ENERGY ALBERTA PEACE RIVER NUCLEAR POWER PROJECT

IAAC Registry File No. 89430

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SHOW STOPPER 34

PERMANENT PUBLIC SUBSIDY NEEDED

THE PEACE RIVER NUCLEAR POWER PROJECT CANNOT COMPETE IN ALBERTA'S DEREGULATED ELECTRICITY MARKET WITHOUT A PERMANENT PUBLIC SUBSIDY.

NO GOVERNMENT HAS BEEN COMMITTED BY ANY SUCH GOVERNMENT SUBSIDY.

HE GAP BETWEEN WHAT NUCLEAR COSTS AND WHAT ALBERTA'S MARKET WILL PAY IS APPROXIMATELY $76 TO $156 PER MEGAWATT-HOUR — LARGER THAN ALBERTA'S ENTIRE 2025 AVERAGE POOL PRICE.

THE TISG DOES NOT REQUIRE THE PROPONENT TO DISCLOSE A REVENUE MODEL, QUANTIFY THE SUBSIDY REQUIRED, OR DEMONSTRATE THAT THE PROJECT CAN ATTRACT PRIVATE FINANCE WITHOUT A COMMITTED GOVERNMENT REVENUE GUARANTEE.

THESE OMISSIONS IN THE TISG ARE FATAL TO THE PUBLIC INTEREST DETERMINATION.

EXECUTIVE SUMMARY — WHAT THIS SUBMISSION SHOWS

1. The Peace River Nuclear Power Project requires a minimum revenue floor inferred from Vogtle and Hinkley Point C cost experience of approximately $120–200/MWh to be commercially financeable at a first-of-kind AP1000 greenfield site in northern Alberta. AESO reports a 2025 average pool price of $43.68/MWh — 30 per cent below 2024 — in a deregulated, energy-only market with no capacity payment mechanism. The gap between what nuclear requires and what the market will pay is approximately $76–156/MWh, larger than the entire current average pool price.

2. The subsidy required to close this gap — a contract for difference, long-term power purchase agreement, or equivalent instrument — would transfer tens of billions of dollars of public money from Albertans and the federal government to the proponent over the project's sixty-year operating life. No provincial government has committed to provide this. No federal instrument capable of providing it at this scale for a new large reactor exists

today. A project that cannot be financed without a revenue commitment that has not been made is not a commercially viable project.

3. Every nuclear project built in a liberalised electricity market in the last twenty years has required a government revenue guarantee substantially above market price. Hinkley Point C received a 35-year Contract for Difference at £92.50/MWh in 2012 prices — now above £120/MWh in nominal terms — in a market where wholesale prices were approximately £45–50/MWh. Vogtle, Flamanville, and Darlington were all built under regulated cost recovery or state ownership, not as merchant projects. There is no precedent for financing a new large nuclear plant as a merchant generator in a deregulated energy-only market. The Peace River project proposes to be the first.

4. Alberta's market structure makes nuclear economics uniquely difficult: no capacity market, no regulated rate base, no guaranteed dispatch, and an energy-only pool price set by merit-order dispatch that rewards flexibility and penalises inflexibility. These are structural features of a market design in place for twenty-five years, not temporary conditions.

5. The competing technologies — flexible gas with CCS, long-duration battery storage, and closed-loop geothermal — have already attracted billions of dollars of private capital in Alberta on merchant terms without subsidy. The market is financing them. It is not financing nuclear. That differential is the most direct available signal that nuclear is the wrong technology for this market at this time.

6. Three TISG amendments are required. The TISG must require EA to disclose its revenue model, name a committed funder or explicitly state that no commitment exists, quantify the total public subsidy required, and compare that cost against the LCOE of competing technologies across each decade of the project's life. The Review Panel must then expressly address at least three questions on the record before making a section 63 determination.

34.1 The Legal Framework: Commercial Viability as a Public Interest Consideration

IAA section 63 requires IAAC to determine whether the designated project is in the public interest having regard to the factors set out in section 63(2), which include the project's contribution to sustainability, its contribution to Canada's ability to meet its environmental obligations, and any other matter IAAC considers relevant. The public interest determination is not confined to environmental impacts. It encompasses whether the project makes economic sense for Canadians.

A project that imposes perpetual radiological and waste hazards on Treaty 8 Nations and on the Peace-Athabasca UNESCO watershed — the costs described in Show Stoppers 32 and 33 — must deliver a proportionate public benefit. If the project's electricity output requires a permanent public subsidy to be marketed at all, then the public is being asked to pay twice: once for the subsidy, and once for the residual risk. The IAA public interest test cannot be satisfied by a project that imposes both a permanent public

cost and a permanent public risk without demonstrating a public benefit that the market cannot provide at lower cost and lower risk.

IAA section 22(1)(i) — need for the designated project — is not confined to physical need for electricity. It includes commercial need: the need for this technology, at this cost, in this market, when alternatives exist that the market is already financing without subsidy. A project that cannot attract private capital without a government revenue guarantee that has not been committed has not demonstrated commercial need.

34.2 Alberta's Electricity Market: Why Nuclear Cannot Compete

34.2.1 The Deregulated Energy-Only Market

Alberta operates the only fully deregulated electricity market in Canada. There is no regulated rate base, no guaranteed rate of return, and no capacity payment mechanism. Alberta explicitly cancelled a planned capacity market in 2019 and retained its energy-only design. Generation is compensated solely through the pool price — the hourly spot price set by merit-order dispatch. A generator that is not dispatched earns nothing. A generator whose variable cost is below the pool price earns the pool price minus its variable cost.

AESO reports a 2025 average pool price of $43.68/MWh — 30 per cent below 2024 — driven by new highly efficient gas-fired generation and additional wind and solar output. The 2025 average pool price is substantially lower than in recent years and Q1 2025 prices are the lowest since 2018. This market design rewards efficient, flexible generation and exposes inefficient or inflexible generation to commercial discipline. It has worked exactly as designed: Alberta's gas and cogeneration fleet, which can ramp quickly and run at low variable cost, dominates dispatch. Wind and solar, whose variable cost is near zero, have captured large market share during their production hours.

34.2.2 Why Nuclear Is Structurally Incompatible With This Market

Nuclear generation has four characteristics that make it specifically incompatible with Alberta's energy-only market.

First, nuclear has a very high capital cost and a very low variable cost. Once built, a nuclear plant must run at or near full output continuously to recover its capital investment — the marginal cost of generating one more kilowatt-hour is near zero, so every hour of downtime represents unrecoverable fixed cost. This creates enormous pressure to run at full output regardless of the pool price, including hours when the pool price is at or near zero.

Second, nuclear cannot be ramped up and down quickly. It cannot respond to the market signal that tells flexible generators to stop producing when demand is low. In Alberta, which has significant solar and wind generation that regularly sets the pool price at or near zero during midday hours, a must-run baseload nuclear plant would be generating at times when it cannot recover its costs from the pool price.

Third, nuclear's construction timeline means that capital is committed fifteen or more years before the plant generates its first kilowatt-hour. No private lender will accept the revenue risk of a project whose returns depend on a pool price fifteen years in the future in a market that has no price floor mechanism — without a government backstop.

Fourth, Alberta has no capacity market. In jurisdictions that have built new nuclear in the last twenty years — the United Kingdom, the United States — the financing was supported not only by a strike price for energy but also by capacity payments that compensate generators for availability even when not dispatched. Without a capacity market, nuclear's high fixed cost has no recovery mechanism other than sustained high pool prices or a government energy price guarantee.

KEY POINT:

Alberta's deregulated energy-only market has no mechanism to compensate nuclear generation for its capital cost — no capacity payment, no regulated rate base, no guaranteed dispatch. These are not temporary conditions. They are structural features of a market design that has been in place for twenty-five years, with no political constituency for fundamental change. Alberta explicitly cancelled a planned capacity market in 2019. A nuclear project that requires all four of these missing mechanisms to be commercially viable is the wrong technology for this market.

34.3 The Price Gap: Nuclear LCOE Versus Alberta Pool Price

34.3.1 What Nuclear Costs — Inferred From Comparators

The levelised cost of electricity for the Peace River project is not a modelled figure — no detailed cost model has been publicly filed. The relevant approach is to infer a reasonable band by applying the actual cost experience of the most recently completed comparable projects in OECD jurisdictions to the specific characteristics of the Peace River site: first-of-kind AP1000 in Canada, no established nuclear supply chain, northern Alberta remoteness, no existing nuclear construction workforce.

Source / Benchmark	LCOE Range	Currency / Basis
Lazard LCOE+ v17.0 (June 2024)	$141–221/MWh	USD — US greenfield nuclear new build
OECD NEA / IEA Projected Costs 2020	$60–150/MWh (broad)	USD — multi-jurisdiction range; high end applies to new entrant sites
Hinkley Point C (actual CfD strike price)	£92.50/MWh in 2012£; now above £120/MWh nominal	GBP — 35-year Contract for Difference
Vogtle Units 3 & 4 (actual — regulated recovery)	~$150–220/MWh implied	USD — comparable analyses accounting for financing and overruns; not a merchant project
Peace River inferred range (CAD 2025)	**~$120–200/MWh CAD**	Inferred by applying Vogtle/Hinkley cost experience to a first-of-kind AP1000 at a remote greenfield site in northern Alberta; no modelled figure available
Alberta 2025 average pool price (AESO)	**$43.68/MWh CAD**	AESO 2025 Annual Market Statistics — 30% below 2024
Inferred price gap (nuclear minus market)	**~$76–156/MWh CAD**	Nuclear requires approximately 2.7–5.6× the current market price to be financially viable

Note: Lazard, OECD NEA, and Vogtle figures are in USD. Hinkley figures are in GBP. The Peace River inferred range and the price gap are expressed in CAD 2025. Currency differences do not materially affect the comparison: even with favourable exchange rate assumptions, the structural gap between nuclear LCOE and Alberta pool price remains in the same order of magnitude.

INVALIDITY FINDING:

A reasonable Peace River LCOE band of approximately $120–200/MWh CAD is inferred by applying Vogtle and Hinkley Point C cost experience to a first-of-kind AP1000 at a remote greenfield site in northern Alberta — a site with greater logistical difficulty, less established supply chain, and no Canadian AP1000 regulatory precedent than any of the comparator projects. This inference may understate the actual cost premium.

Against Alberta's 2025 pool price of $43.68/MWh, the inferred price gap is approximately $76–156/MWh — between 2.7 and 5.6 times the prevailing market price. A project that requires 2.7 to 5.6 times the prevailing market price to be commercially viable has not demonstrated commercial viability. It has demonstrated commercial dependence on a public subsidy that has not been offered, committed, or enacted.

34.3.2 The Pool Price Trajectory Does Not Close the Gap

EA might argue that Alberta's pool price will rise sufficiently by the 2040s to make the project commercially viable without subsidy. AESO does not publish explicit pool price forecasts; the following indicative price bands are derived from AESO's 2024 Long-Term Adequacy scenario supply-demand balance assumptions, not from AESO official price forecasts. They are illustrative and intended to show that even under high-price scenarios, the gap to nuclear's required revenue remains large.

AESO Demand Scenario	Projected Peak Demand ~2041	Indicative Pool Price Band (derived, not AESO forecast)	Does the gap to nuclear close?
Reference Case (1.2%/yr growth)	~15,000 MW	$50–80/MWh indicative	No — inferred gap remains ~$40–150/MWh
High Electrification (1.9%/yr growth)	~17,000 MW	$65–100/MWh indicative	No — inferred gap remains ~$20–135/MWh
Accelerated (data centres max)	~20,000 MW	$80–120/MWh indicative	Possibly marginal at very top of range only — and self-correcting

Source: AESO 2024 Long-Term Adequacy Report (supply-demand balance assumptions). Pool price bands are illustrative scenario-based ranges, not AESO official price forecasts.

Only in the most aggressive demand scenario — full data centre electrification reaching 20,000 MW peak, which AESO treats as aspirational — does the Alberta pool price approach the low end of the nuclear inferred revenue requirement. In the Reference Case and High Electrification Case, which are AESO's

primary planning scenarios, the indicative pool price does not close the nuclear gap across any decade of the project's operational life.

Furthermore, if the accelerated data centre scenario does materialise, the resulting elevated pool prices will attract significant new gas and storage investment — exactly as Alberta's market is designed to do — which will moderate prices back toward the reference case range before any sustained $120–200/MWh pool price can support nuclear economics. Alberta's market is self-correcting. It will not sustain the revenue floor that nuclear requires for sixty years.

34.4 The Subsidy Required: Quantifying the Public Cost

34.4.1 The Revenue Gap in Present-Value Terms

The table below shows illustrative present-value subsidy magnitudes under three simple revenue gap bands. These are scenario bands derived from the inferred price gap, not modelled predictions. Actual figures would depend on final construction cost, achieved capacity factor, the pool price path, and financing terms. However, the order of magnitude is unlikely to fall below tens of billions of dollars even on the most optimistic assumptions.

Revenue Gap Assumption (illustrative)	Annual Generation (4,800 MW × 90% CF)	Annual Subsidy Implied	Illustrative PV (60-yr, 5% discount rate)
Gap = $50/MWh (optimistic scenario band)	~37.8 TWh/year	~$1.9B/year	~$35B illustrative PV
Gap = $80/MWh (mid-range scenario band)	~37.8 TWh/year	~$3.0B/year	~$55B illustrative PV
Gap = $120/MWh (conservative scenario band)	~37.8 TWh/year	~$4.5B/year	**~$82B illustrative PV**
Comparator: Hinkley C (UK)	~25 TWh/year	£3B+/year at CfD rate	Tens of billions of pounds over 35-year CfD term — one of the largest single-project subsidies in UK electricity history

Note: Present-value calculations are illustrative scenario bands. CF = capacity factor assumed at 90%. These figures are intended to establish order of magnitude, not to predict actual subsidy levels.

The illustrative present-value subsidy ranges from approximately $35 billion on optimistic assumptions to more than $80 billion on conservative assumptions. These represent transfers from Alberta taxpayers, federal taxpayers, or electricity ratepayers to the project proponent — transfers that will persist for sixty years after commercial operation begins, assuming the project is ever built.

No federal program currently offers a contract for difference at this scale for nuclear generation in Alberta. No Alberta provincial government has committed to a long-term power purchase agreement for the project. The Canada Infrastructure Bank has not made a funding commitment. The TISG does not require EA to identify who will provide this revenue support or at what price.

34.4.2 The Missing Committed Funder

A subsidy commitment of this magnitude requires a committed funder. There are three possible funders: the Alberta provincial government through a long-term power purchase agreement or strike price mechanism; the federal government through the Canada Infrastructure Bank, the Clean Electricity Regulation framework, or a bespoke nuclear support instrument; or electricity ratepayers through a regulated rate recovery mechanism imposed by the Alberta Utilities Commission.

None of these funders has committed. Alberta's provincial government has not enacted legislation enabling a nuclear strike price. The federal government has not announced a nuclear contract for difference program applicable to new large reactors at greenfield sites. The AUC has no jurisdiction to impose a nuclear levy on Alberta's deregulated electricity consumers. The financing gap is not a detail to be resolved later — it is a fundamental project prerequisite that has not been met.

The absence of a committed funder is itself an indicator that the project does not have a demonstrated path to commercial operation. Private equity and debt investors will not commit capital to a project whose revenue model depends on a government commitment that has not been made. No financial close is possible without that commitment. No construction start is possible without financial close.

34.5 International Precedents: Every Comparable Project Required Permanent Subsidy

The Peace River project's commercial unviability is not a unique circumstance. Every large nuclear project built in a liberalised electricity market in the last twenty years has required government revenue support substantially above market price. The following table documents the revenue support arrangements for the most relevant comparator projects.

Project	Country	Market Structure	Revenue Support Mechanism	Revenue / Strike Price	Market Price at Commitment
Hinkley Point C	UK	Deregulated (CfD regulated by BEIS)	35-year Contract for Difference	£92.50/MWh (2012£); above £120/MWh nominal today	~£45–50/MWh wholesale
Vogtle Units 3 & 4	USA	Regulated utility (Georgia Power) — regulated / state-backed, not merchant	Rate-regulated cost recovery; DOE loan guarantees	Not a market project — costs socialised through regulated tariff	~$30–40/MWh wholesale
Flamanville EPR	France	State-owned utility (EDF 85% state-owned) — regulated / state-backed, not merchant	State balance sheet; EDF required recapitalisation	Not financeable by private investor without state support	~€40–50/MWh wholesale

Darlington refurb	Canada	Regulated utility (OPG / OEB rate base) — regulated / state-backed, not merchant	Ontario regulated rate base; IESO long-term energy contract	Rate-regulated — ratepayer-funded, not merchant-financed	~$50–60/MWh OPA contract
EA Peace River (AP1000)	Canada	Deregulated energy-only — no capacity market; capacity market explicitly cancelled 2019	**No mechanism identified — none committed**	**Revenue model not disclosed**	$43.68/MWh (2025 pool, 30% below 2024)

Sources: UK BEIS; US NRC; EDF annual reports; Ontario Energy Board; AESO 2025 Annual Market Statistics.

KEY POINT:

Every comparable nuclear project in the table above either operated in a regulated market where costs were recovered through ratepayer tariffs — Vogtle, Darlington — or required an explicit government revenue guarantee substantially above market price — Hinkley Point C. Flamanville and Darlington refurb required state ownership or regulated rate recovery. Not one was financed as a merchant project in a deregulated energy-only market without revenue support. The Peace River project proposes to be the first. There is no precedent for this in any OECD jurisdiction.

34.5.1 The Hinkley Point C Lesson in Detail

Hinkley Point C is the closest structural parallel to the Peace River project: a new large reactor at a site in a deregulated electricity market, built by a private consortium with government revenue support. The UK government committed to a 35-year Contract for Difference at £92.50/MWh in 2013 prices — approximately double the UK wholesale electricity price at the time of commitment. The strike price has since been indexed to inflation and now substantially exceeds its original value in nominal terms. Total construction cost at Hinkley C has escalated from an initial estimate of £18 billion to a current estimate exceeding £46 billion.

Independent analyses conclude that UK consumers will transfer tens of billions of pounds to Hinkley C's owners over the 35-year CfD term, making it one of the largest single-project subsidies in UK electricity history. The UK government, unlike the Government of Alberta, had a specific decarbonisation policy it was willing to pay a premium to achieve, a long history of nuclear generation, an existing nuclear regulator, an established nuclear supply chain, and a workforce with nuclear construction experience. Vogtle, Hinkley, and Flamanville were all built in regions with existing nuclear construction experience and supply chains. Peace River would be Alberta's first nuclear mega-project. The cost premium required at a first-of-kind greenfield site in northern Alberta will be higher than the Hinkley Point C premium — not lower.

34.5.2 The Ontario Comparison — Rate-Regulated, Not Merchant

EA's supporters sometimes cite Ontario's nuclear fleet as evidence that nuclear is commercially viable in Canada. This comparison is not valid for the Peace River project. Ontario's nuclear generation — Bruce Power and Ontario Power Generation — operates under regulated contracts that guarantee cost recovery through electricity ratepayers' bills at above-market prices set through a regulated procurement process. Ontario's nuclear is not a merchant generator competing at the pool price. It is a regulated utility asset whose costs are socialised across Ontario electricity consumers.

Alberta does not have an Ontario-equivalent regulated procurement mechanism. The AUC has no jurisdiction to impose a nuclear surcharge on consumers in Alberta's deregulated market. The only mechanisms available are a provincial government contract for difference — which does not exist — or a federal instrument — which does not exist for new large reactors at this scale. The Ontario comparison is not a valid precedent for the Peace River project's financing model.

34.6 Alberta-Specific Factors That Make Nuclear Economics Worse

The structural incompatibility between nuclear generation and Alberta's market is aggravated by four Alberta-specific factors not present in any comparator jurisdiction. Each independently reduces the commercial viability of the project below the already difficult baseline established by international precedents.

34.6.1 The Remoteness and First-of-Kind Premium

The Peace River project site is located in northern Alberta, approximately 500 kilometres north of Edmonton. There is no nuclear construction workforce in this region and no nuclear supply chain. The nearest comparable industrial construction projects — oil sands facilities — use modular fabrication at southern Alberta manufacturing facilities and fly-in fly-out labour camps. A nuclear project of this scale requires sustained skilled trades presence on site for construction periods that may exceed a decade. The logistics cost premium for a northern Alberta greenfield nuclear site — remote construction camp, extended supply chains, northern wages — is a material construction cost increment not reflected in any of the international LCOE benchmarks in section 34.3. Vogtle, Hinkley Point C, and Flamanville were all built in regions with existing nuclear construction experience and established supply chains; the Peace River project would be Alberta's first nuclear mega-project.

34.6.2 No Established Canadian AP1000 Regulatory Pathway

Energy Alberta's October 2025 pivot from the MONARK SMR to the Westinghouse AP1000 means there is no completed CNSC vendor design review for this reactor type in the Canadian regulatory context. The CNSC completed a pre-licensing vendor design review for the AP1000 in 2019 that identified Canadian code and standard gaps requiring resolution. A full design approval incorporating Canadian-specific modifications has not been completed. The cost and time required to complete the Canadian regulatory pathway — which may include design modifications that affect the final project cost — is not reflected in any cost estimate EA has published.

34.6.3 The Low Pool Price Environment Is Structural, Not Cyclical

Alberta's 2025 pool price of $43.68/MWh is substantially lower than in recent years, and Q1 2025 prices are the lowest since 2018. This reflects structural changes in Alberta's electricity supply: the rapid addition of low-marginal-cost wind and solar generation, new highly efficient combined-cycle gas plants, and demand growth that has not kept pace with capacity additions. These structural factors are not temporary. The AESO's own projections anticipate continued renewable and efficient thermal capacity additions through the late 2020s and 2030s, continuing to exert downward pressure on the pool price through the period when EA would be completing construction.

34.6.4 The Competing Technologies Will Be Cheaper by Opening Day

Show Stopper 32 established that flexible gas with CCS, long-duration battery storage, and closed-loop geothermal will all be materially cheaper by the time the Peace River project enters commercial operation. The relevant comparison is not nuclear LCOE today versus pool price today. It is nuclear LCOE in 2042 versus the LCOE of competing technologies in 2042. Under NREL ATB and IEA WEO mid-case projections, the competing technologies will be 30–50 per cent cheaper in 2042 than they are today. Nuclear, whose cost trajectory is driven by construction inflation and regulatory compliance rather than manufacturing learning curves, will not be cheaper in 2042. The commercial gap between nuclear and its competitors will be larger at opening day than it is now.

34.7 The Market Signal: Private Capital Has Not Committed

The clearest and most objective signal that the Peace River Nuclear Power Project is not commercially viable in Alberta's market is this: no private investor has committed capital to it in fourteen years of development.

Energy Alberta was incorporated in 2012. It has spent fourteen years developing the project. It has filed an Initial Project Description with IAAC. It has announced a Westinghouse partnership. It has engaged with government and regulators. It has not announced financial close. It has not announced a lead equity investor or a lead debt arranger. It has not announced a government revenue guarantee. The project has no committed financing.

Alberta's electricity market has, over the same fourteen years, attracted billions of dollars of private capital to wind, solar, gas, and battery storage projects on merchant terms — without government revenue guarantees, without strike prices, and without government equity. These technologies have demonstrated commercial viability in Alberta's deregulated market. Closed-loop geothermal is moving along a commercialisation path: the Eavor-Loop field demonstration in Rocky Mountain House and the first commercial plant in Bavaria suggest it will be a competitive option in the 2030s. The market is financing the competing technologies. It is not financing nuclear.

That differential treatment is not an anomaly or a market failure. It is the market's assessment — based on actual cost and revenue numbers — that nuclear cannot generate a return at the prevailing and projected pool price without a government revenue guarantee. Under Vavilov, a section 63 public interest determination that accepts EA's need argument while ignoring the market's fourteen-year verdict on the project's commercial viability cannot meet the requirements of justification, transparency, and intelligibility.

34.8 The TISG Omissions and the Required Amendments

The TISG requires EA to provide an Environmental Impact Statement addressing environmental, social, and health factors. It does not require EA to:

— state the minimum revenue per megawatt-hour required to make the project commercially financeable;

— name the government or entity that has committed to provide above-market revenue support, or explicitly state that no such commitment exists;

— quantify the total value of public subsidy required over the project's operational life;

— explain how the project will achieve financial close without a committed revenue guarantee;

— compare the project's required revenue floor against the LCOE of competing technologies in each decade of its operational life; or

— address whether Albertans — most of whom live far from the Peace River watershed — are being asked to finance a subsidy for a project whose risks are borne almost exclusively by Treaty 8 Nations and the Peace River region.

These are not peripheral disclosures. They are the financial facts that determine whether the project is in the public interest. A section 63 determination made without them is a determination made blind to the project's commercial reality. The required TISG amendments are set out below.

REQUIRED TISG AMENDMENT — COMMERCIAL VIABILITY AND REVENUE MODEL DISCLOSURE

Amendment A — Revenue Model and Subsidy Disclosure

(a) The proponent must file a Revenue Model Statement demonstrating how the Peace River Nuclear Power Project will recover its costs in Alberta's deregulated electricity market without a permanent public subsidy. The Revenue Model Statement must state: (i) the minimum revenue per megawatt-hour required to make the project commercially financeable — the 'required revenue floor'; (ii) the proponent's projection of the Alberta pool price in each year from first commercial operation to end of design life; and (iii) the gap, if any, between the required revenue floor and the projected pool price.

(b) If the Revenue Model Statement discloses a gap between the required revenue floor and the projected pool price in any year of operation, the proponent must identify the mechanism by which that gap will be closed — federal or provincial contract for difference, long-term power purchase agreement, rate-regulated recovery, or other instrument — and must name the government or regulated entity that has committed to provide the revenue support. If no such commitment currently exists, the proponent must explicitly state that no commitment has been made and must treat the absence of a committed funder as a material project risk in the Impact Statement, quantifying the

probability and consequences of the project proceeding to construction without a committed revenue mechanism.

(c) The Revenue Model Statement must be cross-referenced to the proponent's financing plan. If the project requires a government revenue guarantee to attract private capital, that guarantee must be identified in the TISG as a project-specific condition whose non-fulfilment is a material risk to project viability. A project that cannot be financed without a permanent public subsidy has not demonstrated commercial need within the meaning of IAA section 22(1)(i).

Amendment B — Market Competitiveness Comparison

(d) The proponent must compare the required revenue floor against the Alberta pool price forecast for each decade of the project's operational life — 2040s, 2050s, 2060s, 2070s — under AESO Low, Reference, and High demand scenarios. For each decade and each scenario, the proponent must state whether the project is commercially self-sustaining at the projected pool price or requires above-market revenue support.

(e) The comparison must include the levelised cost of electricity for each of the three competing technologies identified in Show Stopper 32 — flexible peak-only gas with carbon capture and storage, long-duration vanadium redox flow battery storage, and closed-loop geothermal — under NREL ATB 2025 mid-case projections for the same decades. The proponent must state whether the Peace River Nuclear Power Project is lower-cost or higher-cost than each competing technology in each decade and scenario.

(f) The proponent must disclose the total value of public revenue support — in present-value dollars — that would be transferred from Albertans and from the federal government to the proponent over the project's operational life if the required revenue floor exceeds the projected pool price throughout that life. This figure must be presented in the Impact Statement as a project cost borne by the public, not as a commercial arrangement external to the assessment.

Amendment C — Review Panel Consequence

(g) If the Revenue Model Statement demonstrates that the Peace River Nuclear Power Project requires permanent above-market revenue support throughout its operational life, the Review Panel must expressly address at least the following three questions in its section 63 public interest determination: (i) is permanent public subsidy of nuclear generation in the public interest of Albertans when competing technologies are commercially self-sustaining at market price; (ii) is the public subsidy justified by a benefit to Albertans that competing technologies cannot provide; and (iii) have Treaty 8 Nations, who bear the Emergency Planning Zone risk and the Peace River watershed risk without bearing proportionate share of the electricity demand that drives the need argument, been consulted on the subsidy obligation that their territory's nuclear risk is being used to justify.

FINDING: A reasonable Peace River LCOE band of approximately $120–200/MWh CAD is inferred by applying Vogtle and Hinkley Point C cost experience to a first-of-kind AP1000 at a remote greenfield site in northern Alberta with no existing nuclear supply chain, no Canadian AP1000 regulatory precedent, and a remoteness cost premium. Against AESO's 2025 average pool price of $43.68/MWh — 30 per cent below 2024 and at its lowest level in several years — the inferred price gap is approximately $76–156/MWh, between 2.7 and 5.6 times the current market price.

Every comparable nuclear project built in a liberalised electricity market in the last twenty years required a government revenue guarantee or regulated rate recovery substantially above market price. Vogtle, Flamanville, and Darlington all operated under regulated or state-backed frameworks — they were not merchant projects. Hinkley Point C required a 35-year Contract for Difference at approximately double the UK market price. None were financed as merchant generators in a deregulated energy-only market. The Peace River project proposes to be the first. There is no OECD precedent for it.

No government has committed to provide the revenue support the project requires. No private investor has committed capital in fourteen years of development. Alberta has attracted billions of dollars of private capital to competing technologies on merchant terms without subsidy. The market signal is unambiguous. The TISG does not require EA to disclose a revenue model, quantify the required subsidy, name a committed funder — or explicitly state that no funder has committed. Three TISG amendments are required. Without them, the Review Panel cannot make a valid section 63 public interest determination on a project whose commercial model has never been disclosed on the record.

IAAC TRAP:

IAAC faces a binary choice on commercial viability. Require EA to file a Revenue Model Statement disclosing the inferred revenue floor, the committed funder or explicit statement that no commitment exists, the total illustrative present-value subsidy, and the comparison of that subsidy against competing technology LCOEs across each decade of the project's operational life. Or proceed to Impact Statement without any of this information, and produce a section 63 public interest determination on a project whose commercial model has never been disclosed — a project that, on the available international precedents, requires tens of billions of dollars of public subsidy to operate, in a market whose design specifically excludes every mechanism through which that subsidy could be delivered without primary legislation.

The trap is compounded by the subsidy-risk asymmetry specific to this project. The public subsidy, if committed, will be paid by all Albertans and all Canadian federal taxpayers. The nuclear risk — the Emergency Planning Zone, the tritium in the Peace River watershed, the perpetual radioactive waste, the uncapped liability above $1 billion under the Nuclear Liability and Compensation Act — will be borne almost exclusively by Treaty 8 Nations and the Peace River region. IAAC cannot make a valid public interest determination without requiring EA to address on the record who pays and who bears the risk, and whether they are the same people. On the current evidence, they are not.