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Guest contributor

### OPINION EXCLUSIVE

Solar panels and solar renewable energy plants use some of the more innovative and sustainable technologies that have been widely focused on in the last decades due to their key role in environmental protection and the reduction of dependence on fossil fuels. They convert the energy from the sun into clean, pollution-free electricity. With features including low production cost, high efficiency, and long life, these technologies are quite enticing when compared to conventional power plants. Flexibility in the deployment of solar power plants, especially in very remote areas, has granted them a vital role in the supply of sustainable energy and energy security. Distributing solar panels and plants across multiple locations provides several benefits, including reduced transmission losses, enhanced security, and a stronger grid system. More importantly, passive defense principles ensure the security and stability of the critical infrastructure of operating solar power plants. Key principles include selecting locations with low natural hazard risks, designing buildings and structures that withstand weather conditions and natural disasters, and distributing load across the grid to reduce dependence on a single area. Moreover, integrating solar power plants with intelligent grids and implementing backup systems, like accumulative systems, can enhance their efficiency and safety.



● YJC

## Principles for protecting solar energy



● MEHR

The dispersion of solar power plants and passive defensive measures against attacks can only reduce their vulnerability and not completely avoid the shutdown of electricity production in wartime situations. Overall, this will not only increase the productivity of the plants but also reduce risks related to unexpected events and conflicts. One of the most outstanding features of solar power plants is their flexibility in the supply of electricity to diverse regions. Their installation in disadvantaged and remote areas guarantees the availability of stable electricity to communities that

have hitherto been deprived of such facilities. In addition, advanced storage technologies, like batteries, allow the use of electricity at times when there is low solar radiation. Microgrid systems, being local in nature, further distribute any generated electricity in the locality itself, directly reducing dependency on main transmission lines. This prevents widespread power blackouts during disasters or acts of war and increases stability in the grid. In view of the increasing importance of renewable energies worldwide, solar power plants are surely among the most ra-

tional and sustainable solutions to the supply of energy. Allowing for a reduction in dependence on fossil fuels and a decrease in environmental pollution, these plants will therefore increase energy security and help maintain key infrastructures. More specifically, the principles of passive defense and geographical dispersion protect solar plants against natural and human-induced threats. One of the ways to answer present needs and ensure that the future will be brighter, safer, and more sustainable for generations to come is investment in the development of solar power plants and related technologies.

Iran's energy heart beats well

## South Pars supplying more gas than committed

**PERSPECTIVE** The 13 refineries of Iran's South Pars are operating at full capacity to warm people's homes in various cities and villages across the country during the cold winter days. South Pars, the world's largest gas field, is one of Iran's most important energy sources, playing a vital role in supplying gas to the country during the cold season.

Located in the Persian Gulf and shared with Qatar, the field covers an area of 9,700 square kilometers, with 3,700 square kilometers belonging to Iran, situated 100 kilometers off the coast at a depth of 3,000 meters below the sea floor. The South Pars gas field holds 14.2 trillion cubic meters of gas, equivalent to 8% of the world's total gas reserves and 47% of Iran's known gas reserves.

To meet the country's gas needs during winter, extensive efforts have been made, and major repair operations have been carried out in various phases and platforms to ensure maximum gas production. The South Pars gas refineries, located in Assaluyeh and Kangan, comprise 24 gas phases, with phases 1-10 and 15-21 in Assaluyeh and phases 11-14, 19, and 22-24 in Kangan. The average daily gas production from South Pars has reached over 700 million cubic meters in recent years, indicating an increase in production capacity and efficiency. Given the country's growing energy needs, this production level is crucial for meeting domestic demands and exporting to global markets.



● THE CRADLE

### Maximum production to supply winter gas

The CEO of the South Pars Gas Complex stated in an interview with Mehr news agency: "To supply the country's gas

needs during the cold season, fundamental measures have been taken, and the South Pars refineries are operating at full capacity." Gholamabbas Hosseini noted that with 855 million

cubic meters of gas entering the national grid daily, the share of the 13 South Pars refineries in supplying the country's gas exceeds 585 million cubic meters per day.

Hosseini lauded the efforts and dedication of the South Pars Complex personnel and added, "Innovative measures have been taken and domestically manufactured parts and equipment

have been used to maximize gas production in South Pars." The CEO announced that the daily gas production and processing at Site 1 of South Pars exceed 333 million cubic me-

ters, with over 252 million cubic meters also being produced and processed at Site 2. Hosseini expressed readiness to continue producing and refining gas in South Pars, hoping that it