

TABLE 8. DEGREE-DAYS FOR INDUSTRIAL HEATING IN VARIOUS CITIES OF THE UNITED STATES*

Annual Totals for a Normal Heating Season.

STATE	CITY	DEGREE-DAYS		STATE	CITY	DEGREE-DAYS	
		45F Base	55F Base			45F Base	55F Base
Ala.	Birmingham.....	6	853	Mich.	Houghton.....	4029	6112
	Mobile.....		245		Lansing.....	2537	4444
	Montgomery.....		504		Marquette.....	3713	3822
Aris.	Phoenix.....		229		Port Huron.....	2312	4552
	Yuma.....		37		Saginaw.....	4049	6576
					Sault Ste. Marie.....		
Ark.	Fort Smith.....	329	1478	Minn.	Duluth.....	4419	6774
	Little Rock.....	276	1188		Minneapolis.....	3309	5417
					Moorhead.....	4796	6572
Cal.	Eureka.....		1328		St. Paul.....	2497	5497
	Fresno.....	3	718	Miss.	Vicksburg.....		468
	Independence.....	519	1930				
	Los Angeles.....		17	Mo.	Columbia.....	1252	2939
	Red Bluff.....	24	822		Hannibal.....	1635	3231
	Sacramento.....	3	803		Kansas City.....	1463	2980
	San Diego.....		26		St. Louis.....	1186	2745
	San Francisco.....		384		Springfield.....	982	2423
	San Luis Obispo.....		230				
Col.	Denver.....	1548	3440	Mont.	Havre.....	3736	5874
	Grand Junction.....	1757	3433		Helena.....	2843	5071
	Pueblo.....	1499	3261		Kalispell.....	2874	5131
Conn.	Meriden.....		734	Neb.	Lincoln.....	3023	3650
	New Haven.....	1769	3237		North Platte.....	2291	4152
D. C.	Washington.....	1041	2487		Omaha.....	2284	3982
Fla.	Pensacola.....		127		Valentine.....	2833	4801
Ga.	Atlanta.....	109	1165	Nev.	Winnemucca.....	1670	3468
	Augusta.....		861	N. H.	Concord.....	2646	4640
	Macon.....		711	N. J.	Atlantic City.....	1123	2904
	Savannah.....		231	N. M.	Sante Fe.....	1634	3106
Idaho	Boise.....	1045	2814	N. Y.	Albany.....	2018	4302
	Lewiston.....	1034	2688		Binghamton.....	2073	4296
	Pocatello.....	2161	4140		Buffalo.....	2359	4316
Ill.	Cairo.....	749	2119		Ithaca.....	2412	4023
	Chicago.....	1969	3743		New York.....	1098	3089
	Springfield.....	1677	3289		Oswego.....	2274	4363
					Rochester.....	2341	4231
Ind.	Evansville.....	799	2335	N. C.	Charlotte.....	172	1388
	Indianapolis.....	1307	2829		Hatteras.....		718
Ia.	Charles City.....	3370	5293		Raleigh.....	229	1080
	Davenport.....	2296	4142		Wilmington.....		729
	Des Moines.....	2440	4180	N. D.	Bismarck.....	3831	6468
	Dubuque.....	1628	4468		Williston.....	4616	6399
	Keokuk.....	1926	3579	Ohio	Cincinnati.....	1376	3003
	Sioux City.....	2894	4732		Cleveland.....	1525	3795
Kan.	Concordia.....	1652	2690		Columbus.....	1600	3255
	Dodge City.....	1385	2962		Dayton.....	1487	3147
	Topeka.....	1518	1811		Sandusky.....	1949	3425
	Wichita.....	1152	2587		Toledo.....	1990	3757
Ky.	Lexington.....		2557	Okla.	Oklahoma City.....	600	1835
	Louisville.....	1073	2294	Ore.	Baker.....	2321	4307
La.	New Orleans.....		30		Portland.....	373	1911
	Shreveport.....		565		Roseburg.....	272	1868
Me.	Eastport.....	2956	5236	Pa.	Erie.....	2337	3837
	Portland.....	2530	4572		Harrisburg.....	1565	3236
Md.	Baltimore.....	986	2491		Philadelphia.....	1122	2895
Mass.	Boston.....	1787	3603		Scranton.....	1938	3755
	Nantucket.....	1514	3419		Pittsburgh.....	1377	3023
Mich.	Alpena.....	3131	5499	R. I.	Block Island.....	871	3388
	Detroit.....	2240	4089	S. C.	Charleston.....		336
	Escanaba.....	3699	5918		Columbia.....		759
	Grand Haven.....	2405	3435		Greenville.....	297	1502
	Grand Rapids.....	2332	4177				

TABLE 8. DEGREE-DAYS FOR INDUSTRIAL HEATING IN VARIOUS CITIES OF THE UNITED STATES (Continued)

Annual Totals for a Normal Heating Season.

STATE	CITY	DEGREE-DAYS		STATE	CITY	DEGREE-DAYS	
		45F Base	55F Base			45F Base	55F Base
S. D.	Huron.....	3743	5678	Vt.	Burlington.....	3014	4984
	Pierre.....	3162	5234		Northfield.....	3652	7121
	Rapid City.....	2590	4628	Va.	Lynchburg.....	554	1928
	Yankton.....	2898	6045		Norfolk.....	260	1496
Tenn.	Chattanooga.....	242	1398		Richmond.....	549	1895
	Knoxville.....	431	1741	Wash.	North Head.....	184	2062
	Memphis.....	166	1284		Seattle.....	408	2185
	Nashville.....	419	1678		Spokane.....	1741	3672
Tex.	Abilene.....		915		Tacoma.....	507	2365
	Amarillo.....	786	2220		Walla Walla.....	993	2565
	El Paso.....	32	919	W. Va.	Elkins.....	1506	3327
	Fort Worth.....		754		Parkersburg.....	1147	2784
	Galveston.....		43	Wis.	Green Bay.....	3318	5331
	Houston.....		110		La Crosse.....	3034	3992
	Palestine.....		484		Madison.....	3067	4650
	San Antonio.....		305		Milwaukee.....	2857	4617
Utah	Modena.....	1978	3981	Wyo.	Cheyenne.....	2500	4700
	Salt Lake City.....	1475	3202		Lander.....	3208	6450

* From *Degree-Day Handbook*, by C. Strock and C. H. B. Hotchkiss (The Industrial Press, 1937, pp. 132-134). Values are not coordinated with table 2 which is from a later source.

of degree-days, plant operators frequently compute each month the fuel burned per degree-day by the heating plant. The resulting unit value, by eliminating the outside temperature variable, indicates whether the operating efficiency of the plant is above or below the previous month or year.

INDUSTRIAL DEGREE-DAYS

When estimating the heating requirements of warehouses, factories, and other buildings where the inside temperature to be maintained differs greatly from the usual inside temperature range of 68 to 72 F, it is common to use degree-days based on temperatures of 55 to 45 F. These are generally referred to as industrial degree-days, and are listed in Table 8 for a number of cities using both 55 F and 45 F as the base. In general, the degree-days (55 F base) are used when the temperature of the heated space is to be maintained at approximately 60 F. For an inside temperature of about 50 F, the degree-days calculated on a 45 F base should be used.

The industrial degree-days are useful for estimating fuel consumption by comparison between localities in which the difference in degree-days is not too great, and where the known fuel consumption of one building may be used to determine unit consumption per degree-day.

MAXIMUM DEMANDS AND LOAD FACTORS

In one form of district heating rates, a portion of the charge is based upon the maximum demand of the building. The maximum demand may be measured in several different ways. It may be taken as the instantaneous peak or as the rate of use during any specified interval. One method is to take the average of the three highest hours during the winter. These figures are shown for a number of buildings in Detroit in Table 9.¹²