

Introduction

The statistics appeared in this chapter have been provided as register records by the Ministry of Energy on two topics of "water" and "electricity".

1. Water

This section includes information on "underground waters", "reservoir dams", and "length of networks and number of water and sewage extensions". The related statistics have been added to the Statistical Yearbook of Iran since 1346.

Statistics on underground waters and reservoir dams have been provided by Water Resources Management Company and statistics on the length of networks and number of water and sewage extensions has been obtained from the Water and Sewage Engineering Company.

Central and Internal basin, Hamun basin, and Sarakhs basin were renamed by Water Resources Management Organization as Central Plateau, Eastern Border and Qareh Qum respectively, in 1383.

2. Electricity

Data related to electric power industry was first collected in 1343 by the then Ministry of Water and Power (renamed the Ministry of Energy in 1353). Since 1346, the Ministry has regularly provided the annual statistics on the power industry comprising power generation, transmission, distribution, and consumption. The statistics, a part of which appears in some tables of this yearbook, are presented in various annual publications released by the Ministry.

Moreover, through two successive censuses of population and housing in 1365 and 1375, the SCI collected data on residential units and households benefiting from piped water and electricity which are reflected in Chapter 9, "Construction and Housing," of the yearbook.

Definitions and concepts

Water basin: see Chapter 1, Definitions and concepts.

Aquatic year: see Chapter 1, Definitions and concepts.

Water produced: the amount of water gained from various (surface and underground) water resources such as wells, springs, subterranean canals, dams and river basins.

Dam: a structure built against the flow of water to reserve water or change the direction of flow or manage it for satisfying different needs such as

drinking, industry, irrigation (agriculture), electricity generation and control of flood.

Reservoir dam: a dam made for reserving, managing or controlling the flow of water to reserve it for procuring water for irrigation, drinking, industry, electricity generation and control of flood

Large reservoir dam: refers to all dams with a height of 15 metres or more as well as 10 to 15 metres high dams having a reservoir with a volume of 1 million cubic metres or more and/or a capacity of flood discharge of 2000 or more cubic metres per second.

Inflow: annual volume of water entered the reservoir of a dam through the river.

Outflow: total annual volume of water discharged from different outlets of a dam (weir, silt ejector channels, take-out gates, drainage channels) and evaporation.

Water extension: refers to the part of branched-off water pipes, containing pipe, related accessories, with a profile appropriate to the water metre and the extension capacity of public water, which connects a private water distribution line or public water distribution network from installation place of the extension valve to the delivery point (valve following the water metre).

Public water distribution network: a collection of interconnected pipe lines with needed pressure for distributing water for household, office and industrial consumption in a region or inside the city, all of which belong to the Water and Sewage Company.

Sewage extension: refers to the part of minor sewage pipelines, including pipes and related accessories, with a profile appropriate to siphon or contractual capacity, which carries joint sewages away from the siphon to the private line or to the public network for collecting sewages.

Public network for collection and transmission of sewage: refers to all installations and equipment, such as main collectors, used for collection and transmission of sewage to water treatment house and pump houses of urban sewage and public side networks, all belonging to the Water and Sewage Company. The network is not responsible for collection, transmission and disposal of rainfall water flowing on passages, flood channels and channels inside and outside cities located in the customers' estates.

Nominal capacity (registered nominal power): refers to the maximum expected output of an electricity generator in designing condition defined by the manufacturer. Nominal power is

usually installed in KVA or KW for smaller generators on the generator.

Actual capacity or actual power (registered power): refers to the maximum amount of electricity that could be generated by a generator while regarding the environmental conditions (altitude, temperature, and relative moisture).

Maximum coincidental power generated: refers to the sum of electric power generated at the peak of network load during a certain period. The sum of maximum coincidental power generated might be equal or less than the total capacity of the plants.

Gross production: refers to the amount of electricity generated by a generator or a plant during a certain period which is measured on output series of the main or supplementary generators and stated in kilowatt hour (kWh) or megawatt hour (MWh).

Net generation: refers to the electricity measured at the point of transmission to the power grid. During a certain period, the net generation may be calculated by subtracting the gross internal consumption from the gross generation in the same period.

Other institutions: the institutions which generate electricity for their own consumption and also sell a part of their production to other institutions but are independent from the Ministry of Energy; some examples are, Esfahan Steelworks, Mobarakeh Steel Industries, Petrochemical Industries, Tabriz Tractor Industries, and Sarcheshmeh Copper Industries.

Interconnected network: the collection of production sites and regions of energy consumption around the country connected together with a network of transmission lines and high voltage stations. The network lets electricity exchange between the regions covered, and makes the export of electric energy possible.

Isolated network (generation and power consumption): refers to regional, provincial and island networks not connected with adjacent networks or interconnected network.

Load-demand: the power consumed during a certain period in a certain part of the network.

Maximum coincidental load: in a full interconnected electricity system, maximum coincidental load for a day, a week, a month, or a year refers to the sum of load at the peak of consumption in regions in megawatt. Where the interconnected system does not cover the total country, the maximum coincidental load may be calculated by adding up maximum load of interconnected network and load of separate regions in megawatt simultaneously. With regard to the difference between peak hours of consumption in different regions connected to the interconnected network, maximum coincidental load is less than the sum of the maximum loads of the regions.

Maximum non-coincidental load: the sum of the peak of consumption in different regions of the country during a certain period, which are not necessarily simultaneous.

Power Company: the companies (Ltd.) which are by law engaged in generation, transmission and distribution of electricity or in a part of such activities and provide the customers with electricity. The definition covers the water and power organizations as well.

Power plant: refers to the installation place of generators and related equipment.

Hydroelectric power plant: a power plant in which the potential energy of water accumulated at dams or flowing energy of rivers water is used to drive the hydroelectric turbine for electricity generation.

Thermal power plant: a power plant in which chemical energy inherent in solid, liquid, gaseous fuels is transformed into electricity. This definition covers nuclear, steam, gas, combined-cycle and diesel power plants.

Steam power plant: a kind of power plant in which thermal energy produced from liquid, solid and gas fuels is used for steam production and then driving the steam turbine to generate electricity.

Gas power plant: a type of power plant in which hot gas produced from the thermal energy in gas and liquid fuels drives gas turbine to generate electricity.

Combined-cycle power plant: a kind of power plant in which, in addition to electric energy in gas turbine, the heat in gases off the gas turbine is used for production of steam using a recycling steam kettle. The steam produced is transformed into electric energy in a steam turbogenerator set.

Diesel power plant: a kind of power plant in which gas or liquid is used in cylinders to transform mechanical energy produced by coupled generator into electric energy.

Internal consumption: refers to the sum of electricity consumed internally by units and for non-technical cases, as well as consumption of lights, etc. in a power plant in a certain period in kilowatt-hour (kWh).

Losses: refers to the energy lost in transmission and distribution lines in a network or a certain system. Energy lost by transformers is considered as losses of transmission and distribution.

Sale or consumption of electricity: the amount of electricity sold to the consumers for various consumptions.

Energy produced by the fuel (thermal value): the amount of heat (kilo calorie or B.T.U.) produced through burning of the mass unit of a certain fuel.

Thermal output: considering that the thermal energy produced by 1 kWh is equal to 860 kcal, the output of thermal power plants (thermal output) is calculated through the following formula:

output(%) = (860/thermal energy consumed for 1 kWh of power generated) × 100

Line of power: the cables installed on poles to transmit the electric power from the production site (power plant) or substation to consumption places in different voltages.

Power transmission line: a line composed of conductors, insulators and other subsidiary equipment used for transmission of high amount of electricity, with high voltages in long distances between source points (power plants and receiving points).

Subtransmission line: a collection of transmission lines with voltages from 63 to 132 kV.

Electricity customers: natural or legal persons whose specifications are registered by customers division according to the regulation of the power company after submitting the required documents and payment of the related costs, and are offered a customer number.

Household uses: electricity used by households to operate common electric appliances and for lights in residential units.

Public uses: electricity used for public services.

Agricultural uses: electricity used for pumping surface and underground water or repumping water for production of crops or carrying out agricultural activities. Agricultural activities are defined in ISIC Rev. 3.

Industrial uses: electricity used for doing jobs in establishments engaged in manufacturing and mining activities.

Selected information

In aquatic year 1386-87, the amount of annual discharge of the underground water resources was 77544 mln cu m which in comparison to the aquatic year 1385-86 had a 2.1 percent decrease. It should be noted that out of 6 main basins, the central plateau with 47.9% had the maximum annual discharge.

In 1388, the inflow of the large reservoir dams amounted to 35729 mln cu m had a 94.2% decrease in comparison to the last year. The maximum inflow of the dams is that of Khuzestan dams (67.8% of inflow of the large reservoir dams). In this year, about 17067 mln cu m of large reservoir dams have been consumed, 60 percent of which belongs to the agricultural consumptions.

In the same year, about 6660 mln cu m of water is produced in the water and sewage companies of the country (urban and rural) out of which 4719 mln cu m was sold. Sale of water had a 4.8 percent increase compared to the preceding year. This is while production of water had no change.

In 1388, there were over 15690000 water extensions which had a 4.9 percent increase in comparison to the preceding year. Out of this number about 11670000 extensions were for the urban areas which had a 4.1% increase compared to the previous year.

In 1388, the gross electricity generation of institutions affiliated to the Ministry of Energy was 195582 mln kilowatt hours, more than 47 percent of which is produced in the steam power plants. Furthermore, the gross electricity generation amount had a 1.5 percent increase compared to the preceding year.

In this year, about 167527 mln kilowatt hours of generated electricity was consumed by a number of 24191000 subscribers. In this respect, the amount of electricity sold and the number of electricity subscribers increased by 4 and 7 percent respectively compared to the preceding year.

In 1388, percentage of subscribers in the house, public, agricultural and manufacturing sectors was 82.0, 3.9, 0.8 and 0.7 respectively. Also in this year, the percentage of the sold electricity which was consumed in the house and manufacturing, agricultural, public sectors and for the streets lighting was 33.2, 32.2, 12.8, 13 and 2.2 percent respectively.

A number of 52815 villages (about 4.3 mln rural households) were electrified which increased by 2.4% in comparison to the previous year.

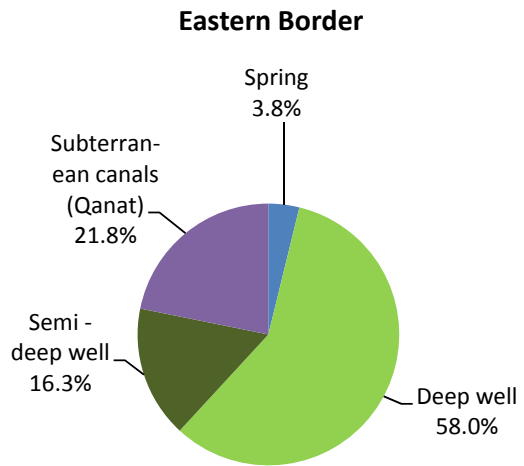
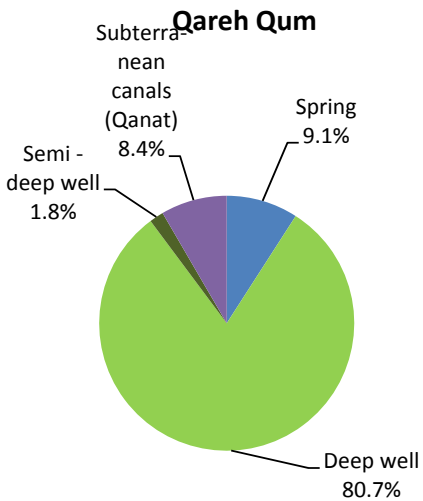
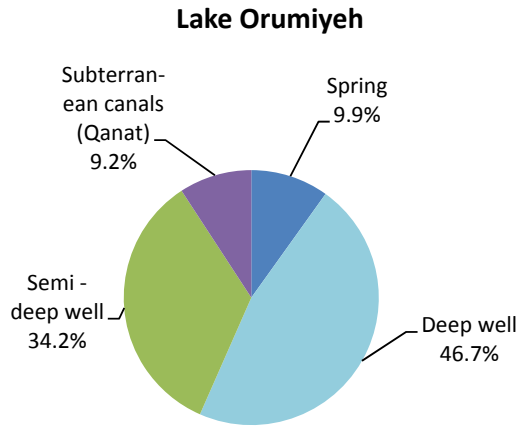
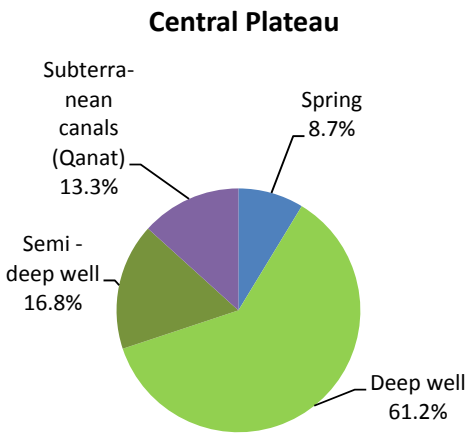
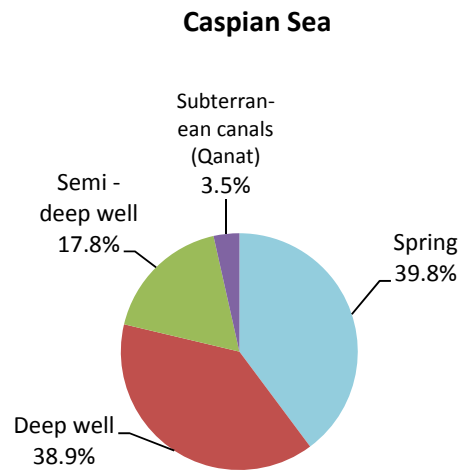
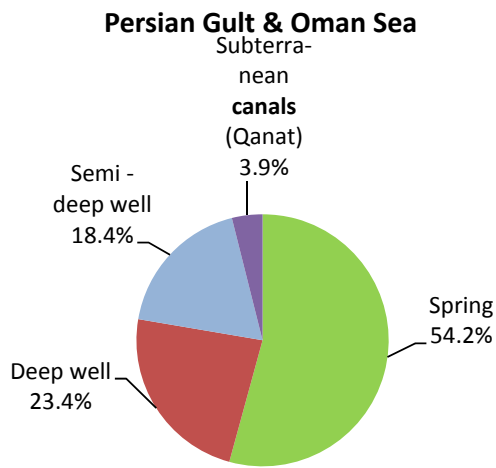
8. 1. UNDERGROUND WATER RESOURCES AND THEIR ANNUAL DISCHARGE BY MAIN BASINS

(mln cu m)

Aquatic year and main basins	Total discharge	Deep well		Semi-deep well		Subterranean canals (Qanat)		Spring	
		Number	Annual discharge	Number	Annual discharge	Number	Annual discharge	Number	Annual discharge
1374-75	60946	93646	27708	254900	11441	30988	9543	44476	12253
1379-80	69549	118986	30757	314405	13263	33036	7962	49785	17566
1382-83	74347	130008	31403	338041	13492	34355	8212	55912	21240
1383-84	77877	141820	33868	373272	13666	35819	7888	99695	22454
1384-85	79837	155800	35843	432943	12778	36307	7527	112787	23690
1385-86	79196	164714	35785	460124	13121	37197	7375	124443	22914
1386-1387	77544	165883	36065	464946	13540	36888	6992	127604	20948
Caspian Sea	8417	34052	3270	173510	1498	2751	297	52174	3352
Persian Gulf and Oman Sea	25495	30059	5978	82180	4684	4663	1006	35855	13828
Lake Orumiyeh	2532	8296	1182	65962	866	1576	233	5757	251
Central Plateau	37130	85678	22728	137816	6231	23568	4946	30804	3225
Eastern Border	1306	1614	758	2375	213	2554	285	1194	50
Qareh Qum	2664	6184	2149	3103	48	1776	225	1820	242

Source: Ministry of Energy.

8.1. ANNUAL DISCHARGE FROM UNDERGROUND WATER RESOURCES BY MAIN BASINS, 1386-87



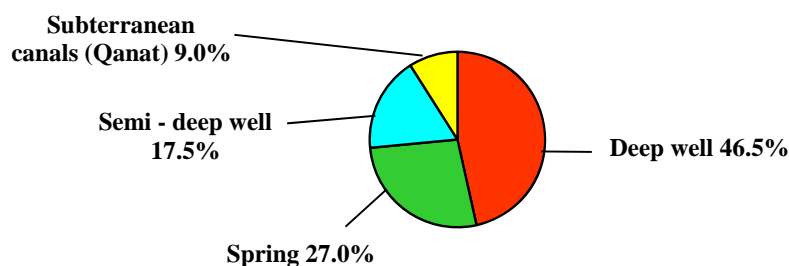
For data see Table 8.1.

8. 2. UNDERGROUND WATER RESOURCES AND THEIR ANNUAL DISCHARGE BY REGIONAL WATER ORGANIZATIONS: AQUATIC YEAR 1386-87 (mln cu m)

Regional water organization	Total discharge	Deep well		Semi-deep well		Subterranean		Spring	
		Number	Annual discharge	Number	Annual discharge	Number	Annual discharge	Number	Annual discharge
Total	78548	165883	36064	464946	14541	36888	6993	127604	20950
East Azarbayejan	1298	6411	647	27815	241	1891	271	1960	139
West Azarbayejan	2335	4799	1369	43970	721	488	54	868	191
Ardebil	372	1820	164	4193	78	173	13	2270	117
Esfahan.....	5980	15103	2564	31970	1543	4051	846	8816	1027
Ilam	468	1193	261	580	14	0	0	737	193
Bushehr	796	602	77	8022	597	24	12	130	110
Tehran	4130	17553	2830	40871	261	930	357	8181	682
Chaharmahal & Bakhtiari.....	7721	2094	559	1541	172	770	193	2222	6796
South Khorasan	1102	1961	745	834	54	4172	256	1427	47
Khorasan-e-Razavi	7661	13394	6238	6216	136	6236	784	4810	503
North Khorasan	985	2161	446	2518	45	718	108	2931	386
Khuzestan.....	1179	2429	761	1237	135	4	2	492	281
Zanjan	1245	2986	733	12402	220	801	49	9227	242
Semnan.....	1087	2790	797	1599	31	743	101	1445	158
Sistan & Baluchestan ..	1479	1104	308	7652	813	1530	325	791	32
Fars.....	9703	23108	3646	48044	3164	1504	916	2766	1977
Qazvin	2078	4066	1613	5316	24	223	43	17908	398
Qom.....	1067	1061	706	3494	130	726	205	882	26
Kordestan	1310	2156	396	10335	197	415	41	18255	676
Kerman.....	7754	11630	4293	17445	2587	1927	724	1170	150
Kermanshah	2005	2892	428	5981	388	313	71	4277	1118
Kohgiluyeh & Boyerahmad	1727	573	112	1112	95	61	12	3847	1508
Golestan	1335	5818	603	17831	472	300	43	6405	217
Gilan.....	812	3159	229	13500	164	49	20	5041	399
Lorestan.....	2403	3140	523	2467	142	1574	234	6642	1504
Mazandaran	2055	14837	482	115891	309	34	1	7051	1263
Markazi	3025	5308	1399	7415	500	2961	759	4063	367
Hormozgan	1454	1404	375	18065	896	145	36	639	147
Hamedan	2490	7257	1793	5428	254	967	185	1746	258
Yazd	1492	3074	966	1202	158	3158	332	605	36

Source: Ministry of Energy.

8. 2. PERCENTAGE OF ANNUAL DISCHARGE FROM UNDERGROUND WATER RESOURCES, 1386-87



For data see Table 8. 1.

8.3. STATISTICS ON LARGE RESERVOIR DAMS⁽¹⁾ BY REGIONAL WATER ORGANIZATIONS (mln cu m)

Description	Inflow	Outflow			Water consumption				
		Total	From turbines ducts for electricity generation	Other ⁽²⁾	Total	Agriculture	Drinking	Manu facturing	Other ⁽³⁾
1375 ⁽⁴⁾	36901	40136	26784	13352	18125	15009	1462	374	1280
1380.....	30400	27311	18386	8925	11467	8819	1209	382	1058
1384.....	59548	55858	40405	15453	19045	13855	1747	620	2823
1385.....	50873	54716	44913	9803	17157	13233	2276	589	1059
1386.....	69369	71560	57168	14392	17864	14027	1920	298	1620
1387.....	18399	19227	13519	5709	16192	11496	2330	659	1708
1388.....	35729	27475	11372	16103	17067	10310	4127	657	1973
<i>East Azarbayejan</i>									
Aras ⁽⁵⁾	4534	4368	4228	140	1858	996	19	3	840
Nahand.....	20	16	0	16	15	0	14	0	1
Alaviyan.....	87	77	0	77	75	60	10	2	3
Sattarkhan Ahar.....	42	47	0	47	43	33	7	2	1
Aydoghamush.....	63	69	0	69	27	22	0	0	5
Sahand.....	104	110	0	110	17	11	4	0	2
Taj bar sarab.....	4	1	0	1	1	1	0	0	0
Arasbaran.....	9	0	0	0	0	0	0	0	0
Ghale chai.....	31	35	0	35	34	33	0	0	1
Khoda afarin.....	8260	8354	8354	0	0	0	0	0	0
<i>West Azarbayejan</i>									
Shahid Ghanbari.....	46	44	0	44	27	27	0	0	0
Bukan.....	1166	888	0	888	806	582	121	2	101
Mahabad.....	152	138	90	47	126	109	17	0	0
Hasanlu.....	59	36	0	36	20	17	0	0	3
Barun.....	102	59	0	59	52	50	0	0	2
Shahrchay.....	156	105	0	105	105	70	23	0	12

8. 3. STATISTICS ON LARGE RESERVOIR DAMS⁽¹⁾ BY REGIONAL WATER ORGANIZATIONS
(continued) **(mln cu m)**

Description	Inflow	Outflow			Water consumption				
		Total	From turbines ducts for electricity generation	Other ⁽²⁾	Total	Agriculture	Drinking	Manu- facturing	Other ⁽³⁾
<i>Ardebil</i>									
Sabalan	12	15	0	15	15	13	0	0	3
Gilarlu	1	0	0	0	0	0	0	0	0
Qurichay	2	2	0	2	2	2	0	0	0
Yamchi	48	56	0	56	56	29	21	0	5
Saqizchi	2	2	0	2	1	1	0	0	0
Moghadas ardebili	14	2	0	2	3	2	0	0	1
<i>Esfahan</i>									
Zayandehrud	1109	997	901	66	918	183	385	100	250
Golpayegan	30	15	0	15	13	12	0	1	0
Hana	10	17	0	17	14	10	0	0	4
Khamiran	11	8	0	8	6	6	0	0	0
<i>Ilam</i>									
Ilam	28	14	0	14	10	0	10	0	0
<i>Bushehr</i>									
Reis Ali Delvari	245	57	0	57	57	55	0	0	2
<i>Tehran</i>									
Lar	361	347	161	186	162	0	161	0	1
Latiyan	341	329	325	3	326	69	255	0	2
Karaj	386	299	283	16	292	47	211	0	34
Taleghan	404	348	0	348	333	168	165	0	0
Mamlo	145	137	137	131	131	0	0	0	0

8.3. STATISTICS ON LARGE RESERVOIR DAMS⁽¹⁾ BY REGIONAL WATER ORGANIZATIONS
(continued)

(mln cu m)

Description	Inflow	Outflow			Water consumption				
		Total	From turbines ducts for electricity generation	Other ⁽²⁾	Total	Agriculture	Drinking	Manu-facturing	Other ⁽³⁾
Chaharmahal & Bakhtiari									
Choghakhor	29	22	0	22	0	0	0	0	0
Naghan	2	1	0	1	0	0	0	0	0
South Khorasan									
Haji Abad	5	3	0	3	3	3	0	0	0
Parsa	0	0	0	0	0	0	0	0	0
North Khorasan									
Shirin Darreh	62	46	0	47	24	24	0	0	0
Barzu	13	10	0	10	10	10	0	0	0
Chary	2	2	0	2	1	1	0	0	0
Bidvaz	19	13	0	13	12	12	0	0	0
Khorasan- e- Razavi									
Dusti ⁽⁵⁾	1116	463	0	463	410	193	43	1	173
Sedeh Khaf	14	8	0	8	8	8	0	0	0
Toroq.....	9	5	0	5	4	0	4	0	0
Sangerd	4	3	0	3	3	3	0	0	0
Komayestan	2	1	0	1	2	2	0	0	0
Yam	3	3	0	3	3	3	0	0	0
Kardeh	11	6	0	6	6	2	4	0	0
Shahid Yaqubi	11	7	0	7	5	5	0	0	0
Tabarak Ghochan	8	8	0	8	6	4	2	0	0
Shahid Dehghan	20	2	0	2	2	2	0	0	0
Fariman	14	11	0	11	11	11	0	0	0
Zavin Kalat	2	1	0	1	1	1	0	0	0
Dolatabad	5	0	0	0	0	0	0	0	0
Chali Deh Torghabe	12	0	0	0	0	0	0	0	0
Dahan Ghale.....	14	1	0	1	1	1	0	0	0
Khuzestan									
Karkhe	2061	1222	382	841	1107	458	645	4	0
Dez	4671	3307	3307	0	2291	1867	278	146	0
Karun1 Shahid Abbaspour ⁽⁶⁾	6187	4638	4638	0	3185	1820	1118	247	0
Karun3 ⁽⁶⁾	5341	4932	4931	0	0	0	0	0	0
Marun	912	404	143	261	309	262	42	5	0
Masjed-Soleyman ⁽⁶⁾ (Goder Lander).....	5041	5008	5008	0	1092	844	167	81	0
Zanjan									
Tahem	17	10	0	10	7	1	6	0	0
Semnan									
Damghan.....	16	14	0	14	12	12	0	0	0

8.3. STATISTICS ON LARGE RESERVOIR DAMS⁽¹⁾ BY REGIONAL WATER ORGANIZATIONS
(mln cu m)

Description	Inflow	Outflow			Water consumption				
		Total	From turbines ducts for electricity generation	Other ⁽⁹⁾	Total	Agriculture	Drinking	From turbines ducts for electricity generation manufacturing	Other ⁽²⁾
<i>Sistan& Baluchestan⁽⁷⁾</i>									
Pishin.....	413	402	0	402	80	79	1	0	0
Chahehnimeh (1,2,3).....	1229	962	0	962	224	174	50	0	0
Shai Kelk.....	20	6	0	6	1	0	0	0	1
<i>Fars</i>									
Dorudzan	271	193	46	147	163	100	39	18	6
Izad Khast	3	4	0	4	3	3	0	0	0
Molasadra(Tange Baragh)	105	102	47	55	101	54	0	0	47
Salman Farsi.....	119	69	0	69	63	32	28	1	2
Sivand	16	17	0	17	15	15	0	0	0
<i>Qom</i>									
Panzdah Khordad	19	40	0	40	35	1	34	0	0
<i>Kordestan</i>									
Baneh	8	6	0	6	5	0	5	0	0
Qeshlaq	45	56	0	56	52	5	39	0	8
Zarivar	36	16	0	16	0	0	0	0	0
Sang siyah	4	2	0	2	0	0	0	0	0
<i>Kerman</i>									
Jiroft	116	52	0	52	39	39	0	0	0
Sirjan(Tanguiyeh)	4	7	0	7	5	3	2	0	0
Baft.....	4	4	0	4	3	3	0	0	0
<i>Kermanshah</i>									
Gavshan	91	209	0	209	190	184	0	0	6
Gilangharb.....	1	1	0	1	0	0	0	0	0
Soleymanshah ..	23	11	0	11	8	7	0	0	1
Shiyan	5	1	0	1	1	1	0	0	0
<i>Kohgiluyeh& Boyerahmad</i>									
Kosar	275	164	0	164	143	18	70	3	52
Shah Ghasem....	5	2	0	2	0	0	0	0	0

8.3. STATISTICS ON LARGE RESERVOIR DAMS⁽¹⁾ BY REGIONAL WATER ORGANIZATIONS
(continued) (mln cu m)

Description	Inflow	Outflow			Water consumption				
		Total	From turbines ducts for electricity generation	Other ⁽²⁾	Total	Agriculture	Drinking	Manu- facturing	Other ⁽³⁾
<i>Golestan</i>									
Voshmgir ⁽⁶⁾	168	135	0	135	69	63	0	0	6
Golestan ⁽⁶⁾	145	108	0	108	29	19	0	0	10
Alagol.....	9	14	0	14	0	0	0	0	0
Vomel.....	5	2	0	2	2	2	0	0	0
Golestan 2 ⁽⁶⁾	37	19	0	19	2	2	0	0	0
<i>Gilan</i>									
Sefidrud ⁽⁸⁾	1341	978	725	252	1332	975	72	38	247
<i>Lorestan</i>									
Kaznar	2	2	0	2	2	0	0	0	2
Tanghaleh.....	1	0	0	0	0	0	0	0	0
Khanabad	20	22	0	22	20	4	0	0	16
<i>Mazandaran</i>									
Shahid Rajaee.....	188	144	0	144	143	118	0	0	25
Shiyadeh.....	5	3	0	3	3	3	0	0	0
Berenjestanak.....	14	14	0	14	14	3	0	0	11
Meijeran	17	17	0	17	17	5	1	0	11
Salaheddinkola.....	0	0	0	0	0	0	0	0	0
Farimsahra	2	2	0	2	2	0	0	0	2
Sonbol Abad.....	4	5	0	5	5	1	0	0	4
Alimalat.....	1	1	0	1	1	0	0	0	1

**8. 3. STATISTICS ON LARGE RESERVOIR DAMS⁽¹⁾ BY REGIONAL WATER ORGANIZATIONS
(continued) (mln cu m)**

Description	Inflow	Outflow			Water consumption				
		Total	From turbines ducts for electricity generation	Other ⁽⁹⁾	Total	Agriculture	Drinking	Manu facturing	Other ⁽²⁾
Alborz									
Markazi	136	86	0	86	85	15	0	0	70
Saveh									
Hormozgan									
Jegin⁽⁹⁾									
Esteqlal	72	61	0	61	56	56	0	0	0
Hamedan	380	251	0	251	16	16	0	0	0
Ekbatan									
Abshineh	439	176	0	176	50	11	36	3	0
Shirinsu	34	24	0	24	22	5	18	0	0
Yazd	0	0	0	0	0	0	0	0	0
Darrehbid									
Korait	1	1	0	1	0	0	0	0	0
Nahreyn	1	1	0	1	1	1	0	0	0

1. For 95 large reservoir dams (based on the ICOLD definition) with the capacity of 30982 mln.cu.m, almost equaling to 90% of the total volume

of all dams under use.

2. Other outflows include evaporation, weir, dam take-out gates, slit ejection, direct pumping from reservoir, drainage and leaking.

3. Including environment uses and dams campings, etc.

4. Data for the year 1375 include statistics on reservoir dams with the capacity of less than one million cubic metres.

5. Outflow of Aras and Dusti dams is equal to the total outflow of the dams. Water consumption includes the country of Iran only.

6. Karun3, Shahid Abbaspur and masjed-soleyman dams in Khuzestan Ostan and Golestan1&2 and Vusmgir dams in Golestan Ostan are chain dams and their inflow and outflow are affected by each other and the volumes of inflow and outflow of Karun 3, Shahid Abaspur, Golestan 1&2 were not included in Total. Therefore, the total of inflow and outflow of the dams basins is 47597 and 48948 mln cu m..

7. Evaporation of the dams covered by Sistan and Baluchestan Regional Water Organization includes major part of the outflow volume (equal to 190 mil .cu.m.).

8. Some of water uses are supplied from Sefidrud dam's middle basin to Tarik diversion dam.

9. Data from Bahman through Esfand 1385.

Source: Ministry of Energy.

8. 4. CAPACITY OF RESERVOIRS, LENGTH OF THE NETWORK AND NUMBER OF WATER EXTENSIONS COVERED BY URBAN WATER AND SEWAGE COMPANIES IN URBAN AREAS

Year and urban water and sewage company	Capacity of reservoirs (cu m)	Length of the network with a diameter of 80 mm or more (km)	Extensions (number)
1375.....	6735738	66557	6445675
1380.....	8402485	77955	8060281
1384.....	10328673	115167	9643889
1385.....	10914721	119059	10115189
1386.....	11176301	129720	10640807
1387.....	12182784	135599	11208647
1388.....	12788446	143716	11670825
East Azarbayejan	945500	6962	705784
West Azarbayejan	326636	4370	446206
Ardebil	193309	2449	216275
Esfahan	924515	13741	1032631
Ilam	122450	1622	96150
Bushehr	198750	2683	151239
Tehran	2868177	20501	1820332
Chaharmahal & Bakhtiari	124000	1621	142941
South Khorasan	95140	1690	102774
Khorasan-e-Razavi	840730	9623	1068929
North Khorasan	89770	1196	115722
Khuzestan	806879	9655	751234
Zanjan	132750	1687	157197
Semnan	152950	2156	163142
Sistan & Baluchestan	266635	3959	229414
Fars	772700	10620	905099
Qazvin	176070	1683	197488
Qom	233270	1891	226692
Kordestan	206825	2210	201392
Kerman	651542	8313	447189
Kermanshah	297386	2224	229099
Kohgiluyeh & Boyerahmad	62900	1177	81046
Golestan	189000	2772	195499
Gilan.....	242370	5062	328064
Lorestan	231190	3234	259485
Mazandaran	519611	6942	463249
Markazi	194100	3306	235766
Hormozgan	349516	2438	159251
Hamedan	278175	2700	243596
Yazd	295600	5229	297940

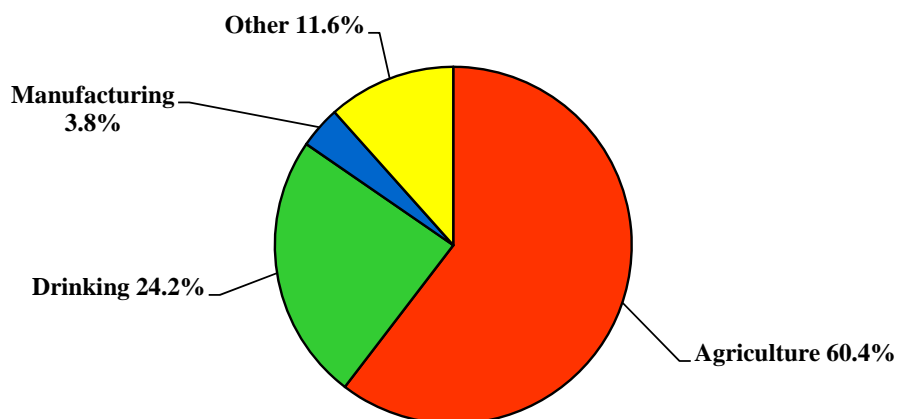
Source: Water and Sewage Engineering Company.

8. 5. WATER SUPPLY, PRODUCTION AND SALE CAPACITIES IN URBAN AREAS COVERED BY URBAN WATER AND SEWAGE COMPANIES

Year and urban water and sewage company	Supply (lit/second)	Production (1000 cu m)	Sale (1000 cu m)
1375.....	157801	3694153	2737860
1380.....	165328	4008252	2617518
1384.....	289481	4697508	3288258
1385.....	214154	5094428	3464452
1386.....	223573	5319282	3753334
1387.....	233408	5554571	3755528
1388.....	249020	5551910	3929525
East Azarbayejan	12457	215865	173288
West Azarbayejan	6949	167504	128885
Ardebil	4515	62856	47377
Esfahan	17939	416538	310641
Ilam	1602	35332	25471
Bushehr	1928	60126	56749
Tehran	72123	1575857	1155973
Chaharmahal & Bakhtiari	2146	43427	32969
South Khorasan	1544	32643	23781
Khorasan-e-Razavi	17739	326684	250498
North Khorasan	1202	34315	26089
Khuzestan	20425	573466	282786
Zanjan	3380	61098	43816
Semnan	2491	55973	42315
Sistan & Baluchestan	3762	90712	66977
Fars	12110	287637	207075
Qazvin	3504	74069	59977
Qom	4150	86727	68400
Kordestan	3923	88752	59000
Kerman	5947	187049	129908
Kermanshah	5310	126523	89787
Kohgiluyeh & Boyerahmad	1342	37393	22680
Golestan	3221	69101	51864
Gilan	4630	121489	85798
Lorestan	6151	120299	73499
Mazandaran	11020	219641	149837
Markazi	4729	108865	78619
Hormozgan	3135	91096	50911
Hamedan	4511	94237	65750
Yazd	5135	86636	68805

Source: Water and Sewage Engineering Company.

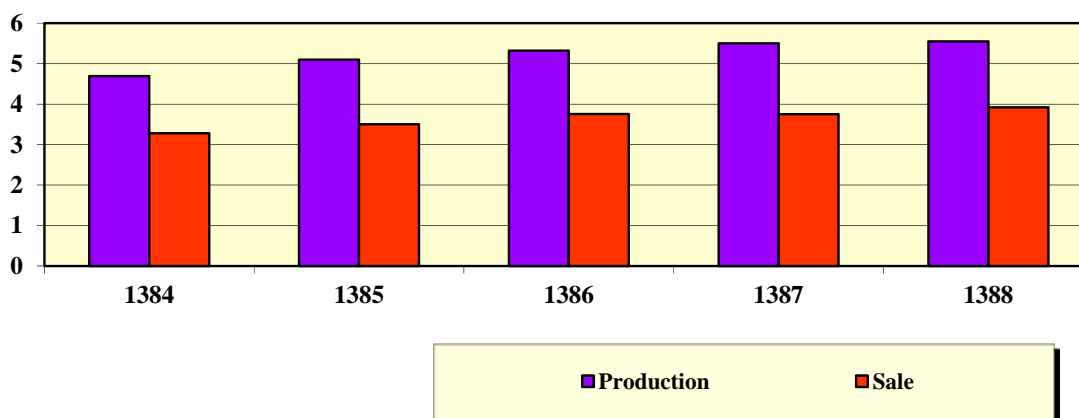
8. 3. WATER CONSUMPTION OF LARGE RESERVOIR DAMS BY TYPE OF USE, 1388



For data see Table 8. 3.

8. 4. PRODUCTION AND SALE OF WATER IN URBAN AREAS BY URBAN WATER AND SEWAGE COMPANIES

Billion cu m



For data see Table 8. 5

8. 6. LENGTH OF SEWAGE NETWORK AND THE NUMBER OF EXTENSIONS IN URBAN AREAS COVERED BY URBAN WATER AND SEWAGE COMPANIES

Year and urban water and sewage company	Length of the network with a diametre of 200 mm or more (km)	Number of extensions
1375.....	9930	678906
1380.....	17845	1409615
1384.....	28148	2346123
1385.....	30443	2509298
1386.....	33102	2799081
1387.....	36055	3216161
1388.....	38430	3593243
East Azarbayejan	2350	304629
West Azarbayejan	2171	217744
Ardebil	772	63316
Esfahan	5705	480373
Ilam	626	35642
Bushehr	528	35949
Tehran	3664	238879
Chaharmahal & Bakhtiyari	856	74316
South Khorasan	2386	275164
Khorasan-e-Razavi	245	17724
North Khorasan	234	26234
Khuzestan	4047	368360
Zanjan	271	18300
Semnan	237	12526
Sistan & Baluchestan	412	24046
Fars	2027	185930
Qazvin	596	66666
Qom	506	44192
Kordestan	1275	195197
Kerman	270	7418
Kermanshah	1768	275009
Kohgiluyeh & Boyerahmad	178	7776
Golestan	502	11736
Gilan	1838	197772
Lorestan	1092	104668
Mazandaran	580	17287
Markazi	1115	80439
Hormozgan	647	55000
Hamedan	1003	129536
Yazd	529	21415

Source: Water and Sewage Engineering Company.

8. 7. WATER SUPPLY, PRODUCTION AND SALE CAPACITIES IN RURAL AREAS COVERED BY RURAL WATER AND SEWAGE COMPANIES

Year and rural water and sewage company	Supply (lit/second)	Production (1000 cu m)	Sale (1000 cu m)
1384.....	34937	918150	600800
1385.....	51242	1019180	652929
1386.....	54505	1078016	695971
1387.....	55595	1104970	745751
1388.....	56918	1107761	789971
East Azarbayejan	4180	59246	41815
West Azarbayejan	2104	56892	35567
Ardebil	684	19600	13700
Esfahan	2354	55119	3865
Ilam	2238	13905	9177
Bushehr	752	25787	18141
Tehran	3703	64768	43810
Chaharmahal & Bakhtiari	1015	21160	14600
South Khorasan	570	12500	8300
Khorasan-e-Razavi	4739	86313	60238
North Khorasan	650	1578	1123
Khuzestan	4598	75000	44300
Zanjan	1412	26500	16804
Semnan	590	12660	8580
Sistan & Baluchestan	2133	40400	23700
Fars	6720	109644	67170
Qazvin	790	21796	14930
Qom	360	9400	6600
Kordestan	138	25265	15500
Kerman	2188	54300	34074
Kermanshah	119	16000	14000
Kohgiluyeh & Boyerahmad	339	11948	75000
Golestan	2739	42232	29814
Gilan	175	39485	27520
Lorestan	133	24570	18900
Mazandaran	2200	67710	47894
Markazi	276	34300	24000
Hormozgan	919	31752	27000
Hamedan	1100	35031	25949
Yazd	7000	12900	17900

Source: Water and Sewage Engineering Company.

8. 8. CAPACITY OF RESERVOIRS, LENGTH OF THE NETWORK AND NUMBER OF WATER EXTENSIONS COVERED BY RURAL WATER AND SEWAGE COMPANIES IN RURAL AREAS

Year and rural water and sewage company	Capacity of reservoirs (cu m)	Length of the network (km)	Extensions (number)
1384.....	2599347	108818	3089637
1385.....	2914866	116474	3285903
1386.....	2812154	121063	3481793
1387.....	3289733	127922	3743170
1388.....	3244177	141406	4019362
East Azarbayejan	213546	7008	217020
West Azarbayejan	158680	5672	179489
Ardebil	118832	2990	88035
Esfahan	107818	4426	185740
Ilam	50260	1077	36285
Bushehr	39138	2997	79681
Tehran	176538	3754	188649
Chaharmahal & Bakhtiari	82480	2410	71220
South Khorasan	93510	2249	84982
Khorasan-e-Razavi	215246	9137	409044
North Khorasan	66873	2290	86461
Khuzestan	204820	6443	137097
Zanjan	79536	2897	78126
Semnan	31710	858	48652
Sistan & Baluchestan	90728	6010	113269
Fars	215366	10665	332706
Qazvin	65095	2397	79279
Qom	30280	719	30048
Kordestan	65383	3023	96388
Kerman	183310	9530	195873
Kermanshah	105232	3678	103013
Kohgiluyeh & Boyerahmad	84965	2500	41598
Golestan	97524	4125	160845
Gilan	121411	10553	176077
Lorestan	53857	3713	82096
Mazandaran	118853	10339	265915
Markazi	88154	2875	113548
Hormozgan	121585	10459	125979
Hamedan	91102	3625	125710
Yazd	72345	2987	86537

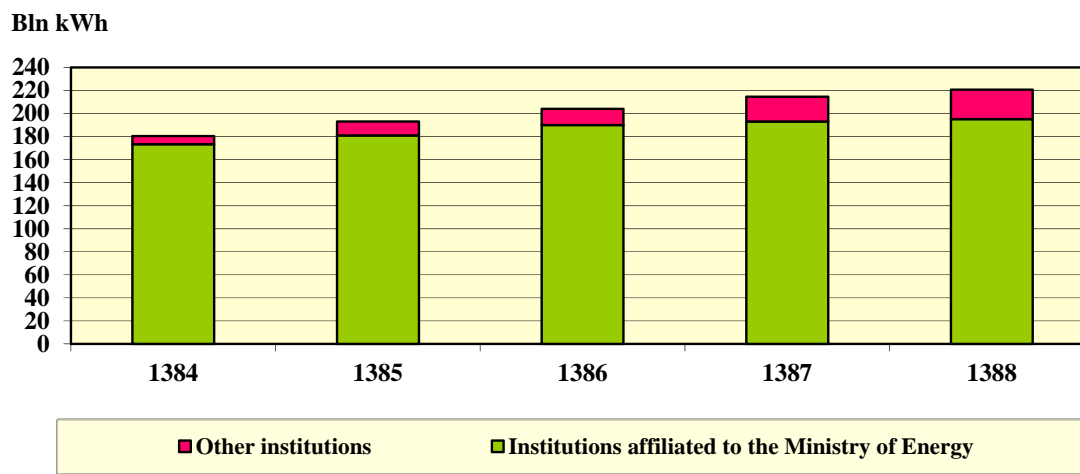
Source: Water and Sewage Engineering Company.

8. 9. NOMINAL CAPACITY AND GROSS ELECTRICITY PRODUCTION OF INSTALLED GENERATORS

Year	Nominal capacity			Gross electricity production		
	Total	Institutions affiliated to the Ministry of Energy	Other institutions**	Total	Institutions affiliated to the Ministry of Energy	Other institutions**
1370.....	18154	14848	3306	64126	59710	4416
1375.....	27077	22420	4657	90851	85825	5026
1380.....	34233	28043	6190	129996	124275	5721
1384.....	41003	38196	2807	178072	171157	6915
1385.....	45151	40909	4242	192534	181538	10996
1386.....	47896	43894	4002	203983	190030	13954
1387.....	52944	46003	6941	214280	192701	21579
1388.....	56181	47298	8883	221318	195583	25735

Source: Ministry of Energy.

8. 5. GROSS ELECTRICITY GENERATION IN THE COUNTRY



For data see Table 8. 9.

8. 10. CAPACITY OF INSTALLED GENERATORS AND MAXIMUM COINCIDENTAL POWER GENERATED IN PLANTS AFFILIATED TO THE MINISTRY OF ENERGY (1000 kW)

Year and type of generator	Nominal capacity			Actual capacity			Coincidental power generated		
	Total	Inter-connected network	Isolated networks	Total	Inter-connected network	Isolated networks	Total	Inter-connected network	Isolated networks
1370.....	14848	12890	1958	13835	12102	1733	10939	9823	1116
1375.....	22420	19656	2764	21136	18655	2481	16106	14562	1544
1380.....	28044	27868	176	25645	25494	151	21853	21790	63
1384.....	38196	38038	158	34607	34494	113	29982	29897	85
1385.....	40909	40732	177	37410	37286	124	31650	31561	89
1386.....	43894	43677	217	40057	39903	154	32685	32582	103
1387 ⁽¹⁾	46004	45787	217	41953	41798	155	34168	34067	101
1388⁽¹⁾.....	47298	47082	216	42254	42100	154	37580	37472	108
Hydroelectric.....	7703	7701	2	7355	7353	2	3910	3910	0
Steam	14935	14935	0	14576	14576	0	13505	13505	0
Gas	10479	10295	184	8447	8320	127	11606	11510	96
Combined cycle.....	13664	13664	0	11495	11495	0	8356	8356	0
Diesel	425	395	30	289	264	25	146	134	12
Wind.....	92	92	0	92	92	0	57	57	0
Private sector ⁽¹⁾	3907	3907	0	3126	3126	0	732	732	0

1. Total does not include private sector.

Source: Ministry of Energy.

**8. 11. CAPACITY OF INSTALLED GENERATORS AND MAXIMUM COINCIDENTAL
ELECTRICITY PRODUCTION OF POWER PLANTS AFFILIATED TO THE MINISTRY
OF ENERGY BY REGIONAL POWER COMPANIES, 1388**

Description	Nominal capacity(1000 kW)	Actual capacity Actual capacity (1000 kW)	Gross production (mln kW h)
Total	56182	49517	221313
Kish Water and Power Company ⁽¹⁾	198	138	473
Azarbajejan Regional Power Company	3274	2829	14212
Esfahan Regional Power Company	2555	2506	17653
Bakhtar Regional Power Company	2360	2303	14270
Tehran Regional Power Company	8998	7681	37539
Khorasan Regional Power Company	4235	3646	17053
Khuzestan Regional Power Company	2397	2257	11951
Zanjan Regional Power Company	0	0	0
Semnan Regional Power Company	25	14	26
Sistan & Baluchestan Regional Power Company	1163	942	3549
Gharb Regional Power Company	1291	1160	7346
Fars Regional Power Company	3860	3114	19064
Kerman Regional Power Company	1972	1578	7744
Gilan Regional Power Company	1727	1604	9377
Mazandaran Regional Power Company	2215	2142	13268
Hormozgan Regional Power Company	2372	2227	11783
Yazd Regional Power Company	953	760	3063
Hydroelectric plants	7703	7355	7207
Wind-electric plants	3907	3126	7550
Private sector.....	4977	4135	18185

1. The Company is under the supervision of Kish Development Organization.

Source: Ministry of Energy.

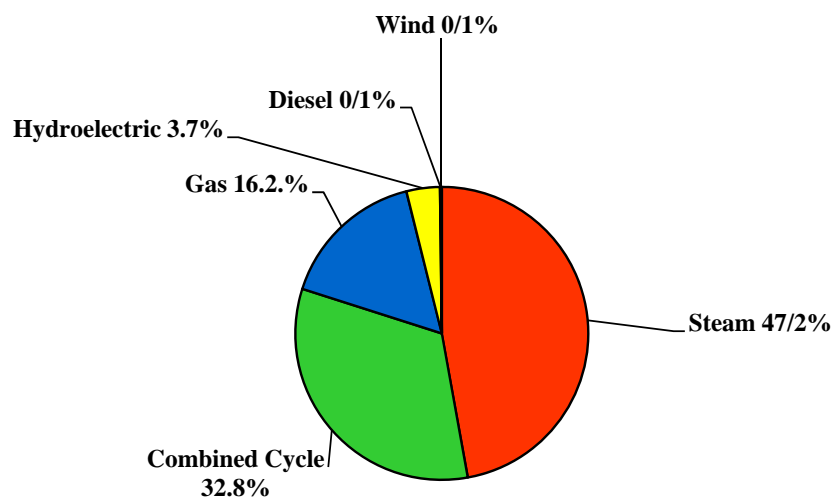
8. 12. ELECTRICITY PRODUCTION AND INTERNAL CONSUMPTION OF THE POWER PLANTS AFFILIATED TO THE MINISTRY OF ENERGY (mln kWh)

Year and type of generator	Gross production	Internal consumption of plants	Net production
1370.....	59710	2968	56742
1375.....	85825	4568	81257
1380.....	124275	5942	118333
1384.....	171157	7155	164002
1385.....	181538	7063	174475
1386.....	190030	7222	182808
1387 ⁽¹⁾	192701	7636	185065
1388.....	195582	7559	188023
Hydroelectric	7207	58	7149
Steam	92252	6252	86000
Combined cycle	64142	1028	63114
Gas	31629	213	31416
Diesel	124	8	116
Wind	228	0	228
Private sector.....	18185	592	17593

1. Total does not include private sector.

Source: Ministry of Energy.

8. 6. NET PRODUCTION OF ELECTRICITY OF THE PLANTS AFFILIATED TO THE MINISTRY OF ENERGY, 1388



For data see Table 8. 12.

8. 13. GROSS ELECTRICITY PRODUCTION OF HYDROELECTRIC POWER PLANTS BY REGIONAL WATER ORGANIZATION AND TYPE OF DAM (1000 kW hours)

Year and regional water organization	Total		Concrete arch		Earth		other	
	Number	Production	Number	Production	Number	Production	Number	Production
1370.....	10	7055818	6	6884146	4	171672	-	-
1375.....	11	7375938	6	7069895	5	306043	-	-
1380.....	13	5056652	8	4902159	5	154493	-	-
1384.....	28	14366564	10	8816435	18	5550129	-	-
1385 ⁽¹⁾	29	18168964	13	12634896	18	5550129	12	182164
1386.....	41	17986929	12	12278204	5	5532105	24	176620
1387.....	41	4753159	22	2801923	8	1853232	11	98004
1388.....	43	7206717	24	5032335	8	2081634	11	92748
East Azarbayejan Regional Water Organization	1	96049	0	0	1	96049	0	0
West Azarbayejan Regional Water Organization	1	7806	0	0	1	7806	0	0
Esfahan Regional Water Organization	3	198252	1	133204	0	0	2	65048
Tehran Regional Water Organization.....	5	285827	3	150300	2	135527	0	0
Khuzestan Regional Water Organization.....	6	6380057	3	4540446	3	1839611	0	0
Fars Regional Water Organization.....	3	31298	1	6194	1	2641	1	22463
Kerman Regional Water Organization.....	1	0	1	0	0	0	0	0
Gilan Regional Water Organization.....	4	113480	1	113480	0	0	3	0
Mazandaran Regional Water Organization.....	5	2350	3	2350	0	0	2	0
Ardebil Regional Water Organization.....	2	66145	2	66145	0	0	0	0
Lorstan Regional Water Organization.....	2	3270	1	283	0	0	1	2987
Kohgiluyeh & Boyerahmad Regional Water Organization	6	15937	6	15937	0	0	0	0
Markazi Regional Water Organization	2	2250	1	0	0	0	1	2250
Hamedan Regional Water Organization.....	1	3996	1	3996	0	0	0	0
Chaharmahal & Bakhtiyari Regional Water Organization	0	0	0	0	0	0	0	0
Khorasan-e-Razavi Regional Water Organization	1	0	0	0	0	0	1	0

Source: Ministry of Energy.

8. 14. GROSS ELECTRICITY PRODUCTION, FUEL CONSUMPTION, ENERGY GENERATION AND OUTPUT OF THERMAL POWER PLANTS AFFILIATED TO THE MINISTRY OF ENERGY, LARGE SCALE INDUSTRIES AND PRIVATE SECTOR

Year	Gross electricity production (mln kW hours)	Fuel consumed			Energy generated from fuel consumption (bln kcal)	Thermal energy consumed to generate one kWh of electricity (kcal)	Output (percent)
		Gas oil (mln lit.)	Fuel oil (mln lit.)	Natural gas (mln cu m)			
1370.....	52654	965	5144	9099	144964	2753	31.2
1375.....	78449	1014	7446	13443	205737	2623	32.8
1380.....	119218	1618	6799	24012	295114	2414	35.6
1384.....	163284	2649	6329	32832	390111	2385	35.8
1385.....	161267	4362	7587	32168	393246	2403	35.8
1386.....	171900	4083	8435	33264	407871	2373	36.2
1387.....	187752	3427	8911	37865	441936	2355	36.5
1388.....	188147	3802	9541	36501	439203	2386	36.0
Power plants affiliated to the Ministry of Energy .	162415	2670	9541	29598	368164	2334	36.8
Large Industried	7550	2	0	2483	22813	3022	28.5
Private sector.....	18185	1130	0	4420	48226	2652	32.4

Source: Ministry of Energy.

8. 15. PRODUCTION, INTERNAL CONSUMPTION OF POWER PLANTS, PURCHASE, LOSSES AND SALES OF ELECTRIC POWER OF INSTITUTIONS AFFILIATED TO THE MINISTRY OF ENERGY (mln k wh)

Description	1370	1375	1380	1384	1385	1386	1387	1388
Gross production	59710	85825	124275	173270	⁽¹⁾ 181538	190030	192701	195583
Less: Internal consumption of plants.....	2968	4568	5942	7499	⁽¹⁾ 7064	7223	7636	7559
Net production.....	56742	81257	118333	165772	⁽¹⁾ 174474	182807	185065	188024
Plus: Electricity purchased from large-scale industries ^(1,2)	0	2135	5721	7120	⁽¹⁾ 10997	13953	21579	19784
Less: Distribution and transmission networks losses	7985	11202	20857	30989	⁽¹⁾ 35566	38190	37754	34129
Net sales	48757	70055	97476	134783	144862	153534	163249	173679
Net exports	0	384	305	675	⁽¹⁾ 264	678	2191	6152
Domestic sales.....	48757	69671	97171	134238	144598	152856	161058	167527

1. Purchased electricity has been returned altogether.

2. Other institutions include large industries and establishments with 10 and more workers.

Source: Ministry of Energy.

8. 16. MAXIMUM COINCIDENTAL AND NON-COINCIDENTAL LOADS OF REGIONAL POWER COMPANIES (1000 kW)

Year and regional power company	Maximum coincidental load	Maximum non-coincident load
1370.....	9799	xx
1375.....	⁽¹⁾ 15616	xx
1380.....	⁽¹⁾ 23220	xx
1384.....	⁽¹⁾ 30731	xx
1385.....	⁽¹⁾ 33453	xx
1386.....	34582	xx
1387.....	34049	xx
1388.....	37050	xx
Kish Water and Power Company	96	xx
Azarbajejan Regional Power Company	2128	xx
Esfahan Regional Power Company	2601	xx
Bakhtar Regional Power Company	2077	xx
Tehran Regional Power Company	6779	xx
Khorasan Regional Power Company	2569	xx
Khuzestan Regional Power Company	5471	xx
Zanjan Regional Power Company	972	xx
Semnan Regional Power Company	349	xx
Sistan & Baluchestan Regional Power Company	882	xx
Gharb Regional Power Company	1280	xx
Fars Regional Power Company	3244	xx
Kerman Regional Power Company	1323	xx
Gilan Regional Power Company	818	xx
Mazandaran Regional Power Company	1643	xx
Hormozgan Regional Power Company	1588	xx
Yazd Regional Power Company	581	xx
Large Industries.....	2649	xx

1. Maximum non-coincident load is included in regional power companies and is not separable

Source: Ministry of Energy.

8. 17. LENGTH OF DIFFERENT TYPES OF ELECTRIC POWER TRANSMISSION LINES (km circuits)

Year	Transmission line		Subtransmission line	
	400 kV	230 kV	132 kV	63 and 66 kV
1370.....	4770	9574	8315	17568
1375	6730	14115	10647	23336
1380.....	9924	20731	13857	29400
1384.....	12138	24931	17047	36720
1385.....	12404	25634	18582	37974
1386.....	14191	26455	19185	39232
1387.....	14973	27247	20100	40776
1388.....	17438	28478	20703	42341

Source: Ministry of Energy.

8. 18. NUMBER OF CUSTOMERS AND DOMESTIC SALES OF ELECTRICITY BY INSTITUTIONS AFFILIATED TO THE MINISTRY OF ENERGY

Year	Customers	Domestic sales of electricity (mln k wh)
1370.....	10090135	49175
1375	12854735	69671
1380.....	16345450	97171
1384.....	19649310	132898
1385.....	20559946	144597
1386.....	21734244	152853
1387.....	22609603	161058
1388.....	24191259	167527

Source: Ministry of Energy.

8. 19. NUMBER OF DIFFERENT TYPES OF CUSTOMERS BY REGIONAL POWER COMPANIES AND OSTAN

(customers)

Description	Total	Household	Public	Agricultural	Industrial	Other
1375.....	12854735	10440912	290156	37747	55036	1578877
1380.....	16345450	13682563	523505	77556	91468	1970358
1384.....	19649310	16398318	677112	126502	133229	2314149
1385.....	20559946	16989284	748964	138137	152202	2531359
1386.....	21734244	17921413	796283	151789	166976	2697783
1387.....	22609603	18606151	849504	173644	⁽¹⁾ 165475	2814829
1388.....	24191259	19844427	952043	201912	161380	3031497
Azarbayejan Regional Power Company	2429007	1990912	66956	23953	15591	331595
East Azarbayejan	1224183	985035	37480	11039	10073	180556
West Azarbayejan	837465	696581	19818	10918	3663	106485
Ardebil	367359	309296	9658	1996	1855	44554
Esfahan Regional Power Company	2039420	1657494	58570	28530	24443	270383
Esfahan	1800404	1453653	51418	25676	22357	247300
Chaharmahal & Bakhtiyari	239016	203841	7152	2854	2086	23083
Bakhtar Regional Power Company	1464300	1247193	44020	17615	9342	146130
Markazi	504635	431427	16004	5884	4162	47158
Hamedan	524345	438058	17246	7745	3104	58192
Lorestan	435320	377708	10770	3986	2076	40780
Tehran Regional Power Company	6193313	4881781	383178	4677	41036	882641
Tehran	5811550	4570925	375522	3691	35688	825724
Qom	381763	310856	7656	986	5348	56917
Khorasan Regional Power Company	2350013	1971464	74261	14807	14358	275123
South Khorasan	219005	186881	8739	1743	1791	19851
Khorasan-e-Razavi	1898253	1583973	59175	11439	11769	231897
North Khorasan	232755	200610	6347	1625	798	23375

8. 19. NUMBER OF DIFFERENT TYPES OF CUSTOMERS BY REGIONAL POWER COMPANIES AND OSTAN (continued) (customers)

Description	Total	Household	Public	Agricultural	Industrial	Other
Khuzestan Regional Power Company	1206176	1020840	35085	5238	4131	140882
Khuzestan	1054674	890318	29627	3814	3256	127659
Kohgiluyeh & Boyerahmad	151502	130522	5458	1424	875	13223
Zanjan Regional Power Company	683545	569254	28806	7977	5721	71787
Zanjan	292147	244196	9486	4457	2313	31695
Qazvin	391398	325058	19320	3520	3408	40092
Semnan Regional Power Company	248854	197686	11235	3237	3329	33367
Semnan.....	248854	197686	11235	3237	3329	33367
Sistan & Baluchestan Regional Power Company	495437	420989	15961	5773	1542	51172
Gharb Regional Power Company	1087511	931046	27823	11138	4024	113480
Kermanshah	522328	444458	13952	4233	1773	57912
Kordestan	415992	360064	8396	5310	1505	40717
Ilam	149191	126524	5475	1595	746	14851
Fars Regional Power Company	1612796	1345517	42858	28630	11592	184199
Fars	1333694	1114085	35098	26722	10276	147513
Bushehr	279102	231432	7760	1908	1316	36686
Kerman Regional Power Company	770623	662852	20728	8805	2614	75624
Kerman.....	770623	662852	20728	8805	2614	75624
Kish Regional Power Company	23301	16070	2550	0	726	3955
Gilan Regional Power Company	970261	772978	40142	7173	5539	144429
Mazandaran Regional Power Company	970261	772978	40142	7173	5539	144429
Golestan	1743528	1440764	70442	23615	10347	198360
Mazandaran	471233	393507	19166	4675	1819	52066
Hormozgan Regional Power Company	1272295	1047257	51276	18940	8528	146294
Hormozgan.....	417858	344321	17190	4730	1068	50549
Yazd Regional Power Company	417858	344321	17190	4730	1068	50549
Yazd.....	455316	373266	12238	6014	5977	57821

1- Changing industrial tariff into agricultural tariff in 1387 is the reason for reduction in customers number in industrial tariff compared with 1386.

Source: Ministry of Energy.

8. 20. NUMBER OF VILLAGES AND RURAL HOUSEHOLDS ELECTRIFIED BY REGIONAL AND OSTANS' POWER COMPANIES

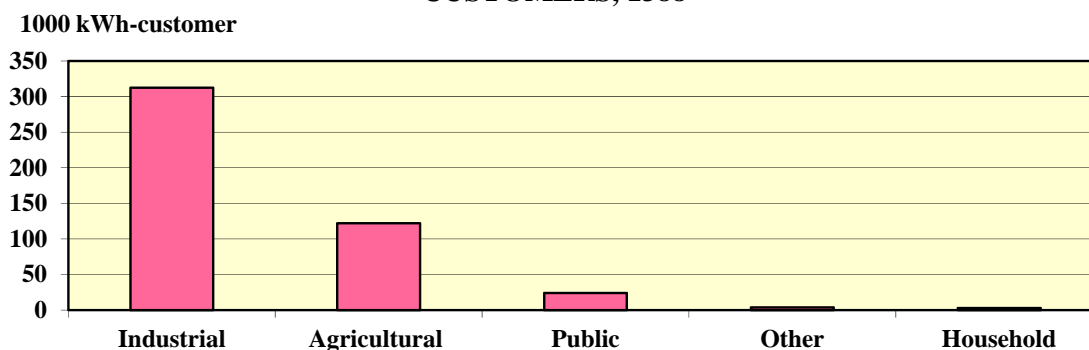
Description	Villages	Households
1370.....	25130	2696776
1375.....	35074	3318832
1380.....	45359	4056072
1384.....	50194	4410278
1385.....	50985	4427849
1386.....	51140	4203031
1387.....	51595	4213022
1388.....	52815	4283236
Azarbajejan Regional Power Company	7107	575015
East Azarbajejan	2713	295517
West Azarbajejan	2863	209687
Ardebil	1531	69811
Esfahan Regional Power Company	2420	381406
Esfahan	1711	296409
Chaharmahal & Bakhtiyari	709	84997
Bakhtar Regional Power Company	4690	387747
Markazi	1173	124161
Hamedan	1119	164920
Lorestan	2398	98666
Tehran Regional Power Company	1004	192571
Tehran	815	174337
Qom	189	18234
Khorasan Regional Power Company	5306	541464
South Khorasan	1299	122896
Khorasan-e-Razavi	3142	325492
North Khorasan	865	93076

8. 20. NUMBER OF VILLAGES AND RURAL HOUSEHOLDS ELECTRIFIED BY REGIONAL AND OSTANS' POWER COMPANIES (continued)

Description	Villages	Households
Khuzestan Regional Power Company	4983	273176
Khuzestan	3470	219956
Kohgiluyeh & Boyerahmad	1513	53220
Zanjan Regional Power Company	1739	163732
Zanjan	915	91374
Qazvin	824	72358
Semnan Regional Power Company	487	35797
Semnan.....	487	35797
Sistan & Baluchestan Regional Power Company	3609	37185
Sistan & Baluchestan	3609	37185
Gharb Regional Power Company	4793	297844
Kermanshah	2447	126471
Kordestan	1761	127222
Ilam	585	44151
Fars Regional Power Company	3378	318688
Fars.....	2892	279069
Bushehr	486	39619
Kerman Regional Power Company	4162	251567
Kerman.....	4162	251567
Gilan Regional Power Company	2918	284485
Gilan.....	2918	284485
Mazandaran Regional Power Company	3779	363956
Golestan	861	104004
Mazandaran	2918	259952
Hormozgan Regional Power Company	1572	124332
Hormozgan.....	1572	124332
Yazd Regional Power Company	868	54271
Yazd.....	868	54271

Source: Ministry of Energy.

8. 7. AVERAGE OF ELECTRICITY CONSUMPTION BY TYPE OF CUSTOMERS, 1388



For data see Tables 8. 19 and 8. 21.

**8. 21. DOMESTIC SALES OF ELECTRICITY BY REGIONAL POWER COMPANIES BY
TYPE OF USE AND OSTANS** (mln kW hours)

Description	Total	Household	Public	Agricultural	Industrial	Streets lighting	Other
1375.....	69671	23993	6595	5731	22925	2055	7621
1380.....	96811	32891	11951	11079	30379	4117	6394
1384.....	132897	44108	16350	16469	43123	4305	8542
1385.....	144598	48085	18329	17666	46590	4608	9320
1386.....	152853	51059	19710	17745	49837	4508	9994
1387.....	161058	52896	20437	21185	51705	4091	10744
1388.....	167527	55629	21825	21413	53971	3675	11014
Azarbayejan Regional Power Company ...	10164	3899	1458	973	2773	303	758
East Azarbayejan	5484	1918	778	456	1770	143	419
West Azarbayejan	3404	1444	505	416	685	115	239
Ardebil	1276	537	175	101	318	45	100
Esfahan Regional Power Company	18482	3707	1265	2601	9825	303	781
Esfahan	17162	3321	1099	2273	9486	251	732
Chaharmahal & Bakhtiyari	1320	386	166	328	339	52	49
Bakhtar Regional Power Company	12054	2478	897	1986	5995	363	335
Markazi	6834	841	333	876	4501	145	138
Hamedan	2883	879	348	851	574	131	100
Lorestan	2337	758	216	259	920	87	97
Tehran Regional Power Company	32146	11885	5949	1050	8313	613	4336
Tehran	30054	11142	5702	725	7744	561	4180
Qom	2092	743	247	325	569	52	156
Khorasan Regional Power Company	14176	3831	1496	4469	3263	359	758
South Khorasan	1145	280	150	415	210	48	42
Khorasan-e-Razavi	11818	3212	1227	3823	2596	288	672
North Khorasan	1213	339	119	231	457	23	44

**8. 21. DOMESTIC SALES OF ELECTRICITY BY REGIONAL POWER COMPANIES BY
TYPE OF USE AND OSTANS (continued)** (mln kW hours)

Description	Total	Household	Public	Agricultural	Industrial	Streets lighting	Other
Khuzestan Regional Power Company	20080	8215	2651	742	7450	257	765
Khuzestan	19101	7805	2534	695	7111	234	722
Kohgiluyeh & Boyerahmad	979	410	117	47	339	23	43
Zanjan Regional Power Company	5607	1055	522	1021	2699	124	186
Zanjan	2198	439	178	328	1123	54	76
Qazvin	3409	616	344	693	1576	70	110
Semnan Regional Power Company	2364	395	208	522	1106	47	86
Semnan.....	2364	395	208	522	1106	47	86
Sistan & Baluchestan Regional Power Company	3284	1505	815	310	283	160	211
Gharb Regional Power Company	5067	2143	888	656	978	153	249
Kermanshah	2429	995	452	273	500	86	123
Kordestan	1665	789	240	241	264	42	89
Ilam	973	359	196	142	214	25	37
Fars Regional Power Company	13618	5437	1747	3125	2277	269	763
Fars	9800	3020	1166	3037	1802	224	551
Bushehr	3818	2417	581	88	475	45	212
Kerman Regional Power Company	6794	1768	1424	2336	822	130	314
Kerman	6794	1768	1424	2336	822	130	314
Kish Regional power Company	497	149	123		117	29	79
Gilan Regional Power Company	3617	1656	485	125	852	180	319
Gilan.....	3617	1656	485	125	852	180	319
Mazandaran Regional Power Company	7296	3248	846	545	1839	243	575
Golestan	1986	974	255	249	305	65	138
Mazandaran	5310	2274	591	296	1534	178	437
Hormozgan Regional Power Company	7834	3465	794	324	2834	62	355
Hormozgan.....	7834	3465	794	324	2834	62	355
Yazd Regional Power Company	4447	793	257	628	2545	80	144
Yazd	4447	793	257	628	2545	80	144

Source: Ministry of Energy.