

Urea in Iran's Petrochemical Industry

Agriculture, one of humanity's oldest and most essential activities, has always played a crucial role in food production and security. As the global population grows and food demand rises, the use of chemical fertilizers has significantly increased. Among these, nitrogen fertilizers are particularly important due to nitrogen's fundamental role in plant growth. Urea, the most widely used nitrogen fertilizer, is extensively applied in agriculture for its 46% nitrogen content and cost-effectiveness.

Recognizing the importance of urea, Iran's petrochemical industry began in the early 1960s with the Marvdasht Chemical Fertilizer Plant (Shiraz Petrochemical Company) under the Chemical Enterprise of the Country, later renamed the National Petrochemical Company. Since then, the industry has experienced substantial growth.

Today, Iran is one of the largest producers and exporters of urea worldwide. The development of urea production has ensured self-sufficiency, fulfilling the domestic agricultural sector's annual demand of 2.5 million tons. Additionally, with the export of 5 million tons to global markets, urea has become a key petrochemical export, contributing significantly to global food security.

Historical Development of Urea Production in Iran

1960s: Establishment of Iran's first chemical fertilizer plants, including Shiraz Petrochemical Company, marking the beginning of urea production.

1970s: Expansion of production through new units, though growth slowed due to the Islamic Revolution and the Iran-Iraq War.

1980s–1990s: Post-war reconstruction and development led to a gradual increase in urea production.

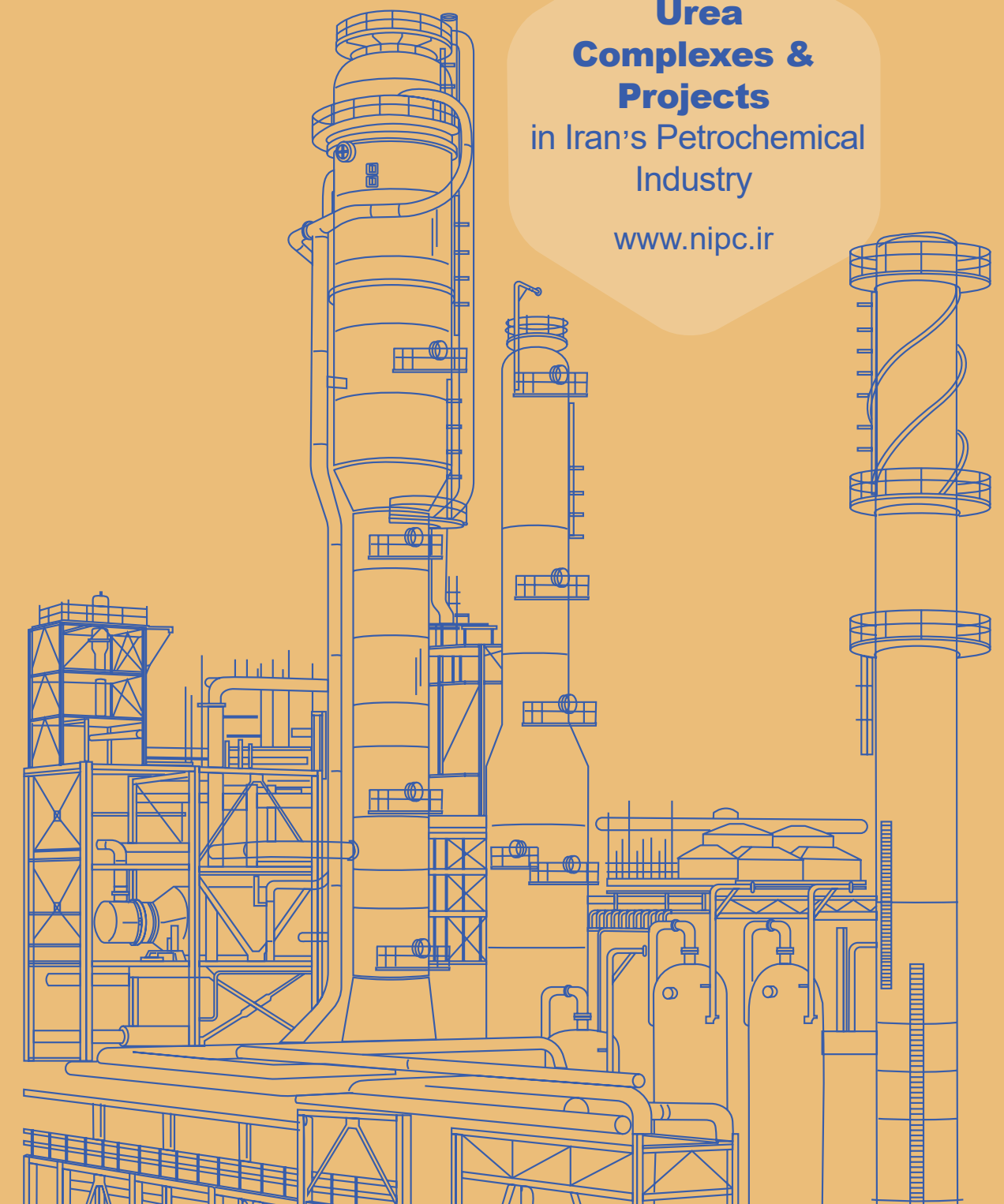
2000s–2010s: Implementation of petrochemical development plans positioned Iran as a major player in the global urea market. The launch of large complexes, including Pardis Petrochemical Company, Khorasan Petrochemical Company, and Shiraz Petrochemical Company, significantly boosted production.

2020s: Iran's urea production capacity surpassed 8 million tons per year, with plans underway to increase capacity to 10 million tons.



**Urea
Complexes &
Projects**
in Iran's Petrochemical
Industry

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Abbreviations

PGPIC: Persian Gulf Petrochemical Industries Company
TAPPICO: Tamin Petroleum & Petrochemical Investment Company
POGDC: Parsian Oil and Gas Development Company

The ongoing Urea Projects
(Seventh Development Plan)



Hengam Petrochemical Urea
Name of Holding: POGDC
Nominal Capacity (KT/Y): 1,075



Kermanshah Petrochemical Urea and
Ammonia (Phase 2)
Name of Holding: POGDC
Nominal Capacity (KT/Y): 660

Urea Complexes
(End of 2024)



Khorasan
Name of Holding: TAPPICO
Nominal Capacity (KT/Y): 495

Kermanshah
Name of Holding: POGDC
Nominal Capacity (KT/Y): 660

Masjid Soleyman Petrochemical Co.
Name of Holding: National Pension Fund
Investment
Nominal Capacity (KT/Y): 1,075

Lordegan Urea Fertilizer Co.
Name of Holding: PGPIC
Nominal Capacity (KT/Y): 1,075

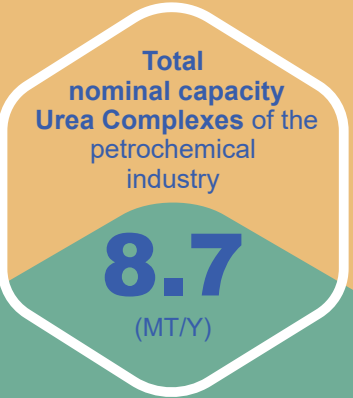
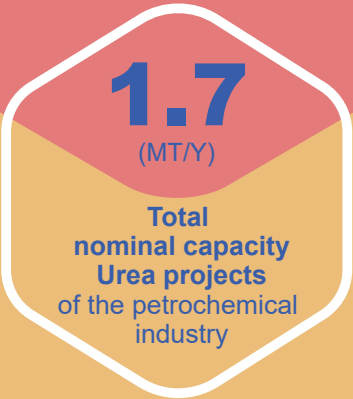
Shiraz
Name of Holding: POGDC
Nominal Capacity (KT/Y): 1,568



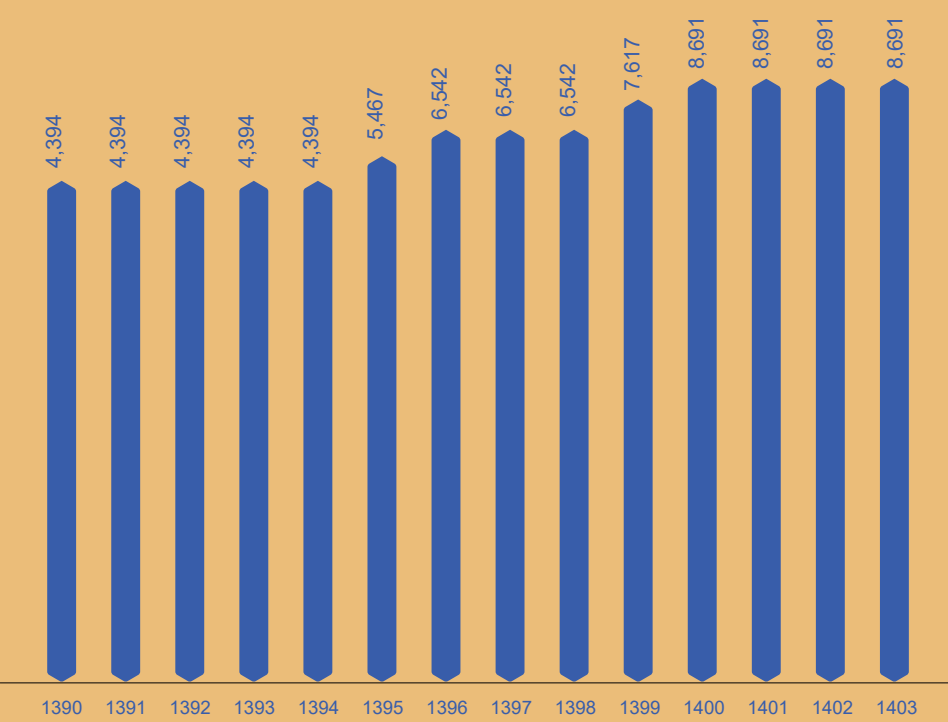
Razi
Name of Holding: Other
Nominal Capacity (KT/Y): 594



Pardis
Name of Holding: POGDC
Nominal Capacity (KT/Y): 3,225



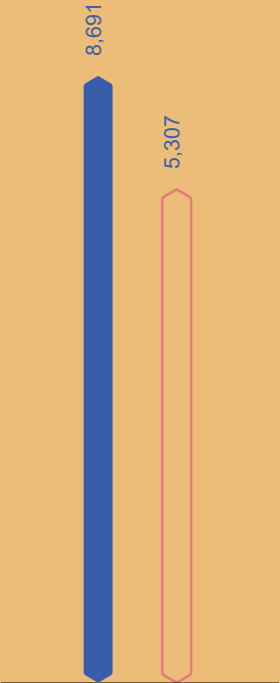
Growth of Urea Products in Iran's Petrochemical Industry



Growth of Urea products/year

figures (KT/Y)

Nominal And Export Capacity of Urea in the Petrochemical Industry (End Of 2024)



Nominal Capacity

Exports