STRAIT OF HORMUZ MONITOR

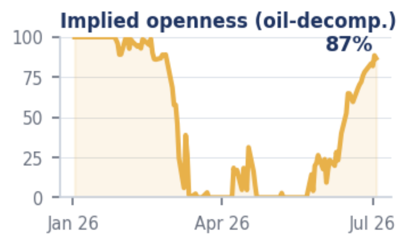
How open · how fast

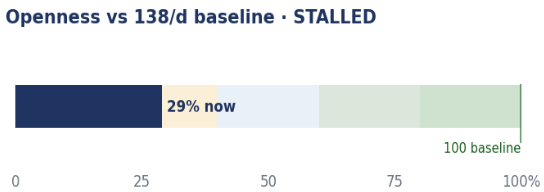
The headline question: how open is Hormuz, and how fast is it reopening? We lead with what we can OBSERVE; dark-share hides the rest.

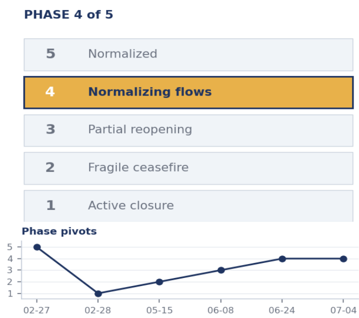
Hormuz ~29% open (observable) · **Phase 4/5 — Normalizing flows** · **STALLED** +0.0 pts/wk

Backing out SPR releases, OPEC+ slack and demand destruction ($12/bbl combined, per Global Oil S/D v12), today's Brent implies Hormuz is 87% open. Observed visible openness is 29%, total flow estimate 26%; the residual Hormuz risk premium in Brent is $5/bbl. Forward Brent has the premium decaying to $-3/bbl by 12m (100% implied openness).

Of the ships we can SEE, only 55% are AIS-off — but the visible count is itself a fraction of true flow: 40 transits/day vs 138 baseline (~29%), with most traffic running dark/unobserved (50-80% on an all-traffic basis). Estimated total ~26% of 20 mb/d throughput (est., low-confidence).







SYNTHESIS — three-sentence headline

Phase 4 Normalizing flows HOLDS — 4 Jul is a HOLIDAY read (US markets shut for Independence Day, observed Fri 3 Jul; no new Western tape). The story is DIPLOMATIC: the Doha round CONCLUDED with 'positive progress' on Hormuz maritime traffic + unfreezing Iranian funds, but is now PAUSED for the multi-day STATE FUNERAL of the assassinated Supreme Leader Ali Khamenei (4-9 Jul; burial at Mashhad, ~40 nations incl. Russia + China; Iranian negotiators have left Doha, next round 'at the earliest possible time'). Iran issued a FRESH warning for vessels to follow Tehran-designated routes through the Strait — a modest assertion-of-control signal — and the TOLL dispute stays the hardest open question (US rejects any Iranian-led tolling; Tehran asserts joint sovereignty with Oman + floats a 'voluntary' fee). Brent holds LOW-70s at $71.52 (Fri close; markets shut over the weekend) -> ~87% implied openness, ~$4.5/bbl residual; gold ~$4,139. The dark-transit sweep still skews the shadow norm ~55% all-traffic: Lloyd's shadow FLEET DOMINATES (~80% of traced), Windward 50-60%, Vortexa ~57%; the freshest granular print (1 Jul) shows just 4 fully AIS-off of 43 transits (~9%) — per-transit transparency still improving under the structural shadow norm, Kpler flagging >20M bbl waiting to sail (+18% w/w). Gates intact and the kinetic stand-down holds — but the IAEA dispute and the conditional high-level track keep the durability capped. Phase 4 Normalizing flows HOLDS — 4 Jul is a HOLIDAY read (US cash shut), PROCESS carrying while TERMS stay stuck. The Doha round CONCLUDED with 'positive progress' on Hormuz maritime traffic + frozen funds, but is PAUSED for Khamenei's 4-9 Jul state funeral (negotiators left Doha; next round unscheduled) — a hiatus, not a breakdown, though the leadership-transition overhang (Mojtaba unseen since the Feb strike) adds durability risk. Iran's fresh Tehran-designated-routing warning + the unresolved TOLL dispute are the live frictions. Brent parked LOW-70s at $71.52 over the holiday weekend; gold ~$4,139; ~87% implied openness, ~$4.5/bbl residual. The IAEA dispute is unresolved; and the dark sweep holds a stubborn ~55% all-traffic shadow norm (Lloyd's ~80% of traced). We hold the conservative ~5.1 mb/d tracker over the official record claims. Gates intact — but a Doha breakdown or a confirmed re-escalation, not a quiet tape, is the path that re-bids crude and puts the downgrade in play. Counts hold ~35-43 transits/day (~1/4 of the 138 pre-war baseline; the 1 Jul print was 43, 24 in/19 out, only 4 fully AIS-off). Straits.live marks 'day 122' with volume ~70% below baseline. Official/Vance claims run far higher (16-20M bbl single-day 'records'; Iran says 40M+ bbl since the blockade lifted), but the conservative tracker read holds ~5.1 mb/d. Backlog clears; the Saudi Ras Tanura restart scales. Counts open-but-capped around a quarter of pre-war.

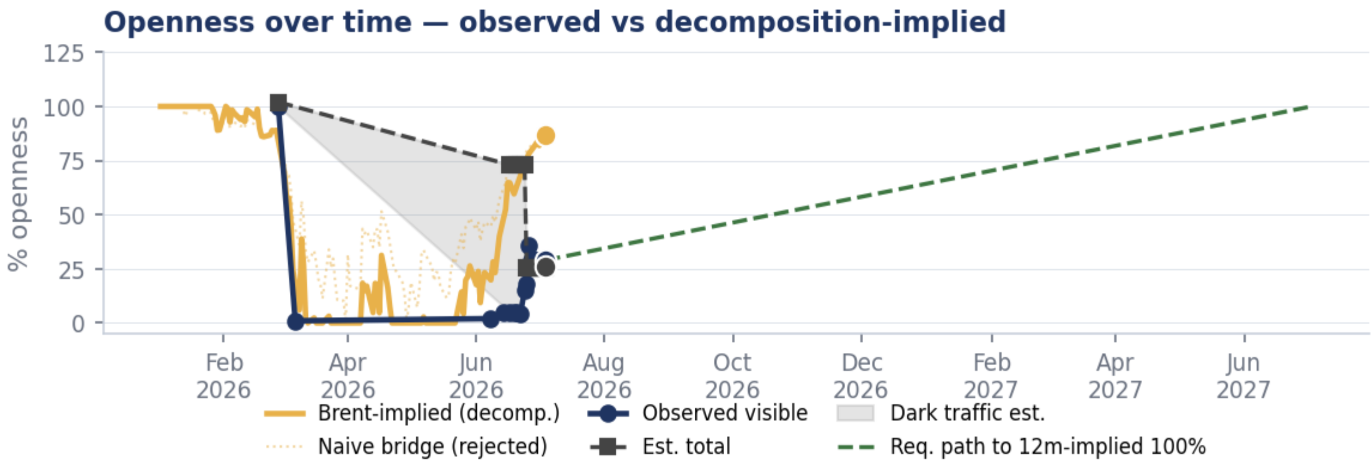
As of 2026-07-04 · **Sources:** visible transits (Windward / hormuzmonitor) · dark-share (Vortexa) · throughput (EIA Q1 avg) · Brent (ICE) · diplomatic (analyst principal-scored). Baselines: 138 ships/day · 20 mb/d.

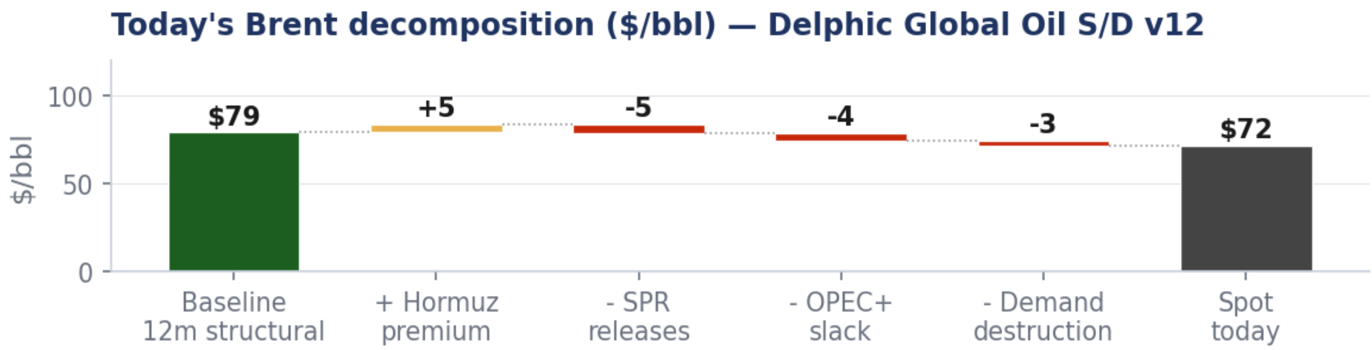
SYNTHESIS

What this means · oil-pricing consistency check

Two readings — the physical openness curve and the oil pricing curve — tell parallel stories. The gap between them is the central tension and the value of the monitor.

Backing out SPR releases, OPEC+ slack and demand destruction ($12/bbl combined, per Global Oil S/D v12), today's Brent implies Hormuz is 87% open. Observed visible openness is 29%, total flow estimate 26%; the residual Hormuz risk premium in Brent is $5/bbl. Forward Brent has the premium decaying to $-3/bbl by 12m (100% implied openness).





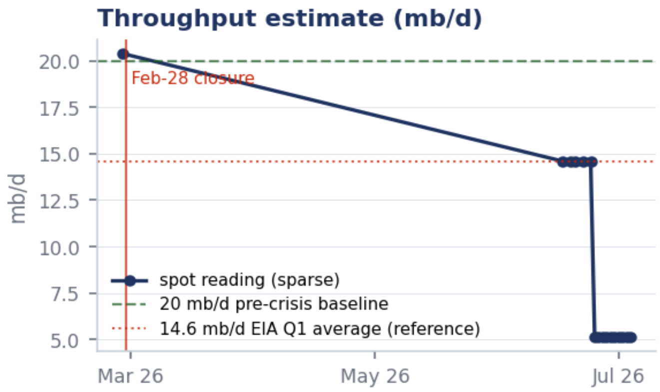
HOW BRENT TRANSLATES TO OPENNESS — Delphic decomposition

- **DECOMPOSITION** — Brent_spot = baseline + Hormuz_premium - non-Hormuz_offset. Baseline = $79/bbl (Delphic 12m structural fair-value, full normalization). Peak Hormuz premium = $34/bbl (Strike scenario vs baseline). Solving for premium and mapping linearly 0..peak gives implied openness 0..100%.
- **NON-HORMUZ OFFSETS TODAY** — $12/bbl backed out of today's Brent (per Global Oil S/D v12): $5 from active US/IEA SPR releases (172 mb US commitment, ~164 mb of 400+ mb deployed by May 8); $4 from deployed OPEC+ slack (UAE coiled-spring flush, Saudi paper quota); $3 from permanent demand destruction (~0.5-0.8 mb/d, teapot exits + electrification).
- **SPOT vs FORWARD** — SPOT $72: implied premium $5/bbl, openness 87%. 12m-FORWARD $71: offsets shrink to $5/bbl (SPR refill demand reverses release pressure above $85; demand recovers +1.0 mb/d by 12m); premium $-3/bbl, openness 100%.
- **WHY NOT THE NAIVE BRIDGE** — A linear bridge from observed crisis-peak ($118) to pre-crisis avg ($64) would imply 86% openness today — attributing 100% of Brent's decline to Hormuz reopening. That is analytically wrong: SPR / OPEC+ / demand destruction have done the heavy lifting. The decomposition method (87%) is the honest answer.

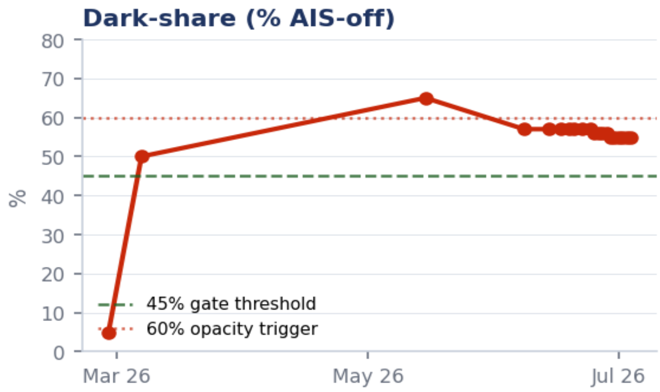
TRAJECTORY

Where we are vs where we have come from

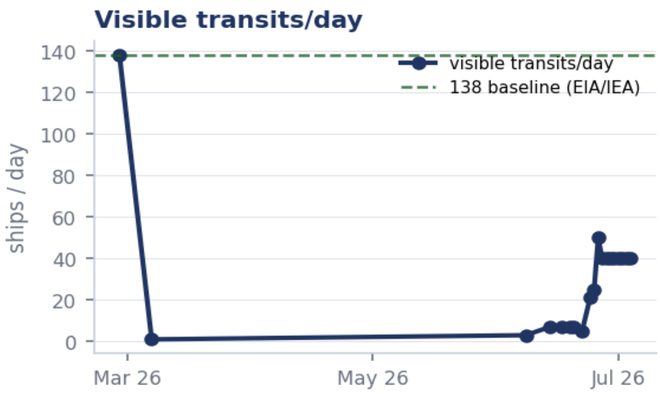
Dark-share and visible transits are the reliable trajectory signals. Throughput is shown as a reference (EIA Q1 average), not a daily spot.



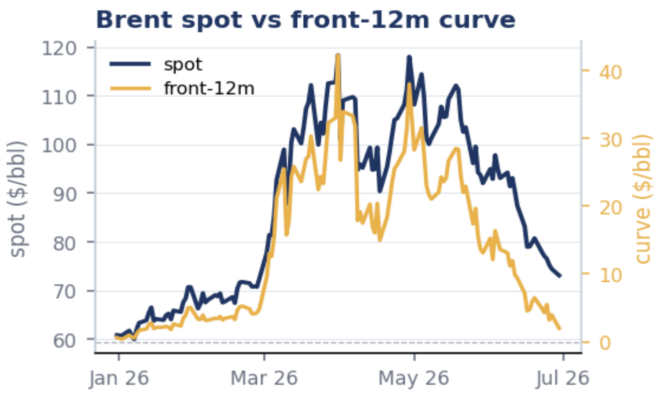
Throughput estimate vs 20 mb/d baseline · 14.6 EIA-Q1 reference line is an average, not a spot. The line is sparse because daily spot is genuinely uncertain while dark-share is high.



% of vessels with AIS off — the observability gap (Vortexa). Falling = visibility returning. Gate clears below 45.



Visible transits/day vs 138 baseline — the reopening curve and the headline openness metric (Windward / hormuzmonitor). The slope is the reopening velocity.



Brent spot + front-12m curve over the last 6 months (ICE, parquet). Falling spot + flattening curve = war-premium discharging.

ANALYSIS

Read · triggers

Thesis. Phase 4 Normalizing flows HOLDS — 4 Jul is a HOLIDAY read (US markets shut for Independence Day, observed Fri 3 Jul; no new Western tape). The story is DIPLOMATIC: the Doha round CONCLUDED with 'positive progress' on Hormuz maritime traffic + unfreezing Iranian funds, but is now PAUSED for the multi-day STATE FUNERAL of the assassinated Supreme Leader Ali Khamenei (4-9 Jul; burial at Mashhad, ~40 nations incl. Russia + China; Iranian negotiators have left Doha, next round 'at the earliest possible time'). Iran issued a FRESH warning for vessels to follow Tehran-designated routes through the Strait — a modest assertion-of-control signal — and the TOLL dispute stays the hardest open question (US rejects any Iranian-led tolling; Tehran asserts joint sovereignty with Oman + floats a 'voluntary' fee). Brent holds LOW-70s at $71.52 (Fri close; markets shut over the weekend) -> ~87% implied openness, ~$4.5/bbl residual; gold ~$4,139. The dark-transit sweep still skews the shadow norm ~55% all-traffic: Lloyd's shadow FLEET DOMINATES (~80% of traced), Windward 50-60%, Vortexa ~57%; the freshest granular print (1 Jul) shows just 4 fully AIS-off of 43 transits (~9%) — per-transit transparency still improving under the structural shadow norm, Kpler flagging >20M bbl waiting to sail (+18% w/w). Gates intact and the kinetic stand-down holds — but the IAEA dispute and the conditional high-level track keep the durability capped.

READ — Openness * phase * velocity

- **OPEN** — Counts hold ~35-43 transits/day (~1/4 of the 138 pre-war baseline; the 1 Jul print was 43, 24 in/19 out, only 4 fully AIS-off). Straits.live marks 'day 122' with volume ~70% below baseline. Official/Vance claims run far higher (16-20M bbl single-day 'records'; Iran says 40M+ bbl since the blockade lifted), but the conservative tracker read holds ~5.1 mb/d. Backlog clears; the Saudi Ras Tanura restart scales. Counts open-but-capped around a quarter of pre-war.
- **PHASE** — Phase 4 Normalizing flows HOLDS (prev Phase 4). The opacity gate reads the ALL-traffic dark share (~55%: Windward 50-60% now, Vortexa 57% conflict-avg off the 65.2% May peak) — so the gate FAILS on BOTH legs (throughput 5.1 < 12 AND dark 55 > 45), not just barrels. Phase holds regardless (downgrade fires on pricing/durability, not the gate). No Phase-5 upgrade: that needs durable barrels, a falling all-traffic dark share, AND a clean inspector entry.
- **VELOCITY** — STALLED near-term on counts (~40-transit plateau, ~29% of pre-war), so the gauge's trailing 7-day slope OVERSTATES momentum. The live movers are diplomatic (the Doha technical track now advancing) and pricing (Brent steadying at $71.52, +~0.9%, the glut still capping), not a fresh count move.
- **ESTIMATE** — VOLUME the lone caveat; the range stays wide. Sustained trackers read ~5.1 (JPMorgan) / ~4.8 (Kpler) mb/d (~25-32% of pre-war) — Kpler ~2-2.5 mb/d specifically on the DARK channel — while officials claim single-day records. We hold the conservative tracker; the high-side figures are official/wire, not corroborated. Flow QUALITY normalised; durable VOLUME remains the Phase 4->5 gap.

DARK TRANSITS * SHADOW FLEET — The shadow norm — tracker-by-tracker (the daily dark-transit sweep, re-searched 3 Jul)

- **LLOYD'S LIST INTELLIGENCE** — The shadow FLEET DOMINATES Hormuz crossings as Iran ramps bypass loadings — ~80% of currently TRACED transits run dark. The bypass pattern: laden tankers exit, ship-to-ship in the Gulf of Oman, empty hulls run back AIS-off. Non-Iranian dark transits scaled 17 (Mar) -> 64 (Apr) -> 70 (May) — now >2/3 of all non-Iranian movements.
- **WINDWARD** — 50-60% of ALL traffic completely dark; >1,100 vessels hit by GPS interference region-wide since the conflict began. The visible count is a fraction of the real flow — 'transparency back' holds only for the AIS-on population.
- **VORTEXA / KPLER** — Vortexa: dark transits ~57% of all crossings over the conflict, PEAKING 65.2% in May (now receding). Kpler: most cargoes pass dark, primarily UAE-origin crude, ~2-2.5 mb/d on the dark channel; 94% of transits run OFF the formal IMO lane (53% the Iranian corridor); the fleet skews shadow (58.7% are 20+ yrs, 55.5% carry no IG P&I).
- **FRESHEST PRINT (1 JUL)** — 43 transits (24 in / 19 out) with only 4 running FULLY AIS-off (3 in / 1 out, ~9% of the day's observable transits) — the per-transit AIS-off share keeps receding even as the structural shadow-fleet norm holds ~55%. The prior granular print (29 Jun) had 42 transits, 10 IMAGERY-CONFIRMED dark hulls and 110 dark-activity events, with three OFAC-designated vessels rotating (an outbound ~337kbbl tanker with recent Russian port calls, one inbound emerging from a 92-DAY AIS blackout to Larak, an LPG carrier re-emerging after 89 dark days) — a COORDINATED shadow-fleet rotation. Kpler: >20M bbl of Iranian crude ready to sail 7+ days, +18% w/w — the glut backlog building behind the reopening.
- **READ** — The gate reads the ALL-traffic dark share (~55%, re-confirmed by today's sweep — NOT carried forward), so the opacity leg FAILS the 45 line and OPACITY sits ~5pts under its 60 trip. The corridor's normal is a SHADOW normal — a broad commercial response to conflict + GPS-jamming risk, not merely sanctions evasion. The JMIC AIS-on reversal is the one signpost that could bend it back toward transparency; a break above 60 arms OPACITY.

OFFICIAL RECORD * SoH — Statements * decisions — as regards the Strait

- **DOHA — TECHNICAL TRACK ADVANCES** — Contra yesterday's stall, indirect/technical US-Iran talks are UNDERWAY in Doha (Qatar + Pakistan mediating). Gharibabadi says WORKING GROUPS are formed to implement the MoU and negotiate a final deal; the first-phase regional understandings centre on MINE CLEARANCE + maritime safety in the Strait, coordinated with Oman. A constructive tilt on process.
- **BUT — HIGH-LEVEL CONDITIONAL** — Qatar reports NO high-level meetings yet, and chief negotiator Ghalibaf says Iran will NOT enter further negotiations until the MoU is implemented. The Islamabad/Versailles MoU (17 Jun) holds the 60-day ceasefire; the high-level track stays gated on implementation, not yet on terms.

- **IAEA — STILL DUELLING** — FM spokesman Baghaei tells Grossi to 'stop political statements and focus on his duties' — the verification crack is unresolved (Tehran resists inspector access to Fordo/Natanz/Isfahan before a FINAL deal). A constructive process tilt that does NOT yet lift the durability cap; E3 snapback latent in the 60-day window.
- **PRICE — STEADIES, GLUT CAPS** — Brent EDGES UP to $71.52 (+~0.9% off 2 Jul's $70.92) — a small steadying off the low, the glut still the dominant frame; WTI $68.40. The curve stays near-flat (the 2026 overhang in the back end). Implied openness ~87%, residual premium ~$4.5/bbl (ticks up marginally as Brent firms). Gold EXTENDS its surge to ~$4,139 (+~2.2%) — the real-rate / safe-haven bid running hotter than crude.
- **GLUT / SUPPLY** — Iran says it has shipped 40M+ bbl since the blockade lifted; Russian exports at records; the IEA warns a lasting resolution could drive an ~8 mb/d 2027 supply surge vs ~2 mb/d demand — a major overhang. OPEC's al-Ghais DISMISSES the glut call. OPEC+ +188k b/d July; Saudi Ras Tanura restart underway. The supply side keeps the bid capped even with the reverser latent.

WHERE WE'VE COME FROM — Trajectory

- **2026-05-15** — Dark-share peaks at 65% in Phase 2 — maximum opacity.
- **2026-06-17** — Islamabad/Versailles MoU signed; toll-free reopening clause starts the recovery.
- **2026-06-22/24** — Switzerland Round 1: road map + Hormuz de-confliction channel; center-corridor transits return -> UPGRADE to Phase 4 Normalizing flows; Brent $76.53 -> $74.44.
- **2026-06-26** — Brent curve flips to mild backwardation (premium largely out); Saudi Ras Tanura restart; the glut narrative takes over. Phase 4 HOLDS.
- **2026-06-30** — H1 mark; Araghchi asserts 30-day 'total oversight'; JMIC reverses its 'go dark' advisory; dark sweep confirms a stubborn ~55% all-traffic shadow. Brent $72.63. Store gates intact; Phase 4 HOLDS.
- **2026-07-01** — Doha high-level convening slips; hardliners demand nuclear deterrence; Brent bounces to $73.13. Dark-share scalar RE-BASED onto the all-traffic denominator (~55%). Phase 4 HOLDS.
- **2026-07-02** — Doha TECHNICAL track advances (working groups formed, mine-clearance first); Brent DROPS to $70.92 on the glut (~88% implied open); dark sweep re-confirms ~55%. Phase 4 HOLDS; direction firms.
- **2026-07-03** — Quiet, price-led follow-through: Brent steadies at $71.52 (+~0.9%), gold extends to ~$4,139; the Doha technical track carries with no high-level meeting; dark norm holds ~55% (~87% implied open). Phase 4 HOLDS.
- **2026-07-04** — US Independence Day (cash markets shut). The Doha round CONCLUDES with 'positive progress' on Hormuz maritime traffic + frozen funds, then PAUSES for Khamenei's 4-9 Jul state funeral (negotiators leave Doha; next round TBD). Iran issues a fresh Tehran-designated-routing warning for Strait transit; the toll dispute stays unresolved. Brent parked low-70s over the holiday weekend. Phase 4 HOLDS.

WHERE IT'S HEADED — Direction * accelerants * reversers

- **DIRECTION** — STRENGTHENING on flow + pricing (Brent low-70s and falling, curve flat, Saudi restart) AND now modestly on process (the Doha technical track advancing on mine-clearance/maritime-safety) — but the DURABILITY vector stays capped by the IAEA dispute and the conditional high-level track.
- **ACCELERANT** — A high-level Doha convening + barrels catching counts (~5.1 -> 8-12 mb/d) as the Gulf restart scales + a clean inspector entry inside the 60-day window + a falling all-traffic dark share as the JMIC AIS-on guidance takes — together, the Phase-5 Normalized path.
- **REVERSER (latent)** — A Doha breakdown, a CONFIRMED ceasefire violation or a repeat tanker/cargo attack, an IAEA-dispute hardening / enrichment-talks collapse / E3-snapback, OR Iran enforcing unilateral 'oversight' terms against non-Iranian transit — any re-arms durability/MoU-snapback fear and pulls DOWNGRADE-RISK toward Phase 3/2, the one path that puts a bid back under crude.

CENTRAL TENSION — Flow/pricing/process-vs-verification/terms

- **PRICING** — Brent ~$71.52 (+~0.9% d/d, still deep in the low-70s), the curve near-flat — the war premium is largely discharged (oil model ~87% implied open, residual ~$4.5/bbl) and the market trades the 2026 glut. A disinflationary offset into the jobs-day tape; gold's continued surge to ~$4,139 is the tell that the bid is rotating to real-rate / safe-haven, not oil.
- **PHYSICAL** — Normalised only on the VISIBLE population — ~35-40 transits/day, Saudi restart underway — but the gate scores the ALL-traffic dark share (~55%, Lloyd's ~80% of traced), which FAILS the 45 line, so 'transparency back' holds only for what we can see. The lag is throughput (~5.1 mb/d tracker, ~25-32% of pre-war; officials claim single-day records) AND opacity — both gate legs unmet.
- **READ** — The divergence is FLOW/PRICING/PROCESS (normalised, premium out, the Doha technical track now advancing) vs VERIFICATION/TERMS (IAEA unresolved, the high-level track conditional on MoU implementation). Markets and tankers say open and oversupplied; the diplomacy says the durability underwriting the reopening isn't sealed — snapback the stick.

SCENARIOS — Base * Bear * Bull

- **BASE** — Phase 4 holds; the Doha technical track grinds on (mine-clearance/maritime-safety) without a high-level breakthrough; the Saudi/Gulf restart scales and barrels grind from ~5.1 toward 8-10 mb/d; the IAEA dispute stays a war of words inside the window; Brent low-70s and soft with the curve flat on the glut.
- **BEAR** — The Doha track breaks down, the IAEA standoff hardens, OR a kinetic re-escalation returns (confirmed ceasefire violation, a repeat Oman-style attack), OR Iran enforces unilateral terms against non-Iranian transit; E3-snapback fear rebuilds, dark-share climbs back toward 65, the curve re-backwardates and Brent snaps +$5-8; Phase 4 un-confirms to 3/2.
- **BULL** — A high-level Doha convening + Iran admits inspectors to the damaged sites inside the window; barrels back above 12 mb/d on the Gulf restart; the JMIC AIS-on guidance takes and the all-traffic dark share falls toward ~30-40; Phase 5 Normalized in 3-4 weeks.

Bottom line. Phase 4 Normalizing flows HOLDS — 4 Jul is a HOLIDAY read (US cash shut), PROCESS carrying while TERMS stay stuck. The Doha round CONCLUDED with 'positive progress' on Hormuz maritime traffic + frozen funds, but is PAUSED for Khamenei's 4-9 Jul state funeral (negotiators left Doha; next round unscheduled) — a hiatus, not a breakdown, though the leadership-transition overhang (Mojtaba unseen since the Feb strike) adds durability risk. Iran's fresh Tehran-designated-routing warning + the unresolved TOLL dispute are the live frictions. Brent parked LOW-70s at $71.52 over the holiday weekend; gold ~$4,139; ~87% implied openness, ~$4.5/bbl residual. The IAEA dispute is unresolved; and the dark sweep holds a stubborn ~55% all-traffic shadow norm (Lloyd's ~80% of traced). We hold the conservative ~5.1 mb/d tracker over the official record claims. Gates intact — but a Doha breakdown or a confirmed re-escalation, not a quiet tape, is the path that re-bids crude and puts the downgrade in play.

TRIGGERS — open materiality list (name · status · rule · source)

NAME	STATUS	RULE	SOURCE
RE-STRESS	**DORMANT**	brent_1m > +8%	brent.parquet (ICE)
OPACITY	**ARMED**	dark_share > 60%	dark_share.json (Vortexa)
DIPLOMATIC DETERIORATION	**DORMANT**	durability < 0	diplomatic_scores.json (analyst)
NEAR-CONFIRM	**DORMANT**	throughput > 12 mb/d AND dark_share < 50%	throughput_mbd.json + dark_share.json
DOWNGRADE-RISK	**DORMANT**	brent_1m > +8% OR durability < -0.5	brent.parquet + diplomatic_scores.json

METHODOLOGY & SOURCES

How the monitor works

Reference page: indicator families, baselines, computed metrics, sources, and the phase state-machine rules. All upstream data lives in the Dropbox store at delphic-market-data/store/.

INDICATOR FAMILIES

- **PRICING (leads / warns)** — Brent spot + front-12m curve from ICE (parquet). War-risk premia from manual entry. Pricing leads the call — can trigger downgrades alone but cannot trigger upgrades without physical confirmation.
- **PHYSICAL (confirms upgrade / lags)** — Throughput estimate (EIA Q1 average, reference only). Dark-share % (Vortexa). Visible transits/day (Windward / hormuzmonitor). The physical gate gates upgrades past Phase 2.
- **DIPLOMATIC (durability)** — Five milestones scored -2..+2 by the principal: navigation freedom, nuclear / ballistic, sanctions / reconstruction, ceasefire compliance, succession stability. Composite is the weighted average.

BASELINES

- **138 ships/day** — Pre-crisis steady-state visible transits (EIA / IEA 2025 reference). Denominator for visible_pct.
- **20 mb/d** — Pre-crisis throughput baseline (EIA). Denominator for est_total_pct.
- **Brent endpoints (Delphic Global Oil S/D v12)** — Structural fair-value baseline $79/bbl (12m, full normalization, no Hormuz premium). Peak Hormuz premium $34/bbl (Strike scenario $113 vs baseline $79). Non-Hormuz offsets today: SPR $5 + OPEC+ slack $4 + demand destruction $3 = $12/bbl. Used by the decomposition on the synthesis page.

COMPUTED METRICS

- **visible_pct** — = visible_transits / 138 — the OBSERVABLE openness headline.
- **est_total_pct** — = throughput_mbd / 20 — estimated total including covert flow. Labelled low-confidence whenever dark-share > 30%.
- **observability_gap** — = est_total_pct - visible_pct — the unobserved share.
- **velocity_pts_per_week** — = visible_pct now minus visible_pct ~7 days ago (nearest non-today entry within +/-3 days), normalised. Labels: ACCELERATING > +3, RECOVERING +0.5..+3, STALLED within +/-0.5, CLOSING < -0.5.
- **implied_openness (Delphic decomposition)** — Brent_spot = baseline + Hormuz_premium - non-Hormuz_offset. Solve for Hormuz_premium, then implied_openness = clamp(100 * (1 - premium / peak_premium), 0, 100). Same formula on 12m-forward Brent with shrunk offsets. The naive linear bridge (without backing out non-Hormuz factors) is REJECTED.
- **phase (state machine)** — UPGRADE requires physical confirmation (throughput > 12 AND dark-share < 45) AND durability >= 0 AND pricing momentum > 0. DOWNGRADE may fire on pricing or durability alone (asymmetric).

SOURCES

- **Visible transits** — Windward and hormuzmonitor public counts; written to store/soh/visible_transits.json
- **Dark-share** — Vortexa AIS-off coverage; written to store/soh/dark_share.json
- **Throughput estimate** — EIA Q1 2026 average mb/d; written to store/soh/throughput_mbd.json. Not a daily spot reading.
- **Brent + front-12m curve** — ICE daily prints, mirrored to store/commodity/brent.parquet and store/commodity/brent_co12.parquet.
- **Diplomatic scores** — Analyst principal-scored, store/soh/diplomatic_scores.json.
- **History** — store/soh/history.jsonl. Seeded with public-record anchors (EIA, Vortexa, Windward, press). Appended every build.