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GAS UTILITIES

(Transport and Distribution Systems)

DECEMBER(1) 1963

For the twelve-month period January to December 1963, total net deliveries increased 7.5 per cent to 812,038,024 Mcf. from 755,424,830 Mcf. last year. Total net deliveries amounted to 2,323,284 Mcf./day. Exports for the twelve months of 1963 totalled 359,606,260 Mcf. compared with 342,812,316 Mcf. in 1962, up 4.9 per cent.

In December 1963 gas utilities received from field gathering systems and processing plants 90,592,104 Mcf. of natural gas. The transport systems accounted for 65,156,131 Mcf., while the distribution systems received 25,435,973 Mcf.; natural gas received from storage was 7,247,873 Mcf. The total supply of gas utilities totalled 97,914,626 Mcf., of this, 50,937,687 Mcf. were sold to ultimate customers in Canada, an increase of 17.2 per cent, while exports amounted to 35,988,642 Mcf., up 12.6 per cent over last year. The difference between gas supply and deliveries was accounted for by losses including cyclical billing adjustments, line pack changes and small deliveries to storage. Transport systems delivered 35,871,114 Mcf. to distribution systems in December 1963.

The transport systems which represent virtually all of the major "intercity" movements of natural gas had traffic amounting to 58.2 billion commodity (Mcf.) miles (1,328 ton-miles) during December 1963 compared with 48.6 billion (1,109 ton-miles) last year. Total commodity miles for the year 1963 were 580,400,095 Mcf. (13,233 ton-miles) compared with 513,703,911 Mcf. (11,712 ton-miles) last year.

Utility receipts of natural gas produced in Alberta totalled 75.2 billion cubic feet; of this, 24.2 per cent was sold to ultimate customers in Alberta, 13.6 per cent in Ontario, 3.7 per cent in Quebec, 3.3 per cent in Manitoba, 3.0 per cent in Saskatchewan and 1.7 per cent in British Columbia. In Table 3 gas received from and delivered to storage are considered as having terminated or originated in the province where the storage is located.

Revenue for the natural gas utilities for the month was \$44,350,495 and for manufactured and liquefied petroleum gases systems \$228,360, giving a combined Gas Utilities total of \$44,578,855.

Starting in January of 1963 this report had revisions in concept to bring it into line with the practice of industry and to remove complex reporting problems for the respondents. All gas volumes are now given in cubic feet measured at 14.73 p.s.i.a. and 60° F; that is, without adjustments to a common B.T.U. base. Gas sales and exports in cubic feet containing 1,000 B.T.U.'s at 14.73 p.s.i.a. and 60° F are given separately in Tables 4 and 5 in the companion publication "Sales of Manufactured and Natural Gas", Catalogue number 45-005. As a result of these changes it has been necessary to revise historical figures to enable more meaningful comparisons.

The effect of this change in concept is that previous years sales were overstated for Alberta and British Columbia. Revised figures for sales and exports for the period 1957 to 1963 are presented in the December "Sales of Manufactured and Natural Gas", (Tables 7 to 13), Catalogue number 45-005.

Residential sales and a substantial portion of the smaller commercial sales are for the most part made through "positive displacement meter" and adjustments to a common base are only close approximations; industrial and larger commercial sales are for the most part "orifice meter" sales which are easily adjusted to the common base. All sales are reported on a billing month basis, consequently "Line losses and unaccounted for" include a cyclical billing adjustment.

(1) Contains several revised figures (see tables).

Industry Division

April 1964
8506-503

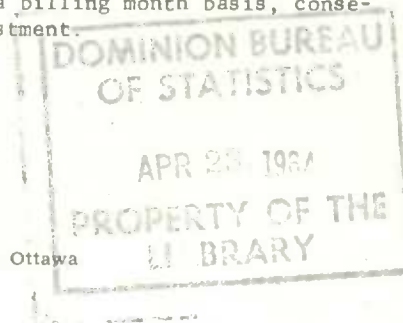


TABLE 1. Receipts and Disposition of Natural Gas Utilities by Province
December 1963

| No. | | New Brunswick | Quebec | Ontario |
|-----|--|---------------|-----------|------------|
| | | | Mcf. | |
| | <u>Receipts</u> | | | |
| 1 | By transport systems: | | | |
| 1a | Fields | - | - | - |
| 1b | Processing plants | - | - | - |
| 2 | By distribution systems: | | | |
| 2a | Fields | 13,326 | - | 1,894,336 |
| 2b | Processing plants | - | - | - |
| 3 | Total (1 + 2) | 13,326 | - | 1,894,336 |
| 4 | Imports | - | - | - |
| 5 | Other receipts | - | - | 3,367 |
| 6 | Total net receipts (3 + 4 + 5) | 13,326 | - | 1,897,703 |
| 7 | Received from storage | - | - | 6,638,834 |
| 9 | Total supply of gas utilities (6 + 7) | 13,326 | - | 8,536,537 |
| | Transfers from: | | | |
| 11 | Other provinces | - | 2,866,181 | 18,514,851 |
| 12 | Distribution to transport (primary) | - | - | 623,790 |
| 13 | Other gas utilities | - | 2,866,181 | 28,399,840 |
| 19 | Total gross receipts (9 + 11 + 12 + 13) ... | 13,326 | 5,732,362 | 56,075,018 |
| | <u>Disposition</u> | | | |
| | Sales: | | | |
| 20 | Residential | 4,661 | 1,361,465 | 7,793,372 |
| 21 | Industrial | - | 1,105,846 | 7,485,475 |
| 22 | Commercial | 1,963 | 291,201 | 2,941,880 |
| 30 | Total sales (20 + 21 + 22) | 6,624 | 2,758,512 | 18,220,727 |
| 31 | Exports | - | - | 206,681 |
| 32 | Other deliveries | - | - | 901 |
| 33 | Total net deliveries (30 + 31 + 32) | 6,624 | 2,758,512 | 18,428,309 |
| 34 | Delivered to storage | - | - | - |
| 35 | Line pack fluctuation | - | - 6,894 | - 22,713 |
| 36 | Gas used in system | - | 9,233 | 870,136 |
| 37 | Line losses and unaccounted for | 6,702 | 105,330 | 4,909,475 |
| 39 | Total demand on gas utilities (33 + 34 + 35 + 36 + 37) | 13,326 | 2,866,181 | 24,185,207 |
| | Transfers to: | | | |
| 40 | Other provinces | - | - | 2,866,181 |
| 41 | Distribution by transport (primary) | - | 2,866,181 | 21,792,953 |
| 42 | Other gas utilities | - | - | 7,230,625 |
| 49 | Total disposition (39 + 40 + 41 + 42) | 13,326 | 5,732,362 | 56,075,018 |

† Revised figures.

TABLE 1. Receipts and Disposition of Natural Gas Utilities by Month, Canada, 1963

| No. | | January | February | March | April | May |
|-----|--|-------------|-------------|-------------|-------------|-------------|
| | | | | Mcf. | | |
| | <u>Receipts</u> | | | | | |
| 1 | By transport systems: | | | | | |
| 1a | Fields | 6,490,502 | 5,665,269 | 5,185,435 | 4,817,434 | 3,969,236 |
| 1b | Processing plants | 53,448,663 | 45,922,308 | 50,341,692 | 45,448,449 | 44,410,120 |
| 2 | By distribution systems: | | | | | |
| 2a | Fields | 20,099,614 | 15,790,009 | 14,239,942 | 11,394,674 | 9,779,643 |
| 2b | Processing plants | 6,544,092 | 6,772,147 | 7,614,165 | 6,155,868 | 6,333,738 |
| 3 | Total (1 + 2) | 86,582,871 | 74,149,733 | 77,381,234 | 67,816,425 | 64,492,737 |
| 4 | Imports | 213,784 | 166,149 | 987,966 | 1,124,916 | 875,595 |
| 5 | Other receipts | 82,482 | 40,522 | 1,002 | 441 | 17,726 |
| 6 | Total net receipts (3 + 4 + 5) | 86,879,137 | 74,356,404 | 78,370,202 | 68,941,782 | 65,386,058 |
| 7 | Received from storage | 8,536,394 | 5,486,862 | 2,646,935 | 773,968 | 152,844 |
| 9 | Total supply of gas utilities (6 + 7) | 95,415,531 | 79,843,266 | 81,017,137 | 69,715,750 | 65,538,902 |
| | Transfers from: | | | | | |
| 11 | Other provinces | ... | ... | ... | ... | ... |
| 12 | Distribution to transport (primary) | 4,275,301 | 4,737,209 | 3,624,455 | 2,988,816 | 3,874,616 |
| 13 | Other gas utilities | 43,342,270 | 38,021,384 | 35,730,383 | 30,669,258 | 28,038,503 |
| 19 | Total gross receipts (9 + 11 + 12 + 13) | 143,033,102 | 122,601,859 | 120,371,975 | 103,373,824 | 97,452,015 |
| | <u>Disposition</u> | | | | | |
| | Sales: | | | | | |
| 20 | Residential | 24,487,687 | 24,217,941 | 19,618,195 | 13,908,773 | 9,552,827 |
| 21 | Industrial | 18,467,506 | 17,030,474 | 19,176,060 | 19,602,222 | 20,192,971 |
| 22 | Commercial | 10,897,541 | 10,826,176 | 8,844,584 | 6,530,644 | 4,534,231 |
| 30 | Total sales (20 + 21 + 22) | 53,852,734 | 52,074,591 | 47,638,839 | 40,041,639 | 34,280,029 |
| 31 | Exports | 34,608,544 | 29,721,885 | 32,520,099 | 29,464,060 | 28,532,280 |
| 32 | Other deliveries | 88,879 | 65,370 | 68,550 | 59,194 | 56,316 |
| 33 | Total net deliveries (30 + 31 + 32) | 88,550,157 | 81,861,846 | 80,227,488 | 69,564,893 | 62,868,625 |
| 34 | Delivered to storage | 766,307 | 580,226 | 951,620 | 1,836,791 | 3,655,424 |
| 35 | Line pack fluctuation | 168,468 | - 110,881 | 254,266 | - 188,432 | - 72,489 |
| 36 | Gas used in system | 2,125,732 | 1,883,954 | 1,922,048 | 1,572,385 | 1,508,466 |
| 37 | Line losses and unaccounted for | 3,804,867 | - 4,371,879 | - 2,338,285 | - 3,069,887 | - 2,421,124 |
| 39 | Total demand on gas utilities (33 + 34 + 35 + 36 + 37) | 95,415,531 | 79,843,266 | 81,017,137 | 69,715,750 | 65,538,902 |
| | Transfers to: | | | | | |
| 40 | Other provinces | ... | ... | ... | ... | ... |
| 41 | Distribution by transport (primary) | 34,377,018 | 29,710,223 | 27,422,291 | 22,906,425 | 21,685,383 |
| 42 | Other gas utilities | 13,240,553 | 13,048,370 | 11,932,547 | 10,751,649 | 10,227,720 |
| 49 | Total disposition (39 + 40 + 41 + 42) | 143,033,102 | 122,601,859 | 120,371,975 | 103,373,824 | 97,452,015 |

* Revised figures.

TABLE 1. Receipts and Disposition of Natural Gas Utilities by Month, Canada, 1963

| June | July | August | September | October | November | December | Year to date | | No. |
|-------------|------------|------------|------------|-------------|-------------|-------------|-------------------|-------------------|-----|
| | | | | | | | 1963 ^F | 1962 ^F | |
| Mcf. | | | | | | | | | |
| 3,545,883 | 3,917,797 | 4,473,601 | 4,720,859 | 5,022,913 | 6,187,700 | 6,877,372 | 60,874,001 |) | 1a |
| 40,807,081 | 41,167,577 | 40,752,094 | 42,215,524 | 45,840,931 | 52,106,765 | 58,278,759 | 560,739,963 |) | 1b |
| 7,666,185 | 6,862,754 | 7,467,238 | 8,209,324 | 10,655,546 | 15,068,377 | 16,575,475 | 143,808,781 |) | 2a |
| 6,227,544 | 5,813,608 | 6,023,038 | 6,397,408 | 7,138,785 | 7,547,240 | 8,860,498 | 81,428,131 |) | 2b |
| 58,246,693 | 57,761,736 | 58,715,971 | 61,543,115 | 68,658,175 | 80,910,082 | 90,592,104 | 846,850,876 | .. | 3 |
| 828,262 | 867,400 | 859,313 | 809,481 | 68,025 | 9,773 | 12,710 | 6,823,374 | 5,477,463 | 4 |
| 4,042 | 10,081 | 9,846 | 9,715 | 9,362 | 10,240 | 61,939 | 257,398 | 36,846 | 5 |
| 59,078,997 | 58,639,217 | 59,585,130 | 62,362,311 | 68,735,562 | 80,930,095 | 90,666,753 | 853,931,648 | .. | 6 |
| 39,489 | - | 2,264 | 7,112 | 294,597 | 2,329,767 | 7,247,873 | 27,518,105 | 26,378,593 | 7 |
| 59,118,486 | 58,639,217 | 59,587,394 | 62,369,423 | 69,030,159 | 83,259,862 | 97,914,626 | 881,449,753 | .. | 9 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 |
| 4,400,065 | 5,105,874 | 4,764,739 | 3,855,268 | 4,140,394 | 2,968,330 | 3,285,502 | 48,020,563 |) | 12 |
| 24,171,023 | 24,629,384 | 25,111,177 | 26,826,572 | 29,446,417 | 36,305,214 | 46,159,102 | 388,450,687 |) | 13 |
| 87,689,574 | 88,374,475 | 89,463,310 | 93,051,263 | 102,616,970 | 122,533,406 | 147,359,230 | 1,317,921,003 | .. | 19 |
| 5,602,252 | 3,477,050 | 3,035,356 | 3,784,998 | 6,031,555 | 11,959,412 | 20,180,322 | 145,856,368 | 134,919,118 | 20 |
| 19,364,972 | 18,606,378 | 19,473,061 | 19,434,988 | 21,215,754 | 22,007,749 | 20,806,654 | 235,378,789 | 213,467,798 | 21 |
| 2,786,605 | 1,886,996 | 1,869,999 | 2,714,615 | 3,481,096 | 6,039,943 | 9,950,711 | 70,363,141 | 63,674,593 | 22 |
| 27,753,829 | 23,970,424 | 24,378,416 | 25,934,601 | 30,728,405 | 40,007,104 | 50,937,687 | 451,598,298 | 412,061,509 | 30 |
| 26,118,308 | 26,871,216 | 26,295,124 | 27,125,032 | 29,289,379 | 33,071,691 | 35,988,642 | 359,606,260 | 342,812,316 | 31 |
| 52,586 | 50,623 | 55,297 | 61,063 | 79,197 | 92,626 | 103,765 | 833,466 | 551,005 | 32 |
| 53,924,723 | 50,892,263 | 50,728,837 | 53,120,696 | 60,096,981 | 73,171,421 | 87,030,094 | 812,038,024 | 755,424,830 | 33 |
| 5,862,640 | 6,751,487 | 5,776,280 | 4,813,658 | 3,758,519 | 687,550 | 520,079 | 35,960,581 | 26,038,186 | 34 |
| - 159,822 | - 266,566 | 231,302 | 226,529 | - 102,523 | 280,533 | 143,260 | 403,645 | .. | 35 |
| 1,475,841 | 1,521,333 | 1,531,913 | 1,591,855 | 1,703,544 | 1,805,843 | 2,552,148 | 21,195,062 | .. | 36 |
| - 1,984,896 | - 259,300 | 1,319,062 | 2,616,685 | 3,573,638 | 7,314,515 | 7,669,045 | 11,852,441 | .. | 37 |
| 59,118,486 | 58,639,217 | 59,587,394 | 62,369,423 | 69,030,159 | 83,259,862 | 97,914,626 | 881,449,753 | .. | 39 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | 40 |
| 16,947,007 | 16,385,216 | 16,936,705 | 18,332,801 | 20,682,808 | 27,309,709 | 35,871,114 | 288,566,710 | .. | 41 |
| 14,624,081 | 13,350,042 | 12,939,211 | 12,349,039 | 12,904,003 | 11,963,835 | 13,573,490 | 147,904,540 | .. | 42 |
| 87,689,574 | 88,374,475 | 89,463,310 | 93,051,263 | 102,616,970 | 122,533,406 | 147,359,230 | 1,317,921,003 | .. | 49 |

.. Figures not available.
 ... Figures not appropriate or not applicable.

TABLE 3. Receipts and Disposition of Natural Gas by Source

December 1963

| No. | | New Brunswick | Ontario | Saskatchewan | Alberta | British Columbia | Imports from U.S.A. | Total | |
|-----|--|---------------|-----------|--------------|------------|------------------|---------------------|------------|--|
| | | Mcf. | | | | | | | |
| | <u>Receipts</u> | | | | | | | | |
| 1 | By transport systems: | | | | | | | | |
| 1a | Fields | - | - | - | 6,564,037 | 313,335 | ... | 6,877,372 | |
| 1b | Processing plants | - | - | - | 48,048,846 | 10,229,913 | ... | 58,278,759 | |
| 2 | By distribution systems: | | | | | | | | |
| 2a | Fields | 13,326 | 1,894,336 | 772,072 | 13,885,862 | 9,879 | ... | 16,575,475 | |
| 2b | Processing plants | - | - | 2,488,221 | 6,306,633 | 65,644 | ... | 8,860,498 | |
| 3 | Total (1 + 2) | 13,326 | 1,894,336 | 3,260,293 | 74,805,378 | 10,618,771 | ... | 90,592,104 | |
| 4 | Imports | ... | ... | ... | ... | ... | 12,710 | 12,710 | |
| 5 | Other receipts | - | 3,367 | - | 58,572 | - | ... | 61,939 | |
| 6 | Total net receipts (3 + 4 + 5) | 13,326 | 1,897,703 | 3,260,293 | 74,863,950 | 10,618,771 | 12,710 | 90,666,753 | |
| 7 | Received from storage | - | 6,638,834 | 260,411 | 348,628 | - | ... | 7,247,873 | |
| 9 | Total supply of gas utilities (6 + 7) | 13,326 | 8,536,537 | 3,520,704 | 75,212,578 | 10,618,771 | 12,710 | 97,914,626 | |
| | <u>Disposition</u> | | | | | | | | |
| | Sales: | | | | | | | | |
| 23 | British Columbia | - | - | - | 1,253,834 | 3,133,340 | - | 4,387,174 | |
| 24 | Alberta | - | - | - | 18,223,419 | - | 12,710 | 18,236,129 | |
| 25 | Saskatchewan | - | - | 2,046,985 | 2,288,375 | - | - | 4,335,360 | |
| 26 | Manitoba | - | - | 542,572 | 2,450,589 | - | - | 2,993,161 | |
| 27 | Ontario | - | 8,000,330 | - | 10,220,397 | - | - | 18,220,727 | |
| 28 | Quebec | - | - | - | 2,758,512 | - | - | 2,758,512 | |
| 29 | New Brunswick | 6,624 | - | - | - | - | - | 6,624 | |
| 30 | Total sales (23 + 24 + 25 + 26 + 27 + 28 + 29) | 6,624 | 8,000,330 | 2,589,557 | 37,195,126 | 3,133,340 | 12,710 | 50,937,687 | |
| 31 | Exports | - | - | - | 29,005,136 | 6,983,506 | ... | 35,988,642 | |
| 32 | Other deliveries | - | - | - | 103,765 | - | ... | 103,765 | |
| 33 | Total net deliveries (30 + 31 + 32) | 6,624 | 8,000,330 | 2,589,557 | 66,304,027 | 10,116,846 | 12,710 | 87,030,094 | |
| 34 | Delivered to storage | - | - | 39,276 | 480,803 | - | - | 520,079 | |
| 35 | Line pack fluctuation | - | - | 9,175 | 30,838 | 103,247 | - | 143,260 | |
| 36 | Gas used in system | - | 21,582 | 52,649 | 2,277,590 | 200,327 | - | 2,552,148 | |
| 37 | Line losses and unaccounted for | 6,702 | 514,625 | 830,047 | 6,119,320 | 198,351 | - | 7,669,045 | |
| 39 | Total demand on gas utilities (33 + 34 + 35 + 36 + 37) | 13,326 | 8,536,537 | 3,520,704 | 75,212,578 | 10,618,771 | 12,710 | 97,914,626 | |

... Figures not appropriate or not applicable.

TABLE 4. Operating Statistics: Natural Gas Utilities

December 1963

| | Natural gas transport systems | Natural gas distribution systems | Total natural gas utilities |
|---------------------------------|-------------------------------|----------------------------------|-----------------------------|
| Daily sendouts (Mcf.): | | | |
| December 1963: | | | |
| Daily average | 2,318,057 | 1,643,151 | 2,824,199 |
| Maximum(1) | 2,677,506 | ... | ... |
| Minimum(1) | 2,072,572 | ... | ... |
| Exports maximum(1) | 1,208,998 | ... | 1,208,998 |
| December 1962 [†] : | | | |
| Daily average | .. | 1,402,282 | .. |
| Maximum(1) | 2,412,942 | ... | ... |
| Minimum(1) | 1,769,767 | ... | ... |
| Year to date 1963: | | | |
| Daily average | 1,775,816 | 1,237,256 | 2,323,284 |
| Maximum(1) | 2,677,506 | ... | ... |
| Minimum(1) | 1,130,725 | ... | ... |
| Commodity miles: | | | |
| Mcf. miles (thousands) | 58,241,915 | .. | .. |
| Ton-miles (millions) | 1,328 | .. | .. |
| Line pack: | | | |
| Beginning of month (Mcf.) | 6,475,443 | .. | .. |
| End of month (Mcf.) | 6,594,431 | .. | .. |
| Operating revenues | (\$)21,832,921 | (\$)34,475,588 | (\$)44,350,495(2) |

(1) Non-coincident.

(2) Interindustry revenues eliminated.

.. Figures not available.

... Figures not appropriate or not applicable.

† Revised figures.

TABLE 5. Manufactured and Liquefied Petroleum Gases Utilities

Receipts and Disposition

December 1963

| | Manufactured | Liquefied petroleum gases |
|--|--------------|---------------------------|
| | Mcf. | |
| Gas receipts | 65,311 | 261,630 |
| Deliveries to ultimate customers | 62,482 | 229,027 |
| Line pack fluctuations | - | 2,074 |
| Gas used in system | - 2,074 | 2,925 |
| Metering difference, line losses, cyclical billing adjustments and unaccounted for | 4,903 | 27,604 |
| Total disposition | 65,311 | 261,630 |
| Daily average sendout | 2,016 | 7,388 |
| Revenues | (\$)46,574 | (\$)181,786 |



TABLE 6. Exports and Imports to and from the United States

December 1963

| Customs port | Exports | Imports |
|------------------------------------|------------|---------|
| | Mcf. | |
| Cornwall, Ontario | 206,681 | - |
| Ojibway, Ontario | - | - |
| Emerson, Manitoba | 6,327,239 | - |
| Coutts, Alberta | 578 | 12,710 |
| Aden, Alberta | 1,451,773 | - |
| Carway, Alberta | 926,387 | - |
| Kingsgate, British Columbia | 17,790,656 | - |
| Huntingdon, British Columbia | 9,285,328 | - |
| Canada | 35,988,642 | 12,710 |