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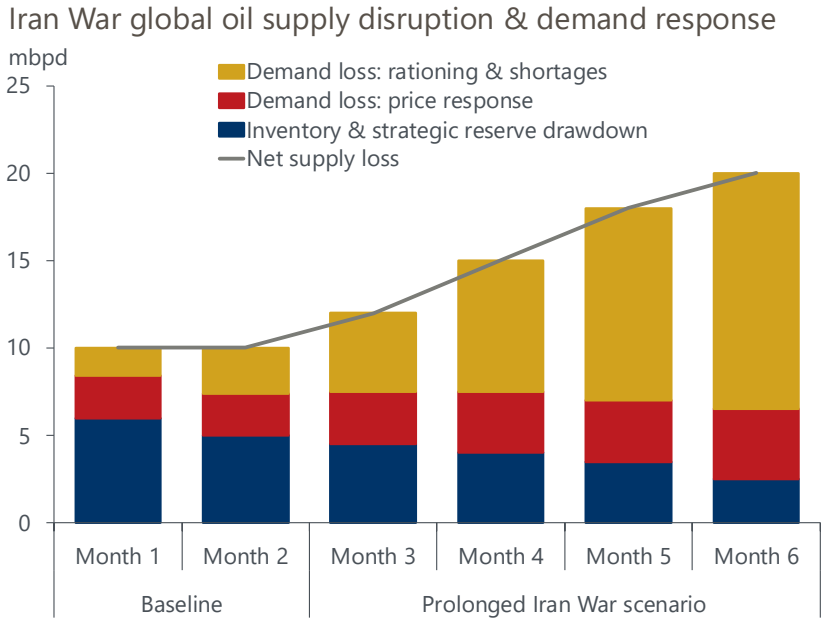
Research Briefing | Global

A prolonged Iran War would lead to severe fuel shortages

- **The US/Israel–Iran war has removed around 10 mbpd of oil from global markets, after allowing for some Strait of Hormuz flows being rerouted through Saudi and UAE bypass pipelines. With pre-conflict global oil demand around 104 mbpd, that is roughly a 10% supply shortfall.**
- **We estimate that higher prices initially destroyed around 2.4 mbpd of oil demand, reflecting oil's very low short-run price elasticity and the limited availability of substitutes. Strategic reserves and inventory drawdowns are currently doing much of the remaining adjustment, supporting around 6 mbpd of demand, but these buffers are finite and become less effective over time.**
- **That still leaves a shortfall of around 2 mbpd in the near term, rising sharply as inventories are depleted. In our prolonged Iran war scenario, we estimate the gap widens to around 13 mbpd by the sixth month. That represents an unprecedented shortage of around 12% of consumption, leading to widespread rationing concentrated in emerging economies, with significant hits to activity and supply chain disruption. Our modelling shows this scenario would trigger a global recession and slow world GDP growth to 1.4% in 2026.**
- **Natural gas is much less likely to see global shortages. Gas demand is more price-responsive than oil, largely because power systems can switch from gas to coal. While the loss of Qatari LNG is large at roughly 20% of global LNG trade, it is only around 3% of total global gas consumption, so higher prices and fuel switching are broadly enough to offset the lost supply globally.**

Chart 1: Rationing grows severe under a prolonged war scenario



Sources: Oxford Economics, Haver Analytics

Baseline assumes some transit through Strait of Hormuz returns in May with Gulf infrastructure largely intact. Prolonged war scenario assumes the Strait remains essentially closed, Red Sea shipping routes are attacked, and Gulf pipeline and production facilities are damaged. Inventory drawdown assumes the committed IEA 400 mb release, a second smaller coordinated release, and ongoing commercial stock drawdown.

Bridget Payne - Head of Energy Forecasting - bpayne@oxfordeconomics.com

The closure of the Strait of Hormuz has removed around 10 mbpd of oil supply from global markets on a net basis, even after allowing for some rerouting through Saudi and UAE pipelines. That deficit can only be closed through three channels: higher prices reducing demand, inventories being drawn down, and rationing or physical shortage.

The first two do much of the work initially, but they are finite. The longer the disruption lasts, the more the adjustment shifts into rationing—the most economically destructive outcome, because it constrains essential fuel use and real activity rather than just discretionary demand.

Short-run oil demand is inelastic

Short-run oil demand elasticity is very low, around -0.03. That means for every 1% increase in price, consumption falls by 0.03% and a very large price increase only reduces global demand modestly. Based on the 79% rise in Brent crude prices compared to our baseline since the crisis began, the implied reduction in demand is 2.4 mbpd globally for Q2. That is meaningful, but it only closes a fraction of the gap. Price does not reduce demand evenly across products, mainly cutting the more discretionary and substitutable parts of fuel use.

Refined product prices have risen more than crude because product stocks are tighter and refineries have cut run rates to preserve operational efficiency amid crude supply disruption.

Table 1: Short-run oil demand destruction

Product	Short-run price elasticity	Pre-conflict demand (mbpd)	Wholesale price change	Demand reduction (mbpd)
Gasoline	-0.03	27	95%	0.8
Diesel	-0.03	28	99%	0.8
Jet fuel	-0.05	8	117%	0.5
Fuel oil/ bunker	-0.01	7	104%	0.1
Petrochemicals/ other	-0.02	27	60%	0.3
Crude	-0.03	104	78%	2.4

Source: Oxford Economics, Haver Analytics, IEA

Diesel is the biggest issue. Its demand underpins freight, agriculture, construction, and a large share of industrial activity. These sectors cannot easily switch fuels or stop operating without broader economic disruption. That means diesel demand falls relatively little through price alone, which is exactly why diesel shortages are so economically damaging.

Gasoline is also inelastic in the short run, especially in car-dependent economies such as the US, Australia, and parts of Asia. People can reduce discretionary trips, but they cannot quickly change where they live, how they commute, or the type of vehicle they own. In lower-income economies, the demand response can be larger simply because households are more constrained by price.

Jet fuel is more elastic. Air travel is more discretionary than road freight or household energy use, and fuel surcharges pass through to ticket prices quickly. That makes aviation one of the first areas where demand is cut through price, particularly for leisure travel.

Fuel oil/ bunker fuel is among the least price-elastic products. Shipping operators can slow steam to reduce fuel use, but that cuts effective transport capacity rather than eliminating demand altogether.

Petrochemical and other uses are mixed. Industrial and petrochemical use is more flexible, but household cooking demand for LPG in South Asia and Africa is highly inelastic because there are few near-term substitutes.

Bridget Payne - bpayne@oxfordeconomics.com

Inventories and strategic reserves

The second adjustment mechanism is inventory drawdown.

This is doing most of the work initially. To date, most countries are not seeing widespread physical shortage because crude and refined product stocks are being run down to maintain supply. That is why the shock is initially felt mainly through higher prices rather than empty pumps, though these are starting in countries with low fuel storage, like Australia.

The IEA estimated global observed oil inventories at over 8.2 billion barrels in January, which looks large on paper. In practice, not all of that stock is available: some is operational minimum inventory, and what matters is not just the stock level but how quickly it can be refined and transported into usable supply. The IEA has already coordinated a release of 400 million barrels, the largest in its history. But against a 10 mbpd net deficit, that is only around one to two months of lost supply in volume terms, and in practice it is spread over time. Based on past releases, the realistic aggregate flow contribution is more like 2–3 mbpd.

The picture is also highly uneven across regions. Countries with thin refined product stocks and limited fiscal capacity move into shortage risk quickly, while those with deeper inventories have more time, but not unlimited time.

There is also a mismatch problem: most strategic reserves are crude, not refined products, and much of the lost Gulf crude is heavy and sour, better suited to producing middle distillates such as diesel and jet. Releasing lighter crude from reserves does not fully solve that, so even where crude availability is supported, diesel and jet shortages are emerging first.

That is why inventories buy time rather than solve the problem. They slow the move into rationing, but do not prevent it if the disruption persists.

The gap is where the economic damage sits

After allowing for price-driven demand destruction and inventory and reserve flows, there is still a gap. That gap is currently around 2 mbpd or 2% of pre-conflict oil demand, but grows the longer the disruption lasts as inventories deplete and the ability of higher prices to destroy further demand becomes more limited. In our prolonged war scenario where the war extends to September and escalates to strikes on the Red Sea, pipelines, and energy production facilities, we estimate over 13% of pre-conflict oil demand will need to be rationed (Chart 1).

That is where the real economic damage sits. At this point, demand is no longer falling just because households and firms are choosing to consume less. It is falling because fuel is not reliably available, governments are restricting access, firms cannot finance purchases, or supply chains are breaking down. Our modelling suggests that a Prolonged Iran war scenario, where the Strait of Hormuz remains closed for six months, would trigger a global recession and slow world GDP growth to 1.4% in 2026.

Diesel sits at the centre of this because it underpins the productive economy in a way no other fuel does. It powers road freight, agricultural machinery, construction equipment, rail and a large share of industrial activity, with few near-term substitutes in the existing capital stock. When diesel supply is physically constrained, the impact spreads through freight costs, food production and industrial output simultaneously.

This is already visible in the most vulnerable economies. In parts of South and Southeast Asia and sub-Saharan Africa, adjustment has moved beyond price into access restriction—starting with administrative rationing, deepening through market dysfunction, and spilling into broader economic damage:

- The Philippines has declared a national energy emergency and imposed a four-day working week;
- Pakistan has moved to a four-day public sector week;
- Bangladesh has imposed fuel purchase caps and closed universities;
- Myanmar has introduced alternating driving days;
- Thailand has capped diesel prices and banned fuel exports; and
- Vietnam is seeking emergency crude from outside the Gulf.

Bridget Payne - bpayne@oxfordeconomics.com

Panic buying and black markets for LPG have emerged in India, filling stations are running dry in Thailand, and fuel traders across the region are tightening credit terms, squeezing out smaller operators who cannot finance purchases at elevated prices.

These pressures are cascading across borders. China and Thailand have restricted fuel exports, worsening shortages in Vietnam, Laos, and Cambodia. Vietnam Airlines has cancelled flights over jet fuel shortages. Each country's attempt to protect its own market makes the regional picture worse.

If the disruption continues, diesel shortages begin to affect agriculture and industrial curtailment spreads into cement, steel, and food processing. Aviation contracts further across Southeast Asia, Australia, and the Pacific.

Regional differences

North America is the most insulated. The US and Canada have large domestic production, ample inventories, and flexible refining systems. The US would still feel the shock, particularly because it is one of the most oil-intensive economies in the world, with high driving rates and a large vehicle fleet. So even as a net exporter with strong inventories, high pump prices would still hit households hard and feed into inflation. But the risk is primarily one of price, not widespread physical shortage.

Europe sits in the middle. It has more storage, more policy capacity, and more refining than many vulnerable importers, so is buffered initially. But it remains exposed, especially on gas and eventually on middle distillates if disruption is prolonged. Government efforts to shield consumers from price rises can also slow demand adjustment and accelerate stock drawdown.

China is more insulated than its neighbours because of large reserves, domestic coal, and stronger state control over the energy system. But it is likely to protect its own market first, including through fuel export restrictions, which worsens the strain on neighbouring countries.

Emerging economies across the Asia Pacific and sub-Saharan Africa are the most exposed, combining heavy import dependence with limited inventory cover and, in many cases, weak fiscal and institutional capacity to manage shortages. The Philippines, Vietnam, Thailand, Bangladesh, Pakistan, and much of sub-Saharan Africa are all vulnerable to refined product shortages if Gulf supply remains cut off.

No global shortages in natural gas

Natural gas demand is much more responsive to price than oil. In the very short run, gas demand elasticity is around -0.07, more than twice that of oil, mainly because of substitutability in power generation. Power systems constantly adjust their fuel mix based on availability and relative prices. Gas is valuable not because it is especially cheap or clean, but because it is flexible and can ramp up and down quickly. Renewables and nuclear reduce exposure over time, but they are not effective short-term substitutes once the system is built—coal is. Coal- and gas-fired plants play similar roles in the dispatch stack, and where coal capacity is available, utilities can switch relatively quickly. That switching channel is what makes gas demand much more elastic than oil, and it is already happening at scale across Europe and Asia.

Outside power, gas demand is much less flexible. Residential heating and cooking cannot be switched in days or weeks. Industrial process heat has limited short-term substitutability. And where gas is used as a chemical feedstock, especially in ammonia and urea production, it is not really substitutable at all, because gas is part of the product, not just the energy input.

The loss of Middle Eastern LNG—overwhelmingly Qatar's Ras Laffan facility, plus some UAE exports that transit the Strait—totals around 90 million tonnes of oil equivalent (mtoe), or roughly 20% of global LNG trade but only around 3% of total global gas consumption of 3,524 mtoe. By contrast, we estimate the roughly 33% rise we are forecasting in global gas prices in Q2 implies around 80 mtoe of price-driven demand destruction, using a short-run elasticity of -0.07. The demand response alone is broadly sufficient to offset the lost volumes at the global level.

That is very different to oil, where price-driven demand destruction only closes a minority of the gap. Ras Laffan, the world’s largest liquefaction plant, is already offline due to both export disruption and physical

damage, and is likely to take months to restart and years to fully recover. But that means the gas disruption is unlikely to worsen materially from here. Oil is different: inventories are still being drawn down and the disruption could intensify further if bypass pipelines or Red Sea routes also come under sustained attack.

But the global gas picture still masks large regional differences. Countries with coal switching capacity can adjust. Countries that relied directly on Qatari LNG and have few alternatives, such as Bangladesh and Pakistan, cannot. For them, this is a physical supply shock, not just a price shock. Europe sits somewhere in the middle: the gas market can still balance globally, but low storage and a difficult refill season leave it exposed if the disruption persists.

Bridget Payne - bpayne@oxfordeconomics.com