Energy
Transitions
Commission

Securing the energy transition: energy security, fossil fuels, clean energy and resilience

ETC Representatives Meeting

14 May 2026

Plan for the day

Agenda item	Presentation time	Discussion time
Implications of the war in the Strait of Hormuz on clean energy	15’	
Intersection of clean energy and wider resilience	10’	
Summary of ETC input to Santa Marta Fossil Fuel conference	5’	50’

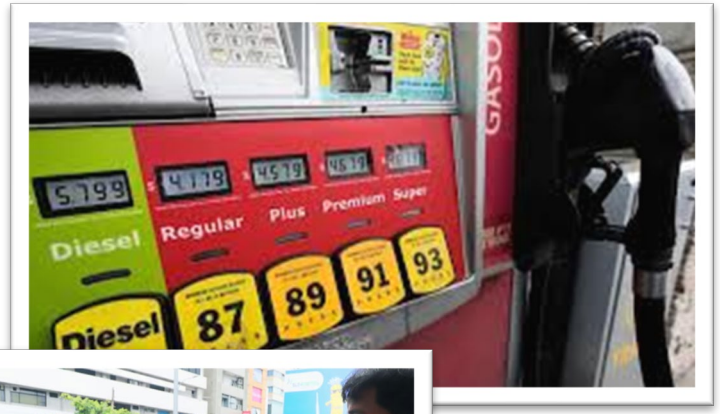
Agenda

- **Implications of the war in the Strait of Hormuz on clean energy**
- Intersection of clean energy and wider resilience
- Summary of ETC input to Santa Marta Fossil Fuel conference

The Middle East conflict has closed the world's most critical energy route, and the human cost is already evident

Iran + Add to myFT

Iran war is causing largest disruption in history to oil supplies, says IEA



Source: Public media publications

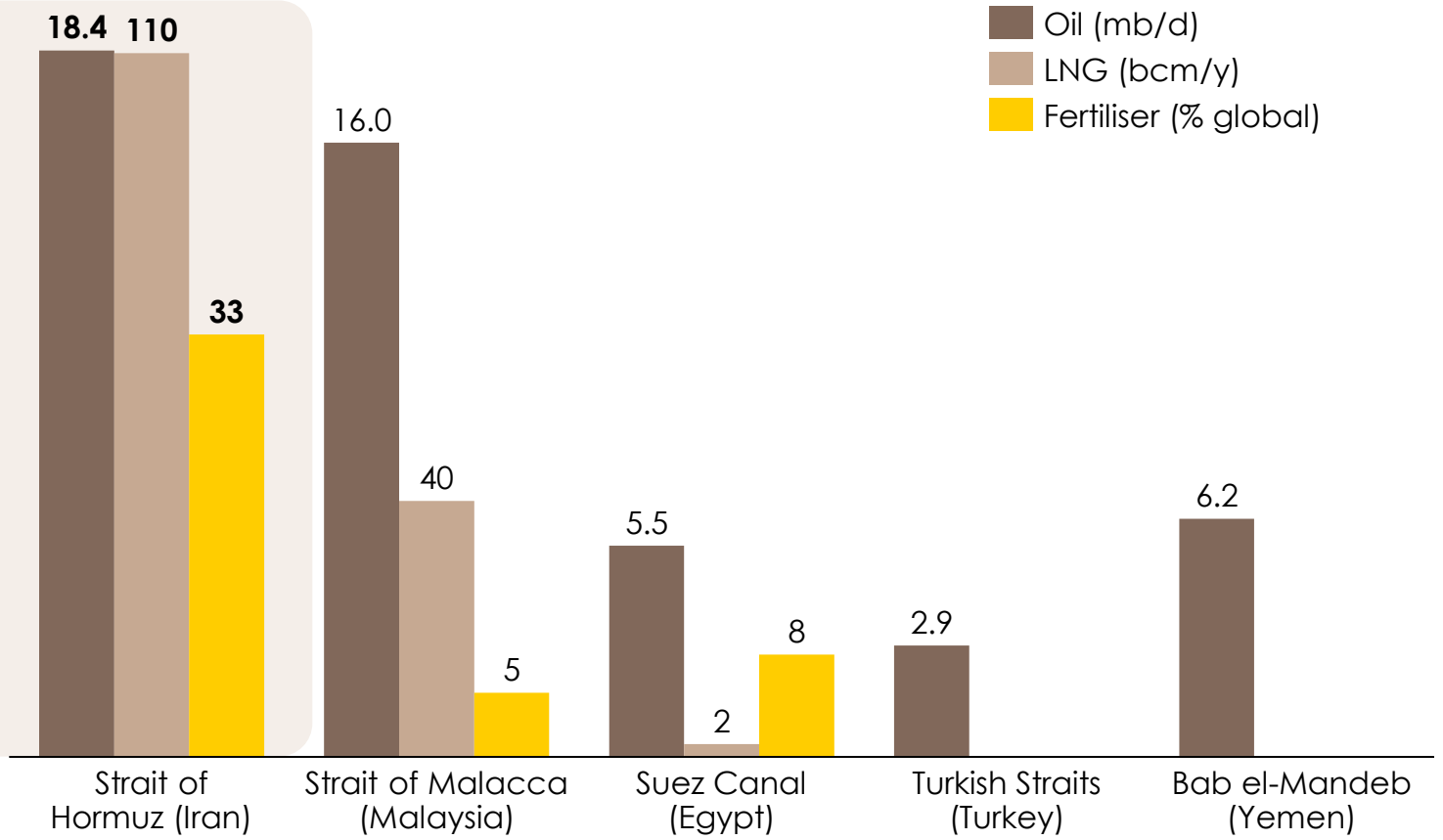
Hormuz is the world's most critical energy chokepoint

Strait of Hormuz

- **1/3 of crude oil** global trade
- **1/5 of LNG** global trade
- **1/3 of fertilizer** global trade
- Relevant shares of LPG, refined oil products and other commodities including:
  - **9% aluminium** production
  - **39% helium** production
  - **20% sulphur** production

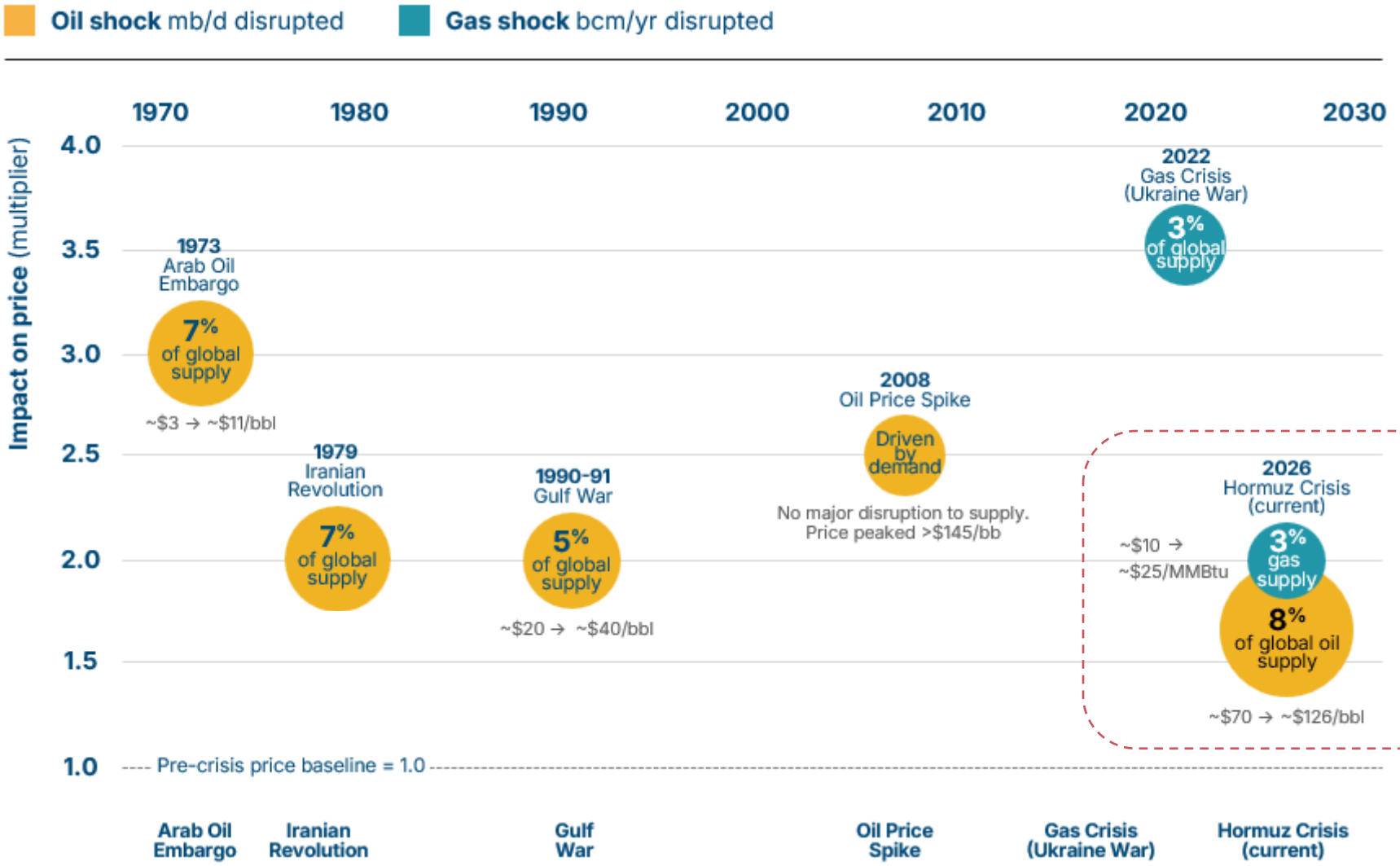
- ~85% of crude oil and LNG **destined to Asia,** with access to fertilizers disproportionally impacting least developed countries

Flow scale of main global marine routes
As shown in legend



Notes: Bar heights rescaled for visual comparison; Oil = mb/d; LNG = bcm/year (bars scaled /6 for comparison); Fertiliser = % of global trade (bars scaled /3 for comparison);
Source: UKMTO and Vaguard, 12 March 10:00 GMT; IEA Oil Market Report (2026); IEA Today in Energy (2025); UNCTAD (2026); ETC analysis.

This is the largest oil supply shock since 1973, but unlike then we now have cost-competitive clean alternatives to deploy at scale



1973

- GDP **−2.2%**
- Equities **−40%**
- Decade of **stagflation**

2026

- Similar-scale oil disruption
- But **cost-competitive clean alternatives** now exist
- They can deploy in **months, not decades**

Source: Adapted from IEA Oil Market Report (2026)I ETC analysis, IMF World Economic Outlook (2026); ETA historical data

The immediate implication of the attacks is economic, but the strategic opportunity is structural substitution

Possible implications

1. **Immediate demand destruction and economic consequences**

   question over duration

2. **Reinforces shift to 'resilient' clean energy**

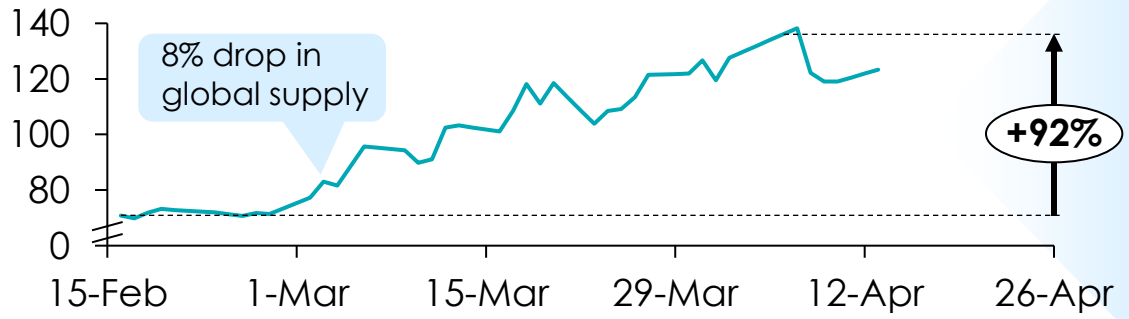
   but speed of deployability is key to near term response

Notes: Bar heights rescaled for visual comparison; Oil = mb/d; LNG = bcm/year (bars scaled /6 for comparison); Fertiliser = % of global trade (bars scaled /3 for comparison);
Source: UKMTO and Vaguard, 12 March 10:00 GMT; IEA Oil Market Report (2026); IEA Today in Energy (2025); UNCTAD (2026); ETC analysis.

Fossil fuel systems are more exposed to price volatility and buffers are limited

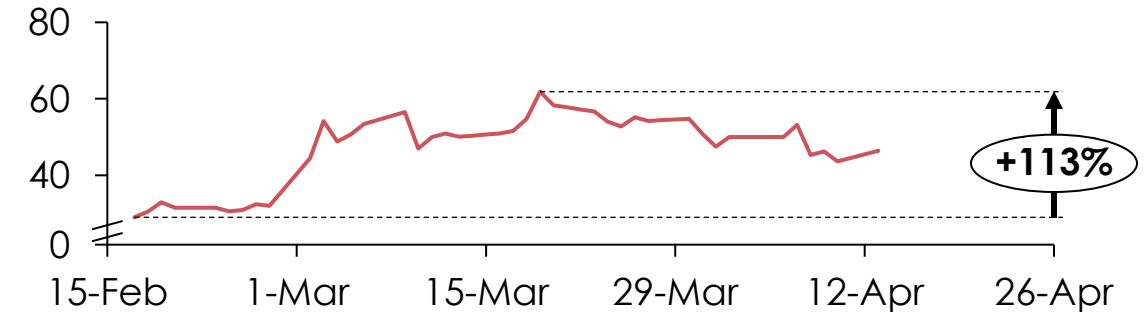
Brent crude price (Dec 2025 – Mar 2026)

Dollars per Barrel



TTF natural gas price, month ahead (Feb – Mar 2026)

€ per MWh

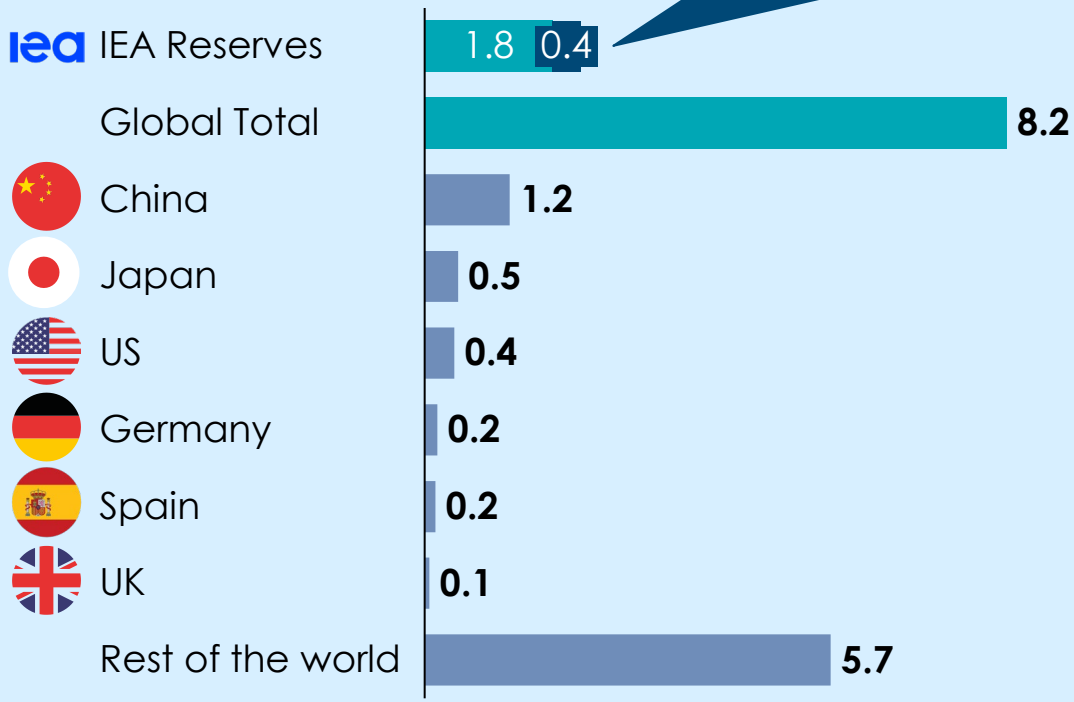


Global Oil Reserves

Billion barrels

IEA release is 5% of global stock, equivalent to:

- ~20 days of Hormuz flows
- ~50 days of the current net supply loss (8 mb/d)



Limited rerouting (~2.5 mb/d vs ~20 mb/d disrupted) and slow infrastructure (5+ years for new pipelines) mean disruptions translate directly into higher prices

Source: IEA (2026), Oil Market Report; The Wall Street Journal (2026), IEA Will Launch Largest-Ever Oil Release From Global Strategic Reserves; Reuters (2026), How much oil do G7 countries hold in emergency reserves?; Financial Times (2026), Iran war tests Xi Jinping's plan to build China's stockpiles

Asia is at the epicentre of the global energy shock, and higher prices are feeding directly into transport, food and household energy costs

Exposure: Lower Moderate High Very high

Country	Oil imported (%)	LNG imported (%)	Imports via Hormuz (% oil)	LNG via Hormuz (% LNG)	Strategic reserves (days)	Immediate impact
Japan	100%	95%	77%	10-15%	208	• High exposure to oil and LNG prices • Power system pressure
South Korea	100%	95%	62%	20%	200	• LNG shortages • Rising power costs
China	70%	40%	40%	20%	100	• Higher import costs • Industrial output rationed
India	90%	50%	40%	30%	10	• LPG/propane shortages affect industry & food services • Fertiliser cost increases
Europe	95%	40-50%	6-8%	5-10%	90	• High gas and power prices • Industrial competitiveness pressure
Australia	85-90%	0%	Only indirect exposure via Asian refining		49	• Transport fuel chain stress – refining dependency
Brazil	10-25%	<5%	Low direct exposure		45	• Diesel price pressure • Supply chain impacts
USA	Net self-sufficient		No direct import dependence		125	• Higher gasoline and diesel prices despite domestic supply

Real life examples of disruption

- **India**: Fertiliser shortage threatening next harvest; Restaurants closing as cooking fuel runs out
- **Philippines:** Household energy bills doubled in a single month
- **Sub-Saharan Africa**: Fertiliser supply chains severed — food security at risk across net-importing nations

Governments responses are splitting between crisis management today and clean resilience tomorrow

Europe

Short term

- **EU** crisis costing €**500m per day**
- 16/27 states intervened with targeted household support
- More targeted than 2022

Structural acceleration

- **Germany** €8bn clean energy package
- **France** doubled electrification support
- **Spain & Portugal** fast-tracked renewables and grid access
- **EU** accelerating power market reform to decouple electricity from gas prices

Asia

Short term

- **South Korea** delayed coal phase-out
- **Japan** increased coal burn;
- **China** capped domestic fuel prices
- **Pakistan/Bangladesh/Thailand** closed schools, remote work, reduced hours

Structural acceleration

- **South Korea** renewables target tripled 37→100 GW by 2030
- **Indonesia** 100 GW solar + cooking electrification
- **Philippines** 250 MW solar + 450 MWh battery deployed
- **India** accelerating wind and battery storage clearances

Emerging/Rest of the world

Short term

- **Australia** fuel excise cuts
- **Brazil** diesel subsidies

Structural acceleration

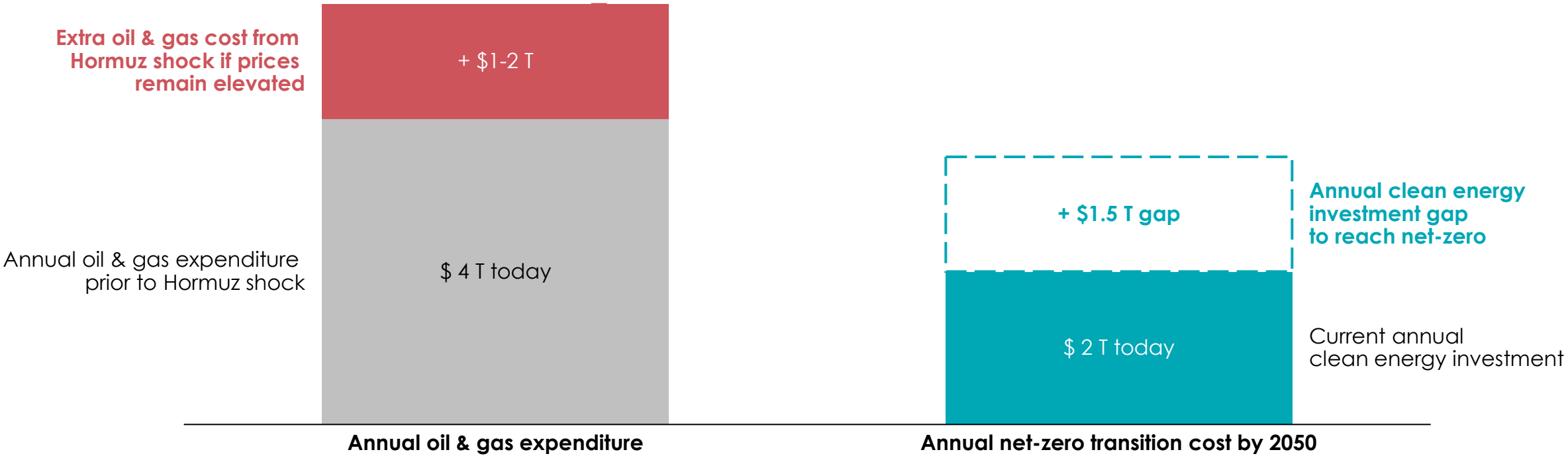
- **Egypt** signed PPAs for 5,620 MW solar, wind and storage (March 2026)
- **Chile** approved $1bn+ renewables (April 2026)
- **Brazil** 107 GW solar plan to 2035
- **Türkiye** reaffirmed 120 GW solar and wind by 2035

Source: Reuters (2026), Brazil proposes new plan for diesel subsidies as prices jump; The Guardian (2026), Australians may not see cheaper fuel for weeks despite Labor's excise cuts; Reuters (2026), China curbs domestic fuel price hike again to soften impact of surging oil prices; The Korea Times (2026), Korea delays shutdown of coal-powered plants amid energy crisis; Philippine Information Agency (2026), 250 MW Solar, 450 MWh Battery Storage Boosts Power Supply, Strengthens Energy Independence; Cabinet Secretariat of the Republic of Indonesia (2026)

Closing the clean investment gap can hedge against future fossil fuel shocks

Estimated annual cost: 2026 Hormuz crisis if persisted for 1 year vs net-zero transition investment

$ trillion per year



Payments to oil & gas producers and suppliers

- Sustains extraction, transport and fuel supply chains
- Fuel costs recur every year

Investment in renewables, grids and clean infrastructure

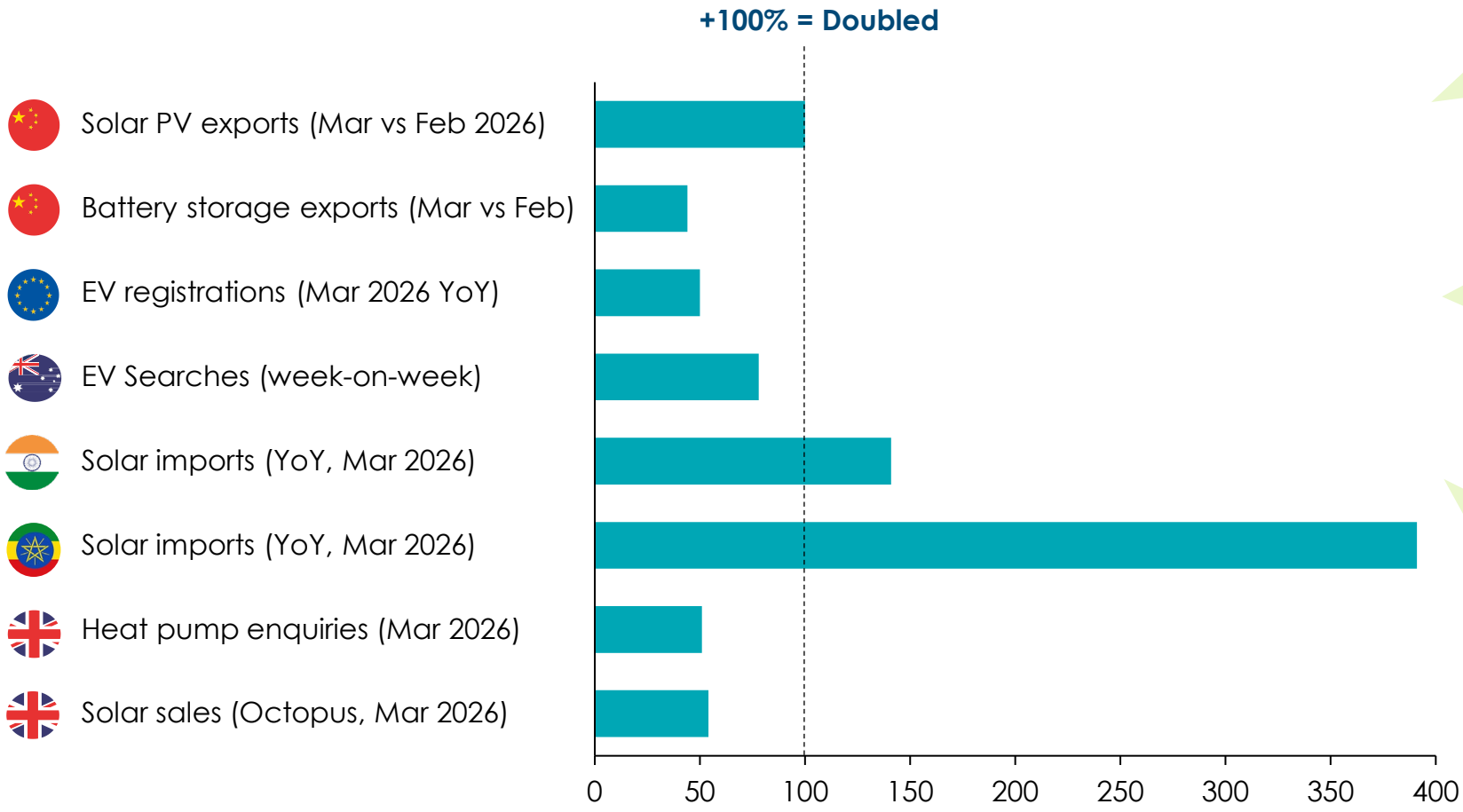
- Builds clean energy infrastructure
- Paid once, low ongoing operating costs

Sources: ETC (2023), Financing the Transition; IEA (2025), World Energy Investment

The crisis is accelerating the transition more effectively than any subsidy program with surging demand for clean technologies

Clean technologies

% change vs comparison period



Capital is reallocating to clean energy.
Chinese PV exports doubled in a month; Philippines' pension fund launched $8,300 solar loans

Behavioral change is accelerating the EV pivot.
Record EV searches and sales in developed countries

50 countries hit record highs for solar imports.
- India +141%,
- Ethiopia +391%,
- Kenya +207 %

YoY = year-on-year. Week-on-week for Australia EV searches. Octopus Energy UK data for heat pumps and solar.
Sources: EMBER (2026); Reuters (2026); Euronews (2026); Zecar (2026); Octopus Energy (March 2026).

Clean Energy system comes at higher costs, but offers greater resilience from resource distribution to shock absorption

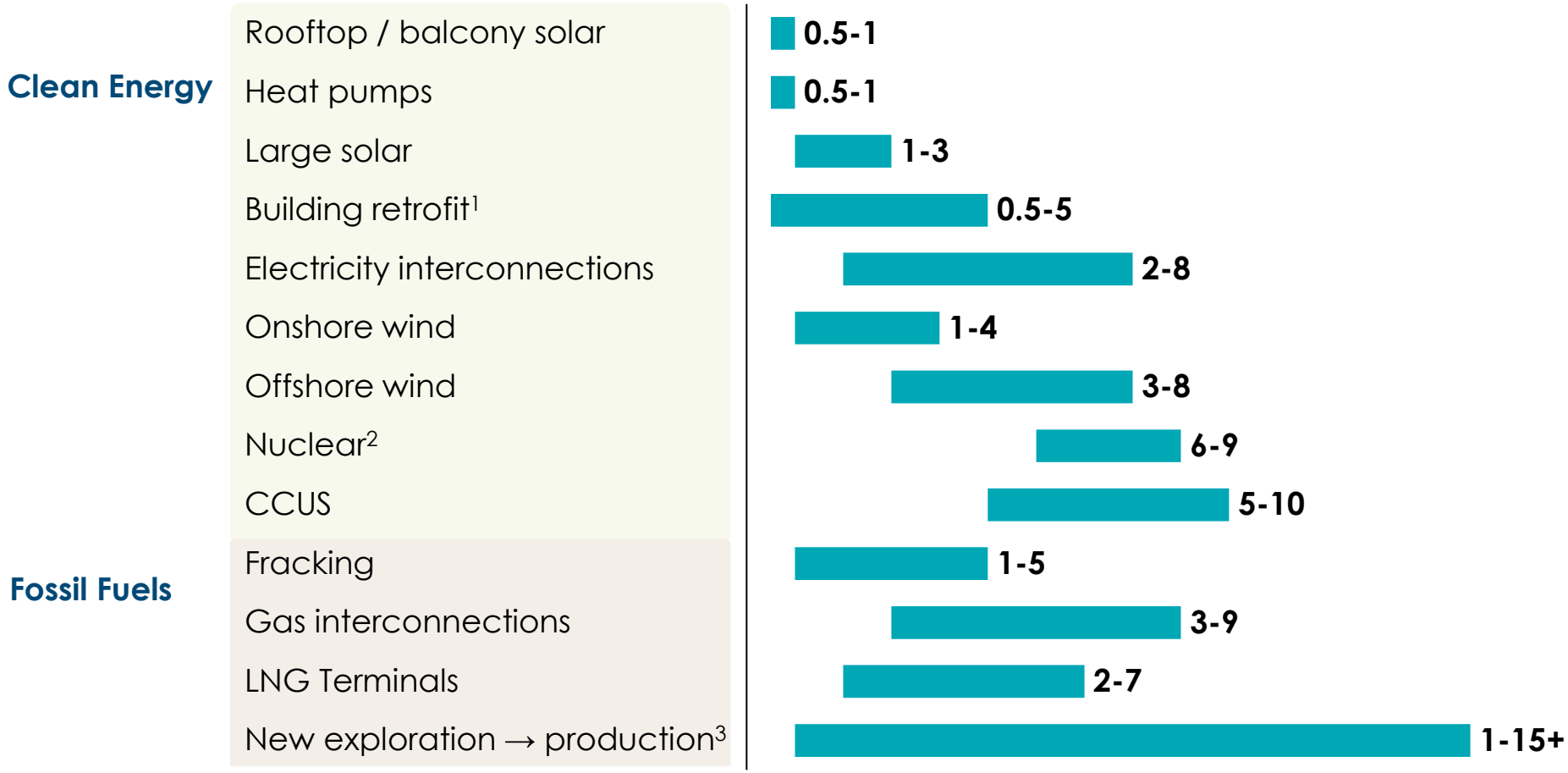
	Fossil Fuel Systems	Clean Energy
Costs	• **The world spends ~$4trn on oil and gas each year** • **This could increase by $1-2trn this year** if price increases of +$30/bbl and $10/MMBtu are sustained, equivalent, **~1-1.5% of GDP**	• **The clean energy transition requires $3.5trn/year of investment** to create power & transport systems that are the same cost or cheaper than fossil fueled ones • Total additional cost of Net Zero **0-1% of global GDP** (~$1 ton/year) to 2050
Features: Resource distribution	• **Concentrated resource supply** increases energy security risks	• **Distributed asset base** increases national energy security
Features: Expense structure	• **No additional productive assets created**: same energy service, but with higher cost	• Costs shift from fuel to **upfront capital**. • **Creates** assets that lower future system costs and create jobs in system installation
Features: Environmental impact	• **Creates emissions**, air pollution and other environmental damage	• **Low or no emissions**, cleaner air, limited environmental damage
Features: Energy Productivity	• **Limited efficiency gain** through demand reduction	• Renewables, grids, EVs, heat pumps are **at least 2-3x more efficient** at delivering useful energy
Features: Supply chain	• **Commodity dependence:** continuous fuel purchases for combustion or products means mostly 'single use' = immediate price exposure	• **Resources not continuously consumed. Refining of critical material inputs highly concentrated,** however long-lived assets can be recycled;
Features: Shock absorption	• **Limited reserve** supply of oil and gas makes price rises immediately with supply risks	• **Gradual absorption** with shocks affecting future deployment not current energy supply

Source: SYSTEMIQ & University of Oxford (2026), The Resilience Nexus: How Europe's security, competitiveness and climate goals are interlinked; ETC (2025), Global trade in the energy transition; ETC (2023), Financing the Transition

Clean alternatives can be deployed at scale years before new fossil fields produce a single barrel

Estimated deployment timeframes for different energy solutions

years



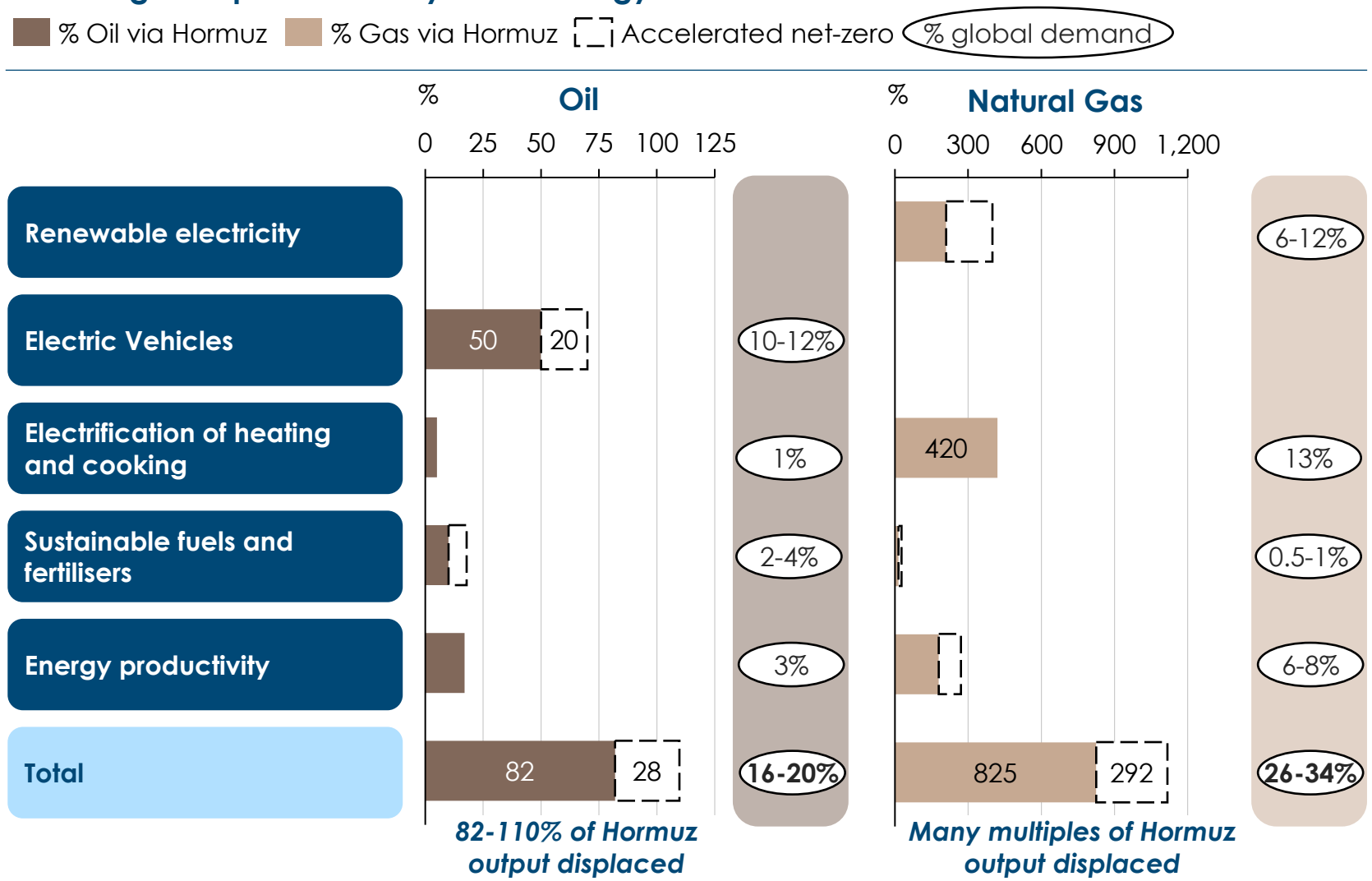
Solar manufacturing capacity already exceeds demand by ~100%.
Global PV module production can scale immediately

By 2030, EVs alone displace ¼ of current Hormuz flows.
Achieved before a new exploration project reaches production

Notes: [1] Efficiency gains through retrofit varies heavily, with certain actions such as insulations being relatively quick.
[2] Based on plant development timeframes in western Europe.
[3] Deployment timeframes vary by country and location. Timeframes can also vary depending on if plans are already in place.
Sources: SYSTEMIQ analysis for the ETC based on EIA, OTI, North Sea Link, Global Energy Monitor, Qualenergia, Iso Energy, IRENA, EA, CCC, Eurelectric, FT.

Win-win interventions can free the world from another Hormuz crisis by 2035

Oil and gas displacement by clean energy in 2035



How resilience is built

- Reduce gas price exposure in power
- Largest structural oil-demand lever
- Cut gas use in buildings and light industry
- De-risk food systems and hard-to-electrify sectors over time
- Lowers demand quickly, often with short paybacks

Notes: Lower range is based on ETC's ACF and IEA's STEPS scenarios. Higher rang is based on ETC's PBS/Unconstrained and IEA's Net-zero scenarios
Sources: ETC (2025), The Road Ahead: Electrification, Design and Mobility Choices for Efficient Transport; IEA (2025), World Energy Outlook;

Immediate actions to manage demand and consumers exposure should go alongside structural changes to a clean energy system…

A menu of options to be prioritised based on national circumstances, exposure and fiscal space:

Near-term response

- Cut demand quickly through energy-saving measures and operational efficiency
- Protect vulnerable households with targeted, temporary support
- Prioritise fuel use for food, freight, public services and critical industry

Medium-term substitution

- Fast-track permitting and grid connections
- Strengthen auctions and procurement to reduce investor risk
- Reform power markets to reduce fossil price pass-through
- Rebalance electricity-to-gas price signals to support heat pumps and electric cooking
- Tighten efficiency standards across buildings and industry
- Accelerate EVs: ICE phase-outs, charging and prioritize commercial fleets

Long-term resilience

- Scale green fuels and fertilisers through mandates, procurement, FOAK support
- Maintain credible carbon pricing and CBAM signals
- Reduce clean barriers and diversify critical mineral and clean tech supply chains
- Lower the cost of capital for clean investment

IEA 10-point plan to meaningfully reduce pressure on consumers

1. Remote work
2. Lower speed limits
3. Public transport shift
4. Traffic restrictions in cities
5. Car sharing and eco-driving
6. Freight efficiency
7. Reallocate LPG to essential uses
8. Reduce air travel
9. Clean cooking alternatives
10. Industrial efficiency and fuel switching

Source: IEA (2025) World Energy Outlook; IEA (2026), Sheltering From Oil Shocks;

… and while short-term compromises on supply will be unavoidable, permanent lock-ins that don't prevent against future shocks must be off-limits

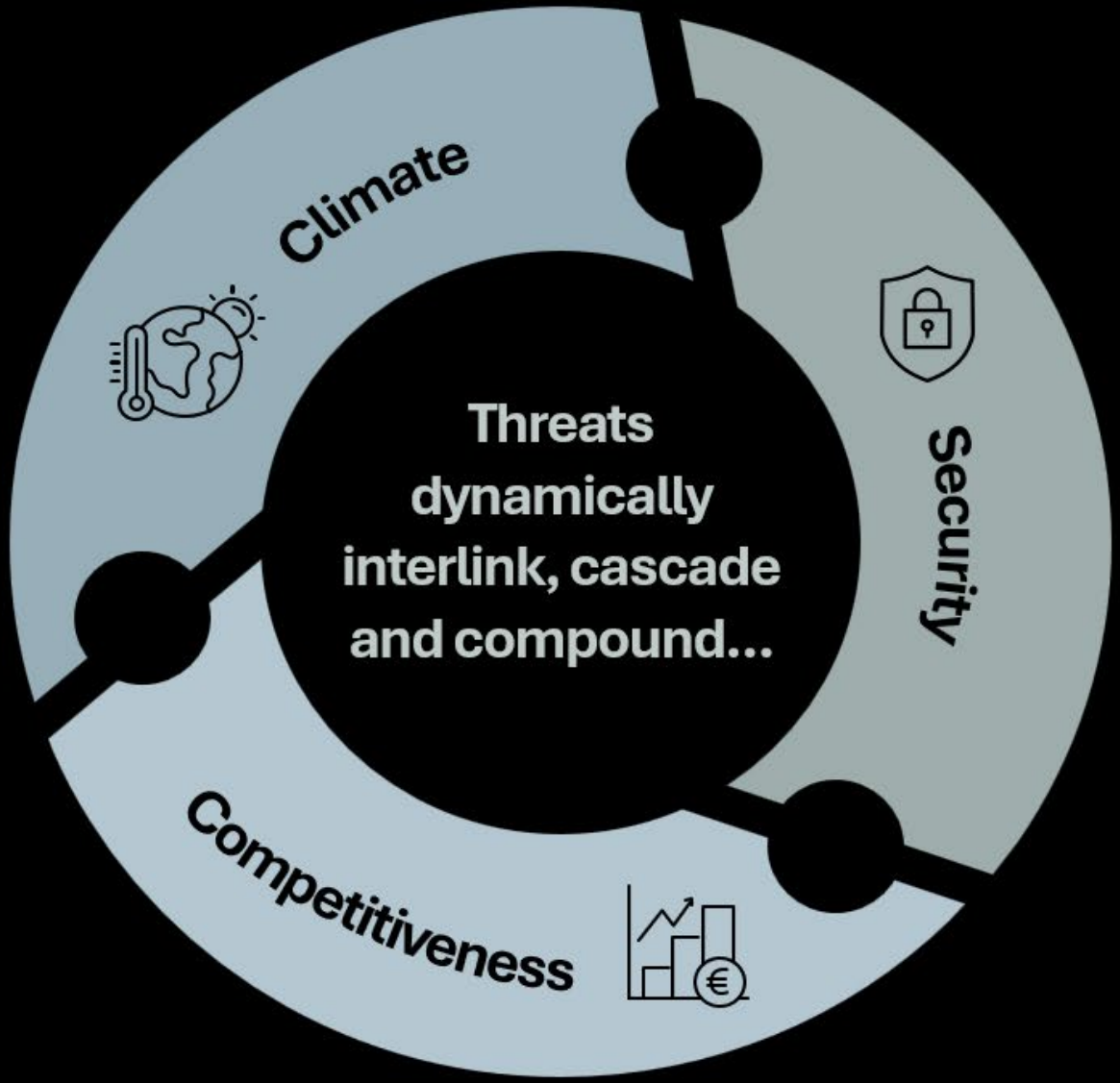
Trade-off	What's acceptable	The risk if mismanaged	Clear Do-nots
1. Fossil subsidies	• Targeted, time-limited support for low-income households	• Support can kill price signals driving clean uptake • **4/5 of €10bn already committed is poorly targeted**	• **No blanket subsidies** — protect consumers, not consumption
2. Coal burn	• Existing plant utilisation where LNG is unaffordable	• Temporary use locks in emissions beyond the crisis	• **No phase-out delays**
3. New LNG infrastructure	• Short-term import capacity • **Qatar 17% offline, 3–5 yrs to repair**	• Long-term contracts extend fossil dependence into a market already oversupplied	• **No long-term LNG contracts**
4. Domestic oil & gas expansion	• Slowing decline of existing/consented fields	• New supply arrives too late to help and too late to stop • **Existing fields 2–3 yrs; new exploration 5–10+ yrs to output**	• **No new exploration or field expansion.**
5. Carbon pricing flexibility	• Temporary price relief during a crisis	• Weakening the signal destroys ETS credibility and clean investment certainty	• **No carbon pricing weakening** — maintain cap trajectory and strengthen CBAM

Sources: S&P Global (2026), Southeast Asia cushioned from LNG shock as coal capacity provides buffer; Financial Times (2026), Will the Iran war derail the energy transition?; IEA (2025), *Global Methane Tracker; Financial Times (2026), Energy tax cuts spread to 39 economies as fuel prices jump*

Agenda

- Implications of the war in the Strait of Hormuz on clean energy
- **Intersection of clean energy and wider resilience**
- Summary of ETC input to Santa Marta Fossil Fuel conference

THE RESILIENCE AGENDA



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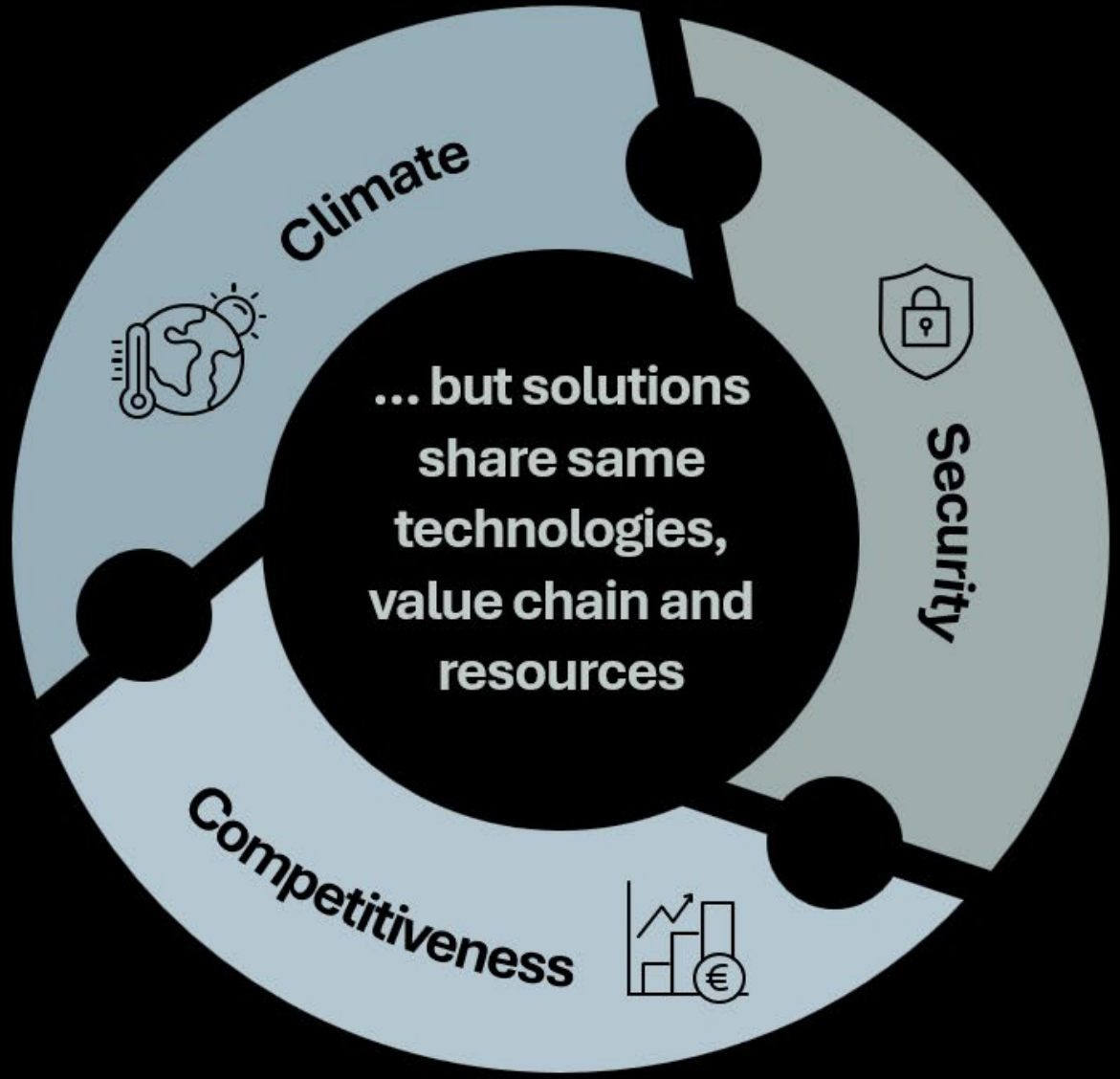
THE RESILIENCE AGENDA



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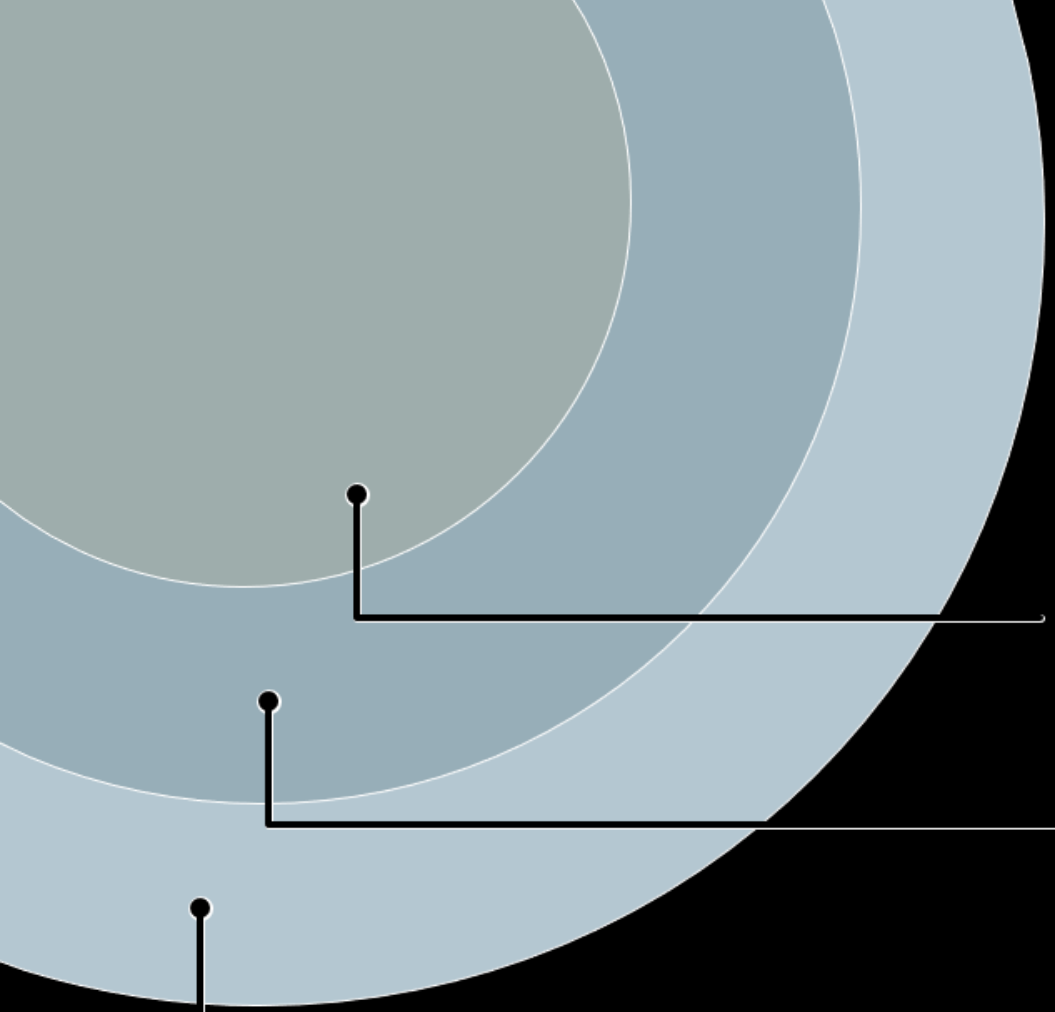

Horizon 1: Immediate Readiness

Horizon 2: Industrial-defence base

Horizon 3: Economic Resilience

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Hormuz brief is part of a wider ETC campaign on phase down of fossil fuels: from real-time policy response to long-term transition strategy

Fossil fuel phase down: Trends by fuel and policies to accelerate implementation

Analytical briefing on global demand trends and policies to accelerate the transition

- Comprehensive view of global fossil fuel demand by fuel and sector
- Evidence that coal, oil and gas peak under current policies, not just net-zero scenarios
- Clear policy priorities to accelerate decline and avoid overinvestment in supply

An electrified and resilient future beyond fossil fuels

Strategic perspective on electrification as the backbone of the future energy system displacing fossil fuels demand

- Long-term vision of a highly electrified, low-fossil energy system
- Shows how efficiency gains reduce energy demand while supporting economic growth
- Identifies key sectors where electrification can rapidly displace fossil fuels

Lessons on Energy Security after the Hormuz Crisis

Rapid-response analysis of energy security risks and system resilience

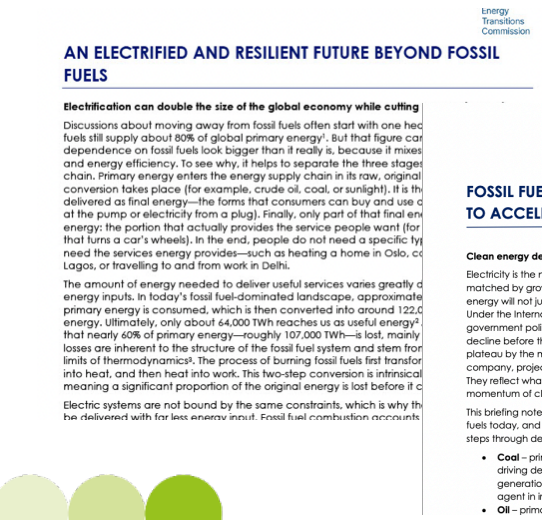
- Real-time case study of a major geopolitical energy shock and its global impacts
- Quantifies economic cost and systemic vulnerability of fossil fuel dependence
- Makes the case for clean energy as a structural solution to energy security

Transitioning Away from Fossil Fuels Conference (Colombia – Netherlands) **28th April**

COP30 Presidency consultation

Public launch **15th of May**

ETC's fossil phase-down argument is now being validated by the wider energy security debate



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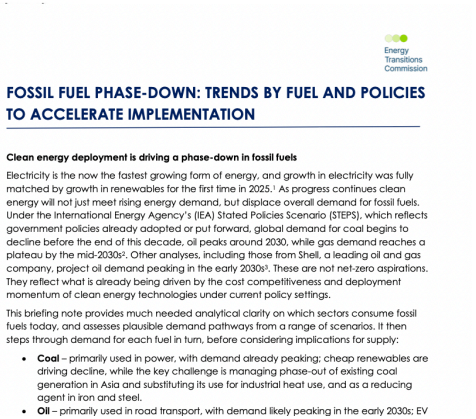
AN ELECTRIFIED AND RESILIENT FUTURE BEYOND FOSSIL FUELS

Electrification can double the size of the global economy while cutting

Discussions about moving away from fossil fuels often start with one hec
fuels still supply about 80% of global primary energy[1]. But that figure car
dependence on fossil fuels look bigger than it really is, because it mixes
and energy efficiency. To see why, it helps to separate the three stage
chain. Primary energy enters the energy supply chain in its raw, original
conversion takes place (for example, crude oil, coal, or sunlight). It is th
delivered as final energy—the forms that consumers can buy and use
at the pump or electricity from a plug). Finally, only part of that final en
energy: the portion that actually provides the service people want (for
that turns a car's wheels). In the end, people do not need a specific ty
need the services energy provides—such as heating a home in Oslo, c
Lagos, or travelling to and from work in Delhi.

The amount of energy needed to deliver useful services varies greatly
energy inputs. In today's fossil fuel-dominated landscape, approximate
primary energy is consumed, which is then converted into around 122,
energy. Ultimately, only about 64,000 TWh reaches us as useful energy[2].
that nearly 60% of primary energy—roughly 107,000 TWh—is lost, mainly
losses are inherent to the structure of the fossil fuel system and stem fro
limits of thermodynamics[3]. The process of burning fossil fuels first transfo
into heat, and then heat into work. This two-step conversion is intrinsical
meaning a significant proportion of the original energy is lost before it c

Electric systems are not bound by the same constraints, which is why th
be delivered with far less energy input. Fossil fuel combustion accounts



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FOSSIL FUEL PHASE-DOWN: TRENDS BY FUEL AND POLICIES TO ACCELERATE IMPLEMENTATION

Clean energy deployment is driving a phase-down in fossil fuels

Electricity is the now the fastest growing form of energy, and growth in electricity was fully matched by growth in renewables for the first time in 2025.[1] As progress continues clean energy will not just meet rising energy demand, but displace overall demand for fossil fuels. Under the International Energy Agency's (IEA) Stated Policies Scenario (STEPS), which reflects government policies already adopted or put forward, global demand for coal begins to decline before the end of this decade, oil peaks around 2030, while gas demand reaches a plateau by the mid-2030s[2]. Other analyses, including those from Shell, a leading oil and gas company, project oil demand peaking in the early 2030s[3]. These are not net-zero aspirations. They reflect what is already being driven by the cost competitiveness and deployment momentum of clean energy technologies under current policy settings.

This briefing note provides much needed analytical clarity on which sectors consume fossil fuels today, and assesses plausible demand pathways from a range of scenarios. It then steps through demand for each fuel in turn, before considering implications for supply:

- **Coal** – primarily used in power, with demand already peaking; cheap renewables are driving decline, while the key challenge is managing phase-out of existing coal generation in Asia and substituting its use for industrial heat use, and as a reducing agent in iron and steel.
- **Oil** – primarily used in road transport, with demand likely peaking in the early 2030s; EV

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Climate change Added

Colombia hosts first meeting to quit fossil fuels as energy crisis worsens

'Coalition of the willing' kicks off strategy talks despite absence of big emitters

The talks taking place in the Colombian city of Santa Marta would be 'difficult', said its environment minister © AFP via Getty Images

Attracta Mooney in London and **Pilita Clark** in Santa Marta

Jules Kortenhorst, co-chair of the Energy Transitions Commission, a think-tank that will present two papers at the conference, said it was "fundamental to talk" about phasing out both demand and supply. ETC research found about 60-70 per cent of fossil fuel demand could be phased out by 2050 through electrification.

REUTERS Bloomberg POLITICO

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