

Introduction

Since oil, gas, and petrochemical industries play a vital role in Iran's economy, the data on them are presented in an exclusive chapter. The Iranian oil industry came to existence by the exploitation of gas and oil from the first oil well in Masjed Soleyman (south-western Iran) in the year 1287 (1908) on which data are available. After the nationalization of the oil industry in the Month of Esfand of the year 1329, the National Iranian Oil Company (NIOC) managed to release some more data. The data furnished by the NIOC for the year 1334 (1955) were reflected in the first statistical yearbook of Iran.

Also, the National Iranian Gas Company (NIGC), established in the year 1955, and the National Iranian Liquefied Gas Company (NILGC), established in the year 1366, have been regularly releasing data on liquefied natural gas (LNG) and liquefied petroleum gas (LPG), respectively.

The start of the first fertilizer plant in the year 1342 was an introduction to the establishment of the National Petrochemical Company in the year 1343. Because of the abundant resources of oil and gas available in the country, the high value-added of the industry, and some other factors, the production of chemicals and petrochemicals has received great attention.

The statistics appearing in this chapter are currently provided by the Deputy for Planning of the ministry of oil.

It is worth mentioning, in addition to the statistics in this chapter, some statistics about oil and gas appeared in Chapter 24 (International Statistics) which is provided by the Organization of the Petroleum Exporting Countries (OPEC)¹.

Definitions and concepts

Crude oil: is a complicated mixture of hydrocarbons that are extracted from natural underground reservoirs in some regions in the world. Crude petroleum mainly consists of saturated and unsaturated aliphatic hydrocarbons

1) Organization of Petroleum Exporting Countries

2) Jet Propellant

3) Aviation Turbine Kerosene

and some aromatic materials. In addition to hydrogen and carbon that are the main constituents of oil, it also contains nitrogen, oxygen, sulphur, and metals such as nickel, sodium, vanadium and iron as well. As a result of the changes in the amount of these elements, the physical and chemical properties of crude oil is very variant.

Kerosene: is part of crude oil consisting of paraffin, petroleum and aromatic hydrocarbons, this product is used as heating and thermal power generation fuel and is one of the main constituents of jet fuel.

Fuel oil: is a residual substance obtained from the distillation of crude oil in refineries. Because of its heavy hydrocarbon content, this product does not burn easily. It is one of the main fuels for ships and large manufacturing establishments including power generation plants.

Gas oil: is a product obtained from the separation of kerosene from crude petroleum, this product is used as fuel for agricultural and industrial machinery and public transport vehicles and for thermal installations.

Motor spirit: is a mixture of isomerized and circular hydrocarbons with different concentrations, to which certain organic compounds are added for easy burning.

Jet fuel: is used as engine fuel for fighter and passenger aircraft. It is produced in different types in terms of a mixture of high quality burning oil and other light oil products (Naphtha) with some additives to prevent rusting, reduce the risk of icing, etc. In international standards, it is known as JP4² and ATK³.

Enriched gas (Natural gas): refers to the gas obtained from oil and gas reservoirs, available as associated gas or cap gas (such as gas extracted from Aghajari gas field), non-associated gas (such as Sarakhs and Sarkhun gas).

Sweet gas: enriched (natural) gas is turned into sweet gas after separation and refinement. The

separation means the separation of liquids and gaseous impurities from enriched gas.

Liquefied gas: is a mixture of normal butane and propane, the proportion of which changes under million dollars has been exported, which increased by 22.0 percent and decreased by 9.0 percent, respectively compared to the previous year. Environmental conditions and utilization and becomes liquid under a pressure of about 100-110 pounds per square inch.

Gas injection: is gas and/or water injected into oil reservoir for optimum utilization and preservation of resources.

Gas customer: is the natural or legal person who can receive natural gas from gas distribution network.

Gas consumer: is the customers whose gas connection is made after passing the stages of the subscription.

Gas extension: refers to the lines which have been extended from transmission, feeding and network lines into the customer's private station.

Polymer: refers to heavy molecules with high carbon made out of molecules with low carbon in compositions of unsaturated paraffin hydrocarbons.

Types of the polymer include:

- (a) Major: polyethylenes, PVC, polypropylene, polystyrene, melamine crystal, polyesters, PET, and ABS.
- (b) Engineering: polycarbonate and epoxy.
- (c) Rubbers: styrene-butadiene and polybutadiene, rubber.

Chemicals: They are categorized into organic (containing carbon) and non-organic (without carbon) materials based on the materials used in their production.

- (a) Basics: They include ethylene, propylene, methanol, butadiene, C4 cut, butene-1.
- (b) Intermediates: They include ethylene oxide, ethylene glycols, acetic acid, vinyl acetate, EDC, VCM, ethanol amine, 2-ethyl-hexanol and butanols.
- (c) Minerals: They include heavy and light sodium carbonate, argon, prechlorine,

chloridric acid, liquid chlorine, caustic soda, Sodium hypochlorite and explosive ammonium nitrate.

Aromatics: Aromatic hydrocarbons are cyclic unsaturated hydrocarbons that contain one or more benzene rings (a 6-carbon ring with 3 double bonds in the ring). Aromatics include benzene, toluene, xylene mixtures, paraxylene, orthosylene, ethyl benzene, meno-styrene, and PTA.

Fuel: includes propane, butane, pentane plus, pentane, pyrolysis gasoline, C4 raffinate, C6 raffinate, C.F.O, and MTBE.

Fertilizers, pesticides and related materials

- (a) Fertilizers include urea, ammonium nitrate, diammonium phosphate, ammonium sulphate.
- (b) Pesticides include alachlor, butachlor.
- (c) Related materials include ammonia, nitric acid, phosphoric acid, sulphuric acid, sulphur, chloroacetyl chloride.
- (d) Minerals include light and dense sodium carbonate, sodium bicarbonate, argon, perchlorin, hydrochloric acid, chlorine (liquid), caustic soda, sodium hypochlorite, ammonium nitrate (explosive).

Selected information

In the year 1399, a total of 793488 thousand barrels of crude oil were exported, which shows a 9% increase compared to the preceding year.

In the year 1399, a number of 1215 cities and 34149 villages were supplied with piped gas, and 28 cities and 2632 villages were being supplied with piped gas.

The total production of the National Company of the Petrochemical Industries with a 10% increase stood at 61155 thousand tons in the year 1399 compared to the preceding year (the year 1398). Out of this amount 9834 thousand tons valued at 1058708 billion rials are related to the domestic sale which increased by 8.0 and 56.0 percent, respectively compared to the previous year. Also, 24360 thousand tons valued at 8824 million dollars were exported, amount of which increased 22 percent in amount and 9 percent decreased in value respectively.

7.1. REFINERY CAPACITY FOR CRUDE OIL IN DOMESTIC REFINERIES (1000 barrels)

| Refinery | Year | | | | | | | | |
|---|---------------|---------------|---------------------|---------------|-----------------------|---------------------|---------------|---------------|---------------|
| | 1380 | 1385 | 1390 ⁽¹⁾ | 1394 | 1395 ^(1,2) | 1396 ⁽¹⁾ | 1397 | 1398 | 1399 |
| Total | 556260 | 556260 | 623055 | 623055 | 677832 | 675980 | 763580 | 791320 | 793488 |
| Abadan | 142350 | 142350 | 142350 | 142350 | 142740 | 142350 | 142350 | 142350 | 142740 |
| Arak | 63875 | 63875 | 91250 | 91250 | 91500 | 91250 | 91250 | 91250 | 91500 |
| Esfahan | 103660 | 103660 | 103660 | 103660 | 103944 | 103660 | 103660 | 131400 | 131760 |
| Bandar Abbas | 84680 | 84680 | 116800 | 116800 | 117120 | 116800 | 116800 | 116800 | 117120 |
| Tabriz | 40150 | 40150 | 40150 | 40150 | 40260 | 40150 | 40150 | 40150 | 40260 |
| Tehran | 82125 | 82125 | 82125 | 82125 | 91500 | 91250 | 91250 | 91250 | 91500 |
| Shiraz | 20440 | 20440 | 20440 | 20440 | 20496 | 20440 | 20440 | 20440 | 20496 |
| Kermanshah | 8030 | 8030 | 8030 | 8030 | 8052 | 8030 | 8030 | 8030 | 8052 |
| Lavan (distillation complex) | 10950 | 10950 | 18250 | 18250 | 18300 | 18250 | 18250 | 18250 | 18300 |
| Gas condensate of Persian Gulf Star | | x | x | x | 43920 | 43800 | 131400 | 131400 | 131760 |

1. Revised figures.

2. The year 1395 was a leap year.

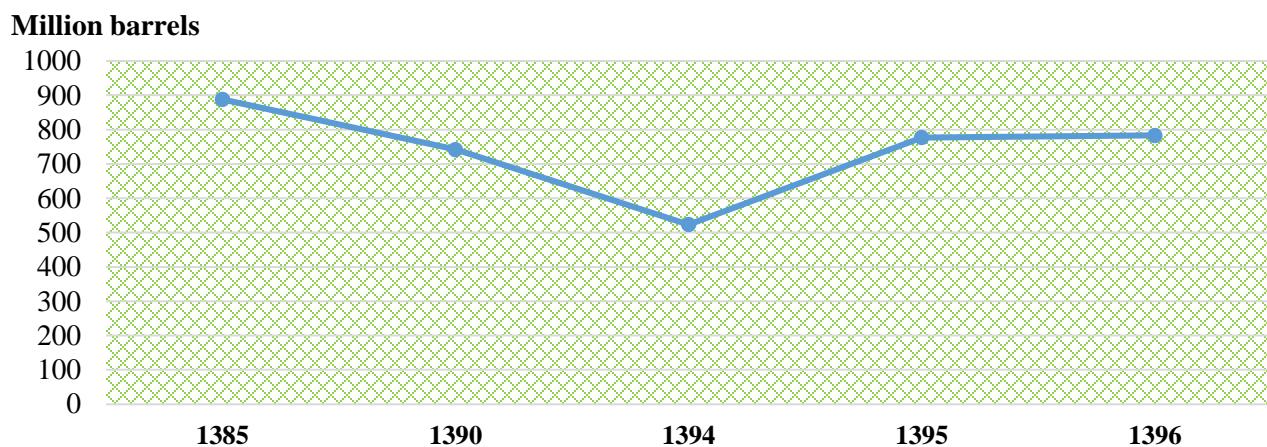
Source: Ministry of Oil.

7.2. DIRECT EXPORT OF CRUDE OIL AND OIL PRODUCTS

| Description | Year | | | | | | | | |
|----------------------------------|--------|--------|--------|--------|--------|--------|------|------|------|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 |
| Crude oil (1000 barrels)..... | 730000 | 887881 | 741939 | 523392 | 777714 | 782880 | 000 | 000 | 000 |
| Oil products (mln lit/day) | 42 | 42 | 14 | 28 | 23 | 41 | 000 | 000 | 000 |

Source: Ministry of Oil.

7.1. DIRECT EXPORT OF CRUDE OIL



For data see Table 7.2.

7.3. AVERAGE PRODUCTION OF DIFFERENT TYPES OF OIL PRODUCTS IN REFINERIES (cu m/day)

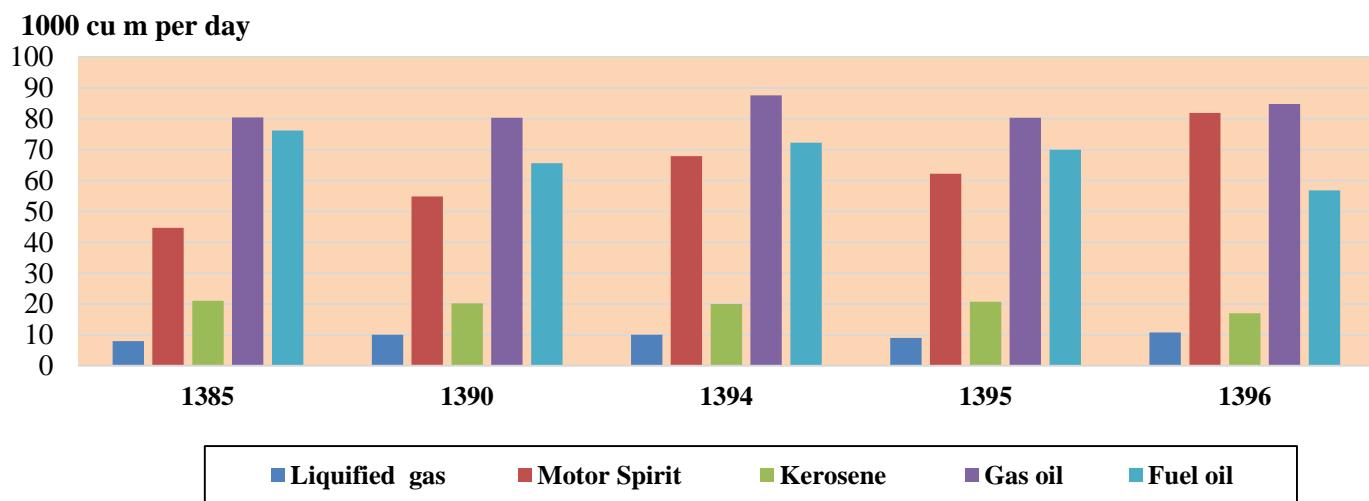
| Product | Year | | | | | | | | |
|-------------------------------------|-----------------------------|-----------------------------|------------|------------|------------|------------|------------|------------|------------|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 |
| Total | 245891⁽¹⁾ | 257313⁽¹⁾ | 000 |
| Liquefied gas..... | 8298 | 8016 | 10120 | 10135 | 9068 | 10774 | 000 | 000 | 000 |
| Motor spirit | 37128 ⁽¹⁾ | 44664 ⁽¹⁾ | 54820 | 67872 | 62177 | 81911 | 000 | 000 | 000 |
| Kerosene..... | 27160 | 21048 | 20199 | 20061 | 20710 | 17035 | 000 | 000 | 000 |
| Gas oil | 70879 | 80473 | 80352 | 87606 | 80339 | 84795 | 000 | 000 | 000 |
| Fuel oil | 80152 | 76205 | 65643 | 72302 | 69942 | 56853 | 000 | 000 | 000 |
| Jet fuels | 3098 | 3600 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| Lubricants..... | 1221 | 0 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| Bitumen..... | 8284 | 859 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| Other products ⁽²⁾ | 10382 | 24107 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |

1. Motor spirit includes basic gasoline, MTBE, super gasoline consumption etc.; however, MTBE and super gasoline consumption are not included in the total.

2. Other oil products exclude semi-finished products, gas, hydrogen and sulfur.

Source: Ministry of Oil.

7.2 AVERAGE AMOUNT OF SOME OIL PRODUCTS OF REFINERIES



For data see Table 7.3.

7.4. CONSUMPTION OF OIL PRODUCTS (1000 cu m)

| Product | Year | | | | | | | | | |
|-----------------------------------|---------------------|---------------------|-------|-------|-------|-------|------|------|------|--|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 | |
| Motor spirit ⁽¹⁾ | 16723 | 26887 | 20884 | 26856 | 25762 | 34317 | 000 | 000 | 000 | |
| Jet fuel G.P.4 | 157 | 99 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Jet fuel A. T. K | 943 | 1155 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Kerosene | 8954 | 7199 | 7257 | 7322 | 7559 | 6218 | 000 | 000 | 000 | |
| Gas oil..... | 25215 | 31471 | 29427 | 31794 | 28131 | 29102 | 000 | 000 | 000 | |
| Fuel oil | 15245 | 15644 | 19909 | 18939 | 19747 | 9593 | 000 | 000 | 000 | |
| Lubricants | 390 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Bitumen | 2100 ⁽²⁾ | 4202 ⁽²⁾ | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Liquefied gas | 4163 | 3922 | 2739 | 1447 | 1839 | 2079 | 000 | 000 | 000 | |
| Crude lubricants..... | 351 | 1668 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Benzinc solvents | 12 | 42 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |
| Napht Solvents..... | 2 | 42 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | |

1. Including regular, super, and unleaded gasoline.

2. Unit of measurement is regarded as thousand tons and includes VB (primary material of bitumen) as well.

Source: Ministry of Oil.

7.5. IMPORTS OF OIL PRODUCTS BY TYPE (mln/litre)

| Product | Year | | | | | | | | |
|------------------------|-------------|--------------|------------|------------|------------|------------|------------|------------|------------|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 |
| Total | 2840 | 11897 | 000 |
| Motor spirit | 2840 | 10038 | 000 | 2082 | 3067 | 4419 | 000 | 000 | 000 |
| Kerosene..... | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| Gas oil | 000 | 1858 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |
| Aircraft gasoline..... | 000 | 2 | 000 | 000 | 000 | 000 | 000 | 000 | 000 |

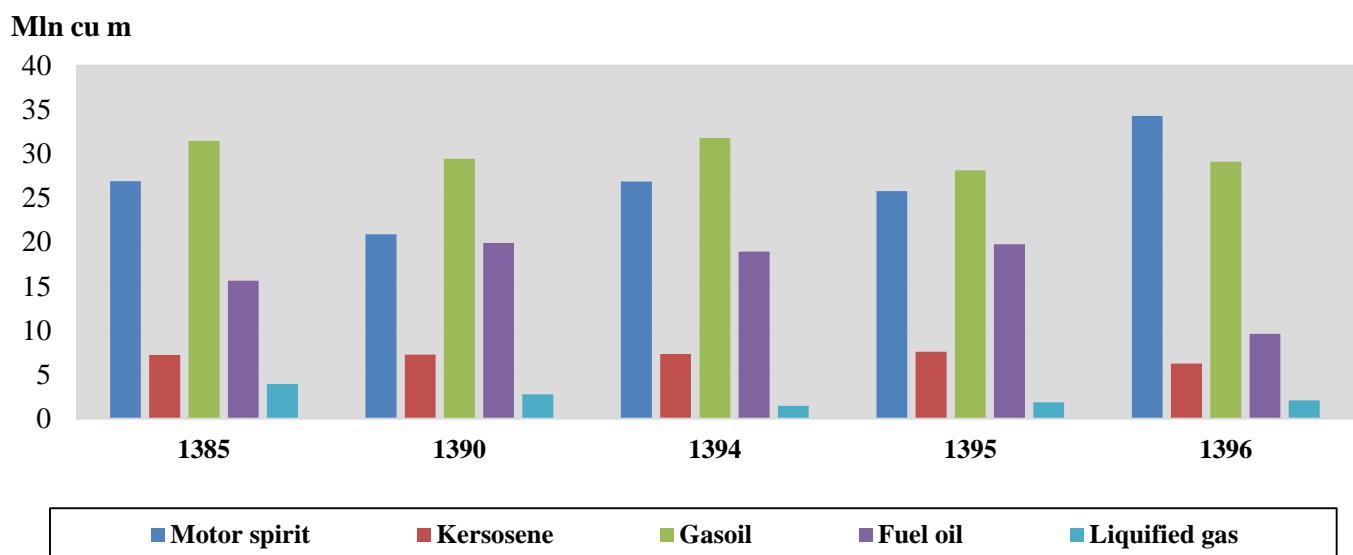
Source: Ministry of Oil.

7.6. TRANSPORTED OIL PRODUCTS BY MEANS OF TRANSPORT (mln ton kms)

| Means of transport | Year | | | | | | | | |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1398 |
| Total | 32397 | 39185 | 37249 | 36429 | 38024 | 42749 | 44012 | 49709 | 40971 |
| Pipelines | 21024 | 25194 | 21854 | 21359 | 22145 | 26432 | 25002 | 28965 | 24057 |
| Railway | 1977 | 2547 | 1661 | 2069 | 2505 | 2168 | 2890 | 3489 | 3403 |
| Road vehicles | 7893 | 8995 | 7844 | 10754 | 11947 | 13196 | 14566 | 14720 | 11471 |
| Tankers | 1503 | 2449 | 5890 | 2247 | 1427 | 953 | 1554 | 2535 | 2040 |

Source: Ministry of Oil.

7.3. CONSUMPTION OF SOME OIL PRODUCTS



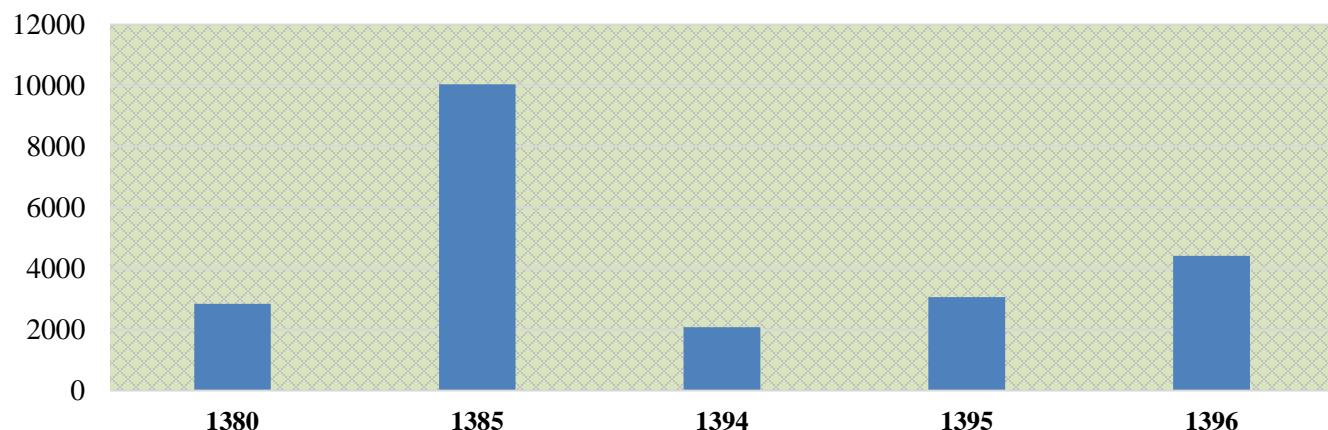
For data see table 7.4.

7.7. AVERAGE PRODUCTION OF ENRICHED GAS BY SOURCE OF PRODUCTION

(mln cu m/day)

| Resource | Year | | | | | | | | | |
|-------------------------------------|------|------|------|------|------|------|------|------|------|-----|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 | |
| Total | 312 | 464 | 631 | 715 | 779 | 845 | 000 | 000 | 000 | 000 |
| Associated gas..... | 88 | 98 | 104 | 77 | 97 | 102 | 000 | 000 | 000 | 000 |
| Cap gas..... | 51 | 34 | 30 | 29 | 28 | 28 | 000 | 000 | 000 | 000 |
| Gas of independent gas fields | 172 | 333 | 497 | 609 | 655 | 715 | 000 | 000 | 000 | 000 |

Source: Ministry of Oil.

7.4. VOLUME OF IMPORTED MOTOR SPIRIT**Million liters**

For data see Table 7.5.

**7.8. CITIES SUPPLIED⁽¹⁾ OR BEING SUPPLIED WITH PIPED GAS AND HOUSEHOLDS
COVERED IN THIS PROGRAMME AT THE END OF THE YEAR**

| Year and Ostan | Cities supplied with piped gas ⁽²⁾ | | Cities being supplied with piped gas ⁽³⁾ |
|--------------------------------|---|----------------------|--|
| | Number | Number of households | |
| 1380..... | 380 | 13842345 | 79 |
| 1385..... | 694 | 16406766 | 82 |
| 1390..... | 998 | 17512239 | 0 |
| 1394..... | 1102 | 17723919 | 50 |
| 1395..... | 1123 | 17932245 | 25 |
| 1396..... | 1153 | 17969177 | 47 |
| 1397..... | 1177 | 18067454 | 50 |
| 1398..... | 1192 | 18087721 | 43 |
| 1399..... | 1215 | 18218295 | 28 |
| East Azarbayan..... | 67 | 890557 | 0 |
| West Azarbayan | 44 | 633846 | 1 |
| Ardebil | 29 | 257887 | 0 |
| Esfahan..... | 110 | 1413759 | 0 |
| Alborz | 16 | 792535 | 1 |
| Ilam | 26 | 109991 | 0 |
| Bushehr | 36 | 234643 | 0 |
| Tehran | 48 | 4406914 | 0 |
| Chaharmahal & Bakhtiyari | 40 | 175842 | 0 |
| South Khorasan | 30 | 130400 | 0 |
| Khorasan-e-Razavi..... | 79 | 1427578 | 0 |
| North Khorasan | 22 | 143175 | 0 |
| Khuzestan..... | 83 | 986703 | 0 |
| Zanjan | 21 | 217688 | 0 |
| Semnan..... | 20 | 169707 | 0 |
| Sistan&Baluchestan | 5 | 215008 | 5 |
| Fars..... | 105 | 1023014 | 5 |
| Qazvin | 25 | 295019 | 0 |
| Qom..... | 6 | 365334 | 0 |
| Kordestan | 31 | 337871 | 0 |
| Kerman..... | 65 | 535572 | 5 |
| Kermanshah | 29 | 438658 | 3 |
| Kohgiluyeh & Boyerahmad | 17 | 103270 | 0 |
| Golestan | 33 | 305964 | 0 |
| Gilan..... | 51 | 537270 | 0 |
| Lorestan..... | 24 | 333502 | 1 |
| Mazandaran..... | 59 | 624935 | 2 |
| Markazi | 35 | 350287 | 0 |
| Hormozgan..... | 7 | 124695 | 5 |
| Hamedan | 31 | 346041 | 0 |
| Yazd | 21 | 290630 | 0 |

1. The number of cities are based on the definitions provided by the Ministry of Oil.

2. Including all cities, parts of which are gas consumers.

3. Including cities where piped gas supply operations have already started.

Source: Ministry of Oil.

7.9. VILLAGES SUPPLIED⁽¹⁾ OR BEING SUPPLIED WITH PIPED GAS AND HOUSEHOLDS COVERED IN THIS PROGRAMME AT THE END OF THE YEAR

| Year and Ostan | Villages supplied with piped gas ⁽²⁾ | | Villages being supplied with piped gas ⁽³⁾ |
|-------------------------------|---|----------------------|---|
| | Number | Number of households | |
| 1380..... | 416 | 212071 | 000 |
| 1385..... | 4344 | 1527073 | 2294 |
| 1390..... | 12196 | 2901337 | 4715 |
| 1394..... | 19901 | 3795070 | 5514 |
| 1395..... | 22929 | 4071715 | 4303 |
| 1396 ⁽⁴⁾ | 25607 | 4297835 | 5120 |
| 1397..... | 28814 | 4561313 | 4174 |
| 1398 ⁽⁴⁾ | 31236 | 4713119 | 3960 |
| 1399..... | 34149 | 4893540 | 2632 |
| East Azarbayjan..... | 2260 | 325796 | 186 |
| West Azarbayjan | 1535 | 233074 | 219 |
| Ardebil | 1409 | 115094 | 87 |
| Esfahan..... | 1067 | 182240 | 7 |
| Alborz | 182 | 60389 | 46 |
| Ilam | 488 | 46866 | 5 |
| Bushehr | 453 | 83040 | 8 |
| Tehran | 497 | 201445 | 35 |
| Chaharmahal & Bakhtiari | 522 | 85900 | 25 |
| South Khorasan..... | 1327 | 85828 | 183 |
| Khorasan-e-Razavi..... | 2450 | 501949 | 162 |
| North Khorasan | 741 | 110064 | 2 |
| Khuzestan..... | 2057 | 264318 | 125 |
| Zanjan | 626 | 96573 | 21 |
| Semnan..... | 281 | 39498 | 5 |
| Sistan & Baluchestan | 13 | 6458 | 14 |
| Fars..... | 2207 | 371285 | 78 |
| Qazvin | 560 | 89734 | 19 |
| Qom..... | 160 | 17537 | 0 |
| Kordestan | 1392 | 125459 | 42 |
| Kerman..... | 1429 | 189649 | 301 |
| Kermanshah | 1680 | 110198 | 331 |
| Kohgiluyeh & Boyerahmad | 879 | 72509 | 165 |
| Golestan | 894 | 237468 | 13 |
| Gilan..... | 2080 | 301075 | 70 |
| Lorestan..... | 1881 | 153844 | 192 |
| Mazandaran | 2361 | 434134 | 184 |
| Markazi | 1007 | 105141 | 4 |
| Hormozgan..... | 43 | 9479 | 17 |
| Hamedan | 1036 | 192032 | 2 |
| Yazd | 632 | 45464 | 84 |

1. The number of villages are based on the definitions provided by the Ministry of Oil.

2. Including all villages parts of which are gas consumers.

3. Including villages where piped gas supply operations have already started.

4. Revised figures.

Source: Ministry of Oil.

7.10. NUMBER OF AVAILABLE GAS EXTENSIONS⁽¹⁾ NATURAL GAS CONSUMERS BY TYPE AND CONSUMPTION AMOUNT AT THE END OF THE YEAR

| Year and Ostan | Extension (number) | Number of natural gas consumers (consumer) | | | | Consumption (mln cu m/year) |
|-------------------------------|-----------------------|--|-----------------|-----------------------|---------------|-----------------------------------|
| | | Total | Residential | Commercial- Public | Industrial | |
| 1380..... | 3724769 | 5007481 | 4796531 | 206902 | 4048 | 62255 |
| 1385..... | 6170548 | 9244178 | 8736507 | 485278 | 22393 | 103375 |
| 1390..... | 8729783 | 14782893 | 13795904 | 924283 | 62706 | 144517 |
| 1394..... | 10334849 | 20368351 | 19016618 | 1260889 | 90844 | 173422 |
| 1395..... | 10721161 | 21118327 | 19620388 | 1395697 | 102242 | 184287 |
| 1396..... | 11215035 | 22228640 | 20684528 | 1438035 | 106077 | 192318 |
| 1397..... | 11602173 | 23335595 | 21639647 | 1580747 | 115201 | 200260 |
| 1398..... | 11955733 | 24844430 | 23124583 | 1595372 | 124475 | 204649 |
| 1399..... | 12334291 | 25832303 | 24030000 | 1669802 | 132501 | 222856 |
| East Azarbayan..... | 680342 | 1662457 | 1466517 | 187293 | 8647 | 10968 |
| West Azarbayan | 472010 | 1033804 | 929057 | 102662 | 2085 | 6279 |
| Ardebil | 247025 | 521749 | 478463 | 41723 | 1563 | 3070 |
| Esfahan | 1220686 | 2348389 | 2207763 | 128633 | 11993 | 21189 |
| Alborz | 279669 | 896820 | 830649 | 61860 | 4311 | 5807 |
| Ilam | 111943 | 183472 | 175911 | 6862 | 699 | 802 |
| Bushehr | 216615 | 234635 | 230129 | 4057 | 449 | 17437 |
| Tehran | 1191550 | 3571585 | 3301575 | 251926 | 18084 | 26438 |
| Chaharmahal & Bakhtiari | 191779 | 338440 | 313501 | 22863 | 2076 | 2116 |
| South Khorasan | 166926 | 288128 | 269384 | 17521 | 1223 | 1645 |
| Khorasan-e-Razavi..... | 1002387 | 2469433 | 2291806 | 162562 | 15065 | 13594 |
| North Khorasan | 178285 | 334447 | 308377 | 25356 | 714 | 2750 |
| Khuzestan | 698008 | 1088391 | 1064124 | 22463 | 1804 | 19787 |
| Zanjan | 195906 | 367407 | 336289 | 28975 | 2143 | 2858 |
| Semnan..... | 139651 | 304497 | 277580 | 23933 | 2984 | 2693 |
| Sistan & Baluchestan | 74000 | 76899 | 75877 | 1003 | 19 | 1510 |
| Fars | 857969 | 1576925 | 1492407 | 79187 | 5331 | 12519 |
| Qazvin | 200877 | 445470 | 415016 | 26731 | 3723 | 4758 |
| Qom | 178737 | 425787 | 397032 | 24732 | 4023 | 2803 |
| Kordestan | 272561 | 562669 | 523831 | 36284 | 2554 | 3137 |
| Kerman | 456270 | 694708 | 675561 | 18087 | 1060 | 8894 |
| Kermanshah | 274025 | 616441 | 584200 | 29628 | 2613 | 3888 |
| Kohgiluyeh & Boyerahmad | 127832 | 204056 | 194862 | 8171 | 1023 | 630 |
| Golestan | 301126 | 596748 | 568855 | 25816 | 2077 | 3142 |
| Gilan..... | 607041 | 1122447 | 1031610 | 85013 | 5824 | 7042 |
| Lorestan..... | 269504 | 562248 | 535349 | 25830 | 1069 | 2204 |
| Mazandaran..... | 813616 | 1493222 | 1381577 | 98796 | 12849 | 8488 |
| Markazi | 297467 | 675829 | 629057 | 40901 | 5871 | 6989 |
| Hormozgan..... | 33259 | 16161 | 15554 | 427 | 180 | 7372 |
| Hamedan | 322225 | 637336 | 590252 | 43690 | 3394 | 3977 |
| Yazd | 255000 | 481703 | 437835 | 36817 | 7051 | 8056 |

1. Including extensions not yet utilized.

Source: Ministry of Oil.

7.11. LIQUEFIED GAS DELIVERED BY REFINERIES FOR DISTRIBUTION⁽¹⁾ (1000 tons)

| Year | Total | Abadan | Arak | Esfahan | Bandar Abbas | Tabriz | Tehran | Shiraz | Kermanshah | Reserve centres |
|-------------------|-------------|------------|------------|------------|--------------|------------|------------|-----------|------------|-----------------|
| 1380 | 1394 | 310 | 175 | 442 | 235 | 134 | 23 | 49 | 26 | 0 |
| 1385 | 1489 | 295 | 189 | 392 | 201 | 101 | 234 | 54 | 23 | 0 |
| 1390 | 1847 | 438 | 231 | 452 | 241 | 119 | 287 | 58 | 21 | 0 |
| 1394 | 2149 | 425 | 550 | 449 | 256 | 110 | 296 | 49 | 14 | 0 |
| 1395 | 2174 | 508 | 593 | 393 | 239 | 109 | 271 | 49 | 12 | 0 |
| 1396 | 2112 | 472 | 569 | 378 | 246 | 77 | 314 | 42 | 14 | 0 |
| 1397 | 2028 | 315 | 658 | 358 | 237 | 87 | 317 | 40 | 15 | 0 |
| 1398 | 2079 | 379 | 638 | 431 | 180 | 109 | 287 | 40 | 15 | 000 |
| 1399 | 1979 | 372 | 504 | 442 | 166 | 129 | 318 | 32 | 16 | 000 |

1. Excluding total delivery of liquefied gas for Lavan and Setare Khalij Fars (Persian Gulf) Refinery.

Source: Ministry of Oil.

7.12. TOTAL PRODUCTION OF NATIONAL PETROCHEMICAL COMPANY⁽¹⁾ BY PRODUCTS CATEGORY (1000 tons)

| Products category | Year | | | | | | | | |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1380 | 1385 | 1390 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 |
| Total | 12543 | 18000 | 42736 | 46411 | 50628 | 53626 | 53375 | 55494 | 61155 |
| Polymers..... | 780 | 1396 | 4182 | 5706 | 6133 | 6890 | 6844 | 7294 | 7814 |
| Chemicals..... | 3070 | 5178 | 13779 | 15458 | 21118 | 22685 | 23308 | 24754 | 27745 |
| Aromatics..... | 1032 | 1241 | 3283 | 2825 | 2955 | 3292 | 3879 | 4108 | 4153 |
| Fuel | 2911 | 5787 | 12837 | 13684 | 15110 | 14903 | 12911 | 13079 | 14604 |
| Fertilizers and pesticides.. | 4750 | 4398 | 8655 | 8738 | 5312 | 5856 | 6433 | 6259 | 6838 |

1. Including internal consumption of petrochemical complexes.

Source: Ministry of Oil.

7.13. QUANTITY AND VALUE OF NPC'S DOMESTIC SALES BY PRODUCTS CATEGORY (1000 tons; bln rials)

| Products category | Year | | | | | | | |
|---------------------------------|---------------------|-------------|---------------------|--------------|---------------------|--------------|---------------------|---------------|
| | 1380 ⁽¹⁾ | | 1385 ⁽¹⁾ | | 1390 ⁽¹⁾ | | 1394 ⁽¹⁾ | |
| | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| Total | 4181 | 6054 | 4819 | 20609 | 5634 | 61648 | 6515 | 140132 |
| Polymers..... | 655 | 3292 | 1044 | 9528 | 2426 | 38508 | 2545 | 91800 |
| Chemicals..... | 867 | 1087 | 1002 | 3557 | 1227 | 8548 | 1182 | 16522 |
| Aromatics..... | 242 | 521 | 446 | 4132 | 222 | 3000 | 395 | 9786 |
| Fuel | 504 | 262 | 575 | 2191 | 820 | 8001 | 701 | 10718 |
| Fertilizers and pesticides | 1913 | 892 | 1752 | 1201 | 939 | 3591 | 1692 | 11306 |

| Products category | Year | | | | | | | |
|----------------------------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|
| | 1395 ⁽¹⁾ | | 1396 ⁽¹⁾ | | 1397 ⁽²⁾ | | 1398 ⁽²⁾ | |
| | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| Total | 7443 | 167616 | 8354 | 207590 | 8377 | 392652 | 8444 | 564438 |
| Polymers | 2897 | 112416 | 3173 | 137888 | 3289 | 257532 | 3430 | 367626 |
| Chemicals | 1356 | 21623 | 2116 | 31118 | 1580 | 47559 | 1460 | 63040 |
| Aromatics | 297 | 8725 | 321 | 11588 | 470 | 27980 | 557 | 47152 |
| Fuel | 679 | 10191 | 663 | 12809 | 740 | 30892 | 806 | 51591 |
| Fertilizers and pesticides | 2214 | 14661 | 2081 | 14187 | 2298 | 28689 | 2191 | 35029 |
| | | | | | | | | |
| | | | | | | | | |

1. Information for the years 1380 to 1396 excludes inter-complex (plants) sale.

2. Revised figures.

Source: Ministry of Oil.

7.14. QUANTITY AND VALUE OF NPC'S EXPORTS BY PRODUCTS CATEGORY (1000 tons; mln dollars)

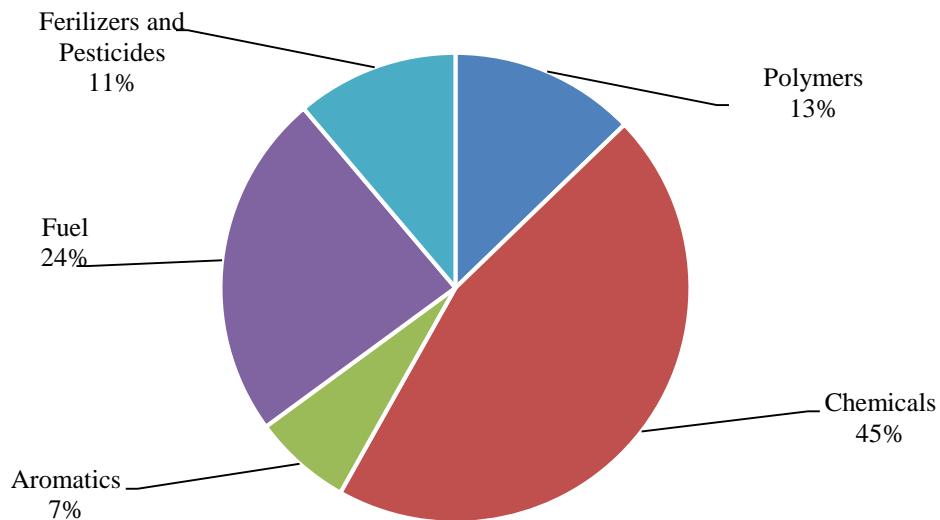
| Products category | Year | | | | | | | |
|----------------------------------|-------------|------------|-------------|-------------|---------------------|--------------|--------------|-------------|
| | 1380 | | 1385 | | 1390 ⁽¹⁾ | | 1394 | |
| | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| Total | 4011 | 795 | 6013 | 3320 | 18193 | 14707 | 18807 | 9225 |
| Polymers | 142 | 73 | 340 | 415 | 1622 | 2575 | 2566 | 2976 |
| Chemicals | 1520 | 181 | 2217 | 899 | 7152 | 4259 | 6532 | 2283 |
| Aromatics | 385 | 116 | 445 | 461 | 1193 | 1682 | 1312 | 1003 |
| Fuel | 1948 | 423 | 3011 | 1545 | 5702 | 5169 | 5811 | 2224 |
| Fertilizers and pesticides | 16 | 2 | 0 | 0 | 2524 | 1022 | 2586 | 739 |

| Products category | Year | | | | | | | |
|----------------------------------|--------------|-------------|--------------|--------------|---------------------|--------------|--------------|-------------|
| | 1395 | | 1396 | | 1397 ⁽¹⁾ | | 1399 | |
| | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| Total | 21153 | 9952 | 22404 | 11950 | 20518 | 11336 | 22337 | 9468 |
| Polymers | 3135 | 3422 | 3804 | 4111 | 3289 | 3663 | 3859 | 3277 |
| Chemicals | 6868 | 2358 | 6791 | 2799 | 7077 | 2972 | 8416 | 2259 |
| Aromatics | 1374 | 989 | 1380 | 993 | 1570 | 1135 | 1440 | 949 |
| Fuel | 6545 | 2533 | 6884 | 3261 | 4863 | 2674 | 4440 | 2138 |
| Fertilizers and pesticides | 3231 | 650 | 3545 | 786 | 3719 | 892 | 4182 | 845 |
| | | | | | | | | |
| | | | | | | | | |

1. Revised figures.

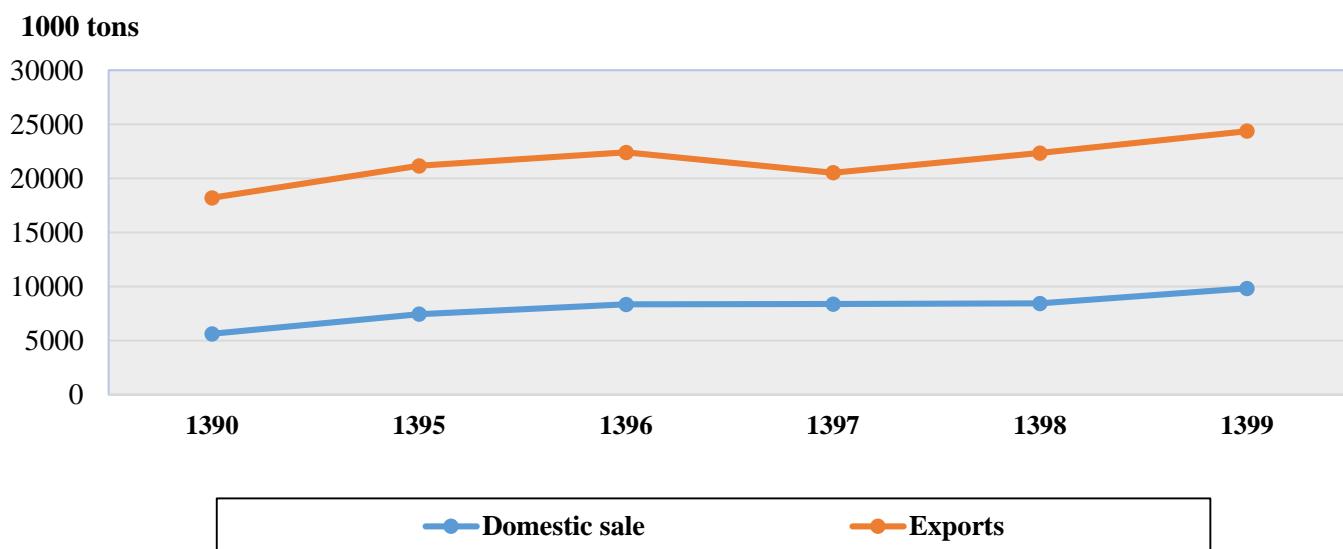
Source: Ministry of Oil.

7.5. TOTAL PRODUCTION OF NATIONAL PETROCHEMICAL COMPANY BY PRODUCTS CATEGORY, THE YEAR 1399



For data see Table 7.12.

7.6. VOLUME OF DOMESTIC SALES AND EXPORTS BY THE NATIONAL PETROCHEMICAL COMPANY



For data see Table 7.13 & 7.14.