Experts' proposals for easing energy shortages:

Reforms in pricing policies, consumption will help

Tehran should not show 'signs of weakness' against possible renewed maximum pressure

Hiking fuel prices to match with production costs only path to economic recovery

Alireza Kafshkanan (L) speaks as another Iranian expert in the field of energy, Amin Noorbakhsh, looks on during an interview with Iran Daily.
HOSSEIN NAGHIZADEH/IRAN DAILY

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INTERVIEW EXCLUSIVE

The energy deficit in electricity and gas supply have recently become hot-button issues in Iran's economy, especially as the weather turns cooler, leading to gas shortages and intermittent power outages in both the industrial and residential sectors. The situation has caught the attention of experts regarding energy management, consumption patterns, and the impact of sanctions on the country's economy and energy sector.

At first glance, the emergence of energy shortages, particularly gas, seems puzzling, especially in a country that holds the second-largest gas reserves in the world. It might not be entirely logical to attribute this solely to external factors like sanctions. Consequently, some experts argue that the deficit is primarily a result of internal mismanagement, linking it to inefficiencies in energy production, distribution, and usage. Conversely, others point to a lack of production infrastructure and failure to modernize energy facilities, thus tying the energy shortfall to sanctions and the inability to attract foreign investment.

Determining the extent to which internal and external factors have contributed to the deficits requires further digging, but what is clear is that Iran has been grappling with energy shortages for several years now. Given that the energy sector is seen as the backbone of the country's economy, finding a quick fix to this issue becomes increasingly urgent.

Beyond these issues, another major topic that sheds light on the role of sanctions in the energy sector is the ongoing talks about oil exports. It is clear that a substantial portion of Iran's revenue comes from crude oil sales. The urgency to address oil income becomes even more pronounced with less than a month remaining until Donald Trump is inaugurated as the new US president, who is expected to bring back the so-called maximum pressure campaign aimed at cutting down Iran's petrodollars.

In an interview with Alireza Kafshkanan and Amin Noorbakhsh—two experts in the energy economy—Iran Daily discussed the intricacies of these pressing issues.

IRAN DAILY: **The energy shortfall in electricity and gas supply have become widely discussed topics recently. Could you briefly outline how these shortages have emerged in recent years? Do you think the deficit is linked to a specific government's performance?**

KAFSHKANAN: The crisis facing our country, or more accurately, our economy, revolves around the energy deficit. Shortages usually crop up as electricity deficit in summer and a combination of gas and electricity scarcities in winter. In summer, we struggle with electricity shortages due to inadequate power generation and, essentially, a shortage of power plants, leading to consumption outpacing production and creating a deficit. This year, the power shortfall hit 18,000 megawatts, while in 2021, the last year of president Hassan Rouhani in office, it was only 6,000 MW. By the end of Ebrahim Raisi's government in August, which was cut short as he lost his life in a helicopter crash, the figure climbed to 18,000 MW, with forecasts for next year suggesting peak consumption deficits could soar to 24,000 MW.

I point this out to emphasize that the energy shortage is not a problem that sprang up overnight or solely during incumbent President Masoud Pezeshkian's administration. In winter, we also encounter a gas supply deficit, which has become more pronounced this year. In previous years, we managed the shortages primarily by shutting down industries. However, this year, in addition to the usual uptick in consumer demand, the government decided to shift some of the pressure caused by the energy shortfall from the industrial sector to the households and small businesses, redistributing the burden of energy shortages. I believe the government made the right call here.

In past years, particularly over the last three years, the government only imposed such shortfalls on industries, labeling it as "demand management," which ultimately led to industries closing during the summer and winter.

Typically, we calculate the total annual gas production against total consumption needs to determine the shortfall or deficit. According to the Supreme Audit Court, the gas shortfall in 2023 reached 64 billion cubic meters, while usage last year hovered between 256 and 259 billion cubic meters, indicating a deficit of around 25%. This year, naturally, the shortfall is expected to surge, potentially nearing 30%. If we continue down this path, next year's shortfall could jump to 35%. Thus, the deficit issue is not something that can be strictly pinned on this government or the previous one.

Why does the severity of the energy shortfall seem to worsen each year? Isn't it because the government has not managed to balance production and consumption?

KAFSHKANAN: Consumption growth has outstripped the construction of power plants and gas production in the country. Plus, keep in mind that power plants are aging year by year; while under president Rouhani, the country built plants with a capacity of 20,000 MW, this was still insufficient to meet the rising demand. During his president Raisi's term, various reports indicate that between 7,500 and 9,000 MW were added to power generation capacity over three years. However, president Raisi himself stated that the country needed around 30,000 MW to offset the electricity shortfall—an ambitious target his administration aimed to hit in four years.

Can you shed light on Iran's current capacity for oil output and exports? How much could production and sales potentially rise, both under current sanctions and if those sanctions are to lift?

NOORBAKHSH: Iran's refinery capacity for domestic use is clear; it stands at around 1.8 to 2 million barrels per day (bpd). Iran has also been exporting roughly 1.7 million bpd in recent months. Any increase beyond these volumes depends on how much Iran can extract from its oil fields.

First and foremost, we need to assess whether it makes economic sense to develop and extract from joint fields or if we should rely on domestic reserves. Currently, our proven oil reserves sit at 158 billion barrels, and boosting extraction will depend on enhancing our production infrastructure.

When discussing production increases in the short term—over the next two years—even if sanctions are lifted, we are not likely to see significant results. A reasonable extraction increase would be around 200,000 to 300,000 bpd. However, we also need to evaluate the future of the oil market. For instance, if oil continues to demand a minimum price of \$60 to \$70 over the next 100 years, we could gradually proceed with field development. On the flip side, if our analysis suggests that oil prices may drop sharply in the next 20 years, we should aggressively pursue maximum field development and ramp up production.

I believe there is potential to boost oil output to 3.8 million bpd in the short run, provided that sanctions and investment restrictions don't linger, allowing us to simultaneously improve production and export infrastructure.

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What is your take on the goal of producing 5.4 million barrels of oil daily by the end of the Seventh Development Plan in March 2029? Do you think this target is achievable given the ongoing sanctions?

NOORBAKHSH: If we look at production realistically, the figure mentioned in the Seventh Development Plan makes sense. Achieving this figure, especially considering the existing sanctions, is an ambitious goal that includes condensates, but it doesn't seem entirely out of reach. However, reaching this target hinges on the development of oil fields, refineries and export infrastructures.

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