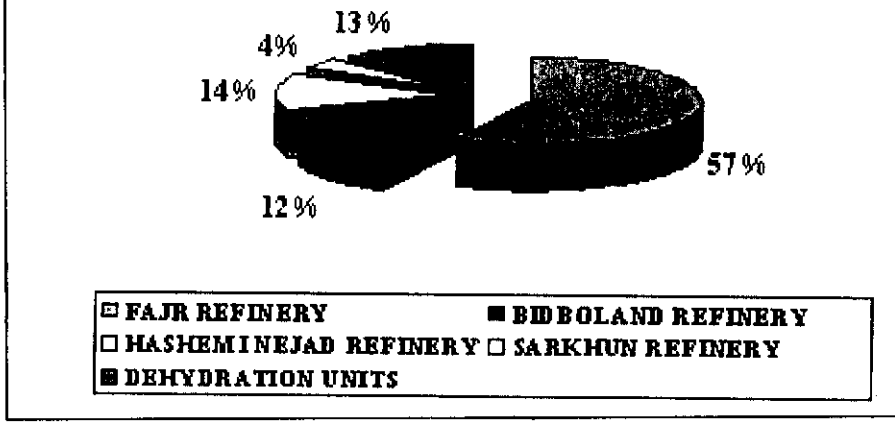
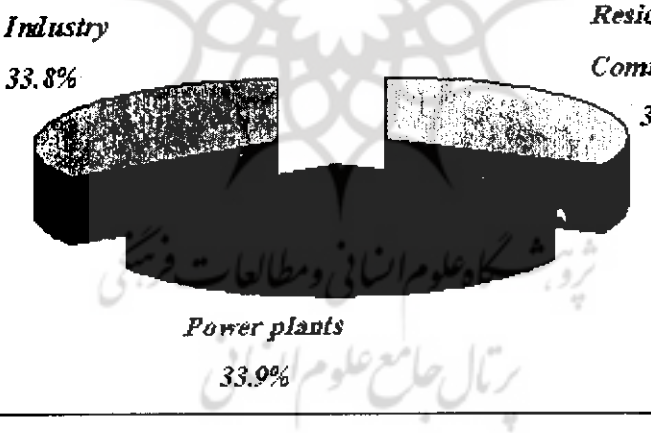
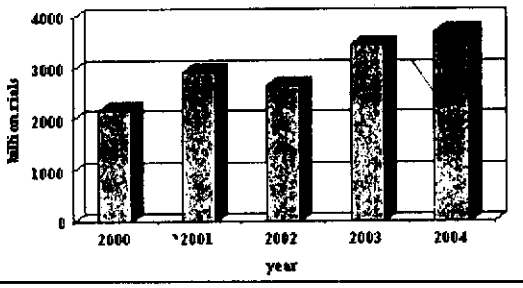
Natural Gas Treatment Capacity



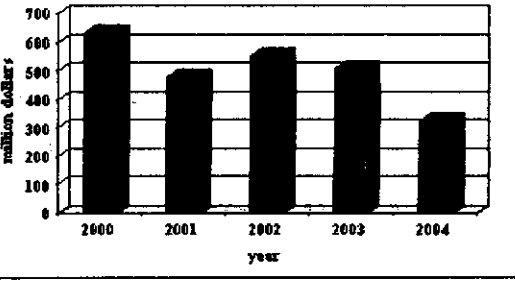
Pattern Of Natural Gas Consumption By Sector (2000-2004)



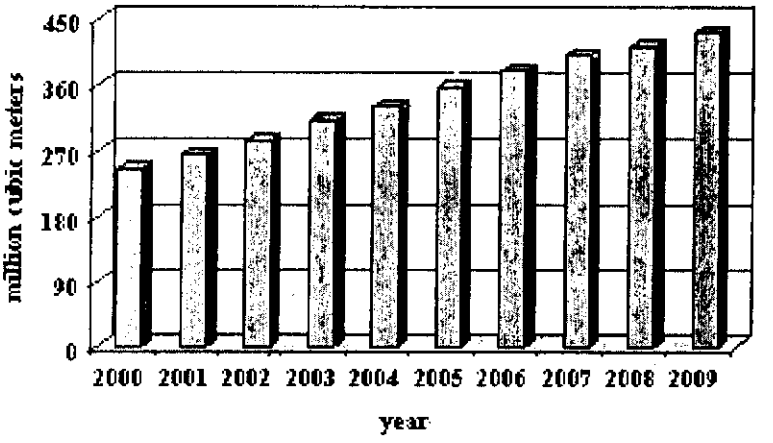
Required Investment For Natural Gas Projects (Rial Component)



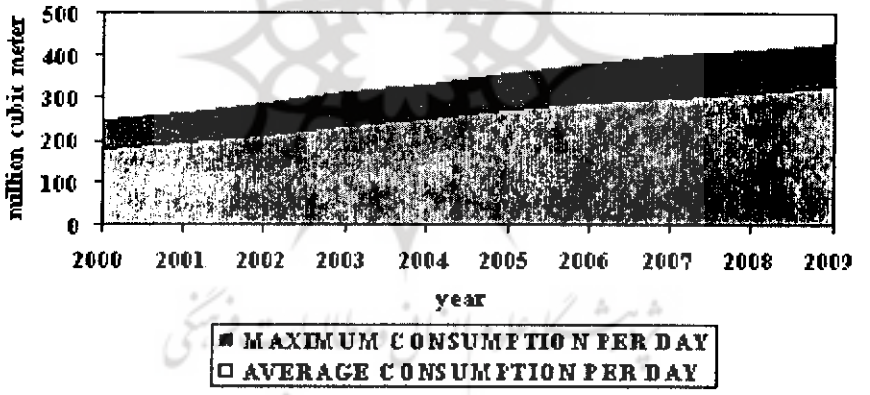
Required Investment For Natural Gas Projects (F. Ex. Component)



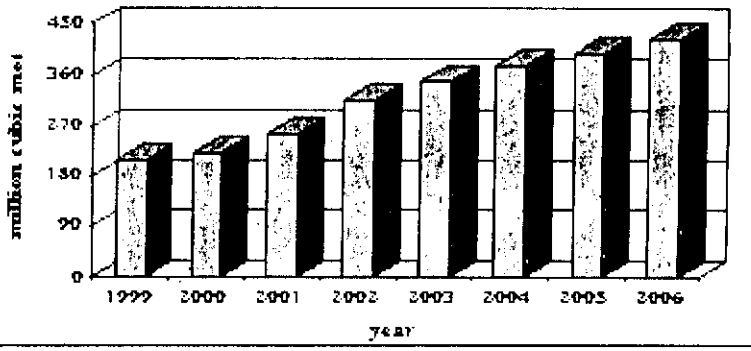
Forecast Of Maximum Natural Gas Consumption Per Day



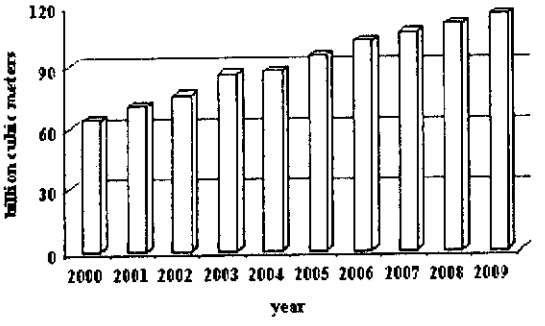
Comparison Of Average & Maximum Consumption Of Natural Gas Per Day



Natural Gas Treatment Capacity



Forecast Of Natural Gas Consumption



Network & Extension

YEAR	NETWORK (KM)	EXTENSION
UP TO 1999	51000	3100000
UP TO 2004	66000	4200000

- ✓ -Natural Gas Consumption Trend
- ✓ -Forecast of Natural Gas Consumption by Sector
- -Gas Treatment Projects
- -Gas Transmission Projects
- -Forecast of Required Investment During the 3rd 5-year Plan

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-Forecast of Natural Gas Consumption by Sector
-Gas Treatment Projects
-Gas Transmission Projects
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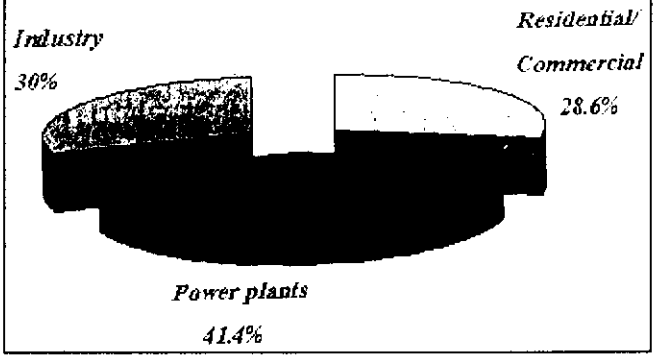
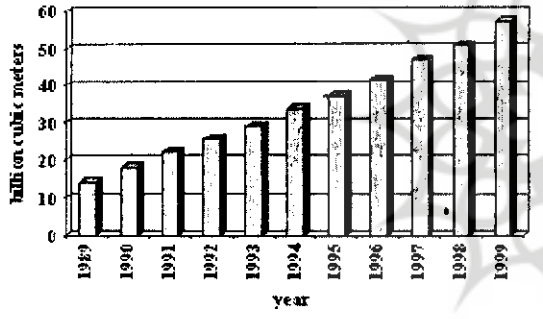
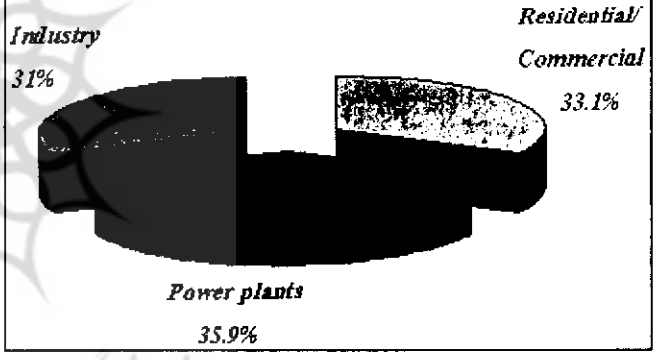
Pattern Of Natural Gas Consumption By Sector (1989-1994)



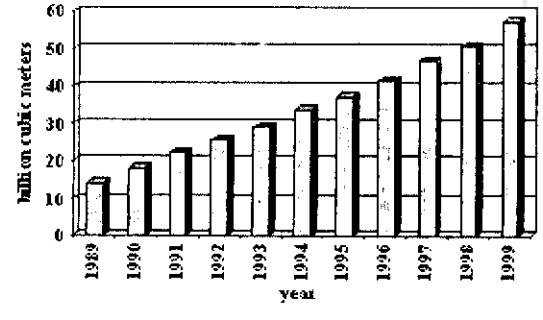
Natural Gas Consumption



Pattern Of Natural Gas Consumption By Sector (1995-1999)



Natural Gas Consumption



Natural Gas Consumption by Sector

YEAR	POWER PLANT	INDUSTRY	RESIDENTIAL/ COMMERCIAL
1989-1994	41.4%	30%	28.6%
1995-1999	35.9%	31%	33.1%

& commercial users. Our gas export will reach 30 MMCM per day in 2007 from 9 MMCM per day in year 2000.

Gas Consumption management

In the Figure a comparison has been made between the peak and the average daily consumption for the period 2000-2009. This highlights the needs for "Gas Consumption Management" so that optimum utilization of resources and investments being guaranteed.

For this purpose, the following precautions have been considered

- Seasonal sales contract
- Minimizing consumption in cold seasons by saving energy, optimizing gas consumption, and co-ordination overhauls schedules for some major consumers
- Application of price incentives for the purpose of peak shaving
- Installing gas storage facilities

Gas Transmission Pipelines and Compressor Stations Projects (Period 2000-2004)

For this period, it has been planned to install 4000 Km transmission Pipelines (about 140000 Inch-Km) based on the availability of gas supply. This plan will increase the total transmission Pipelines length to about 16000Km by the end of the year 2004. Also, installation of 23 compressor stations in addition to the existing 20 stations, has been planned for the period (2000-2004). This will increase total house power capacity from 1.2 to about 2.6 MMHP.

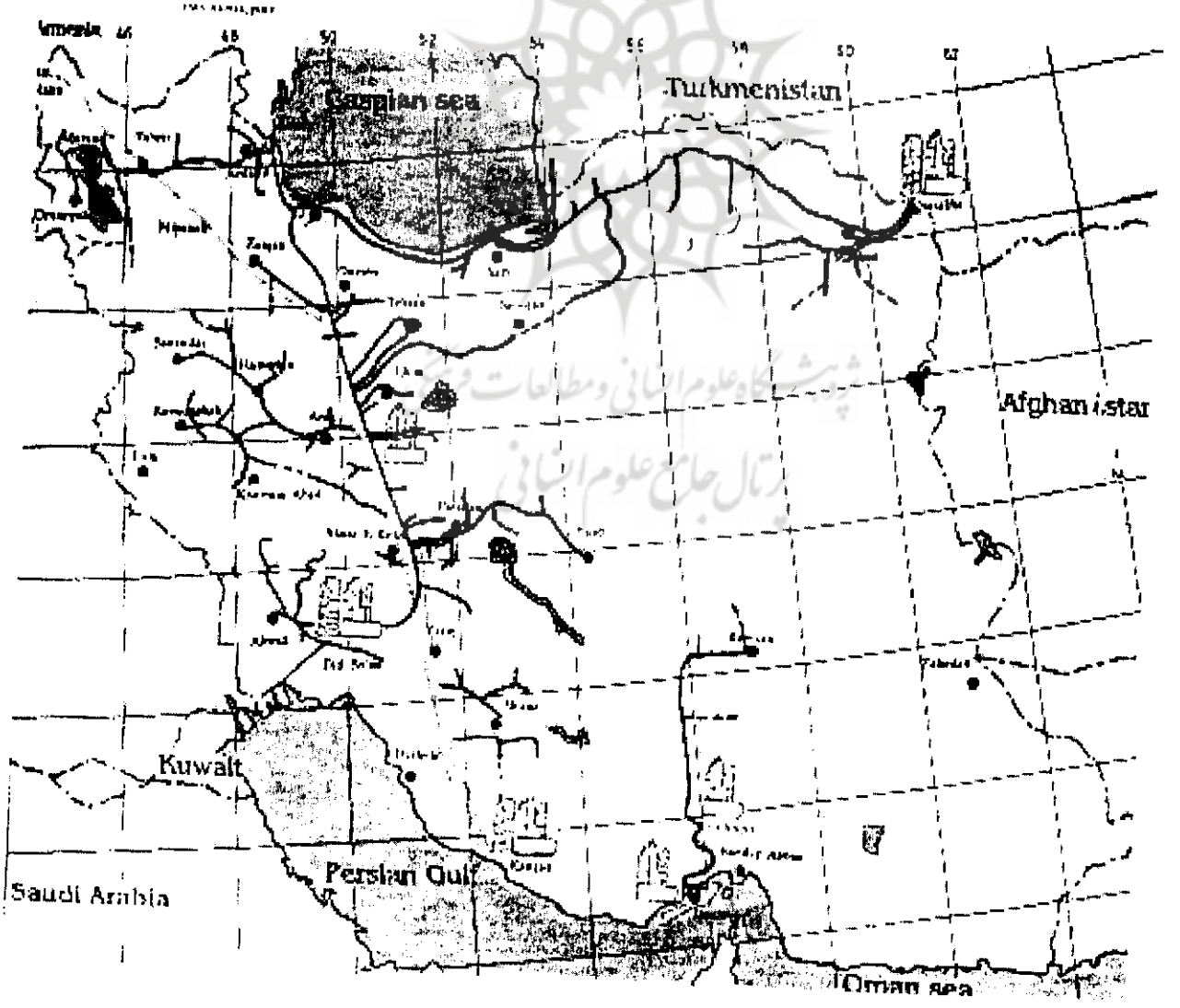
Gas Distribution Network Projects

(Period 2000-2004) 15000 Km of distribution pipe networks and 1.1 million extentions are to be installed during the period (2000-2004). With these plans the total network and lines in the cities will amount to 66000 Km and 4.2 MM respectively. It is worth to mention that at the end of the third 5-year plan about 4700 industrial units and 40 power plants will use natural gas as fuel or feedstock.

The Investment Opportunities for Execution of NIGC Projects (Third 5-year plan)

The total requirements for implementing NIGC projects during third five-year plan is estimated to be about 2500$MM and 15000 billion Rials. The breakdown is shown in the table. Please note that all the above mentioned projects are to be supported by NIOC to satisfy gas needed by NIGC.

Consequently some other funds will be needed to develop new natural gas fields. ■



Persian Gulf Gas Resources Conference
7th-8th November, 1999, Tehran-Iran

Gas Industry Development in Iran

A.Soheylipour Corporate Planning Director & Member of the Board NIGC,I.R.Iran

I would like to give you brief descriptions of developments in downstream section of Iran's gas industry.

Emerging into energy sector 35 years ago, gas industry now has entered developing phase of its life. This phase is characterized by growing demand and needs for investment to push natural gas towards potential consumers.

Reinforcing down stream infrastructure also requires supports from internal and international financiers to sustain gas industry countrywide and even regionally. The main topics you will be informed about are:

1. The trend of natural gas consumption during past 10 years
2. Forecast of natural gas consumption for the next 10 years and load factor management
3. Gas treatment projects during next 10 years
4. Projects planned for expanding transmission pipelines, compressor stations and distribution networks during next 5 years
5. Prospects for required investment in gas industry downstream section during next 5 years.

Pattern of Natural Gas Consumption in the past 10 years (Period 1989-1999)

● As it appears in the graph, natural gas consumption in Iran has increased drastically from 12 BCM at the end of 1988 to 33.7 in 1994 and 57.2 BCM by the end of 1999.

The rate of natural gas consumption growth has been 18.8% and 11.2% respectively in first and second 5-year National Development plans. During these two development plans, the share of natural gas in national energy consumption basket has been 34% and 40% compared with its previous share of 22%. In 1998 the consumed natural gas in Iran has been substituted for an equivalent of 334 millions of barrels of oil products which worth approximately 4 billions dollars.

It is predicted that in 1999, replacing 376 million barrels of oil products with 57.2BCM of natural gas will result in 4.6 billions of dollars saving for the country.

● The figure shows that the maximum daily consumption has had an increase from 58MMCM in 1989 to 124.6MMCM in 1994 and 215 MMCM in 1999.

● Natural Gas consumption by sector shows that in the first five-year plan (1989-1994), power plants section was the largest consumer with a share of 41.4% followed by industry and residential/ commercial sections with 30% and 28.6% respectively.

● As you see in the diagram, for the second five-year plan, again power plants are the largest consumers of natural gas although the percentage figures have changed to 35.9%, 31% and 33.1% with the same order.

● The table shows that for a decrease of 5.5% in power plants consumption, the residential-commercial section has taken some more 4.5% of natural gas, compared with the previous period.

Gas Treatment Projects for the next 10 years (Period 1999-2009)

The total capacity of gas treating facilities is currently 190 MMSCMD. (including sweetening facilities and dehydration plants: Fajr, Bid Boland, Hashemi Nejad, Sarkhoon, Shoorije, Gonbadly, Dalan, Gavarzin and Saraje). The projects for the period 2000-2004 are as follows:

● Expanding Shahid Hashemi nejad refinery (2 treatment units each 7 MMSCMD)

● Expanding Sarkhoon refinery (one sweetening 6 TYMSCMD)

● Construction of Assalouyeh refinery with a capacity of 85 MMSCMD, taking natural gas from phases 1 to 3 of South Pars field.

● Study and planning for construction of dehydration units with capacity of 23 MMSCNM, taking gas from Shanool and Varavy fields

● Study and planning for construction of Ilam refinery (10 MMSCMD)

● Study and planning for construction of a treating plant with a capacity of 14 MMSCMD to use gas from Southern Gashoo fields

Forecast of Gas Consumption in Different Sectors (Period 1999-2009)

Based on the estimates, yearly gas consumption shall increase from 57BCM in 1999 to 115 in 2009. Accordingly, the average rate of increase in this period will be 7.2%. For the same period, our daily peak consumption will reach 431 MMCM from 215MMCM. It is noteworthy that the above- mentioned consumption is based on addition of some new consumers, namely 12 power plants, 3000 industrial and 1,850,000 residential