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Price Indexes of Electric Utility Construction

(Reference - July 1968 Prices and Price Indexes
Catalogue No. 62-002)

Distribution Systems
Transmission Lines
Transformation & Switching Stations

1961=100

The base-weighted price indexes of the cost of constructing electrical utility distribution systems, transmission lines and transformation and switching stations in Canada express prices in a given year for materials, labour and equipment as a percentage of prices for the same components of cost in the base year 1961. Annual commodity, group and total indexes are presented herein for distribution systems, transmission lines and transformation and switching stations. Other than as noted below indexes from 1956 to 1965 remain unchanged; the 1966 preliminary indexes, published in the August 1967 issue of "Prices and Price Indexes" have been reviewed and revised; the 1967 indexes are provided as preliminary estimates.

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At the aggregative level, the impact on the index of the revisions described below has been such that the levels of the indexes have been lowered somewhat. (The revisions have left the basic methodology of the index construction, described in DBS publication 62-526, unchanged.) Due to the introduction of a new wage rate sample, distribution systems and transmission lines indexes have been lowered from 1965 forward. For transformation and switching stations the wage rate component underwent similar revision but in addition, revisions of more consequence were made to the materials and equipment components. The power transformer data have been revised from 1956 forward as have the in-place construction indexes. Other commodities such as ready-mix concrete, and switchgear and protective equipment were revised from 1962 and 1966 respectively.

As noted, all indexes were affected when wage rate data supplied by the Labour Standards Branch of the Federal Department of Labour were replaced by union basic wage rates collected from major utilities and from a few contractors specializing in electric utility construction. In addition to providing wage rate data more applicable to electric utility experience, the new sample provides greater regional coverage within most provinces. For this reason the indexes are now described to relate to the provinces instead of to a sample of cities as previously. Samples selected are thought to relate adequately to union own-account and contract construction and to rural and urban construction with the exception of wage rates for transmission lines. Further improvements to the transmission lines price samples will be made for Ontario, Alberta and Newfoundland in 1968 which will improve sample coverage for rural and non-union wage rates from 1968 onwards. Further details of the revisions are given in footnotes to the tables.

Characteristics of Recent Price Movement

Sharp increases in the demand for capital goods which were a feature of the economy in 1965 and 1966 terminated in 1967 when total demand for capital goods held close to their high 1966 levels. This change was accompanied by declines in employment in the construction industry. However, because of future anticipated needs for increased generating capacity and because of the continuing growth of electric utility production, expenditures for electric utility plant have continued to be heavy and, although the rate of increase in 1967 expenditure was reduced compared to that of the previous years, the electric utility's share of total investment rose during the period under review. The cost of borrowing money to finance construction also continued to rise although the increase in 1967 was less sharp than was that recorded in 1966.

Electric Utilities

	1965 1964	1966 1965	1967 1966
<u>Recent price index percentage changes</u>			
Distribution systems	+ 2.4	+ 4.9	+ 4.4
Construction	+ 4.3	+ 5.6	+ 5.7
Materials	+ 4.6	+ 6.2	+ 1.8
Poles	+ 12.9	+ 8.0	- 4.9
Conductors	+ 4.2	+ 8.9	+ 4.2
Labour	+ 4.4	+ 4.7	+ 11.9
Construction equipment	+ 1.0	+ 2.2	+ 5.1
Distribution systems equipment	- 2.3	+ 3.6	+ 0.9
Transmission lines	+ 5.6	+ 4.1	+ 5.0
Materials	+ 6.1	+ 3.4	+ 2.4
Poles, western cedar	+ 11.2	+ 11.5	- 16.1
Hardware	+ 0.1	+ 1.5	+ 4.7
Towers	+ 2.3	0	- 5.0
Conductors, ACSR	+ 7.9	+ 1.5	+ 3.3
Insulators	+ 4.5	+ 5.5	+ 5.4
Labour	+ 5.4	+ 6.5	+ 12.3
Construction equipment	+ 1.6	+ 2.7	+ 4.7
Transformation and switching stations	+ 6.3	+ 4.2	- 2.9
Structures and improvements	+ 10.0	+ 5.6	- 5.5
Materials	+ 7.8	+ 4.3	- 5.1
Buswork and conductors	+ 9.9	+ 8.0	- 2.8
In-place prices	+ 17.1	+ 10.0	- 6.6
Earth excavation	+ 16.2	+ 11.6	- 8.1
Crushed gravels	+ 18.8	+ 6.8	- 3.5
Labour	+ 4.5	+ 5.2	+ 12.7
Station equipment	+ 5.7	+ 3.6	- 6.6
Power transformers	+ 4.9	+ 1.2	- 7.1
Switchgear and protective equipment	+ 9.7	+ 6.5	- 4.3
Power circuit breakers	+ 2.7	+ 4.7	- 8.3

Electric Utilities - Concluded

	1965 1964	1966 1965	1967 1966
<u>Related Economic Indicators</u>			
Capital expenditures in Canada(1)	+ 17.6	+ 17.3	+ 0.6
Capital expenditures in electric utilities(1)	+ 24.9	+ 21.6	+ 13.6
Expenditures in electric utilities as a proportion of capital expenditures in Canada	7.3	7.6	8.6
Indexes of employment in construction(2)	+ 13.1	+ 10.4	- 7.3
Index of real domestic product for electric power(3)	+ 8.0	+ 11.0	+ 9.0
Net generating capability(4)	+ 8.9	+ 3.9	+ 12.1
Average bond yield for 10 public utilities(5)	+ 3.5	+ 13.2	+ 8.7

Source: (1) Public and Private Investment in Canada, DBS Catalogue 61-205 Annual.

(2) Canadian Statistical Review, DBS Catalogue 11-003, Monthly.

(3) Indexes of Real Domestic Product, by Industry, DBS Catalogue 61-506.

(4) Annual Electric Power Survey of Capability and Load, DBS Catalogue 57-204, Annual.

(5) McLeod, Young, Weir and Company, 50 King Street West, Toronto.

The change in demand for capital goods has been accompanied by a change in electric utility construction price behavior; as can be seen in the above table the pattern of overall price increases in all indexes has been changed. While many commodities continued to show price increases and while the labour indexes showed the sharpest increases in the history of the indexes, a number of important commodities showed price decreases. For individual commodities the decreases often tended to be greater than the decline in federal sales tax on production machinery and equipment which affected many of the commodities in 1967.

A more detailed examination of the indexes reveals the following movements. For the distribution systems and transmission lines, the rates of increase at the total level were similar in 1967 compared to 1966. All major components showed increases, with sharp increases of approximately 12 percent being shown in the labour component. Material prices rose less sharply in 1967 than in 1966. Of the two per cent increase shown in materials, one per cent relates to the general increase from 11 to 12 per cent in federal sales tax which occurred at the beginning of the year(1).

The transformation and switching stations index declined almost three points in 1967. Equipment and materials price declines were sufficient to counter the 13 per cent increase which occurred in the labour component. Materials and equipment indexes showed declines of 5.1 and 6.6 per cent, respectively, which do not exceed the decline of 6.5 per cent attributable to the changes in federal sales tax on production equipment which occurred during the year(1).

The following commodity price movements are of interest:

- (a) Distribution poles, which are shorter and more readily available in the logging yards than transmission line poles, continued to show less vigorous price movement than was shown by the transmission lines poles index. Indeed the former index declined by 4.9 per cent during 1967 while the latter index decreased by 16.1 per cent, a sharp reversal of the price behaviour exhibited in the previous years under review.
- (b) Conductors showed price rises during the four years under review although the aluminum transmission conductors (ACSR) rose less than did the indexes for sheathed copper and aluminum conductors.
- (c) Steel prices as reflected in price collections for light structural steel for transmission towers showed an increase in 1965 of 2.3 per cent, no change in 1966 and a sharp price decline in 1967 of 5 per cent.
- (d) Equipment price changes can be summarized as follows:

	Price index percentage change 1967 1966	Percentage change attributable to federal sales tax change 1967 1966	Net percentage price change
Distribution Systems Equipment	+ 0.9	+ 1.0	- .1
Meters	+ 1.0	+ 1.0	0
Distribution transformers	0	+ 1.0	- 1.0
Station equipment	- 6.5	- 6.8	+ .3
Power transformers	- 7.1	- 6.8	- .3
Circuit breakers	- 8.3	- 6.8	- 1.5
Switchgear and protective equipment	- 4.4	- 6.8	+ 2.4

Clearly federal sales tax changes were the major contributing factor to the declines being shown in many of the equipment indexes. With one exception, manufacturers either held prices steady or granted additional price decreases during the year.

(e) Wage rate changes have been vigorous during the period under review. A summary of changes occurring in provinces with large index weights is outlined in the following table.

(1) See Table 7 for a summary of federal sales tax rates used to adjust index prices.

Electric Utility Wage Rate Components Percentage Change from the Preceding Year

	1965 1964	1966 1965	1967 1966
<u>Quebec</u>			
Linemen:			
Transmission lines	+ 6.8	+ 5.6	+ 27.7
Distribution systems	+ 4.0	+ 4.2	+ 25.0
Groundmen:			
Transmission lines	+ 7.4	+ 7.0	+ 15.7
Distribution systems	+ 4.5	+ 4.7	+ 13.2
Electricians	+ 4.8	+ 4.0	+ 24.0
Common labourers	+ 5.7	+ 5.4	+ 12.1
<u>Ontario</u>			
Linemen:			
Transmission lines	+ 3.7	+ 5.0	+ 8.2
Distribution systems	+ 4.1	+ 4.3	+ 8.6
Groundmen:			
Transmission lines	+ 5.7	+ 6.3	+ 7.6
Distribution systems	+ 4.6	+ 4.7	+ 9.2
Electricians	+ 3.8	+ 4.0	+ 8.8
Common labourers	+ 4.3	+ 5.0	+ 10.1
<u>British Columbia</u>			
Linemen:			
Transmission lines	+ 6.3	+ 6.3	+ 11.2
Distribution systems	+ 6.1	+ 6.1	+ 9.4
Groundmen:			
Transmission lines	+ 4.9	+ 11.3	+ 16.9
Distribution systems	+ 5.8	+ 6.2	+ 9.6
Electricians	+ 6.5	+ 6.1	+ 7.6
Common labourers	0	+ 14.6	+ 19.3

Rates of increase accelerated during the period with "major" increases ranging from 10 to as much as 28 percent experienced in 1967 in British Columbia and Quebec. In 1965 and 1966 increases were of the order of 5 or 6 percent. During the four-year period sharp increases were most common in Quebec and least common in Ontario. Indeed, in Ontario the average increase during the period under review was six percent.

Within Quebec, the effect of faster rising rates outside of Metro-Montreal can be detected in the sharper rises shown in the transmission lines series as opposed to the distribution systems for groundmen and linemen. Metro-Montreal has a smaller weight in the transmission lines index than it has in the distribution systems index. It is also of interest to note that the price movement of groundmen and common labourers is similar in Quebec, and that electrician and linemen rates are showing similar behaviour. These patterns are not repeated in the other major provinces. Ontario exhibits similar change for all trades shown, whereas in British Columbia, linemen and groundmen rates move similarly but common labourers show a pattern of price change completely unlike any other trade shown in the table.

When the Government of the United States was created in 1789, it was a very young nation. It was a nation of immigrants, a nation of people who had come from many different parts of the world. It was a nation that was still very much in the process of being formed. It was a nation that was still very much in the process of being shaped. It was a nation that was still very much in the process of being defined. It was a nation that was still very much in the process of being created.

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TABLE 1. Price Indexes of Electric Utility Distribution Systems, Major Components and Items, Canada, Annually, 1956-67

(1961=100)

Total, major components and items	Indexes											
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Final 1966	Pre-liminary 1967
Distribution systems	95.1	96.5	93.2	96.8	100.3	100.0	101.9	102.5	104.6	107.1 ^r	112.4	117.4
Construction	92.7	91.9	93.5	96.3	98.5	100.0	102.5	105.2	107.8	112.4 ^r	118.5	125.2
Materials(1)	103.8	100.4	98.7	100.6	100.3	100.0	101.8	103.9	105.2	110.0	116.8	118.8
Poles	99.1	97.5	99.1	104.8	99.3	100.0	104.0	108.4	107.3	121.1	130.8	124.4(2)
Eastern cedar	120.8	101.9	101.3	116.2	100.2	100.0	109.0	112.1	109.1	109.8	121.4	-
Western cedar	97.7	97.2	99.0	104.1	99.2	100.0	103.6	108.1	107.2	121.8	131.4	-
Crossarms	113.1	97.4	94.9	110.2	105.7	100.0	111.9	116.6	128.0	128.2	129.9	133.2
Hardware	96.5	97.4	99.5	99.7	100.0	100.0	101.3	103.5	103.5	102.0	101.6	105.7
Secondary racks	95.9	96.7	98.8	99.6	99.9	100.0	102.6	104.4	104.4	98.6	93.5	95.5
Other hardware	96.8	97.7	99.8	99.7	100.0	100.0	100.9	103.2	103.2	103.3	104.8	109.7
Conductors	107.9	103.4	99.1	98.1	100.2	100.0	99.7	100.6	102.3	106.6	116.1	121.0
Triplex	102.9	105.5	102.3	97.8	100.0	100.0	98.1	97.4	97.2	99.4	103.4	105.9
Polyethylene insulated - Aluminum	102.9	105.5	102.3	97.8	100.0	100.0	98.1	97.4	97.3	99.6	103.5	106.5
Copper	123.0	96.9	89.3	99.0	100.7	100.0	104.6	110.3	117.5	128.0	153.9	165.5
Insulators	94.9	95.2	95.9	98.7	102.0	100.0	100.6	101.4	101.4	106.0	111.8	117.8
Luminaires	96.1	97.1	97.0	99.2	100.1	100.0	101.2	102.7	103.0	98.5	95.2	95.7
Labour	75.7	78.5	84.9	89.3	95.3	100.0	104.3	108.3	112.8	117.8 ^r	123.3	138.0
Groundmen	75.0	78.1	84.6	88.8	95.0	100.0	104.3	108.5	113.0	118.0 ^r	123.7	136.3
Linemen	76.1	78.8	85.1	89.6	95.5	100.0	104.2	108.2	112.8	117.6 ^r	123.0	139.1
Construction equipment	85.2	90.1	93.8	96.2	98.9	100.0	99.4	100.0	101.3	102.3 ^r	104.5	110.0
Equipment - Trucks	82.6	90.5	95.7	97.8	99.6	100.0	102.3	103.5	103.7	103.6	104.8	108.5
Operating expenses	87.7	89.7	91.9	94.5	98.2	100.0	96.4	96.6	99.0	101.0 ^r	104.1	111.4
Mechanics(3)	75.7	78.5	84.9	89.3	95.3	100.0	104.3	108.3	112.8	118.1 ^r	123.4	138.8
Other Operating Expenses(4) ...	94.9	96.3	96.2	97.7	99.9	100.0	91.7	89.6	90.7	90.7	92.5	95.0
Distribution systems equipment(1) ...	100.4	106.6	92.5	97.9	104.3	100.0	100.4	96.4	97.6	95.4	98.8	99.7
Meters	89.4	96.7	98.3	99.1	100.0	100.0	100.0	99.1	98.6	98.6	98.6	100.9
Transformers	107.3	112.9	88.9	97.1	107.1	100.0	100.6	94.7	96.9	93.3	99.0	99.0

(1) Combined materials and distribution

systems equipment index

(2) Price movement for the pole index is derived from price reports for western cedar only, from 1967 forward.

(3) In 1963, Federal Department of Labour Fair Wage Rates were replaced by wage rates reported by a sample of electric utilities and contractors. See also footnote 1, Table 4.

(4) The component indexes of Other Operating Expenses are shown in Table 2.

^r Revised figures.

TABLE II. Price Indexes of Electric Utility Transmission Lines, Major Components and Items, Canada, Annually, 1956-67

(1961=100)

Total, major components and items	Indexes												1968	1969
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Final 1966	Pre- limi- nary 1967		
Transmission lines	92.1	94.4 ^r	95.7	97.0	98.9	100.0	100.9	102.3	102.7	108.5 ^r	113.0	118.6		
Materials	98.5	100.3	99.8	100.0	100.3	100.0	99.9	100.5	99.6	105.7	109.3	111.9		
Poles, towers and fixtures	95.8	97.3	98.8	102.0	100.3	100.0	101.3	103.1	103.5	108.7	113.9	115.2		
Poles, western cedar	97.7	97.2	99.0	104.1	99.2	100.0	100.4	103.8	101.8	115.2	130.7	109.7		
Crossarms	113.1	97.4	94.9	110.2	105.7	100.0	111.9	116.6	128.0	128.2	129.9	133.2		
Hardware	96.8	97.7	99.8	99.7	100.0	100.0	100.9	103.2	103.2	103.3	104.8	109.7		
Towers	90.8	97.1	99.0	99.8	100.0	100.0	100.0	100.0	100.0	102.3 ^r	102.3	97.3		
Conductors and insulators	101.2	103.5	100.9	97.9	100.3	100.0	98.5	97.9	95.5	102.6	104.7	108.5		
Conductors, ACSR	102.4	105.0	101.9	97.7	100.0	100.0	98.1	97.3	94.4	101.9	103.4	106.8		
Insulators	94.9	95.2	95.9	98.7	102.0	100.0	100.6	101.4	101.4	106.0	111.8	117.8		
Labour	75.2	78.3 ^r	84.5	88.7	94.9	100.0	104.6	108.6	112.8	118.9 ^r	126.5	142.0		
Groundmen	74.7	78.0	84.2	88.3	94.6	100.0	104.7	108.8	113.0	119.2 ^r	127.5	141.4		
Linemen	76.0	78.7 ^r	85.0	89.3	95.4	100.0	104.5	108.2	112.5	118.4	125.1	143.0		
Construction equipment	84.2	88.2	91.5	94.3	97.5	100.0	99.2	99.4	101.4	103.0	105.8	110.8		
Equipment	78.2	84.3	89.9	93.2	96.1	100.0	104.1	104.9	107.2	109.0	111.6	115.7		
Bulldozers	76.9	82.6	87.9	92.0	95.3	100.0	104.2	106.2	111.0	112.3	112.5	116.3		
Compressors	75.1	79.9	86.0	89.8	93.5	100.0	105.6	105.0	106.8	111.2	117.6	122.3		
Trucks	82.6	90.5	95.7	97.8	99.6	100.0	102.3	103.5	103.7	103.6	104.8	108.5		
Operating expenses	90.2	92.1 ^r	93.1	95.4	98.8	100.0	94.3	93.8	95.7	97.0 ^r	100.0	105.9		
Mechanics(1)	75.2	78.3 ^r	84.5	88.7	94.9	100.0	104.6	108.6	112.8	118.1 ^r	124.4	141.0		
Other Operating Expenses	95.2	96.7	96.0	97.7	100.1	100.0	90.8	88.9	90.0	89.9	91.8	94.2		
Diesel fuel	99.1	103.2	97.9	99.6	100.0	100.0	101.7	103.1	101.3	98.1	97.7	98.6		
Gasoline	96.5	99.6	99.8	99.9	99.5	100.0	98.3	90.7	91.5	88.4	88.8	89.7		
Lubricating oils	91.0	94.1	94.5	96.0	98.4	100.0	100.0	99.8	99.2	99.5	102.9	107.6		
Tires	94.4	94.1	92.8	96.2	101.7	100.0	79.1	79.6	81.9	84.6	88.7	92.1		
Tubes	93.1	92.5	89.7	88.9	88.9	100.0	100.8	100.8	100.8	102.5	99.7	101.3		
Repair parts	93.4	95.3	96.6	97.3	98.7	100.0	101.0	103.7	103.5	103.9	104.4	108.0		

(1) In 1965, Federal Department of Labour Fair Wage Rates were replaced by wage rates reported by a sample of electric utilities and contractors. See also footnote Table 5.

^r Revised figures.

TABLE III. Price Indexes of Electric Utility Transformation and Switching Stations, Major Components and Items, Canada, Annually, 1956-67

(1961=100)

Total, major components and items	Indexes													
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Final 1966	Pre- limi- nary 1967	1968	1969
Transformation and switching stations	115.2 ^r	118.1 ^r	109.0 ^r	113.5 ^r	109.8 ^r	100.0	104.5 ^r	107.2 ^r	111.7 ^r	118.7 ^r	123.7	120.1		
Structures and improvements	110.1 ^r	105.6 ^r	101.3 ^r	102.6 ^r	103.3 ^r	100.0	102.6 ^r	109.0 ^r	113.1 ^r	124.4 ^r	131.4	124.2		
Materials	100.0	99.8	99.0	99.6	100.5	100.0	100.4 ^r	103.5 ^r	109.1 ^r	117.6 ^r	122.6	116.3		
Ready-mix concrete(1)	99.8	100.0	100.0	100.0	100.0	100.0	100.3 ^r	104.2 ^r	107.3 ^r	112.0 ^r	118.3	121.7		
Steel structures	92.3	97.4	99.0	99.8	100.6	100.0	100.1	102.4	107.1	114.7	115.7	104.4		
Wooden structures	102.2	97.1	97.1	103.9	102.5	100.0	104.2	108.9	116.0	125.0	129.8	124.9		
Buswork and conductors	109.6	103.5	99.0	98.3	100.2	100.0	100.0	103.5	110.8	121.8	131.6	127.9		
In-place prices	149.9 ^r	128.5 ^r	110.6 ^r	114.3 ^r	114.1 ^r	100.0	111.2 ^r	130.4 ^r	129.0 ^r	151.0 ^r	166.1	155.2		
Earth excavation	161.4 ^r	132.4 ^r	113.6 ^r	116.7 ^r	121.9 ^r	100.0	118.8 ^r	145.0 ^r	139.1 ^r	161.7 ^r	180.4	165.8		
Crushed gravels	131.0 ^r	122.1 ^r	105.6 ^r	110.3 ^r	101.4 ^r	100.0	98.8 ^r	106.7 ^r	112.5 ^r	133.7 ^r	142.8	137.8		
Labour(2)	74.3	77.6	82.5	88.6	94.7	100.0	104.3	107.6	111.5	116.5 ^r	122.5	138.0		
Common labourer	71.2	75.4	81.3	87.3	93.9	100.0	105.6	109.3	114.2	119.2 ^r	126.5	140.6		
Electrician	76.0	78.8	83.1	89.3	95.1	100.0	103.6	106.8	110.0	115.1 ^r	120.3	136.6		
Station equipment	127.9 ^r	132.6 ^r	118.4 ^r	123.2 ^r	115.7 ^r	100.0	105.1 ^r	106.7 ^r	111.5 ^r	117.9 ^r	122.1	114.1		
Power Transformers(3) ...	142.3 ^r	154.3 ^r	130.6 ^r	136.3 ^r	121.5 ^r	100.0	108.3 ^r	105.8 ^r	109.8 ^r	115.2 ^r	116.6	108.3		
Circuit Breakers	95.2	97.3	96.7	101.1	104.4	100.0	100.9	106.4	112.8	115.8	121.3	111.2		
Switchgear and protec- tive Equipment(4) ...	128.9	122.9	114.4	117.9	114.6	100.0	102.7	108.4	113.3	124.3	132.4	126.7		

(1) Additional prices were incorporated into the index beginning in 1962. The present sample is sufficiently extensive that regional indexes are available monthly from mid 1967 onward.

(2) See footnote (1) Table 6.

(3) Industry Selling Price Transformer Index was utilized from 1956 to 1961. Additional data have become available recently and the expanded sample was introduced into the index in 1962.

(4) The index presented for the period 1956 to 1966 is a weighted average of the metalclad switchgear index and the disconnect switches contained in earlier publications. Additional data have recently become available and the expanded sample was introduced into the index in 1966.

^r Revised figures.

TABLE IV. Wage Rate Indexes for Distribution Systems Construction, Canada and Nine Provinces, 1956-67(1)

(1961=100)

	Indexes													
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Final 1966	Pre- limi- nary 1967	1968	1969
<u>Linemen</u>														
Newfoundland	74.2	76.6	87.9	90.6	96.9	100.0	104.3	105.5	107.4	110.7 ^r	115.5	118.9		
Nova Scotia	74.2	76.6	87.9	90.6	96.9	100.0	104.3	105.5	107.4	113.6 ^r	119.3	126.4		
New Brunswick	74.2	76.6	87.9	90.6	96.9	100.0	104.3	105.5	107.4	112.2 ^r	117.4	129.4		
Quebec	73.9	75.0	81.8	86.9	93.7	100.0	109.7	113.6	118.7	123.5 ^r	128.7	160.6		
Ontario	78.2	81.2	83.9	85.6	94.6	100.0	103.4	106.7	110.4	114.9 ^r	119.8	130.1		
Manitoba	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	113.9 ^r	117.3	126.8		
Saskatchewan	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	116.8 ^r	122.7	133.3		
Alberta	77.4	82.2	86.3	91.1	94.5	100.0	102.4	104.1	108.2	112.6 ^r	122.6	130.4		
British Columbia	74.2	78.2	87.7	95.4	98.2	100.0	101.8	107.4	112.3	119.2 ^r	126.5	138.4		
Canada	76.1	78.8	85.1	89.6	95.5	100.0	104.2	108.2	112.8	117.6 ^r	123.0	139.1		
<u>Groundmen</u>														
Newfoundland	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	117.0 ^r	121.4	125.8		
Nova Scotia	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	120.9 ^r	125.6	133.6		
New Brunswick	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	120.0 ^r	126.7	135.6		
Quebec	73.9	75.0	81.8	86.9	93.7	100.0	109.7	113.6	118.7	124.0 ^r	129.8	146.9		
Ontario	74.0	78.2	84.4	86.0	94.8	100.0	102.9	106.2	109.4	114.4 ^r	119.8	130.8		
Manitoba	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	116.5 ^r	120.7	136.1		
Saskatchewan	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	113.9 ^r	118.7	124.7		
Alberta	71.8	73.9	79.8	85.6	91.0	100.0	103.2	107.4	109.0	113.5 ^r	123.0	130.5		
British Columbia	73.1	76.1	83.6	89.5	95.0	100.0	102.3	107.3	111.9	118.4 ^r	125.7	137.8		
Canada	75.0	78.1	84.6	88.8	95.0	100.0	104.3	108.5	113.0	118.0 ^r	123.7	136.3		

(1) For the period 1956 to 1964 wage rate indexes were derived for nine major cities from data supplied by the Labour Standards Branch of the Department of Labour. In January 1965, Union wage rate data for basic wage rates reported by major utilities and some contractors were incorporated into the index. The sample selected provides an estimate of wage rate change for each province and represents urban own-account and contract electric utility construction.

^r Revised figures.

TABLE V. Wage Rate Indexes for Transmission Lines Construction, Canada and Nine Provinces, 1956-67(1)
(1961=100)

	Indexes											
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Final 1966	Pre- limi- nary 1967
<u>Linemen</u>												
Newfoundland	74.2	76.6	87.9	90.6	96.9	100.0	104.3	105.5	107.4	110.7 ^r	115.5	118.9
Nova Scotia	74.2	76.6	87.9	90.6	96.9	100.0	104.3	105.5	107.4	113.6 ^r	119.3	126.4
New Brunswick	74.2	76.6	87.9	90.6	96.9	100.0	104.3	105.5	107.4	112.2 ^r	117.4	129.4
Quebec	73.9	75.0	81.8	86.9	93.7	100.0	109.7	113.6	118.7	126.8 ^r	133.9	171.0
Ontario	78.2	81.2	83.9	85.6	94.6	100.0	103.4	106.7	110.4	114.5 ^r	120.2	130.0
Manitoba	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	113.9 ^r	117.3	126.8
Saskatchewan	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	116.8 ^r	122.7	133.3
Alberta	77.4	82.2	86.3	91.1	94.5	100.0	102.4	104.1	108.2	112.6 ^r	122.6	130.4
British Columbia	74.2	78.2	87.7	95.4	98.2	100.0	101.8	107.4	112.3	119.4 ^r	126.9	141.1
Canada	76.0	78.7 ^r	85.0	89.3	95.4	100.0	104.5	108.2	112.5	118.4	125.1	143.0
<u>Groundmen</u>												
Newfoundland	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	117.0 ^r	121.4	125.8
Nova Scotia	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	120.9 ^r	125.6	133.6
New Brunswick	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	120.0 ^r	126.7	135.6
Quebec	73.9	75.0	81.8	86.9	93.7	100.0	109.7	113.6	118.7	127.5 ^r	136.4	157.8
Ontario	74.0	78.2	84.4	86.0	94.8	100.0	102.9	106.2	109.4	115.6 ^r	122.9	132.2
Manitoba	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	116.5 ^r	120.7	136.1
Saskatchewan	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	113.9 ^r	118.7	124.7
Alberta	71.8	73.9	79.8	85.6	91.0	100.0	103.2	107.4	109.0	113.5 ^r	123.0	130.5
British Columbia	73.1	78.1	83.6	89.5	95.0	100.0	102.3	107.3	111.9	117.4 ^r	130.7	152.8
Canada	74.7	78.0	84.2	88.3	94.6	100.0	104.7	108.8	113.0	119.2 ^r	127.5	141.4

(1) For the period 1956 to 1964, wage rate indexes were derived for nine major cities from data supplied by the Labour Standards Branch of the Department of Labour. In January 1965, union wage rate data for basic wage rates reported by major utilities and some contractors were incorporated in the index. The sample selected provides an estimate of wage rate change for each province and represents urban own-account and contract electric utility construction.
^r Revised figures.

TABLE VI. Wage Rate Indexes for Transformation and Switching Stations Construction(1)
Canada and Nine Provinces, 1956-67,
(1961=100)

	Indexes													
	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	Final 1966	Pre- limi- nary 1967	1968	1969
<u>Common labourer(2)</u>														
Nova Scotia	81.0	86.4	90.5	92.5	96.6	100.0	106.1	110.9	115.6	126.7	135.1	146.2		
New Brunswick	82.9	91.0	94.6	94.6	96.4	100.0	103.6	103.6	106.3	111.1	117.3	125.5		
Quebec	73.9	75.0	81.8	86.9	93.7	100.0	109.7	113.6	118.7	125.5	132.3	148.3		
Ontario	66.8	72.8	78.2	85.1	93.1	100.0	105.0	108.6	114.6	119.5	125.5	138.2		
Manitoba	67.3	74.5	80.0	89.7	95.2	100.0	100.0	100.0	100.0	104.4	108.1	116.9		
Saskatchewan	77.6	80.8	88.5	94.2	97.4	100.0	100.0	105.1	110.9	114.1	117.8	124.1		
Alberta	71.8	73.9	79.8	85.6	91.0	100.0	103.2	107.4	109.0	113.1	123.4	129.0		
British Columbia	73.1	78.1	83.6	89.5	95.0	100.0	102.3	107.3	111.9	111.9	128.2	153.0		
Canada	71.2	75.4	81.3	87.3	93.9	100.0	105.6	109.3	114.2	119.2	126.5	140.6		
<u>Electrician(2)</u>														
Nova Scotia	78.3	81.7	85.2	88.3	92.6	100.0	102.2	104.3	108.7	114.4	119.1	126.7		
New Brunswick	79.0	82.0	86.0	89.5	96.0	100.0	100.0	106.5	110.0	122.0	129.8	143.4		
Quebec	80.0	80.0	83.2	90.0	95.2	100.0	106.0	108.8	112.0	117.4	122.1	151.4		
Ontario	71.6	75.6	79.5	85.7	93.5	100.0	102.5	105.3	108.1	112.2	116.7	127.0		
Manitoba	73.6	80.4	85.0	91.1	96.8	100.0	101.4	103.5	106.1	111.0	115.9	128.0		
Saskatchewan	88.0	89.3	92.7	96.6	98.7	100.0	106.8	111.1	114.5	117.7	122.2	133.6		
Alberta	77.4	82.2	86.3	91.1	94.5	100.0	102.4	104.1	108.2	112.9	122.9	130.8		
British Columbia	74.2	78.2	87.7	95.4	98.2	100.0	101.8	107.4	112.3	119.6	126.9	136.6		
Canada	76.0	78.8	83.1	89.3	95.1	100.0	103.6	106.8	110.0	115.1	120.3	136.6		

(1) For the period 1956 to 1964, wage rate indexes were derived for eight major cities from data supplied by the Labour Standards Branch of the Department of Labour. In January 1965, union wage rate data for the basic wage rates reported by major utilities and some contractors were incorporated in the index. The sample selected provides an estimate of wage rate change for each province - and represents urban own-account and contract electric utility construction. Wage rate data for Newfoundland have been collected and are available on request.

(2) Expenditures for Newfoundland during the base-weight period were small and for this reason wage rates for Newfoundland are not included in the published indexes. Rates have been collected from Newfoundland utilities since 1964 and indexes are available upon request.

TABLE VII. Federal Sales Tax Rates for Commodities Used in Electric Utility Construction Price Indexes(1)

Tax percentage rates for taxable commodities										
Commodity	Tax exempt item	1/1/56	30/4/59	1/1/67	1/1/56	14/6/63	1/4/64	1/1/65	1/4/67	2/6/67
		to 29/4/59	to 31/12/66	to 31/12/67	to 13/6/63	to 31/3/64	to 31/12/64	to 31/3/67	to 1/6/67	to 31/12/67
<u>Distribution systems and transmis-</u> <u>sion lines</u>										
Towers		10	11	12						
Poles, wooden	x									
Crossarms		10	11	12						
Hardware		10	11	12						
Conductors:										
Aluminum		10	11	12						
Copper		10	11	12						
Insulators		10	11	12						
Meters		10	11	12						
Transformers		10	11	12						
Luminaires		10	11	12						
Trucks		10	11	12						
Bulldozers		10	11	12						
Compressors		10	11	12						
Gasoline		10	11	12						
Diesel fuel		10	11	12						
Lubricating oils		10	11	12						
Tires		10	11	12						
Tubes		10	11	12						
Parts		10	11	12						
<u>Transformation and switching</u> <u>stations</u>										
Earth excavation and embankment	x									
Gravels	x									
Ready-mix concrete	x									
Steel structures:										
Steel					0	4	8	11	6	0
Insulators					0	4	8	11	6	0
Wooden structures:										
Poles	x									
Crossarms					0	4	8	11	6	0
Insulators					0	4	8	11	6	0
Hardware					0	4	8	11	6	0
Buswork and conductors					0	4	8	11	6	0
Power transformers					0	4	8	11	6	0
Circuit breakers					0	4	8	11	6	0
Disconnect switches					0	4	8	11	6	0
Metalclad switchgear					0	4	8	11	6	0

(1) Indexes or prices used in these indexes were adjusted to reflect Federal sales tax rates generally applicable on sales of these commodities to electric utilities.

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