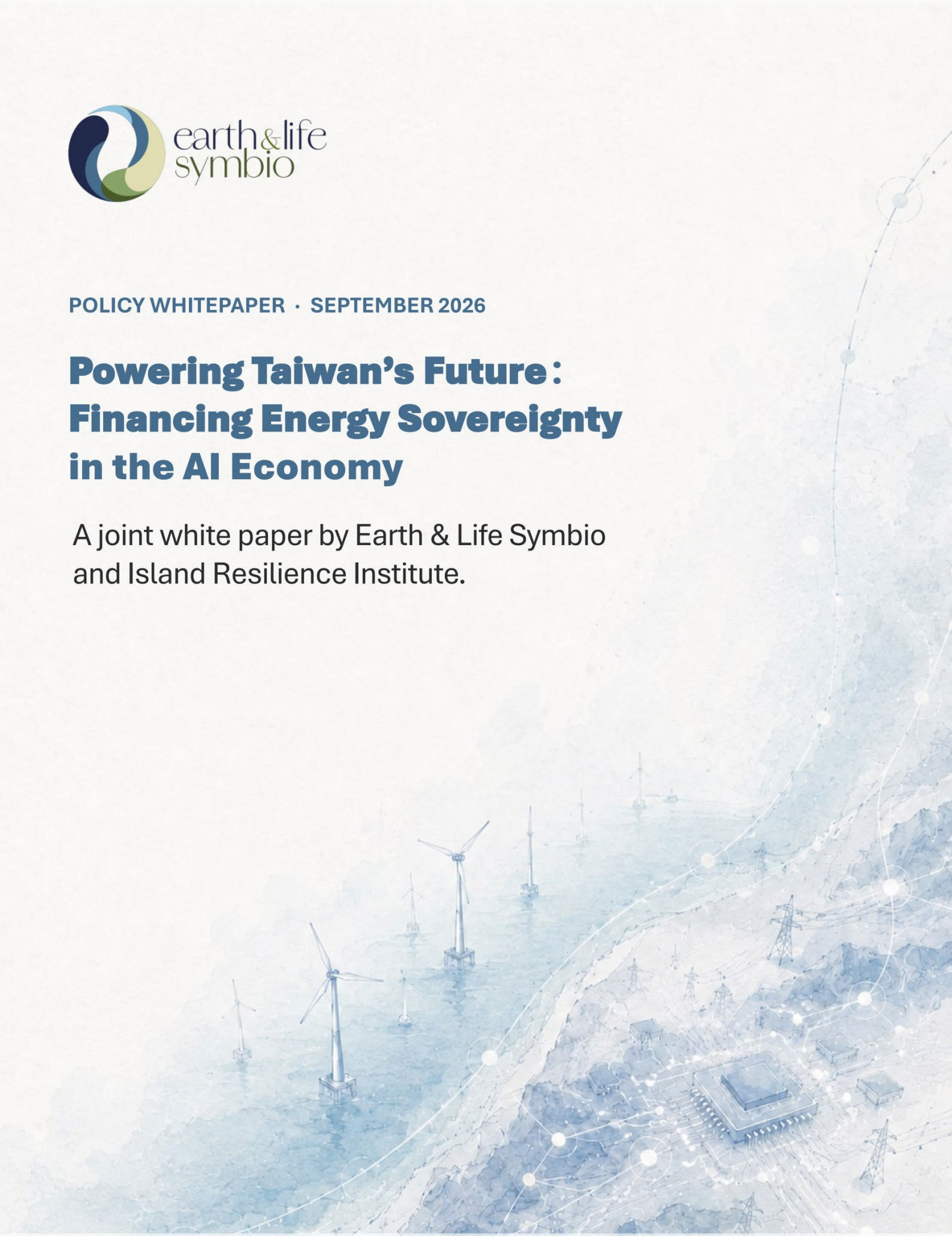
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Powering Taiwan's Future: Financing Energy Sovereignty in the AI Economy

A joint white paper by Earth & Life Symbio and Island Resilience Institute.



ORGANISATIONS FEATURED

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Executive Summary

Taiwan's economy is being reshaped by the AI and semiconductor boom: the government's official 2026 GDP growth forecast stands at 11.05%, the fastest pace in 39 years, with first-half 2026 growth already reaching 14% on AI-driven chip exports and record semiconductor capex. TSMC alone is projected to account for up to 24% of national electricity demand by 2030. However, Taiwan's position at the centre of the global semiconductor and emerging AI economy rests on an increasingly fragile energy foundation. Fabrication plants and data centres are power-intensive, sensitive to volatility, and constrained by corporate commitments to decarbonisation; yet Taiwan's grid remains dominated by imported fossil fuels, with coal and gas supplying over four-fifths of electricity and roughly 95% of primary energy coming from abroad. This dependence exposes the AI economy to fuel price shocks and geopolitical disruptions that Taiwan cannot control, while RE100-style targets from anchor firms such as TSMC and their international customers create a growing gap between the renewable electricity they require and what the grid can credibly deliver.

Offshore wind is the only domestic resource capable of closing this gap at scale on a 2030-relevant timeline. The Taiwan Strait offers world-class wind conditions and seasonal output that complements solar, providing the seasonal profile that complements solar and supports annual renewable matching. As of September 2026, Taiwan has achieved 4.9 GW of installed capacity, ranking fifth globally. At the same time, the semiconductor sector is already acting: TSMC has signed long-term corporate PPAs for the full output of Ørsted's 920 MW Greater Changhua 2b & 4 project and Northland Power's 1,022 MW Hai Long project, becoming the sole offtaker of Hai Long's 30-year output once it reaches full operation in 2027. In other words, the AI economy is actively trying to purchase energy sovereignty in the form of domestic offshore wind.

Technology and demand are there. Bankability decides what gets built: clear policy signals and competitive financing must meet investors' hurdle rates and give them confidence to commit capital for the long term. Roughly 5 GW of capacity and a handful of flagship PPAs will not suffice for a grid that must support both existing fabs and the next generation of AI computer infrastructure. In fact, approximately 39% of the planned offshore wind capacity from recent rounds is already delayed or stalled. This stagnation stems not from a lack of wind, but from a lack of bankable financial structures.

Powering Taiwan's future AI economy thus depends on a relatively narrow set of financial and policy decisions. The direction is clear: make it structurally attractive for banks and investors to back offshore wind and related grid infrastructure; give international lenders a taxonomy they can actually underwrite against; and transform a symbolic sovereign sustainable bond into a regular programme aimed squarely at

energy transition assets. Standing government–investor dialogue and a domestic co-investment vehicle should support these instruments, taking the green finance and offshore wind architecture Taiwan has already built and extending it just far enough that capital, projects, and corporate buyers can meet at the speed the AI economy now demands.

Table 1. Taiwan's energy and AI outlook – key figures to 2030

~0 (2023) → ~22.2 TWh (2030) Contractable renewable shortfall, RE100 members (the headline gap) – BNEF via CIER, 2026	**~10.2% (2025) →~24% (2030)** TSMC share of national electricity – TSMC ESG; S&P Global via CommonWealth; TSMC. 2025 Sustainability Report
~21.8 TWh **AI-industry electricity demand** MOEA, National Electricity Supply & Demand Report, 2025	**~43.3 GW / +6.4 GW** **Night peak 2030 / uplift 2025–2030** MOEA, National Electricity Supply & Demand Report, 2026
~2.5% / yr **Demand growth 2026–2035 (official, up-revised)** MOEA, National Electricity Supply & Demand Report, 2026	**~328.7 TWh** **Total electricity 2030 (consumption basis)** MOEA, National Electricity Supply & Demand Report, 2026
~5 GW now; ~1.5 GW/yr; up to ~10.9 GW by 2030 **Offshore wind commissioned / pipeline** 14 July 2026; MOEA	**~95.4%** **Primary-energy import dependence** MOEA, 2025

CHAPTER 1

AI demand and the contractable-renewable gap

By 2030, the renewable electricity that Taiwan's RE100 export chain can actually contract for will fall approximately 22.2 TWh short of what its members need (BNEF via CIER, 2026). That number — not the headline generation total — is the binding constraint this paper addresses. Taiwan can meet aggregate electricity demand with gas. What it cannot yet guarantee is enough certified, contractable renewable supply for its semiconductor and AI supply chain to remain internationally compliant.

> ***By 2030, the renewable electricity that Taiwan's RE100 export chain can actually contract for will fall approximately 22.2 TWh short of what its members need.***

Taiwan's economy relies heavily on exports. For its manufacturers, customers' clean power requirement has become a non-negotiable business imperative. Apple requires its direct suppliers to use 100% renewable electricity for Apple production before 2030. Under TSMC's supplier agreement, the 2030 targets are 85% renewable electricity for production in Taiwan and 100% for production abroad. Microsoft's "100/100/0" goal goes further, aiming to match its own electricity use with carbon-free power every hour, although that goal has reportedly been under review.

As of September 2026, Taiwan has 39 homegrown RE100 members committed to reaching 100% renewable electricity. The practical test is whether suppliers can secure enough qualifying renewable power, on contract terms that meet buyers' requirements. If they cannot, Taiwan risks losing manufacturing investment to markets where renewable power is more affordable and easier to obtain.

Table 2. Corporate renewable and carbon-free electricity commitments

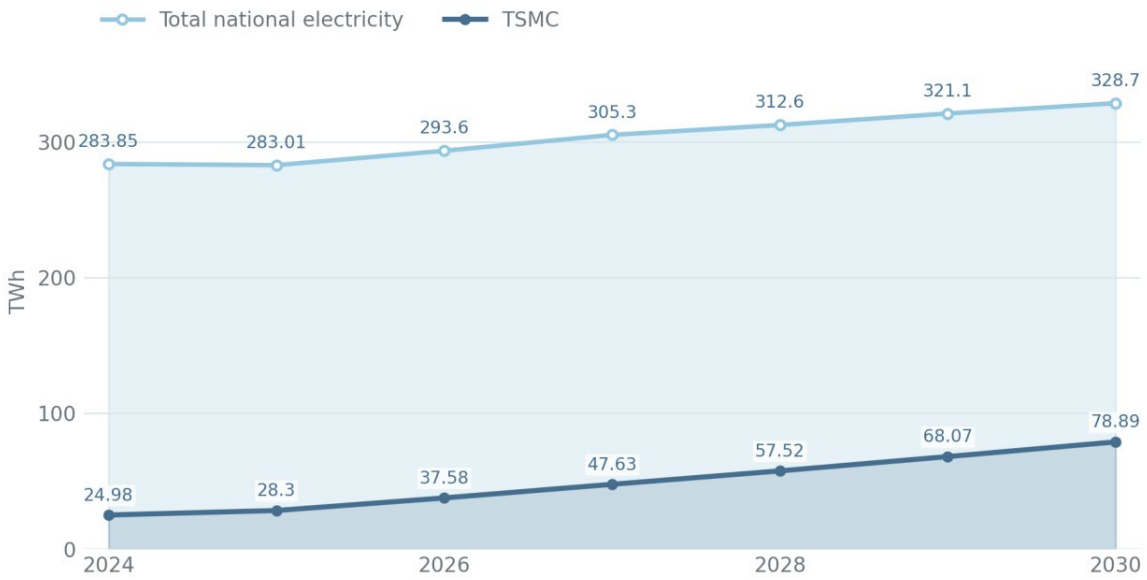
Company	Required Renewable / Carbon-Free Level	Who It Applies To	Deadline
Apple	100% renewable electricity for Apple-related production	Manufacturing suppliers producing for Apple	2030
NVIDIA	100% renewable electricity for energy used in offices and data centres under NVIDIA's control	NVIDIA's own operations (not full supply chain)	Achieved FY25
Microsoft	100% of company electricity matched with zero-carbon energy 100% of the time (24/7, "100/100/0") for operations (under review)	Microsoft's own operations (datacentres, offices)	2030 target

Company	Required Renewable / Carbon-Free Level	Who It Applies To	Deadline
TSMC	RE85 for production in Taiwan; RE100 for production outside Taiwan	TSMC production sites and their suppliers' production for TSMC	2030
ASUS	RE40–RE65 renewable-electricity use for key suppliers	"Key suppliers" in ASUS supply chain	2025

The scale of demand concentrated in the semiconductor sector makes this gap tractable but urgent. Industry already accounts for more than 55% of national electricity consumption (Global Taiwan Institute, 2026; U.S. EIA Taiwan brief, Apr 2026), and the share is rising as the semiconductor and AI build-out advances. In its latest planning (MOEA 2026), the Energy Administration projects the system night peak rising from about 36.88 GW in 2025 to about 43.3 GW in 2030, an increase of roughly 6.4 GW. It also revises the 2026–2035 demand-growth rate up to about 2.5% a year, against a 2016–2025 average near 1.24% (MOEA, National Electricity Supply & Demand Report, 2026). Most advanced economies forecast flat or declining electricity demand under efficiency gains, which makes Taiwan's outlook, and its upward official revision, exceptional (IEA, 2024).

TSMC is the dominant single driver of this trend. It consumed approximately 24.8 TWh in 2023 — around 9% of national electricity — and is projected to account for roughly 24% of national load by 2030 as 2-nanometre and angstrom-class fabs in Hsinchu, Kaohsiung, and Taichung ramp up (TSMC 2023 Sustainability Report; CommonWealth Magazine, 2024). Beyond fabs, AI infrastructure adds a second layer of demand across hyperscale data centres and the AI-server assembly operations of Foxconn, Quanta, Wiwynn, and Inventec. Globally, the IEA estimates data-centre electricity consumption at about 415 TWh in 2024 (1.5% of world demand), rising to about 945 TWh by 2030 (3.0%), a near-2.9-fold increase (IEA, via CIER, 2026).

Figure 1. TSMC's electricity consumption could reach around 25% of Taiwan's total power usage by 2030



Note: National electricity in TWh; intermediate years are interpolated and indicative. Source: TSMC 2023 Sustainability Report; MOEA electricity statistics; authors' calculations.

The contractable-renewable gap is already visible in current operations. There are now 39 Taiwan-headquartered RE100 members and over 100 RE100 companies with operational sites in Taiwan, together consuming more than 10% of national electricity (RE100 Taiwan, 2026; CIER, 2026). Yet renewables account for only approximately 15% of Taiwan's power mix as of early 2026, below the government's planned 20% monthly share from November 2026 and its 30% target for 2030 (Energy Administration, MOEA, 2025). Most RE100 members operating in Taiwan are sourcing well below their stated commitments, with contracted renewable demand still having far to climb. Taiwan's entire national renewable target for 2030 is approximately 99 TWh — and TSMC's projected electricity consumption alone by 2030 is on track to approach that figure before a single data centre or other RE100 signatory is counted (S&P Global, 2024; MOEA, 2026). The gap is therefore not a statistical artefact; it is the difference between corporate renewable-electricity commitments and buyer procurement requirements and what the market can actually supply on contracted terms, growing from near zero in 2023 to approximately 22.2 TWh by 2030 (BNEF via CIER, 2026).

Figure 2. Taiwan-headquartered RE100 members by sector



Source: RE100 Taiwan Initiative; company sustainability disclosures; compiled by authors.

It is important to be precise about what this gap measures, and what it does not. MOEA's demand outlook has been revised upward, not downward, and gas-fired capacity can cover total kilowatt-hours. The problem is that gas does nothing to satisfy the specific requirement these corporations carry: certified, contractable renewable electricity available through PPAs or tradeable certificates. Measured against total generation, Taiwan's trajectory looks adequate; measured against renewable supply that firms can actually sign for on long-dated terms, it is structurally short. Locking in that supply via long-term corporate PPAs is therefore a cost-stability strategy as much as a compliance tool: industrial tariffs have been held at NT$4.27 per kWh since early 2025, but BNEF projects a rise toward NT$5.45–6.88 per kWh by 2030, and in its Taiwan corporate-PPA survey every respondent cited securing long-term renewable supply as their primary motivation.

> ***Closing the RE100 contractable-renewable gap and reducing exposure to price shocks akin to the Strait of Hormuz episode are, in practical financing terms, the same investment.***

CHAPTER 2

Energy Sovereignty: Vulnerability and Opportunity

Taiwan's electricity runs overwhelmingly on imported fossil fuels. In 2025, coal and gas together generated approximately 83% of Taiwan's electricity – gas at 47.7% and coal at 35.3% – and roughly 95.4% of all primary energy consumed in Taiwan was imported from abroad (Energy Administration, 2026; EIA, 2026; Enerdata, 2026). Even under the government's 2030 plan – which targets 30% renewables, 50% gas, and 20% coal – the grid will remain majority-fossil and almost entirely dependent on imports for the rest of this decade. There is no realistic domestic alternative at scale before 2030.

The gas supply chain runs through a fragile set of routes. In 2024, roughly three-quarters of Taiwan's LNG was sourced from just three countries: Australia (38%), Qatar (25%), and the United States (approximately 10–12%) (CPC Corporation, 2025; LNG Prime, 2025). Qatari and other Gulf cargoes must pass through the Strait of Hormuz, a narrow waterway between Iran and Oman through which approximately 20% of the world's LNG trade flows before reaching Taiwan. Gas-fired plants supply roughly 47.7% of Taiwan's electricity. A disruption at the Strait of Hormuz therefore directly threatens the fuel source behind nearly half of Taiwan's power generation.

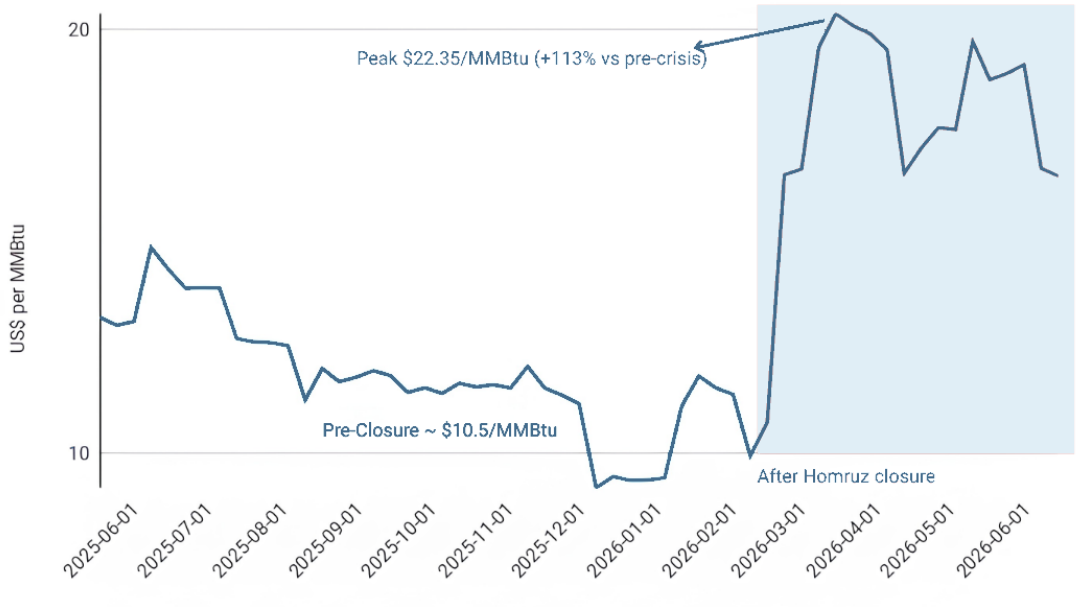
This is not a hypothetical risk. It is happening now. On 28 February 2026, the Strait of Hormuz was effectively closed to LNG tanker traffic following Iranian military action, removing Gulf volumes, including cargoes from Qatar's Ras Laffan terminal, one of Taiwan's largest supply sources, from the market (EIA, 2026; CNBC, 2026). The price impact was immediate and severe. The Japan-Korea Marker (JKM), the benchmark price for LNG delivered to East Asia, including Taiwan, rose from a pre-closure level near US$9.5–10.5/MMBtu to a peak of approximately US$19.6/MMBtu by mid-May 2026, before easing to around US$16/MMBtu in late June as diplomatic progress reduced the acute tightness (CME Group/Platts JKM, via Trading Economics, July 2026). That represents a near-doubling of the input cost for gas-fired power generation at its peak. Brent crude moved in parallel, rising from approximately US$60 in early 2026 to above US$100 by May before easing (LNG Market War Room, June 2026). For Taiwan, which suppresses regulated electricity prices rather than passing fuel cost increases through to consumers, this kind of price shock converts directly into pressure on the government budget.

Taiwan's state-owned refiner, CPC Corporation, has absorbed this shock rather than passing it to consumers. From the Hormuz closure on 28 February through 6 September 2026, CPC's fuel price-stabilisation mechanism absorbed approximately NT$18.7 billion (US$0.6 billion) on gasoline and diesel alone – a figure still climbing as renewed US-Iran tensions in early September pushed the weekly absorption rate to a new high (CPC Corporation, 5 September 2026). Natural gas tariffs for power

generators, CPC's largest LNG buyer segment, were raised three times during the crisis (41.6% in April, 9.9% in August, 5.83% in September) but still trail the government's own cost-recovery formula, with the shortfall absorbed by CPC. Across all fuel products since Taiwan's price-freeze policy began in 2020, CPC's cumulative unrecovered cost reached approximately NT$612.9 billion (US$19.4 billion) by end-March 2026, pushing its accumulated deficit above NT$79 billion and prompting a four-year NT$350 billion recapitalisation plan alongside a NT$300 billion emergency credit facility (Ministry of Economic Affairs Taiwan, April 2026). The price shock has not disappeared – it has simply moved from household energy bills onto the state oil company's balance sheet, and from there onto the national budget.

This fiscal exposure will only deepen as long as gas remains structurally central to Taiwan's power mix – and, as the next section shows, none of Taiwan's other generation options can meaningfully reduce that dependence before 2030.

Figure 3. Asia LNG benchmark prices spiked after the Strait of Hormuz closure (2025–2026)



Note: Taiwan sources around 33% of LNG via the Strait of Hormuz. Source: Market data cited in the report; authors' chart.

Unfortunately for Taiwan, the incumbent generation mix cannot close this gap. Each existing pillar has reached a structural limit that prevents it from delivering the contractable, low-carbon electricity the supply chain requires.

The cost comparison between offshore wind and LNG-fired generation should account for long-term contracted prices, imported-fuel price volatility and full lifecycle emissions. LNG-fired generation emits on the order of 0.5 tonnes of CO2-equivalent per MWh across the supply chain – from liquefaction and shipping to combustion – with the precise intensity depending on fuel sourcing, methane leakage and plant efficiency. This is several times the lifecycle intensity of offshore wind, meaning every TWh met by gas rather than wind adds both price volatility and

emissions exposure (U.S. Department of Energy, 2022; NREL, Life Cycle Emissions Factors for Electricity Generation Technologies).

Nuclear cannot return to service before approximately 2028. Even at full restart, the restartable fleet totals under 4 GW; roughly 9% of projected 2030 night peak, and nuclear generation does not qualify under RE100 commitments that bind the semiconductor supply chain (NucNet, 2025; FDD, 2026).

Coal is being phased down under the 2050 Net-Zero Pathway, with air-quality litigation effectively capping output at 2023 levels (NDC, 2022). It cannot grow to fill the gap.

Solar faces near-term land-use and grid-interconnection constraints, with capacity concentrated in the south while load growth is concentrated in the north. The government's original target was 20 GW by end-2025 (Executive Yuan, Solar Photovoltaic Promotion Policy). Official Energy Administration statistics show 16.103 GW installed as of July 2026, still below that target (Energy Administration, MOEA, 2026). Land access and grid connections remain constraints on delivery; secondary reporting discusses the resulting delays (Eco-Business, 2025). Changes in siting policy — including floating solar, agrivoltaics and brownfield redevelopment — and grid reinforcement would be needed to accelerate deployment.

Gas, as the preceding section shows, addresses total kilowatt-hours but does nothing to meet the specific requirement corporations carry: certified, contractable, renewable electricity.

No combination of these options closes the 22.2 TWh contractable renewable gap. Yet, offshore wind is so far the only resource that can. Taiwan already has approximately 5 GW commissioned, making it one of the top five offshore wind markets globally by installed capacity, with a Phase 3 pipeline cadenced at roughly 1.5 GW per year through to 2035 (Asia Wind Energy Association, June 2026; MOEA, 2026). The Taiwan Strait is one of the world's most productive offshore wind corridors: average wind speeds of 10–12 metres per second produce capacity factors of 40–50%, compared to a global average of approximately 35% (4C Offshore; WindEurope, 2024). Crucially, the Taiwan Strait wind resource runs counter-cyclically to solar — peak generation occurs during the northeast monsoon season from October to March, precisely when solar output is at its lowest. This seasonal complementarity means offshore wind does not merely add gigawatts; it adds the right kind of gigawatts for Taiwan's system — bulk generation whose October–March output peaks precisely when solar is weakest. Output varies with wind conditions and cannot be dispatched on demand; but combined with storage, flexible demand, and grid reinforcement, its predictable seasonal profile matches the annual matching structure of RE100 contracts.

Taiwan's track record has already validated the asset class, and its anchor buyer is TSMC. The clearest demonstration that Taiwanese offshore wind can attract long-term corporate commitment at scale is TSMC's own procurement record. In 2020, TSMC signed what was at the time the world's largest renewable energy corporate PPA: a 20-year fixed-price agreement with Ørsted to offtake 100% of the output from the 920 MW Greater Changhua 2b & 4 offshore wind farm (Ørsted / Infolink, 2020; Reuters, 2024). Then in April 2026, TSMC deepened its position further, signing a new 30-year CPPA with Northland Power for the entire 1,022 MW Hai Long offshore wind project, comprising Hai Long 2A (294 MW), 2B (224 MW), and 3 (504 MW), located approximately 45–70 km off the Changhua coast (Northland Power, April 2026; Enerdata, 2026). Building on a 2022 partnership that already covered Hai Long 2B and 3, the April 2026 agreement adds Hai Long 2A and makes TSMC the sole offtaker of the entire project when it reaches full commercial operations in 2027 (Ars Technica, 2026). Taken together, TSMC has now contracted for nearly 2 GW of Taiwanese offshore wind capacity across two projects and two developers – the most concrete demand signal in the market, and a direct financing anchor for developers, lenders, and export credit agencies assessing project bankability.

> ***The bottleneck is the market infrastructure.***

These deals also demonstrate what a functioning CPPA market can achieve. Both agreements involve a fixed, long-dated price: 20 years for Greater Changhua, 30 years for Hai Long – that is above the original feed-in tariff, improves project economics, and provides lenders with the revenue certainty required for project finance. The Hai Long agreement in particular is notable: signed during the Hormuz crisis, when Taiwan's energy security vulnerability was at its most acute, it signals that Taiwan's leading electricity consumer is actively converting its energy security exposure into long-term renewable contracts rather than waiting for policy to act.

The bottleneck is not the wind; it is the market infrastructure. Whether the offshore wind pipeline delivers at the required pace depends far less on the resource or the technology than on whether the regulatory and financing conditions exist to make projects bankable, and to channel capital not just to flagship transactions but across the full supply chain. Approximately 39% of offshore-wind projects from recent auction rounds are currently stalled, not because the engineering is difficult, but because the market rules, financing instruments, and contract frameworks that allow private capital to reach these projects are not yet fully in place (Asia Wind Energy Association, June 2026). The TSMC–Hai Long and TSMC–Greater Changhua deals show what is possible when demand, financing, and contract certainty align. The policy task is to build the conditions that make this outcome replicable across dozens of projects, not just two. The obstacle is not engineering; it is market infrastructure.

Other markets facing the same challenge have resolved it through a short list of proven regulatory and financing mechanisms.

Table 3. Energy-security exposure at a glance

~33% **Taiwan LNG exposure via the Strait of Hormuz** Sources cited in this report	**~82%** **Electricity generated from coal and gas in 2024** Energy Administration, 2025
~96% **Primary-energy import dependence** IFRI, 2024	**~US$9.5–10.5 →~US$19.6/MMBtu** **JKM LNG price: pre-closure level to 2026 peak** CME/Platts JKM via Trading Economics, 2026

CHAPTER 3

What Other Markets Have Done – and What Taiwan Can Apply

Taiwan has the wind resource, the corporate demand, and the project pipeline. What is still missing are the specific financial rules, instruments, and market structures that allow private capital to flow into clean energy at the required scale and speed. The good news is that comparable economies have already solved these problems – without new technology or unlimited public funding. The international practitioners who joined the June 9 forum brought four lessons that speak directly to Taiwan's situation.

Four proven mechanisms, drawn from markets that have successfully mobilised private capital for clean energy transition, each address a specific gap in Taiwan's current system. The first shows how central bank rules can redirect bank lending without public spending. The second shows how sovereign credibility reduces the cost of long-term capital. The third shows why sequencing market design ahead of deployment determines whether investment holds. The fourth introduces a financing instrument directly suited to Taiwan's island economy and offshore wind portfolio.

3.1 Central Bank Rules Can Redirect Bank Capital Without Public Spending

Governments do not need to spend public money to redirect bank lending toward clean energy. They need to change the rules. The fastest lever for redirecting bank lending toward clean energy is regulatory design, not subsidy. In December 2023, the Bangko Sentral ng Pilipinas introduced Circular 1185, reducing the reserve requirement from 3% to 0% for banks issuing qualifying green or sustainability bonds, and raising the single-borrower lending limit by 15% for eligible renewable energy loans (BSP, 2023). Neither measure required fiscal outlay. Crucially, access to both incentives was conditional on banks first publishing a qualifying sustainable-finance framework – turning the incentive into a capacity-building requirement, not a windfall. The Philippine experience suggests that such measures work best when introduced gradually and alongside broader market-building efforts, including taxonomy, disclosure and supervisory dialogue. For Taiwan, the lesson is not to copy the mechanism wholesale, but to consider how prudential tools can support transition objectives without compromising their core financial-stability purpose. Philippine sustainable-finance volumes grew more than fourfold in two years, from US$2.6 billion in 2023 to US$10.9 billion in 2025, and the BSP extended the pilot in January 2026 because uptake was still accelerating (BSP Circular 1227, 2026).

The lesson for Taiwan is direct. ING Bank's work on green finance transactions in Asia illustrates two relevant applications: a US$300 million green bond for Evergreen Marine — the region's first unrated green shipping bond, which attracted international investors on the strength of a credible, independently reviewed framework — and NT$3.9 billion in green financing for two battery storage projects in Yunlin County, demonstrating that storage is a bankable, securitisable asset class (ING, June 2026 forum). The infrastructure of green lending already exists in Taiwan. Philippine model provides not just a blueprint but the regulatory nudge that Taiwan is missing.

3.2 Sovereign Credibility Is a Financing Instrument

When investors trust that a government will follow through on its clean energy commitments, they lend at lower interest rates and for longer terms, a financial advantage that compounds across decades of infrastructure investment. Denmark's experience is the clearest benchmark. Denmark enacted a legally binding Climate Act committing to a 70% emissions reduction by 2030 (Danish Climate Act, 2020). Backed by a regular programme of sovereign green bonds raising approximately €6 billion since 2022, its most recent issuance — the first globally under the EU Green Bond Standard — was nearly twice oversubscribed (Danish Ministry of Finance, 2026). Today, 92% of Denmark's electricity is low-carbon, with approximately 56–60% from wind, and the country is on track to reach 13–14 GW of offshore wind by 2030 (Danish Energy Agency, 2026).

The pricing advantage Denmark commands does not come from the bond label. It comes from the combination of a legally binding target, a verified track record of meeting commitments, and a predictable, regular issuance programme that long-duration institutional investors — pension funds, insurance companies, sovereign wealth funds — can plan around. As of early 2026, 62 governments have issued sustainable bonds totalling approximately US$883 billion, with Asia-Pacific leading in the number of active sovereign issuers (EuroSIF, June 2026 forum; ICMA, 2026). Taiwan's sovereign sustainable-bond programme, initiated in 2025, is positioned to follow this model — but the credibility that lowers borrowing costs rests on more than legal form: investors price the credibility of implementation, the durability of political and public support across election cycles, and a multi-year issuance commitment they can plan around. A national renewable target with a well-sequenced implementation pathway, sustained cross-party and public backing, and a predictable issuance calendar would deliver the same signalling value whether or not the target itself is legally binding.

3.3 Getting the Sequence Wrong Is Expensive

Build-out without market design stalls investment or strands it entirely. Vietnam's feed-in tariff triggered a solar boom that added 12 GW in a single year, but the grid

could not move power from the south to the load centres in the north (IEEFA, 2024). Assets were stranded, investors lost money, and the programme required a costly redesign. South Korea took the deliberate alternative: by planning grid expansion alongside solar deployment, it installed 7 GW over five years without comparable disruption (IEEFA, 2024; Asia Wind Energy Association, June 2026 forum). The difference was not the speed of deployment — it was that market rules, grid access, and contract frameworks were built before deployment, not after.

Taiwan is displaying early warning signs of the Vietnam pattern. Approximately 39% of offshore-wind projects from Rounds 3.1 and 3.2 are currently stalled, and the active developer pool is smaller today than it was in 2018 (Asia Wind Energy Association, June 2026 forum). The wind resource and the technology are not the constraints. The real constraints are regulatory certainty, grid-connection timelines, and the confidence of lenders that contract rules will hold for 30 years. The Round 3.3 revised framework — revised evaluation criteria, floor price protection, early-completion incentive — is a step in the right direction. The open question is whether the supporting market instruments that sit beneath the auction design are also in place before the next round attempts financial close.

3.4 New Instruments Reach Capital That Green Bonds Do Not

Green bonds are well established but do not reach every investor or every asset. Blue bonds — instruments whose proceeds go specifically to ocean and water-related projects — are directly relevant to Taiwan as an island economy with offshore wind farms, major commercial ports undergoing decarbonisation, and legally defined marine spatial planning obligations. SDG 14 (Life Below Water) currently attracts less than 1% of global labelled-bond issuance despite the ocean being the planet's largest carbon sink. In 2023, Ørsted issued the first blue bond from an offshore wind developer: a €100 million, five-year private placement aligned with ICMA principles, the IFC Blue Finance Guidelines (v2.0), and the EU Taxonomy, funding seagrass restoration, marine reef rebuilding, and low-noise turbine installation technology (Ørsted, 2023). It attracted ocean-focused impact funds and biodiversity-aligned institutional capital that standard green bonds do not systematically reach. Port operators, shipping companies, and development banks across Korea, Japan, and the UAE have since followed (Blue Bond Accelerator, June 2026 forum).

Taiwan has the anchors in place: the 2025 National Ocean White Paper, the RE100 commitments of the top five chipmakers, and a growing offshore wind and port infrastructure pipeline. The 12–18-month preparation window — taxonomy alignment, eligible-category definition, independent second-party opinion — must open now for issuance to be achievable within a two-to-three-year horizon.

CHAPTER 4

Why Global Infrastructure Investors Are Cautious on Taiwan

Taiwan is Asia's most advanced offshore wind market outside China, with roughly 4.6 GW installed as of early 2026 and a government roadmap targeting 18.3–19.9 GW by 2035. Yet the roster of institutional capital willing to commit fresh equity has narrowed rather than widened over the past two auction rounds. This chapter synthesises structured interviews with institutional investors and industry participants, including a major Canadian fund with over CAD 2 trillion in assets under management; a major Dutch pension fund with a long-standing presence in Asia; Copenhagen Infrastructure Partners (CIP); Ørsted; Macquarie; BlackRock; GIC; and JERA Taiwan, to identify three common denominators driving investor hesitation.

The findings point to a single underlying dynamic expressed in three distinct forms: Taiwan's offshore wind sector, having transitioned from a subsidised feed-in-tariff regime to a competitively-bid, corporate-PPA-driven model, now offers projected returns that sit below the threshold most global infrastructure investors require to deploy capital into an emerging, execution-intensive market. Compounding this return gap are regulatory and permitting unpredictability, and a market structure that limits diversification, liquidity, and exit optionality relative to comparable Western markets.

The Three Common Denominators

- **Barrier 1 — Return Threshold Mismatch:** Achievable project IRRs sit below both self-funded and leveraged investors' hurdle rates.
- **Barrier 2 — Regulatory and Revenue Uncertainty:** A rapid shift from fixed feed-in tariffs to zero-subsidy competitive bidding and corporate PPAs has removed the predictable cash-flow floor investors underwrote against.
- **Barrier 3 — Market Structure and Exit Constraints:** Small deal universe, thin secondary market, local-content and financing localisation requirements, and currency/interest-rate exposure limit portfolio fit for global allocators.

Each barrier is addressed in turn below, grounded in on-the-record and on-background investor interviews, with potential solutions mapped to the government bodies best positioned to act on them: the Financial Supervisory Commission (FSC), Ministry of Finance (MOF), National Development Council (NDC), and Ocean Affairs Council (OAC).

4.1 Context: A Market That Outgrew Its Own Financing Model

Taiwan built the world's most aggressive offshore wind feed-in-tariff regime in 2018 specifically to compensate international developers for first-mover risk in a new market. That strategy worked: it produced Formosa 1 and 2, the CDPQ/Ørsted-backed Greater Changhua projects, Skyborn's Yunlin farm, and a cluster of Japanese utility co-investments. But the government has since pivoted deliberately toward market-based procurement. Round 3.1 and 3.2 auctions saw developers bid PPA prices down to NTD 0 or NTD 0.1/kWh — effectively a zero-subsidy outcome — and the sector is now shifting toward corporate power purchase agreements (CPPAs) as the primary revenue mechanism, most visibly through TSMC's offtake commitments.

That transition was designed to reduce public subsidy exposure and reflect the sector's maturity. From an investor's chair, however, it removed the very feature that made Taiwan investable in the first place: a long-dated, government-backed, inflation-referenced cash flow floor. What replaced it — merchant and corporate-PPA exposure in a market still building out grid capacity, still finalising Round 3.3 allocation mechanics (draft released January 2026, 3.6 GW, grid connection 2030–2031), and still working through a decade of local-content policy — reads to global capital as early-stage risk without early-stage compensation.

4.2 Barrier One: The Return Threshold Mismatch

The clearest and most consistent barrier raised across interviews is a straightforward return-threshold problem: Taiwan's achievable project economics do not clear the hurdle rates that global infrastructure investors apply to a market with Taiwan's risk profile.

What Investors Told Us

> ***Major North American fund***
>
> *The major North American fund's standing hurdle rate for new-market infrastructure equity sits in the double digits. Even in scenarios where the firm has signaled flexibility — compressing toward a high single-digit threshold for de-risked, operating-stage assets — Taiwan's current achievable IRR does not clear that lowered bar. The gap is a pricing problem, not a sentiment problem: the fund's Vietnam partnership with Hon Hai, structured around a long-term PPA and its Catalytic Transition Fund, shows that it will deploy emerging-market capital in Asia when the return and offtake structure work — Taiwan, to date, has not presented that structure.*
>
> *— Interview with a major North American fund, integrated with public deal history*

> ***Major European pension fund***
>
> *A major European pension fund with a long-standing presence in Asia evaluated a specific Taiwan offshore wind opportunity and walked away when underwriting returned an IRR below 8%. The deal was declined at the investment-committee level by the fund's CIO before reaching final approval. The fund subsequently adopted an internal no-Taiwan-infrastructure policy — not a case-by-case caution, but a standing allocation restriction. That is a materially harder barrier to reverse than a single declined transaction: it signals the market has been assessed once, priced, and closed at the policy level pending a structural change in achievable returns.*
>
> *– Interview with a major European pension fund*

Benchmarking Against Taiwan's Actual Return Environment

Independent research on Taiwan's post-FIT offshore wind economics corroborates both investors' assessments. Under the current CPPA-driven model – with no feed-in tariff, no investment tax credit, and limited clarity on cost recovery for fixed-bottom projects moving forward – industry interviews collected in academic literature describe project economics as "not viable" at prevailing terms for externally-financed sponsors.

A single, publicly-disclosed blended IRR figure for Taiwan offshore wind does not exist – that calculation sits inside proprietary BNEF/CIER and bank credit models that are not published. What is publicly disclosed is the full set of pricing inputs that feed that calculation, spanning three successive revenue regimes:

Revenue Regime	Rate / Mechanism	Return Implication
Original FIT (2019 PPA vintage)	Flat NT$5.516/kWh (20yr) or tiered NT$6.2795/kWh (yrs 1–10) + NT$4.1422/kWh (yrs 11–20)	Highest, government-backed cash-flow floor – no longer available to new projects
Round 3.1 / 3.2 auction (zero-subsidy)	Bids compressed to NT$0/kWh; revenue reliance shifted almost entirely to CPPAs	Removes the auction-price floor entirely; project return now depends on CPPA quality
Round 3.3 (opens April 2026)	NT$2.29/kWh floor for surplus green power, set at Taipower's average avoided cost	A backstop, not a driver – applies only to surplus power, introduced specifically because NT$0 auction pricing plus pure merchant exposure was not bankable

The CPPA Layer, Including TSEE

Because Round 3 revenue now depends on the CPPA a project can secure, the corporate offtake market is the real determinant of achievable IRR — and that market itself has needed government intervention to function. Taiwan Smart Electricity & Energy Co. (TSEE), established in October 2024 through joint investment by state-affiliated and private-sector enterprises, was created specifically to bridge renewable supply and corporate demand through aggregated procurement, because the difficulty of securing sufficient long-term, fixed-price CPPAs with highly creditworthy counterparties has significantly hindered offshore wind development in Taiwan to date. TSEE's existence is itself evidence for Barrier 1: the CPPA market that Round 3 pricing now depends on was not clearing on its own.

On the buyer-cost side, regulated pass-through charges — wheeling fees and reserve capacity cost — currently add an estimated 50–70% on top of Taipower's retail rates for corporate renewable buyers, a markup industry groups have asked the government to clarify and cap because of the unpredictability it introduces into CPPA pricing. At the distressed end of the spectrum, floating wind developers were asked to submit CPPA price bids that came in at NT$6.9 to NT$12/kWh — a level explicitly described as far beyond what the local market would accept, and a direct signal that at those prices a bankable IRR is not achievable without further subsidy or risk-sharing.

Working IRR Range

Triangulating these inputs against the global hurdle-rate benchmarks investors report (below), fixed-bottom projects with strong, TSMC-caliber CPPA counterparties — the Hai Long-type structure — are the strongest case in the market and most plausibly sit in the high single digits, since the Round 3.3 floor price was calibrated specifically to make financing work at that tier. Projects more exposed to merchant or thinner CPPA coverage, closer to the NT$0 auction-price end of the spectrum, are more consistent with the sub-8% range identified in the Dutch pension fund's declined transaction. Floating wind, at current CPPA bid levels, sits outside a bankable range entirely absent new subsidy.

Investor Type / Project Tier	Typical Required or Estimated IRR
Self-funded strategic / utility investor (global benchmark)	Below 10% acceptable
Externally-financed infrastructure fund, fixed-bottom offshore wind (global benchmark)	12–15%
Floating offshore wind (higher technical/financial risk, global benchmark)	15%+ (several points above fixed-bottom)

Investor Type / Project Tier	Typical Required or Estimated IRR
Major Canadian fund standing hurdle (new market, un-derisked)	Double digits (10%+)
Major Canadian fund reduced hurdle (de-risked, operating-stage)	High single digits (~8–9%)
Dutch pension fund's declined Taiwan project (actual underwritten IRR)	Below 8%
Taiwan fixed-bottom, strong CPPA (Hai Long / TSMC-type) – estimated	High single digits (~7–9%), calibrated to Round 3.3 floor price support
Taiwan fixed-bottom, thin/merchant CPPA exposure – estimated	Below 8%, consistent with the Dutch pension fund's declined transaction
Taiwan floating wind at current CPPA bid levels	Not bankable without additional subsidy or risk-sharing

The pattern across every data point is consistent: Taiwan's current achievable returns sit at or below the floor that even the most flexible global investors (the Canadian fund, in its reduced-hurdle scenario) can accept, and below the level self-funded strategics require to proceed without financing leverage. The Dutch pension fund's experience is the sharpest illustration – a real, underwritten transaction that failed a sub-8% IRR test and triggered not just a pass, but a policy-level market exit. Even the strongest available structure in the market – a TSMC-backed CPPA – lands at the low end of what the Canadian fund's own reduced hurdle would accept, leaving essentially no margin for execution risk (Barrier 2) or structuring complexity (Barrier 3) on top.

Why the Gap Exists

- Round 3 auction dynamics compressed PPA pricing to near-zero subsidy levels, a design intended to reflect sector maturity but calibrated without an equivalent reduction in project execution risk (permitting timelines, grid queue, typhoon/seismic design costs, local-content premiums).
- Local content requirements raise capex without a corresponding revenue offset, compressing achievable IRR relative to comparable European or U.S. projects with lighter localisation mandates.
- CPPA price discovery is still immature: floating wind CPPA bids have ranged as high as NTD 6.9–12/kWh in recent tenders – far above what the domestic market will absorb – evidence that the corporate-offtake market has not yet found a clearing price that also clears investor hurdle rates.

Potential Solutions

- **MOF / NDC:** Structure a targeted, time-limited investment tax credit or accelerated depreciation mechanism for Round 3.3 and floating wind allocations, offsetting local-content capex premiums without reintroducing a full feed-in tariff.
- **FSC:** Support development of a domestic institutional co-investment vehicle (life insurer / pension consortium) that can accept a lower blended return than foreign funds, narrowing the equity gap for projects that fail global hurdle rates but remain viable at domestic cost of capital.
- **NDC:** Commission and publish an independent, methodologically transparent Taiwan offshore wind IRR benchmark (updated annually) to replace the current reliance on proprietary BNEF/CIER modeling that investors such as the Dutch pension fund and the Canadian fund cannot independently verify before underwriting — opacity itself is inflating the risk premium investors apply.

4.3 Barrier Two: Regulatory and Revenue Uncertainty

The second denominator is procedural rather than purely financial: investors describe Taiwan's regulatory pathway as unpredictable in timing and structure, which compounds Barrier One by adding a risk premium on top of an already-thin return.

The Feed-in-Tariff-to-CPPA Transition

Taiwan's shift from a guaranteed 20-year feed-in tariff to competitive, near-zero-subsidy auctions followed by a CPPA-dependent revenue model represents one of the fastest revenue-mechanism transitions of any major offshore wind market globally. For an asset class where investors typically model cash flows over 20–25 year horizons, a policy regime change mid-market-cycle is itself a repricing event — not because the new regime is necessarily worse, but because it introduces a structural break that is difficult to underwrite with confidence.

Permitting and Auction Timeline Risk

The government's own Round 3.3 mechanism was only released in draft form in January 2026, for a 3.6 GW allocation with grid connection scheduled for 2030–2031 — leaving developers and their capital partners with a compressed window to underwrite, finance, and construct against a still-evolving rulebook. Precedent projects reinforce the concern: Greater Changhua 1 and 2a faced extraordinarily high costs tied to building a local supply chain at scale and reinforcing onshore grid infrastructure, and Yunlin's 640 MW project took roughly four years longer than originally scheduled to reach full operation, delayed by pandemic disruption, supply chain shortages, and monopile installation challenges.

Investors read this history as a pattern rather than a series of isolated incidents: permitting, supply chain localisation, and grid-connection timelines have consistently run longer than initial project schedules across nearly every major Taiwan offshore wind asset built to date, including projects backed by the most sophisticated sponsors in the sector (Ørsted, CDPQ, Macquarie, Skyborn/GIP).

The Avoided-Cost Ambiguity

Taipower's avoided-cost mechanism, which underpins residual power pricing for offshore wind, is calculated retrospectively – announced only after the year to which it applies, based on Taipower's audited prior-year costs. Investors underwriting a project today cannot know the exact pricing mechanism that will apply to power sold outside a locked CPPA, adding a further layer of revenue uncertainty on top of the CPPA/merchant transition itself.

Potential Solutions

- **Ocean Affairs Council / MOEA (coordinating with NDC):** Publish a locked, multi-year auction and permitting calendar for Round 3.3 and beyond, with defined maximum review periods for environmental and construction permits, to convert timeline risk from open-ended to bounded.
- **FSC:** Work with Taipower to publish avoided-cost methodology and a forward indicative range before the applicable year, rather than only after audited costs are finalised, reducing merchant-exposure pricing uncertainty for CPPA-adjacent revenue.
- **NDC:** Establish a standing government-investor consultation forum so that regulatory changes are sequenced with investor underwriting cycles rather than announced independently of them.

4.4 Barrier Three: Market Structure and Exit Constraints

The third denominator is structural: Taiwan's offshore wind market, while large by regional standards, remains too narrow and too illiquid for many global infrastructure allocators to build a diversified, exitable position – independent of the return and regulatory questions addressed above.

A Thin Deal Universe

The list of institutional owners across Taiwan's operating and under-construction offshore wind capacity is short and repeats across nearly every project: Ørsted, CDPQ, Cathay PE, Macquarie/GIG, Copenhagen Infrastructure Partners, Skyborn/GIP, JERA, TotalEnergies, and a small group of Japanese utility co-investors (Sojitz, Chugoku Electric, Chudenko, Shikoku Electric, Eneos). For allocators of the scale of these Canadian and Dutch institutions, a market this concentrated offers limited

opportunity to build a position at scale without effectively buying into the same handful of existing consortiums — constraining both deal flow and negotiating leverage.

Currency, Rate, and Local Financing Requirements

Taiwan dollar exposure, combined with financing structures that increasingly require local bank and life-insurer participation (as seen in the CDPQ-led Greater Changhua holdco financing, which drew on 17 international and Taiwanese banks and insurers alongside export credit agency cover from EDC, EKF, K-SURE, Atradius, and UK Export Finance), add a layer of structuring complexity that global funds must underwrite on a market-by-market basis rather than replicate from a standard template used in Europe or North America.

Limited Exit Optionality

Secondary market liquidity for Taiwan offshore wind stakes remains thin. Macquarie's 2025 disposal of a Taiwan offshore wind stake for $263 million is one of very few disclosed secondary transactions in the market — a data point that cuts both ways: it demonstrates an exit is possible, but the scarcity of comparable transactions makes it difficult for a prospective new entrant to benchmark valuation or anticipate exit timing, both of which factor directly into underwriting IRR.

Potential Solutions

- **FSC:** Encourage development of a secondary trading or syndication platform for operating-stage renewable infrastructure assets, giving both domestic and foreign holders a clearer path to partial exits and price discovery.
- **MOF:** Review local-financing-participation requirements to ensure they broaden rather than narrow the pool of eligible international co-investors and lenders, particularly for mid-sized funds that lack Macquarie- or CDPQ-scale local banking relationships.
- **NDC / Ocean Affairs Council:** Actively court a broader set of Asian strategic investors (building on the JERA precedent) as co-investment partners alongside global funds, deepening the deal universe rather than relying on repeat transactions among the same consortium of existing owners.
- FSC / Bureau of Labor Funds / insurers' association: Pair market-opening measures with capacity building and regulatory adjustment so that Taiwanese pension funds and life insurers can participate directly in the offshore wind and grid build-out. The relevant products are local-currency, long-duration, contracted-cash-flow assets — CPPA-backed project equity and infrastructure debt — that match domestic liabilities and meet these institutions' own risk-return

requirements. Building this domestic investor base strengthens the energy-security case of Chapter 2 from within: indigenous energy assets funded by Taiwanese retirement savings, and a deeper domestic market that makes Taiwan more legible and more attractive to foreign capital.

4.5 Synthesis: One Root Cause — the Policy Uncertainty Premium

Read together, the three barriers are not independent. They are different expressions of the same underlying problem: Taiwan is asking global investors to accept emerging-market execution risk (Barrier 2), at returns more typical of a mature, de-risked market (Barrier 1), within a market too narrow to diversify that risk effectively (Barrier 3). The European pension fund's no-Taiwan-infrastructure policy and the Canadian fund's unmet hurdle rate are different institutional responses to the same risk-return equation.

International experience shows that markets can respond quickly when governments provide credible and consistent signals. In Europe, greater ECB policy clarity has supported renewed investor confidence, alongside expectations of approximately 17% corporate profit growth. Korea offers an even more relevant regional example: corporate-governance reforms, investment incentives and a clear national focus on AI and semiconductor competitiveness helped the KOSPI rise by almost 20% in January 2026. Korea has also attracted a US$1.3 billion renewable-energy platform designed to expand from 1.7 GW of operating capacity toward a 10 GW portfolio serving data centres, semiconductor manufacturing and other strategic industries. These outcomes cannot be attributed to policy alone, but they demonstrate how policy certainty, industrial strategy and private capital can reinforce one another.

Taiwan now needs to step up its industrial-competitiveness game. Reliable renewable energy is no longer only a climate objective: it is enabling infrastructure for AI, semiconductors and advanced manufacturing, as well as a pillar for securing energy sovereignty. Greater certainty around auction schedules, revenue frameworks, permitting, grid connections and cross-agency decision-making would not eliminate project risk. It would, however, reduce the additional premium investors demand for policy-generated uncertainty; and thereby lower the cost of capital for Taiwan's energy transition.

This has a direct implication for the recommendations above: solving any one barrier in isolation is unlikely to bring institutional capital back to the table. A published avoided-cost methodology will not persuade the European pension fund if the underlying IRR remains below 8%. A tax credit that raises returns by 100–150 basis points will not persuade the Canadian fund if permitting timelines remain unbounded. The agencies engaged through this report's ecosystem dialogue — including the FSC, MOF, NDC and Ocean Affairs Council — therefore need to

sequence these interventions as a coherent package rather than a menu of disconnected measures.

The strategic objective should be clear: remove avoidable policy uncertainty, crowd private capital back into the market and secure the clean-energy infrastructure Taiwan needs to remain competitive in the AI era. Policy certainty is not simply an investor concession; it is an investment in Taiwan's industrial resilience, energy sovereignty and long-term economic security.

Two mechanisms cut across all three barriers and deserve particular emphasis in the recommendations that follow: a standing government–investor consultation forum, which converts policy certainty from an annual hope into an institutional process; and a domestic institutional co-investment vehicle, which matches long-duration local capital — Taiwanese pension funds and life insurers — to long-duration local assets, and in doing so both narrows the equity gap and signals domestic confidence to foreign capital.

4.6 Summary of Recommendations by Agency

Agency	Priority Actions
Financial Supervisory Commission (FSC)	Domestic co-investment vehicle to narrow the equity gap; avoided-cost forward guidance with Taipower; secondary trading platform for operating assets; capacity building and regulatory adjustment for Taiwanese pension funds and life insurers to invest in local-currency renewable infrastructure
Ministry of Finance (MOF)	Targeted investment tax credit / accelerated depreciation for Round 3.3 and floating wind; review of local-financing-participation rules to broaden the lender/co-investor pool
National Development Council (NDC)	Independent, transparent IRR benchmark to replace opaque proprietary modeling; standing government-investor consultation forum; active courtship of additional Asian strategic co-investors
Ocean Affairs Council	Locked multi-year auction and permitting calendar with bounded review periods for Round 3.3 and beyond

These recommendations are intended as inputs to the high-level ecosystem dialogues this research is designed to support and should be further pressure-tested through continued engagement with market participants. The interview base for this analysis is listed under "Investor Interview Series" in the References section. Further perspectives from CDPQ, Cathay PE, Skyborn/GIP, and other investors with direct operating history in Taiwan would help test whether the findings represent a market-wide consensus or reflect the more conservative end of the investor spectrum.

** Sources for this chapter — institutional investor interviews and public deal history — are listed under "Investor Interview Series" in the References section*

CHAPTER 5

Policy Recommendations

Taiwan has the wind resource, the anchor demand, and the demonstrated bankability. What it lacks is the market infrastructure — the regulatory rules and financing instruments that allow private capital to find the projects it needs to fund, at the speed and scale the supply chain requires. The five recommendations below address the missing financing components and the institutional mechanisms needed to support them, with defined Taiwanese actors responsible for delivery.

Recommendation 1 — Make Green Lending Financially Rewarding for Banks

Lead Actor: FSC

Taiwan's green finance guidance has so far relied largely on persuasion. The next step is to make green lending structurally more attractive, not merely encouraged. The Philippines demonstrated this with BSP Circular 1183 (December 2023): lower reserve requirements for qualifying green and sustainability bond issuance and higher single-borrower lending limits for qualifying renewable-energy lending, at zero fiscal cost, shifted bank behaviour. For Taiwan, carefully calibrated, time-bounded prudential incentives, conditional on banks establishing credible sustainable-finance frameworks, could reward early movers, build institutional capacity and mobilise more capital while preserving financial-stability safeguards. The FSC should assess the appropriate design with the central bank and introduce any measures gradually, alongside taxonomy, disclosure and supervisory dialogue.

Recommendation 2 — Make the Taxonomy Usable by International Lenders

Lead Actor: FSC, NDC & MOEA

Taiwan's Sustainable Economic Activity Guidelines V2 (December 2024) cover renewable energy — but in qualitative terms that international project finance lenders cannot use. The gap is the absence of quantitative performance thresholds for offshore wind, battery storage, and solar. The FSC should add those thresholds, aligned with ASEAN Taxonomy v4.0, and publish a cross-reference to ICMA Green Bond Principles — converting the taxonomy from domestic guidance into a document that international capital can rely on directly.

Recommendation 3 – Scale Up the Sovereign Sustainable Bond Programme for Renewable Energy

Lead Actor: MOF & NDC

Taiwan issued its first central government sustainable bond in January 2026 – NT$4 billion, 15x oversubscribed, priced below equivalent conventional bonds. The green premium is proven and institutional appetite is clear. What is missing is scale and scope: the first bond financed a university dormitory. MOF should commit to a regular, multi-year issuance schedule with energy transition – offshore wind infrastructure, grid reinforcement, strategic storage – as a core eligible category, giving long-duration institutional investors the predictable pipeline they need to allocate at scale.

Recommendation 4 – Open the Blue Bond Preparation Window

Lead Actor: NDC, MOF and OAC, with port authorities

Taiwan's offshore wind buildout is not environmentally costless, and treating it as such is a financing risk as much as an ecological one. Most planned sites overlap the 763 km² habitat the Ocean Affairs Council designated in 2020 for the critically endangered Indo-Pacific humpback dolphin, where pile-driving noise and construction-phase fishery exclusion are documented, published risks. Conservation researchers already describe Taiwan's environmental-assessment mandate for these sites as underfunded. Standard green taxonomies cover turbines and storage, not reef restoration or cetacean monitoring; blue bonds do, as Ørsted's 2023 issuance demonstrates. NDC and the Ocean Affairs Council, with MOF, should define offshore wind marine-mitigation as an explicit eligible-use category sized to track capacity additions, not issued as a one-off.

Recommendation 5 – Institutionalise Government–Investor Dialogue and a Domestic Co-Investment Vehicle

Lead Actors: NDC & FSC

Each of the four instruments above will underperform if policy changes continue to surprise the investors expected to finance them. Two institutional mechanisms should therefore sit alongside them.

First, establish a standing government–investor consultation forum, convened by the NDC with the FSC, MOF and Ocean Affairs Council, so that auction design, tariff adjustments and regulatory changes are better aligned with investor underwriting and capital-allocation cycles.

Second, create a domestic co-investment vehicle or net-zero/low-carbon industrial demonstration park, structured with life insurers and Taiwan's labour pension and insurance funds. By providing patient domestic capital, anchoring project equity in local currency, or reducing upfront costs through coordinated land and infrastructure provision, such a mechanism could improve project bankability and crowd in foreign capital rather than displace it.

The objective is simple: give investors greater policy visibility and put credible domestic capital alongside them.

CHAPTER 6
Summary

Taiwan's future as a semiconductor and AI hub depends on its ability to supply large volumes of predictable, low-carbon electricity to power-intensive fabs and data centers. Leading firms such as TSMC and their global customers have committed to high renewable shares in production, but the grid they rely on remains dominated by imported coal and gas, leaving both industrial output and public finances exposed to fuel price volatility and geopolitical risk.

> ***Taiwan needs a financing architecture that treats indigenous energy and related grid assets not as exceptional transactions, but as critical infrastructure and a repeatable investment class central to its energy sovereignty.***

The strategic priority, therefore, is to build an energy system that is both cleaner and more indigenous, reducing import dependence, diversifying supply routes, and expanding domestic renewable capacity in ways that support the 24-hour power needs of fabs and data centers. Offshore wind, solar, storage, flexible demand and targeted grid investments all have roles to play; what matters most is that policymaking and finance work together to turn these resources into a stable, contractable energy base for the AI economy. Taiwan needs a financing architecture that treats indigenous energy and related grid assets not as exceptional transactions, but as critical infrastructure and a repeatable investment class central to its energy security.



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Investor Interview Series – sources for Chapter 4

- Primary sources: interviews with 8 infrastructure investors with interest in Taiwan.
- Secondary sources: Norton Rose Fulbright Global Offshore Wind – Taiwan (May 2026); Clifford Chance CDPQ transaction releases; Windpower Monthly (Macquarie, Skyborn); MDPI "The Fate of Floating Offshore Wind in Taiwan" (Wind, 2026); EnergyOMNI Round 3.3 and avoided-cost coverage; Global Energy Monitor Taiwan Strait Offshore Wind Development database; Enerdata Round 3.3 auction announcement (March 2026); BlackRidge Research Hai Long project profile; TSEE corporate disclosures; European Chamber of Commerce Taiwan – Lunch with TSEE on Taiwan's CPPA Market; AmCham Taiwan 2025 Energy Position Paper.

Note: The Taiwan-specific IRR figures in Chapter 4.2 are estimates triangulated from public pricing inputs (FIT legacy rates, Round 3 auction outcomes, the Round 3.3 floor price, and disclosed CPPA cost structures), not a single published blended-IRR study. No public source discloses a single Taiwan offshore wind project IRR figure; the underlying calculation sits inside proprietary BNEF/CIER and bank credit models.

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