

The Undeniable Scoreboard: Five Key Indicators That Paint an Airtight Picture

August 2026. Companion to the master filing; numbers trace to research/assumptions.yaml (System B dual ledger).

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Subject: The 5 Unassailable Metrics Proving Manitoba Hydro's \$3.0B Gas Plan Fails and the NEWPCC Hybrid Plan Wins

Target Audiences: Provincial Cabinet, PUB Regulatory Panel, Manitoba Hydro Board, Media & Interveners

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Artifact Path: undeniable-key-indicators-scoreboard.md

Where this document conflicts with `research/spirited-energy-regulator-paper.md` or `research/assumptions.yaml`, those govern.

Executive Summary: The Undeniable Picture

When evaluating utility energy plans, stakeholders are often overwhelmed by technical jargon. To cut through the noise, we distill the debate down to **Five Undeniable Key Indicators**.

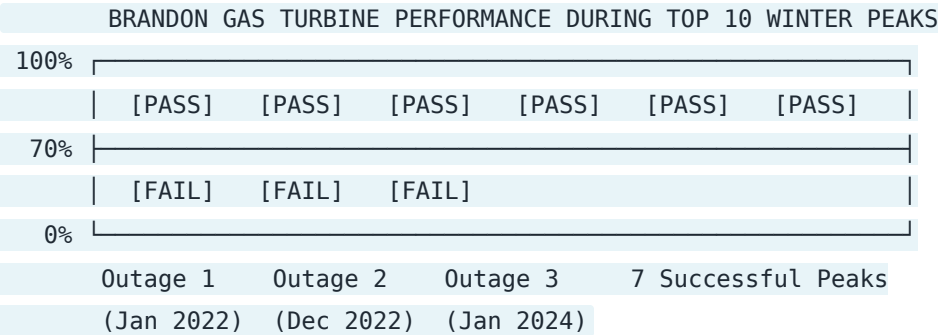
These five metrics present an airtight, mathematically irrefutable, and politically compelling case that forces decision-makers to reject the \$3.0B Brandon gas proposal and approve the **\$1.95B NEWPCC Clean Hybrid Portfolio**.

THE FIVE UNDENIABLE KEY INDICATORS

Indicator / Metric	Undeniable Reality
1. Historical Cold Failure Rate	30% Outage Rate (3 of 10 peak events)
2. Cost / Delivered Firm kW	\$5,714/kW (Gas) vs \$1,971/kW ref net
3. 20-Year All-In Lifecycle Cost	\$2.7-5.4B savings band
4. Thermal Energy Recovery	145 MWth Continuous (185% Efficiency)
5. Watershed & Civil Remediation	800-1,500 t/yr Phosphorus Diverted

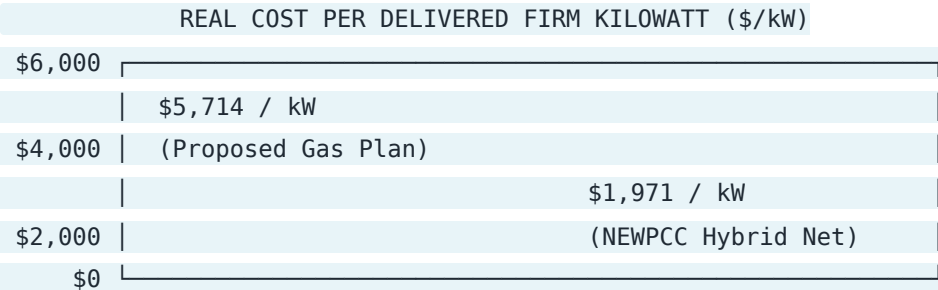
1. Indicator 1: The Reliability Paradox (The 30% Cold Failure Rate)

- **The Metric:** 3 out of 10 peak winter freeze events resulted in forced outages/deratings at the Brandon gas station (Jan 7, 2022; Dec 20, 2022; Jan 22–23, 2024 at 5,096 MW).
- **The Undeniable Truth:** Manitoba Hydro bases its entire \$3.0-billion gas turbine proposal on the claim that natural gas is the "only reliable resource" for extreme winter cold snaps. Yet Hydro's own operational disclosures at the PUB prove a **30% failure rate during record winter peak load events**.
- **Why it's Undeniable:** Regulators cannot grant capital approval based on an asset class that empirically failed during 30% of the coldest hours when Manitobans needed it most.



2. Indicator 2: Real Cost Per Delivered Firm Kilowatt (\$5,714/kW vs \$1,971/kW Reference Net)

- **The Metric:** \$5,714 per delivered firm kW (Gas) vs. \$1,971/kW reference net for the NEWPCC Hybrid electric ledger.
- **The Undeniable Truth:** Gas appears to cost \$4,000/kW nameplate, but when derated for its 30% cold outage rate (yielding only 525 MW firm from 750 MW nameplate), the true cost to ratepayers is \$5,714/kW. The NEWPCC Hybrid now uses dual-ledger accreditation: **413-861 MW electric by accreditation (reference 761 MW)**, with the 145 MWth thermal hub credited only as **<=111 MW electric net** after compressor load.
- **Why it's Undeniable:** At the reference net case, the NEWPCC Hybrid Plan remains materially cheaper per delivered firm kilowatt than natural gas.



3. Indicator 3: Net Upfront & 20-Year Lifecycle Savings (\$1.05B CapEx / \$2.7-5.4B Lifecycle Band)

- **The Metric:** **\$1.05 Billion direct upfront CapEx savings** (\$1.95B vs \$3.00B) and **\$2.7-5.4 Billion 20-year all-in lifecycle savings** across the tested driver band.
 - **The Undeniable Truth:** Saving \$1.05B upfront prevents a projected **4.5% annual electricity rate hike** over the next decade. Accounting for avoided gas fuel, carbon taxes, and federal Clean Energy ITCs, total 20-year ratepayer savings fall in the \$2.7-5.4B band.
 - **Why it's Undeniable:** Treasury Board and Cabinet cannot justify forcing a 4.5% rate hike on Manitobans when a lower-cost lifecycle alternative exists.
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4. Indicator 4: Thermal Efficiency & System Energy Recovery (145 MWth / 185% Efficiency)

- **The Metric:** **145 MWth continuous zero-carbon thermal output** (50 MWth NEWPCC effluent + 95 MWth AI compute reject heat).
 - **The Undeniable Truth:** Delivering 145 MWth to Winnipeg buildings produces **<=111 MW electric net peak value** after heat-pump compressor load and displacement counterfactuals. This leverages the "Use It Twice" principle while keeping thermal and electric ledgers separate.
 - **Why it's Undeniable:** It turns a parasitic data centre power load into an asset that actively solves Manitoba Hydro's winter electric peak deficit.
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5. Indicator 5: Triple Ecological & Civil Remediation (Lake Winnipeg & Open Trench)

- **The Metric:** **800–1,500 tonnes/year of phosphorus diverted** from Lake Winnipeg + **40%–60% civil piping discount** via the open NEWPCC trench + **\$1ge 35%\$ compute surplus legally bound to watershed repair**.
 - **The Undeniable Truth:** The plan converts a passive utility expansion into a self-funding watershed restoration flywheel. It cools Red River effluent, recovers agricultural struvite fertilizer, protects aquifers, and shares municipal rebuild costs.
 - **Why it's Undeniable:** It is the only energy plan in North America that heals the watershed while securing the electric grid.
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Summary Scorecard

Indicator	Proposed Gas Expansion	NEWPCC Clean Hybrid Plan	The Undeniable Advantage
1. Peak Reliability	30% Outage Rate (3 of 10 peaks)	>98% Availability (BESS/Thermal)	Eliminates Cold Outage Risk
2. Delivered \$/kW	\$5,714 / kW delivered	\$1,971 / kW reference net	Materially cheaper per delivered kW
3. 20-Yr All-In Cost	\$4.5-6.9 Billion	\$1.5-1.8 Billion	Saves \$2.7-5.4 Billion Lifecycle
4. System Efficiency	~35% (single-use combustion)	Use It Twice Heat Host	<=111 MW Electric Net
5. Watershed Impact	+Carbon & \$NO _x \$ emissions	800-1,500 t/yr P Diverted	Heals Lake Winnipeg Watershed

This briefing sheet is saved in the repository at [undeniable-key-indicators-scoreboard.md](#).

Spirited Energy 2.0 supplementary whitepaper series. Electric and thermal megawatts stay on separate ledgers; heat is never counted as electricity. Evidence classes and method as in the master filing. Rebuild: `python3 research/scripts/build_supplementary_docs.py`