Renewable Resources and Weather

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Table 7.1 **Utah Energy Saving Systems Tax Credit, 1980-1995**

Residential Sector

Year	Total Received	Total Approved	Amount of Credit	Average of Credit	Equipment Cost	Installation Cost	Total Cost
	Applications				Dollars		
1980	307	304	150,811	496	1,487,839	162,523	1,650,362
1981	557	550	288,298	524	1,633,648	1,471,417	3,105,065
1982	923	913	151,335	564	2,171,840	3,371,272	5,543,112
1983	785	749	460,401	615	4,234,912	619,330	4,854,242
1984	925	908	531,140	585	5,025,337	734,542	5,759,879
1985	484	475	248,408	523	2,364,314	339,181	2,703,495
1986	124	124	144,851	1,168	697,419	67,115	764,534
1987	34	34	34,219	1,006	142,393	21,772	164,165
1988	14	14	12,475	891	61,835	975	62,810
1989	17	17	16,291	958	66,587	5,644	72,231
1990	28	28	29,225	1,044	157,177	16,095	173,272
1991	22	22	16,361	744	63,269	6,508	69,777
1992	24	24	15,928	664	58,150	5,561	63,711
1993	17	17	14,024	825	66,145	5,419	71,564
1994	na	28	29,975	1,071	133,258	6,787	139,720
1995	na	17	16,551	974	67,524	5,671	73,195
Total	4,261	4,224	2,160,294	12,650	18,431,646	6,839,813	25,271,135

Commercial Sector

Year	Total Received	Total Approved	Amount of Credit	Average of Credit	Equipment Cost	Installation Cost	Total Cost
	Applications				Dollars		
1980	3	3	2,432	811	24,131	191	24,322
1981	3	3	4,083	1,361	38,319	2,511	40,830
1982	6	5	8,051	1,610	39,337	44,513	83,850
1983	12	11	22,326	2,030	229,973	52,375	282,348
1984	16	16	33,711	2,107	408,374	99,812	508,186
1985	3	3	3,220	1,073	29,000	3,200	32,200
1986	4	4	9,793	2,448	80,601	17,324	97,925
1987	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0
1989	2	2	9,733	4,867	94,335	3,000	97,335
1990	1	1	4,088	4,088	40,879	--	40,879
1991	--	--	--	--	--	--	0
1992	2	2	3,347	1,673	31,466	2,000	33,466
1993	--	--	--	--	--	--	0
1994	na	1	11,290	11,290	109,313	3,586	112,898
1995	na	0	0	0	0	0	0
Total	52	51	112,074	33,358	1,125,728	228,512	1,354,239

Source: Utah Department of Natural Resources, Office of Energy and Resource Planning.

Notes:
1. The residential tax credit was 10% with a $1,000 limit for 1980-June 1985 and 25% with a $1,500 limit for July 1986-1990.
2. The commercial tax credit was 10% with a $3,000 limit for 1980-June 1985 and a 10% with a $25,000 limit for July 1986-1990.
3. The renewable energy tax credit did not exist in 1996.

Table 7.2a **Utah Estimated Renewable Energy Consumption, 1984-1997**
Physical Units

Year	Residential		Industrial		Electric Utility	
	Biofuels	Solar	Biofuels	Hydroelectric	Geothermal	Hydroelectric
	Thousand Cords	Million kilowatthours	Thousand Cords	Million kilowatthours	Million kilowatthours	Million kilowatthours
1984	na	na	na	na	38	1,391
1985	na	na	na	na	110	1,019
1986	na	na	na	na	172	1,413
1987	na	na	na	na	164	893
1988	na	na	na	na	174	593
1989	na	na	na	na	173	562
1990	148	10	120	9.7	152	486
1991	156	10	115	9.7	186	604
1992	164	10	120	19.3	186	580
1993	156	10	120	35.0	148	818
1994	153	13	125	40.0	195	716
1995	169	13	130	40.0	140	926
1996	169	14	135	40.0	192	1,019
1997E	170	14	140	40.0	169	1,348

Table 7.2b **Utah Estimated Renewable Energy Consumption, 1984-1997**
Trillion Btu

Year	Residential		Industrial		Electric Utility		Total
	Biofuels	Solar	Biofuels	Hydroelectric	Geothermal	Hydroelectric	
1984	na	na	na	na	0.8	14.4	15.2
1985	na	na	na	na	2.3	10.5	12.8
1986	na	na	na	na	3.6	14.6	18.2
1987	na	na	na	na	3.5	9.2	12.7
1988	na	na	na	na	3.7	6.1	9.8
1989	na	na	na	na	3.7	5.8	9.5
1990	3.0	0.034	2.4	0.1	3.2	5.0	13.7
1991	3.1	0.034	2.3	0.1	3.9	6.2	15.7
1992	3.3	0.034	2.4	0.2	3.9	6.0	15.8
1993	3.1	0.034	2.4	0.4	3.1	8.5	17.5
1994	3.1	0.044	2.5	0.4	4.1	7.4	17.5
1995	3.4	0.044	2.6	0.4	2.9	9.6	18.9
1996	3.4	0.044	2.7	0.3	4.0	10.5	21.0
1997E	3.4	0.044	2.8	0.3	3.5	13.9	24.0

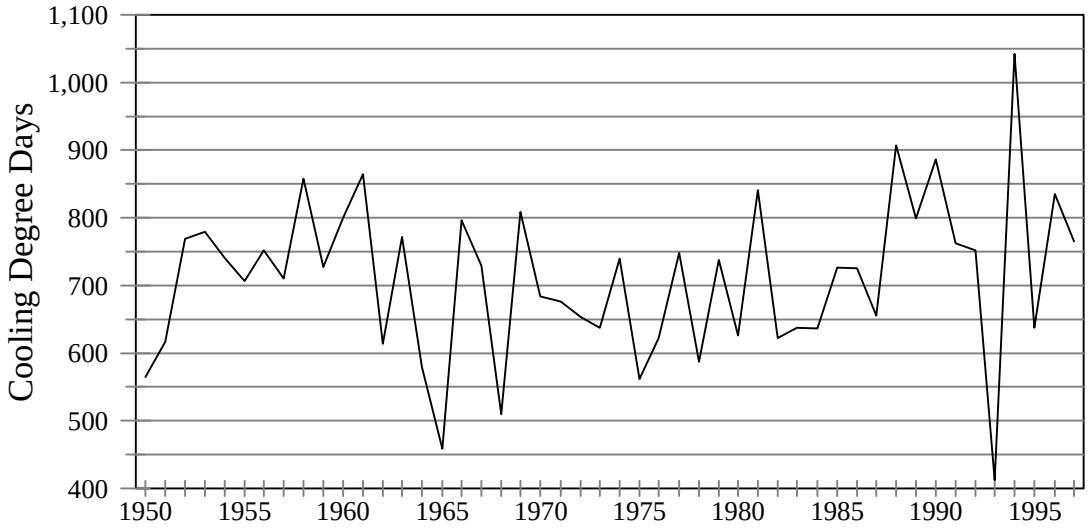
Source: EIA, *State Energy Data Report 1996*, DOE/EIA-0214(96), for 1984-1996 data; Utah Office of Energy and Resource Planning, for estimated 1997 data.

Table 7.3 **Utah Monthly and Annual Cooling Degree Days, 1950-1997**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
1950	0	0	0	2	4	83	207	197	55	17	0	0	565
1951	0	0	0	1	20	58	276	192	68	2	0	0	617
1952	0	0	0	1	29	110	237	264	113	15	0	0	769
1953	0	0	0	1	2	102	324	239	109	2	0	0	779
1954	0	0	0	8	42	79	338	195	76	3	0	0	741
1955	0	0	0	1	17	84	251	278	72	3	0	0	706
1956	0	0	0	1	33	152	283	178	102	3	0	0	752
1957	0	0	0	1	12	102	273	262	59	1	0	0	710
1958	0	0	0	0	69	153	242	312	74	8	0	0	858
1959	0	0	0	1	9	171	300	210	34	2	0	0	727
1960	0	0	0	1	19	147	350	174	108	1	0	0	800
1961	0	0	0	1	24	205	337	278	19	1	0	0	865
1962	0	0	0	7	14	95	222	187	81	8	0	0	614
1963	0	0	0	0	41	56	287	268	104	16	0	0	772
1964	0	0	0	0	11	50	308	169	39	3	0	0	580
1965	0	0	0	0	6	61	229	146	10	7	0	0	459
1966	0	0	0	1	43	114	334	217	85	2	0	0	796
1967	0	0	0	0	10	49	297	292	78	3	0	0	729
1968	0	0	0	0	12	100	276	89	31	2	0	0	510
1969	0	0	0	1	64	62	270	301	109	1	0	0	808
1970	0	0	0	0	17	104	254	288	20	1	0	0	684
1971	0	0	0	1	11	100	278	265	20	1	0	0	676
1972	0	0	1	1	24	135	254	204	33	1	0	0	653
1973	0	0	0	0	24	104	242	235	30	2	0	0	637
1974	0	0	0	1	26	180	290	173	67	3	0	0	740
1975	0	0	0	0	2	54	299	150	56	1	0	0	562
1976	0	0	0	0	33	79	301	137	71	1	0	0	622
1977	0	0	0	6	2	198	264	211	64	3	0	0	748
1978	0	0	0	0	8	104	275	161	35	4	0	0	587
1979	0	0	0	1	18	111	275	203	122	8	0	0	738
1980	0	0	0	1	8	96	287	170	62	2	0	0	626
1981	0	0	0	6	11	133	304	286	100	1	0	0	841
1982	0	0	0	1	12	85	204	279	40	1	0	0	622
1983	0	0	0	0	2	82	223	252	77	2	0	0	638
1984	0	0	0	1	30	69	255	227	53	1	0	0	636
1985	0	0	0	7	34	141	312	207	23	2	0	0	726
1986	0	0	0	1	17	198	206	283	19	1	0	0	725
1987	0	0	0	10	34	151	198	180	72	10	0	0	655
1988	0	0	0	1	19	216	362	240	47	22	0	0	907
1989	0	0	0	10	23	105	371	213	75	2	0	0	799
1990	0	0	0	8	15	143	325	240	153	2	0	0	886
1991	0	0	0	1	7	98	312	283	59	3	0	0	763
1992	0	0	0	15	60	133	202	261	71	10	0	0	752
1993	0	0	0	1	42	53	101	159	54	2	0	0	412
1994	0	0	0	1	48	193	352	333	114	1	0	0	1,042
1995	0	0	0	0	7	53	215	273	88	2	0	0	638
1996	0	0	0	2	22	175	331	261	43	1	0	0	835
1997	0	0	0	1	44	133	223	273	89	2	0	0	765

Source: National Climatic Data Center, *Cooling Degree Days, Historical Climatology Series 5-1*.

Figure 7.1 **Utah Cooling Degree Days, 1950-1997**



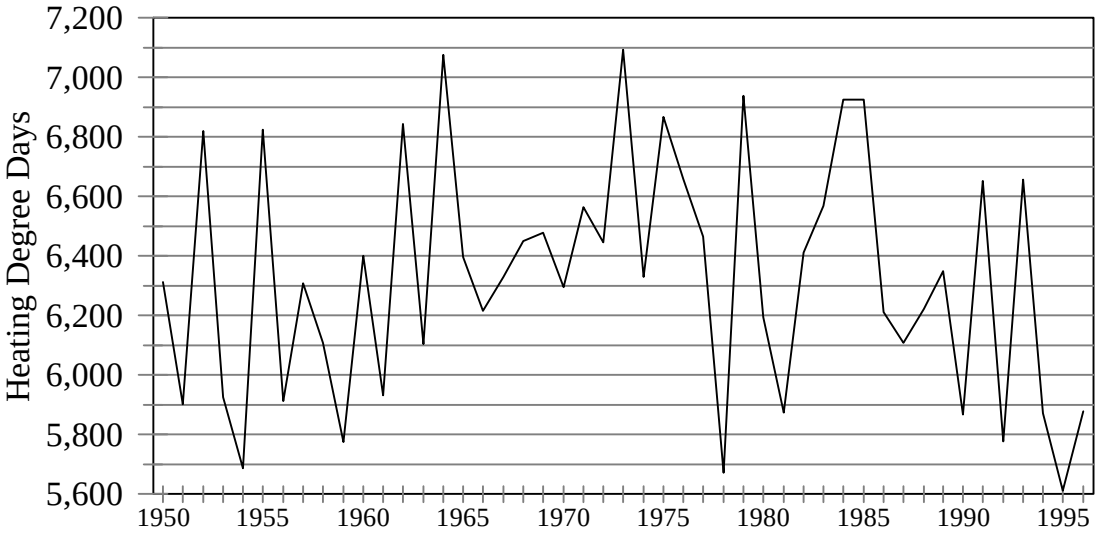
Source: National Climatic Data Center, *Cooling Degree Days, Historical Climatology Series 5-1*.

Table 7.4 **Utah Monthly and Annual Heating Degree Days, July 1949-December 1997**

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Annual Total
1949	5	7	95	409	924	1,219	1,622	1,164	767	371	234	105	6,922
1950	5	7	92	552	629	1,132	1,240	873	798	499	377	109	6,313
1951	8	10	144	284	714	952	1,166	866	891	459	267	141	5,902
1952	3	9	124	484	885	1,214	1,234	1,071	1,028	463	224	80	6,819
1953	5	5	76	299	937	1,075	858	860	711	586	426	88	5,926
1954	2	7	81	394	649	1,159	1,021	844	842	388	187	113	5,687
1955	1	9	113	407	667	1,129	1,380	1,186	941	607	278	107	6,825
1956	4	4	117	391	904	938	940	1,118	756	481	209	50	5,912
1957	4	16	87	418	946	1,135	1,256	777	725	546	309	88	6,307
1958	4	6	137	448	961	1,018	1,159	733	863	592	141	47	6,109
1959	6	3	115	362	829	932	1,029	887	781	454	338	39	5,775
1960	3	6	182	446	796	1,103	1,273	1,064	748	461	268	51	6,401
1961	1	12	79	443	754	1,130	1,119	822	777	529	239	28	5,933
1962	2	4	243	499	910	1,164	1,362	941	926	410	292	92	6,845
1963	6	8	107	355	701	1,091	1,343	730	811	628	186	138	6,104
1964	2	4	80	276	789	1,241	1,349	1,192	1,084	599	313	148	7,077
1965	2	14	167	387	872	1,046	1,069	936	912	494	367	131	6,397
1966	5	19	291	371	648	1,109	1,169	1,057	777	512	183	75	6,216
1967	1	6	100	495	700	1,196	1,134	876	708	627	337	150	6,330
1968	2	4	107	425	708	1,295	1,303	847	704	645	324	87	6,451
1969	2	41	188	457	849	1,177	1,037	1,002	964	484	146	131	6,478
1970	3	2	78	621	822	1,042	1,077	764	841	682	278	86	6,296
1971	3	2	231	608	753	1,148	1,106	923	836	545	321	88	6,564
1972	3	3	233	583	885	1,267	1,153	850	626	542	242	60	6,447
1973	4	7	182	438	878	1,345	1,404	1,017	873	619	242	84	7,093
1974	5	6	193	424	814	1,063	1,256	1,042	685	568	236	37	6,329
1975	3	15	126	411	768	1,176	1,284	966	848	719	407	145	6,868
1976	3	20	142	481	891	1,091	1,234	949	978	549	209	112	6,659
1977	3	21	117	504	767	1,132	1,264	915	916	418	380	29	6,466
1978	3	5	124	391	755	935	1,026	836	638	520	354	85	5,672
1979	2	16	176	377	900	1,293	1,448	1,022	822	533	273	77	6,939
1980	3	7	66	368	969	1,070	1,086	870	844	473	347	92	6,195
1981	2	14	129	467	782	1,012	1,078	859	740	412	318	61	5,874
1982	2	3	85	525	700	966	1,243	1,043	794	619	327	104	6,411
1983	5	3	166	583	892	1,153	1,026	846	743	665	381	105	6,568
1984	4	3	110	398	793	1,170	1,396	1,175	908	616	229	122	6,924
1985	3	5	144	614	802	1,209	1,372	1,196	918	403	204	56	6,926
1986	1	5	215	464	928	1,291	1,141	756	575	519	287	30	6,212
1987	4	2	233	477	771	1,105	1,262	860	782	357	207	49	6,109
1988	5	13	117	346	793	1,149	1,305	948	816	443	264	24	6,223
1989	1	4	153	257	796	1,227	1,398	1,151	662	371	246	84	6,350
1990	1	6	112	424	778	1,112	1,060	981	664	378	297	54	5,867
1991	1	5	45	427	773	1,399	1,324	864	783	584	360	88	6,653
1992	2	3	133	420	840	1,191	1,264	794	604	313	152	61	5,777
1993	6	3	117	347	976	1,241	1,271	1,060	759	542	187	147	6,656
1994	1	1	72	480	996	1,116	973	928	657	445	172	31	5,872
1995	6	2	97	469	633	941	1,046	920	704	502	256	37	5,613
1996	1	3	160	446	740	989	1,111	939	670	575	185	59	5,878
1997	5	4	96	451	755	1,308							

Source: National Climatic Data Center, Heating Degree Days, Historical Climatology Series 5-2; December 1997 data estimated by Utah Office of Energy and Resource Planning.

Figure 7.2 **Utah Heating Degree Days, 1950-1997**



Source: National Climatic Data Center, Heating Degree Days, Historical Climatology Series 5-2; December 1997 data estimated by Utah Office of Energy and Resource Planning.