

COMMUNICATIONS, ENERGY, AND SCIENCE

This section presents statistics relating to postal services, telephones, telegraphs, radio, television, and newspapers; electrical, gas and petroleum power and energy; and scientific resources.

Hawaii is served by all communications media. The most recent statistics indicate 76 post offices, 568,000 telephones, 33 radio stations, 12 television stations, and seven daily newspapers. Island residents completed 1.15 billion local telephone calls, 5.35 million inter-island calls, and 10.70 million transpacific calls in 1975. The largest daily newspaper reported a paid circulation of 113,500.

Electricity sales exceeded 5.3 billion kilowatt-hours in 1975, or 7,400 per residential customer. The total has doubled since 1966. Manufactured gas sales reached 35.6 million therms in 1975, three-quarters above the figure ten years earlier.

The liquid fuel tax base for 1975 was approximately 839 million gallons, compared with 825 million in 1974 and 396 million in 1965. The 1975 total included 285 million gallons of gasoline, 462 million of aviation fuel, and 88 million of diesel oil.

The State is well served with scientific resources. A 1974 inventory reported 367 companies and agencies with research or scientific capabilities. Employment in these organizations was more than 31,600. Sixty-one patents were granted to Hawaii residents in 1975, the largest number on record.

Information on communications, energy and science can be obtained from reports and records of the U.S. Postal Service, U.S. Bureau of Mines, Federal Communications Commission, Federal Power Commission, Hawaii State Department of Taxation, Hawaii State Public Utilities Division, individual utility companies, and Audit Bureau of Circulations. Detailed statistics on energy consumption, with special emphasis on petroleum products, appear in *Energy Use in Hawaii*, published by the Department of Planning and Economic Development in 1974. *Hawaii's Scientific Resources, 1974-1975*, also issued by DPED in 1974, contains information on scientific organizations and facilities in the Islands. Data for the nation as a whole can be found in the *Statistical Abstract of the United States: 1975*, Section 18, 19, and 20.

Table 208.—POSTAL SERVICE: 1958 TO 1975

Year	Number of post offices ¹	Gross postal receipts (\$1,000) ²	Pieces of mail handled (millions) ²
1958 ³	88	(NA)	(NA)
1959.....	85	(NA)	(NA)
1960.....	83	7,732	127
1961.....	82	8,434	(NA)
1962.....	82	11,041	(NA)
1963.....	80	13,037	(NA)
1964.....	80	(NA)	(NA)
1965.....	80	13,692	144
1966.....	80	14,984	147
1967.....	80	15,881	149
1968.....	80	17,617	159
1969.....	80	20,178	172
1970.....	80	20,840	187
1971.....	80	21,976	201
1972 ⁴	78	23,434	215
1973.....	77	27,100	226
1974.....	76	29,663	233
1975.....	76	33,549	238

NA Not available.

¹As of June 30. Includes all 1st-, 2nd-, 3rd-, and 4th-class post offices; excludes branches and stations.

²Years ended June 30.

³For earlier years, see *The State of Hawaii Data Book 1974*, p. 193.

⁴Revised.

Source: *Annual Report of the Postmaster General* for 1958-1970; *Statistical Abstract of the United States* for 1960-1971; U.S. Post Office, San Francisco, records (for 1962-1963); U.S. Postal Service, Honolulu, records (for 1971 and later years).

Table 209.—TELEPHONE SERVICE: 1958 TO 1975

Year	Telephones in service, Dec. 31			Local calls completed (1,000)	Interisland calls		Transpacific calls	
	State total	Oahu	Other islands		Paid ¹	Completed	Paid, in and out ²	Hawaii originated
1958	176,750	143,189	33,561	353,990	352,181	375,032	326,669	197,089
1959	191,373	156,291	35,082	383,017	441,676	467,216	433,793	253,690
1960	208,411	171,793	36,618	413,908	512,404	538,317	516,527	303,334
1961	221,599	183,401	38,198	422,729	519,789	545,777	569,122	335,104
1962	233,680	193,570	40,110	434,132	573,789	605,138	702,428	403,051
1963	247,629	205,342	42,287	449,933	651,787	669,781	750,161	421,900
1964	265,793	220,939	44,854	470,097	794,060	808,729	926,424	523,803
1965	283,689	236,006	47,683	506,198	948,585	969,531	1,336,557	757,352
1966	302,506	251,505	51,001	539,632	1,129,492	1,153,375	1,687,105	957,163
1967	323,849	268,190	55,659	562,522	1,332,551	1,354,805	2,144,049	1,271,406
1968	352,196	291,317	60,879	585,071	1,624,206	1,649,734	2,594,151	1,558,008
1969	381,982	314,915	67,067	611,919	1,963,219	1,994,026	3,267,601	1,948,391
1970	414,165	339,952	74,213	631,543	2,288,320	2,317,727	3,753,449	2,257,208
1971 ³	445,995	365,733	80,262	667,542	2,569,758	2,607,521	4,476,130	2,517,860
1972	498,593	412,443	86,150	702,346	3,072,319	3,131,881	5,427,667	3,055,018
1973 ⁴	523,699	430,612	93,087	1,016,950	3,754,413	3,804,616	6,813,550	3,794,848
1974	544,718	444,359	100,359	1,078,658	4,494,314	4,564,049	8,619,719	4,775,288
1975	567,685	460,602	107,083	1,154,045	5,156,241	5,352,232	10,703,400	5,907,991

¹Excludes uncollectables.

²Includes calls paid in Hawaii and elsewhere.

³Defense Administrative Telephone System (DATS) taken over by Hawaiian Telephone Company in 1971. DATS telephones in service numbered 4,423 (all on Oahu) as of December 31, 1971.

⁴The sharp increase in completed local calls is attributable in part to a change in the method of estimation.

Source: Hawaiian Telephone Co., records.

Table 210.—TELEPHONE SERVICE, BY ISLAND: 1975

Subject	State total	Hawaii	Maui	Lanai	Molokai	Oahu, except DATS ¹	DATS ¹	Kauai
Telephones in service ²	567,685	50,090	33,131	820	2,191	431,437	29,165	20,851
Residence main stations ²	250,319	22,034	15,431	575	1,317	201,471	...	9,491
Business main stations ²	64,522	5,427	3,844	103	310	37,405	15,052	2,381
Local calls:								
Originating ³	1,538,726,841	...	...	...	...	...	...	...
Completed ³	1,154,045,131	...	...	...	...	...	...	...
Interisland calls:								
Completed ⁴	5,352,232	1,167,859	999,302	...	...	2,613,949	...	571,122
Paid ³	5,156,241	...	...	...	...	...	...	...
Transpacific paid calls:								
Hawaii originating ⁴	5,907,991	331,733	390,562	...	...	5,016,952	...	168,744
Incoming and outgoing ³	10,703,400	...	...	...	...	...	...	...

¹Defense Agency Telephone Service, all on Oahu.

²As of December 31.

³Not available by island.

⁴Molokai and Lanai combined with Oahu.

Source: Hawaiian Telephone Company, records.

Table 211.—TELEGRAPH MESSAGES: 1970 TO 1975

Year	Total messages	From Hawaii to Mainland			From Mainland to Hawaii		
		Total from Hawaii	Originated in Hawaii	Originated elsewhere	Total to Hawaii	Originated on Mainland	Originated elsewhere
1970	567,550	266,811	198,830	67,981	300,739	236,106	64,633
1971	419,188	201,600	135,581	66,019	217,588	154,506	63,082
1972	392,596	189,214	122,792	66,422	203,382	141,682	61,700
1973	385,823	198,693	136,747	61,946	187,130	116,850	70,280
1974	382,281	185,204	100,321	84,883	197,077	125,319	71,758
1975	346,851	166,700	81,986	84,714	180,151	110,390	69,761

Source: Federal Communications Commission, Common Carrier Bureau, records.

Table 212.—PAID CIRCULATION OF DAILY AND SUNDAY ENGLISH-LANGUAGE NEWSPAPERS: 1958 TO 1975

Year	Honolulu Advertiser ¹	Honolulu Star-Bulletin ¹	Sunday Star-Bulletin and Advertiser ²	Hawaii Tribune-Herald ³	
				Daily	Sunday
1958	46,347	97,680	...	9,755	9,765
1959	51,424	102,929	...	9,895	10,021
1960	64,287	104,901	...	9,884	9,898
1961	70,097	104,212	...	10,421	10,433
1962	62,239	100,858	146,540	10,679	10,824
1963	59,391	102,195	141,202	10,826	10,910
1964	62,337	105,099	145,934	11,006	11,060
1965	64,435	107,976	152,156	11,136	11,265
1966	66,499	109,865	156,123	11,447	11,600
1967	67,550	112,182	160,147	10,944	11,124
1968	70,135	115,688	166,171	11,645	11,813
1969	71,835	119,148	168,034	12,473	12,706
1970	74,318	123,765	174,069	13,125	13,469
1971	74,441	124,601	177,929	13,851	14,167
1972	72,723	126,341	181,452	14,250	14,683
1973	74,799	129,561	187,648	15,669	16,045
1974	76,196	121,163	184,528	15,724	16,253
1975	71,937	113,541	179,790	15,843	16,560

¹Published daily, Monday through Saturday. Data are five-day averages through 1961 and six-day averages thereafter, for six-month periods ended September 30.

²First published in 1962, replacing the separate Sunday editions of the Advertiser and Star-Bulletin. The Sunday Advertiser reported average circulations of 77,279 in 1958, 86,289 in 1959, 81,400 in 1960, and 84,653 in 1961. The Sunday Star-Bulletin, first issued November 1, 1959, reported average circulations of 111,450 in 1960 and 113,498 in 1961. All data are averages for six-month periods ended September 30.

³Published daily. Data are averages for the fourth quarter (October through December) through 1972 and for six-month periods ended September 30 beginning in 1973.

Source: Audit Bureau of Circulations data supplied by the Hawaii Newspaper Agency, Inc., and the Hawaii Tribune-Herald.

Table 213.—COMMERCIAL AND EDUCATIONAL RADIO AND TELEVISION BROADCAST STATIONS ON THE AIR: 1958 TO 1976

Year (as of January 1)	Commercial			Educational	
	AM	FM	TV ¹	FM	TV ¹
1958	15	1	7	2	—
1959	15	1	7	2	—
1960	17	1	7	2	—
1961	18	1	8	1	—
1962	20	1	9	1	—
1963	20	1	10	1	—
1964	23	2	10	1	—
1965	23	2	10	—	—
1966	24	2	10	—	—
1967	25	2	10	—	2
1968	25	3	10	—	2
1969	25	4	10	—	2
1970	25	4	10	1	2
1971	25	4	10	1	2
1972	25	5	10	1	2
1973	24	5	10	1	2
1974	25	7	10	1	2
1975	26	5	10	1	2
1976	26	6	10	1	2

¹Includes satellites but excludes translators.

Source: Federal Communications Commission, records; FCC data cited in *Statistical Abstract of the United States, 1959-1970*.

Table 214.—TELEPHONE AVAILABILITY AND TELEVISION SETS IN OCCUPIED HOUSING UNITS, BY COUNTY: 1970

Subject	State total	City and County of Honolulu	Hawaii County	Kauai County	Maui County
All occupied units	203,088	164,763	17,260	8,282	12,783
Telephone:					
Available	185,265	152,198	14,907	7,064	11,096
None	17,823	12,565	2,353	1,218	1,687
Number of television sets:					
One	143,288	114,351	13,101	6,376	9,460
Two or more	46,373	41,254	2,286	864	1,969
None	13,427	9,158	1,873	1,042	1,354

Source: U.S. Bureau of the Census, *U.S. Census of Housing: 1970*, Final Report HC(1)-B13, tables 32, 37, 62, and 63.

Table 215.—CABLE TELEVISION COMPANIES, 1961 TO 1975, AND SUBSCRIBERS, 1970 TO 1975
(As of December 31)

Year	State total	City and County of Honolulu	County of Hawaii	County of Kauai	County of Maui
Companies:					
1961-1962 ¹	1	1	—	—	—
1963	2	2	—	—	—
1964-1967	4	4	—	—	—
1968	5	4	—	—	1
1969-1970	6	5	—	—	1
1971-1972	7	5	—	1	1
1973	8	5	1	1	1
1974	10	5	3	1	1
1975	10	5	3	1	1
Subscribers:					
1970 ²	12,091	11,066	—	—	1,025
1971	13,718	12,581	—	37	1,100
1972	16,887	14,732	—	478	1,677
1973	21,826	18,315	501	950	2,060
1974	34,041	25,979	4,420	1,300	2,342
1975	54,609	43,172	7,019	1,500	2,918

¹The first CATV company in Hawaii, Kaiser-Teleprompter, began service April 20, 1961. State regulation of CATV was authorized by Act 112, S.L.H. 1970, effective June 19, 1970.

²Earliest year available.

Source: Hawaii State Department of Regulatory Agencies, CATV Division, records.

Table 216.—POSTAGE, TELEPHONE, AND TELEGRAPH RATES, AND NEWSPAPER PRICES: 1955 TO 1976
(In dollars)

Year (as of July 1)	Postage rates (letters, < 1 oz.)		Telephone rates (including tax) for Honolulu					Telegraph rate per full-rate word (non-coded)	Newspaper price ¹	
	Surface	Air	Local call, pay phone	To Hilo ²	To San Francisco		Monthly charge ³		Daily	Sunday
					Direct dialing ⁴	Operator handled ²				
1955	0.03	0.06	0.10	2.19	...	9.38	7.15	0.19	0.05	0.15
1960	0.04	0.07	0.10	1.93	...	6.60	8.42	0.21	0.10	0.15
1965	0.05	0.08	0.10	1.65	...	6.05	8.42	0.21	0.10	0.20
1970	0.06	0.10	0.10	0.99	...	4.29	9.90	0.21	0.10	0.25
1971	0.08	0.11	0.10	0.99	...	4.29	9.90	0.21	0.15	0.35
1972	0.08	0.11	0.10	0.99	4.29	4.29	10.12	0.21	0.15	0.35
1973	0.08	0.11	0.10	0.97	3.27	4.25	10.63	0.21	0.15	0.35
1974	0.10	0.13	0.10	0.97	2.59	3.40	10.53	0.21	0.20	0.45
1975	0.10	0.13	0.10	0.96	2.57	3.37	10.17	0.21	0.20	0.50
1976	0.13		0.10	0.95	2.54	3.34	10.07	0.21	0.20	0.50

¹Street sales, *Honolulu Advertiser* and *Honolulu Star-Bulletin*.

²Station-to-station operator-handled daytime calls, first three minutes.

³For an individual residential line.

⁴Daytime calls, first three minutes. Direct dialing was introduced January 16, 1972.

Source: Office of the Postmaster General, records; Hawaiian Telephone Co., records; Federal Communications Commission, records; newspaper mastheads.

Table 217.—ELECTRIC UTILITIES: 1958 TO 1975

Year	Customers, Dec. 31		1,000 KWH sold			Ave. ann. use (KWH)		Ave. rate (dollars/KWH)		Installed capacity (KW)
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other	
1958	123,070	23,823	1,253,844	481,907	771,937	3,916	32,403	.031167	.023089	349,438
1959	127,336	24,602	1,422,145	519,222	902,923	4,078	36,701	.030240	.021664	469,343
1960	132,440	25,138	1,602,197	580,849	1,021,348	4,386	40,630	.029723	.021559	469,343
1961	136,788	25,664	1,766,031	624,730	1,141,301	4,567	44,471	.029057	.021015	527,708
1962	140,661	26,440	1,966,105	678,628	1,287,477	4,825	48,694	.028886	.020722	543,737
1963	144,638	27,194	2,077,570	730,317	1,347,254	5,049	49,542	.028389	.020609	628,312
1964	149,547	28,137	2,284,275	786,118	1,498,157	5,257	53,245	.027949	.020133	716,312
1965	154,822	28,901	2,445,024	853,086	1,591,939	5,510	55,082	.027569	.020072	731,395
1966	160,784	29,492	2,639,866	912,616	1,727,250	5,676	58,567	.027290	.019949	830,644
1967	166,256	30,161	2,832,468	989,785	1,842,684	5,953	61,109	.027039	.020037	829,157
1968	171,346	30,821	3,109,256	1,083,233	2,026,023	6,322	65,735	.026803	.020022	894,532
1969	178,569	31,761	3,426,052	1,174,502	2,251,550	6,577	70,890	.026548	.019647	896,271
1970	186,282	32,721	3,758,094	1,270,732	2,487,362	6,822	76,017	.026810	.020113	1,007,021
1971	193,043	33,471	4,167,127	1,375,308	2,791,819	7,124	83,410	.028229	.021493	1,016,350
1972	201,903	34,406	4,562,568	1,493,840	3,068,728	7,399	89,192	.02849	.02172	1,135,055
1973	210,740	35,515	4,867,850	1,581,855	3,285,995	7,506	92,524	.03077	.02367	1,266,600
1974	219,633	36,268	5,113,906	1,635,978	3,477,928	7,449	95,895	.03493	.02704	1,419,892
1975	226,836	36,980	5,334,755	1,676,438	3,658,317	7,391	98,927	.04586	.03794	1,454,359

Source: Hawaii State Public Utilities Division, *Historical Data, Gas and Electric Utilities, State of Hawaii, 1959 to 1968* (unpaged), and records.

**Table 218.—SERVICE PROVIDED BY HAWAIIAN ELECTRIC CO., INC., ON OAHU:
1958 TO 1975**

Year	Number of customers, December 31		Net input ¹ (1,000 KWH)	Power sold (1,000 KWH)	Average annual residential use (KWH)	Average residential rate (dollars per KWH)	Installed capacity (KW) 31 December
	Total	Residential only					
1958	106,455	90,185	1,136,279	1,054,934	4,392	0.02886	287,500
1959	111,378	94,287	1,304,572	1,204,880	4,574	0.02774	385,050
1960	117,227	99,377	1,468,461	1,370,880	4,920	0.02722	385,050
1961	121,668	103,376	1,626,950	1,518,184	5,085	0.02659	439,450
1962	125,866	107,008	1,798,338	1,693,763	5,349	0.02645	439,450
1963	130,228	110,729	1,923,930	1,799,824	5,588	0.02607	520,750
1964	135,352	115,000	2,102,472	1,972,110	5,803	0.02578	602,050
1965	140,904	119,883	2,238,936	2,107,709	6,058	0.02548	602,050
1966	146,465	124,929	2,431,363	2,282,968	6,234	0.02522	684,250
1967	151,554	129,591	2,645,853	2,480,323	6,510	0.02493	684,250
1968	156,386	133,884	2,914,104	2,727,627	6,915	0.02465	725,850
1969	162,439	139,271	3,201,353	3,004,187	7,222	0.02442	725,850
1970	168,531	144,854	3,494,059	3,275,673	7,478	0.02438	811,700
1971	174,300	150,285	3,844,325	3,600,728	7,776	0.02555	811,700
1972	180,794	156,249	4,175,342	3,942,679	8,108	0.02584	902,600
1973	187,321	162,180	4,407,460	4,189,397	8,191	0.02812	1,005,200
1974	194,043	168,525	4,641,204	4,393,616	8,110	0.03063	1,140,180
1975	198,598	172,839	4,793,015	4,555,118	7,999	0.04313	1,140,180

¹Net generated plus purchased power.

²Maximum generator nameplate.

Source: Hawaiian Electric Co., Inc., records.

Table 219.—ELECTRIC UTILITIES, BY ISLAND: 1975

Island	Customers, Dec. 31		1,000 KWH sold			Ave. ann. use (KWH)		Ave. rate (dollars/KWH)		Installed capacity (KW)
	Residen- tial	Other	Total	Residen- tial	Other	Residen- tial	Other	Residen- tial	Other	
State total	226,836	36,980	5,334,755	1,676,438	3,658,317	7,391	98,927	0.04586	0.03794	1,454,359
Oahu	172,839	25,759	4,555,119	1,366,666	3,188,453	7,907	123,780	0.04313	0.03488	1,209,400
Hawaii	23,557	5,129	333,101	139,015	194,086	5,901	37,841	0.05635	0.05353	124,300
Maui	17,372	3,396	274,607	105,058	169,549	6,048	49,926	0.05443	0.05756	72,890
Kauai	10,988	2,079	148,533	52,748	95,785	4,801	46,072	0.06735	0.06815	39,900
Molokai	1,407	440	17,769	9,396	8,373	6,678	19,029	0.06631	0.08967	7,869
Lanai	673	177	5,626	3,555	2,071	5,282	11,701	0.05889	0.07381	---

Source: Hawaii State Department of Regulatory Agencies, Public Utilities Commission, records.

Table 220.—GAS UTILITIES: 1958 TO 1975

(Data limited to Honolulu Gas Co., Ltd., and its successor organization, Gasco Inc. Excludes bottled gas.)

Year	Customers		Gas sold (1,000 therms)			Ave. ann. use (therms)		Average rate-(dollars per therm)	
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other
1958	35,527	2,820	14,520	10,015	4,505	282	1,598	0.3674	0.2398
1959	35,826	2,657	14,869	10,018	4,851	280	1,826	0.3538	0.2246
1960	35,536	2,555	15,881	10,299	5,582	290	2,185	0.3619	0.2280
1961	35,857	2,227	16,790	10,502	6,289	293	2,824	0.3685	0.2263
1962	35,463	2,050	18,197	10,839	7,358	306	3,589	0.3679	0.2262
1963	35,034	1,874	18,914	10,775	8,139	308	4,343	0.3666	0.2238
1964	34,994	1,515	19,697	10,919	8,778	312	5,794	0.3639	0.2202
1965	34,775	1,428	20,397	11,016	9,381	317	6,570	0.3634	0.2186
1966	34,956	1,355	21,019	11,171	9,848	320	7,268	0.3626	0.2185
1967	35,000	1,382	22,547	11,348	11,198	324	8,103	0.3618	0.2179
1968	34,955	1,300	23,570	11,331	12,240	324	9,415	0.3618	0.2169
1969	34,829	1,305	25,649	11,848	13,801	340	10,576	0.3588	0.2156
1970	32,163	3,979	27,831	10,891	16,940	339	4,257	0.3619	0.2227
1971	32,072	4,081	30,445	9,279	21,167	289	5,187	0.3699	0.2308
1972	31,806	4,277	33,322	9,321	24,000	293	5,612	0.36843	0.22681
1973	31,142	4,639	34,540	8,931	25,609	287	5,520	0.37518	0.23121
1974	30,620	4,608	34,363	8,096	26,267	264	5,700	0.68361	0.52267
1975	30,236	4,449	35,594	8,230	27,364	272	6,151	0.81723	0.63583

Source: Hawaii State Public Utilities Division, *Historical Data, Gas and Electric Utilities, State of Hawaii 1959 to 1968* (unpaged), and records.

Table 221.—GAS UTILITY SERVICE BY GASCO, INC., FOR OAHU: 1960 TO 1975

Calendar year	Customers ¹		Gas sold (1,000 therms) ²		Average annual residential usage (therms) ²
	Total	Residential	Total	Residential	
1960	36,152	33,773	15,354	9,951	295
1961	35,942	33,724	16,210	9,981	296
1962	35,327	33,281	17,548	10,272	309
1963	34,761	32,892	18,249	10,192	310
1964	34,329	32,817	19,011	10,316	314
1965	34,040	32,615	19,711	10,409	319
1966	34,168	32,819	20,297	10,544	321
1967	34,237	32,862	21,708	10,701	326
1968	34,079	32,787	22,668	10,666	325
1969	33,908	32,611	24,659	11,102	340
1970	33,851	29,880	26,696	10,026	336
1971	33,691	29,621	29,082	8,290	280
1972	33,479	29,256	31,643	8,258	282
1973	33,142	28,813	32,610	8,041	279
1974	32,455	28,200	32,166	7,522	267
1975	31,856	27,778	32,885	7,600	274

¹As of December 31. Data for residential customers, 1960-1970, may include a few commercial accounts.

²Includes liquefied petroleum gas.

Source: Gasco, Inc., records.

Table 222.—GAS UTILITIES, BY ISLAND: 1975
(Excludes bottled gas)

Island	Customers		Gas sold (1,000 therms)			Ave. ann. use (therms)		Average rate (dollars per therm)	
	Residential	Other	Total	Residential	Other	Residential	Other	Residential	Other
State total	30,236	4,449	35,594	8,230	27,364	272	6,151	0.81723	0.63583
Oahu	27,782	4,073	32,885	7,605	25,280	274	6,207	0.83124	0.64706
Hawaii	1,888	321	2,293	482	1,811	255	5,642	0.65264	0.49177
Maui	345	55	360	87	273	253	4,970	0.60311	0.55159
Kauai	221	—	56	56	—	254	—	0.66579	—
Molokai	—	—	—	—	—	—	—	—	—
Lanai	—	—	—	—	—	—	—	—	—

Source: Hawaii State Department of Regulatory Agencies, Public Utilities Division, records.

Table 223.—TYPICAL RESIDENTIAL UTILITY MONTHLY RATES, BY ISLAND: JANUARY 1976

Utility and usage	Oahu	Hawaii ¹	Kauai	Maui	Molokai	Lanai
Water:						
¾-inch meter, 5,000 gallons	5.90	3.75	5.50	4.05	4.05	3.55
¾-inch meter, 10,000 gallons	7.25	5.75	8.00	6.10	6.10	5.25
¾-inch meter, 20,000 gallons	9.95	9.75	13.00	10.20	10.20	8.65
1½-inch meter, 50,000 gallons	23.10	24.00	35.00	26.25	26.25	22.00
Electricity:						
100 kilowatt-hours	7.73	10.34	10.33	8.84	12.04	9.75
250 kilowatt-hours	14.51	18.35	20.65	17.05	21.33	18.67
500 kilowatt-hours	23.61	28.70	35.65	28.53	34.80	31.33
Gas:						
10 therms	10.08	6.55	6.33	5.43	—	—
25 therms	20.68	12.74	13.02	11.22	—	—
50 therms	38.30	22.31	23.89	20.59	—	—
100 therms	74.00	41.76	45.84	39.54	—	—
Telephone:²						
Individual line	9.50	8.50	8.10	8.10	6.95	6.25
Two-party line	7.80	7.15	6.85	6.85	5.90	5.35

¹Water rates are those for North and South Hilo, North and South Kohala, and Ka'u. For North and South Kona, add 16¢ per 1,000 gal.; for Puna and Hamakua, 4¢ per 1,000 gal.

²Plus 6 percent Federal excise tax.

Source: Hawaii State Public Utilities Commission; Honolulu Board of Water Supply; Hawaii County Department of Water Supply; Kauai County Department of Water; Maui County Department of Water Supply; Lanai Company, Inc.

Table 224.—BOILERS AND PRESSURE VESSELS: DECEMBER 31, 1975

Island	Power boilers	Heating boilers	Pressure vessels ¹
State total	662	2,185	3,220
Hawaii	95	234	547
Maui	56	145	272
Lanai	3	2	26
Molokai	4	12	23
Oahu	459	1,684	2,145
Kauai	45	108	207

¹Five cubic feet or more.

Source: Hawaii State Department of Labor and Industrial Relations, Division of Occupational Safety and Health, records.

Table 225.—LIQUID FUEL TAX BASE: 1958 TO 1975
(In thousands of gallons)

Year reported ¹	All types	Gasoline	Diesel oil ²		Liq. pet. gas ²		Aviation fuel	Small boats	
			Non-hwy.	Hwy. use	Off-hwy.	Hwy. use		Gasoline	Diesel oil
1958 ³	186,508	118,939	19,758	3,002	...	...	41,031	3,778	
1959	208,925	127,845	26,228	3,683	...	...	49,454	1,715	
1960	250,499	138,219	28,134	3,898	...	...	78,890	1,358	
1961	278,428	143,621	31,894	3,783	...	...	97,500	1,629	
1962	299,317	148,934	31,681	4,020	328	108	112,752	233	1,261
1963	317,948	152,347	34,527	4,141	361	101	124,880	248	1,344
1964	357,859	160,786	38,562	4,578	383	115	151,911	278	1,247
1965	395,595	169,670	38,587	5,193	367	119	180,052	251	1,356
1966	481,361	177,627	40,039	5,506	414	122	256,175	238	1,241
1967	572,354	188,717	39,569	5,511	457	139	336,359	250	1,351
1968	619,803	197,663	41,213	6,566	781	253	371,686	227	1,415
1969	743,255	223,088	49,147	7,703	674	242	460,753	226	1,424
1970	754,632	235,178	58,129	8,029	814	274	450,474	214	1,519
1971	809,628	250,191	57,405	8,852	1,044	579	489,767	231	1,559
1972	827,825	261,452	65,163	9,523	1,231	702	487,743	264	1,747
1973	882,932	281,122	74,608	11,159	1,909	453	511,502	280	1,899
1974	824,653	270,267	75,124	11,539	2,093	789	463,728	312	801
1975	839,289	284,552	75,120	12,710	1,823	1,380	462,384	411	908

¹Liquid fuel sold in a given month is usually reported the following month. Annual totals accordingly refer to fuel sold in a 12-month period ended November 30.

²Liquefied petroleum gas was reported with diesel oil before 1962.

³Because of an accounting error, one large supplier misreported large quantities of non-highway diesel oil as fuel for small boats in 1958.

Source: Hawaii State Department of Taxation, "Tax Base for Certain Taxes," "Comparison of Liquid Fuel Tax Collections & Distribution for Two Years," and "Liquid Fuel Tax Base and Tax Collections" (annual reports).

Table 226.—DOMESTIC DEMAND FOR PETROLEUM PRODUCTS: 1972 AND 1973
(Barrels daily)

Item	Total		Military ¹		All other	
	1972	1973	1972	1973	1972	1973
Total petroleum	90,480	93,025	2,671	3,460	87,809	89,565
Liquefied gases	1,249	1,334	—	—	1,249	1,334
Fuel uses	1,249	1,334	—	—	1,249	1,334
Other	—	—	—	—	—	—
Gasoline	17,333	18,058	707	726	16,626	17,332
Motor	17,161	17,874	699	718	16,462	17,156
Aviation	172	184	8	8	164	176
Spec. naphthas, solvents	107	101	—	—	107	101
Jet fuel	32,688	33,778	1,612	2,471	31,076	31,307
Naphtha-type	1,825	2,507	1,601	2,466	224	41
Kerosene-type	30,863	31,271	11	5	30,852	31,266
Kerosene	82	85	5	8	77	77
Distillate fuel oil	5,415	5,742	347	255	5,068	5,487
Lubricating oils, greases	284	263	—	—	284	263
Residual fuel oil	31,735	31,907	—	—	31,735	31,907
Asphalt and road oil	940	1,044	—	—	940	1,044
All other finished and unfinished oils	16	58	—	—	16	58
Still gas	631	655	—	—	631	655

¹Excludes imports and direct shipments.

Source: U.S. Bureau of Mines, "Crude Petroleum, Petroleum Products, and Natural Gas Liquids in P.A.D. District V, Year 1973," *Mineral Industry Surveys*, February 19, 1975, pp. 3-4.

Table 227.—ENERGY CONSUMPTION, BY TYPE AND CONSUMING SECTOR: 1960 TO 1972
(In trillion British thermal units)

Year	Gross consumption								Utility electricity distributed	Net consumption
	Total gross consumption	By energy type ¹		By consuming sector						
		Petroleum products	Hydro-power	Household and commercial	Industrial	Transportation ²	Electric power	Miscellaneous ²		
1960	76.1	75.9	0.2	1.4	8.7	41.8	23.1	1.1	6.2	59.2
1961	94.5	94.3	0.2	3.5	11.5	54.3	24.3	0.9	6.9	77.1
1962	86.0	85.8	0.2	4.2	10.1	43.5	26.1	2.1	7.4	67.3
1963	93.4	93.1	0.3	4.2	9.2	49.9	27.7	2.4	7.8	73.5
1964	103.7	103.3	0.4	3.7	10.4	57.1	30.4	2.1	8.6	81.9
1965	109.6	109.3	0.3	4.1	10.5	60.7	30.9	3.4	9.2	87.9
1966	122.0	121.7	0.3	4.0	10.8	70.5	33.2	3.5	9.9	98.7
1967	135.1	134.8	0.3	4.0	7.5	81.6	31.4	10.6	10.6	114.3
1968	152.1	151.9	0.2	5.1	11.3	97.5	34.6	3.6	11.7	129.2
1969	163.3	163.0	0.3	6.5	13.4	103.7	38.5	1.2	12.9	137.7
1970	169.9	169.7	0.2	7.9	14.0	104.0	43.0	1.0	14.1	141.0
1971	180.7	180.5	0.2	6.7	12.8	113.3	47.5	0.4	15.6	148.8
1972	186.3	186.1	0.2	6.2	13.3	111.6	52.8	2.4	17.3	150.8

¹No consumption of anthracite, bituminous coal and lignite, natural gas, or nuclear power was recorded in this period.

²Highway use of distillate fuel oil included in "miscellaneous" in 1967.

Source follows next table.

Table 228.—PETROLEUM CONSUMPTION, BY TYPE AND CONSUMING SECTOR: 1962, 1971 AND 1972

Petroleum product and consuming sector	Thousand barrels			Trillion British thermal units		
	1962	1971	1972	1962	1971	1972
Total	14,730	31,269	32,219	85.8	180.5	186.1
Type of petroleum:						
Gasoline	4,581	5,903	6,363	24.0	31.0	33.4
Jet fuel	1,371	11,685	11,582	7.8	66.3	65.7
Kerosene	55	80	52	0.3	0.5	0.3
Distillate fuel oil	1,641	1,706	1,622	9.5	10.0	9.4
Residual fuel oil	6,716	10,631	11,316	42.2	66.8	71.2
Liquefied petroleum gases	171	964	945	0.7	3.9	3.8
Asphalt	195	300	339	1.3	2.0	2.3
Consuming sector:						
Household and commercial	707	1,285	1,167	4.2	6.7	6.2
Industrial	1,673	2,178	2,285	10.1	12.8	13.3
Transportation	7,874	20,210	20,008	43.5	113.3	111.6
Electric power	4,129	7,534	8,371	25.9	47.3	52.6
Miscellaneous	347	62	388	2.1	0.4	2.4

Source of tables 227 and 228: U.S. Bureau of Mines, *Historical Fuels and Energy Consumption Data, 1960-72, United States by States and Census Districts West of the Mississippi*, by L. H. Crump (Information Circular 8705, 1976), pp. 72-77.

Table 229.—SCIENTIFIC RESOURCES: 1972 AND 1974

Type of organization	Number of companies or agencies		Total employment		Professional employment		Technical employment *	
	1974	1972	1974	1972	1974	1972	1974	1972
Total employing organizations . . .	367	346	31,624	25,268	7,181	7,206	9,966	5,216
Organizations with scientific capabilities	91	75	16,878	8,842	2,703	2,043	6,076	1,017
Computer sciences	57	46	2,969	2,022	888	765	1,212	697
R & D and allied companies	43	41	1,712	4,992	527	1,215	394	1,335
Testing laboratories	26	26	972	911	272	483	243	208
Private research agencies	35	40	775	738	299	331	114	129
Government agencies	115	118	8,318	7,763	2,492	2,369	1,927	1,830
Federal	23	23	1,432	1,518	282	413	697	775
Military	10	10	668	642	178	167	188	184
State, except U.H.	34	37	2,588	2,539	919	820	500	352
University of Hawaii	32	34	1,374	1,322	690	646	250	286
County	16	14	2,256	1,742	423	323	292	233
Subject	1974	1972	Subject		1974	1972		
Professional associations:			Colleges and universities:					
Number of associations	49	43	Number of units		32	32		
Regular membership	11,901	11,182	Full-time enrollment ¹		37,687	34,276		
Associate membership	620	555	Part-time enrollment ¹		49,619	46,215		
Scientific libraries:			Business and technical schools:					
Number of libraries	21	22	Number of units		4	5		
Scientific books	680,769	682,042	Full-time enrollment		1,225	1,550		
			Part-time enrollment		50	305		

¹Because of different enrollment definitions, these data are not comparable to those in Section 3.

Source: Hawaii State Department of Planning and Economic Development, *Hawaii's Scientific Resources, 1974-1975 Directory*, 7th edition (1974), p. 5.

Table 230.—PATENTS GRANTED TO HAWAII RESIDENTS: 1959 TO 1975

Year	Patents	Year	Patents	Year	Patents
1959	20	1965	13	1971	37
1960	13	1966	26	1972	26
1961	26	1967	20	1973	50
1962	28	1968	22	1974 ¹	55
1963	20	1969	41	1975 ¹	61
1964	20	1970	50		

¹Fiscal year. Includes reissues.

Source: *Annual Report of the Commissioner of Patents* (annual).