SEATTLE CITY LIGHT

annual report for the year 1967

CITY OF SEATTLE

DECEMBER 31, 1967

ELECTED OFFICIALS

J. D. Braman	*Mayor*
Carl G. Erlandson	*City Comptroller and City Clerk*
E. Lorentzen	*City Treasurer*
Alfred L. Newbould	*Corporation Counsel*
Floyd C. Miller	*President, City Council*
Paul J. Alexander	*Council Member*
Ted C. Best	*Council Member*
Charles M. Carroll	*Council Member*
Mrs. Harlan H. Edwards	*Council Member*
Tim Hill	*Council Member*
Mrs. Arthur V. Lamphere	*Council Member*
M. B. (Mike) Mitchell	*Council Member*
Sam Smith	*Council Member*

BOARD OF PUBLIC WORKS

Roy W. Morse	*City Engineer, Chairman*
John M. Nelson	*Superintendent of Lighting, Vice-Chairman*
Kenneth M. Lowthian	*Superintendent of Water*
C. S. McCormick	*Superintendent of Buildings*
E. G. Henry	*Executive Secretary*

DEPARTMENT OF LIGHTING

John M. Nelson	*Superintendent*
H. V. Strandberg	*Chief Engineer*
Julian C. Whaley	*Director of Operations*
Arnold C. Amundsen	*Director of Finance and Accounts*
A. C. Tyler	*Director of Marketing and Commercial Activities*
Francis A. Scarvie	*Director of Administrative Services*
C. L. Bradeen	*Power Manager*
R. E. Wilcox	*Administrative Analyst*

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FOR THE
DECEMBER

SEATTLE CITY LIGHT

ANNUAL REPORT

FOR THE YEAR ENDED
DECEMBER 31, 1967

Contents

Cover: Boundary Project

CITY OF SEATTLE • DEPARTMENT OF LIGHTING • 1015 THIRD AVENUE, SEATTLE, WASHINGTON

HIGHLIGHTS OF 1967

Boundary hydroelectric plant, in commercial operation since September, produced 1.1 billion kilowatt hours of energy.

System energy requirements for the year, 6,104,083,808 kilowatt hours, were 2.6 per cent greater than previous all-time high of 1966.

Energy production of City Light's hydroelectric plants surpassed all previous records, totaling nearly 3.7 billion kilowatt hours.

Energy purchases and net interchanges totaled 31.7 per cent less than in 1966.

Energy sales revenue from Seattle-area accounts gained $1,347,029 or 3 per cent over comparable 1966 revenue to reach $46,390,827.

Energy billings to Seattle-area consumers totaled 5,409,-845,088 kilowatt hours, were up 4.8 per cent from comparable 1966 billings.

Residence billings averaged 10,947 kilowatt hours per household, as against 10,494 kilowatt hours the preceding year.

Residence electricity cost declined again to an average .879 of one cent per kilowatt hour.

Purchased-power expense, $6,539,432, was $1,823,864 or 21.8 per cent less than 1966's record figure.

Operation and maintenance expenses, including power purchases, advanced 1.5 per cent to a $23,588,117 total.

Tax expense was up $776,206 or 17.4 per cent from 1966, totaling $5,243,545.

Total operating expenses of $38,303,093 were $1,914,-616 or 5.3 per cent more than 1966 expenses.

Net earnings were $7,073,439. In 1966 they had been $8,664,831.

Construction expenditures totaling $31,738,703 included $19,479,849 spent on the Boundary hydroelectric project.

Thunder Creek: a Federal Power Commission temporary permit was sought for a proposed dam and tunnel to divert this Skagit tributary into Ross Lake.

Underground construction accounted for $66.8 million of City Light's $119.8 million 1968-1973 capital improvements program adopted in 1967.

To the Honorable Mayor and City Council, and to the Citizens of Seattle:

It is a pleasure to present to you Seattle City Light's annual report for 1967, which in important respects was a pivotal year in the utility's history. The substantial completion and first operation of the 600,000-kilowatt Boundary hydroelectric project on the Pend Oreille River in Northeastern Washington was the climax of 65 years of almost continuous effort to develop water-power resources with which to satisfy Seattle's electric energy needs abundantly and cheaply. The excellent plant we now have at Boundary will be helping City Light to meet these needs for many, many years to come.

Although City Light will continue to explore opportunities to increase the production of its existing hydroelectric developments on the Pend Oreille, the Skagit, and the Cedar, and may exploit such opportunities when it seems feasible to do so, there is reason to conclude that City Light's era of major hydroelectric project construction is at an end. In the first place, no site suitable for a large project — certainly none of Boundary's caliber — is available to Seattle. In the second place, it is now generally agreed that the Pacific Northwest's next large non-federal generating plants will not be hydroelectric stations built by individual utilities, but will be thermal — probably nuclear-fueled — plants built for and operated for the joint benefit of associations of the region's utilities.

Seattle City Light is a key participant in the regional planning of future power resources that is now moving ahead, for Seattle is not only the Pacific Northwest's leading metropolis and electric load center but also the owner of over 1.3 million kilowatts of hydroelectric generating capability that will continue to be immensely valuable after thermal plants come into service to carry the regional base energy load.

In moving from an independent role to of a co-operative participant in the creation of large new energy resources, City Light retains abundant scope for independent action. The field of action is shifting, however. Where for two generations and more, the Seattle community felt a primary concern for the growth of its industries and valued cheap electricity for the support it could lend to this growth, the community more recently has given critical attention to the environmental deterioration which has accompanied growth and which may inhibit further growth.

Electricity's only direct contribution to environmental decay in Seattle is the unsightliness of some of the apparatus which happens to offer the most economical means of distributing electricity: overhead wires and transformers supported by poles. Production and consumption of Seattle's water power do not pollute the water or air; they do not consume the earth's natural resources. It is a telephoto picture of 'visual pollution' which disturbs the community, and in this picture the appearance — and the hoped-for disappearance — of utility poles and wires bulks very large.

Having recognized the reality and gauged the power of the community's desire for measures that will eliminate visual pollution, City Light has responded with the six-year, $66.8 million undergrounding program described in some detail on page 22 of this report. This is a maximum program, in that it will tax City Light's manpower resources to complete the programmed construction projects in six years. It is also a maximum program from the financing standpoint: City Light's expected 1968-1973 revenues will not support a $119.8 million construction program (including $53 million of expenditures for normal system improvements in addition to $66.8 million for undergrounding) without supplementary funds which we intend to obtain by marketing some $52 million worth of City Light revenue bonds.

A program this size could not have been adopted without the confident assumption that every member of the City Light organization will meet its challenges as a matter of course. Loads and revenues will grow, construction will thrive, and City Light will conserve its resources, as in the past. Legitimate pride in being 'first in the nation' with a daring underground conversion policy may inspire City Light to better its past performance. Certainly in striving toward new goals we at City Light must produce results that will not pass unnoticed by the people of Seattle — or by residents of other cities.

For their co-operation and good counsel during the past year, we of Seattle City Light are most grateful to the elected officers of the City of Seattle, to the members of the various municipal departments, and to a large number of public-spirited Seattle citizens.

John M. Nelson

JOHN M. NELSON
Superintendent of Lighting

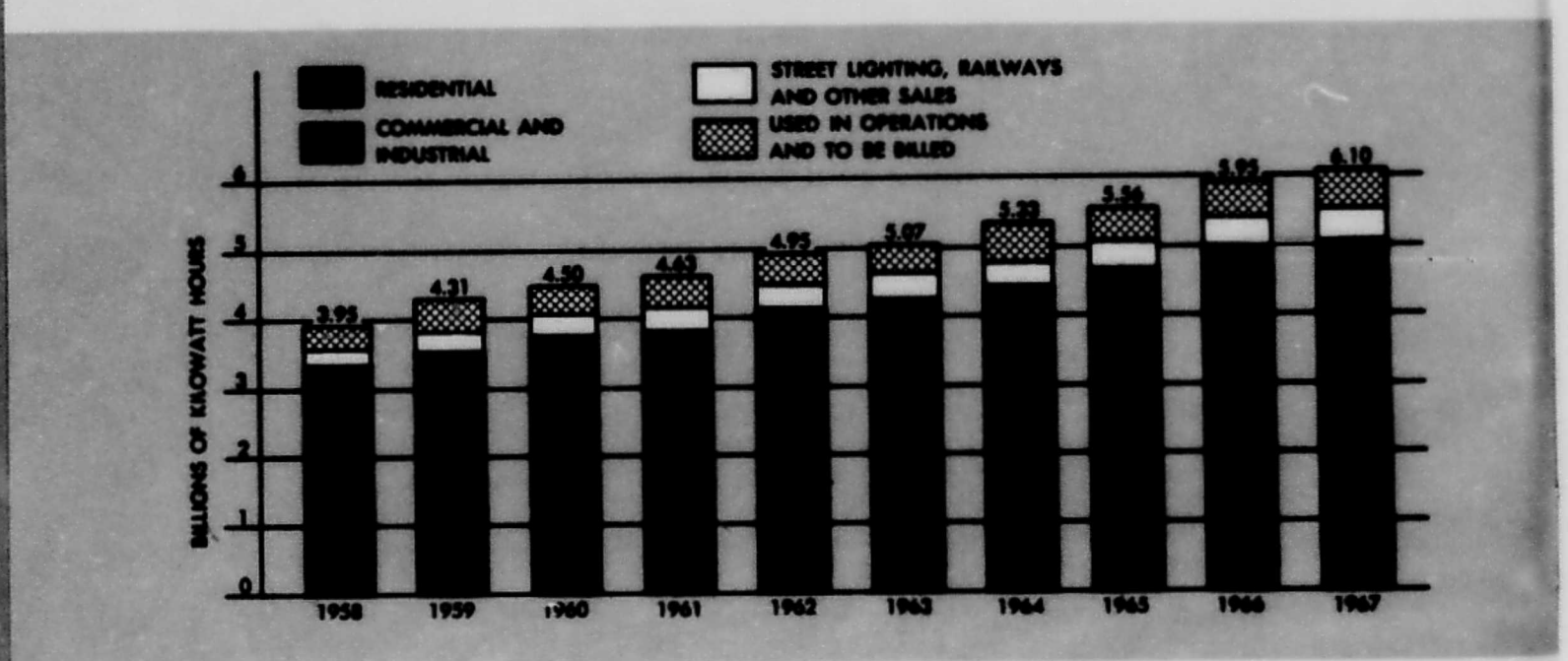
SOURCES OF ELECTRIC ENERGY

	Generation			Scheduled Interchange		Total System Energy
	Hydro	Steam	Purchases	In	Out	
	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours
1967	3,655,858,000	1,212,000	2,659,598,000	413,461,505	626,045,697	6,104,083,808
1966	2,361,902,000	245,000	3,704,609,204	371,078,196	491,140,981	5,946,693,419
1965	2,242,254,000	16,000	3,337,833,196	390,416,204	409,177,334	5,561,342,066
1964	2,689,356,000	234,000	2,770,768,698	321,331,102	448,963,019	5,332,726,781
1963	2,465,755,000	31,000	2,670,346,406	359,282,886	423,050,016	5,072,365,276
1962	2,172,504,000	39,000	2,612,442,540	597,254,310	428,723,953	4,953,515,897
1961	2,515,381,000	87,000	2,029,904,038	441,743,222	359,993,821	4,627,121,439
1960	2,240,273,000	3,000	2,153,441,786	504,181,769	395,833,904	4,502,065,651
1959	2,717,634,000	38,000	1,606,524,257	660,857,645	385,712,076	4,305,341,826
1958	2,044,242,000	33,000	1,495,426,691	812,542,590	398,368,447	3,953,875,834

DISPOSITION OF ELECTRIC ENERGY

	Residence	Commercial and Industrial	Street Lighting	Other Sales*	Self-Consumed, System Losses and Unbilled†	Total System Energy
	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours	Kilowatt Hours
1967	2,481,720,687	2,613,001,170	79,647,196	375,206,700	554,508,055	6,104,083,808
1966	2,359,760,284	2,641,297,851	67,026,029	353,896,098	524,713,157	5,946,693,419
1965	2,245,623,253	2,444,376,032	62,317,276	324,072,774	484,752,731	5,561,342,066
1964	2,198,195,167	2,218,510,943	59,198,049	305,508,122	551,314,500	5,332,726,781
1963	2,130,183,006	2,130,389,369	58,740,583	303,479,496	449,572,822	5,072,365,276
1962	2,084,739,626	2,051,384,729	57,700,419	291,454,502	468,236,621	4,953,515,897
1961	1,950,084,410	1,875,638,399	57,147,351	271,002,026	473,249,253	4,627,121,439
1960	1,902,276,324	1,842,148,333	55,306,619	257,841,728	444,492,647	4,502,065,651
1959	1,796,934,631	1,730,583,623	52,649,451	240,606,553	484,567,568	4,305,341,826
1958	1,649,153,258	1,603,629,146	51,235,238	235,528,891	414,329,301	3,953,875,834

*Includes Sales to Public Authorities and Transit, and Sales for Resale.
†Includes electric energy registered on customers' meters but not recorded as energy sales, due to meter-reading schedules.



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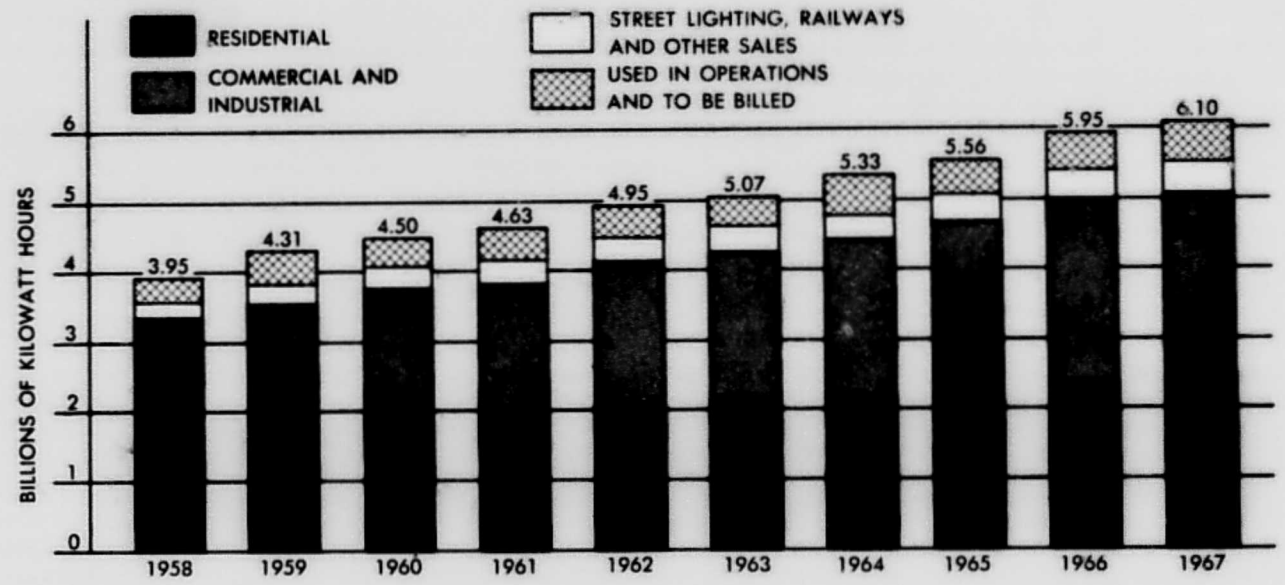

ENERGY PRO AND SALES

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	Total System Energy
ours	Kilowatt Hours
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,981	5,946,693,419
,334	5,561,342,066
,019	5,332,726,781
,016	5,072,365,276
,953	4,953,515,897
,821	4,627,121,439
,904	4,502,065,651
,076	4,305,341,826
,447	3,953,875,834

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	Total System Energy
Hours	Kilowatt Hours
1,055	6,104,083,808
5,157	5,946,693,419
5,731	5,561,342,066
5,500	5,332,726,781
5,822	5,072,365,276
4,621	4,953,515,897
4,253	4,627,121,439
4,647	4,502,065,651
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3,301	3,953,875,834

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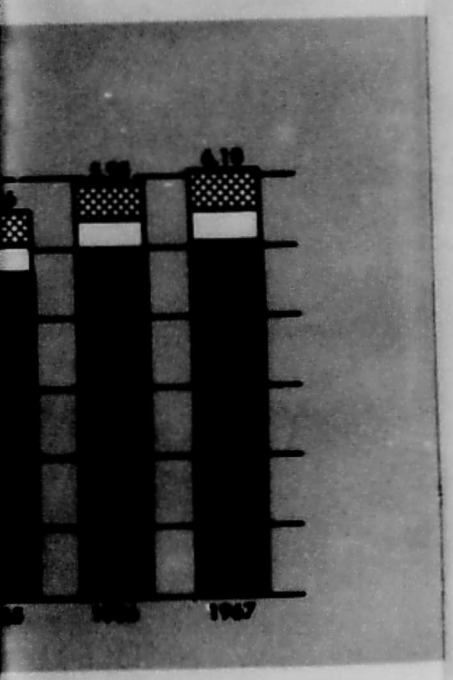


ENERGY PRODUCTION AND SALES

The Seattle City Light electric system's one-year energy requirements exceeded six billion kilowatt hours for the first time in 1967. (See tabulation, page 4.) City-owned hydroelectric plants produced about 60 per cent of this total—almost 3.7 billion kilowatt hours. The other 40 per cent—over 2.4 billion kilowatt hours—was obtained through purchases from the Bonneville Power Administration and two public utility districts. The year's total requirements were 2.6 per cent greater than in 1966.

The City Light plants' record-breaking production last year reversed the situation of the year before, when energy purchases—an unprecedented 3.7 billion kilowatt hours—had met 60.3 per cent of that year's system requirements, while the plants were producing only 39.7 per cent of the required energy. A factor in this reversal was superior streamflow conditions on the Skagit River in 1967, which permitted the City's three Skagit plants to increase their energy output by 7.7 per cent. Activation of the four generating units at City Light's new Boundary hydroelectric station on the Pend Oreille River had, however, a much more decisive effect on owned-plant production figures for the past year. At Boundary, three units came into commercial operation last September and one last December. In four months, the new plant generated over 1.1 billion kilowatt hours of energy—more than any other City Light plant produced in the entire year.

PURCHASES AND LOADS

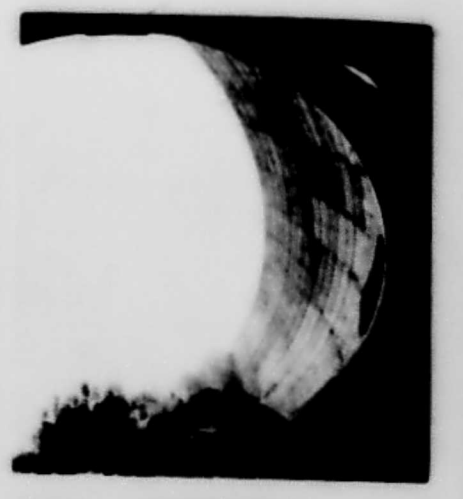
On long-term purchase contracts, firm-power deliveries to the City Light system from the Grant and Pend Oreille County Public Utility Districts continued throughout 1967, reaching a maximum of 130,000 kilowatts. Firm-power purchases from BPA were cut back from 370,000 to 325,000 kilowatts with the expiration of City Light's contract to supply an interruptible 30,000 kilowatts to Aluminum Company of America plants at Vancouver and East Wenatchee, Washington, on June 30. The required two-year notice having been given, City Light's purchases from BPA were reduced to 25,000 kilowatts when the first two Boundary units began operation September 1 and to zero when the third unit 'came on line' September 16. It was the first time in 20 years that Seattle had been able to do without Bonneville power, but within a few months purchases from BPA under existing contracts would again be needed to supplement City Light generation, as loads on the Seattle system increased. The sharp cutback in City Light's purchases from BPA resulted in a purchased energy total for 1967 that was 31.8 per cent below the all-time high of 1966.

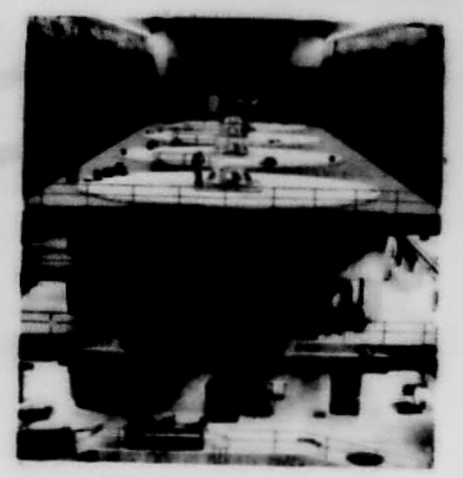
Peak and average loads on the Seattle system reached new highs in 1967. The 1966 system peak, 1,160,000 kilowatts, was surpassed January 5, 1967, by a 1,172,000-kilowatt peak and again December 21 by a 1,253,000-kilowatt peak which, unlike the earlier record-breakers, did not include ALCOA's 30,000-kilowatt load. Last December 21 also set a 24-hour system energy record of 23,298,000 kilowatt hours, an average system load of 970,750 kilowatts for the day. The previous all-time high average load for 24 hours, 937,000 kilowatts, had occurred in very cold weather December 16, 1964. Energy deliveries equivalent to an average load of 839,133 kilowatts made December 1967 the system's record month, while system loads averaging 696,928 kilowatts for the whole year 1967 were also unprecedented for City Light.

A system energy gain of 2.6 per cent from 1966 (when the out-of-town aluminum plant loads were present all year) to 1967 (when they were present only six months) becomes a gain of 5.1 per cent when only the Seattle-area energy figures for both years are considered. Seattle-area electric loads averaged 682,062 kilowatts in 1967.

POWER PLANNING

Favorable operating conditions and the new Boundary resource gave City Light marketable surpluses of both 'prime' power and 'secondary' energy in the latter part of 1967. A 1966 agreement between Seattle City Light and the Cowlitz County Public Utility District under which the latter utility's efficient and otherwise uncommitted steam





Upper: Vertical curvature locates crest of Boundary Dam 50 feet downstream from its base. 'Fisheye' view from river level.

Lower: Boundary's compact subterranean machine hall has space (foreground) for two more 150,000-kilowatt turbine-generator units.

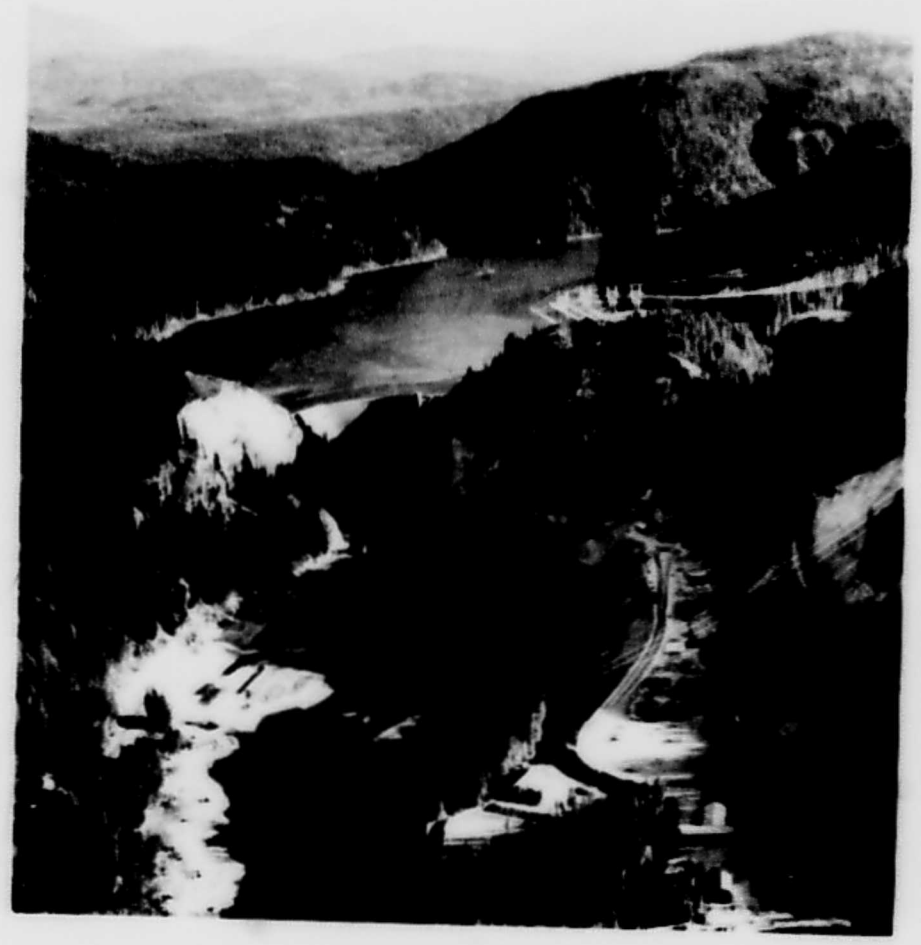
Left: Boundary project viewed from plane crossing U.S.-Canada border. Lake extends 17½ miles up Pend Oreille River to Box Canyon project. Tower-topped limestone monolith west of dam encloses machine hall. Transformers are set in cliff face.

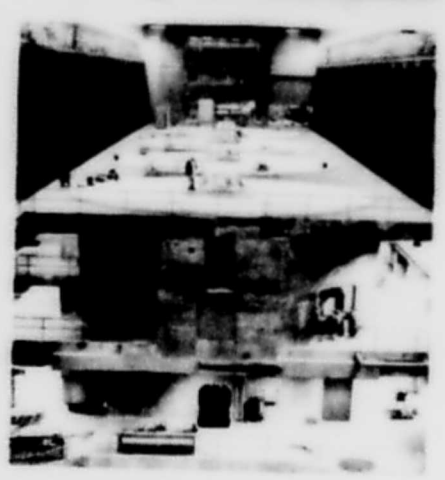
plant served as a 'backup' for Seattle's generation was renewed in 1967 with fortunate results. With the Cowlitz plant in reserve, it was possible to draft Seattle's important Ross reservoir below its 'rule curve' temporarily in September. October rains more than replenished the deficit: by year-end, Ross was 20 feet above the 'rule curve' level, and in the form of stored water, Seattle had ample 'secondary' energy both there and in federal reservoirs of the Pacific Northwest. Some of this energy probably will be sold to Tacoma's municipal utility, which last August contracted to purchase 14,000 kilowatts of Seattle's surplus firm power for one year.

Seattle City Light continued its active participation, throughout 1967, in the work of two regional bodies, the Public Power Council and the Power Planning Council: planning with other utilities and Bonneville the development of resources with which to meet the ever-increasing energy needs of the Pacific Northwest. City Light also was represented in the Western Systems Coordinating Council, organized last year by 40 utilities in 13 Western states to deal both with facilities planning and with operating problems related to bulk-power reliability.

City Light assisted in preparing testimony for presentation at the Seattle hearings of a U.S. Senate conference committee studying the proposed Bulk Reliability Bill (S. 1934). The step which the electric-utility industry is now negotiating — from regional coordination of utility operations to the interlinking of whole regions — promises enormous benefits to the utilities but exposes them to the threat of a spreading of accidental outages unless effective preventive measures can be implemented. Seattle is therefore collaborating wholeheartedly in efforts to find solutions for the difficult new problems associated with the growing interdependency of the nation's power systems.

Harbor House, on Queen Anne Hill not far from downtown Seattle, features magnificent marine views—and individual electric air conditioning of all 56 apartment units.





Upper: Vertical curvature locates crest of Boundary Dam 50 feet downstream from its base. Tribune view from river level.

Lower: Boundary's compact subterranean machine hall has space (foreground) for two more 150,000-kilowatt turbine-generator units.

Left: Boundary project viewed from plane crossing U.S.-Canada border. Lake extends 17½ miles up Pend Oreille River to Box Canyon project. Tower-topped limestone monolith west of dam encloses machine hall. Transformers are set in cliff face.

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ENERGY SALES

City Light sales of energy to Seattle-area consumers in 1967, up nearly a quarter-billion kilowatt hours or 4.8 per cent from comparable 1966 sales, reached 5,409,845,088 kilowatt hours. Billings totaling 139,730,665 kilowatt hours to out-of-town aluminum plants — down 46.6 per cent from the previous year's — brought total sales for the year to 5,549,575,753 kilowatt hours.

All the major categories of Seattle-area accounts participated in the general rise in electricity consumption. Although the number of residence accounts increased only 1.1 per cent during 1967, home electric-energy use climbed 5.2 per cent to nearly 2.5 billion kilowatt hours total. Billings to service-area commercial and industrial accounts increased 3.9 per cent, with the commercial component of these billings providing most of the growth. Street lighting consumed 18.8 per cent more energy than in 1966, as high-intensity mercury-vapor lighting reached more and more suburban thoroughfares and Seattle residential streets. Governmental agencies, including Seattle's public transportation system, were billed for six per cent more electricity in 1967 than in 1966.

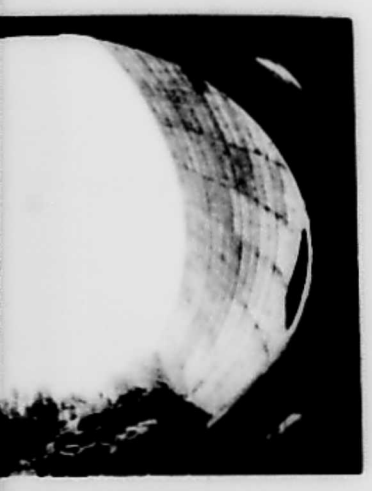
Harbor House, on Queen Anne Hill not far from downtown Seattle, features magnificent marine views—and individual electric air conditioning of all 56 apartment units.

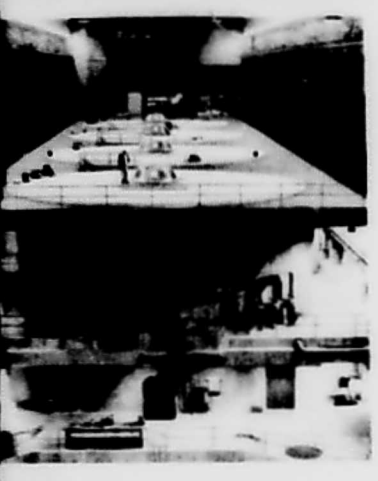
SALES PROMOTION

Working on the principle that it is through greater electricity consumption that consumers can benefit most from the existence of a consumer-owned electric utility, City Light people viewed the success of their sales-promotion efforts in 1967 as a positive service to City Light customers. These efforts were spectacularly successful in achieving a 'breakthrough' in the promotion of the 'total-electric environmental control' concept (electric heating plus air conditioning) for commercial premises and the promotion of electric space heating for single and multiple-residence structures.

Electric air conditioning advanced strongly in the Seattle area last year with 268 new installations (45 per cent more than in 1966) representing 7,561 additional horsepower of capacity (74 per cent more than 1966 additions). The number of accounts billed under City Light's Schedule 45, the rate which applies to total-electric air-conditioned commercial premises, rose from 86 to 121 during 1967. During the year, the Frederick & Nelson and Bon Marché department stores and the Olympic Hotel—the largest Seattle establishments of these types — all scheduled air-conditioning projects for 1968. Facilities to occupy both the north and south campuses of the new Seattle Community College are being designed to qualify for Schedule 45 with electric air conditioning. Following the lead of the 50-story Seattle-First National Bank Building now under construction in downtown Seattle, planners of other new large office buildings are giving primary consideration to electric environmental control instead of automatically specifying steam heat. In the past two years, City Light has taken the initiative in assembling and presenting facts about the newer concept to architects, engineers and owners.

Electric heating of single-family and multi-unit residences made gains last year in both new construction and conversion installations. Particularly striking was the acceptance of electric heating by speculative builders: electric heating was chosen for 279 of the 1,181 new single-family residences built in





er: Vertical curvature locates crest oundary Dam 50 feet downstream its base. 'Fisheye' view river level.

er: Boundary's compact subterranean bine hall has space (foreground) wo more 150,000-kilowatt ine-generator units.

: Boundary project viewed from e crossing U.S.-Canada border. extends 17½ miles up Pend Oreille r to Box Canyon project. Tower- ed limestone monolith west of dam ses machine hall. Transformers et in cliff face.

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Tama-Qua Apartments (in suburban Boulevard Park, south of Seattle) consists of 300 electrically-heated units in eight buildings. The pool, too, is electrically heated.

City Light's service area in 1967—almost 24 per cent, where 10 to 12 per cent had been typical in recent years. Apartment construction, which has far outstripped single-family home building in the number of dwelling units produced here for a number of years, again in 1967 adopted electric heating for 97 per cent of the new units. Electric heat has been specified for the 1,000 authorized and 2,000 proposed units of high-rise housing for the elderly now being planned by the Seattle Housing Authority and for a smaller number of similar units planned by the King County Housing Authority.

Although sales of electric energy to Seattle-area industry failed to match the brilliant gains of recent years in 1967, there was lively activity in the planning and development of additional industrial loads last year. Plant expansions by The Boeing Company, Lone Star Cement Corporation, the Earle M. Jorgensen Company and Sicks' Rainier Brewing Company, together with the large commercial air conditioning projects mentioned above, were principal contributors to the 81,000 kilovolt-amperes of new load for which City Light accepted contracts from industrial and large commercial customers in 1967. Comparable load additions for 1966 had totaled 39,000 kilovolt-amperes.

DOMESTIC USE AND RATES

Households served by City Light continued to increase their electric-energy consumption in 1967, the first full year of experience with the rate modifications of July 1966. The many extremely fine days of 1967—they were exceptionally numerous even for Seattle's normally mild climate—probably countered to some extent the rates' intended consumption-boosting effect. Nevertheless, greater consumption and more favorable rates combined in 1967 to produce the lowest average kilowatt-hour cost yet recorded for City Light residence customers: .879 of one cent. Nationwide, the average kilowatt-hour cost of domestically consumed electricity in 1967 was 2.17 cents, according to Edison Electric Institute estimates.

Energy billings to City Light's residence accounts averaged 10,947 kilowatt hours and $96.18 per account for all of the past year, registering moderate gains over the preceding year's averages, which were 10,494 kilowatt hours and $94.78. EEI estimated that the average electricity consumption of all American homes in 1967 was 5,565 kilowatt hours and that the average cost of the year's electricity was $120.76 per home. The trend of these comparisons since 1940, when City Light inaugurated its famous 'all-electric' residence rate, is shown graphically on page 9, where the emergence of domestic electricity as a bargain commodity in Seattle since 1910 is also traced in a tabulation.

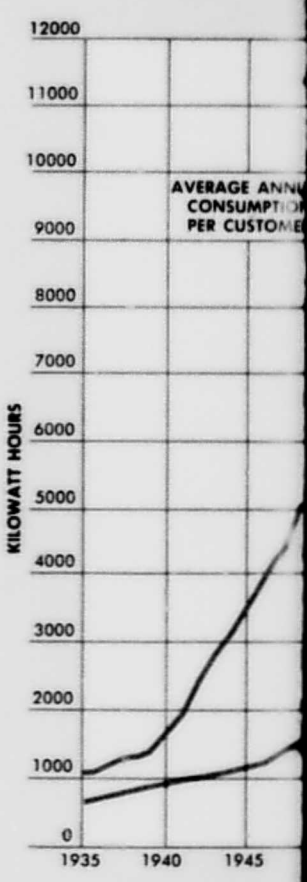
Four out of every five residences City Light served in 1967—including virtually all electrically heated residences—were billed at the 'all-electric' rate. These typical residences' average electric-energy consumption last year was 12,804 kilowatt hours, up from 12,348 kilowatt hours in 1966. The average kilowatt-hour cost of energy billed at this rate was .834 of one cent, and the average cost of the year's electricity was $106.80 per 'all-electric' residence account in 1967.

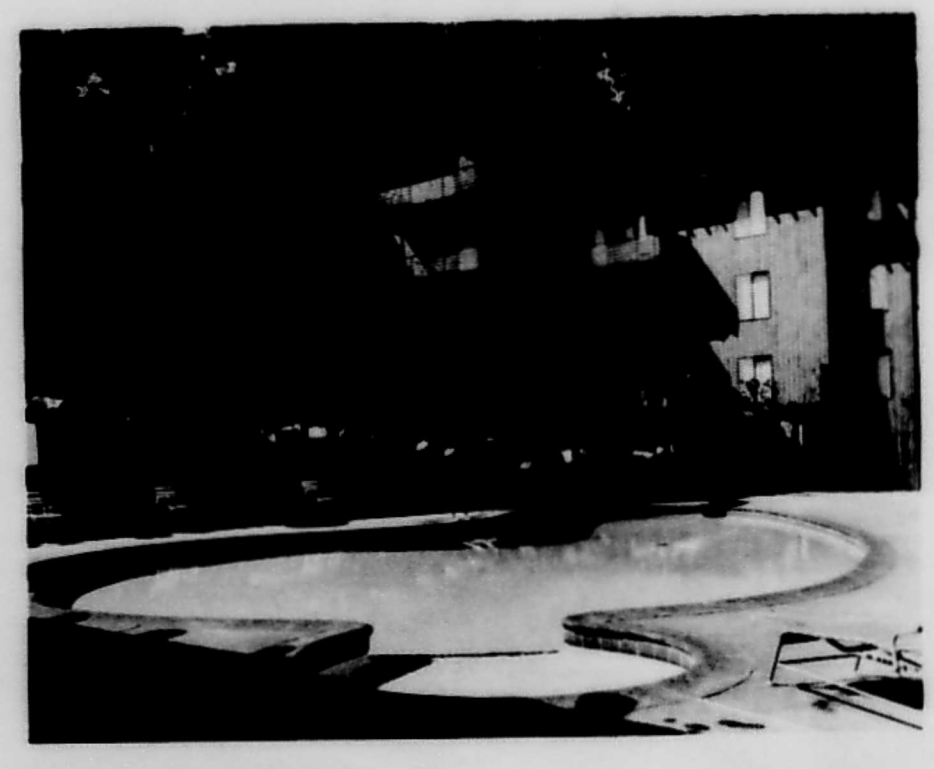
CONSUMER SERVICES

By early 1967 it was apparent that an adequate trouble-shooting and repair service for customers' electric space-heating installations was needed to guarantee maximum consumer satisfaction with electric heating. Such a service, if it provided quick response to

Year	Kilowatt Hours Billed
1967	2,481,720,68
1966	2,359,760,284
1965	2,245,623,25
1964	2,198,195,16
1963	2,130,183,00
1962	2,084,739,62
1961	1,950,084,41
1960	1,902,276,324
1959	1,796,934,63
1958	1,649,153,258
1957	1,606,971,53
1956	1,536,883,46
1955	1,446,344,39
1950	577,683,81
1945	340,645,49
1940	137,107,60
1935	86,101,55
1930	88,601,32
1925	39,551,297
1920	21,997,324
1915	7,852,554
1910	2,619,46

*Figure adjusted to allow for approxi monthly billing in November, 19





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Year	Kilowatt Hours Billed
1967	2,481,720,687
1966	2,359,760,284
1965	2,243,[illegible]
1964	2,198,[illegible]
1963	2,130,183,006
1962	2,084,739,626
1961	1,950,084,410
1960	1,902,276,324
1959	1,796,934,631
1958	1,649,153,258
1957	1,606,971,535
1956	1,536,883,466
1955	1,446,344,395
1950	577,603,815
1945	340,645,495
1940	137,107,600
1935	86,101,559
1930	68,601,328
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*Figure adjusted to allow for approximate monthly billing in November, 1945.

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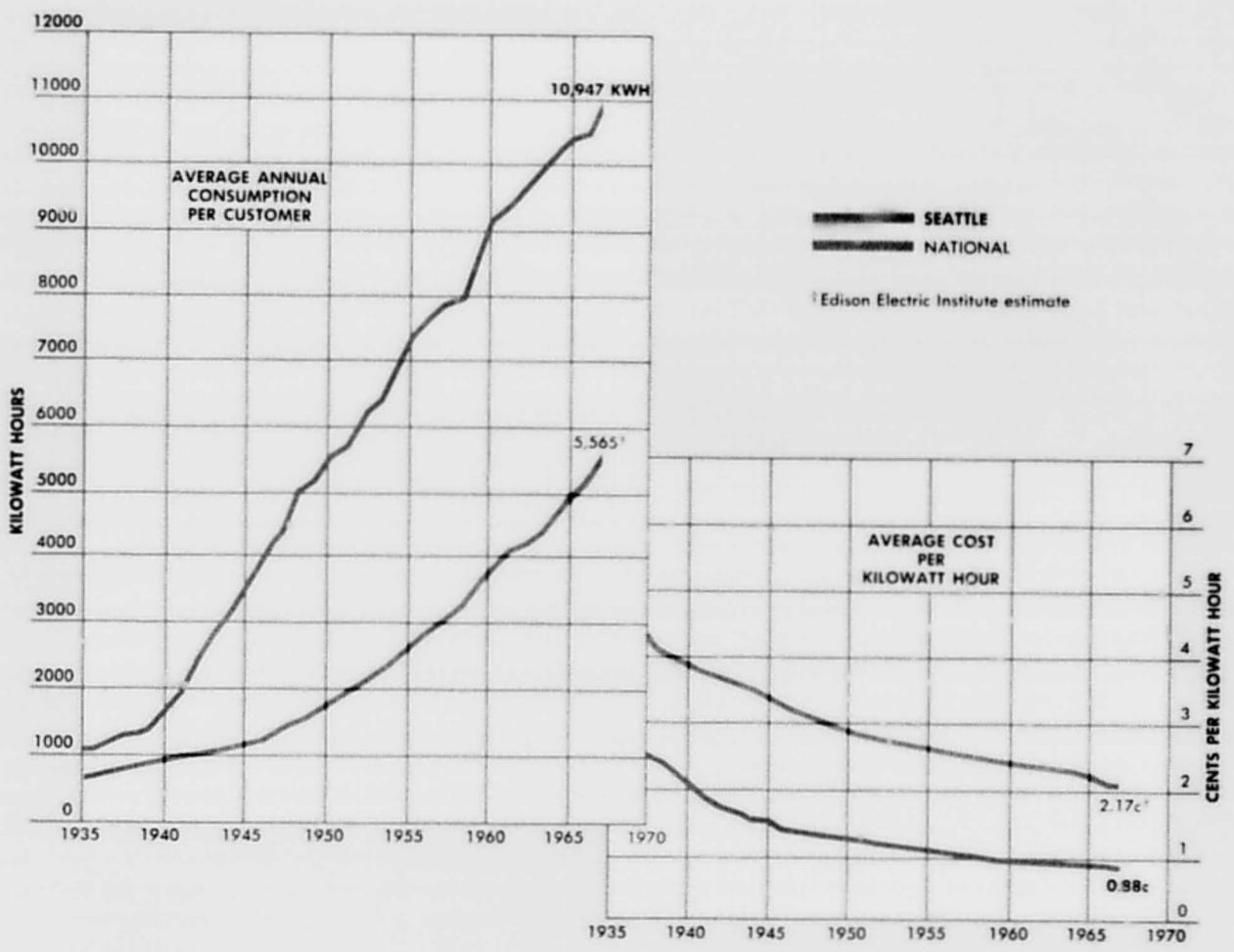
RESIDENCE SERVICE DATA

Year	Kilowatt Hours Billed	Average No. of Consumers	Revenue	Average KWH Per Consumer	Average Rev. Per Consumer	Average Revenue Per KWH
1967	2,481,720,687	226,712	$21,805,928.32	10,947	$96.18	$0.00879
1966	2,359,760,284	224,860	21,311,749.71	10,494	94.77	0.00903
1965	2,245,623,253	217,962	20,550,550.24	10,303	94.29	0.00915
1964	2,198,195,167	213,671	20,724,506.98	10,288	96.99	0.00943
1963	2,130,183,006	215,123	20,249,442.77	9,902	94.13	0.00951
1962	2,084,739,626	215,612	19,875,922.54	9,669	92.18	0.00953
1961	1,950,084,410	210,112	18,767,308.92	9,281	89.32	0.00962
1960	1,902,276,324	208,294	18,357,203.09	9,133	88.13	0.00965
1959	1,796,934,631	207,500	17,560,838.32	8,660	84.63	0.00977
1958	1,649,153,258	204,526	16,293,336.31	8,063	79.66	0.00988
1957	1,606,971,535	201,844	15,931,985.79	7,961	78.93	0.00991
1956	1,536,883,466	197,379	15,390,823.09	7,786	77.98	0.01001
1955	1,446,344,395	193,156	14,620,983.71	7,488	75.70	0.01011
1950	577,683,815	102,643	7,004,828.82	5,628	68.24	0.01213
1945	340,645,495	89,644	4,951,053.88	3,626*	52.69*	0.01453
1940	137,107,600	80,505	2,894,979.62	1,703	35.96	0.02111
1935	86,101,559	80,087	2,330,430.93	1,075	29.10	0.02707
1930	88,601,328	83,318	2,510,100.62	1,063	30.13	0.02833
1925	39,551,297	73,481	1,421,789.68	538	19.35	0.03595
1920	21,997,324	58,805	992,697.04	374	16.88	0.04513
1915	7,852,554	35,170	430,690.61	223	12.25	0.05485
1910	2,619,461	12,740	212,526.75	206	16.68	0.08113

*Figure adjusted to allow for approximately 15,600,000 kilowatt-hours delivered before 1945 but billed in 1945 because of change from bi-monthly to monthly billing in November, 1945.



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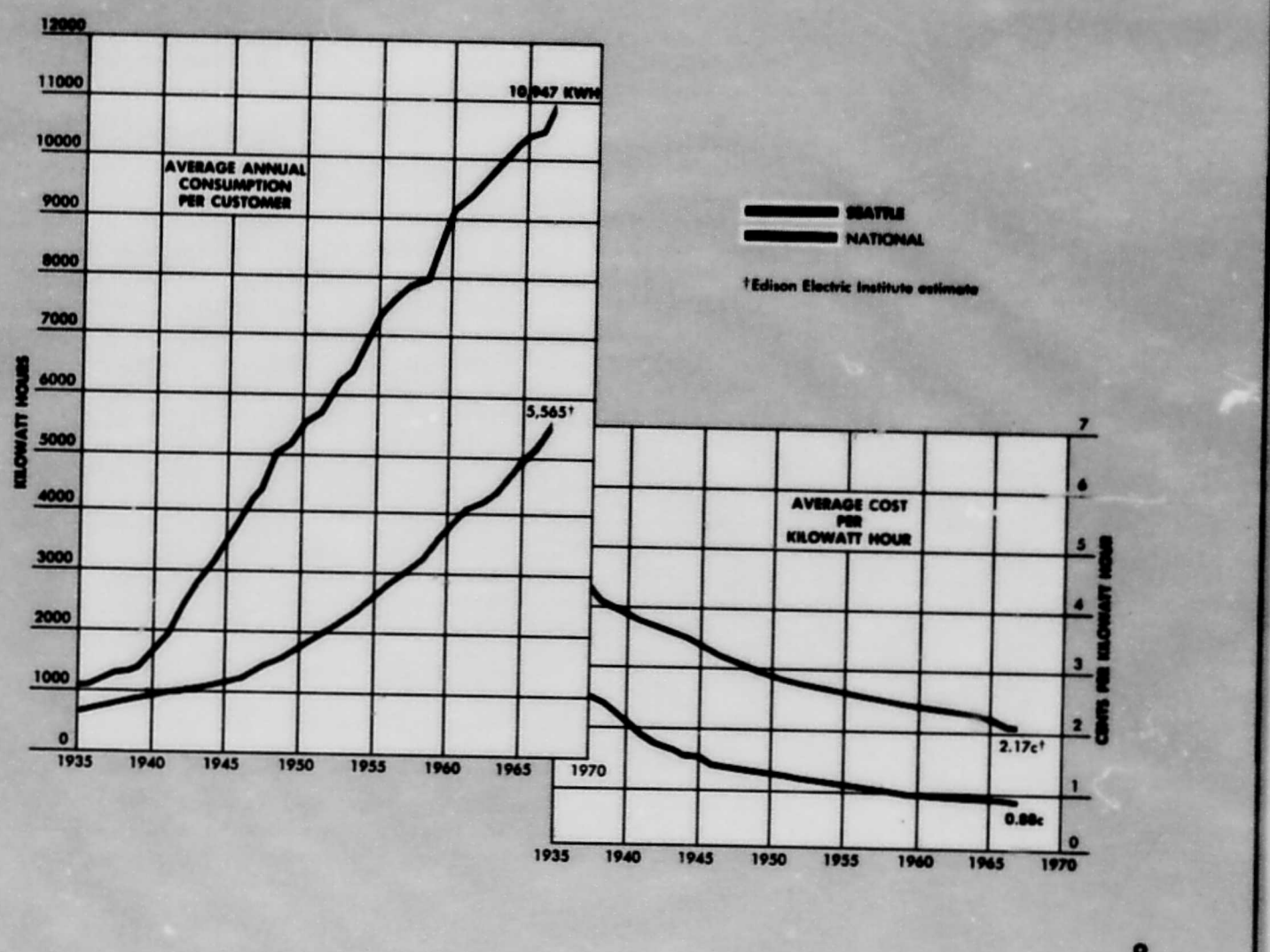

calls and was reasonably priced, was a potentially valuable adjunct of City Light rates and sales programs geared to the promotion of electric heating installations by more customers. Unfortunately, the community's electric heating contractors were too busy with installations to take on servicing, and neither they nor the appliance dealers were properly equipped or staffed to render the quality of service that was felt to be needed.

Accordingly, in February City Light's appliance service unit began accepting customer calls to service heating equipment along with the electric range and electric water-heater service calls they had been handling for many years. The new 'pilot' program gave priority to the more urgent heating service calls over the unit's traditional work, but the same policy of billing the customer only for parts used, not for labor, was retained for the trial program.

Customer demands for heating-equipment service grew from 78 calls in February to 653 in December, totaling 2,475 for the 11 months and indicating a degree of acceptance which warranted continuing the trial into 1968. One-third of City Light's appliance servicemen enrolled in a Seattle Community College evening course in electric heating, with more to follow. The unit's supervisor estimated that five years of experience would be needed to place his men's performance of electric-heat servicing on a par with their praise-winning ability to deal with the other appliances.

In February 1967 the same City Light appliance service group initiated another 'pilot' program: the servicing of customers' electric clothes dryers. After two months, this experiment ended with the conclusion that, while dryers need some mechanical maintenance, they are not often subject to electrical trouble. For the time being, City Light would concentrate on helping its customers get the most satisfactory service possible from their electric cooking, water-heating, and space-heating equipment. Servicemen completed 141,789 calls in 1967, of which 28 per cent resulted in billings for repair parts.

Incoming telephone calls from City Light customers keep as many as 20 stations active in this telephone service unit, which handled 336,284 calls in 1967. Calls are distributed automatically to equalize work loads, waiting periods.

CONSULTATION

City Light in 1967 formed a new electric heating and air conditioning consultant unit which pooled the special knowledge the utility needs in order to deal with the growing customer demand for factual advice in these areas. This group took part in a March seminar on large office building design with architects and engineers, and prepared a number of reports on installation and energy costs of electric heating and air conditioning for owners of existing commercial buildings, as well as for designers of new structures.

Specialist consultants in the fields of home economics, illumination and commercial electric cooking, baking and water heating supplemented the work of City Light's field customer-contact men in 1967 under pressure of greater load growth, more economic activity, more cost consciousness, stronger competition from energy fuels, and more concern with environmental values than they had experienced in previous years. To equip City Light's customer consultants and sales engineers with information pertinent to the infinitely varied interests of consumers called for much scientific collection and analysis of data. Studies of high-intensity lighting in commercial buildings, swimming-pool energy requirements, water-heater construction, the characteristics of residence electric loads, and the lighting and heating requirements of supermarkets were typical projects completed or in progress at City Light in 1967.

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Accordingly, in February City Light's appliance service unit began accepting customer calls to service heating equipment along with the electric range and electric water-heater service calls they had been handling for many years. The new 'pilot' program gave priority to the more urgent heating service calls over the unit's traditional work, but the same policy of billing the customer only for parts used, not for labor, was retained for the trial program.

Customer demands for heating-equipment service grew from 78 calls in February to 653 in December, totaling 2,475 for the 11 months and indicating a degree of acceptance which warranted continuing the trial into 1968. One-third of City Light's appliance servicemen enrolled in a Seattle Community College evening course in electric heating, with more to follow. The unit's supervisor estimated that five years of experience would be needed to place his men's performance of electric-heat servicing on a par with their praise-winning ability to deal with the other appliances.

In February 1967 the same City Light appliance service group initiated another 'pilot' program: the servicing of customers' electric clothes dryers. After two months, this experiment ended with the conclusion that, while dryers need some mechanical maintenance, they are not often subject to electrical trouble. For the time being, City Light would concentrate on helping its customers get the most satisfactory service possible from their electric cooking, water-heating, and space-heating equipment. Servicemen completed 141,789 calls in 1967, of which 28 per cent resulted in billings for repair parts.

Incoming telephone calls from City Light customers keep as many as 20 stations active in this telephone service unit, which handled 336,284 calls in 1967. Calls are distributed automatically to equalize work loads, waiting periods.

CONSULTATION

City Light in 1967 formed a new electric heating and air conditioning consultant unit which pooled the special knowledge the utility needs in order to deal with the growing customer demand for factual advice in these areas. This group took part in a March seminar on large office building design with architects and engineers, and prepared a number of reports on installation and energy costs of electric heating and air conditioning for owners of existing commercial buildings, as well as for designers of new structures.

Specialist consultants in the fields of home economics, illumination and commercial electric cooking, baking and water heating supplemented the work of City Light's field customer-contact men in 1967 under pressure of greater load growth, more economic activity, more cost consciousness, stronger competition from energy fuels, and more concern with environmental values than they had experienced in previous years. To equip City Light's customer consultants and sales engineers with information pertinent to the infinitely varied interests of consumers called for much scientific collection and analysis of data. Studies of high-intensity lighting in commercial buildings, swimming-pool energy requirements, water-heater construction, the characteristics of residence electric loads, and the lighting and heating requirements of supermarkets were typical projects completed or in progress at City Light in 1967.

FINANCIAL REVIEW

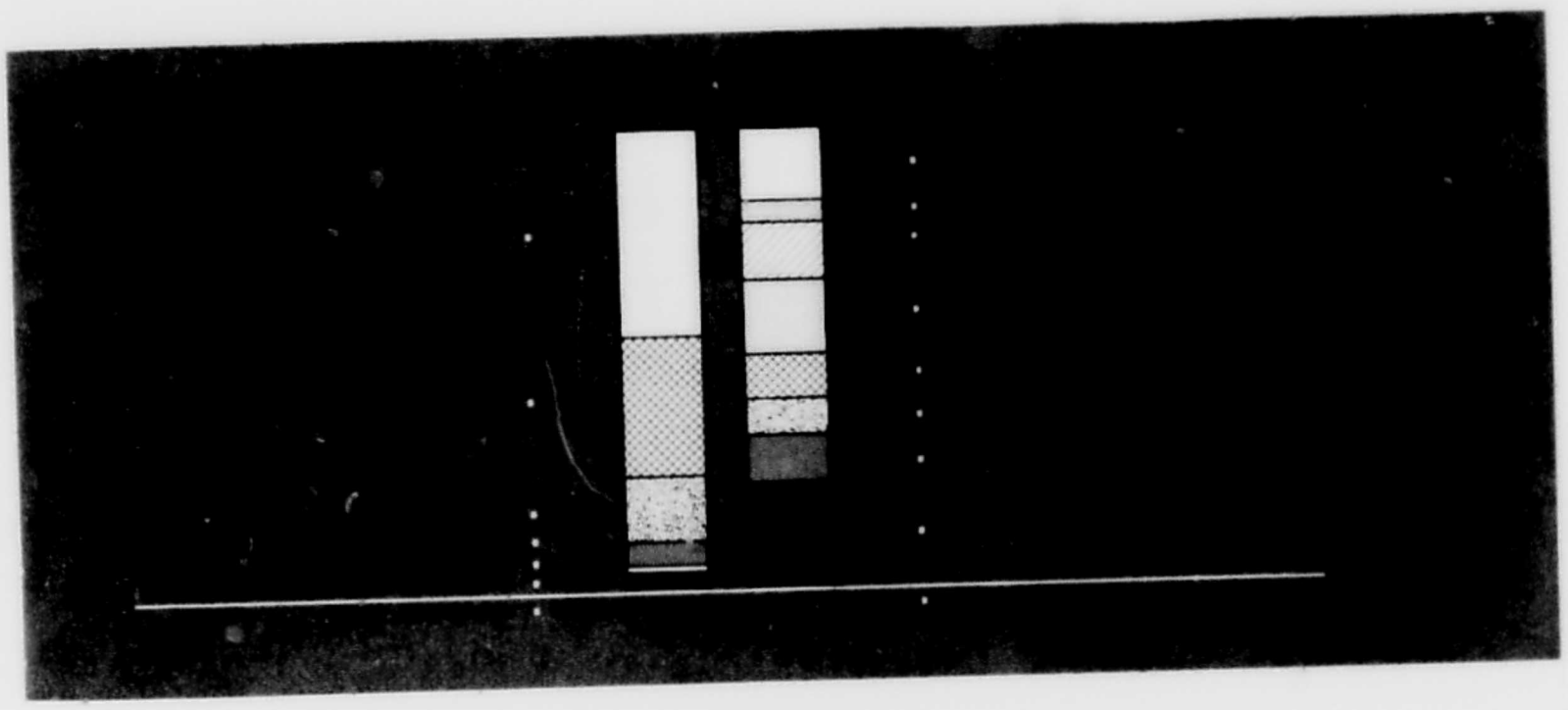
Lighting Department revenue from sales of electric energy in the Seattle service area in 1967 totaled $46,390,827. This was $1,347,029 or 3.0 per cent more than the comparable 1966 revenue. Revenue from sales to all categories of service-area consumers increased. The $21,805,929 revenue from residence accounts surpassed the 1966 figure by $494,179 or 2.3 per cent. The $14,542,699 revenue from commercial accounts was $584,613 or 4.2 per cent more than the comparable revenue for 1966. Seattle-area industrial accounts produced $6,410,022 of the Department's revenue in 1967 — $106,519 or 1.7 per cent more than the same accounts produced in 1966. Revenue from street lighting, transportation and governmental accounts gained $161,719 or 4.7 per cent over the 1966 total to reach $3,632,177 in 1967.

The expiration June 30, 1967, of the Department's long-term contract to supply power to aluminum reduction plants outside the Seattle area caused revenue from this source to decrease from $745,886 in 1966 to $398,232 in 1967. This revenue is included with revenue from Seattle-area industry in the ten-year tabulation of industrial revenue on page 12. The nonrecurring effect of the cessation of out-of-town energy sales on the industrial revenue total recorded for 1967 was a net decline of $241,134 or 3.4 per cent. Revenue from all electric-energy sales, including sales to out-of-town aluminum plants, totaled $46,789,059 in 1967 — $999,376 or 2.2 per cent more than in 1966.

The Department's miscellaneous revenues from sources other than sale of electricity totaled $415,686 in 1967, as against $428,246 in 1966. The operating revenue total for 1967 was accordingly $47,204,745.

Operating expenses. The Department's operating expenses in 1967, including depreciation and taxes, came to $38,303,093, an amount $1,914,616 or 5.3 per cent greater than 1966 expenses. The Boundary hydroelectric project's transition from work in progress to operating facility profoundly affected some expense accounts in September and November. A substantial reduction in purchased-power expense was more than offset by increases — largely related to Boundary — in 'wheeling' (transmission) costs, plant operation costs, and depreciation, tax, and debt expenses.

Operation and maintenance costs, up $2,176,143 or 14.6 per cent from 1966 to a 1967 total of $17,048,685, reflected rises in wages and salaries and in the prices of material items. Greater contributions to operation and maintenance expense increases came, however, from a $552,285 rise (from $359,102 in 1966 to $911,387 in 1967) in Bonneville Power Administration charges for 'wheeling' power over its transmission grid for Seattle, and from a $563,792 rise



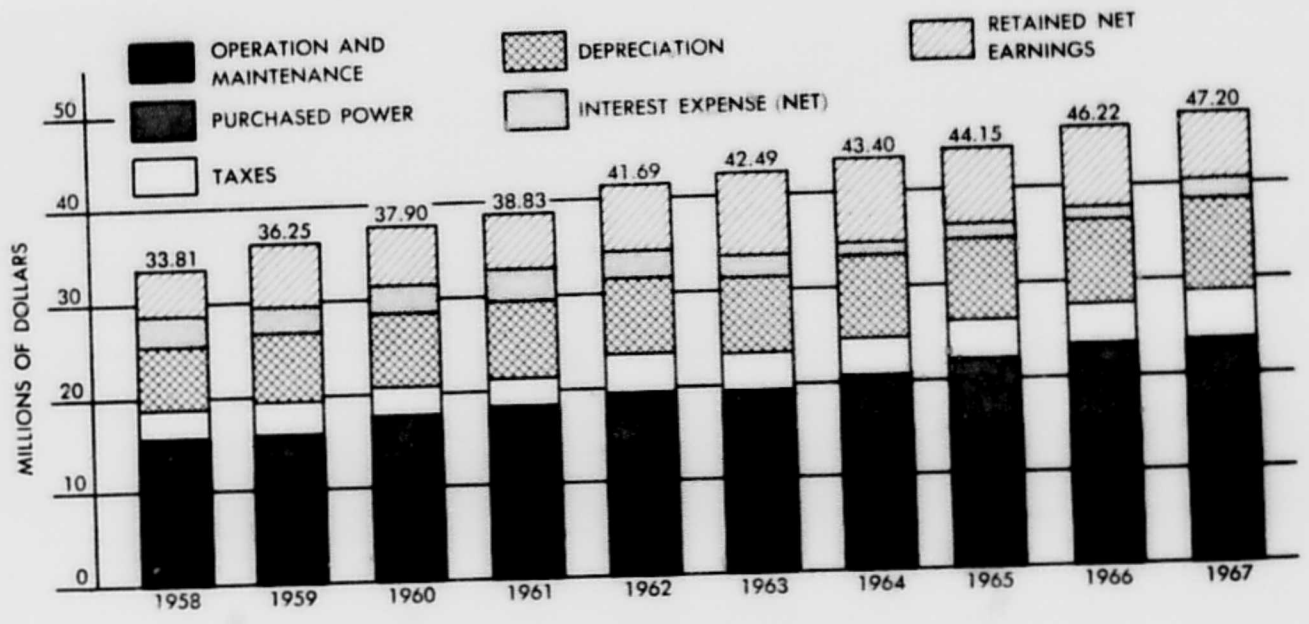
OPERATING REVENUES

	Residence	Commercial	Industrial	Governmental and Other	Customer Services	TOTAL
1967	$21,805,929	$14,542,699	$6,808,254	$3,632,177	$415,686	$47,204,745
1966	21,311,750	13,958,086	7,049,389	3,470,458	428,246	46,217,929
1965	20,550,550	13,195,113	6,768,186	3,279,983	357,052	44,150,884
1964	20,724,507	12,865,320	6,292,368	3,144,087	374,068	43,400,350
1963	20,249,443	12,666,239	6,157,744	3,119,662	298,631	42,491,719
1962	19,875,923	12,641,319	5,878,956	2,998,461	295,320	41,689,979
1961	18,767,309	11,262,206	5,718,221	2,820,718	266,174	38,834,628
1960	18,357,203	10,933,372	5,638,078	2,701,496	266,247*	37,896,396
1959	17,560,838	10,307,899	5,219,699	2,567,015	594,004	36,249,455
1958	16,293,336	9,715,974	4,823,524	2,522,361	451,692	33,806,887

OPERATING EXPENSE AND NET EARNINGS

	Operation and Maintenance	Purchased Power	Taxes	Depreciation	Interest Expense (net)	Net Earnings
1967	$17,048,685	$6,539,432	$5,243,545	$9,471,431	$1,828,213	$7,073,439
1966	14,872,542	8,363,296	4,467,339	8,685,300	1,164,621	8,664,851
1965	14,573,946	7,563,060	3,999,150	8,603,100	1,424,805	7,986,823
1964	14,073,480	6,661,740	3,926,804	8,403,228	1,724,882	8,610,216
1963	13,403,261	5,936,961	3,837,848	8,254,811	2,305,500	8,753,338
1962	13,769,055	5,851,237	3,685,852	8,230,308	2,642,131	7,511,396
1961	12,966,250	5,096,880	3,474,502	8,116,267	2,996,780	6,183,949
1960	12,660,738*	4,851,172	3,357,033	7,804,245	2,672,921	6,550,287
1959	11,804,464	4,155,718	3,179,552	7,635,438	2,808,922	6,665,361
1958	11,301,288	4,173,929	3,050,087	7,237,469	2,974,205	5,069,909

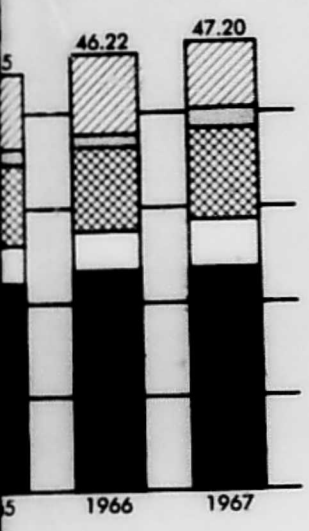
*Revenues for servicing customers' installations commencing in 1960 have been applied as reductions of distribution expense in accordance with FPC classifications.



	TOTAL
5	$47,204,745
6	46,217,929
2	44,150,884
8	43,400,350
1	42,491,719
0	41,689,979
4	38,834,628
7 *	37,896,396
4	36,249,455
2	33,806,887

est (net)	Net Earnings
213	$7,073,439
621	8,664,831
805	7,986,823
882	8,610,216
500	8,753,338
131	7,511,396
780	6,183,949
921	6,550,287
922	6,665,361
205	5,069,909

RETAINED NET EARNINGS



(from $1,664,819 in 1966 to $2,228,611 in 1967) in expenses incidental to the productive operation of Seattle's own hydroelectric plants. Boundary figured heavily in increased 'wheeling' costs by reason of both its great capability and its distance from Seattle, and in increased generation costs through the addition of operating staff salaries, payments for upstream benefits and backwater encroachments, and insurance premiums, all of which began in September.

On the other hand, purchased-power expense declined by $1,823,864 or 21.8 per cent from the all-time-high figure of 1966; the 1967 cost was $6,539,432. When power-purchase costs are lumped together with other operation and maintenance expenses for both years, the 1967 total, $23,588,117, is only $352,279 or 1.5 per cent more than the 1966 total.

Depreciation and taxes. Depreciation expense mounted to $9,471,431 in 1967; of the $786,131 (9.1 per cent) increase over 1966 depreciation, Boundary accounted for $650,265.

Tax expense rose $776,206 or 17.4 per cent above the 1966 figure to total $5,243,545 for 1967. The largest share of the increase, $459,755, resulted from charging federal Social Security tax payments to taxes rather than (as was formerly done) to other expense accounts. Payments to Whatcom County in lieu of taxes were up $35,000 — from $75,000 to $110,000 — in accordance with a new agreement between the County and the Department which became effective with 1967. Payments to Pend Oreille County in lieu of taxes, which had previously been chargeable to Boundary project construction, began to appear as tax expense in September, when the commercial operation of the project began. This additional tax expense accounted for $51,666 of the 1967 increase in tax expense. The remaining $229,785 of the 1967 tax-expense increase occurred in city and state taxes directly related to revenues, which increased.

Interest earnings, debt expense, net earnings. Interest earnings of invested Department funds declined from $2,041,297 in 1966 to $1,232,819 in 1967. Depletion of the Boundary Project Bond Fund investments in November 1966 and a substantial reduction in the amount of invested internally-generated funds (as these funds were utilized to finance completion of Boundary project construction) were responsible for the decrease in interest earnings.

Net debt expense decreased $144,886 or 4.5 per cent from $3,205,918 in 1966 to $3,061,032 in 1967. Interest and amortization expense related to outstanding bonds was reduced by $79,728, while interest charged to construction, a credit, increased by $65,608. The construction interest credit, $1,677,136 in 1967, will be largely eliminated in 1968 because Boundary project construction is substantially completed.

Net earnings from the Department's 1967 operations were $7,073,439 as compared with $8,664,831 for the preceding year. Revenues and interest earnings increased less than expenses increased; a smaller earnings figure resulted. All the Department's net earnings are reinvested in the utility through plant additions and bond redemptions.

Financing and debt coverage. Construction expenditures totaling $31,738,703 and bond redemptions totaling $3,890,000 in 1967 were financed with funds generated by current operations and internally-generated funds previously set aside in investments for these purposes. The amount of these invested funds decreased from $28,674,292 at the beginning of the year to $7,963,250 at the year's end. Nearly all of this $20,711,042 decrease resulted from use of invested funds to finance the completion of Boundary project construction.

The Department's 1967 operations generated $19,605,902 of funds available to meet bond interest and redemption requirements. This was 2.30 times the 1967 debt-service requirement, $8,523,928, and 2.01 times the $9,747,700 maximum scheduled one-year debt-service requirement, which occurs in 1985.

Net plant additions and construction in progress. Adjusted to reflect retirements, net additions to plant in service in 1967 totaled $94,831,263. Generating plant additions, $82,517,765, and transmission plant additions, $3,899,432, both were heavily affected by the preliminary Boundary project closing entries of September and November 1967. Distribution plant additions for the year were $7,303,998; general plant additions were $1,110,068.

Construction work in progress decreased by $65,291,360 during 1967, reflecting the Boundary project's change of status from work in progress to plant in service. The Boundary project had added about $20 million to the Department's construction work in progress during the year. Therefore, the September and November plant entries reduced construction work in progress by $86,023,000.

At year-end, construction work in progress totaled $6,057,233. Minor finishing-up tasks at Boundary accounted for $1,159,397 of this total, while the remaining $4,897,936 represented scattered construction projects including ten residences at Newhalem, the Skagit River vehicular bridge at Gorge Dam, the University Receiving Substation in Seattle, and the Laurelhurst underground distribution conversion. These and other current Department construction projects are described elsewhere in this report.

BALANCE SHEET

ASSETS

	December 31	
	1967	1966
UTILITY PLANT, at cost:		
Plant in service, excluding land	$405,592,103	$311,855,356
Less—Accumulated provision for depreciation	*125,038,027*	*116,686,552*
	280,554,076	195,168,804
Land and land rights	9,380,598	8,286,524
Construction work in progress	6,057,233	71,348,793
	295,991,907	274,804,121
MUNICIPAL LIGHT AND POWER BOND RESERVE FUND:		
United States Government securities, at cost	9,783,505	9,783,505
CURRENT ASSETS:		
Cash deposited with—		
City Treasurer — Operating funds	2,238,821	2,930,240
Fiscal agent—Interest and redemption funds	385,000	914,240
United States Government securities, at cost, approximating market—		
Investments available for major construction projects	7,963,250	28,674,292
Accounts receivable, customers *(less reserve: 1967—$271,155; 1966—$274,756)*	5,090,651	4,183,171
Materials and supplies—at average cost	3,392,729	2,903,999
Prepayments and other	889,372	2,151,907
	19,959,823	41,757,849
DEFERRED DEBITS:		
Unamortized bond discount	1,716,824	1,851,939
Preliminary costs—proposed projects	718,801	716,547
Other deferred debits	1,082,383	772,519
	3,518,008	3,342,005
	$329,253,243	$329,687,480

The accompanying notes are an integral part of the financial statements

EARNINGS RETAINED I

LONG-TERM DEBT:
Revenue bonds, due seri
Less—Bonds due within

CURRENT LIABILITIES:
Warrants outstanding
Accounts payable, accru
Amounts retained on c
Accrued bond interest
Guaranty deposits
Revenue bonds due wit

DEFERRED CREDITS:
Unamortized premium
Other deferred credits

RESERVES FOR SELF-I

CONTRIBUTIONS IN

COMMITMENTS AND

LIABILITIES AND RETAINED EARNINGS

December 31	
1967	1966
$152,869,367	$145,712,439
158,955,000	162,845,000
4,367,000	*3,890,000*
154,588,000	158,955,000
601,170	1,744,509
3,423,920	6,172,770
1,173,055	3,085,767
1,792,720	1,830,381
139,438	150,111
4,367,000	3,890,000
11,497,303	16,873,538
57,828	67,279
2,320,809	294,895
2,378,637	362,174
2,433,147	2,418,464
5,486,789	5,365,865
$329,253,243	$329,687,480

EARNINGS RETAINED IN THE BUSINESS

LONG-TERM DEBT:

Revenue bonds, due serially (see pages 19 and 20)

Less—Bonds due within one year

CURRENT LIABILITIES:

Warrants outstanding

Accounts payable, accrued payrolls and taxes

Amounts retained on contractors' estimates

Accrued bond interest

Guaranty deposits

Revenue bonds due within one year

DEFERRED CREDITS:

Unamortized premium on debt

Other deferred credits

RESERVES FOR SELF-INSURANCE

CONTRIBUTIONS IN AID OF CONSTRUCTION

COMMITMENTS AND UNRECORDED LIABILITIES *(see notes)*

The accompanying notes are an integral part of the financial statements

STATEMENT OF EARNINGS AND EARNINGS RETAINED IN THE BUSINESS

	Year Ended December 31	
	1967	1966
ELECTRIC ENERGY SALES AND OTHER OPERATING REVENUES	$ 47,204,745	$ 46,217,929
OPERATING EXPENSES:		
Operations	12,310,180	10,270,678
Maintenance	4,738,505	4,601,864
Depreciation	9,471,431	8,685,300
Purchased and interchange power	6,539,432	8,363,296
Taxes	5,243,545	4,467,339
TOTAL OPERATING EXPENSES	38,303,093	36,388,477
NET OPERATING REVENUES	8,901,652	9,829,452
INTEREST EARNED ON INVESTMENTS	1,232,819	2,041,297
	10,134,471	11,870,749
DEBT EXPENSE:		
Interest and amortized net discount	4,738,168	4,817,446
Interest charged to construction — credit	1,677,136	1,611,528
	3,061,032	3,205,918
NET EARNINGS FOR THE YEAR	7,073,439	8,664,831
EARNINGS RETAINED IN THE BUSINESS:		
Balance at beginning of year	145,712,430	137,053,208
Miscellaneous credits, *charges*, net	83,458	4,660
Balance at end of year	$152,869,327	$145,712,430

The accompanying notes are an integral part of this financial statement.

The Statement of Source and Application of Funds on page 15 shows the source of net earnings and other working capital provided during the year

STATEMEN

BALANCE AT BEGINN	
Funds provided:	
Net earnings	
Depreciation and am	
Other, net	
Funds used for:	
Net additions to uti	
Less — Claim for de (see notes)	
Reduction in long-t	
BALANCE AT END O	

NOTES TO FINAN

DECEMBER 31, 1967

A contractor has filed claims of $ the validity and amount of the against the contractor for delays The withheld amount has been

The Department pays amounts Department is also billed for un the present method of expensing are established by the City to pro which results in proper matchin

Regular and supplemental char for 1967 and 1966, respectivel employees, estimated on the bas $3,200,000 at December 31, 19

The Department has charged ap were charged to other expense c

The Department purchases pow was approximately 132,000 KW approximately 85,000 KW in 2 debt service costs proportionate

TO THE SUPERINTE
CITY OF SEATTLE
DEPARTMENT OF L
SEATTLE, WASHING

In our opinio tained in the busine Seattle, Departmen information on wo applied on a basis made in accordan the accounting rec

Seattle, Washingto
February 19, 196

STATEMENT OF EARNINGS AND EARNINGS RETAINED IN THE BUSINESS

	Year Ended December 31	
	1967	1966
ELECTRIC ENERGY SALES AND OTHER OPERATING REVENUES	$ 47,204,745	$ 46,217,929
OPERATING EXPENSES:		
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Interest and amortized net discount	4,738,168	4,817,446
Interest charged to construction — credit	*1,677,136*	*1,611,528*
	3,061,032	3,205,918
NET EARNINGS FOR THE YEAR	7,073,439	8,664,831
EARNINGS RETAINED IN THE BUSINESS:		
Balance at beginning of year	145,712,439	137,053,268
Miscellaneous credits, *charges*, net	83,489	*5,660*
Balance at end of year	$152,869,367	$145,712,439

The accompanying notes are an integral part of the financial statements

The Statement of Source and Application of Funds on page 17 shows the application of net earnings and other working capital provided during the year.

STATEMEN

BALANCE AT BEGINN	
Funds provided:	
Net earnings	
Depreciation and am	
Other, net	
Funds used for:	
Net additions to uti	
Less — Claim for de (see notes)	
Reduction in long-t	
BALANCE AT END O	

NOTES TO FINAN

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DEPARTMENT OF L
SEATTLE, WASHING

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Seattle, Washingto
February 19, 196

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1966	
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10,270,678	
4,601,864	
8,685,300	
8,363,296	
4,467,339	
36,388,477	
9,829,452	
2,041,297	
11,870,749	
4,817,446	
1,611,528	
3,205,918	
8,664,831	
137,053,268	
5,660	
$145,712,439	

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

YEAR ENDED DECEMBER 31, 1967

	Light Fund Working Capital
BALANCE AT BEGINNING OF THE YEAR	$24,884,311
Funds provided:	
Net earnings	7,073,439
Depreciation and amortization	9,597,095
Other, net	163,892
	30,659,217
Funds used for:	
Net additions to utility plant and work in progress	1,770,000
Less — Claim for delay in completion of project withheld from payments to contractor (see notes)	*4,367,000*
Reduction in long-term debt	33,256,217
BALANCE AT END OF THE YEAR	$ 8,462,520

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1967

A contractor has filed claims of $25,000,000 for additional construction costs relating to the Boundary Dam on the Pend Oreille River. Both the validity and amount of the claims are disputed by the Department. In connection therewith, the Department has claimed $1,770,000 against the contractor for delays in completion of the project and has withheld this amount from payments otherwise due under the contract. The withheld amount has been included in the balance sheet caption "other deferred credits."

The Department pays amounts to the Seattle City Employees' Retirement System equal to the employees' contributions. In addition, the Department is also billed for unfunded supplemental benefits paid to the retired employees, these amounts are expensed as billed. While the present method of expensing retirement costs does not spread the cost ratably over the service lives of the employees, electric energy rates are established by the City to provide funds for operating costs (including retirement costs as presently expensed) and capital improvements, which results in proper matching of costs and revenues.

Regular and supplemental charges by the retirement system, net of termination credits, amounted to approximately $925,000 and $776,000 for 1967 and 1966, respectively. The estimated liability for future supplemental payments to the retirement system for currently retired employees, estimated on the basis of a standard annuitants table of mortality, without interest factor, was approximately $3,390,000 and $3,200,000 at December 31, 1967 and December 31, 1966, respectively.

The Department has charged approximately $460,000 of social security taxes to the "taxes" account for 1967; in prior years these taxes were charged to other expense classifications.

The Department purchases power under four contracts expiring between 1996 and 2005. The power available under these contracts in 1967 was approximately 132,000 KW which will increase to a maximum of approximately 320,000 KW in 1975 and decrease thereafter to approximately 85,000 KW in 2005. The Department's annual payment under the contracts is generally a share of the seller's operating and debt service costs proportionate to the share of power to which the Department is entitled.

TO THE SUPERINTENDENT OF LIGHTING
CITY OF SEATTLE
DEPARTMENT OF LIGHTING
SEATTLE, WASHINGTON

In our opinion, the accompanying balance sheet and related statements of earnings and earnings retained in the business and source and application of funds present fairly the financial position of the City of Seattle, Department of Lighting, at December 31, 1967, the results of its operations and the supplementary information on working capital for the year, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. Our examination of these statements was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

PRICE WATERHOUSE & CO.

Seattle, Washington
February 19, 1968

STATE OF WASHINGTON
DEPARTMENT OF STATE AUDITOR
DIVISION OF MUNICIPAL CORPORATIONS
State Examiner
1025 Third Avenue
SEATTLE, WASHINGTON 98104

February 19, 1968

Mr. John M. Nelson, Superintendent
Department of Lighting
City of Seattle

Dear Sir:

This is to certify that, at the close of the fiscal year 1967, the undersigned has verified the amount of all investments owned by the Lighting Department in the custody of the City's depositary, Seattle-First National Bank, and reconciled the cash on hand and in banks as shown by the books of account with control accounts maintained by the City Comptroller. The foregoing investment verification and cash reconciliation indicated that all funds requirements of the utility were properly accounted for.

And further, that the exhibits contained in the 1967 Annual Report of the Director of Finance appear to follow the accounting and reporting systems prescribed by the Division of Municipal Corporations.

The financial affairs of the Department are currently being examined for the 1967 annual period on a fiscal-legal post audit basis as required by law (RCW 43.09.260). Upon completion thereof, copies of an examination report containing comments with respect to the results of the audit will be released by the Division of Municipal Corporations and filed with the proper officials of the municipality.

Very truly yours,

DIVISION OF MUNICIPAL CORPORATIONS

By John W. Noah
John W. Noah
State Examiner

As required by state law (RCW 43.09.260), the Department's accounts are regularly audited by examiners of the Division of Municipal Corporations of the State Auditor's office.

City of Seattle
OFFICE OF THE COMPTROLLER
Seattle, Washington 98104

February 19, 1968

Mr. John M. Nelson, Superintendent
Department of Lighting
City of Seattle
1015 Third Avenue
Seattle, Washington 98104

Dear Sir:

In compliance with the provisions of the City Charter and City ordinances, I have examined the Lighting Department's Statement of Earnings for the year 1967 and the Balance Sheet as of December 31, 1967, and affirm them to be in agreement with the control accounts kept in this office of the various Lighting Department funds.

Very truly yours,

City Comptroller

CGE:elc

In compliance with Article VIII (Section 1) of the Seattle City Charter and Ordinance No. 39034, the financial statements of the Department of Lighting have been examined and found to be in agreement with records maintained by the City Comptroller.

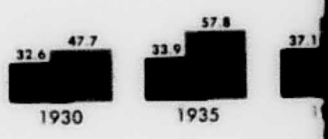
STATEMENT OF

NAME OF BOND	
BOND ISSUES FULLY REDEEME	
General Lien Bonds	
Revenue Bonds	
OUTSTANDING REVENUE BO	
S.L&P. Refunding Series L-S	
M.L&P. Series L-L 1	
M.L&P. Series L-L 2	
M.L&P. Series L-L 3	
M.L&P. Series L-L 4	
M.L&P. Acquisition Series L-	
M.L&P. Series L-N 1	
M.L&P. Series L-N 2	
M.L&P. 1958	
M.L&P. 1958	
S.M.L&P. 1964	
S.M.L&P. 1964	
S.M.L&P. 1964	
S.M.L&P. 1964	
S.M.L&P. 1964	
S.M.L&P. 1964	
TOTAL	
Less: Bonds due wit	

*Includes $16,761,000 redeemed

PLANT INVESTMENT

BONDS OUTSTANDING



...43.09 [illegible], the ...egularly audited ...s of Municipal ...ller's office.

...e City Charter and City ordinances. ...ent of Earnings for the year 1967 ...nd affirm them to be in agreement ...e various Lighting Department funds.

...y truly yours,

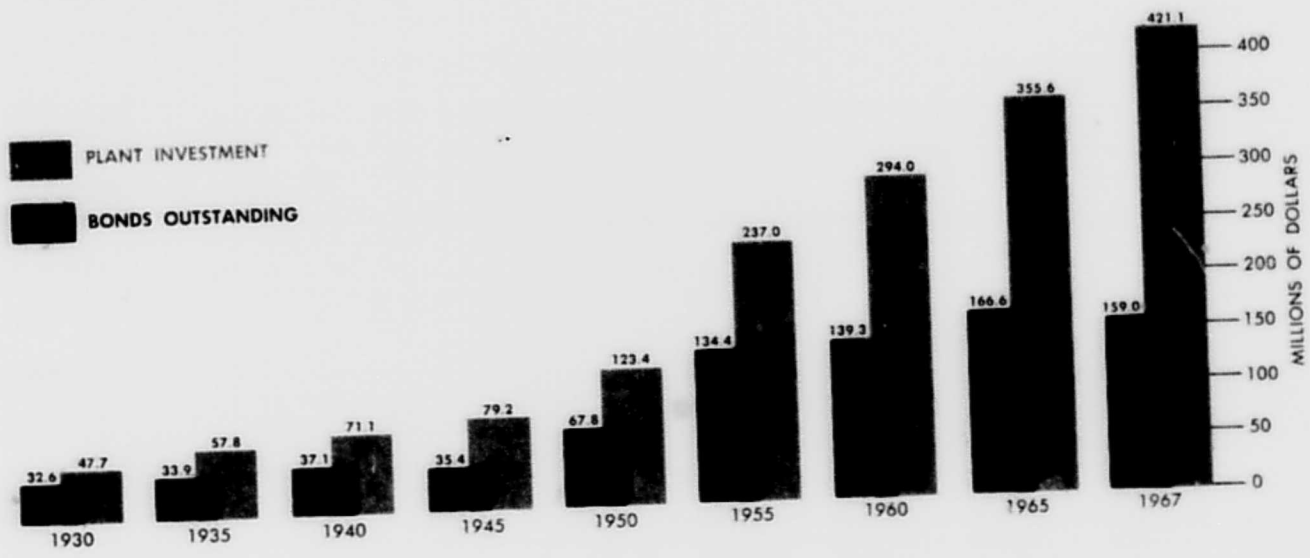
...ty Comptroller

STATEMENT OF BONDED DEBT

DECEMBER 31, 1967

NAME OF BOND	Year of Issue	When Due	Int. Rate	Amount Issued	Amount Redeemed	Amount Outstanding
BOND ISSUES FULLY REDEEMED:						
General Lien Bonds	1903-14	1923-34		$ 4,044,000	$ 4,044,000	
Revenue Bonds	1917-58	1923-70		82,931,000*	82,931,000*	
OUTSTANDING REVENUE BOND ISSUES:						
S.L.&P. Refunding Series L-S 5	1947	1954-70	2	7,000,000	5,329,000	$ 1,671,000
M.L.&P. Series L-L 1	1948	1953-73	2¾	6,000,000	2,518,000	3,482,000
M.L.&P. Series L-L 2	1948	1953-73	2¾	6,000,000	3,086,000	2,914,000
M.L.&P. Series L-L 3	1949	1954-74	2¼	9,000,000	4,753,000	4,247,000
M.L.&P. Series L-L 4	1950	1955-75	2¼	15,000,000	5,359,000	9,641,000
M.L.&P. Acquisition Series L-M	1951	1956-80	2	25,850,000	4,475,000	21,375,000
M.L.&P. Series L-N 1	1952	1970-83	2¾	28,000,000		28,000,000
M.L.&P. Series L-N 2	1952	1970-87	2¾	25,000,000		25,000,000
M.L.&P. 1958	1958	1968-77	3¼	4,100,000		4,100,000
M.L.&P. 1958	1958	1978-88	3½	13,525,000		13,525,000
S.M.L.&P. 1964	1964	1968-72	5	2,400,000		2,400,000
S.M.L.&P. 1964	1964	1990-93	3½	16,200,000		16,200,000
S.M.L.&P. 1964	1964	1973, 1986-89	3⅜	12,850,000		12,850,000
S.M.L.&P. 1964	1964	1982-85	3 3/10	3,700,000		3,700,000
S.M.L.&P. 1964	1964	1974-81	3¼	5,350,000		5,350,000
S.M.L.&P. 1964	1964	1994	3	4,500,000		4,500,000
TOTAL				$271,450,000*	$112,495,000*	$158,955,000
Less: Bonds due within one year						4,367,000
						$154,588,000

*Includes $16,761,000 redeemed by refunding issues.



INTEREST REQUIREMENTS AND PRINCIPAL REDEMPTION ON BONDS

OUTSTANDING DECEMBER 31, 1967

YEAR	INTEREST	REDEMPTION	TOTAL
1968	$ 4,539,508.75	$ 4,367,000.00	$ 8,906,508.75
1969	4,423,191.25	4,550,000.00	8,973,191.25
1970	4,296,606.25	5,419,000.00	9,715,606.25
1971	4,148,343.75	5,535,000.00	9,683,343.75
1972	3,994,846.25	5,664,000.00	9,658,846.25
1973	3,838,412.50	5,843,000.00	9,681,412.50
1974	3,673,225.00	5,984,000.00	9,657,225.00
1975	3,525,021.25	6,163,000.00	9,688,021.25
1976	3,374,625.00	6,290,000.00	9,664,625.00
1977	3,221,212.50	6,490,000.00	9,711,212.50
1978	3,059,950.00	6,645,000.00	9,704,950.00
1979	2,890,487.50	6,785,000.00	9,675,487.50
1980	2,706,750.00	6,980,000.00	9,686,750.00
1981	2,506,575.00	7,195,000.00	9,701,575.00
1982	2,298,175.00	7,420,000.00	9,718,175.00
1983	2,107,337.50	7,625,000.00	9,732,337.50
1984	1,938,175.00	7,800,000.00	9,738,175.00
1985	1,712,700.00	8,035,000.00	9,747,700.00
1986	1,444,237.50	6,300,000.00	7,744,237.50
1987	1,236,737.50	6,565,000.00	7,801,737.50
1988	1,012,900.00	6,800,000.00	7,812,900.00
1989	831,200.00	3,800,000.00	4,631,200.00
1990	702,000.00	3,800,000.00	4,502,000.00
1991	569,000.00	4,000,000.00	4,569,000.00
1992	429,000.00	4,100,000.00	4,529,000.00
1993	285,500.00	4,300,000.00	4,585,500.00
1994	135,000.00	4,500,000.00	4,635,000.00
TOTALS	$ 64,900,717.50	$158,955,000.00	$223,855,717.50

TAXES AND CON

DIRECT TAXES PAID AND

City occupational and busine
State public utilities and bus
King County, payment in lie
Whatcom County, payment i
Pend Oreille County, payme
Province of British Columbia
Federal Social Security tax

TOTAL (as shown in State

TAXES CHARGED TO ACCO

Federal license fee
Federal Social Security tax
State gasoline tax and auto
State sales tax
State license fee
State electrician's license
Whatcom County, payment
Pend Oreille County, payme
Pend Oreille County, payme
City of Tukwila franchise

OTHER CONTRIBUTIONS TO

Computed loss on cost of Se
in excess of general fund
Skagit Project school costs a

TOTAL, TAXES AND CONT

As a self-supporting agency, the cost of services and employee be payments included:

City Employees' Retirement
City Employees' Health Ca
Services by City Treasurer's
Other Services by General F

In addition, all net earnings—$ through bond redemption and equity accumulated to the end Light maintain rates among the

*State Gasoline Tax and Auto in 1967 on City Light vehicles portation Division are paid th this item.

31, 1967
TOTAL
8,906,508.75
8,973,191.25
9,715,606.25
9,683,343.75
9,658,846.25
9,681,412.50
9,657,225.00
9,688,021.25
9,664,625.00
9,711,212.50
9,704,950.00
9,675,487.50
9,686,750.00
9,701,575.00
9,718,175.00
9,732,337.50
9,738,175.00
9,747,700.00
7,744,237.50
7,801,737.50
7,812,900.00
4,631,200.00
4,502,000.00
4,569,000.00
4,529,000.00
4,585,500.00
4,635,000.00
$223,855,717.50

TAXES AND CONTRIBUTIONS TO THE COST OF GOVERNMENT

	1967	1966
DIRECT TAXES PAID AND LISTED AS TAXES:		
City occupational and business taxes	$2,679,860	$2,488,721
State public utilities and business activities taxes	1,661,104	1,615,039
King County, payment in lieu of taxes	280,961	288,393
Whatcom County, payment in lieu of taxes	110,000	75,000
Pend Oreille County, payment in lieu of taxes	51,667	
Province of British Columbia (Canada) land tax	198	186
Federal Social Security tax	459,755	
TOTAL (as shown in Statement of Earnings)	5,243,545	4,467,339
TAXES CHARGED TO ACCOUNTS OTHER THAN TAXES:		
Federal license fee	26,061	35,351
Federal Social Security tax	131,638	523,285
State gasoline tax and auto licenses*	4,815	4,809
State sales tax	935,209	1,067,682
State license fee	22,824	17,530
State electrician's license	100	100
Whatcom County, payment in lieu of school taxes	90,822	63,012
Pend Oreille County, payment in lieu of school taxes	35,782	37,337
Pend Oreille County, payment in lieu of taxes	103,333	155,000
City of Tukwila franchise	6,800	6,600
	1,357,384	1,910,706
OTHER CONTRIBUTIONS TO THE COST OF GOVERNMENT:		
Computed loss on cost of Seattle street lighting in excess of general fund appropriation	552,646	482,575
Skagit Project school costs absorbed	33,685	39,120
	586,331	521,695
TOTAL, TAXES AND CONTRIBUTIONS	$7,187,260	$6,899,740

As a self-supporting agency, the Lighting Department pays for its share of the cost of services and employee benefits provided by the City. In 1967 and 1966 payments included:

City Employees' Retirement System	$ 989,535	$ 821,606
City Employees' Health Care Plan	223,660	210,340
Services by City Treasurer's Office	87,303	86,317
Other Services by General Fund Departments	265,000	265,000

In addition, all net earnings—$7,073,439 in 1967—are reinvested in the utility through bond redemption and new construction. The $158,356,156 paid-up equity accumulated to the end of 1967 reduces financing costs and helps City Light maintain rates among the lowest in the nation.

*State Gasoline Tax and Auto Licenses amounting to approximately $39,545 in 1967 on City Light vehicles serviced by or rented from the Motor Transportation Division are paid through that division, hence are not included in this item.

ENVIRONMENT AND DISTRIBUTION

IN THE FINAL WEEKS OF 1967, Seattle City Light adopted a capital improvements construction program for 1968-1973 which included $66.8 million worth of underground transmission and distribution facilities construction. Additional expenditures toward making more presentable or inconspicuous those electric-utility installations which are above ground and visible are also provided for in the remaining $53 million of this $119.8 million program.

Seattle people have expressed in many ways their desire to create an urban environment in this community that is worthy of the natural endowments of the region. The sheer size of City Light's latest undergrounding and beautification program is a measure of this utility's determination to contribute what it can to the realization of Seattle's aspirations. Expenditures on the undergrounding program alone will average about $11.1 million annually, roughly one-fifth of City Light's entire projected operating revenue during the six years. The remainder of the six-year program brings construction expenditures up to an average annual total just under $20 million.

To meet the financing requirements of such a building program, City Light counts on generating a projected $67 million from utility operations during the six years and expects to raise $52 million by marketing revenue bonds. Three minor projects in the program will be partly financed by grants of urban renewal funds expected to total $700,000.

Projects and expenditures making up the $66.8 million undergrounding program are grouped in this way:

- Conversion of service from existing overhead to new underground distribution facilities in established commercial centers, and contributions to the costs of such conversions in residential neighborhoods where property owners supply a major part of the financing through local improvement district formation or other sponsorship, $19.4 million.
- Provision of underground service to new commercial areas, shopping centers, schools, apartment developments and (with developers' co-operation) residential tracts, $7.2 million.
- Conversion of service from existing overhead to new underground distribution facilities from the Elliott Bay waterfront to downtown streets already served by underground networks, between Bay Street and South Jackson Street, $2.6 million.
- Conversion of service from existing overhead to new underground distribution facilities along principal arterial streets of the city selected in co-ordination with the City Engineering Department for widening and other improvements, $18 million.
- Expansion and improvement of downtown Seattle's underground distribution networks to handle exceptional load growth, $16.5 million.
- Construction of the underground 115,000-volt transmission link between Broad Street Receiving Substation and the projected Massachusetts Street Receiving Substation, $3.1 million.

Overhead distribution system appearance improvements are provided for in a $13 million allocation distinct from the undergrounding program. This allocation covers continuing conversion of primary overhead distribution in selected portions of the City Light service area from 4,300 to 26,000 volts (yielding a less conspicuous type of installation and minimizing the need for neighborhood distribution substations in these areas) as well as a general beautifying and streamlining of visible distribution facilities.

Accomplishing the objectives of City Light's new undergrounding program will mean for Seattle that several long strides have been taken toward eventually adopting underground electrical distribution as the standard pattern of City Light service. No overhead-to-underground conversion projects approaching Seattle's in scope and cost have been reported from other cities, so far. Even City Light's recent achievements in undergrounding and beautification, while by no means negligible (see tabulation, below), have been comparatively limited. They were in part a means of testing public interest in such improvements, and in part a way of participating in the development of the techniques and materials the electric utility industry must acquire if the environmental benefits of underground distribution are going to be realized without intolerable distortions of present rate structures.

UNDERGROUNDING AND BEAUTIFICATION EXPENDITURES

April 1, 1960, through December 31, 1967

Year	Underground Conversions: Freeway, Civic Center & Peripheral Downtown Areas	Residential Undergrounding Projects	Underground Service & Transmission Line Installations	Additions to Existing Underground System	Overhead System and Substation Beautification	Total City Light Expenditures
1967	$ 723,781	$ 769,885	$1,196,803	$1,074,860	$ 39,732	$ 3,805,061
1966	1,276,707	124,722	3,144,922	508,828	34,587	5,089,766
1965	1,163,073	248,913	980,211	537,080	18,867	2,948,144
1964	457,622	65,708	382,754	746,670	3,373	1,656,127
1963	239,056	157,732	281,308	863,308	117,655	1,659,059
1962	220,159	59,229	143,581	648,099	296,086	1,367,154
1960-61	912,293	18,380		1,625,945	507,613	3,064,231
TOTALS	$4,992,691	$1,444,569	$6,129,579	$6,004,790	$1,017,913	$19,589,542

SYSTEM IMPROVEMENTS

City Light expended $31,738,703 in 1967 on the planning, engineering and construction of system capital improvements. Of this total, $18,856,709 was allotted to generating-plant improvements; $1,892,383 to work on power transmission facilities; $9,769,175 to electric distribution system extensions and betterments; and $1,220,436 to the improvement of general plant facilities, including communications.

BOUNDARY PROJECT

Boundary hydroelectric project construction work during the past year accounted for $17,825,257 of City Light's expenditures on generating-plant improvements and $1,654,592 of the year's expenditures on power transmission facilities: $19,479,849 altogether. Proceeds of 1964's $45 million sale of City Light revenue bonds having been entirely expended on Boundary project construction by November 1966, the construction work which carried the project to virtual completion in 1967 was financed exclusively with funds generated by City Light's operations in the current and prior years.

Substantial completion of the Boundary project work was the banner event of City Light's construction year. Concrete structures in the project's underground machine hall and adjoining galleries had been completed, in large part, by the beginning of 1967, and some blocks forming the arch of Boundary Dam had been built up to within 100 feet of the structure's ultimate crest elevation. By April, the last of the tailrace excavation work and all construction of draft-tube exits were finished, permitting the diversion tunnel to be closed. Under tight scheduling, gates were fitted to the giant sluiceways which pierce the dam 200 feet below its crest just before the undiverted river rose to pour through the sluice openings.

Final concrete placements in the dam structure occurred late in June. Meanwhile, the assembling and installing of machinery and electrical equipment were progressing well. By mid-July, the first turbine-generator unit was ready for test operation; early in August, the second. Then sluiceway gates were closed to fill the forebay so that the machines could be tested and adjusted during operation in the latter part of August. On September 1, both units began 'commercial' operation.

On September 16, the third Boundary unit began producing commercially; the fourth unit, completed in late October, was not officially in commercial operation until December 1. Fitting units as large as those at Boundary (initially rated at 150,000 kilowatts each) into the Pacific Northwest's highly integrated river- and power-management patterns demanded very close co-ordination among the region's utilities.

The Boundary development was formally dedicated on September 29, with municipal officers of Seattle, Spokane and other communities participating and with many Pend Oreille County public officials and residents in attendance. The impact of more than three years' active construction, involving at times as many as 1,300 men, on the economy of sparsely settled northern Pend Oreille County had been considerable. Rather than establish a new community near the project (as had been necessary in the isolated wilderness situation of Seattle's Skagit River projects), City Light had chosen to contribute a fair share of the cost of providing adequate public facilities in existing nearby communities: a new high school, a hospital addition, road and street improvements, better fire protection.

These betterments would be of lasting value to the communities of northern Pend Oreille County, as would payroll and other expenditures related to operating and maintaining the new generating station. Twelve of the 21 men occupying permanent Boundary project positions at the end of 1967 had been Eastern Washington residents when selected to work there. Recreational resources beneficial to area residents and potentially attractive to tourists are planned both by City Light — boat-launching and picnicking facilities on the western shore of the picturesque lake created by Boundary Dam — and by the U.S. Forest Service, which will augment its camping accommodations in the vicinity of the project.

To enlarge an existing Forest Service recreation site and give it usable frontage on the eastern shore of the Boundary reservoir, City Light in 1967 sold 47 acres of land acquired for the reservoir to the Forest Service for $14,300, retaining mineral and flooding rights in the tract.

Two agreements negotiated earlier in 1967 virtually completed City Light's acquisition of land and land-use rights needed for the Boundary project and

reservoir. Pend Oreille Mines & Metals Company accepted $796,000 as full compensation for the land and land rights City Light obtained from the company and for loss of generation at the company's small hydroelectric plant at Metaline Falls. This plant, from which some equipment was salvaged, was inundated by the filling of the Boundary reservoir. The other negotiated agreement provided for a $60,000 City Light payment to the State of Washington in lieu of the mining royalties the State might have collected if the Boundary project had not rendered some river-bottom areas unsuitable for mining operations.

PROJECT LICENSE APPLICATIONS

Preparation of an application for Federal Power Commission licensing of City Light's Cedar Falls hydroelectric project progressed but was not completed in 1967. (This project has not previously been licensed because construction of its principal features predated the existence of the FPC itself.) The application is being prepared in close co-ordination with the Seattle Water Department because the hydroelectric installations lie within the watershed of Seattle's domestic water supply system.

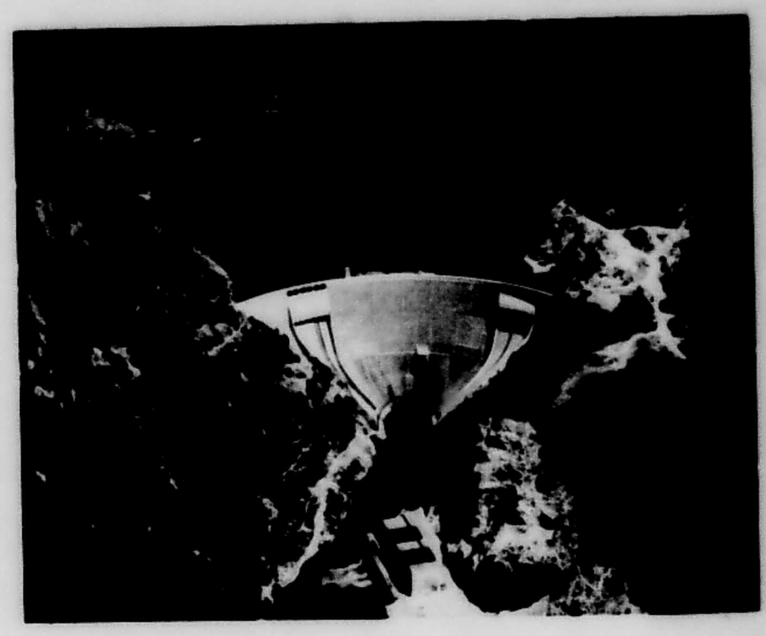
City Light submitted its application to the FPC in 1967 for a preliminary permit covering a proposed diversion of Thunder Creek, which flows into Diablo Lake, into the reservoir behind Ross Dam by means of a dam and tunnel. Diversion of this stream to a reservoir almost 400 feet higher than Diablo Lake would increase Ross Plant's output by about 15 per cent without affecting operations at the Gorge and Diablo plants, on the Skagit downstream from Ross.

SKAGIT RIVER PROJECTS

A 99-year agreement between the City of Seattle and the Province of British Columbia concluded at the beginning of 1967 permits City Light to flood more Canadian land at the head of Ross Lake by raising the surface of the lake as much as 125 feet. With FPC approval, City Light last spring enlarged the Ross Dam spillway gates so as to raise the lake's maximum surface elevation by 2½ feet. This minor change, by adding about 30,000 acre-feet to the reservoir's capacity, increased the annual energy capability of City Light's Skagit plants by some 25 million kilowatt hours.

The signing of the Seattle-British Columbia agreement, after many years of negotiation, reopened the subject of substantially increasing the height of Ross Dam to investigation. Technological advances in arch-dam design and construction that have occurred in the more than 30 years since Ross Dam was first conceived also have made a new investigation desirable. Accordingly, City Light engaged International Engineering Company, a San Francisco consultant firm, late in 1967 to study the Ross site and report on practical development schemes, with their estimated costs.

A concrete arch bridge was constructed to replace a temporary structure for vehicular access across the Skagit to Gorge Dam in 1967, and suspension bridges were erected at Devil's Creek and Lightning Creek on the trail along the eastern shore of Ross Lake. A facility to replace the Ross Lake floating camp was designed for 1968 construction. Ten new houses for City Light operating and maintenance employees were designed and, under contract, 98 per cent constructed in 1967. These units, at Newhalem, replace substandard structures dating back to the



Ross Dam, 540 feet high, was completed in 1949. Reservoir clearing a short distance beyond the dam indicates approximate level of 'ultimate height' development which would raise reservoir 125 feet and increase its capacity to 3.45 million acre-feet.

A permanent concrete vehicular bridge now spans the Skagit River downstream from Gorge Dam (background), where spillway is in action.

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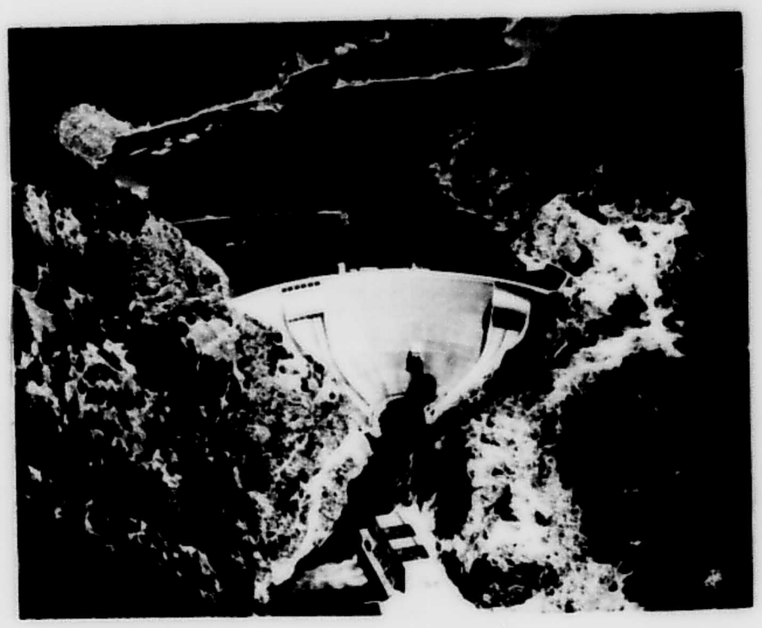

A permanent concrete vehicular bridge now spans the Skagit River downstream from Gorge Dam (background), where spillway is in action.

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Upper: Newly erected and occupied maintenance shops building at Newhalem is of prefabricated steel construction.

Lower: Newhalem, one of two Seattle City Light employee communities on the Skagit River, boasts ten new dwellings.

1920s. A prefabricated steel maintenance shops building which also replaces old, inadequate facilities was erected at Newhalem and almost entirely occupied by the end of 1967.

At all of City Light's Skagit installations last year, necessary maintenance work was combined with a general upgrading effort to achieve both better operation and improved presentability. The traditional conducted tours are bringing more visitors into these areas each year: last year, five instead of three daily tours were scheduled so that 35,000 people could be accommodated during the tour season. Probably as many more enjoyed the fishing, hiking and camping these areas afford.

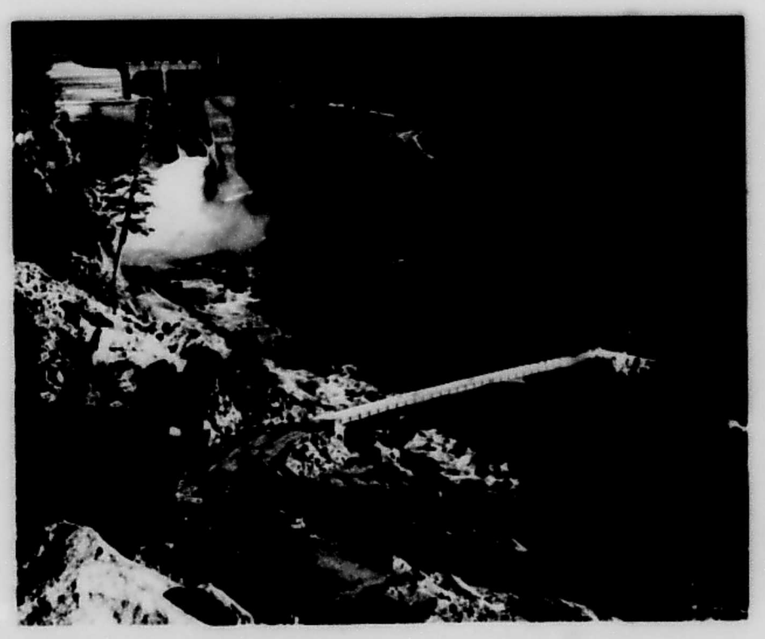
Progress of North Cross-State Highway construction past City Light project sites has made it necessary to plan for much greater traffic volumes in project areas in the future. The new administrative headquarters City Light must build at Newhalem when highway construction claims the site of the present small facility will probably provide some conveniences for visitors, for this reason.

TRANSMISSION SYSTEM

Freeway construction east of Lake Washington occasioned the relocation of four City Light 230,000-volt transmission line towers at the Factoria Interchange site and one near Woodinville. A new tower was erected to accommodate a revision of the same line (the Bothell-SnoKing-Duwamish line) which looped it into Bonneville Power Administration's Maple Valley Substation to give the City Light system its third South End 230,000-volt connection with the BPA grid.

Routings were selected and design work begun in 1967 for two new transmission lines to be constructed within the City Light service area. One of these, a 230,000-volt line on single steel poles, will link City Light's Duwamish and South Receiving Substations through a projected new West Seattle receiving substation (Delridge), and will provide a looped connection between South Substation and the projected new Massachusetts Street Receiving Substation.

The other new transmission line will be a 115,000-volt pipe-type underground installation which will link Massachusetts Street with the existing Broad Street Receiving Substation. This line will supplement the similar underground connection between the new East Pine Receiving Substation and Broad Street, completed late in 1966, in strengthening City Light's 115,000-volt system.



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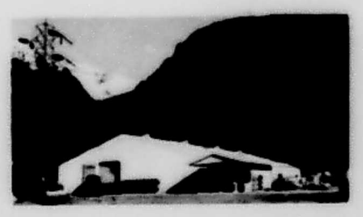


Upper: Newly erected and occupied maintenance shops building at Newhalem is of prefabricated steel construction.

Lower: Newhalem, one of two Seattle City Light employee communities on the Skagit River, boasts ten new dwellings.

ss Dam, 540 feet high, was completed in 1949. Reservoir clearing a short distance beyond the dam indicates approximate level of 'ultimate height' development which would raise reservoir 125 feet and increase its capacity to 3.45 million acre-feet.

1920s. A prefabricated steel maintenance shops building which also replaces old, inadequate facilities was erected at Newhalem and almost entirely occupied by the end of 1967.

At all of City Light's Skagit installations last year, necessary maintenance work was combined with a general upgrading effort to achieve both better operation and improved presentability. The traditional conducted tours are bringing more visitors into these areas each year: last year, five instead of three daily tours were scheduled so that 35,000 people could be accommodated during the tour season. Probably as many more enjoyed the fishing, hiking and camping these areas afford.

Progress of North Cross-State Highway construction past City Light project sites has made it necessary to plan for much greater traffic volumes in project areas in the future. The new administrative headquarters City Light must build at Newhalem when highway construction claims the site of the present small facility will probably provide some conveniences for visitors, for this reason.

TRANSMISSION SYSTEM

Freeway construction east of Lake Washington occasioned the relocation of four City Light 230,000-volt transmission-line towers at the Factoria Interchange site and one near Woodinville. A new tower was erected to accommodate a revision of the same line (the Bothell-SnoKing-Duwamish line) which looped it into Bonneville Power Administration's Maple Valley Substation to give the City Light system its third South End 230,000-volt connection with the BPA grid.

Routings were selected and design work begun in 1967 for two new transmission lines to be constructed within the City Light service area. One of these, a 230,000-volt line on single steel poles, will link City Light's Duwamish and South Receiving Substations through a projected new West Seattle receiving substation (Delridge), and will provide a looped connection between South Substation and the projected new Massachusetts Street Receiving Substation.

The other new transmission line will be a 115,000-volt pipe-type underground installation which will link Massachusetts Street with the existing Broad Street Receiving Substation. This line will supplement the similar underground connection between the new East Pine Receiving Substation and Broad Street, completed late in 1966, in strengthening City Light's 115,000-volt system.

SUBSTATIONS

At City Light's new East Pine Receiving Substation, energized at the end of 1966, the few uncompleted equipment installations were taken care of early in 1967 and the entire station site was landscaped. Construction of the new University Receiving Substation, for which engineering design work and equipment ordering had begun in 1966, got under way in 1967 and was 97 per cent complete by year-end.

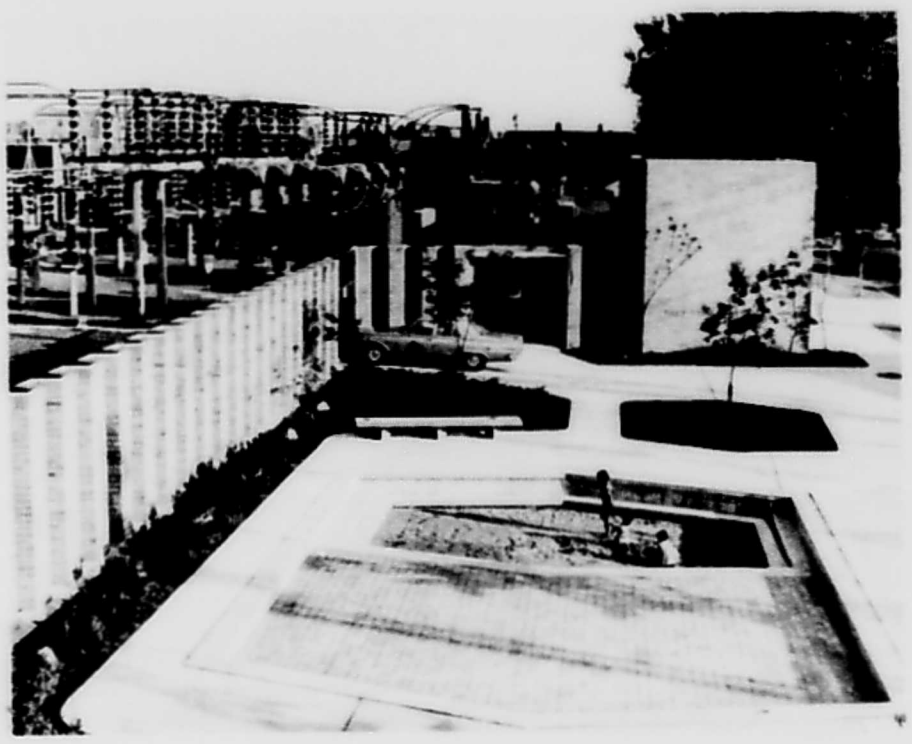
Energization of University Substation, scheduled for March 1968, will make its 225,000-kilovolt-ampere capacity available for expected additions to the facilities and electric service requirements of the University of Washington and will provide load relief for City Light's North Receiving Substation. University Substation is supplied from an overhead 115,000-volt transmission line which parallels the Freeway bridge over Lake Union. The 26,000-volt feeders from the new station are all carried in underground ducts.

City Light revised and added to the facilities at several existing receiving substations last year. At Duwamish, four 26,000-volt feeder positions and a 14.4-megavar capacitor bank were installed. At Broad Street, two additional 13,000-volt feeders were under construction to supply downtown underground networks, and the 26,000-volt feeder positions were being rearranged so that one would be free to serve local distribution while others supplied six 4,500-volt unit distribution substations. At Shoreline, a 14.4-megavar capacitor bank was added. At South, synchronous condenser windings were rebuilt, to specifications developed by City Light engineers, to counteract the effects of extreme duty imposed on these units by Bethlehem Steel Company's electric-arc furnaces.

Work accomplished at City Light's distribution substations in 1967 included replacement of the underground cables supplying a 4,000-volt transformer bank at Central Substation, in the sub-basement of the City Light Building. These cables failed during the afternoon of October 2, shutting down the entire station with its 50,000 kilovolt-amperes of downtown network load, to which service could not be restored (owing to fire damage and smoke) for 2½ hours. When this occurred, action had already been initiated to divide the 4,000-volt underground network serving part of Seattle's central business district into three separate networks, so as to lessen the effect of outages on the rare occasions when they occur and to make Central Substation a firmer supply for its important segment of the downtown load. Work on this project will be completed in 1968.

Five outdoor unit-type distribution substations were relocated last year and one new one was built: Harris Substation, on the east slope of Beacon Hill. Transformers at three substations serving industrial plants were replaced with larger transformers, while at another industrial substation, service to the customers' new switchgear was installed. City Light's substation beautification program continued active in 1967 with sprinkler installations and upgrading of landscaping in progress at several sites.

East Pine Receiving Substation's prize-winning design showcases a functional array of electrical apparatus inside its unusual brick protective wall and provides places for playing or relaxing all around the outside.



UNDERGROUND DISTRIBUTION

City Light organized a new construction and maintenance unit, the Underground Division, in 1967 in recognition of the growing volume of its underground distribution system engineering and construction activities, with all their specialized techniques and requirements. The new division, headed by a distribution engineer, was initially staffed with 35 engineering and office personnel and 165 men in

City Light crew plants distribution transformer in newly-made vault in Laurelhurst residential district, where underground utilities are replacing overhead service for over 1,000 homesites.

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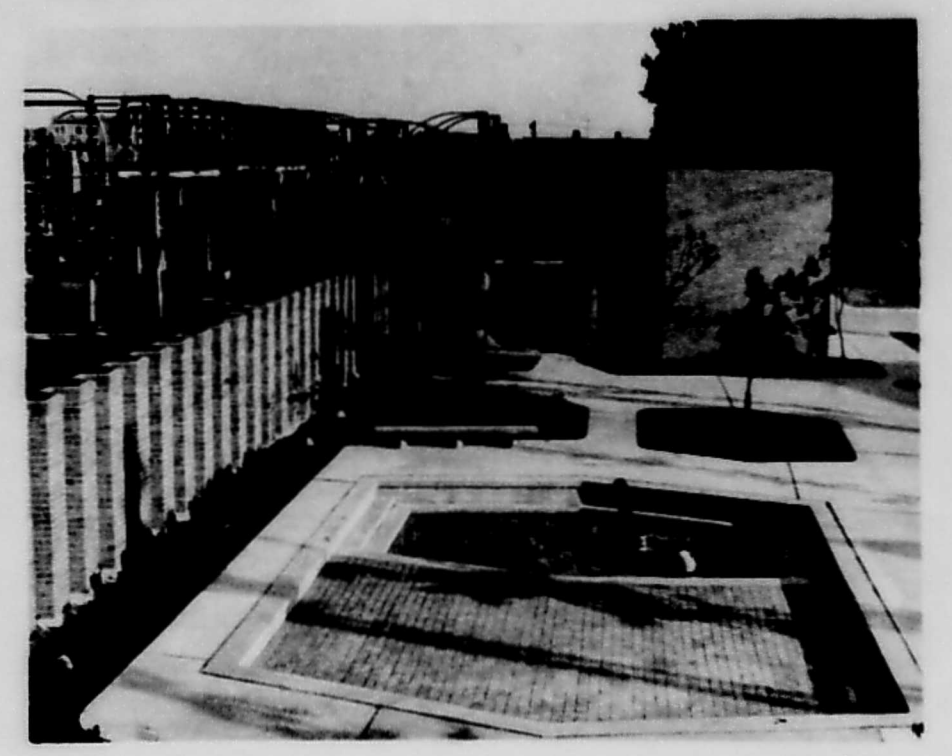

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City Light's experience with the design and maintenance of underground distribution systems, which goes back to 1910, indicates that it is much more difficult and expensive to expand, revise or repair an underground system than an equivalent overhead system. For this reason, it is economical to minimize future problems by designing and building underground installations as well as possible. Employing the best technology available to the electric utility industry, City Light has also cooperated with manufacturers and suppliers in efforts to develop better and cheaper cables, hardware and equipment for underground installations. The size and skills of City Light's underground crews are being developed to meet needs that cannot be met otherwise, since there is no local pool of craftsmen ready-trained in underground work that can be drawn upon.

City Light's installations of underground distribution continued to register genuine progress all last year, with a pronounced shift of emphasis from downtown to outlying areas. The 50-block University District undergrounding project, sponsored entirely by City Light on a determination that this outlying commercial center's electric load concentration would soon exceed the capacity of any practical overhead system expansion, was well along toward completion at the end of 1967, with 60 per cent of the area and 70 per cent of the loads cut over to underground service.

In the Laurelhurst residential district (a fine older neighborhood with paved streets and sidewalks, elaborate landscaping and many rockeries where City Light is sharing the cost of converting distribution from overhead to underground by contracting individually with 420 property owners and using its own forces to do the work), conversions had been completed for 200 properties by year-end. Prospects were good that City Light could complete this residential conversion project—reportedly the largest of its type in the nation—during 1968. Meanwhile, engineering of a similar project embracing another 640 homesites in an adjoining Laurelhurst neighborhood was already under way at City Light in 1967.

Elsewhere in Northeast Seattle, a contractor completed underground utility installations and street lighting to serve the 42 residences whose owners had formed a 'Sixty Below' corporation (named after the neighborhood's central street) to underwrite a major portion of the costs. Wherever there was neighborhood initiative in favor of conversion to underground service, City Light responded with encouragement and helped out with the planning. Although a few undergrounding projects have failed to get launched even after considerable preliminary work, at the end of 1967 there were good prospects that View Ridge (where formation of a local improvement district for the purpose was approved at a public hearing), Carleton Center, Aviation Heights, Hawthorne Hills, and Blue Ridge would inaugurate undergrounding projects.

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Upper: Underground service takes over and a pole comes down beside Olive Way, heavily traveled arterial exit from downtown Seattle to Central Freeway.

Lower: Pole removal along East 45th Street, in Seattle's outlying University district, where City Light serves a growing load with a new underground network installation.

Left: Setting a 75,000-kilovolt-ampere power transformer on prepared foundation at City Light's University Receiving Substation. Station site will be handsomely landscaped.

homesites in 46 new tract developments and 914 living units in 23 new apartment and court developments. At year-end, City Light had underground service installations under construction which were to serve 2,536 new single and multiple dwelling units. Builders and tract developers contributed to the cost of underground service installations related to new residential construction, which were entirely distinct from the more costly conversions from overhead to underground residential distribution.

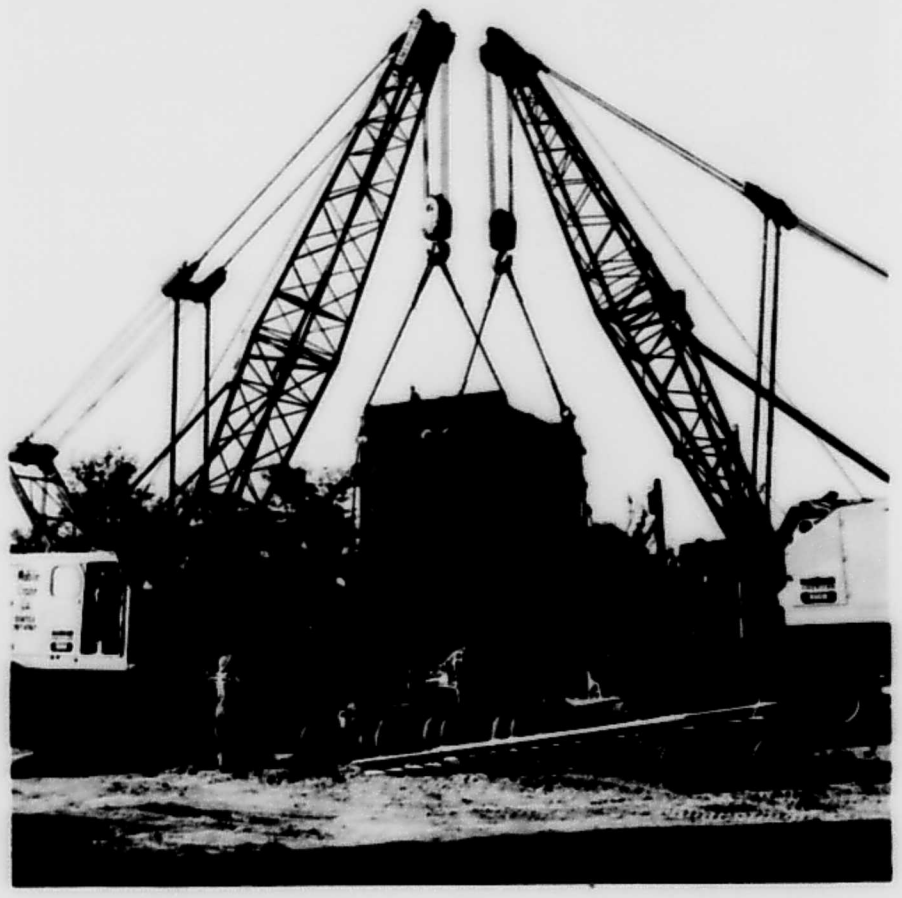
In the course of their year's work on underground system extensions and improvements, on overhead-to-underground conversions, and on the installation of underground services in overhead service areas, City Light's underground crews installed 215 transformers and removed 40, for a net gain in underground system transformer capacity of 56,993 kilovolt-amperes. About 258 circuit miles of underground cable were installed in City Light's service area in 1967. Continuing from preceding years the undergrounding of all Freeway cable crossings, City Light in 1967 completed that at Galer Street, which involved two 26,000-volt feeders.

OVERHEAD DISTRIBUTION

As the construction of underground distribution facilities progressed last year, loads were gradually being transferred from overhead facilities so that these, with their supporting poles, could be removed. Removal of overhead installations in the 'Sixty Below' conversion project area was completed in 1967. Removal operations were under way in connection with the University District, Laurelhurst and Stewart Street conversions; most or all of these removals would be finished in 1968.

Removal of overhead system apparatus to make way for freeway construction has kept pace with freeway

New high-intensity mercury vapor lighting installation invites after-dark strolling on the beachfront esplanade at West Seattle's beautiful Lincoln Park.



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The most important tasks of City Light's Overhead Construction Division continued to be, last year, the extension into additional areas of the new 26,000-volt primary distribution system and the provision of the necessary 26,000-volt feeder capacity at substations. Conversion of distribution from 4,300-volt to 26,000-volt primaries accounted for installations of pole-mounted 26,000-volt transformers with a combined capacity of about 54,000 kilovolt-amperes in 1967. Additionally some new loads were served from 26,000-volt feeders. Five additional 26,000-volt feeders were installed and energized at the new East Pine Substation last year, bringing the total there to seven. Two more feeders remain to be built at East Pine. About two miles of 26,000-volt feeders from the still newer University Substation will be constructed, starting in 1968.

City Light is expediting 4,300-to-26,000-volt conversions to release 4,300-volt unit substations for transfer to the areas selected to receive service at this voltage, where load growth has urgently required additional substation and feeder capacity. In these areas, large new individual loads will be served through the 26,000-volt system and the local distribution between these load centers and the nearest 26,000-volt lines will be converted to the higher-voltage service. City Light estimates that 60,000 kilovolt-amperes of load should be converted in this way to relieve the 4,300-volt distribution system.

STREET LIGHTING

The City Light-sponsored extension of high-intensity mercury vapor lighting to every residential street in Seattle was almost three-fourths completed by the end of 1967, with 17,350 of a projected 24,000 luminaires installed and 9,700 of the 14,000 incandescent lamp fixtures originally in the system taken down. Initially scheduled for completion by August 1968, the project may have to continue into 1969 because the crews available for this work are also meeting unprecedented demands for suburban and private street-lighting installations. These demands have accelerated in the past two years because a City Light street-lighting rate reduction coincided with rising public concern for the safety of streets at night.

In 1967, City Light crews installed about 4,200 mercury vapor luminaires along Seattle's residential streets, 336 units along secondary arterials in the city, and 1,685 units for individual property owners and for suburban street-lighting projects sponsored by water districts in the City Light service area. Apparently because mercury vapor lamps are less vulnerable to vandalism than incandescents, street-light maintenance men found only 250 of the former broken last year as against 3,200 of the latter.

GENERAL PLANT

Construction of general plant facility improvements concerned chiefly City Light's South Service Center in 1967. There, an extensive modernization program has had to be meshed with an unprecedented volume of warehousing and fabricating activity related to Boundary project construction and the expanding distribution system improvement programs.

The whole north end of the original Center structure, Building A, was vacated in preparation for the thorough interior and exterior rehabilitation work that is expected to get under way there in 1968. Service Center office

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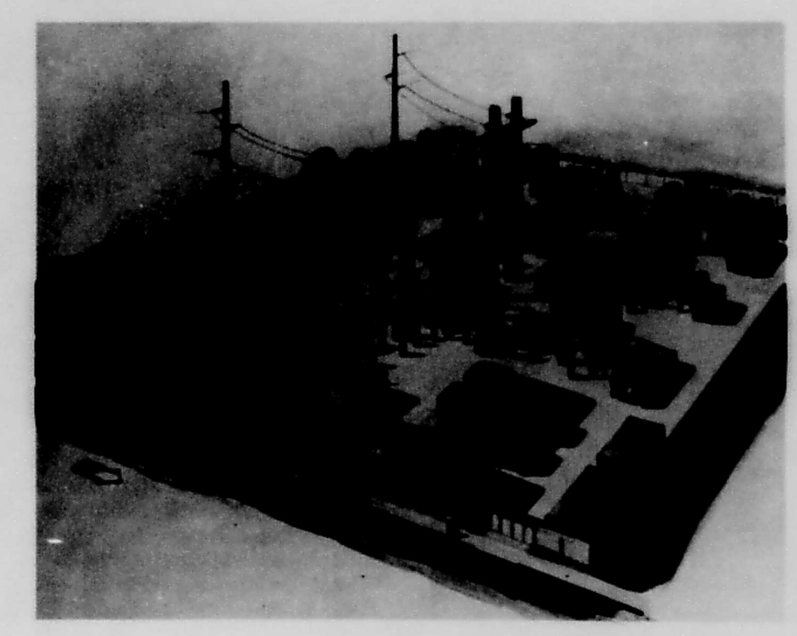
functions which had occupied this part of Building A were shifted temporarily to the new unit, Building B. City Light's appliance service shop, parts storage and crew headquarters, which will eventually occupy the rehabilitated portion of Building A, moved in August to temporary quarters in the same building from their old location in the basement of the City Light Building. Vehicular congestion in the basement and in nearby streets and alleys hampered the movements of service trucks in and out; furthermore, additional basement space was needed for activities centered in the City Light Building.

In this building, the principal improvement completed in 1967 was an air-conditioning and related cooling-tower installation which serves the commercial office and public-access areas of the building, located at street level. The second floor and the entire seven-story tower addition to the building had been air-conditioned when the tower was built, in 1957-1958. Refloor-ing and remodeling of the second level —a part of the original structure occupied in 1935—were also completed in 1967. Work space on this floor, shared among four engineering divisions and the new Underground and Station Construction and Operation Divisions, was completely rearranged and repartitioned.

Architect's sketch of City Light's projected Massachusetts Street Receiving Substation, scheduled to be in service in 1969. Situated near Elliott Bay, station will serve commercial-industrial district south of downtown Seattle.



CONSTRUCTION FORECAST

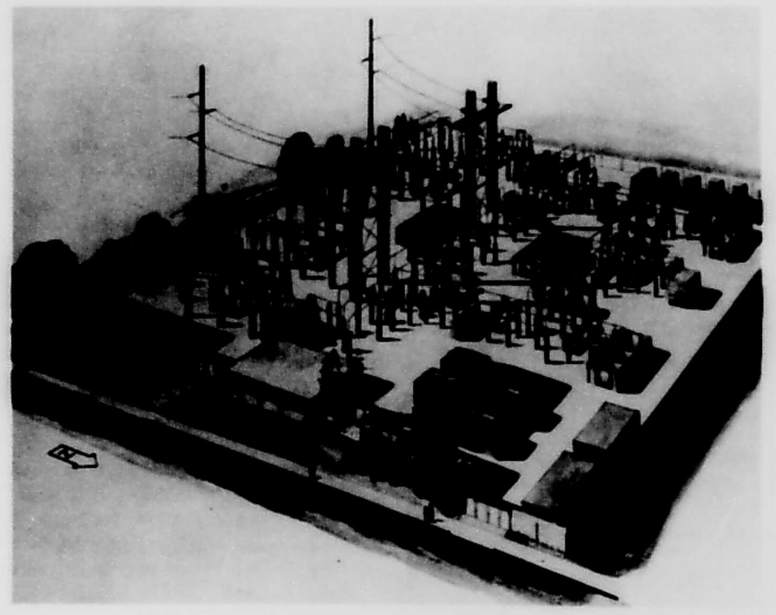
In addition to the $66.8 million worth of underground distribution system improvements construction summarized on page 22, City Light has included $53 million of construction related to other utility plant segments in its 1968-1973 capital improvements program, adopted late in 1967. Generating plant additions and improvements account for $14.9 million, transmission system improvements (other than underground installations) for $5 million, distribution system betterments for $30.8 million, and general plant betterments for $2.3 million of the $53 million portion of the six-year construction program. Specific allocations include:

- $10 million to the proposed diversion of Thunder Creek into Ross Lake.
- $5 million to construction of an additional 230,000-volt connection between the City Light system and the Bonneville transmission grid, with the necessary transmission lines and terminals at South End receiving substations; and construction of 230,000-volt transmission lines interconnecting Duwamish and South Substations with the projected new receiving substations, Delridge and Massachusetts Street.
- $1.3 million toward the $4.1 million total estimated cost of Delridge and Massachusetts Street Receiving Substations.
- $4.2 million to proposed future Union Street and North Park Substations, providing additional capacity necessitated by load growth in their areas.
- $9.1 million to the continuing distribution substation installation program.
- $13 million to the ongoing conversion of overhead distribution facilities from 4,300-volt to 26,000-volt primary service in selected areas, and to overhead system appearance improvements.
- $1.3 million to South Service Center modernization, City Light Building basement renovation, and anticipated replacement of Underground Division crew headquarters when the present facility's site is required for the projected roadway linking U.S. 99 with Interstate 5, south of Lake Union.
- $1 million to miscellaneous general plant improvements including communications equipment and the acquisition of a site diagonally across the intersection of Third Avenue and Madison Street from the City Light Building for future construction.

functions which had occupied this part of Building A were shifted temporarily to the new unit, Building B. City Light's appliance service shop, parts storage and crew headquarters, which will eventually occupy the rehabilitated portion of Building A, moved in August to temporary quarters in the same building from their old location in the basement of the City Light Building. Vehicular congestion in the basement and in nearby streets and alleys hampered the movements of service trucks in and out; furthermore, additional basement space was needed for activities centered in the City Light Building.

In this building, the principal improvement completed in 1967 was an air-conditioning and related cooling-tower installation which serves the commercial office and public-access areas of the building, located at street level. The second floor and the entire seven-story tower addition to the building had been air-conditioned when the tower was built, in 1957-1958. Reflooring and remodeling of the second level —a part of the original structure occupied in 1935—were also completed in 1967. Work space on this floor, shared among four engineering divisions and the new Underground and Station Construction and Operation Divisions, was completely rearranged and repartitioned.

Architect's sketch of City Light's projected Massachusetts Street Receiving Substation, scheduled to be in service in 1969. Situated near Elliott Bay, station will serve commercial-industrial district south of downtown Seattle.



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ADMINISTRATION

Organization. In 1967, City Light separated the underground distribution system engineering, construction, and maintenance functions of one of its oldest operating divisions, Inside Construction, from the division's other assignments to establish a new Underground Division. Headed by a distribution engineer who reports to City Light's director of operations, this unit implements the utility's progressive undergrounding programs with a well-balanced team of qualified specialists.

A permanent staff—19 men and their supervisor—was formed in 1967 to operate and maintain the new Boundary hydroelectric project. This group was assigned to a new division, Station Construction and Operation, in which were united all the remaining activities of the old Inside Construction Division: operation and maintenance of the Cedar Falls hydroelectric plant, the Lake Union and Georgetown steam plants, and all substations, along with the recently added responsibility of providing, testing and repairing all of City Light's communications equipment, relays, meters and instruments. The general supervisor of this new division also reports to City Light's director of operations.

The principal processing activities related to City Light's accounting function—data processing, general accounting, and customer accounting (the last including both consumer billing and consumer credit activities)—were given equal organizational status in 1967, under individual managers who report to the assistant director of finance and accounts.

Personnel shifts. Organizational changes and the retirement of 40 City Light employees during 1967 occasioned an unusual number of shifts in supervisory and managerial assignments. D. D. DeNise, appointed in 1955 to be City Light's first director of operations, retired early last year; his place was filled by Julian C. Whaley, distribution engineer in charge of Inside Construction. The retirement at the end of 1967 of Herbert V. Strandberg, who as City Light's chief electrical engineer in 1955 had become the first chief engineer to be so titled, set off a series of promotions: Robert L. Skone was named chief engineer, Lyle L. Gleason replaced him as chief electrical engineer, T. H. Reid was assigned to Mr. Gleason's former position as supervising senior engineer in charge of system planning, and Robert E. Mithoug became supervising senior engineer in charge of the protection, control and testing section in place of Mr. Reid.

Glenn O. Ward-Davis, formerly supervising senior engineer in Overhead Construction, was chosen to head the new Underground Division. Kenneth H. Hunich, stations general supervisor, was placed in charge of the new Station Construction and Operation Division. Gordon G. Smith succeeded Mr. Ward-Davis in Overhead Construction. L. A. Baunsgard replaced Walter T. Gustafson, who retired, as supervisor of the meters, relays and communications section. George P. Gaw became assistant director of finance and accounts following William M. Grosse's retirement. Clifford E. Aldrich was appointed to be the first supervisor of Boundary project operations. Joseph P. Recchi occupied the new position of assistant director of marketing and commercial operations.

Effective January 1, 1968, Superintendent of Lighting John M. Nelson was appointed to serve a second four-year term by Mayor Braman. He had become vice-chairman of the municipal Board of Public Works following the retirement of Water Superintendent J. Ray Heath. Also effective with the new year were the appointments of Lewis K. Ambrose to the new position of assistant power manager and of Lee D. Peha as safety supervisor in place of F. John Albi, who retired at year-end.

Employment. In December 1967, City Light was employing 1,932 persons, including three of the 21 Neighborhood Youth Corps enrollees who had been employed earlier in the year along with 28 City of

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Employment. In December 1967, City Light was employing 1,932 persons, including three of the 21 Neighborhood Youth Corps enrollees who had been employed earlier in the year along with 28 City of

Seattle Summer Youth Project youngsters. The year-end employment total, down 11 from a year earlier, reflected a decrease of 100 (from 127 to 27) in the temporary Boundary project construction payroll and several lesser changes, the most notable of which were increases of 31 (from 140 to 171) in underground construction and maintenance forces, 12 (from 316 to 328) in overhead system construction and maintenance forces, and the selection of 18 of the permanent Boundary project operating and maintenance employees.

Employment turnover for City Light as a whole averaged 84 per cent per month in 1967. Most of this turnover involved the less skilled employees: laborers, helpers, entry-level clerks. Although only 15 linemen terminated in 1967 as compared with 23 in 1966, recruiting and retaining satisfactory linemen continued to be a problem for City Light. Qualified male clerks also were scarce, and the small number of college-graduate engineers under 35 years old on City Light's payroll was cause for concern because it is from this group that the supervisors of a decade or two hence are expected to develop.

Education and training. At a net cost of $3,525, City Light paid tuition fees for employees who completed a total of 294 work-related college courses in 1967 at the University of Washington, Seattle University, and four community colleges. The percentage of authorized courses actually completed was the highest since this program began in 1963: 79.5 per cent.

As 1967 ended, City Light was working with Shoreline Community College to set up courses for sub-professional engineering specialists that would help them acquire sufficient academic background to qualify for state certification as engineers in training. City Light's engineering trainee program was being strengthened, at the same time, to make it more useful in the recruiting of newly-graduated engineers and in developing engineering talent.

In response to urgent needs, City Light expanded the utility lineman apprenticeship program (part of a larger City of Seattle program) last year. Where only two men had completed this apprenticeship in 1966, nine earned their certificates in 1967 and four others were continuing their training although they had qualified for appointment as journeymen through Civil Service examinations. Sixteen new men entered the program in 1967 as against ten in 1966. Apprentices carried over from the previous year mounted from 12 at the beginning of 1966 to 18 at the beginning of 1967 and 21 at the beginning of 1968.

Seattle Community College evening courses in electrical and other subjects, offered not only in Seattle but at Newhalem in the Skagit area and at Selkirk High School not far from the Boundary project, continued to be popular with City Light employees—and potential City Light employees: the Selkirk High courses helped prepare several successful candidates for permanent positions at Boundary. During working hours, at least 76 City Light employees participated in workshops, seminars and short courses dealing with a great variety of subjects in the year just past.

Safety training. City Light continued to emphasize safety and first-aid instruction in 1967. Employee injuries were down 14 per cent, time-loss injuries were down 30 per cent, and employee days lost on account of injury were down 50 per cent in 1967 from the 1966 figures. City Light's safety office staged 159 safety meetings last year and processed 178 employee safety suggestions. All employees covered by state industrial insurance were given an eight-hour refresher course in first aid. National Safety Council 'safe driver' awards were won by 313 City Light truck drivers. Those with 20 or more years of accidentless driving to their credit were entertained at a special breakfast meeting.

Data processing center. Processor and printer units of the NCR 315 electronic computer which City Light operates for all City departments were exchanged for similar but faster units in 1967 in order to gain a 10- to 15-per-cent capacity increase for the operation, which is on virtually a round-the-clock basis. New assignments given the data-processing center in 1967 included compilations for the Executive Department's Motor Transportation Division and Budget Director, processing of parking-ticket data for the Traffic Violations Bureau, a load-flow analysis for City Light's Underground Division, and computations for City Light engineering and power management activities. Processing of City Light's regular stores inventory was transferred from tabulating equipment to the computer in 1967, and other accounting procedures were being prepared for computerization.

GENERATING CAPA
AND TOTAL INSTA

YEAR	
1905	Cedar Falls Hydro Units 1 & 2
1908	Cedar Falls Hydro Unit 3
1909	Cedar Falls Hydro Unit 4
1912	Lake Union Hydro Unit 10
1914	Lake Union Steam Unit 11
1918	Lake Union Steam Unit 12
1921	Lake Union Steam Unit 13
1921	Newhalem Hydro Unit 20
1921	Cedar Falls Hydro Unit 5
1924	Gorge Hydro Unit 21
1924	Gorge Hydro Unit 22
1929	Gorge Hydro Unit 23
1929	Cedar Falls Hydro Unit 6
1932	Cedar Falls Hydro Units 1, 2,
1932	Lake Union Hydro Unit 10
1936	Diablo Hydro Unit 31
1936	Diablo Hydro Units 35 & 36
1937	Diablo Hydro Unit 32
1951	Georgetown Steam Units 1, 2,
1951	Gorge Hydro Unit 24
1952	Ross Hydro Unit 44
1953	Ross Hydro Unit 43
1954	Ross Hydro Unit 42
1956	Ross Hydro Unit 41
1958	Diablo Plant Modernization
1961	Gorge Hydro, High Dam

*Retirement of units (decrease in total capab

SYSTEM REQUIREME

Year	Kilowatts Average Load	K Pe
1905	224	
1910	3,843	
1915	5,235	
1920	10,880	
1925	21,851	
1930	42,468	
1935	39,877	
1940	5[illegible],597	
1945	118,292	
1950	134,030	
1955	381,517	
1960	512,787	
1961	528,733	
1962	565,808	
1963	579,493	1,0
1964	607,533	1,1
1965	635,275	1,1
1966	679,203	1,1
1970	791,700†	1,4
1975	946,900†	1,7

†Estimated

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GENERATING CAPABILITY ADDITIONS AND TOTAL INSTALLED CAPABILITY

YEAR		JANUARY PEAKING CAPABILITY KW ADDED	TOTAL KW
1905	Cedar Falls Hydro Units 1 & 2	2,400	2,400
1908	Cedar Falls Hydro Unit 3	4,000	6,400
1909	Cedar Falls Hydro Unit 4	4,000	10,400
1912	Lake Union Hydro Unit 10	1,500	11,900
1914	Lake Union Steam Unit 11	10,000	21,900
1918	Lake Union Steam Unit 12	13,500	35,400
1921	Lake Union Steam Unit 13	16,500	51,900
1921	Newhalem Hydro Unit 20	2,000	53,900
1921	Cedar Falls Hydro Unit 5	15,000	68,900
1924	Gorge Hydro Unit 21	20,000	88,900
1924	Gorge Hydro Unit 22	20,000	108,900
1929	Gorge Hydro Unit 23	20,000	128,900
1929	Cedar Falls Hydro Unit 6	15,000	143,900
1932	Cedar Falls Hydro Units 1, 2, 3, 4	*10,400*	133,500
1932	Lake Union Hydro Unit 10	*1,500*	132,000
1936	Diablo Hydro Unit 31	64,500	196,500
1936	Diablo Hydro Units 35 & 36	3,000	199,500
1937	Diablo Hydro Unit 32	64,500	264,000
1951	Georgetown Steam Units 1, 2, 3	21,000	285,000
1951	Gorge Hydro Unit 24	48,000	333,000
1952	Ross Hydro Unit 44	90,000	423,000
1953	Ross Hydro Unit 43	90,000	513,000
1954	Ross Hydro Unit 42	90,000	603,000
1956	Ross Hydro Unit 41	90,000	693,000
1958	Diablo Plant Modernization	27,000	720,000
1961	Gorge Hydro, High Dam	67,000	787,000

*Retirement of units (decrease in total capability)

SYSTEM REQUIREMENTS

Year	Kilowatts Average Load	Kilowatts Peak Load
1905	224	760
1910	3,843	10,175
1915	5,235	13,500
1920	10,880	25,000
1925	21,851	51,00[illegible]
1930	42,468	89,50[illegible]
1935	39,877	88,000
1940	54,597	124,000
1945	118,292	222,000
1950	154,030	312,000
1955	381,517	733,000
1960	512,787	889,000
1961	528,733	962,000
1962	565,808	985,000
1963	579,493	1,028,000
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1965	635,275	1,138,000
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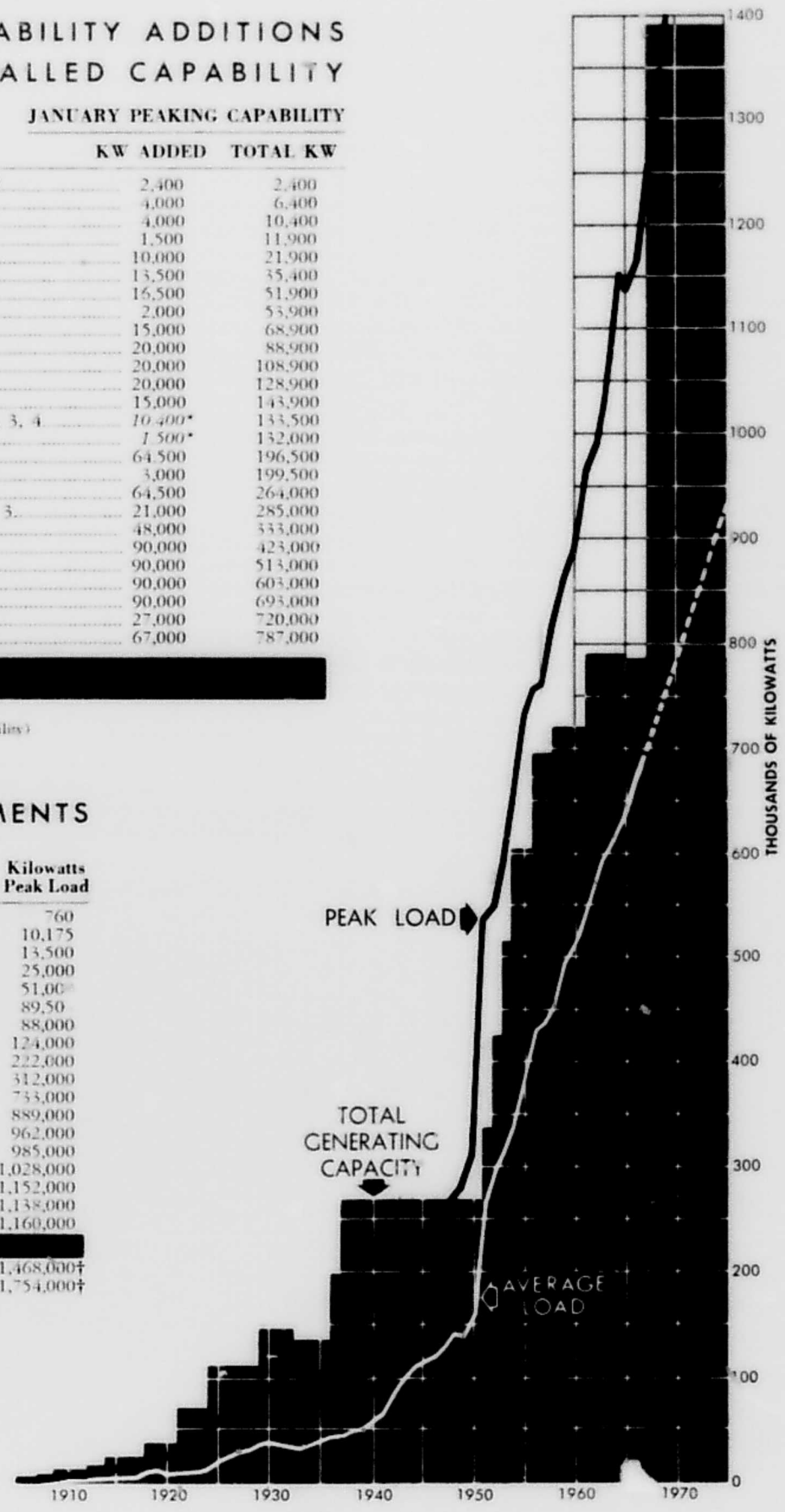

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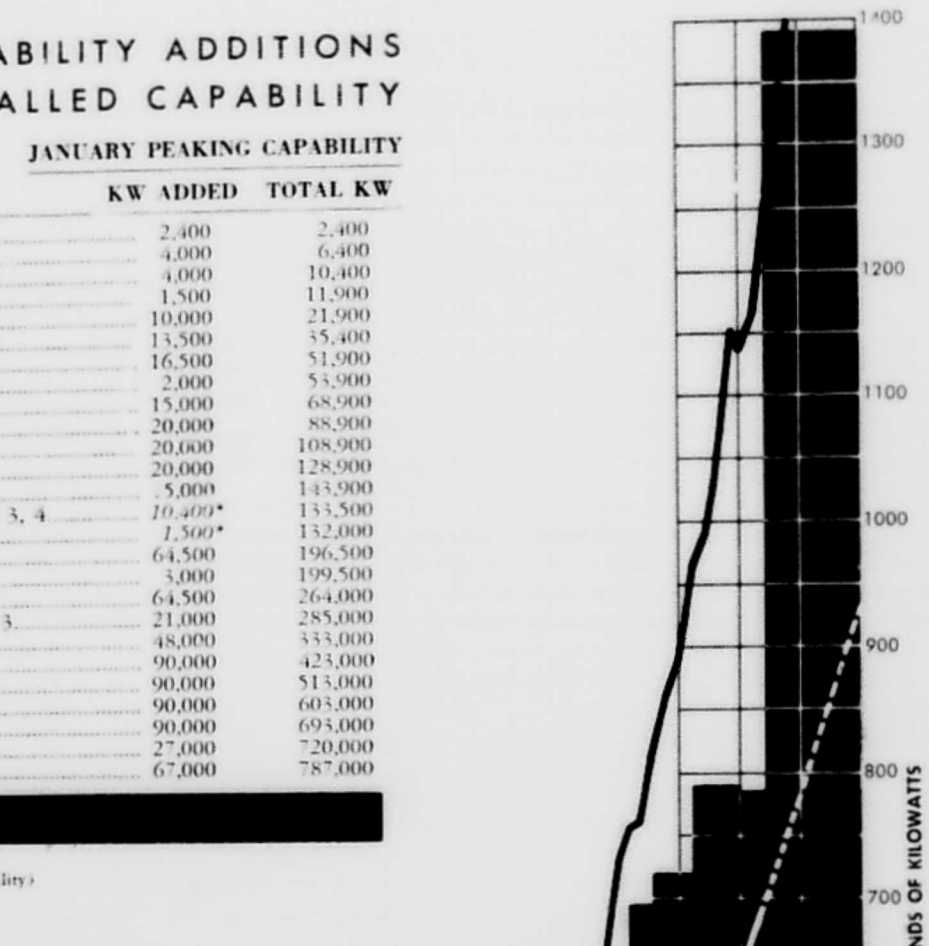

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C. G. ERLANDSON
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CM 69.14

The City of Seattle—Legislative Department

MR. PRESIDENT:

Date Referred and Adopted NOV 6 1968

Your Committee on Finance and City Utilities

to which was referred the within Annual Report of Seattle City Light

for the year 1967,

would respectfully report that we have considered the same and respectfully recommend that

THE SAME BE PLACED ON FILE.

Fin. Committee

C.N. Committee

UNIVERSITY PRINTING CO.