ASSESSMENT 003 · TAIWAN STRAIT · CRITICAL INFRASTRUCTURE AND CIVIL RESILIENCE

Resilience Under Disruption

Energy, connectivity and essential civilian systems in Taiwan

PUBLISHED	ASSESSED AS OF	RESEARCH REVIEWED	OVERALL CONFIDENCE	SCOPE
29 October 2026	25 October 2026	29 October 2026	MODERATE	Taiwan civil systems, 2017 – Oct 2026

Independent research specimen. Prepared by Vigil Consilium to demonstrate its assessment format. Not commissioned by an external client.

THE QUESTION

How could prolonged energy or communications disruptions affect Taiwan's essential civilian services and economic continuity, and what factors determine the capacity to recover?

JUDGMENT

A prolonged disruption would not reach Taiwan's civilian systems one network at a time. Electricity, telecommunications, water and health care converge on two shared dependencies: imported gas, which generates nearly half the island's power, and on-site diesel generation, which keeps critical services running when the grid fails. How long a disruption can be absorbed is therefore set less by any single network's redundancy than by gas cover measured in days, backup autonomy that is not published, and repair capacity Taiwan does not control.

Recovery capacity depends first on whether fuel keeps arriving. The one real supply shock on record, the loss of Qatari LNG cargoes in 2026, was absorbed while sea access to Taiwan stayed open. Beyond fuel arrival, the determinants are generator fuel logistics, access to repair ships and how quickly a small number of concentrated nodes can be restored.

FINDING 01

The short stock sits upstream of every slow fix.

Gas was about 48% of 2025 generation.[1] Importers must hold 11 days of gas, rising to 14 from 2027, and reported holdings were around 11 days (10–11 in EIA's estimate).[2,3] The levers that would reduce reliance on arriving cargoes, a reactor restart and grid reinforcement, run on horizons of years.[1,4]

FINDING 02

The networks meet at the backup generator.

Telecoms, water and hospitals all fall back on on-site generators. In October's typhoon, Taiwan Water ran 19 to keep about 277,000 households supplied.[5] A 2022 telecom outage began when backup batteries ran out after two hours and the generator switchover failed.[6] No figure for fuel held on site has been published.

FINDING 03

Redundancy works where it is sized; repair does not.

When Matsu's cables failed in January 2025, microwave links offered 12.6 Gbps against a 9.5 Gbps daily peak, and services continued.[7] In 2023 the same islands waited weeks for a scarce repair ship.[8] Redundancy turned an outage into a repair-time problem, and repair time stays outside Taiwan's control.

PRACTICAL IMPLICATIONS

- **Plan for combined failure.** The August 2026 drill cut mobile data but left power and fixed lines untouched; a prolonged disruption is unlikely to be that tidy.
- **The shared input to test is diesel for backup generators**, not any one network's spare capacity.
- **Semiconductor continuity runs through power quality and water allocation**, both of which have been stressed in ordinary years.

CONFIDENCE MODERATE

The disruptions, requirements and programmes are well documented. The interactions between them are Vigil's assessment from documented design, and some are inferred.

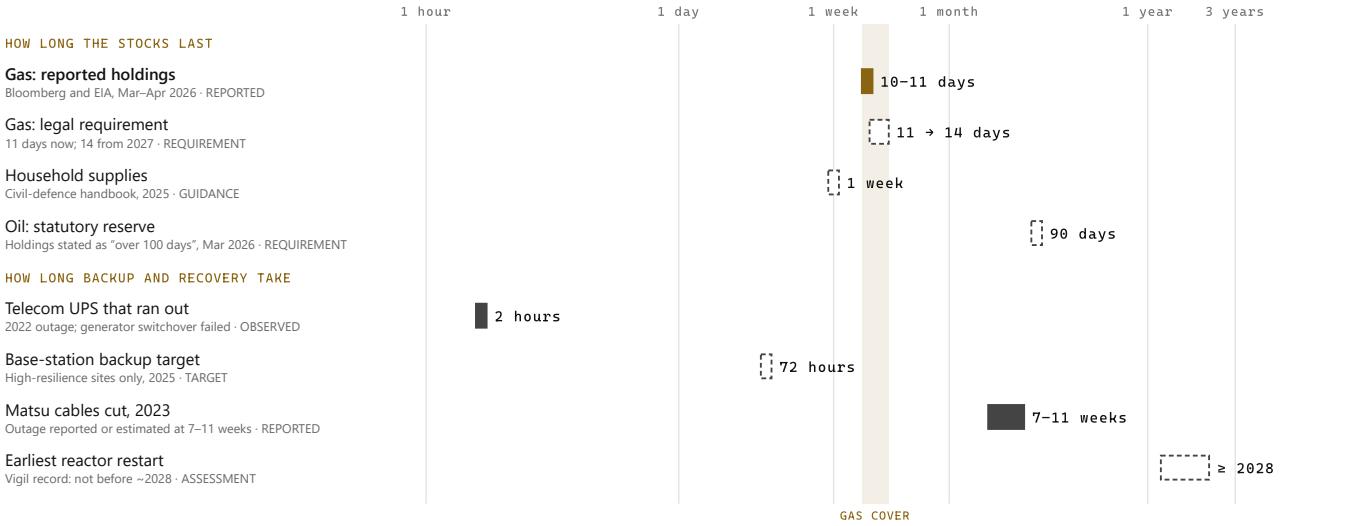
Principal uncertainty: actual fuel stocks, the consumption basis of "days" of cover, and on-site backup autonomy are not published.

02 / SITUATION AND EVIDENCE

Days of fuel, years of remedy

Taiwan imports over 94% of its energy.[3] Its last reactor closed on 17 May 2025,[4] and gas now generates nearly half its electricity. In 2026 the Gulf war tested the supply side: Qatar, a third of Taiwan's LNG in 2025, declared force majeure on scheduled cargoes. Replacement cargoes covered the gap, and the ministry reported no shortages.[2,3,9,10] Sea access to Taiwan itself was never interrupted.

FIGURE 1 How long the stocks last, against how long backup and recovery take



SHOWS Published durations on one logarithmic time axis, each labelled by kind: observed, requirement, target, guidance or assessment. The shaded band is the 10–14 day gas window, carried down the chart for comparison.

BASIS Taipei Times and EIA (gas); Vigil records (oil statute, reactor timing); Taipei Times on the 2022 outage and the base-station programme; AP and CNA on Matsu 2023.[1,2,3,6,8,11,12,13] Restoration for Matsu 2023 is reported at between 7 and 11 weeks; the disagreement is shown as a range.

LIMITS Stocks are stated, not audited, and the consumption basis of "days" is unpublished. Bars of different kinds are compared for scale, not combined. Coal is omitted: its floor and holdings are operator-reported and were not re-verified.

TABLE 1 The record so far, system by system

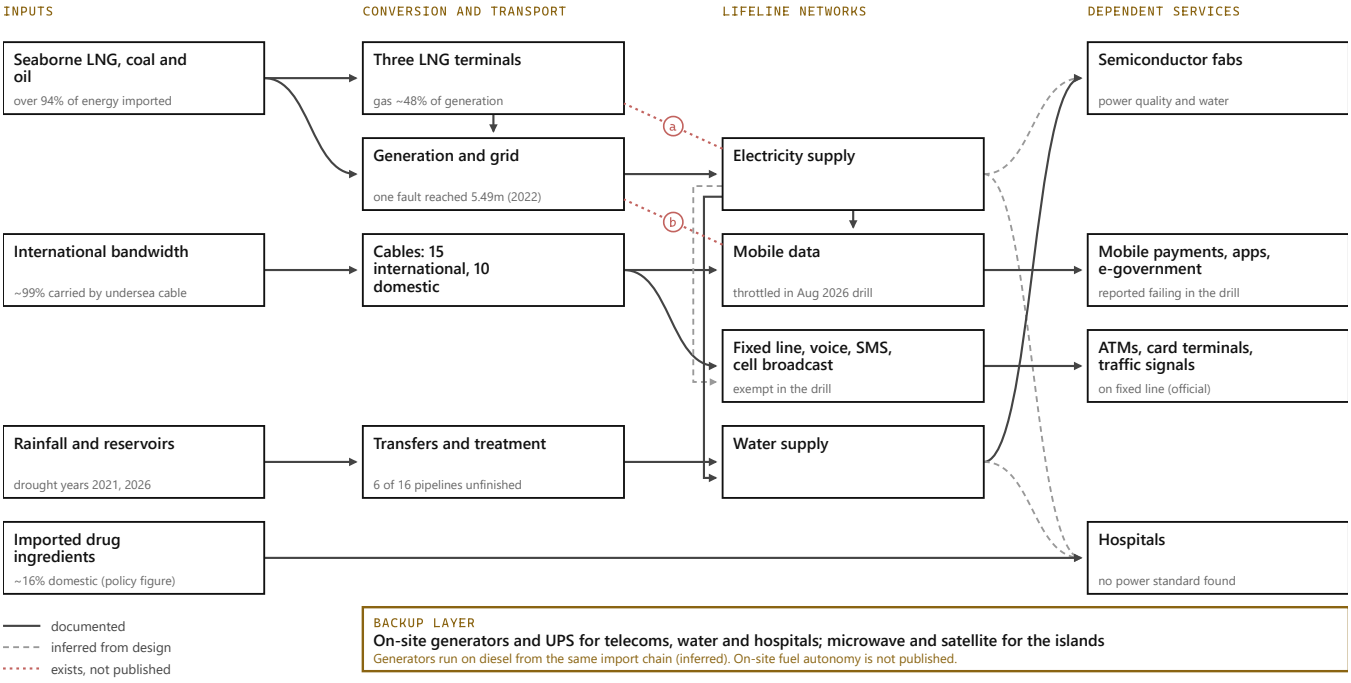
SYSTEM	OBSERVED DISRUPTION	DOCUMENTED VULNERABILITY	OFFICIAL MEASURE	RECOVERY DEPENDS ON
Electricity	2017: valves at one gas metering station cut six generators; rationing for over 6.68m users. 2022: one switchyard fault reached 5.49m.[14,15]	Operating reserve fell to 4% on one day in September 2025.[16]	Grid resilience programme, NT$564.5bn; completion asked for 2028.[1] TARGET	Fuel arrival; restoring a few large nodes.
Gas	2026: Qatari cargoes lost; covered by replacement cargoes.[2,9]	Three terminals; cover of days.[3]	11-day stock, 14 from 2027. REQUIREMENT	Open sea lanes to Taiwan's ports.
International links	2025: seven cable incidents; six cables disrupted at once by an earthquake.[17]	~99% of bandwidth on undersea cables.[13]	Cable-protection law in force Jan 2026; satellite bands opened. REQUIREMENT / DELIVERED	Route diversity; repair ships.
Outlying islands	Matsu 2023, 2025, 2026 cable failures.[7,8,18]	Few cables per island; scarce repair ships.	Matsu No.4 in service Sep 2026; two microwave paths per main island.[19,20] DELIVERED / TARGET	Microwave sized to peak; repair time.
Water	2021 and 2026 droughts; Oct 2026 typhoon: a booster station lost power and supply was rerouted.[5]	Pumping needs power; supply needs rain.	562–574 generators; transfer pipelines, 6 of 16 unfinished.[21,22] DELIVERED / IN PROGRESS	Generators and diesel; rainfall timing.
Payments	Aug 2026 drill: mobile payments reported failing; ATMs on fixed line by design.[23,24]	Mobile data layer.	No continuity measure published. NOT FOUND	Fixed line and power together; no published test.

03 / CORE MECHANISM

Why resilience cannot be assessed one network at a time

Each network has its own redundancy, but they share inputs: imported fuel, electricity, and the diesel that backs electricity up. A disruption to a shared input arrives in every network at once.

FIGURE 2 Taiwan's civilian systems as layers of dependence



SHOWS Which systems depend on which, from imported inputs to the services people use. Solid lines are dependencies documented in a Taiwan source; dashed lines are inferred from documented design. Red dotted lines mark dependencies that exist by engineering necessity but whose arrangement is not published: (a) the power supply of LNG terminals; (b) telecom links to grid control.

BASIS Vigil's Civil Resilience objects and impact chain;[11,25] the incidents and programmes cited in Table 1; the official August 2026 drill explainer.

LIMITS An edge is a dependence, not a cascade: no line carries magnitude, sequence or timing. The diagram is not a complete survey and shows no site or facility.

THE BACKUP LAYER IS SHARED

Telecom operators bought more than 200 portable generators after a 2025 typhoon. Officials set a 72-hour backup target for a subset of high-resilience base stations, not a rule for all of them.[12] Taiwan Water holds over 560 generators for pumping and treatment.[21] Hospital backup arrangements are not published, and no Taiwanese standard for their autonomy was found. Generators of this kind run on diesel or fuel oil, the fuel with the longest statutory cover (an inference from design). The constraint in a long grid outage is therefore probably not the oil stock. It is more likely to be refuelling logistics, on-site autonomy and switchover reliability, none of which is published. VIGIL ASSESSMENT

DRILLS HAVE TESTED ONE LAYER AT A TIME

The August 2026 throttling drill cut mobile data to about 1% of capacity in 14 jurisdictions for 30 minutes. By design, it left voice, SMS, cell broadcast, fixed lines and power untouched.[23,24] It showed where failure begins within telecoms, with mobile payments and online services first. It did not test a loss of power and data together, the more plausible shape of a prolonged disruption. Vigil records no published exercise that has constrained fuel, generation or distribution.[26] VIGIL ASSESSMENT

WATER: THE COUPLING ALREADY STRESSED IN ORDINARY YEARS

Water couples climate, power and industry, and has been stressed without any coercion. In the 2021 drought, water was allocated by priority and fabs trucked water in.[27] After the driest western winter on record, the water agency expected supply to hold to the end of September through transfers and rationing, with six of 16 major transfer pipelines still under construction.[22] When October's typhoon cut a booster station's power line, supply was rerouted from other plants, and 19 generators kept about 277,000 households supplied elsewhere.[5] Recovery depends on infrastructure, rainfall and electricity together; a dry season combined with a fuel or grid disruption, the compounding case, has not been observed. CONDITIONAL

04 / IMPLICATIONS AND OBSERVABLES

What determines recovery, and what would change the judgment

MATSU: THE ONE NATURAL EXPERIMENT

The outlying islands are where cable failures have repeatedly cut connectivity outright, and where restoration is on record. The comparison (Table 2) shows redundancy working once it was sized to demand. It also shows that the dependence on regional repair ships never moved. Vigil cautions against scaling the result to the main island, which has 15 international cables on several routes. An earthquake at the end of 2025 disrupted six of them at once:[17] multi-cable failure has happened, but no published account of its service effect was found. VIGIL ASSESSMENT

CONCENTRATION, AND PRESSURE BY INDUCEMENT

Fuel arrives through three LNG terminals, and faults at a single station or plant reached national scale in 2017, 2021 and 2022.[14,15] In April 2025 a PLA exercise script included strikes on “key ports and energy facilities”. That is a declared rehearsal, not evidence of intent.[28] ATTRIBUTED Recovery can also be shaped by inducement: Kinmen has drawn water from a pipeline from Fujian since 2018,[29] and in 2026 Xiamen said it was examining electricity and gas links, which Taipei says cannot be decided unilaterally.[30]

IMPLICATIONS FOR THE QUESTION

For continuity planning, the unit of analysis is the shared input. Fuel arrival, generator autonomy and repair capacity decide how long services last, more than any one network’s spare capacity. **For supply-chain exposure**, semiconductor continuity is coupled to power quality and to water allocation. In the 2022 blackout, which reached 5.49 million households and businesses, the semiconductor sector was largely spared because science parks are protected by design.[15] That protection is against a grid fault, not against a shortage of the gas that feeds the grid.

TABLE 2 Matsu, three failures

Feb 2023	Both cables cut. Limited microwave; bill payment and medical booking disrupted; repair ship weeks away.[8]
Jan 2025	Both cables down (deterioration). Microwave within an hour, 12.6 Gbps against a 9.5 Gbps peak; ATMs and hospitals prioritised.[7]
Apr 2026	One cable broken. Dongyin carried by microwave.[18]
Sep 2026	Taiwan–Matsu No.4 cable enters service.[20]

CONDITIONAL PATHWAYS

A · SUPPLY SHOCK, SEA OPEN CONDITIONAL

As in 2026: substitution through replacement cargoes.

TESTED BY

stated cover holding above the requirement.

B · ARRIVAL CONSTRAINED CONDITIONAL

Cover is set by days of gas, and services by generator fuel. Wargames model severe hardship;[31] this is a scenario, not a finding.

C · CONNECTIVITY CUT, POWER INTACT CONDITIONAL

Traffic reroutes; the commercial data layer degrades first.

TESTED BY

published effects of a multi-cable event, such as the late-2025 earthquake.

OBSERVABLES THAT WOULD CHANGE THIS ASSESSMENT

01 **Published on-site backup autonomy** for base stations, water plants or hospitals, or a binding hours standard.
TESTS FINDING 02 DIRECTLY

02 **An exercise that constrains fuel or power together with data**, with published findings.[26]
WOULD REPLACE INFERENCE WITH EVIDENCE

03 **Regulatory approval of a reactor restart**, and the 28 November 2026 referendum result.[32]
SHORTENS THE SLOWEST LEVER · FINDING 01

04 **Gas cover reported against the 14-day requirement** in 2027, on a stated consumption basis.
MOVES THE STOCK SIDE OF FIGURE 1

05 **A published account of service effects from the late-2025 multi-cable failure**, or a published repair-vessel arrangement.
TESTS FINDING 03 BEYOND THE ISLANDS

WHAT THIS ASSESSMENT CANNOT CONCLUDE

It cannot say how long services would last in a prolonged interruption: stocks, backup autonomy and control-system dependencies are not public, and no published exercise has tested them. It does not assess intent or attribute any cable damage to a state; two cases have ended in final criminal convictions, neither attributed to a government. Wargame outcomes are scenarios.

05 / EVIDENCE REGISTER

Every source cited, in citation order

33 SOURCES · 8 VIGIL RECORD · 6 OFFICIAL / PRIMARY · 1 RESEARCH / DATA · 18 REPORTING

1 VIGIL RECORD **Vigil Consilium** (reviewed 2026-10-29). Logistics record: Taiwan energy imports (2025 generation mix; reactor filings; "no restart possible before roughly 2028"). vigilconsilium.com/conflicts/taiwan-strait/logistics/taiwan-energy-imports/

2 REPORTING **Taipei Times** (2026-03-18). Gas stockpile requirement to rise from 11 to 14 days; Qatar force majeure on scheduled cargoes. taipeitimes.com/News/taiwan/archives/2026/03/18/2003854053

3 OFFICIAL / PRIMARY **US Energy Information Administration** (2026-04). Taiwan country analysis brief (imports, generation mix, LNG sources and terminals, gas cover). www.eia.gov/international/content/analysis/countries_short/Taiwan/Taiwan.pdf

4 REPORTING **Focus Taiwan (CNA)** (2026-09-03). Nuclear Safety Commission completes Maanshan technical review. focustaiwan.tw/politics/202609030007

5 REPORTING **CNA** (2026-10-24). Typhoon Champi: Taiwan Water generators keep supply to ~277,000 households. cna.com.tw/news/ahel/202610240109.aspx

6 REPORTING **Taipei Times** (2022-05-13). Telecom outage after backup power fails (UPS lasted two hours; generator switchover failed). taipeitimes.com/News/taiwan/archives/2022/05/13/2003778148

7 REPORTING **Taipei Times** (2025-01-22). Matsu cables fail; microwave backup at 12.6 Gbps against a 9.5 Gbps peak. www.taipeitimes.com/News/front/archives/2025/01/22/2003830652

8 REPORTING **AP via Claims Journal** (2023-03-09). Taiwan's Matsu islands cut off after cables severed; repair ship not before 20 April. www.claimsjournal.com/news/international/2023/03/09/315787.htm

9 OFFICIAL / PRIMARY **Ministry of Economic Affairs, via Taipei Representative Office UK** (2026-04). Statement on energy supply after the Middle East conflict (inventories above legal levels; no shortages). www.taiwanembassy.org/uk_en/post/11462.html

10 REPORTING **Bloomberg via Energy Connects** (2026-05-08). Taiwan estimates it has enough gas supply through September. www.energyconnects.com/news/gas-lng/2026/may/taiwan-estimates-it-has-enough-gas-supply-through-september/

11 VIGIL RECORD **Vigil Consilium** (data as of 2026-09). Taiwan Strait module: Civil Resilience (eight objects, eleven authored dependence edges; "an edge is a dependence, not a cascade"). vigilconsilium.com/conflicts/taiwan-strait/humanitarian/

12 REPORTING **Taipei Times** (2025-08-05). Typhoon Danas: base stations damaged; telecoms buy portable generators; 72-hour backup programme. www.taipeitimes.com/News/taiwan/archives/2025/08/05/2003841502

13 REPORTING **CNA** (2025-01-10). Taiwan's international cables (about 99% of bandwidth carried by undersea cable). www.cna.com.tw/news/aipl/202501100035.aspx

14 REPORTING **Taipei Times** (2017-08-17). Blackout of 15 August 2017: gas supply to six generators cut at a metering station. www.taipeitimes.com/News/front/archives/2017/08/17/2003676657

15 REPORTING **Taipei Times (editorial)** (2022-03-07). The 3 March 2022 blackout: 5.49 million households and businesses. www.taipeitimes.com/News/editorials/archives/2022/03/07/2003774310

16 REPORTING **Taipei Times** (2025-09-18). Operating reserve falls to 4% after unit outages. www.taipeitimes.com/News/taiwan/archives/2025/09/18/2003844022

17 OFFICIAL / PRIMARY **Ministry of Digital Affairs** (2026-04-07). Analysis of 2025 submarine cable incidents (15 international and 10 domestic cables; two final convictions). moda.gov.tw/en/press/press-releases/19392

18 OFFICIAL / PRIMARY **Ministry of Digital Affairs** (2026-04-29). Taiwan–Matsu No.3 cable fault: Dongyin switched to microwave. moda.gov.tw/en/press/press-releases/19582

19 OFFICIAL / PRIMARY **Ministry of Digital Affairs** (2026-06-23). Taiwan–Matsu No.4 cable and island microwave redundancy. moda.gov.tw/en/press/press-releases/19976

20 VIGIL RECORD **Vigil Consilium** (reviewed 2026-10-29). Logistics record: maritime trade and cables (Taiwan–Matsu No.4 in service 18 Sep 2026). vigilconsilium.com/conflicts/taiwan-strait/logistics/taiwan-maritime-trade-and-cables/

21 REPORTING **Taiwan News** (2026-07). Taiwan Water tests 562 emergency generators for pumping and treatment plants. www.taiwannews.com.tw/en/news/6395952

22 REPORTING **Focus Taiwan (CNA)** (2026-06-11). Water supply stable to end-September after record-dry winter (six of 16 major pipelines still under construction). focustaiwan.tw/society/202606110015

23 VIGIL RECORD **Vigil Consilium** (reviewed 2026-10-25). Watch: Can communications and civil systems function under disruption? Review ledger to 25 Oct 2026. vigilconsilium.com/watch/taiwan-strait/connectivity-resilience/

24 REPORTING **Focus Taiwan (CNA)** (2026-07-21). Explainer: the August mobile-data throttling drills, what is exempt and what will be disrupted. focustaiwan.tw/society/202607210012

25 VIGIL RECORD **Vigil Consilium** (reviewed 2026-10-29). Impact chain: import dependence and civilian systems ("water, sanitation, health services and communications all depend on electricity"). vigilconsilium.com/conflicts/taiwan-strait/impact-chains/taiwan-import-dependence-civil/

26 VIGIL RECORD **Vigil Consilium** (reviewed 2026-10-25). Watch: Can the energy system absorb a prolonged interruption? ("Not exercised"). vigilconsilium.com/watch/taiwan-strait/energy-resilience/
Its reactor-review observable predates the regulator's 2 September 2026 finding; flagged in the research log.

27 VIGIL RECORD **Vigil Consilium** (reviewed 2026-10-18). Logistics record: semiconductor supply (2021 drought: trucked water, priority allocation). vigilconsilium.com/conflicts/taiwan-strait/logistics/taiwan-semiconductor-supply/

28 REPORTING **Taipei Times** (2025-04-06). PLA Strait Thunder-2025A drills simulate strikes on ports and energy facilities. taipeitimes.com/News/taiwan/archives/2025/04/06/2003834705

29 REPORTING **Taipei Times** (2018-08-06). Kinmen begins receiving water from Fujian pipeline. www.taipeitimes.com/News/front/archives/2018/08/06/2003698048

30 VIGIL RECORD **Vigil Consilium** (2026-08-18). Event record: Xiamen measures, 18 Aug 2026 (examining electricity and gas links to Kinmen; Mainland Affairs Council response). vigilconsilium.com/conflicts/taiwan-strait/events/xiamen-measures-2026/

31 RESEARCH / DATA **CSIS (Cancian, Cancian, Heginbotham)** (2025-07-31). Lights Out? Wargaming a Chinese Blockade of Taiwan. www.csis.org/analysis/lights-out-wargaming-chinese-blockade-taiwan
Wargame outputs: cited as scenario, never as finding.

32 REPORTING **Focus Taiwan (CNA)** (2026-08-28). Nuclear referendum approved for the 28 November ballot. focustaiwan.tw/politics/202608280025

33 OFFICIAL / PRIMARY **Office of the President** (2026-09). Whole-of-Society Defense Resilience Committee: meetings to 19 September 2026. english.president.gov.tw/page/672

06 / METHOD AND LIMITATIONS

How the judgment was reached, and where it is weakest

The assessment began from Vigil's Taiwan Civil Resilience layer: its eight objects and authored dependence edges, the energy and connectivity Watch questions, logistics records, impact chains and scenario templates. Load-bearing figures were re-checked at the ministry, operator or reporting source wherever it could be opened; those carried from Vigil records are marked in the research log. Dependencies are drawn as documented only where a Taiwan source shows them, and as inferred otherwise.

FOUR KINDS OF STATEMENT, KEPT APART

Observed disruptions (blackouts, cable failures, the 2026 LNG shock) are events with dates and sources. **Documented vulnerabilities** are structural facts: import shares, concentration, cover. **Official measures** are labelled as requirement, target or delivered: announced is not delivered, and tested is not effective. **Scenarios**, including wargames, are never presented as outcomes.

PUBLICATION DISCIPLINE

The assessment names no landing station or terminal site, and describes past incidents only as publicly reported. It describes concentration at the level of systems and localities, as Vigil's Taiwan module does.

WHERE THIS DEPARTS FROM VIGIL'S OWN RECORDS

Several canonical records predate events found in this research. They do not yet record the regulator's completed Maanshan technical review (2 September 2026) or the 28 November referendum. They record the 2026 LNG shock as a price and budget story, not as a tested supply disruption. They record transfer-pipeline progress as ten of 16 incomplete where the Cabinet said six, and say the 2022 blackout halted semiconductor plants where contemporary reporting says the sector was largely spared. They state that no backup capacity figure has been published, although Matsu's microwave capacity was. And they describe cable attribution as "established in none", although two final convictions exist. The corrections are listed in the research log for Vigil's review cycle.

TABLE 3 Source quality of the claims the judgment leans on most

CLAIM	BASIS	GRADE	QUALIFICATION
Gas holdings of about 10–11 days	Bloomberg via Taipei Times (Mar 2026); EIA (Apr 2026)	MODERATE	Stated, not audited; values differ; consumption basis unpublished.
Gas ~48% of 2025 generation	Vigil record from ministry data	MODERATE	2024 share was 43% (EIA); the 2025 primary table was not re-opened.
Matsu microwave 12.6 Gbps vs 9.5 Gbps peak	Taipei Times, citing officials (Jan 2025)	HIGH	Islands only; not a main-island measure.
Telecom UPS lasted two hours; switchover failed	Taipei Times (May 2022)	HIGH	One operator, one event.
Backup generators run on shared diesel supply	Inferred from documented generator use	MODERATE	Logistics and on-site fuel unpublished. A Vigil assessment.
No exercise has constrained fuel or power	Vigil Watch, to 25 Oct 2026	MODERATE	Classified exercise content may differ; none is published.

DATES AND REVIEW BASIS

Published 29 October 2026. **Assessed as of** 25 October 2026, the date of Vigil's last Taiwan review, with official sources to 24 October. **Research reviewed** 29 October 2026. The Whole-of-Society Defense Resilience Committee had met nine times to 19 September 2026;[33] its exercise findings are not public.

CONVENTIONS

Evidence status:
ESTABLISHED ATTRIBUTED VIGIL ASSESSMENT UNRESOLVED CONDITIONAL

Confidence: High: independent credible sources agree. Moderate: credible sourcing with known gaps. Low: contested or single-sourced.

Independent research specimen. Prepared by Vigil Consilium to demonstrate its assessment format. Not commissioned by an external client. No classified, proprietary or client information was used.