CUBA TRADE BRIDGE

CTB RESEARCH PAPER NO. 004

Energy and Operational Risk in Cuba

Power Outages | Fuel Constraints | Business Continuity | Trade Execution Risk

Version 1.0 - Final English Edition

July 2026



Prepared by Cuba Trade Bridge

Market intelligence | Trade representation | Commercial research

Contents

1. Publication Note
2. Executive Summary
3. Energy Risk as Commercial Risk
4. Cuba's Energy Context
5. Power Outages and Business Continuity
6. Fuel Constraints and Logistics
7. Post-Customs Operational Risk Factors
8. Sector Sensitivity Matrix
9. Four-Party Operational Risk View
10. Household Energy Fit
11. Working Capital and Product Turnover
12. Storage Endurance and Cold-Chain Questions
13. After-Sales and Service Mobility Risk
14. Questions to Ask the Cuban Buyer / MIPYME
15. Questions to Ask the Authorised Importer / Logistics Channel
16. Operational Red Flags
17. CTB Operational Verification Checklist
18. Source Register
19. Disclaimer

Publication Note

This paper is part of the Cuba Trade Bridge Research Paper Series. It is designed for foreign exporters, trade managers, commercial teams and market-entry advisors evaluating Cuba-related transactions.

The paper treats energy and fuel conditions as commercial operating factors. It is not a technical engineering assessment of Cuba's electric grid, nor is it legal, banking, logistics or investment advice.

Series position

No.001 addressed foreign companies and trade permissions. No.002 addressed payment, banking and financial risk. No.003 addressed MIPYMEs and counterparty verification. No.004 focuses on operational execution risk: whether goods can be stored, handled, distributed, sold and used under current operating conditions.

Executive Summary

In Cuba-related trade, operational execution risk can be as important as legal permission, buyer demand or payment structure. Electricity outages, fuel constraints and infrastructure limitations may affect storage, cold-chain continuity, inland delivery, retail execution, payment timing, after-sales service and consumer sellability.

The purpose of this paper is not to overstate risk, but to help exporters ask practical questions before shipment. A buyer may be real, an import channel may be authorised, and a payment route may be plausible. The transaction still needs operational verification: where the product will be received, how it will be stored, who will move it, whether backup power and fuel are available, and whether the final consumer can actually buy and use it.

Core thesis

In Cuba-related trade, operational execution risk can be as important as legal permission, buyer demand or payment structure.

1. Energy Risk as Commercial Risk

Energy risk should be understood as a commercial operating condition. Power availability can affect production, warehousing, cold storage, communications, electronic payments, sales points and customer service.

For exporters, the relevant question is not only whether the product can legally enter Cuba, but whether the product can be protected, delivered, sold and used after arrival.

Area	Possible commercial impact	Exporter verification question
Production	Delays, downtime or reduced output	Can the buyer continue production during outages?
Warehousing	Handling delays, lighting or equipment limitations	What operating capacity remains during outages?
Cold storage	Temperature deviation or spoilage	Is backup power available and fuelled?
Retail	Sales interruption or payment-system disruption	Can the store operate and process sales?
Communication	Coordination delays	Are mobile/data alternatives available?
Service	Installation and repair delays	Can service teams move and work during disruption?

Practical message

Power availability should be treated as a practical operating condition, especially for products requiring refrigeration, processing, electronic systems or continuous service.

2. Cuba's Energy Context

This section provides operating context rather than a technical engineering assessment. Cuba's energy system should be monitored through official Cuban energy sources, statistical data and recent operational reporting.

Official and institutional sources are useful for different purposes. MINEM and UNE are relevant for system status and institutional context; ONEI provides structural statistical background; IEA provides external energy-mix context; and international news agencies provide current blackout and fuel-disruption context.

Source type	Use in this report
MINEM / UNE	Official operating context, SEN updates, system recovery and public institutional statements.
ONEI	Baseline statistical data on mining, energy and electricity.
IEA	External energy-mix context, including Cuba's dependence on oil products for power generation.
Reuters / AP	Current operational context on nationwide blackouts, fuel constraints and social/economic effects.
CTB field observation	Commercial interpretation of consumer behaviour, product fit and sellability under energy constraints.

3. Power Outages and Business Continuity

Business continuity should be assessed at the level of the specific transaction. Some products are highly sensitive to outages; others may be less affected by electricity but exposed to logistics or retail disruption.

Exporters should ask whether the buyer's facility, warehouse or sales point has backup power, whether that backup system has fuel, and how long the facility can maintain required operating conditions.

Operational area	Risk from outages	Verification question
Cold storage	Temperature deviation and product loss	Is the cold storage connected to backup power?
Retail	Sales interruption	Can POS/payment systems operate during outages?
Production	Output delays	Can production continue with backup systems?
Warehouse handling	Loading/unloading delays	Is equipment, lighting and staff capacity available?
Communication	Coordination failure	Are mobile/data backups available?
Payment	Transaction timing friction	Can payment be processed reliably during outage periods?

4. Fuel Constraints and Logistics

Fuel availability affects both transport capacity and backup-power reliability. For many transactions, the same fuel constraint may affect inland trucking, refrigerated vehicles, generators, technical service visits and distribution routes.

Logistics element	Fuel-related issue	Commercial effect
Port pickup	Truck availability and fuel access	Delayed removal from port or warehouse.
Inland delivery	Transport scheduling constraints	Slower delivery to buyer or retail points.
Cold-chain vehicles	Fuel for refrigerated transport	Temperature-control risk during transport.
Generators	Fuel for backup systems	Backup power may not be reliable without fuel.
Technical service	Service-team mobility	Installation and repair may be delayed.
Rural delivery	Longer fuel-intensive routes	Distribution outside major cities may be more exposed.

Key message

Fuel availability affects both transport capacity and backup-power reliability.

5. Post-Customs Operational Risk Factors

Post-customs handling, storage and inland delivery should be treated as operational risk factors, especially for products sensitive to temperature, delays, handling conditions or fuel availability.

Risk factor	Why it matters	Control question
Port removal timing	Delays can create storage or demurrage exposure.	Who is responsible for pickup after customs clearance?
Inland transport	Fuel and vehicle access may affect delivery timing.	Is transport capacity confirmed before shipment?
Receiving warehouse	Storage conditions determine product integrity.	Is the receiving location ready and suitable?
Temperature control	Sensitive goods require continuous conditions.	What temperature range must be maintained?
Delay costs	Additional expenses can affect profitability.	Who pays delay, storage or demurrage costs?
Delivery responsibility	Unclear responsibility creates dispute risk.	Where does responsibility transfer after arrival?

6. Sector Sensitivity Matrix

Sector / product type	Energy sensitivity	Fuel / logistics sensitivity	Key concern
Frozen food	Very high	High	Cold-chain continuity.
Fresh food	High	High	Spoilage, turnover and distribution timing.
Pharmaceuticals	Very high	Medium-high	Temperature-control and handling conditions.
Dry food	Low-medium	Medium	Distribution, affordability and package size.
Agricultural inputs	Medium	High	Rural delivery and seasonal timing.
Spare parts	Low-medium	High	Delivery and service timing.
Construction materials	Low	High	Transport capacity and unloading.
Hospitality supplies	Medium	Medium-high	Demand interruption and delivery consistency.
Equipment / machinery	Medium	High	Installation, service and parts mobility.

Product-risk message

Product risk depends not only on the product category, but also on storage, delivery, preparation and end-use conditions.

7. Four-Party Operational Risk View

Operational risk should be considered from the perspective of the supplier, buyer or MIPYME, logistics channel and final consumer.

Actor	Perspective	Key question
Supplier	The supplier wants the product to arrive in usable condition and generate repeat business.	Can the product be stored, delivered and used under current operating conditions?
Buyer / MIPYME	CIF price matters, but total landed cost and sellability also matter.	Can the buyer convert the imported product into profitable local sales?
Logistics channel	Delivery planning should reflect fuel, storage, handling and timing constraints.	Can the route from port to receiving point be executed reliably?
Final consumer	The consumer judges the transaction by availability, affordability, quality and usability.	Can the consumer actually buy and use the product?

Four-party message

The transaction does not end when goods arrive in Cuba. It succeeds only when the final consumer can actually buy and use the product.

8. Household Energy Fit

Field observation: in low-budget Cuban households, unreliable electricity changes purchasing behavior. Consumers often prefer small quantities, shelf-stable products, fast-turnover items and goods that do not require refrigeration or electricity-intensive preparation.

Consumer constraint	Likely purchasing behaviour	Product implication
Limited cash	Small quantities and frequent purchases.	Smaller pack sizes may sell faster.
Unreliable refrigeration	Preference for shelf-stable items.	Cold-chain products face household-level risk.
Power cuts during cooking hours	Preference for easy preparation.	Products requiring long electric cooking may be less attractive.
Spoilage risk	Avoidance of items that can be lost quickly.	Low-waste and immediate-use formats matter.
Brand availability gaps	Flexible substitution between brands.	Availability and price may beat brand loyalty.
Household budgeting	Price per meal or use matters.	Affordable unit economics are important.

Sellability message

A product may be technically importable, but if it does not match household energy reality, it may face weak sellability.

9. Working Capital and Product Turnover

Energy and logistics disruptions can slow product turnover and affect the buyer's cash cycle. If goods remain in stock longer than expected, require costly storage, suffer damage or sell slowly because of household constraints, the buyer's working capital can become tied up.

Risk	Possible effect	Commercial question
Slow turnover	Cash remains tied in inventory.	How quickly can the buyer sell the product?
Storage cost	Profit margin may narrow.	Are storage costs included in the landed-cost estimate?
Spoilage or damage	Inventory loss reduces profitability.	What product-loss risk is expected?
Price pressure	Consumer affordability may limit sales.	Is the final retail price realistic?
Delayed delivery	Sales cycle begins later than planned.	What is the expected delivery timeline after customs?
Reorder uncertainty	Repeat business may be delayed.	Can the buyer finance the next order?

10. Storage Endurance and Cold-Chain Questions

For temperature-sensitive goods, storage endurance should be verified before shipment. The issue is not only whether a warehouse exists, but whether it can maintain required storage conditions during interruptions.

Question	Why it matters
How many hours can the warehouse maintain required conditions during a power outage?	Establishes actual storage endurance.
Is backup power available for the cold room or freezer?	Determines continuity of temperature control.
Is fuel available for the generator?	Backup power depends on fuel availability.
Are temperature records kept?	Provides evidence of storage discipline.
Where will goods wait if delivery is delayed?	Identifies contingency storage.
Is refrigerated transport available if needed?	Protects the product during inland movement.
Who bears product-loss risk if conditions fail?	Clarifies commercial responsibility.

11. After-Sales and Service Mobility Risk

For equipment and machinery, operational risk includes installation, maintenance, spare parts and service mobility. A product may be delivered successfully but still underperform commercially if it cannot be installed, serviced or repaired under local conditions.

Area	Risk factor	Verification question
Installation	Technical team may be unavailable or delayed.	Who installs the equipment and when?
Maintenance	Regular service may require fuel and spare parts.	Is a maintenance plan available?
Spare parts	Parts may face import or delivery delays.	Are critical parts stocked locally?
Service mobility	Technicians may face fuel and transport constraints.	Can the service team reach the site?
Power requirements	Equipment may require stable power.	Can the site support the required power load?
Warranty	Warranty obligations may be hard to execute.	What is the practical warranty process?

Equipment message

For equipment and machinery, operational risk includes installation, maintenance, spare parts and service mobility.

12. Questions to Ask the Cuban Buyer / MIPYME

- Do you have backup power for your warehouse or retail location?
- Do you have sufficient fuel for backup systems?
- How many hours can your facility operate during a power outage?
- Is cold storage required for this product?
- Is your cold storage connected to backup power?
- Who is responsible for inland transport after customs clearance?
- Do you use your own vehicles or third-party logistics?
- How do fuel shortages affect your delivery schedule?
- Can you receive goods during blackout periods?
- Do you have recent experience handling similar products?

13. Questions to Ask the Authorised Importer / Logistics Channel

- Who is responsible for port pickup?
- What is the expected timeline from customs clearance to warehouse delivery?
- Are storage and demurrage risks included in the quotation?
- Is refrigerated transport available if required?
- Is backup power available at the receiving warehouse?
- Who pays additional costs caused by delays?
- Can delivery be scheduled around fuel or electricity constraints?
- What happens if fuel shortages delay inland transport?

14. Operational Red Flags

Red flag	Why it matters
Buyer cannot explain storage conditions	Product handling may be unclear.
Cold-chain product but no backup-power plan	Temperature-control risk.
Delivery depends on third-party transport with unclear fuel access	Delivery timing risk.
Warehouse exists but operating capacity is not documented	Capacity needs verification.
Product requires refrigeration at household level	Consumer sellability may be affected.
Large package size for low-budget consumers	Slower turnover risk.
Equipment sale without service plan	After-sales risk.
Good CIF price but unclear landed cost	Profitability may be overstated.

15. CTB Operational Verification Checklist

Before contract

- Energy sensitivity of the product identified.
- Cold-chain requirement confirmed or excluded.
- Buyer operating capacity discussed.
- Authorised importer and logistics channel identified.
- Final-consumer use conditions considered.

Before shipment

- Warehouse and receiving point confirmed.
- Backup power and fuel plan discussed.
- Inland transport responsibility clarified.
- Delay and additional-cost responsibility allocated.
- Storage conditions for sensitive products verified.

After arrival

- Port removal plan monitored.
- Goods delivered to the correct receiving location.
- Storage conditions maintained where relevant.
- Distribution plan remains executable.
- Retail and household-use conditions remain aligned with the product.

16. Source Register

Source	Use in report
MINEM - Situacion del SEN / acciones de recuperacion	Official Cuban energy-system context and recovery explanations.
UNE - Estado del SEN / Nota Informativa	Official operational updates on electricity-system availability and deficits.
ONEI - Anuario Estadistico de Cuba 2024: Mineria y Energia	Baseline energy and electricity statistical context.
IEA - Cuba Energy Profile / Energy Mix	External institutional context on energy mix and oil-product dependence.
Reuters - July 2026 blackout reporting	Current context on nationwide blackouts, fuel constraints and business disruption.
AP - July 2026 blackout and fuel reporting	Current context on grid deterioration, fuel constraints and social/economic effects.
CTB field observation	Commercial interpretation of low-budget household purchase behavior under unreliable electricity.

Source links: minem.gob.cu; unionelectrica.cu; onei.gob.cu; iea.org/countries/cuba; reuters.com; apnews.com.

17. Disclaimer

This report is provided for informational and commercial research purposes only. It is not a technical engineering, legal, banking, logistics, customs, insurance or investment advice document.

Cuba-related transactions may be affected by changing operational, energy, fuel, logistics, financial and regulatory conditions. Exporters should verify transaction-specific facts directly with buyers, authorised importers, logistics providers, banks, insurers and relevant professional advisors before making commercial commitments or shipping goods.

CUBA TRADE BRIDGE

Market intelligence | Trade representation | Commercial research

Research Paper Series

No. 004 - Energy and Operational Risk in Cuba

Version 1.0 - Final English Edition

