Gas Distribution Networks

YEAR	NETWORK (KM)	EXTENSION
UP TO 2005	81000	4400000

Required Total Investment For Natural Gas Projects

billion rial

Subject/Year	2001	2002	2003	2004	2005
Gas Treatment	592	757	1173	1370	447
Transmission	1264	1385	1123	974	1920
Compressor Station	894	964	602	274	454
Distribution	1191	1395	1345	1494	1134
Sum	***3941***	***4501***	***4243***	***4112***	***3955***

Required Investment For Natural Gas Projects In Dollar

million dollar

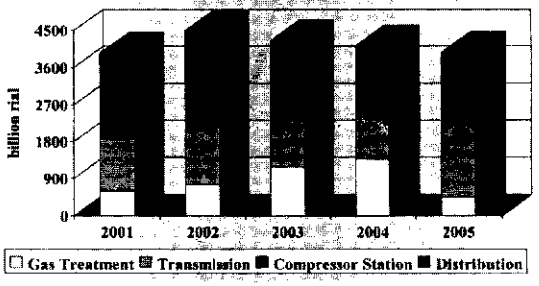
Subject/Year	2001	2002	2003	2004	2005
Gas Treatment	126	148	153	156	82
Transmission	148	178	186	223	211
Compressor Station	100	100	115	83	154
Distribution	36	32	23	24	4
Sum	***410***	***458***	***477***	***486***	***451***

Required Investment For Natural Gas Projects In Rial

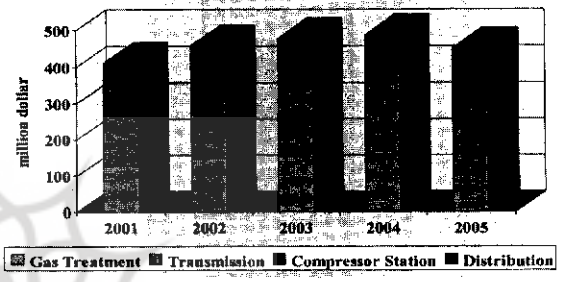
billion rial

Subject/Year	2001	2002	2003	2004	2005
Gas Treatment	371	499	906	1097	305
Transmission	1065	1078	797	584	1552
Compressor Station	719	789	400	129	185
Distribution	1128	1339	1305	1451	1126
Sum	***3223***	***3305***	***3408***	***3261***	***3168***

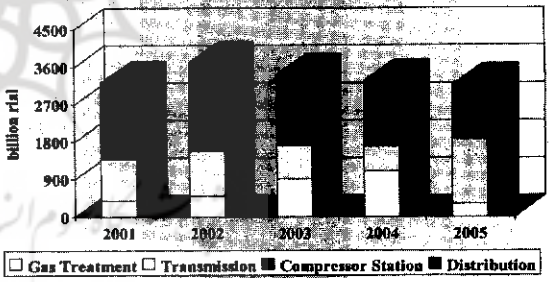
Required Total Investment For Natural Gas Projects



Required Investment For Natural Gas Projects In Dollar



Required Investment For Natural Gas Projects In Rial

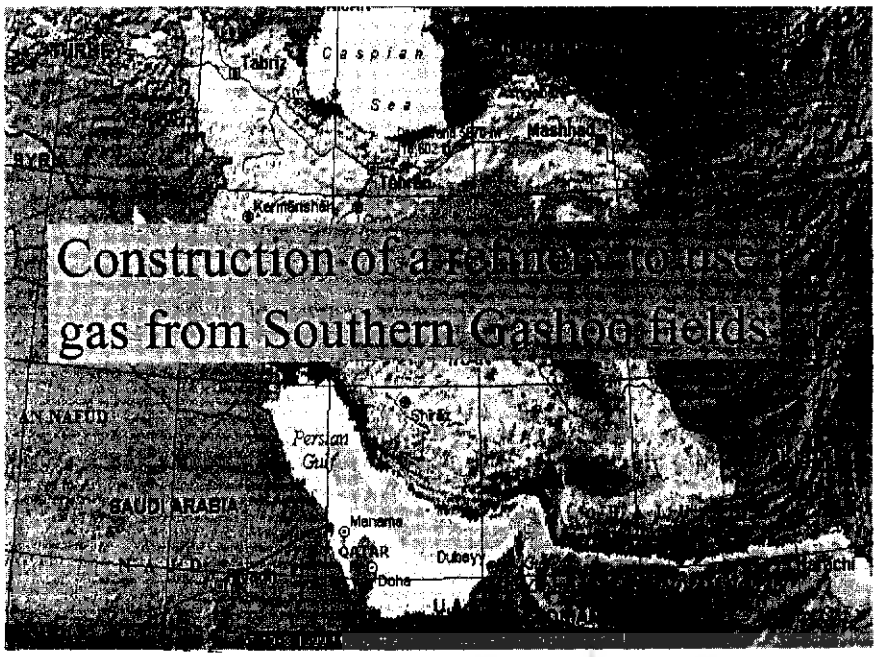


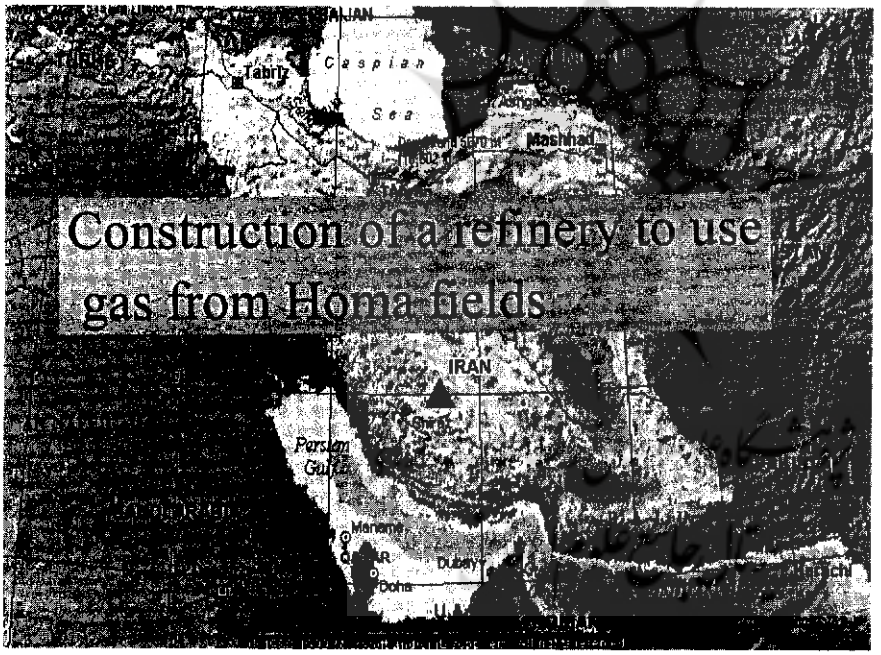
Conclusion

I.R of Iran, with a vast geographical Situation , has special advantages among the neighbouring countries in the natural gas trade.

Being close to the large natural gas markets such as Turkey , India, Pakistan and other East Asian and European countries, access to the large gas suppliers like Turkmenistan and Azerbaijan and also the existence of huge natural gas infrastructures together with Iran´s development plans , are indicative of a very brilliant prospect for investment and cooperation in Iran´s gas industry.

■





Year	Compressor Station
Up To 2000	20
Up To 2005	43

(2001-2004) . With these plans the total network and extentions in the cities will amount to 81000 Km and 4.4 MM respectively (Table 2) .

It is worth to mention that at the end of the third 5 year plan about 4700 industrial units, 40 power plants and 9 MM households will utilize natural gas as fuel or feedstock .

The prospects for investment during (2001-2004) :

The total investment requirements for implementing NIGC projects during the third five year plan is estimated to be about 2280 Million dollars and 16760 billion Rials. The breakdown is shown in the table (Table 3 & Fig.7) .

The investment for the years after 2005 will be according to the gas field development plans.

Forign currency requirements:

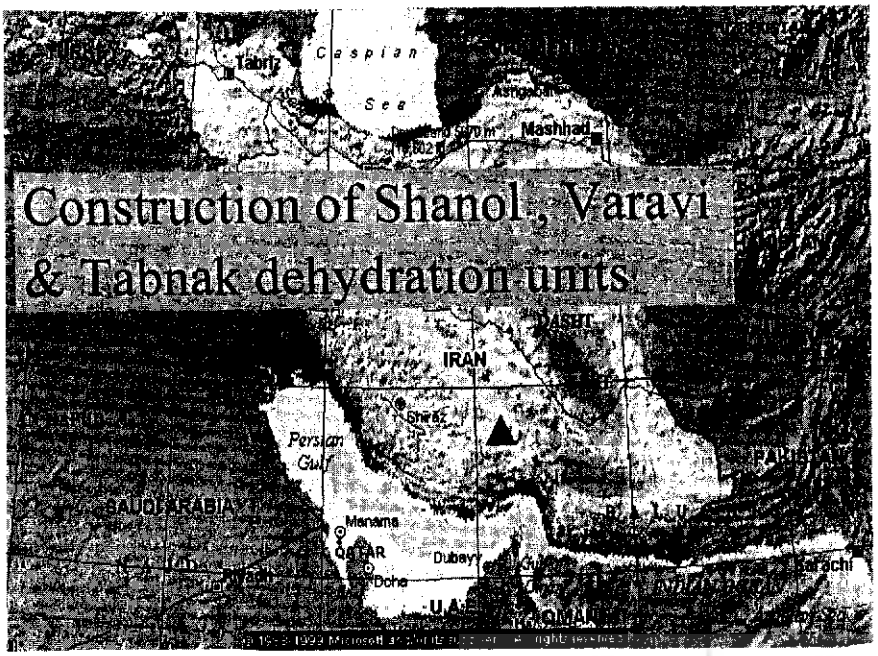
The rate of investment in the areas of treatment, transmission , compressor stations and distribution networks for the years 2001 to 2004 is estimated to be 410, 458, 477, 486 and 451$MM respectively.

Therefore the total investment will amount to 2.3 $ billion in the next 5 years (Table 4 & Fig.8).

Internal mony requirements:

The amount of investment in treatment, transmission, compressor stations and distribution networks for the years 2001 to 2004 will be 3223, 3701, 3408 , 3261, 3168 billion Rials.

It is necessary to mention that implementation of the above mentioned plans in treatment , transmission and distribution is based on natural gas availability through new gas field developements scheduled by NIOC. New investments will be needed to support new field developements (Table 5 & Fig.9).



780 km of the 4th trunkline with diameter of 56″,

150 km 40″ of Tehran 4th line ,

200 km of 40″ Yazd second line ,

300 km of 30″ for the reinforcement of the western pipeline ,

300 Km of 30″ of Ilam and South Gashoo pipeline,

expanding transmission pipelines of Khorasan and other Iran s provinces.

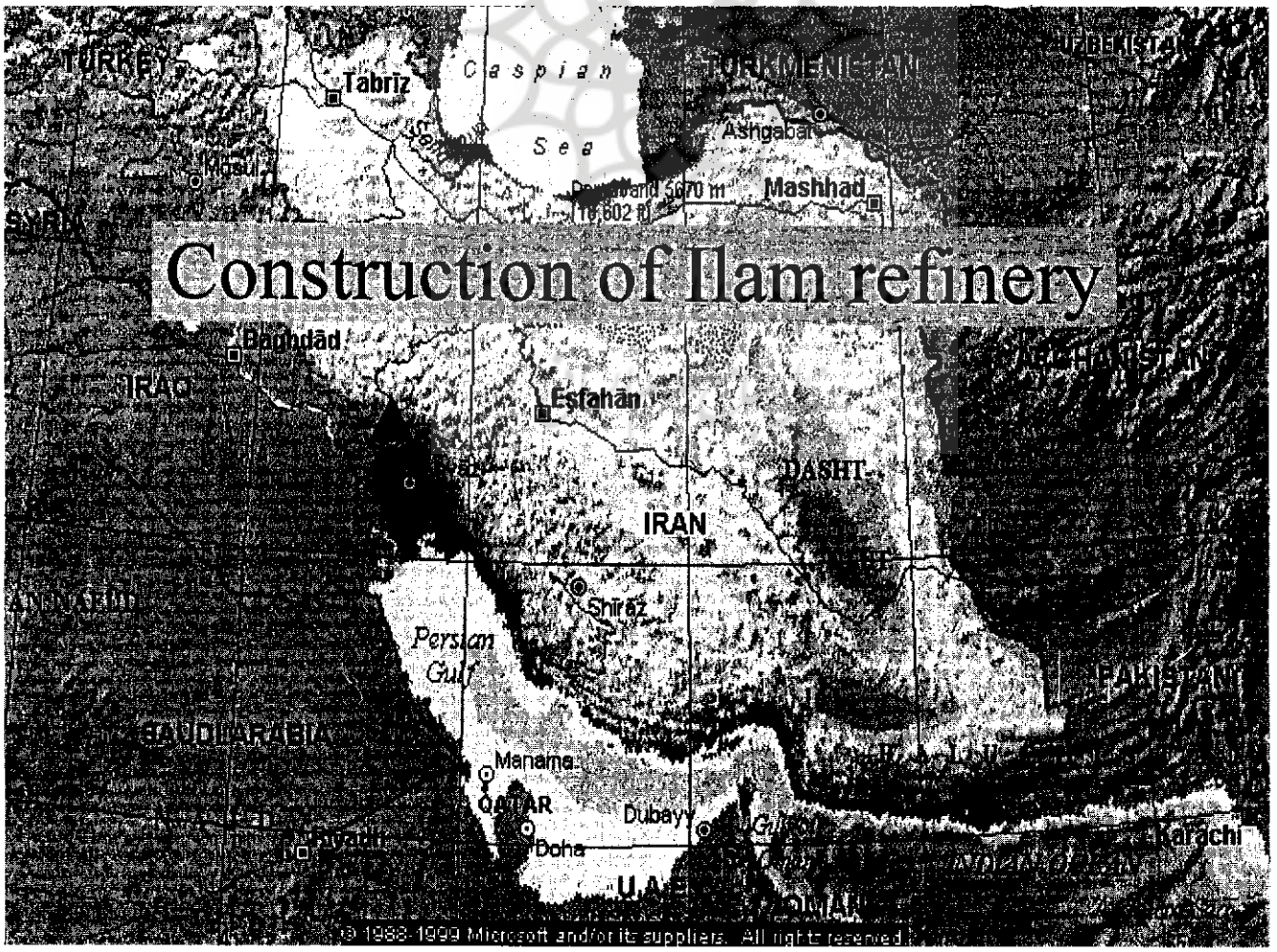
upon the completion and commencement of these plans, the total length of the transmission pipelines will increase to about 18000 km by the end of the year 2004. (Fig. 6)

Gas compressor projects over the next 5 years

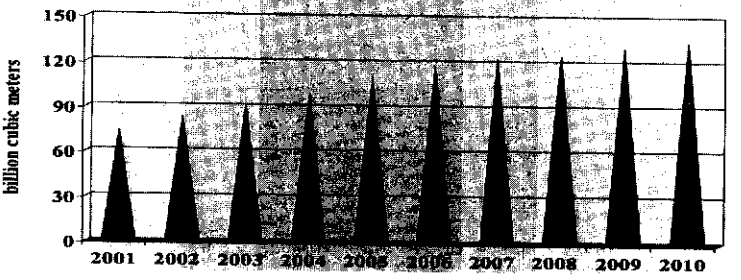
The installation of 23 compressor stations in addition to the existing 20 stations has been planned for the period (2001-2004) . This will increase the total power capacity to approximately 1.4 MM HP (Table 1) .

Gas Distribution Network Project over the next 5 years

Predretrom is to install 30000 Km of distribution pipe networks and 1.3 million extention during the period



Forecast Of Natural Gas Consumption

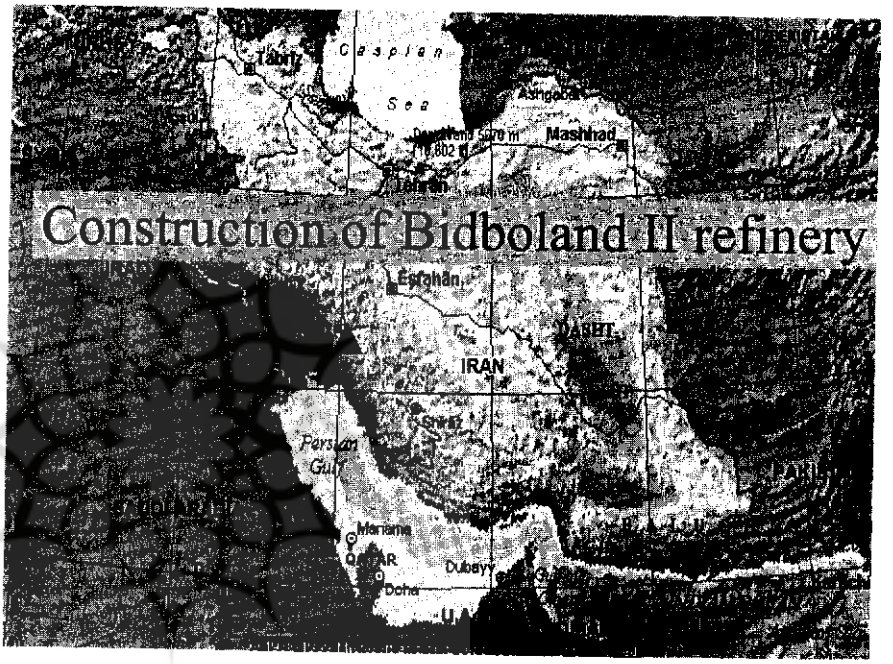


facilities is currently 200 MMSCM per day . For covering the growing demand for natural gas , the following projects have been planned :

1- Construction of Asallooyeh refinery with a capacity of 75 MMSCMD, taking natural gas from phases 1 to 3 of South Pars field . The commencement of the first treatment unit will be in the last quarter of the year 2001. The next phases will be completed in the following year.

The construction of another refinery with treating capacity of 50 MMCM/D of the south pars gas field phases 4 and 5 has already been planned (Fig .5-1) .

2- To be implemented in 2005, the construction of BidBoland II refinery with capacity of 30 MMSCM per day will be supplied by the production of phases 6,7,8 of south pars sour gas field (Fig.5-2) .

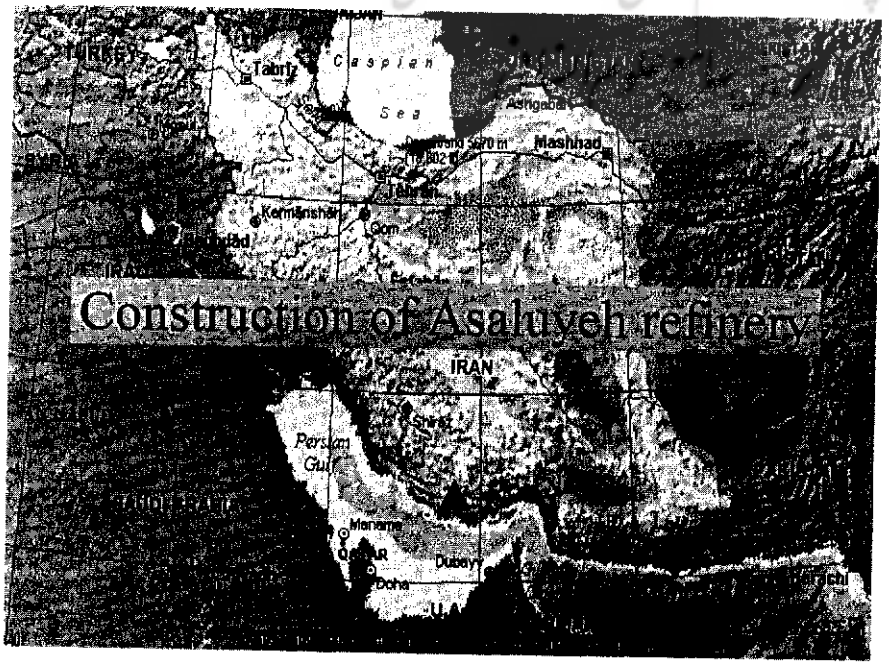


3- Construction of a dehydration units with capacity of 21 MMSCM per day, with feed gas from Shanol and Varavy fields. Also 2 dehydration units with 51 MMCM/D capacity feeded by Tabnak gas field are planned for he year 2005 (Fig .5-3) .

4- Construction of Ilam refinery with capacity of 10 MMSCM per day supplied from Tang Bijar and Kamankooh (Fig.5-4) .

5- Construction of a treating plant with a capacity of 14 MMSCM Supplied by sour gas of the Southern Gashoo fields (Fig.5-5) .

6- Construction of a treating plant with a capacity of 12 MMSCM from feed gas from Homa fields (Fig.5-6).



Gas Transmission Pipeline Projects over the next 5 years

The construction of 5000 km of transmission pipelines has been Planned according to the availability of gas supply. The major pipelines are the following:

Major pipelines :

300 Km of 56" pipeline for completion of the 3rd Iranian Gas Trunkline ,

Update on Gas Programs & Activities

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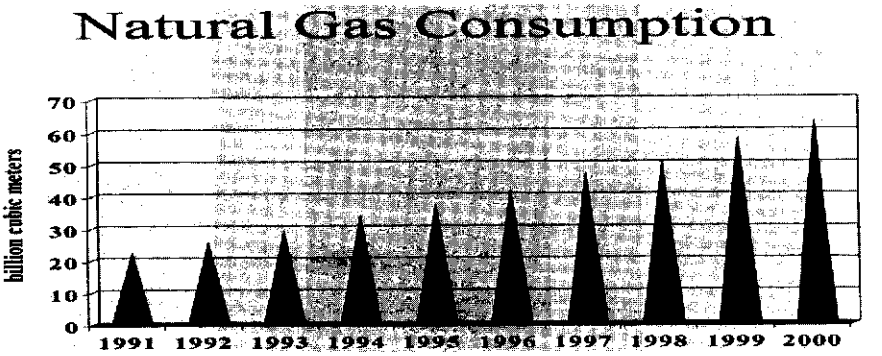

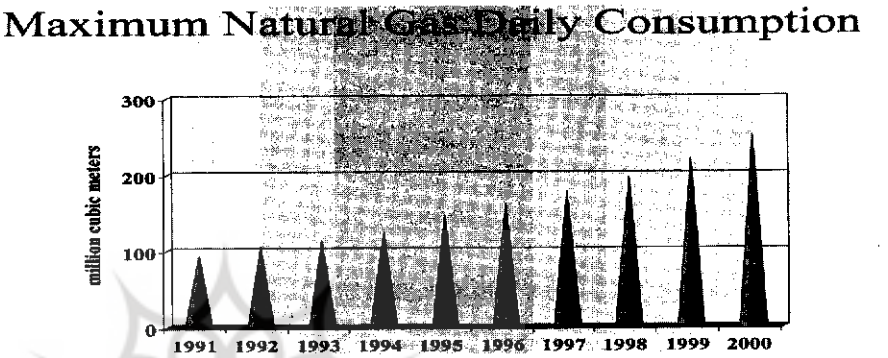

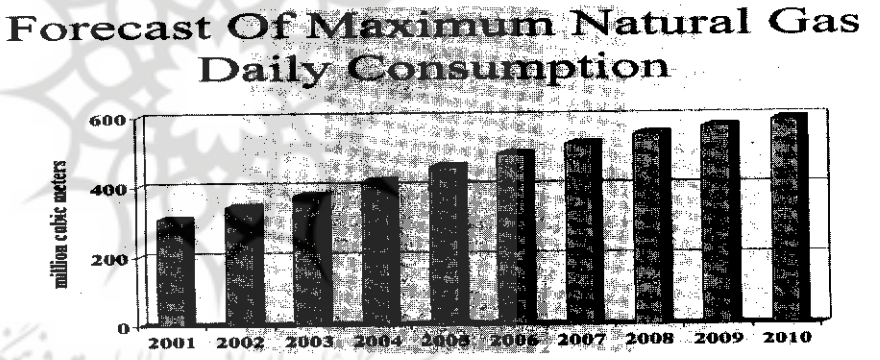

Emerging into energy sector 35 years ago aimed at exporting natural gas to Ex.USSR, The gas industry has now entered the development phase of its life. This phase is charactrized by growing demand and needs for new investment to push natural gas towards potential consumers. In this relation Iran welcomes international cooperations.The main topics discussed in this article are the following:

1- The trend of natural gas consumption during past 10 years.

2- Forecast of natural gas consumption for the next 10 years.

3- Gas treatment projects during the next 10 years

4- NIGC plans for covering demands on natural gas during the next 5 years.

5- Prospects for required investment in the gas industry during the next 54 years.

Pattern of Natural Gas Consumption in Iran for period (1991-2000)

Natural gas consumption in Iran has increased drastically from 18.1 BCM at the end of 1990 to 63 BCM by the end of 2000. The rate of natural gas consumption growth has been 13.3%.

In 1999 the consumed natural gas has been 57.8 BCM which is equal to about 370 million barrels of crude oil (Fig.1) .

The maximum daily consumption has increased from 93.4 MMSCM per day in 1991 to 252 MMSCM per day in the year 2000. The number of extensions and gas supplied households will be 3.2 MM and 6 MM respectively in the year 2000 (Fig.2) .

Forcast of Gas Consumption in Iran for period (2001-2010)

Based on the estimates , yearly gas consumption shall increase from 63 BCM in 2000 to 134 in 2010 . Accordingly , the average increase rate in this period will be 7.8% (Fig.3) .

For the same period , the daily peak consumption will reach 589 MMCM in the year 2010 from 252 MMCM for the year 2000 (Fig.4).

According to schedules Iranian gas export to Turkey will reach 10 BCM in 2007 from 3 BCM in year 2001 .

NIGC plans for covering N.G. demands over the next 10 years

Gas Treatment Projects for the next 10 years :

The total capacity of gas treating