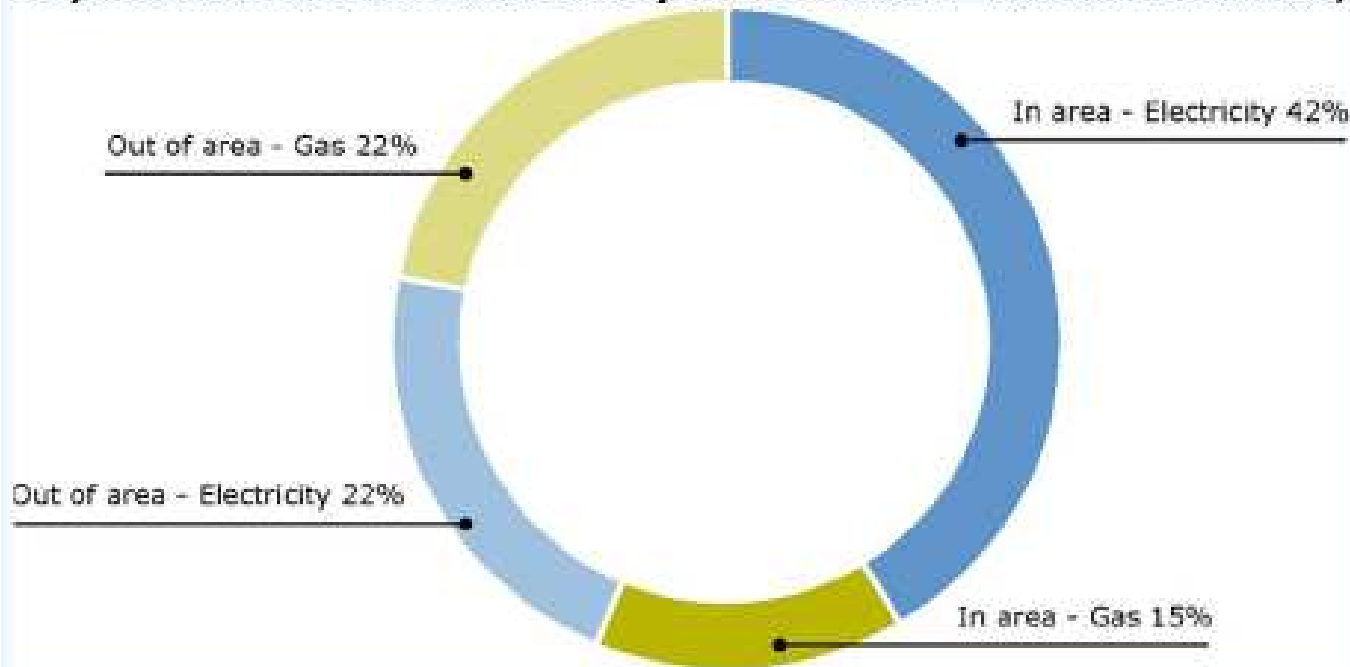
**Source: Ofgem**

**Note: Electricity shares are for June 2008; Gas shares are for December 2007.**

There are four 'other ex PES' in each market, so each has 7-8%

# ..and electricity incumbents supply gas

**Figure 3.8: Former electricity incumbents' customer bases, December 2007**



**Source: Ofgem**

# Role of retail gas

National Gas incumbent entered all regional electricity markets

All electricity suppliers entered natural gas retail market

- ★ We can think of either
- ★ All offer dual fuel deals
  - Most households can receive both
  - Electricity on its own
  - Dual fuel [gas/electricity]

# The full set of players

In each market:

- ★ One regional incumbent electricity supplier
  - Roughly 40% of market
- ★ Four regional entrant electricity suppliers
  - Roughly 7% of market each
- ★ One national incumbent gas supplier
  - Roughly 30% of market

So the gas incumbent also has very loyal consumer base

# Literature has other insights for this situation

- ★ if firms view markets similarly, prices fall in the low elasticity (loyal) market, rise in high elasticity market
- ★ The presence of national gas incumbent may be closer to this case if it is 'strong' everywhere
- ★ If this is the dominant effect, then it may be that:
  - Firms lower price where they are local incumbent

# Best possible outcome for regulator



If the regional entrants remain active participants in the market, then entrants provide significant competitive pressure:

- ★ Regional incumbent lowers price
- ★ Entrants and national incumbent raise theirs
  - This may benefit vulnerable consumers and hence achieve the regulator's objectives

# More likely outcome given the current market shares



If entrants provide modest competitive pressure with differential pricing:

- ★ Regional electricity firms cease to be active out-of-area
- ★ Both regional and national incumbent raise prices!
- ★ Does competition law have anything to say on this?

# Lessons from Competition Law



Discrimination mentioned in both Article 101 and 102 of the Treaty on the Functioning of the European Union (TFEU)

- ★ 102 requires dominance so focus on 101
- ★ Agreements between undertakings ... which ... apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage

Covers business-to-business transactions

## And what has happened since?

Very difficult to measure change against counterfactual  
but retail *margins* have increased recently

- ✦ Gap between incumbent price and best offer in market decreased significantly Jan 08-Jan10 from £53 a year to £39 a year for electricity with standard offers
- ✦ Perhaps surprise is that the gap remains at all
- ✦ Incumbents seem to be losing less market share than previously

# What can we learn from 101TFEU?



Stresses the importance of a level playing field among firms

- ★ In simple cases a Most Favoured Customer clause

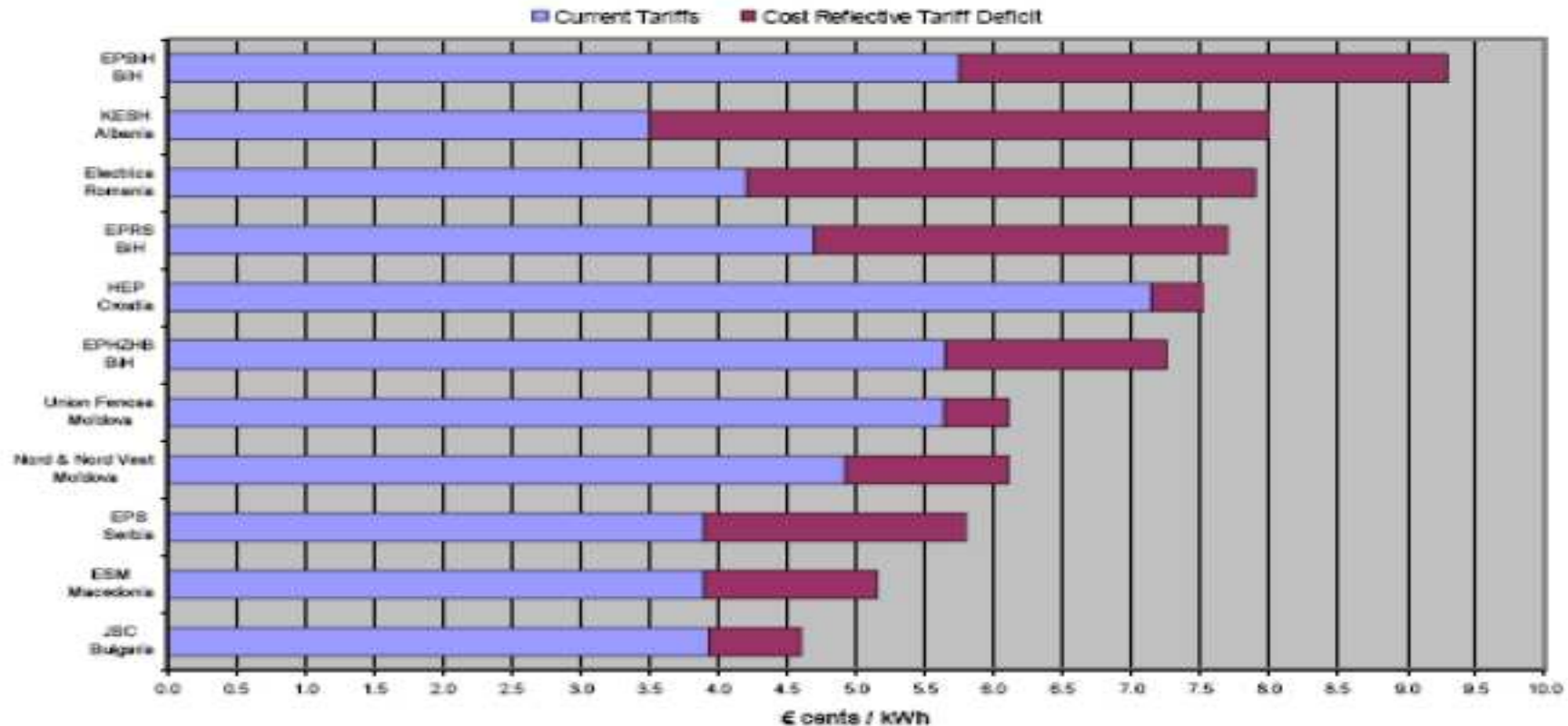
Translated:

- ★ For consumers, this means “fairness”
- ★ Would appear that “fairness” is more important than low prices
- ★ Regulator motivated by concern for fairness
- ★ How much is fairness a concern of the regulator?

## SE Europe Electricity Prices

- ✦ Whole industry traditionally subsidised
- ✦ With additional cross subsidies from industrial to residential consumers (because of sensitivity)
- ✦ Use household surveys to assess the impact of applying the EU's state aid rules to this industry in 3 countries: one new member, one candidate and one potential candidate country

# Prices of residential tariffs traditionally below costs



Source: EBRD (2003)

Electricity Costs and Tariffs, Residential sector, 2003

# EU State Aid Rules pose a challenge



- ✦ State Aid rules require the electricity industry to cover its costs
- ✦ Assuming the residential sector does so, what are the likely effects on households?
- ✦ How will the introduction of competition (also mandated by the EC) affect households?
- ✦ Analyse these effects for Bulgaria (new member), Turkey (candidate country) and Albania (potential candidate)
- ✦ Some comments on the analysis

## Difference between 2003 tariffs and cost reflective tariff levels

Country	2003 tariffs	Cost reflective tariffs
Albania	4.1 L/kWh (<300kWh) 8.8 L/kWh (>300kWh)	12.18 Leka/kWh
Bulgaria	0.098 BGL/kWh (< 75 kWh) 0.153 BGL/kWh (> 75 kWh)	0.16 BGL/kWh
Turkey (regional)	158/ 148 NTL/kWh	184/ 155 NTL/kWh

✦ Price levels rise in all countries, but the effect on households depends on their electricity expenditure

# Demand increases with income, but at a decreasing rate

Average electricity expenditure as % of disposable household income

	Albania (2002)	Bulgaria (2001)	Turkey (2003)
Average/total	12	13	9
Income decile			
Poorest	47	64	47
5 <sup>th</sup>	9	11	13
Richest	3	4	4

Low income households spend less in absolute terms,  
but a higher *proportion* of their income on energy

# Low income groups are much harder hit (relative to income) by the increases



Increases in monthly bills to cost reflective levels, and as a % of income (assuming no change in demand)

	Albania		Bulgaria		Turkey	
	Mean (Leka/ month)	% hh disp inc	Mean (BGL/ month)	% of hh disp inc	Mean (NTL/ month)	% hh disp inc
All	2,152	21	8	5	5	1
Inc deciles						
P'est	1,625	85	4	19	3	5
5 <sup>th</sup>	2,128	14	7	3	4	2
R'est	2,661	4	15	1	7	0.7

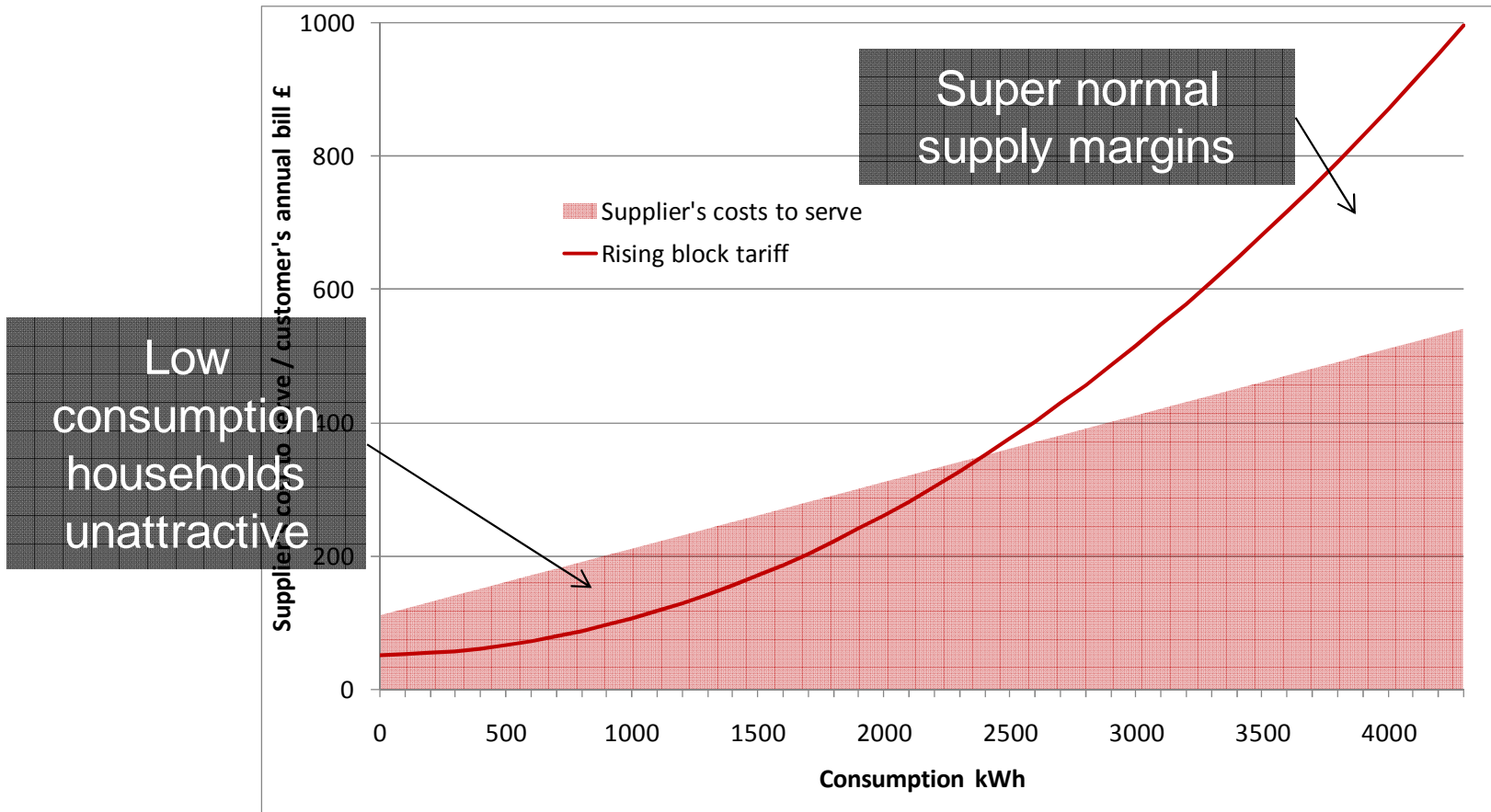
# Competition and tariff structures

- ✦ Costs of supply have a consumer related and an energy related element
- ✦ Albania and Bulgaria have increasing block tariffs, Turkey has energy only element
- ✦ **What problems might introducing competition pose?**

# Tariff structures need to reflect costs

- ✦ Even if the overall level is cost reflective, low consumption consumers are not covering their costs, and high consumption consumers are more than doing so
- ✦ (Effective) Competition makes this unsustainable because entrants target the high consumption (high margin) consumers ~ cherrypicking

# Increasing block tariffs make low consumption (income) households unattractive to serve



# Competition and tariff structures 3

- ✦ High consumption (rich) households will pay less and low consumption (poor) households more with cost reflective tariffs (compared with flat tariffs)
- ✦ To simulate the effect of this element alone, assume 10% of costs (and tariff) is consumer related (remainder energy driven), with no change in overall revenue
- ✦ This is the lower end of the ratio in UK tariffs (around 15%)

# Additional expenditure with (revenue neutral) cost reflective tariff structure

	Albania		Bulgaria		Turkey	
	Mean (Leka/ month)	% of hh disp inc	Mean (BGL/ month)	% of hh disp inc	Mean (NTL/ month)	% of hh disp inc
All	0	0.9	0	0.9	0	0
Inc deciles						
P'st	107	6.6	1.6	5.6	1.3	2
5 <sup>th</sup>	35	0.2	0.5	0.3	0.3	0.2
R'st	-268	-0.4	-3.3	-0.3	-1.7	-0.2

Rich gain and poor lose (more both absolutely and as proportion of income)

# Comments on analysis:

## 1. Reliability of data

- A. Very high proportions of income reported spent on electricity
  - Problems of reliability, especially for low income groups
- B. High proportion of apparent zero expenditure, even when households have electric appliances
  - Especially amongst low income households
  - Zero electricity expenditure recorded for 50% of lowest income decile in Turkey, 18% in Bulgaria
- ✦ Results should be interpreted cautiously, but figures give patterns of change

# Comment on analysis:

## 2. No demand change assumption

- ✦ Would expect some demand response to such big changes as a proportion of income (even allowing for data limitations)
- ✦ Would reduce the change in expenditure (some change taken by reduced comfort)
- ✦ Relative effects remain the same if the responsiveness of demand is the same for all income groups
- ✦ In practice low income likely to have more responsive demand, so the expenditure differences will be less marked

## Policy conclusions: SE Europe

- ✦ State Aid rules in residential electricity will cause considerable hardship to low income families - both removing subsidies and introducing competition
- ✦ Changes that involve reducing ‘non-technical losses’ will impinge further on low income households
- ✦ Social service safety nets are usually poor in Accession countries

# Policy Conclusions: UK

- ❖ The non-discrimination clause introduced by Ofgem will lead to increases in most [all?] prices
- ❖ Ofgem's actions reveal very strong preference for immediate 'fairness' for vulnerable at expense of longer term competition and lower prices
  - Shared with consumer organisations
  - **Alternative concept of fairness: those who 'make the market' work for all should gain?**
- ❖ Mistake (possible) outcome of competition (equal prices) for process

# Questions

- ❖ Is fairness incompatible with retail energy competition?
- ❖ Is it realistic to introduce competition in SE Europe (and elsewhere)?
- ❖ Will we need to return to regulation where competition has been introduced?
- ❖ Would this be a good thing?

# Retail markets and vulnerable consumers

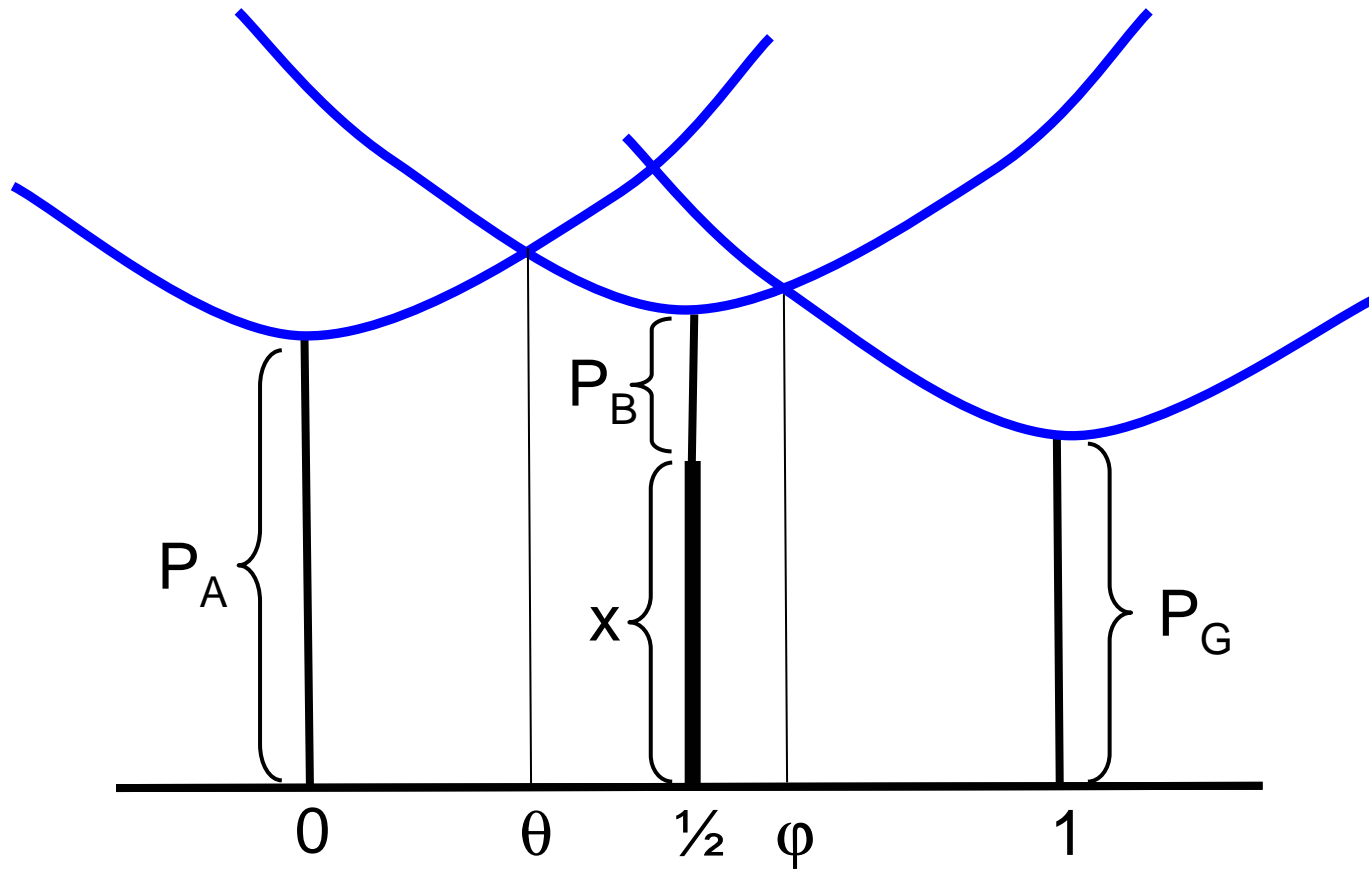
## Supplementary material

# Simple model to capture ND clauses

Two regional markets, focus on one

- ★ Incumbent regional electricity (A) and national gas (G) firms, at each end of a Hotelling line, with consumers located along it, and quadratic transport costs
- ★ entrant electricity firm B (incumbent elsewhere); located midway between incumbents,
  - but with additional consumer disutility,  $x$ , relative to incumbents at that point

# Market shares when all active



# Results when prices are allowed to differ across regions



If disadvantage of entrant sufficiently small:

- ★ All firms active, and A & B each set lower prices out-of-area than 'in area'; G sets same price everywhere

If entrant's disadvantage sufficiently large:

- ★ Not active; Exert no constraint on incumbents; national incumbent charges same in all regions

For some intermediate levels of disadvantage

- ★ Entrant does not enter, but exerts competitive pressure through threat of entry

# If price discrimination prohibited

For sufficiently high  $x$  (incumbent disadvantage)  $x^*$ :

- ★ Entrant leaves market
- ★ Both regional and national incumbent raise their prices

For  $x < x^*$ :

- ★ Entrant remains in the market;
- ★ Regional incumbent lowers price, entrant and national incumbent raise theirs

# ND clauses in Germany

## Gesetz gegen Wettbewerbs-beschränkungen (GWB) § 29

- ★ Introduction of new paragraph in competition law banning electricity [and grid-bound gas] suppliers from
  - Offering less attractive terms than other suppliers
  - Setting prices which exceeds costs disproportionately
  
- ★ Heavily criticised by the Monopolkommission