PRIME Brief

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DOES THE IRAN WAR SIGNAL THE END OF THE ERA OF OIL – AND WHY PAKISTAN'S LIFE COULD DEPEND ON GOING SOLAR

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Overview

Pakistan's electricity vulnerability is concentrated in homes. The household sector dominates national electricity use: in July–March FY2024–25, households accounted for 49.6% of total electricity consumption, equal to 39,728 GWh in those nine months. If imported fuels tighten (RLNG availability, furnace oil back-up, diesel logistics, and financing constraints), the fastest route to unrest is prolonged household load-shedding, because electricity underpins water pumping, communications, refrigeration, small commerce, and basic public safety.

Key Findings and Recommendations

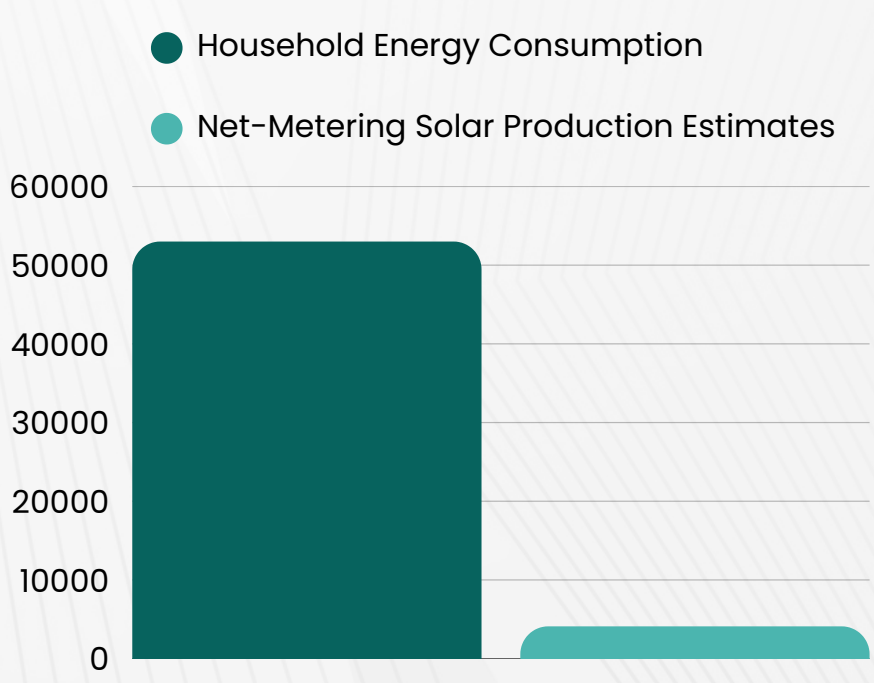
- Stabilize rooftop solar rules (no sudden retroactive shocks) and stop discouraging adoption
- Adopt a household-first resilience target
- Scale batteries fast, not as a luxury, but as essential reliability infrastructure for solar and hydro.
- Use the crisis to settle IPP distortions and modernize distribution

Recent Changes

Pakistan has tightened the screws on rooftop solar

Strait of Hormuz carried roughly 27–29% of world maritime oil trade

Annual Data Estimates



Does the Iran War Signal the End of the Era of Oil – and Why Pakistan's Life Could Depend on Going Solar

Pakistan has tightened the screws on rooftop solar at exactly the wrong moment. In February 2026, NEPRA notified new "prosumer" regulations that shift the country from classic net metering to net billing, cutting the buyback rate for exported rooftop solar electricity to roughly Rs 10–11 per unit (from around Rs 26 previously). Imported grid units can still be billed at Rs 37–55 per unit (before taxes and surcharges), and new contracts are limited to five years.

In a stable world, policymakers can debate tariff design, cross-subsidies, and cost recovery. In a wartime energy shock, the national objective changes: keep households powered, keep essential services running, and reduce exposure to imported fuels. The Iran war has turned the Strait of Hormuz from a distant geopolitical risk into an immediate supply-chain threat. Reuters' mapping of maritime flows shows the Strait has carried roughly 27–29% of world maritime oil trade in recent years, making it the world's largest oil transit chokepoint.

Recent reporting shows how quickly the threat is becoming operational. Pakistan has asked Saudi Arabia to route oil supplies via the Red Sea port of Yanbu after disruptions linked to Hormuz, according to official statements carried by Business Recorder. At the same time, LNG markets have been hit: Reuters reported that Qatar shut gas liquefaction and declared force majeure, with restart estimates stretching into weeks. Reuters also reported Asian spot LNG prices (JKM) surged sharply, with Platts JKM for April delivery assessed around $25.393/mmBtu on March 3, the highest in about three years, as the conflict and Qatar's stoppage tightened supply.

This context matters because weakening rooftop solar incentives becomes more than a policy dispute; it becomes a national-security risk.

Why rooftop solar matters for social stability

Pakistan's electricity vulnerability is concentrated in homes. The household sector dominates national electricity use: in July–March FY2024–25, households accounted for 49.6% of total electricity consumption, equal to 39,728 GWh in that nine-month period. If imported fuels tighten (RLNG availability, furnace oil back-up, diesel logistics, and financing constraints), the fastest route to unrest is prolonged household load-shedding, because electricity underpins water pumping, communications, refrigeration, small commerce, and basic public safety.

Rooftop solar is Pakistan's fastest deployable "shock absorber." It can be installed in weeks, financed privately, and scaled without waiting for state megaprojects. Policies that raises uncertainty, reduces payback, and slows adoption precisely when the country needs acceleration.

How much demand can existing solar infrastructure already cover?

Pakistan's net-metered rooftop solar capacity reached 2,813 MW as of March 31, 2025, according to the Pakistan Economic Survey 2024–25 as reported by Business Recorder. To translate capacity into annual energy, a practical Pakistan-specific benchmark is rooftop yield. IEEFA estimates average specific production around 4 kWh per kWp per day (with seasonal variation).

Using those inputs:

- 2,813 MW is approx. 2,813,000 kW
- At approx. 4 kWh/kW/day, this equals approx. 11.25 GWh/day
- Annualized, this equals approx. 4,100 GWh/year

Now compare that with household demand. If households consumed 39,728 GWh in nine months, an annualized figure is approx. 53,000 GWh/year (39,728 ÷ 9 × 12). That means documented net-metered rooftop solar alone could cover roughly 8% of annual household electricity under average yield assumptions.

In a crisis, 8% is not marginal. It can be the difference between "tight but manageable" and "rolling outages that break daily life," especially if paired with storage and microgrids that protect essential household and community loads. Moreover, net-metered capacity is not the whole story: Pakistan's behind-the-meter and off-grid solar is widely understood to be larger than what appears in net-metering statistics, meaning the real daytime contribution is likely higher.

LNG is the second choke point: spot prices rise, and contracts are oil-indexed

A Hormuz shock does not only hit crude. It tightens LNG and raises the "marginal cargo" price, exactly the price Pakistan faces when it must buy spot shipments to plug gaps. Reuters reported Asian LNG benchmark prices surged as Qatar halted output and conflict risk escalated.

Pakistan also has long-term LNG exposure that is structurally tied to oil. Reuters' reporting on the 2016 15-year Qatar deal described pricing linked to the preceding three-month average Brent crude (commonly summarized as an approx. 13.37% Brent slope). Pakistan later signed another long-term contract reported by Dawn as priced around approx. 10.2% of Brent for 10 years. The strategic implication is direct: if Brent rises due to war, oil-indexed LNG rises too. Pakistan can therefore be hit twice, through both crude and gas pricing, while also facing spot LNG spikes when supply is disrupted.

In a prolonged disruption, renegotiation is not just "price optimization"; it is resilience planning. Reuters has also reported that Pakistan's Qatar LNG pact includes renegotiation windows, indicating the terms are not necessarily immovable.

Batteries: turning solar into reliability and strengthening hydro

Solar reduces imported fuel demand most when it remains useful beyond daylight hours. That is the role of batteries. Battery Energy Storage Systems (BESS) shift solar into evening peaks, provide backup during outages, and support grid services like frequency and voltage support, which matter in Pakistan's stressed distribution networks.

Pakistan is already importing storage at non-trivial scale. IEEFA estimates Pakistan imported about 1.25 GWh of lithium-ion battery packs in 2024 and another 400 MWh in the first two months of 2025, suggesting rapid growth in behind-the-meter storage adoption. Storage also complements hydropower by smoothing ramps, shifting energy to peak hours, and improving stability, reducing reliance on imported thermal peaking fuels when the system is under stress.

The second front: fix IPPs, grid, and DISCOs before the crisis forces it

Even a successful solar push will be blunted if Pakistan's power sector remains financially insolvent. A fuel shock will expose capacity payments, circular debt, losses, theft, and poor recoveries more brutally. This is why the Iran war is also an opportunity to push structural reforms on an emergency footing.

On IPPs, the government has already moved toward renegotiation. Dawn reported that in January 2025 the federal cabinet approved revisions to negotiated settlement agreements with 14 IPPs, aiming to reduce costs and claiming savings of Rs 1.4 trillion. On distribution, DISCO performance is central. NEPRA has publicly called for DISCO restructuring and privatization and highlighted large disparities in recovery performance across companies. The World Bank's Pakistan Development Update on distribution reforms similarly frames distribution governance and incentives as critical to escaping Pakistan's recurring power-sector trap.

What a wartime energy doctrine should look like

- Stabilize rooftop solar rules (no sudden retroactive shocks) and stop discouraging adoption at the margin.
- Adopt a household-first resilience target because households are approx. 50% of electricity consumption.
- Scale batteries fast, not as a luxury, but as essential reliability infrastructure for solar and hydro.
- Build standardized microgrids for critical loads (water, telecom, hospitals, cold chains).
- Use the crisis to settle IPP distortions and modernize distribution, because without grid and DISCO reform, the system remains financially unstable.
- Reopen LNG strategy: reduce dependence on expensive spot cargoes during shocks and seek improved terms and workable price rezview mechanisms in oil-indexed SPAs, given Brent-linked exposure.

Conculsion

Whether the "era of oil" ends globally is debatable. For Pakistan, the practical truth is that dependence on imported fuels routed through a strategic chokepoint is an unacceptable national risk. With Hormuz disruption risk high, LNG supply disrupted, and spot prices surging, Pakistan should accelerate solar-plus-storage and simultaneously complete power-sector surgery, including IPP rationalization, grid modernization, and DISCO reform, before a supply shock turns energy stress into state stress.