European Communities

EUROPEAN PARLIAMENT

Working Documents

1980 - 1981

2 March 1981 DOCUMENT 1-895/80

Report

drawn up on behalf of the Committee on Energy and Research

on the proposal from the Commission of the European Communities to the Council (Doc. 1-337/80) for a draft recommendation on the electricity structures in the Community

Rapporteur: Mr Gordon ADAM

English Edition PE 69.979/fin.

By letter of 16 July 1980 the Council of the European Communities requested the European Parliament to deliver an opinion on the proposal from the Commission of the European Communities to the Council (Doc.1-337/80) for a draft recommendation on the electricity tariff structures in the Community.

The President of the European Parliament referred this proposal to the Committee on Energy and Research as the committee responsible, and to the Committee on Economic and Monetary Affairs for their opinion.

On 24 September 1980 the Committee on Energy and Research appointed Mr Adam rapporteur.

It considered the report at its meeting of 28 January 1981 and adopted the motion for a resolution by nineteen votes to nil, with two abstentions.

Present: Mrs Walz, chairman; Mr Gallagher and Mr Normanton, vice-chairmen, Mr Adam, rapporteur; Mrs von Alemann, Mr Beazley, Mr Capanna, Mr Coppieters, Mr Croux, Mr Galland, Mr Linde, Mr Moreland, Mr Müller-Hermann, Mr Petersen, Mr Price, Mr Purvis, Mr Sassano, Mr Seligman, Mr Vandewiele, Mr Veronesi, Mrs Viehoff.

The opinion of the Committee on Economic and Monetary Affairs is attached.

C O N T E N T S

A

The Committee on Energy and Research hereby submits to the European Parliament the following Motion for a Resolution, together with Explanatory Statement:

MOTION FOR A RESOLUTION

embodying the opinion of the European Parliament on the proposal from the Commission of the European Communities to the Council for a draft recommendation on the electricity tariff structures in the Community

The European Parliament,

- having regard to the proposal from the Commission of the European Communities to the Council,[1]

- having been consulted by the Council (Doc. 1-337/80),

- having regard to the report of the Committee on Energy and Research and the opinion of the Committee on Economic and Monetary Affairs (Doc. 1-895/80),

- recalling previous resolutions concerning energy pricing and its importance for the rational use of energy;

1. Points out that the energy crisis is mainly one of oil supply and cost, and that, because it can be generated from many primary sources, electricity has an important role to play in reducing dependence on oil;

2. Underlines the importance of energy prices in determining the health of the European economy as a whole;

3. Underlines also the potentially important benefits such as increased economic efficiency and improved energy conservation which can result from more rational tariff structures;

4. Points out that a rational tariff structure ought to reflect costs, promote effecient use of production facilities and, because large-scale storage of electricity is difficult, minimise fluctuations in demand;

5. Approves the reasons for promoting two-part tariffs, and for eliminating block tariffs, with the proviso that one-part, three-part, or block tariffs may, in some circumstances, accurately reflect costs and should be permitted if this can clearly be seen to be so;

---

[1] O.J. C214 of 21.8.80 p.5

6. Approves the promotion of multiple tariffs as these are best-suited to even out variations in load;

7. Points out that advances in micro-electronics and in teleswitching allow much more subtle tariff directives to be applied than was economical in the past, and that there is a large market for such control equipment:

8. Rejects, in the absence of an overall energy policy and especially an agreed role for electricity which would allow the proposal to be placed in context, the elimination of tariffs which are based on use; these are acceptable if they contribute to the achievement of long-term objectives;

9. Considers that direct payment in socially desirable cases does not constitute a complete solution, and that price adjustments to meet social objectives are acceptable if these adjustments are clearly defined and transparent;

10. Supports the call for more research into tariff structures, considering that this research should concentrate on topics of common interest throughout the Community and, in particular, into

- methods of ensuring transparency, especially with regard to private contracts where confidentiality has also to be respected,

- the effect of degressive block tariffs on consumption,

- tariff structures appropriate to rational self-generation and the linking of decentralised sources to the electricity network, and the promotion of combined heat and power.

11. Emphasizes that electricity prices on the market need to be characterised by the greatest possible degree of transparency;

12. Proposes that Member States should provide the Commission with regular reports on the extent to which this recommendation is being followed by electricity undertakings.

13. Requests the Commission to include the following amendment in its proposal pursuant to Article 149, second sub-paragraph, of the EEC Treaty:

TEXT PROPOSED BY THE COMMISSION OF THE EUROPEAN COMMUNITIES (1)	AMENDED TEXT

RECOMMENDATION FROM THE COUNCIL ON THE ELECTRICITY TARIFF STRUCTURES IN THE COMMUNITY

Preamble, Recitals and Points 1, 2 and 3 unchanged

Point 4	Point 4
Tariffs based on the use to which electricity is put should be eliminated.	Tariffs based on the use to which electricity is put should be eliminated, unless such tariffs conform with the general requirements of Point 1 above and contribute to the achievement of long-term energy policy objectives.

Point 5 - unchanged

Point 6	Point 6
Tariffs should not be kept artificially low, for example for social motives or anti-inflationary policy reasons; in such cases, separate action, where warranted, should be taken.	Tariffs should not be kept artifically low, for example for social motives or anti-inflationary policy reasons; in such cases, separate action, where warranted, should be taken. or any social support element should be clearly identified as such so as to aid transparency of pricing.

Point 7 and following paragraphs unchanged

1 For full text see O.J. C214 of 21.8.80 p.5

B.

EXPLANATORY STATEMENT

I. INTRODUCTION

1. Much has been written on the subject of energy in recent years. There is no need to review the whole subject here, but it is worth recalling that the energy "crisis" arose principally because oil reserves were seen to be running out, compounded by geographical concentration of those reserves in countries able to form a supply cartel. Although other issues, such as certain aspects of nuclear power or the carbon dioxide produced by combustion of fossil fuels cannot be disregarded, the energy problem in the short to medium term is an oil substitution problem.

2. The European Parliament has stressed the need to reduce dependence on external sources of energy, especially oil, in its resolution of 14 February 1980 (OJ No. C 59 1980)and has emphasized equally that oil should not be replaced by another premium fuel - natural gas - for electricity production in its resolution of 12 December 1977 (OJ No. C 6,1978). Having, in its report on the rational use of energy (Doc. 314/76), observed that price policy was a consequence of external trends rather than a positive measure in itself, the Parliament has also called for a new attitude to pricing so as to promote conservation. The Commission guidelines for pricing were supported in the Parliament's resolution of 18 April 1980 (OJ C 117, 1980). The effect on low income groups had to be allowed for and might be alleviated, for example, by direct aid. The Commission's pricing principles were that prices should:

- cover costs, including replacement costs of supplying the energy;
- ensuring equilibrium of the energy supply and demand in the various sectors;
- encourage energy saving.

II. OUTLINE OF THE COMMISSION'S PROPOSAL

3. The proposal before Parliament is a step in the direction of a rational energy pricing regime in the Community. Tariff structures are extraordinarily complex, as was admitted by the Commission in its Communication to the Council on energy price and tax harmonisation in the Community /COM (80) 152/. The Parliament has not been consulted on this paper. The wide diversity of pricing practices, tariff structures and taxation policies

have existed for many years and these divergences give rise to trade and economic distortions as well as hindering harmonisation of energy policy. The problem is, therefore, one which merits attention.

4. Apart from a draft directive on mineral oil taxation (OJ C 92 1973) the draft recommendation on electricity tariff structures is the first formal proposition in this area of tariffs, taxation and pricing. Proposals are likely to follow at least for gas tariffs, and maybe for other fuels.

5. Electricity pricing practices are extremely complicated and the very great importance of capital in the cost structure is a key factor. The cost of supply depends not only on the volume demanded, but on the seasonal, weekly and daily pattern of demand. The industry, therefore, has to maintain a reserve of generation capacity. Supply costs are minimised, the greater the average load in relation to peak demand, and tariffs exists to encourage off-peak use.

6. In essence, the recommendation is based on the overall principle of differentiating consumer sectors and covering the costs for each separately. Further aims are to encourage saving and avoid cross-subsidies and distortions in the structure of demand.

7. Within that framework it is proposed that tariffs should conform to five guidelines:

(a) two-part tariffs comprising a first fixed portion, independent of consumption, and which is related to the investment needed to meet the likely maximum demand of the consumer. The second portion covers payment for actual consumption;

(b) Elimination of block tariffs, i.e. tariffs in which progressively lower unit prices are charged for consumption within successive blocks;

(c) Avoidance of tariffs based on use.

(d) Provision of multiple tariffs, in which prices are adjusted according to the time of demand with the aim of evening out the load;

(e) Exclusion of outside influences such as social factors as these disturb demand and make pricing less transparent.

8. The Commission proposal draws heavily on a study done by a group of experts from Unipede (International Union of Producers and Distributers of

Electrical Energy); this document was prepared in 1979 and up-dated in 1980, and discussed tariff policy questions and the tariffs prevailing in Member States in considerable detail.

III. ELECTRICITY GENERATION AND TARIFFS

9. Some general information on electricity generation and prices is attached in the annexes. One or two clarifications should be made. The two tables in Annex II refer to production and production capacity respectively, and generating authorities use certain types of plant more intensively than others for cost and technical reasons. Nuclear plants tend to be used to supply the "base load", for example, with gas turbines being used exclusively to meet demand peaks: they can be fired up quickly, unlike some other types.

10. The figures in Annex III are indicative only. One aim of the current proposal is to make tariffs more "transparent", so it is not surprising that there are difficulties in making comparisons. Apart from defining what is meant by a "typical consumer", currency conversion is problematic although an attempt to allow for this has been made in one table where purchasing power standards are used. ("order of selling prices 1978").

Structure of Electricity Costs

11. Electricity supply costs consist of three main components:

- costs relating to the inclusion of the consumer in the network;
- costs related to the demand set up;
- costs which are related to the energy used.

12. Long run marginal cost is used by several countries to fix prices. There is theoretical debate on certain aspects of this approach, concerning, in particular, the definition of the efficient production point when long run marginal cost is falling as can happen in this industry, and whether it is economically efficient to apply marginal cost pricing in one sector of the economy only. For these reasons, and certain practical problems of definition, some experts contributing to the Unipede study expressed reservations about the technique.

The Peak Load Problem

13. Electricity cannot be stored efficiently on a large scale. Supply must, therefore, follow demand and this means that some plant must be switched on

or off to match fluctuations in demand over the daily, weekly, or yearly scales. This can be done most suitably with oil-fired plant, and although electricity generation is reducing its dependence on oil and gas in general, it will continue to rely on these fuels for meeting peak load well into the next century.

14. Figure 1, shows how load varies over the day. This particular example concerns Germany, but other countries show similar patterns albeit with much larger variation. Figure 1 refers to a particular day only, and it will be noted that demand varies between 80% and 100% of its maximum value; this variation is much smaller than in the past.

15. Of course demand varies over the year also, so that the 91.9% average figure seen in Figure 1 is not maintained; annual utilisations work out as the following:

	%
B	67.5
D	66
DK	59
F	65
I	65
IRL	51
L	70/75
NL	65
UK	56.5

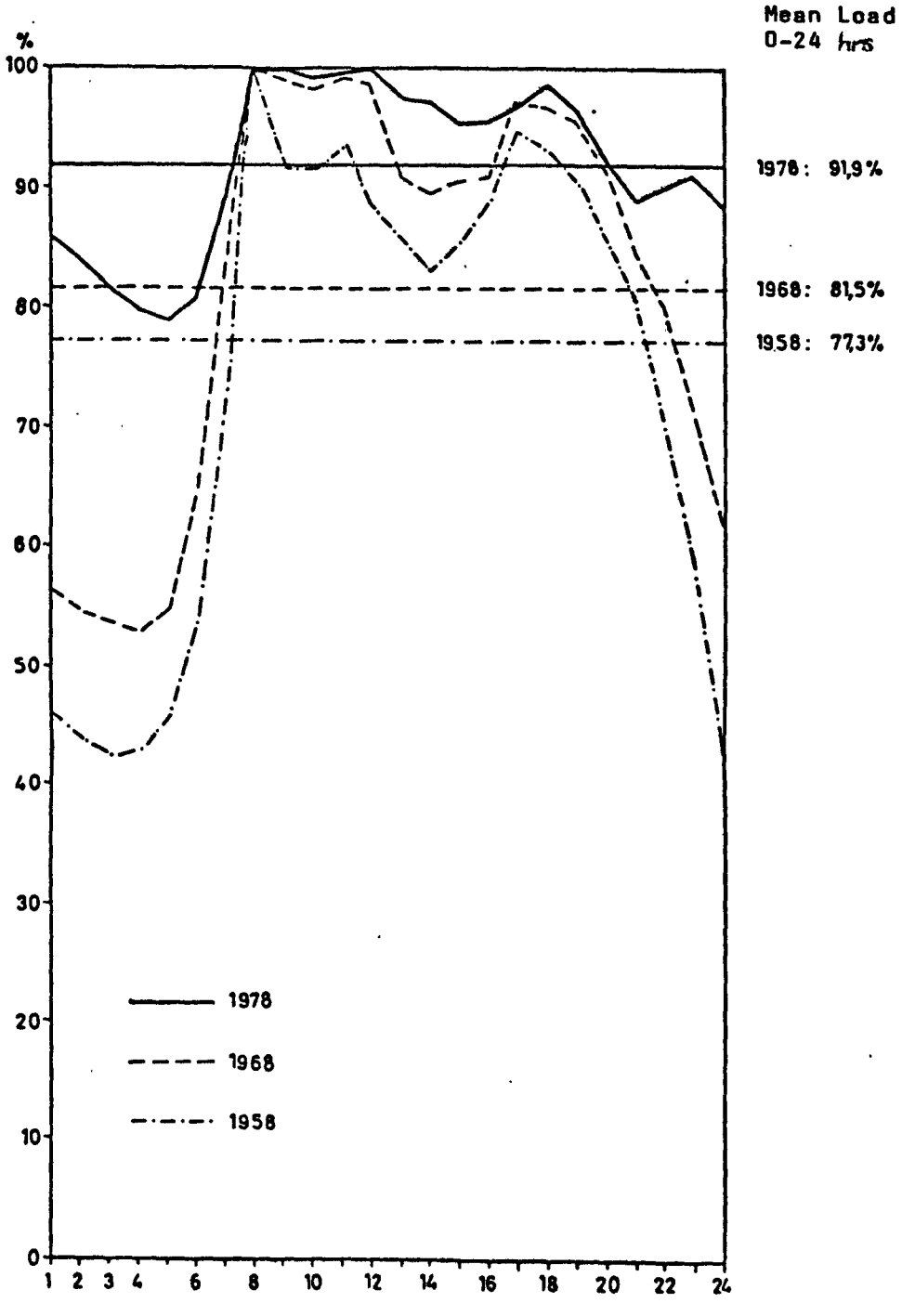
The differing summer and winter levels are illustrated by Figure 2 which applies to Denmark. It is instructive to note the steadiness of the district heating demand over the 24-hour period.

16. Because of the summer decline in demand generating authorities take the opportunity to shut down plant for maintenance; the margin of unused capacity in the summer is not, therefore, necessarily large. Also, while daily load variations call for extensive use of oil-fired plant, in the yearly scale solid fuel plant can be brought into commission but this tends to be of the oldest and least efficient variety.

17. Because of different working habits, climatic conditions, etc. in neighbouring countries, peak loads occur at different times so linking grid systems across frontiers allows some load balancing to be done. Figure 3 gives an indication of these links and their importance. Apart from the special case of Luxembourg, the largest importers are Belgium, Germany and Denmark, where amounts equivalent to 7.2%, 8.1% and 5.3% of peak load are supplied externally.

(FIGURE 1)

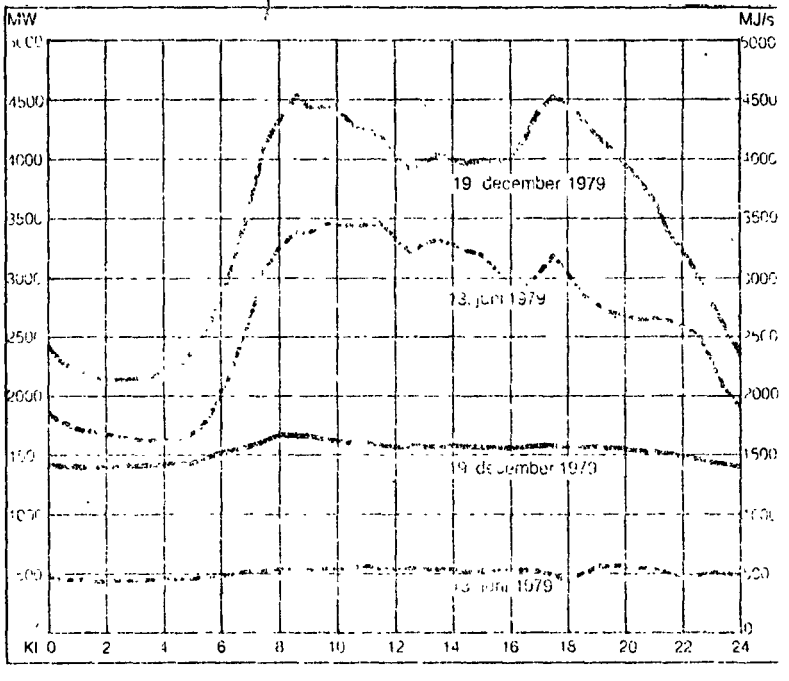
System Load in the Federal Republic of Germany, in 1978
as percentage of maximum load
in comparison to 1968 and 1958 (without power consumption of
pumped-storage stations)



(FIGURE 2)

LOAD CURVES FOR PUBLIC SUPPLIES

(DENMARK)

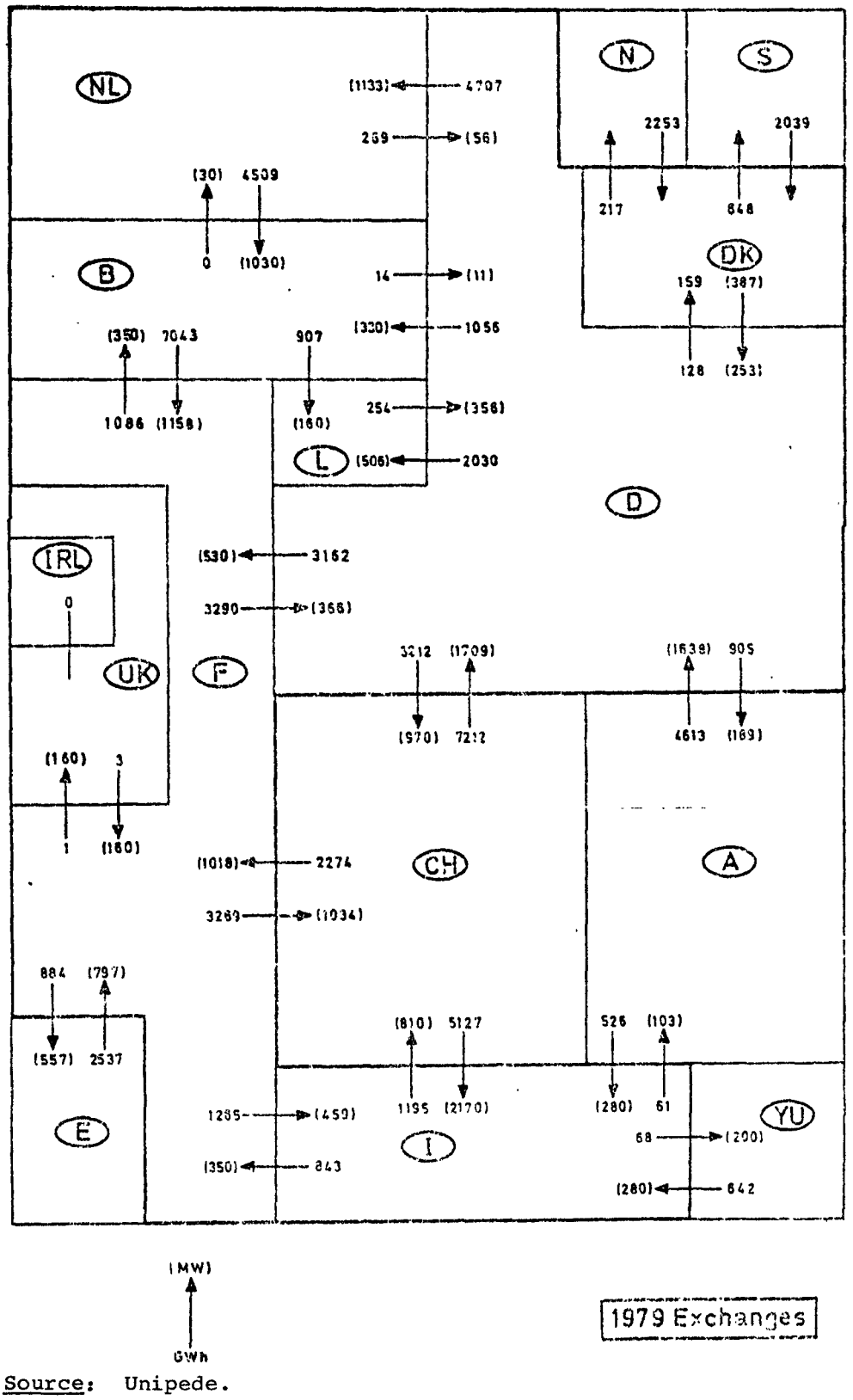


Upper curves: electricity demand

Lower curves: district heating demand

Source: "Danske Elforsyning"1979.

(FIGURE 3)



Source: Unipede.

The Three Consumer Sectors and Existing Tariffs

18. There are three main types of consumer:

- Domestic, accounting for approximately 30% of total demand;
- Commercial (including light industry) accounting for 20%; and
- Industry (large consumers supplied at high voltage) accounting for 50%.

The proportion in each sector subjected to tariffs varies. Private generation is a significant factor in the industrial sector.

Domestic Sector

19. Domestic consumers are supplied at low voltage via a high number of supply points (30,000,000 in West Germany, for example). Average consumption is low, although there is a wide variation within each country and between Member States. The incidence of the various types of tariffs in the domestic sector is shown in Figure 4.

Commercial

20. Commercial users are similarly supplied at low voltage but the number of supply points is much more limited (around 3,000,000 in Germany). Average consumption is much higher than in the domestic sector. The incidence of tariff structures in this sector is indicated in Figure 5.

Industry

21. Supply for these large consumers is at an intermediate stage in the distribution system, and is at high voltage. The number of supply points is between 0.5% and 1% of that for the domestic sector. Demand varies enormously between consumers and the tariff system for this sector is extremely complicated. Figure 6 gives an indication of the various tariffs in the industrial sector.

22. Figures 4, 5 and 6 indicate only the existence of tariffs, and not their significance. As observed in paragraph 18, not all industry is covered by tariffs and transparency is especially lacking for the non-tariff sector, making comparisons especially difficult.

(FIGURE 4)

DOMESTIC TARIFFS

	D	F	I	NL	B	L	UK	IRL	DK
I - One-part									
flat rate					d	d			d
restricted hour						d			
block							d		d
block restricted hour								d	
two-rate time-of-day									d
two-rate time-of-day block							d		
three-rate time-of-day seasonal									
II - Two-part									
flat rate	d	d	d	d	d	d	d	d	d
seasonal									
interruptible									
restricted hour					d		d	d	
block	d	d	d						d
seasonal block									
two-rate time-of-day	d	d		d	d		d	d	
two-rate time-of-day block	d								
two-rate time-of-day seasonal									
two-rate time-of-day seasonal block									
three-rate time-of-day seasonal									
three-rate time-of-day seasonal interruptible									
III - Three-part									
flat rate									d
seasonal									
seasonal block									
two-rate time-of-day									
two-rate time-of-day seasonal									
two-rate time-of-day seasonal block									

Source: Unipede.

(FIGURE 5)

COMMERCIAL TARIFFS

	D	F	I	NL	B	L	UK	IRL	DK
I - One-part									
flat rate				c		c			c
restricted hour									
block				c			c		
block restricted hour									
two-rate time-of-day									c
two-rate time-of-day block				c					
three-rate time-of-day seasonal						c			
II - Two-part									
flat rate	c	c	c	c	c			c	c
seasonal									
interruptible									
restricted hour					c		c	c	
block		c		c					c
seasonal block									
two-rate time-of-day	c	c		c	c			c	
two-rate time-of-day block		c		c			c	c	
two-rate time-of-day seasonal									
two-rate time-of-day seasonal block				c				c	
three-rate time-of-day seasonal									
three-rate time-of-day seasonal interruptible								c	
III - Three-part									
flat rate									c
seasonal									
seasonal block									
two-rate time-of-day									
two-rate time-of-day seasonal									
two-rate time-of-day seasonal block									

Source: Unipede

(FIGURE 6)

INDUSTRIAL TARIFFS

	D	F	I	NL	B	L	UK	IRL	DK
I - One-part									
flat rate									
restricted hour									
block	i								
block restricted hour									
two-rate time-of-day									
two-rate time-of-day block	i								
three-rate time-of-day seasonal									
II - Two-part									
flat rate			i					i	i
seasonal							i		
interruptible			i						
restricted hour			i		i			i	
block				i					i
seasonal block							i		
two-rate time-of-day	i				i	i		i	
two-rate time-of-day block	i							i	
two-rate time-of-day seasonal				i			i		
two-rate time-of-day seasonal block							i	i	
three-rate time-of-day seasonal		i							
three-rate time-of-day seasonal interruptible		i						i	
III - Three-part									
flat rate				i					i
seasonal							i		
seasonal block							i	i	
two-rate time-of-day									
two-rate time-of-day seasonal				i			i		
two-rate time-of-day seasonal block				i			i	i	

Source: Unipede

IV - OBSERVATIONS ON THE PROPOSAL

Some general observations

23. The proposals set out to promote rational pricing which reflects costs, and to save energy. With these broad objectives your rapporteur is in agreement. Within this framework, three of the five major recommendations, those on two-part tariffs, block tariffs and multiple tariffs, relate to reflecting costs. Very broadly, subject to the comments below, and aware that this report can only scratch the surface of such a complex topic, these three proposals appear to be acceptable.

24. Greater difficulty is caused by the two recommendations which concern use of electricity. It is a frequent complaint of Members of this Committee that no overall energy policy exists. Your rapporteur suggests that it is necessary to have an overall view of the role of electricity before deciding on tariff guidelines which affect use directly. That role is far from agreed.

25. Two other general impressions stand out: firstly, that in a field of this complexity it is impossible to define an ideal tariff. The Commission has wisely limited its ambition to enunciated principles. Secondly, that much more research remains to be done - especially for industrial pricing - if transparency is to be achieved and a programme of such research at Community level should be supported.

26. Finally, although the enhanced transparency resulting from the proposals might eventually lead to closer prices, this is not an end desired in itself. If electricity can be produced more cheaply in one country than another it would be contrary to common sense and normal economics to override that.

Recommendation 1

27. The general statement of principles will attract wide support. The phrase "costs incurred in supplying various categories of consumer" raises some delicate issues about the extent to which industry cross subsidises the private consumer (see Annex III). Producers do carry out substantial research and suggest that consumers can be divided into reasonably homogeneous groups who can be offered appropriate tariffs.

Recommendation 2

28. It is very difficult to deal with the tariffs briefly without running the risk of over-generalisation. Recommendation 2 may be a case in point. It has been suggested that a three-way split of costs (connection, provision of capacity and use) is appropriate, yet this recommendation appears to concentrate on

the latter two factors only in proposing a two-part tariff. Two points need to be made.

29. For small domestic consumers, use does not fluctuate very much and only a limited amount of capacity has to be provided. The complication of a two-part tariff may simply be not worthwhile. Five Member States seem to have some form of one-part tariff for the domestic sector, although the proportion supplied under these tariffs is unclear.

30. For larger users, in industry, three-part tariffs can, in some circumstances, better reflect costs than two-part tariffs. This would apply to maximum demand type tariffs, which, in order to discourage consumption above a particular load, charge heavily for further supplies.

31. Nor do existing two-part tariffs necessarily have parts strictly limited to the provision of capacity and to use. Your rapporteur notes the use of "generally" in this recommendation, and being in general agreement with the principle behind this proposal, suggests that anomalies will be covered by this term.

Recommendation 3

32. This is one of the recommendations which gives rise to difficulty, not least because it relies on ill-defined terms such as "promotional", "unnecessary" and "artificial". The tariffs referred to are more prevalent in the industrial and commercial sectors, sectors which are very sensitive to costs. It is, therefore, desirable to have as few changes in structure as possible. The non-transparency of costs, particularly in the industrial sector does, however, give rise to difficulties in making comparisons.

33. At root is a lack of information over the effect of block tariffs on consumption and conservation. It is agreed that discounts for bulk purchases are only justified if they give rise to real savings. Otherwise, smaller competing companies suffer disadvantages. On the other hand, in some circumstances, extra demand causes less efficient generating plant to be brought into service so that costs rise with volume rather than fall. Certainly, tariffs which propose degressively priced blocks need to be scrutinised very carefully to see that they are really related to costs.

34. This is clearly a priority area both for research and for transparency even if historical trends indicate that degressive block tariffs are gradually being abandoned.

Recommendation 4

35. Despite technical difficulties concerning definitions, etc. with previous recommendations, this is the recommendation which raises the most difficult policy issue. What is the role of electricity to be? This report does not aim to resolve that issue. It is clear that the historical reasons for having different tariffs for different uses rarely apply nowadays, and there is logic in the view that electricity is electricity whatever it is used for.

36. Nevertheless, it is a weakness of the proposals that they tend to reflect and codify current attitudes and technology, without consideration of what the broader role of electricity might be. That role, and the related questions of high and low grade types of energy and centralised and decentralised generation, require substantial debate. Your rapporteur is of the view that these tariff guidelines should not, however, have any deleterious effect on the introduction of new technology and should also allow a positive bias in favour of certain long-term goals. The door should not be pushed shut unnecessarily. One might cite two examples where tariffs according to use would be desirable:-

- Although direct electrical heating can be uneconomic, heating by means of electrically driven heat pumps can be very efficient. In certain areas or in certain circumstances one might want to encourage such use through a promotional tariff;

- Some long-term objectives seem to be desirable but the economic and political imperatives for their achievement often do not operate until too late. Massive switches in use patterns are then necessary and cannot be achieved overnight; one might want to start promoting these in advance, for a limited period.

37. It has been also pointed out that some developments, while usefully evening out daily load variations, are marketed on a use basis in combination with a specific tariff. Electric storage heating is the prime example.

38. Your rapporteur proposes that this recommendation be amended, so that differentiation according to use is acceptable if the tariff conforms to the general guidelines of Recommendation 1 and is consistent with explicit long-term policy objectives.

Recommendation 5

39. The peak load problem has already been illustrated, and this recommendation aims to deal with it. It is encouraging that the two principles mentioned (i.e. multiple tariffs and interruptible supplies) are gaining widespread acceptance. Producers often offer special terms to large industrial consumers able to control their loads and/or have their supplies interrupted. If the load is already well spread over the 24-hour period, there is, of course, no need for this recommendation, but this situation does not prevail widely.

40. Previously, although multiple tariffs were recognised as being desirable, the costs of collection (separate circuits, etc.) formed a barrier to their widespread use. Technical progress is overcoming this. Switching between regimes is an ideal application for micro-processors, for example. Similarly, progress is being made with a remote switching and reading, in which circuits can be controlled and meters read centrally in the electricity network rather than at the consuming point. The heating and ventilating sector is a very obvious area for applying micro electronics, and it is not clear that European manufacturing industry is doing enough to satisfy this market.

Recommendation 6

41. Rational pricing inevitably requires either that socially desirable payments are paid separately or that any subsidy is at least separately identifiable in the electricity bill. The problem with separate direct payments, as opposed to subsidised prices, is that of "take up". The proportion of those eligible for various rent rebates who claim them, to take a UK example, is notoriously low. The old may be inadequately informed and may be less likely to make the necessary applications. It may, therefore, be preferable to retain the possibility of socially desirable subsidy as long as this is identifiable as such and prices remain transparent.

42. A second problem concerns consumers in remote areas. It is expensive to connect these consumers to the grid system but they should, nevertheless, be treated fairly. They should not be discriminated against simply because they are an identifiable group. Public services should also be wary of increasing charges to marginal customers as this can lead to a progressive contraction of the system, a process which has happened with bus services in the U.K., for example. It is necessary to maintain a high level of network utilisation. If the consumer can be connected to the grid, then it may be sensible to subsidise the connection while charging the consumer the normal price for

electricity consumed. On the other hand, it may simply not be economic to connect, for example, islanders to the grid and electricity must be generated locally, probably using oil. This is more expensive, and Scottish islanders have won a court action demanding additional social payments in compensation. Only particular consumers were eligible for such payments in any case and this is an unsatisfactory solution.

Recommendation 7

43. The regular review of prices should not become an excuse for indexation, with the consequent lack of incentive to keep costs down.

Research

44. It is quite clear that despite extensive work by suppliers much more could be done in the way of research. Your rapporteur suggests that the Community should concentrate on a limited number of aspects which are of common interest. Amongst these are:

- the real effect of degressive block tariffs on consumption and conservation;
- methods of improving transparency, particularly in the industrial sector where many supplies are provided under private contract rather than tariff and confidentiality has to be respected; and
- tariff structures which will provide appropriate conditions for the introduction of more widespread combined heat and power, for decentralised generation and for supplies to the grid from private generators.

V. CONCLUSIONS

45. It is undoubtedly difficult to produce a short paper on such a complex topic without running the risk of over-simplification. The Commission's paper does nevertheless distil the principles involved sufficiently clearly for the main problems to be highlighted. It draws a reasonable balance between setting out general principles which are useless as a guide to practice, and setting out definite guidelines on which agreement is unlikely.

It is not possible to produce an ideal tariff. Situations vary too much, and it would be the work of several generations to bring all Member States' tariffs into line. Similarly, it should not be the aim to harmonise prices.

46. The aims of consistency and transparency nevertheless are worthwhile, and insofar as they relate closely to production technology are acceptable if not interpreted too rigidly in view of the comments above. This applies to the recommendations concerning two-part tariffs, suppression of block tariffs, and promotion of multiple tariffs. In this context it is noted that the Commission proposes a Recommendation and not a Directive.

47. Those recommendations which affect consumption patterns, however, require more thought. In some circumstances, one could envisage using tariff structures to promote certain uses and tariffs could be differentiated according to end-use in pursuit of a long-term objective of a rational energy use. Secondly, with regard to social payments, these could continue to take the form of subsidies as long as these were transparent, rather than being transferred to another government budget altogether.

48. Changing tariff structures undoubtedly causes considerable upheaval and can have an effect on prices. The fact that this proposal concerns a Recommendation allows Member States some flexibility in applying the principles so as to minimise these upheavals.

49. The need for more research is clear, and this should concentrate on common concerns such as block tariffs, transparency (especially in the industrial sector) and the inter-face between the centralised grid system and other producers.

ANNUAL CONSUMPTION (TWh)

	1977	1978	1979
EUR-9	1081.5	1128.6	1186.7
B	43.1	45.2	48.0
D	319.6	333.6	349.0
DK	21.7	23.2	24.2
F	206.8	220.8	235.6
I	160.1	166.8	175.4
IRL	8.2	8.8	9.7
L	3.3	3.4	3.5
NL	56.6	59.5	62.4
UK	262.1	267.3	278.9

BREAKDOWN OF CONSUMPTION (TWh)

Country	Item	1977	1978	1979
EUR-9	Industry	517.9	532.8	
	Transport	26.2	27.1.	
	Other	461.6	491.4	
	Network losses	72.5	73.9	
	Total	1078.2	1125.2	-
B	Industry	24.3	24.9	26.5
	Transport	0.9	0.9	1.0
	Other	15.5	16.9	17.9
	Network losses	2.4	2.5	2.6
	Total	43.1	45.2	48.0
D	Industry	163.3	169.2	177.7
	Transport	9.1	9.5	10.5
	Other	132.7	142.5	147.5
	Network losses	14.5	12.4	13.3
	Total	319.6	333.6	349.0
DK	Industry	5.1	5.7	6.0
	Transport	0.1	0.1	0.1
	Other	14.3	15.1	15.7
	Network losses	2.2	2.3	2.4
	Total	21.7	23.2	24.2
F	Industry	100.7	103.5	111.3
	Transport	6.5	6.7	6.9
	Other	84.8	94.7	101.2
	Network losses	14.8	15.9	16.2
	Total	206.8	220.8	235.6
I	Industry	89.6	91.5	95.6
	Transport	4.3	4.4	4.5
	Other	51.9	55.7	59.5
	Network losses	14.3	15.2	15.8
	Total	160.1	166.8	173.4
IRL	Industry	2.7	2.9	3.2
	Transport	-	-	-
	Other	4.5	4.9	5.4
	Network losses	1.0	1.0	1.1
	Total	8.2	8.8	9.7
L	Industry			
	Transport			
	Other			
	Network losses			
	Total			
NL	Industry	31.5	32.9	-
	Transport	0.9	0.9	-
	Other	21.7	22.9	-
	Network losses	2.5	2.8	-
	Total	56.6	59.5	-
UK	Industry	100.7	102.2	105.6
	Transport	2.9	3.0	3.0
	Other	137.7	140.3	147.3
	Network losses	20.8	21.8	23.0
	Total	262.1	267.3	278.9

Source: Programmes and Prospects for the Electricity Sector. Unipede 1980.

SOURCES OF EC ELECTRICITY PRODUCTION

Source: Energy objectives 1990 (PE Doc. 211/79)

	1978			
	Solid fuels	Oil	Nuclear energy	Other
D	59.8	9.0	9.5	21.7
F	25.8	23.9	12.8	37.5
I	4.2	54.8	2.3	38.7
N	8.1	16.9	5.9	69.1
B	21.5	34.8	23.2	20.5
UK	66.9	19.3	10.5	3.3
IR	29.2	66.7	-	4.1
DK	63.4	48.1	-	-
EEC	42.6	23.7	9.5	24.2

POSITION OF PLANT MIX ON THE 31 DECEMBER 1979

	Nuclear	Thermal monovalent				Therm.polyvalent		Hydro	Pumping and mixed	Gas turb. Diesel etc.	Not specified	Total
		Coal	Brown coal	Oil	Nat.gas or by-pro	with coal	without coal					
B	1666	155	-	1287	171	2040	3772	64	435	809	-	10399
D	8827	14958	12905	11659	11544	12619	*	2657	3766	3025	630	82590
DK	-	440	-	2331	-	3632	-	-	-	277	-	6680
F	8200	7200	200	11000	800	4800	1100	17500	1600	300	3700	56400
I	1391	-	61	13435	473	4346	8053	12049	3554	1218	416	44996
IRL	-	14	413	1668	195	-	90	220	292	-	-	2892
NL	498	-	-	740	1938	1337	10965	-	-	376	162	16016
UK	6285	40790	-	12151	-	4366	-	1391	1060	3704	4593	74340
EUR-9	26867	63557	13579	54271	15121	33140	23980	33881	10707	9709	9501	294313
	9 %	22 %	5 %	18 %	5 %	11 %	8 %	12 %	4 %	3 %	3 %	100 %

* included under heading of main fuel.

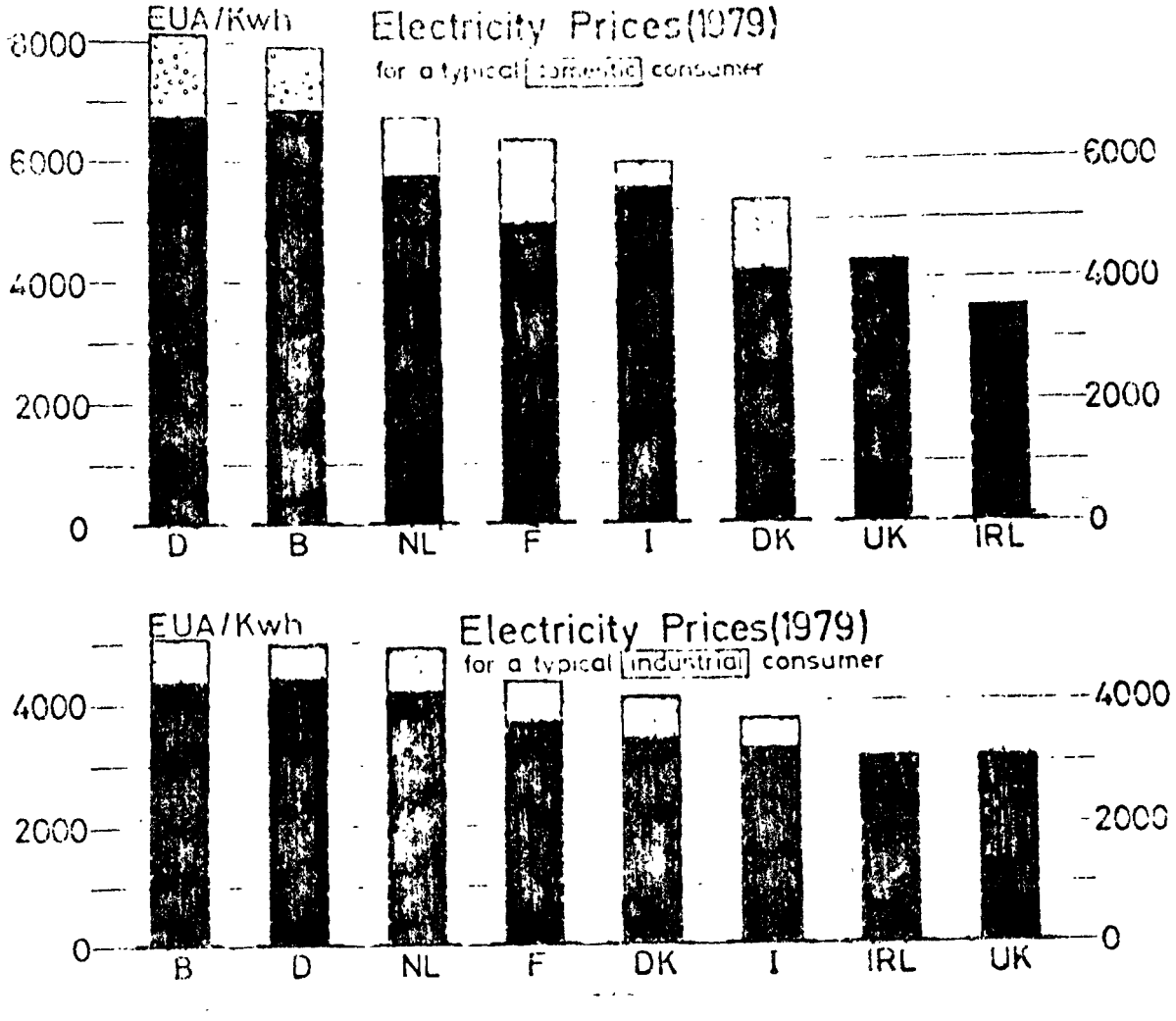
Source: Programmes and Projects for the Electricity Sector Unipede 1980.

ELECTRICITY PRICES FOR A TYPICAL DOMESTIC CONSUMER EUA per 100 Kwh

		B	DK	D	F	IRL	I	NL	UK
1/1/79	Pre tax	6.859	4.156	6.774	4.964	3.512	5.557	5.765	4.296
	After tax	7.969	5.346	8.094	6.361	3.512	5.992	6.803	4.296

ELECTRICITY PRICES FOR A TYPICAL INDUSTRIAL CONSUMER EUA per 100 Kwh

		B	DK	D	F	IRL	I	NL	UK
1/1/79	Pre tax	4.363	3.347	4.426	3.694	3.103	3.258	4.171	3.100
	After tax	5.061	4.085	4.956	4.344	3.103	3.714	4.920	3.100



Source: Energy prices and tax harmonisation in the EC COM(80)152.

1978 Selling prices

PPS ECU/100 kWh

Location	1 - Household uses standard consumer Db		2 - Industrial uses standard consumer Ic	
	PPS	ECU	PPS	ECU
Dusseldorf	8.27	9.46	7.08	8.11
Paris	7.36	7.59	4.81	4.96
Milan	4.30	3.34	5.45	4.23
Rotterdam	7.46	8.58	6.71	7.72
Brussels	9.55	11.21	7.30	8.57
Luxembourg	7.15	8.08	4.62	5.22
London	7.13	5.80	5.59	4.55
Dublin	6.56	5.40	6.48	5.33
Copenhagen	5.32	6.56	5.47	6.74

Order of selling prices 1978

Location	According to PPS		Location	According to ECU	
	Order	Percentage of the highest price		Order	Percentage of the highest price
	1 - Household uses - standard consumer Db				
Brussels	1	100	Brussels	1	100
Dusseldorf	2	86.6	Dusseldorf	2	81.4
Rotterdam	3	78.1	Rotterdam	3	76.5
Paris	4	77.1	Luxembourg	4	72.1
Luxembourg	5	74.9	Paris	5	67.7
London	6	74.7	Copenhagen	6	58.5
Dublin	7	68.7	London	7	51.7
Copenhagen	8	55.7	Dublin	8	48.2
Milan	9	45.0	Milan	9	29.8
	2 - Industrial uses - standard consumer Ic				
Brussels	1	100	Brussels	1	100
Dusseldorf	2	97	Düsseldorf	2	94.6
Rotterdam	3	92	Rotterdam	3	90
Dublin	4	89	Copenhagen	4	78.6
London	5	76.6	Dublin	5	62
Copenhagen	6	75	Luxembourg	6	61
Milan	7	74.6	Paris	7	58
Paris	8	66	London	8	53
Luxembourg	9	63.3	Milan	9	49

Source: Electricity prices 1973-78 Eurostat.

ENERGY TAXATION

Incidence of taxes as % of pre tax price

		B	DK	D	F	IRL	I	NL	UK
Domestic electricity	1.1.79	16	29	19	28	0	8	18	0
Industrial electricity	1.1.79	16	20	12	18	0	14	17	0

Source: Energy Prices and Tax Harmonisation in the EC./COM(80)152/.

OPINION OF THE COMMITTEE ON ECONOMIC AND MONETARY AFFAIRS

Draftsman : Mr P. BEAZLEY

At its meeting on 22-23 September 1980, the Committee on Economic and Monetary Affairs appointed Mr BEAZLEY as draftsman of its opinion for the Committee on Energy and Research.

At its meeting of 20-21 January 1981 it adopted the draft opinion unanimously.

Present: Mr Delors, chairman; Mr de Ferranti and Mr Deleau, vice-chairmen; Mr Beazley, rapporteur; Mr Balfour, Mr Beumer, Mr Bersani (deputizing for Mr Schnitker), Mr Bonaccini, Mr Caborn, Miss Forster, Mr Herman, Mr Mihr, Mr J. Moreau, Mr Nyborg, Mr Prag (deputizing for Sir Brandon Rhys-Williams), Prinz zu Sayn-Wittgenstein, Mr Turner (deputizing for Mr Hopper) and Mr von Wogau.

Purpose of proposal

1. The Commission states that the purpose of this draft recommendation for the Council on electricity tariff structures within the Community is to seek agreement on certain basic principles, in order to obtain more homogeneous conditions of electricity supply and to minimize distortions, to ensure that costs are adequately covered and to promote the rational use of energy.

2. The Commission suggests, therefore, five principles that might underpin a rational tariff structure for the electricity sector within the Community:

   - the general application of two-part tariffs (such as a fixed charge irrespective of consumption and a payment taking into account actual levels of consumption);

   - the elimination of block tariffs of a promotional nature, since these stimulate unnecessarily high consumption at a time when energy conservation is becoming increasingly important;

   - the avoidance of tariffs based on type of use for electricity (since these cause additional costs such as separate metering, and are unjustified since the cost of supplying electricity is not related to what use is actually made of it , such as lighting or heating);

   - the need for the provision of multiple tariffs incorporating different prices for different load periods, such as on and off peak, day and night, winter and summer;

   - the exclusion of outside influences in drawing up tariffs, such as whether tariffs are kept artificially low for social motives or for anti-inflationary policy reasons: the Commission recommends the use of separate government action independent of measures which might result in the distortion of tariff structures.

3. The Commission further calls for electricity prices on the market to be as transparent as possible, and for more research to be carried out at Community level into the characteristics and likely evolution of electricity demand for different categories of consumer.

4. The Commission points out that basic tariff structure principles on the above lines are not yet generally accepted throughout the Community and recognizes the various difficulties involved in altering tariff structures, but nevertheless that considerable progress on the above lines has already been made, and that this process should be reinforced.

5. It should also be pointed out that the Commission's recommendations are based, to a considerable degree, on a study carried out in the last year for the Commission by the International Union of Producers and Distributors of Electrical Energy (UNIPEDE). This report is entitled "study of the tariff structures for electrical energy in the Community countries - possibilities of their alignment"(1). This contains much of the detail about tariff structures missing in the Commission's proposal itself.

Observations

6. The Committee on Economic and Monetary Affairs fully recognizes the potentially important benefits, such as greater economic efficiency and increased energy conservation, that could be attained by the achievement of a more rational electricity tariff structure at Community level. It therefore feels that it is timely to instigate a debate on the nature of the principles or policy framework that might be established to help attain that objective.

7. It would, however, like to reiterate the caution expressed in the UNIPEDE study with regard to the very great differences of circumstance not only between Community countries, but even within individual countries. The sources of primary energy vary greatly with consequent variable impacts on the costs of electricity supply; patterns of consumption depend on factors such as existing industrial structure, climate, and so on. Locational factors, such as the density of population, are also critical. In this context the words of the UNIPEDE experts need emphasizing: "They are of the opinion that it is not possible to draw up one single rigidly defined structure which could be said to be, for want of a better word, 'ideal' for all the Community countries..... The adoption by all countries of a rigidly defined tariff structure which would prevent the optimum situation being achieved within each region or nation would be, as a result, to the disadvantage of the whole of the Community"(2).

(1) XVII/249/79/EN
(2) Op.Cit: pages 42 and 43

8. The other important caution by the UNIPEDE experts concerned the very real problems - economic, administrative, legal and political - entailed in altering tariff structures, illustrating the need for very careful study prior to any changes in existing structures.

9. As regards the basic principles which are suggested in the Commission's draft, these would appear to form a good basis for discussion. It is more difficult, however, to offer more specific comments as to their possible value in the absence of more detailed information about the effects of current tariff structures currently existing within the Community countries and about the possible distortions that they might cause. With regard to the incidence, for instance, of block tariffs of a promotional nature, it would be useful to know more about the actual degree of their adverse effects on energy conservation. The whole area of tariffs being lowered for social reasons is clearly controversial and it would be useful to know about the extent and economic effects of such policies. Furthermore, certain industrial activities, such as aluminium smelting, are particularly dependent on the usage of electricity and it would be helpful to know how they have adapted, the degree to which they have received special assistance, and their position vis-à-vis their overseas competitors. The above issues are merely illustrative of the range of questions which are provoked by the Commission's proposals.

10. All the above comments strongly emphasize, however, the need for more research into the demand characteristics of the different classes of consumers, and the way these are likely to evolve in the future. Such research is an absolute prerequisite to meaningful progress on aligning tariff structures on an economically rational basis. The UNIPEDE group of experts also pointed out that certain distributors have reservations on the issue of the use of marginal costing in tariff framing, and called for further studies in this area. Such studies should be supported.

11. A final important need, and one which is called for in the Commission's draft recommendation is for electricity prices on the market to be characterized by the greatest possible degree of transparency.

Conclusions

12. The Committee on Economic and Monetary Affairs supports the general thrust of the Commission's proposals but emphasizes the need for more information on the characteristics of electricity demand and on the

economic and social implications of existing tariff structures. Finally, it would point out that agreement on some basic electricity tariff principles is a useful but only partial step towards a coherent energy policy within the Community. A wider examination of the structure of energy prices as a whole, including not just the cost of the different sources of energy but also relevant fiscal and other policies, as well as of their implications, is clearly needed.