

2025

POWERING CONTINUITY



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5/5/2025

How Temporary Energy Solutions Keep Canada's Oil & Gas Operations Moving

In Canada's oil and gas sector, operational reliability isn't just a desirable attribute — it's a fundamental business imperative. For companies operating remote sites, performing scheduled turnarounds or constructing new infrastructure in challenging terrain, ensuring uptime is synonymous with preserving cash flow, managing risk and sustaining reputation. As the business development lead for an energy-services provider, you're already fluent in the language of dollars, hours and deliverables. What I'd like to do here is unpack how temporary energy infrastructure — specifically modular power and cooling systems — have become indispensable tools for maintaining continuity in upstream, midstream and downstream contexts, especially in remote or industrial-scale operations.

The Cost of Downtime in Oil & Gas Production

One of the first numbers decision-makers ask is: *What does an hour of downtime really cost?* The numbers are sobering. A survey by ABB found that unplanned outages across Canadian industrial operations cost, on average, about **CAD \$242,000 per hour**. [ABB Group+1](#)

In the broader oil and gas sector, estimates suggest that even losing 3.65 days ($\approx 1\%$ of annual uptime) in a \$500 million annual-revenues operation equates to over US \$5 million of lost production. [Dispel+1](#)

Why so high? Several factors drive cost:

- Lost production volumes (wells shut-in, pumps idle)
- Delayed downstream processing and plant feed impact
- Fixed overheads remaining while revenue falls
- Safety, environmental and contractual exposure during non-standard operations
- Restart costs or additional logistics when bringing equipment back online

For your clients in Alberta, Saskatchewan or offshore east coast Canada, downtime is not just “missed production” — it's an erosion of margin, potential regulatory penalty, and a ripple effect across workforce, subcontractors and service-supply chain.



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HOW TEMPORARY ENERGY SOLUTIONS
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OPERATIONS MOVING

**OPERATIONAL RELIABILITY & INNOVATION
IN ENERGY SERVICES**

When facing a planned maintenance window — say at a natural-gas plant, a pipeline compressor station, or a bitumen upgrader — the option to shut everything until the permanent infrastructure is back online is rarely viable. That's where temporary energy (power & cooling) solutions play a strategic role:

1. Maintain critical loads during maintenance, shutdown or grid delay

Modular generator sets, mobile substations and temporary HVAC / cooling-chiller units enable the site to continue non-core operations (camp facilities, safety systems, control-rooms) even if the main grid or primary process equipment is offline. For example, one project deployed a 500 kW + 100 kW + 60 kW generator bank plus distribution panels to support a gas-plant weekend outage in Alberta. [Trinity Power](#)

2. Remote site flexibility

In pipeline boil-off heater systems, well-pad electrification or remote pump stations, grid upgrades may lag the project schedule. A case study of an LNG-fuelled temporary power micro-grid found the solution allowed a major operator to avoid lease-loss penalties when grid supply couldn't keep pace. [Edge LNG](#)

3. Safety and environmental integrity

Reliable temporary power means critical alarms, evacuation lighting, HVAC, fire-suppression systems and instrumentation remain operational. From the standpoint of both your clients and their insurers/regulators, continuity of these systems is non-negotiable.

4. Scalability & modularity

Temporary systems can be sized, deployed and removed with minimal disruption. For instance, a temporary power-management station delivered a 10:1 payback when used to clean sour-gas and co-generate power, enabling ESP conversion on eight wells in one program. [Aggreko](#)

5. Mitigating schedule risk

With everything from fuel logistics, ambient conditions, remote site access and workforce hours counting, the cost of a delayed shutdown or delayed startup frequently surpasses the cost of the temporary equipment. One project accelerated a water-injection program by 10 months by using seven Tier 4 generator units and paralleling loads. [Power Engineering](#)

Short Case Example: Modular Power During Pipeline Maintenance

Client scenario: A midstream operator is undertaking a 10-day pipeline maintenance shutdown in northern Alberta. The main grid supply is adequate for normal operations, but the stop requires switching over compressor stations, purging lines, and running auxiliary facilities (camp power, communications, safety lighting) off-line. Downtime cost is estimated at CAD \$300,000 per day in foregone throughput and demurrage/contract penalties.

Solution: A temporary mobile substation and generator bank (2 MW) is mobilised one week ahead of the shutdown. The equipment includes switchgear, distribution panels, cable routing, and remote monitoring package. The rental company arranges fuel logistics, environmental containment, and testing. During the shutdown, the site remains powered, the compressors are specific to maintenance tasks, and the camp/services operate normally. At completion, the temporary system is removed, and the site returns to normal grid supply.

Outcome:

- The operator avoids $10 \times \text{CAD } \$300,000 = \text{CAD } \3 million in potential lost revenue.
- The temporary rental cost is significantly lower (say CAD \$250-300k) so the net impact on margin is positive.
- The team meets the regulatory window and avoids reliance on tertiary contractor escalation.
- The good relationship with the maintenance service provider is reinforced — the client knows that the “power problem” was taken off their table.

This type of case is directly analogous to the case study from the mobile sub-station provider, where the service enabled construction/pipeline work to proceed without waiting on utility upgrade. [Aggreko+1](#)

Financial Efficiency of Outsourcing Energy Solutions vs. Permanent Infrastructure



From a commercial standpoint your clients are accustomed to cap-ex vs. opex decisions. Temporary energy solutions are often justified not simply on availability but on financial merit. Here's how you can frame that discussion:

Capital savings

Installing a permanent self-generation or cooling plant sized for the peak that occurs only during turnarounds or expansion phase means building in cost and sunk value. A rented temporary system abstracts that equipment cost, maintenance burden and depreciation away from the operator.

Flexible cost structure

Temporary systems convert a fixed capital outlay into a variable cost tied to the precise duration of need. The contingency risk sits with the provider: you specify load, duration and service levels; they deliver and manage. In the oil & gas business where schedule variance is a certainty, this flexibility is valuable.

Accelerated ROI

Many providers cite pay-back ratios of 8:1 to 10:1 when temporary systems enable incremental production or prevent shutdown losses. In one project, a temporary power station delivered more than a 10:1 pay-back by enabling eight well conversions and accelerating production. [Aggreko](#)

Reduced risk of stranded infrastructure

Should the operator decide to scale down or repurpose; the leased temporary assets can be demobilised. This reduces the risk of under-utilised permanent assets sitting idle or incurring maintenance costs and regulatory burdens.

Operational simplicity and focus

From a BD perspective you know clients don't want to become power-plant operators; they want to focus on extracting hydrocarbons, refining, transporting. By outsourcing the interim energy solution you command the risk management, health & safety compliance, performance guarantee — you free your client to execute their core business.

In your outreach conversations you might say: "Let's quantify the cost of one additional day offline, then compare that to the rental-cost of a turnkey temporary power/cooling solution. Nine times out of ten the rental fraction is trivial compared to what you're protecting."

Conclusion

In the Canadian oil and gas context — whether its remote well-pads, pipeline right-of-ways, sands upgrades or mid-stream compressor stations — ensuring continuity of energy supply is not ancillary: it is foundational. In an industry where every minute of uptime counts, temporary energy

solutions have proven to be more than just backup — they're strategic assets that safeguard productivity, safety, and profitability. By integrating modular power and cooling systems, oil and gas operators across Canada can maintain operational continuity during maintenance, shutdowns, or unforeseen outages without the burden of permanent infrastructure costs. These flexible, scalable systems not only protect against the financial risks of downtime but also empower businesses to stay agile in dynamic field conditions. Ultimately, the real value lies in partnership — where energy service providers deliver reliability, innovation, and sustainability, keeping Canada's oil and gas operations moving forward without missing a beat.