

Publication of the Government Statistical Service

## Business Monitor 242

DEPARTMENT OF TRADE AND INDUSTRY BUSINESS STATISTICS OFFICE

### Report on the Census of Production 1970

(HA25)

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C152 Electricity

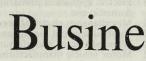
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DEPARTMENT OF TRADE AND INDUSTRY **BUSINESS STATISTICS OFFICE** 

# 1970

#### C152 Electricity

#### Presented by the Department of Trade and Industry (10 & 11 Geo. 6 Cha. 39 sec 7)

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## **Business Monitor**

## Report on the Census of Production

to Parliament in pursuance of the Statistics of Trade Act 1947

LONDON: HER MAJESTY'S STATIONERY OFFICE 1973

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#### C152 Electricity

This report on the Electricity Industry relates to undertakings engaged wholly or mainly in the production and distribution of electricity for public supply. Construction work carried out by employees of electricity undertakings is included. Establishments producing electricity for railway and trolley-bus operation are also included, as are 'district heating' and electricity showrooms. Establishments (other than those of railway and trolley-bus undertakings) producing electricity primarily for their own use are excluded, being included in the industries covering the major output of the parent works.

The industry corresponds to minimum list heading 602 in the Standard Industrial Classification (revised 1968) which was used for the first time as a basis of classification in the 1968 census, when it was reported as part 153. The definition of the industry is the same for the 1963, 1968 and 1970 censuses.

In this report separate particulars are given for the Electricity Boards and other undertakings which consisted of the generating stations of transport undertakings in Great Britain and electricity undertakings in Northern Ireland.

The figures have been compiled from returns made to the Fuel and Energy Statistics Division of the Department of Trade and Industry. The figures for 1963 relate to the calendar year, for 1968 to the year ending 31 March 1969 and those for 1970 to the year ending 31 March 1971.

- In interpreting the data in the tables it is essential to bear in mind the notes and definitions which commence on page (iii)

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Net output, 1963, 1968 and 1970 All United Kingdom undertakings classified to the industry

	Unit		lectricity Bo		Other	undertaki	ingo (a)	Total					
		1963	1968	1970	1963	1968	1970	1963	1968	1970			
umber of generating stations	Number	333	298	289	9	7	6	342	305	295			
Electricity, etc. sold and work done (b)	£'000	11.	1	1,709.276	1				000				
Services rendered to other organisations (c)	.11	1,037,754	1,570,299	351	25,624	38,160	47,304	1,063,378	1,608,459	$\left  \begin{cases} 1,756,580 \\ 351 \end{cases} \right $			
oods merchanted	П	1	I set to	109,411	1	10 2 3	( 1,432	1	100 78/11				
anteen takings	11	62,623	84,397	2,269	} 10	910	29	62,633	277 8.50	$\left\{ \begin{array}{c} 110,843\\ 2,298 \end{array} \right.$			
Total sales and work done	11	1,100,377	1,654,696	1,821,307	25,634	39,070	48,766	1,126,010	1,693,767	1.			
hange during the year, goods on hand for sal	e //	+ 603	+ 1,779	+ 3,741	- 6	+ 72	+ 107	+ 597	+ 1,851	1,870,072 + 3,848			
hange during the year, work in progress Gross output	11	+ 457	+ 591	- 16	+ 38	+ 102	+ 141	+ 495	+ 693	+ 125			
		1,101,437	1,657,067	1,825,032	25,666	39,244	49,013	1,127,103	1,696,311	1,874,045			
ost of materials and fuel used and of erchanted goods		440.000		1.549 1.19.0	1.		-		GOI - 8.54	10.774			
ayments to other organisations (d)		442,922	570,194	743,752	12,527	17,547	21,011	455,450	587,742	764,763			
for renovation of appliances by other firm		426	1 001							1.08			
for transport by road		420	1,991	4,647	-	- 3	35	426	1,991	4,682			
for transport by rail, water, air and	41	1,296	010	1 500					20				
Post Office parcel services (e)	11	1,290	813	1,539	4	14	19	1,301	827	1,558			
Total costs	1												
		444,644	572,998	749,938	12,531	17,561	21,064	457,177	590,560	771,003			
Net output	Ш	656,793	1,084,069	1,075,094	13,135	21,682	27,949	669,928	1,105,751	1,103,042			
Net output per head	£	2,888	4,653	5,118	2,021	3,044	3,969	2,864	4,606	5,081			
otal employment (f)	Thousands	227.4	233.0	210.1	6.5	7.1	7.0	233.9	240.1	Selen R			
Operatives	11	150.8	149.1	127.0	5.1	5.2	CED -		ander a state teste	217.1			
Others (g)	11	76.6	83.9	83.1	1.4	1.9	4.9 2.1	115.9 78.0	154.3	131.9			
ages and salaries				00.1	1.4	1.5	2.1	78.0	85.8	85.2			
Operatives	£'000	118,801	154,632	100.000									
Others (g)	11	77,270	113,973	166,398 135,273	4,164 1,216	5,678	6,852	122,965	160,310	173,250			
ages and salaries per head		5,000	110,010	100,210	1,210	2,302	3,134	78,486	116,275	138,407			
Operatives	£	788	1,037	1,310	015	1 005	1 400						
Others (g)		1,009	1,359	1,628	815 876	1,095	1,406 1,445	789 1,006	1,039 1,355	1,316 1,624			

(a) Including generating stations of transport undertakings in Great Britain and electricity undertakings in Northern Ireland.

(b) Including sales of electricity, by-products and waste products, charges for work done, rents received and work of new construction.

- (c) Amounts charged for hiring out plant, machinery or for any technical or other services rendered.
- (d) Payments for transport inwards are included in the cost of purchased materials and fuel used and excluded from payments for transport to other organisations.

(e) For 1963 and 1968 payments for postal services are excluded.

(f) Average number employed during year.

(g) Administrative, technical and clerical employees.

C152.3

Capital expenditure and stocks, 1963, 1968 and 1970 All United Kingdom undertakings classified to the industry

			Elec	tricity Bo	ards	Othe	r Undertak	ings	Total			
Dibers (g)	-11	Unit	1963	1968	1970	1963	1968	1970	1963	1968	1970	
Capital expenditure (a) New building work		£,000	87,303	78,130	70,696	853	1,952	2,389	88,155	80,081	73,085	
Land and existing buildings Acquisitions Disposals		11 11	$\begin{array}{r}2,844\\572\end{array}$	$2,380 \\ 1,494$	2,651 2,884	20 53	38 84	44 60	$\begin{array}{r}2,864\\625\end{array}$	$2,417 \\ 1,578$	$2,695 \\ 2,944$	
Plant and Machinery Acquisitions (b) Disposals		11 11	390,543 2,700	452,120 4,087	375,980 3,710	8,254 106	$14,559\\288$	16,316 371	398,797 2,806	466,678 4,374	392,296 4,081	
Vehicles Acquisitions Disposals		ere il ce	2,919 342	3,990 477	6,216 648	42 12	127 17	287 30	2,962 354	4,117 494	6,503 678	
Appliances for hire (c) Acquisitions Disposals (d)		II II	499 83	462 75	618 53	95 1	203 1	205 1	594 .84	665 76	823 54	
Vessels Acquisitions Disposals		11 11		80 12	- 38		-	=	-	80 12	- 38	
Nuclear fuel Acquisitions Disposals		ii II	29,601	8,543 1,282	19,714 505			-	29,601	8,543 1,282 554,765	19,714 503 486,810	
Total net capital expenditure (e)		11	510,012	538,276	468,037	9,092	16,488	18,779	519,104	554,705	400,010	
Stocks and work in progress at end of year Materials, stores and fuel Work in progress Goods on hand for sale		II II II	81,265 4,119 11,168	97,986 6,164 12,524	$ \begin{array}{c} 140,396\\ 6,976\\ 20,162 \end{array} $	2,334 158 76	2,787 344 192	4,027 545 292	83,599 4,277 11,245	100,773 6,507 12,717	$ \begin{array}{c c} 144,42\\7,52\\20,45\end{array} $	
Total stocks		I CONTRACT	96,551	116,674	167,534	2,569	3,323	4,864	99,120	119,997	172,39	

(a) Including expenditure for undertakings in Great Britain not yet in production.

(b) Including meters, mains and services, and railway sidings owned by electricity undertakings.

(c) Issued during year.

(d) Proceeds from disposals of appliances formerly on hire which were sold or scrapped during the year.

(e) Acquisitions <u>less</u> disposals.

Analysis of undertakings by size, 1970 - Undertakings classified to the industry.

This table is not applicable to the industry.

ABLE 4	884, 511	loyees, by age	and sov	1970 (a)			
		akings classif					
2.2		4.8					

Ages	Males	Females	All employees
	per cent	per cent	per cent
Under 18	1	·I	2
18 and over	84	14	98
All ages	85	15	100.0

Source: Department of Employment

(a) The percentages relate to the numbers employed at mid-June, 1970

Regional distribution of employment, net capital expenditure and net output, by country, 1970 All United Kingdom undertakings classified to the industry

Country			number oyed		apital ture (a)	Net output			
· ·	100 miles	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	£'000	per cent of United Kingdom		
England		180.2	83.0	349,675	71.8	910,588	82.5		
Wales		13.0	6.0	40,515	8.3	54,184	4.9		
Scotland		18.1	8.3	80,080	16.5	114,468	10.4		
Great Britain		211.3	97.3	470,270	96.6	1,079,240	97.8		
Northern Ireland	31 93	5.8	2.7	16,546	3.4	23,802	.2.2		
United Kingdom		217.1	100.0	486,816	100.0	1,103,042	100.0		

(a) New building work plus acquisitions <u>less</u> disposals of land and existing buildings, plant and machinery and vehicles: including capital expenditure at undertakings not yet in production.

Work of new construction and repair and maintenance carried out by employees of electricity undertakings, 1963, 1968 and 1970 (a) United Kingdom undertakings classified to the industry

	El	ectricity Boa	ards	Ot	her undertaki	ngs	Total				
	1963	1968	1970	1963	1968	1970	1963	1968	. 1970		
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000		
New construction								103 3			
On depots, workshops, offices and other buildings	4,471	4,492	5,138	1				Service of			
On plant and machinery	31,682	26,786	29,046	0.020	4.041		101 115	101 505	102 010		
On mains and services	63,264	65,542	62,708	3,030	4,041	5,957	104,117	101,735	103,812		
Work charged to other divisions and Area Boards	1,671	874	963	]			Tan an	e ldao			
Repair and maintenance											
On depots, workshops, offices and other buildings	7,343	10,101	11,023	]		8	kinga va-sv	100	ol to		
On plant and machinery	42,543	58,332	68,814	1,295	2,740	3,687	66,237	89,003	104,957		
On mains and services	14,616	17,562	17,509	1,290	2,140	5,007	00,237	09,000	104,557		
Work charged to other divisions and Area Boards	439	268	3,924					a characteristic			
Total work of new construction and repair and maintenance	166,028	183,956	199,125	4,325	6,781	9,644	170,354	190,738	208,769		
Less work of repair and maintenance	64,941	86,263	101,270	1,295	2,740	3,687	66,237	89,003	104,957		
Total new construction	101,087	97,694	97,855	3,030	4,041	5,957	104,117	101,735	103,812		

(a) The amount shown for work of new construction represents the sum chargeable to capital account. Repairs and maintenance are valued at the cost of labour and materials.

Work done for other Divisions and Area Boards is valued at the amount charged.

CI62.7

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TABLE 7							t of re persons							tak	ing	3		
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TABLE 8																		
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#### Notes

C152.8

These notes give the main information needed for interpreting the figures in the industry reports, (more detailed information about the census is given in a separate booklet—"Introductory Notes", Part C1 of the Report on the Census of Production for 1970).

#### GENERAL INFORMATION Changes compared with 1968

The questions asked in the 1970 census were similar to those in the 1968 census with certain exceptions. In particular the 1970 census returns did not ask for details of:—

- (i) purchases or sales by commodities
- (ii) payments of rates
- (iii) payments for repairs and maintenance
- (iv) costs of operating road goods vehicles. The amounts payable to other organisations for transport of

goods however, did include the cost of the Post Office parcel services.

Other changes concern the treatment of firms employing less than 25 persons and the rules used for classifying establishments to industry. Any such changes are explained in the following paragraphs, or in the introductions to the industry reports, or by footnotes to the tables.

#### Industrial classification

Establishments were classified to industries on the basis of major activity in conformity with the third edition of the Standard Industrial Classification (Revised 1968). Normally an establishment was classified to an industry if its sales of the principal products of that industry accounted for a greater proportion of its total sales than in its sales of the principal products of any other industry. Classification of an establishment in this census was based on the establishment's return to the Census of Production, 1968.

Establishments added to the register subsequent to the 1968 census were classified on the basis of the description of the business given by the respondent.

#### Coverage

Detailed census returns were generally sought only from establishments employing on average 25 or more persons, but in industries where firms employing less than 25 persons account for a relatively high proportion of total employment and output the exemption limit was lowered to 11. Census returns were also sent to establishments whose employment was not known to the Business Statistics Office at the time of despatch; if their employment was below the exemption limit for their industry establishments were asked to supply figures only of total employment and total sales.

#### TERMS USED IN THE CENSUS REPORT

#### Average number employed

Establishments were required to state the number of persons on the payroll (i.e. whose national insurance cards were held by them) on the average during the year of return, whether full time or part time employees. Separate figures were required for (a) administrative, technical and clerical employees and (b) all other employees (operatives). Averages could be calculated from figures relating to the last week of each calendar month. Establishments were also required to state the number of working proprietors where appropriate and these are included in total employment figures. Outworkers (i.e. persons employed by establishments who worked in their own homes etc. on materials supplied by the establishments) are excluded.

The figures include persons engaged on merchanting or factoring and canteen workers where particulars in respect of these activities could not be excluded from the return.

#### Working Proprietors

These include all persons regarded as "self employed" for national insurance purposes and members of their families who worked in the business without receiving a fixed wage or salary; but such persons who worked less than half the normal number of working hours are excluded. Directors working in the business but not in receipt of a definite wage, salary or commission are included under this heading: directors paid by fee only are not included.

#### Employees

Administrative, technical and clerical employees include managing and other directors in receipt of a definite wage, salary or commission, managers, superintendents and works foremen; research, experimental development, technical and design employees (other than operatives); draughtsmen and tracers; editorial staff, staff reporters, canvassers, competition and advertising staff; travellers; and office (including works office) employees.

Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work (including roundsmen), stores, warehouses, shops and canteens; inspectors, viewers and similar workers; maintenance workers, and cleaners. Operators engaged in outside work of erecting, fitting etc. are also included, but outworkers are excluded.

#### Capital expenditure (a) New building work

This represents the cost incurred during the year of new building and other constructional work (including office buildings, canteens and the like used in connection with the business covered by the return, but not dwelling houses for employees). The value is that charged to capital account during the year of return; it includes expenditure on new buildings or on the extension or reconstruction of old buildings, the value of works of a capital nature carried out by the establishment's own staff and the cost of any newly constructed buildings purchased. Figures shown include any legal charges, stamp duties, agents' commissions, etc.

#### (b) Land and existing buildings

The items shown are the capital cost of freeholds purchased and the capital cost of premium payable for leaseholds acquired (excluding the value of any assets acquired in taking over an existing business), and the amounts receivable for any freeholds or leaseholds disposed of. The value is that charged to capital account during the year of return.

#### (c) Plant, machinery and vehicles

The items shown are the value of plant and machinery and of vehicles acquired, both new and second-hand, and the amount received for items disposed of during year. The value of plant and machinery acquired includes plant, etc., which firms produced for their own use in connection with the business covered by the return. The value of plant, etc., acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. No deduction is made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written off for items scrapped.

Capital expenditure during the year in respect of manufacturing establishments where production had not started before the end of the year is excluded from the figures for both 1963 and 1968 but is included in the figures for 1970.

#### Enterprise

The term enterprise is used in this report to mean one or more establishments under common ownership or control. An enterprise normally consists of a single establishment, more than one establishment owned by the same firm, or a number of establishments owned by a parent company and its subsidiary companies. Information about the relationship between constituent companies of enterprises was obtained mainly from published sources such as the Stock Exchange Year Book supplemented by information from company reports and information supplied by establishments. The information available is not complete but covers the largest and most important groups of industrial establishments and is believed sufficient to provide a worthwhile basis for analysis.

#### Establishment

The definition of the establishment differed between the Censuses for 1963, 1968 and 1970. The definitions used were as follows:— 1963: the establishment was normally the premises under the

same ownership or management at a particular address. 1968: the establishment was defined, in accordance with Standard Industrial Classification (Revised 1968), as being the smallest unit which could provide the information normally required for an economic census, for example, employment, expenses, turnover and capital formation. Sometimes activities which are conducted as a single business are carried on at a number of addresses. In 1968 where the activities of such a business were closely integrated and the addresses, termed local units. were in close proximity the establishment was defined to cover the combined activities and a single return was accepted. When the activities were closely integrated but the addresses were not in close proximity a combined return was accepted but the individual addresses were treated-in the count of establishments in an industry, for instance-as separate establishments.

1970: the practice of treating as multi-unit establishments those

businesses with closely integrated activities at a number of addresses in close proximity was extended to all those businesses where the local units were at more than one geographical location and detailed census information was not available for each unit. Separate figures were obtained, however, of employment and capital expenditure at each unit. The effect of this change is to reduce somewhat the number of establishments as compared with 1968.

#### Gross output

Gross output measures the total value of production (including work done) by establishments during the year. It is calculated as follows:—

#### Value of sales and work done

Plus/Less: Increase/decrease in value of stocks of goods on hand for sale

Plus/Less: Increase/decrease in value of work in progress Gross output.

#### Net output

Net output represents the value added to materials by the process of production (including the margin on selling any merchanted or factored goods). It is calculated as follows:—

#### Gross output Less: Purchases adjusted for change in value of stocks of fuel and raw materials

Less: Payments for work given to other establishments

Less: Payments for transport

Less: Net amount of any duties, subsidies, allowances and levies payable

= Net output.

#### Net output per person employed

The figures of net output per person employed are derived by dividing the net output by the average number of persons employed (full time and part time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

#### Purchases

Purchases include the cost of materials and components bought for use in production; of fuel and electricity for all purposes; of packaging materials including the cost of returnable cases and containers when first purchased; of workshop materials, office materials and materials for repairs to establishment's own buildings, plants and vehicles when carried out by their own work people included in the returns; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also included. In general, purchases of goods for merchanting or factoring and canteen supplies are included. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account.

The values shown include any duty paid (less rebate, etc.) but exclude trade discounts allowed. The cost of transport is included only if included in the cost of materials as invoiced; amounts paid to transport organisations, including an establishment's own separate transport organisations for delivery of materials and fuel are, therefore, excluded. Materials purchased overseas are included at the c.i.f. cost plus any duty payable if the cost of transport from the docks was not included in the invoiced price, but at their full delivery cost if invoiced "carriage paid home". Materials and fuel transferred from another department of the establishment not covered by the same return are included at the estimated selling value recorded by the other department.

#### Sales

Sales are in respect of goods made by the business covered by the return, goods made for it by outworkers or by other establishments from materials given out to them (sometimes described as goods made on commission) and waste products. Any machinery or other capital items produced for use in the business covered by the return are included, the value being that adopted in the establishment's asset accounts. Goods sold without being subjected to any manufacturing process (i.e. merchanted or factored) and canteen takings are included.

The value shown for sales is the net selling value, defined as the amount charged to customers whether on an ex-works or delivered basis excluding any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packaging materials is included. Goods charged on a delivered basis to customers overseas are included at the f.o.b. value. Goods produced in one establishment and transferred to another establishment of the same firm not covered by the return were treated as sales by the producing establishment and valued as far as possible as if they had been sold to an independent purchaser. Goods transferred to wholesale or retail selling organisations for which separate accounts were kept were valued on the same basis.

To the extent that sales of finished products of one establishment constitute the materials purchased by another, total figures of the value of sales (and of materials and fuel purchased) include an element of duplication. In some industries, e.g. motor vehicle manufacturing, and woollen and worsted, this duplication is substantial; and aggregates of the figures for a number of industries contain significantly greater amounts of duplication. For work done on commission, sub-contract work, etc., the value shown is the total amount charged for the work, including the value of any materials bought and used in such work.

#### Services rendered

This represents the amounts charged for hiring out plant, machinery and other goods, providing transport, or for any technical or other services rendered to other organisations. It includes amounts credited for similar services rendered to other establishments of the same enterprise not covered by the return.

#### Standard Industrial Classification

Industry classification is based on the Standard Industrial Classification (Revised 1968). It is published by H M Stationery Office together with a separate index in the form of an alphabetical list of industries.

#### Stocks and work in progress

Values are given of stocks of goods on hand for sale, and of materials and fuel, at the end of the year of return, including any stocks of goods held for merchanting or factoring. Values of the change during the year are also shown. The values include duty in the case of dutiable goods held out of bond.

The value of work in progress at the end of, and the change during, the year are also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received.

#### Transport payments

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payment to other establishments, and to any separate transport organisation of the same establishment not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, i.e. railways, road haulage, canals, coastwise shipping, air, etc. Payments made for sea and air freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded.

#### Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to national insurances and pension schemes is excluded.

#### Work given out

The figures shown represent the total amount paid for work done by other establishments (whether part of the same enterprise or not) on materials supplied to them. They do not include payments to individual outworkers or payments for business and other services.

#### SYMBOLS USED

- The following symbols are used throughout the report:
- .. not available,
- nil or negligible (less than half the last significant figure)
   \* figures cannot be shown owing to risk of disclosing information about individual enterprises.

#### ROUNDING OF FIGURES

Figures in the tables have, where necessary, been rounded to the nearest final digit; there may, therefore, be apparent slight discrepancies between the sums of the constituent items and the totals shown.



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