

Iran pioneers AI in oil industry with first WRFM center launch

The Iranian oil sector is embracing AI technology with the launch of its first WRFM center, which aims to optimize real-time management of wells, reservoirs, and surface facilities using advanced analytics, according to senior government officials.

The WRFM center, unveiled by Hossein Afshin, vice president for Science, Technology, and Knowledge-Based Economy, represents a significant leap in digitizing Iran's oil industry. Speaking at the launch event, Afshin announced that the nation's first AI-powered oil well is set to debut next year at the Sepehr and Jofeir oil fields.

"This project sets the stage for integrating AI into the oil sector, with our first smart refinery under development in Qeshm," ISNA news agency cited Afshin as saying.

WRFM, an integrated approach to managing oil and gas fields, focuses on optimizing operations in three key areas: well management, reservoir management, and facilities management. It combines real-time data and advanced technologies such as AI to enhance decision-making and operational efficiency. By monitoring well performance, predicting reservoir behavior, and maintaining surface infrastructure, WRFM systems streamline operations, reduce downtime, and ensure sustain-

able production.

The WRFM center is designed to enhance real-time operations across oil wells, reservoirs, and surface facilities, leveraging advanced sensors, data management systems, and AI-powered analytics. The center, developed entirely with domestic expertise, contrasts with similar projects in neighboring countries that rely on international firms.

Afshin highlighted the project's strategic importance, stating that "reaching artificial intelligence requires achieving business intelligence first. In one year, AI capabilities will be added to this center to provide advanced solutions."

He further commended Pasargad Exploration and Production Company for spearheading the initiative, describing the project as a breakthrough. The company's involvement, he noted, paves the way for other firms to follow suit, with the nation's first smart refinery also under their leadership.

The WRFM center's first phase, built with a \$10 million investment, uses cutting-edge technology to monitor, transfer, and analyze data, enabling synchronized and real-time management of operations. To complete the subsequent phases, an additional \$5 million is required, which the government and stakeholders aim to secure within the next year.

Reiterating the long-term vision for AI integration, Afshin stated, "Machine learning algorithms and advanced analytics will transform processes, offering precise predictions, increased automation, and reduced costs and risks."

The WRFM system aims to elevate Iran's oil and gas operations to global standards. Combining well, reservoir, and facilities management, the center ensures operational efficiency by utilizing real-time data for informed decision-making.

The initiative is seen as a critical step toward practical digital transformation in upstream oilfield management. With advanced tools and AI-driven insights, it sets a benchmark for innovation and efficiency in Iran's oil industry, potentially serving as a model for other sectors.

Afshin said, "This investment isn't just an expenditure — it's a leap into a smarter, more efficient future for our oil sector, promising significant progress and global competitiveness."

Booting oil production

Speaking at the ceremony, the CEO of Pasargad Exploration and Production Company announced that oil production from the Sepehr and Jofeir fields has surpassed 50,000 barrels per day, with hopes of achieving an additional



SHANA

30,000 barrels per day increase next year.

Ahmad Mohammadi noted that the WRFM center was established and operationalized in under a year through proper planning.

"With this center, we can monitor well and reservoir data online. The oil industry must embrace real-time data monitoring for decision-making," he said. Mohammadi emphasized that the initial development plan for the Sepehr and Jofeir fields was production-focused.

"In the first phase, we aimed for a daily output of 36,000 barrels from these fields, but production has reached

around 40,000 barrels per day. Currently, production from the Sepehr and Jofeir fields exceeds 50,000 barrels per day," he stated.

He added, "In developing fields, we must achieve the target production increase, which requires an investment of \$15 to \$25 million for every additional barrel produced."

Mohammadi further noted that with a 30,000-barrel-per-day increase next year, it would be possible to complete the second phase of the Sepehr and Jofeir field development two years ahead of schedule, boosting production capacity to 110,000 barrels per day.

Oil gets lion's share in Iran's economic growth in H1

Agricultural sector exceeds expectations



IRNA

Economy Desk

Preliminary findings on Iran's economic growth in the first half of the current Iranian year (started March 20) indicate that oil remains the primary driver of the country's economic growth. However, the agricultural sector has also demonstrated significant growth, outperforming industry and services in its contribution to the economy.

The quarterly reports of the Central Bank of Iran (CBI) on economic growth are a key indicator of whether the economy is thriving or faltering. According to IRNA, a notable change in the second quarter's reporting is the shift in the base year from 2016 (1395 in the Iranian calendar) to 2021 (1400), aiming to provide a more accurate reflection of economic realities by adjusting for inflation.

Key economic indicators

Preliminary calculations from the CBI show that Iran's GDP at constant prices (the base year being 1400) reached 2,130.9 trillion rials in the second quarter of the current calendar year of 1403, reflecting a 2.7% growth compared to the same period in 1402. Excluding the oil sector, economic growth for the same period was 2.3%.

Industrial formation grew by 4.6%, government final consumption expenditures rose by 4.4%, and private consumption increased by 2.4% compared to the same quarter in 1402.

Economic performance in H1 of 1403

In the first half of the current Iranian year, sectoral growth rates were as follows:

- Oil and gas: 9.3%
- Agriculture, forestry, and fishing: 2.8%
- Industry and mining: 2.4%
- Services: 2.2%

These sectors contributed 0.7%, 0.4%, 0.8%, and 1.0 percentage points, respectively, to overall GDP growth during this period.

Industrial growth, particularly in large manufacturing facilities with over 100 employees, was 1.3%, with these facilities accounting for 70% of the industrial sector's value added. Among the 24 key industrial subcategories, 15 reported positive growth, including chemical products, basic metals, food production, power generation, and electrical machinery.

Expenditure analysis

During the first six months of 1403, gross fixed capital formation grew by 4.1%, as private sector consumption rose by 1.9%, and government overall consumption increased by 0.6%, compared to the corresponding period of last year.

Notably, machinery investment in Q1 and Q2 of the current Iranian year rose by 0.9% and 4.4%, respectively, reflecting improved economic activity compared to the same periods in 1402.

Investment growth, measured by 'gross fixed capital formation' at constant prices of 1400, increased by 4.6% compared to the same quarter in 1402. Investment in machinery grew by 4.4%, while construction saw a 4.8% increase. In the second quarter of 1402, gross fixed capital formation had grown by 4.3%, with machinery and construction investments rising by 7.2% and 2.2%, respectively.

For the first half of the current year of 1403, Iran's GDP, including oil sales, stood at 40,360.2 trillion rials, while GDP excluding oil sales was 37,034.1 trillion rials, reflecting growth rates of 2.9% and 2.4%, respectively. This sustained growth follows positive economic performance across all quarters of 1402.

Economic growth drivers in Q2 of 1403

Analysis by sector shows that GDP growth in the second quarter was driven by positive contributions across all major sectors. Growth rates were:

- Oil and gas: 8.8%
- Agriculture, forestry, and fishing: 2.8%
- Services: 2.5%
- Industry and mining: 1.7%

When analyzed by final expenditure components (with 1400 base year), gross fixed cap-

Iran expected to receive observer status in EAEU

Leaders of the Eurasian Economic Union (EAEU) countries will grant Iran an observer status and discuss the joint work of the members and the Islamic Republic within their free trade agreement in a meeting to be held in St. Petersburg on Thursday, December 26.

They are also set to sign a number of documents on forming a unified customs transit system, a common electricity market, and a single market for services that harmonizes financial laws and implements liberalization plans for certain sectors of services, Press TV wrote.

The meeting comes just a year after the Eurasian bloc — comprising Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Russia — signed a fully-fledged free trade agreement with Iran to eliminate customs duties on almost 90% of goods and establish a preferential regime for almost all trade between Iran and Russia.

The agreement is expected to bring bilateral trade with Iran to \$18-20 billion over five to seven years from \$6.2 billion in 2022. Among the EAEU states, 80% of Iran's trade is with Russia, followed by Armenia (10%), Kazakhstan (8.7%), Belarus (0.6%), and Kyrgyzstan (0.5%). Iran and Russia have cultivated closer political and economic relations in recent years under their shared goal of countering Western sanctions. They have announced a flurry of joint initiatives, including trading in their national currencies as part of their de-dollarization program.

Recent barter arrangements between the two have involved exchanging Russian metals for Iranian automobile parts and gas turbines. The two countries have also held talks with Azerbaijan to revive the rail component of the International North-South Transport Corridor to connect them to India.

In the energy sector, the National Iranian Oil Company and the Russian Gazprom have unveiled an ambitious plan for \$40 billion of Russian investments in Iran to sustain and develop oil and gas fields, build liquefied natural gas facilities, and construct gas pipelines.

Iran's disenchantment with the West — marked by the collapse of a nuclear agreement after former US president Donald Trump withdrew Washington from the accord in 2018 and imposed more draconian sanctions on Tehran — has convinced the Islamic Republic to look to its neighbors for trade. The Eurasian Economic Union, due to the low volume of its economic relations with the US and the dominance of Russia over the bloc, offers Iran a fertile ground to expand its economic diplomacy.

The commercial opening, achieved through the free trade agreement and reduction of tariffs and the use of the existing capacities in the union to circumvent economic sanctions, provides a platform for a long-term strategic cooperation between Iran and the EAEU.

The Eurasian Union, as a pole of regional convergence in North and Central Asia, creates a breathing room for business for Iran as the close cooperation of China, India, Turkey, and some other East Asian countries with the group holds the prospect of easing up the pressure of sanctions.

Over the past few decades, Iran has sought to make the best use of its domestic capacities including privileged geographical features, rich natural resources, and young and educated manpower to forge various partnerships in its foreign policy outreach to hedge against hegemonic powers.

Hence, employing economic diplomacy and foreign policy capacities to advance the goals of



national development has been more or less constant in different Iranian administrations and reflected in the strategic development documents of the country.

The main issue in cooperation with the union is to formulate a short-term strategy for boosting the productivity of the existing commercial opportunities in parallel with a long-term strategy to strengthen the export capacity and reduce the level of vulnerability of the country's production system.

Caution should be observed in binding the country to the union's regulatory regime where Russia rules supreme and any excessive commitment could expose and compromise the Iran's economic, commercial, technological, and political capabilities.

That said, Iran's economic diplomacy, currently limited to tariffs and free trade, should be expanded to investment and technological cooperation. The government, as the main actor, should also facilitate the cooperation of private and non-governmental actors.

The emerging regional integration will create economic interdependence and lead to the internationalization of economy and politics. It will increase the sensitivity and vulnerability of nations against hostile measures such as unilateral sanctions by the United States. Therefore, the regional economic convergence will act as a buffer against coercive measures and create economic deterrence.