Retail Council of Canada (RCC)

Renewed Regulatory Framework for Electricity

OEB Stakeholder Conference
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Retail Council of Canada (RCC)

- The voice of retail across Canada
- RCC members: 80% of retail sales nationally
- Large chains and small independents
- Retail employs 805,600 Ontarians (the province's 2nd largest employer)

loop initiatives

Sustainably motivated • Business minded

Retail Sector Electricity Insights

Retail Council of Canada
March 20, 2012

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Research methodology

Data on electricity use in the retail industry is lacking

- Literature review revealed no information beyond high-level energy use profiles and typical conservation measures
- Published information does not apply to current Canada/Ontario scenario
- Retailers treat electricity use and cost as confidential information due to industry competitiveness and investment in acquiring expertise
- New information required to inform RCC consultation response

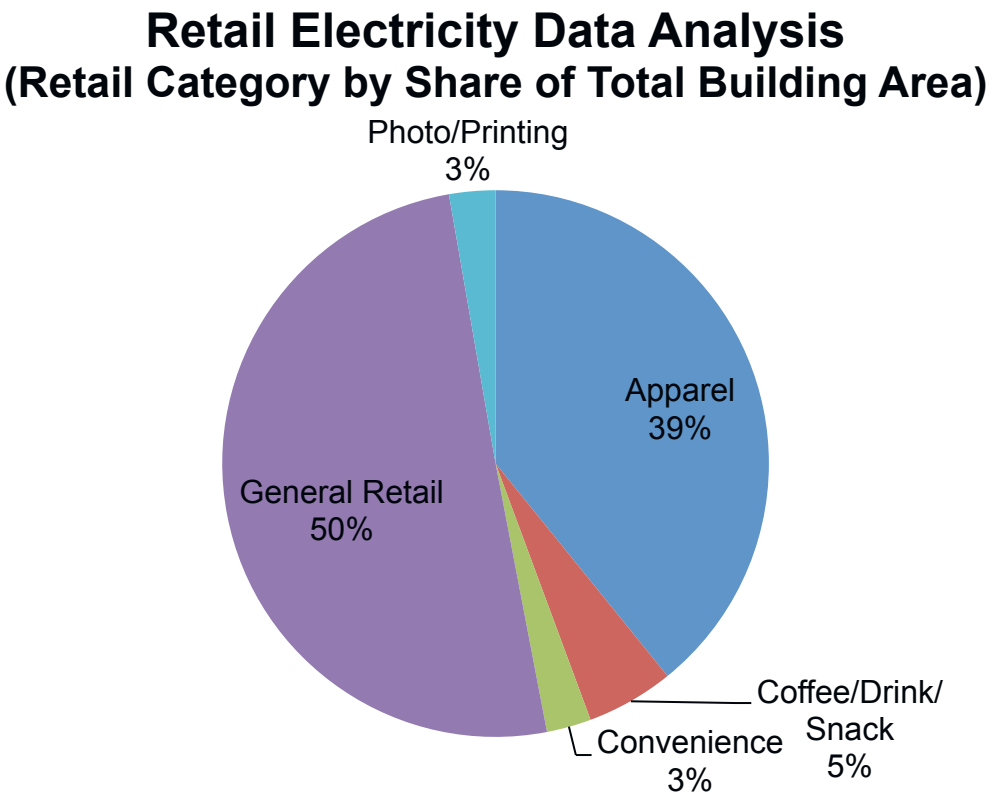
Industry associations and government sources were reviewed (limited use)

Type of Association	Reviewed Association Websites

Government	• ENERGY STAR U.S. and Canada
	• Natural Resources Canada (NRCan)
	• U.S Department of Energy –
	  • U.S Energy Information Administration (EIA)
	  • Retail Energy Alliance

Industry	• International Council of Shopping Centers (ICSC) • Food Marketing Institute (FMI) • Professional Retail Store Maintenance Association (PRSM) • Edison Electric Institute (EEI) • International Facility Management (IFMA) • American Council for an Energy-Efficient Economy (ACEEE) • Independent Electricity System Operator (IESO)
Not for Profit	• Alliance to Save Energy, U.S. • Carbon Trust, U.K. • Greening Retail, Canada

We analysed 12 months of sub-metered TOU data from 34 small retailers to determine use profiles



Source: Halsall Building Energy Database; Actual 2011-2012 data from 34 retailers located in shopping concourse of Toronto indoor office complex.

We also interviewed 6 large and 2 small retailers with Ontario presence

Telephone Interview Participants

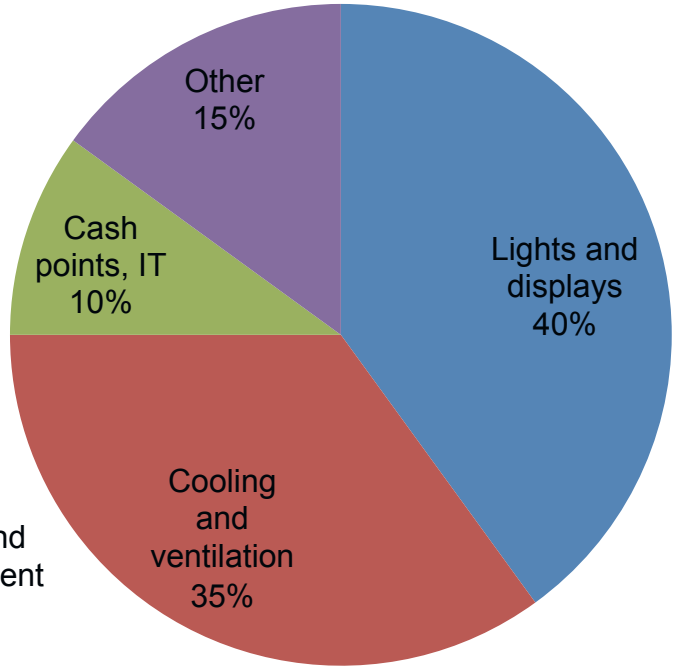
Size	Type of Retailer	Role
Large	Grocer	Director Risk Management
	Grocer	Lead Energy Management
	Big Box Furniture	Country Facilities Manager
	Department Store	Senior Manager Energy
	Chain – Telecom & Media	Energy Manager
	Chain – Specialty Retailer	Manager Energy & Environmental Management
Small	Sporting Goods	General Manager
	Kitchenware Goods	Vice President

Note: Interviews were agreed to under the promise of confidentiality.

Electricity use and cost implications

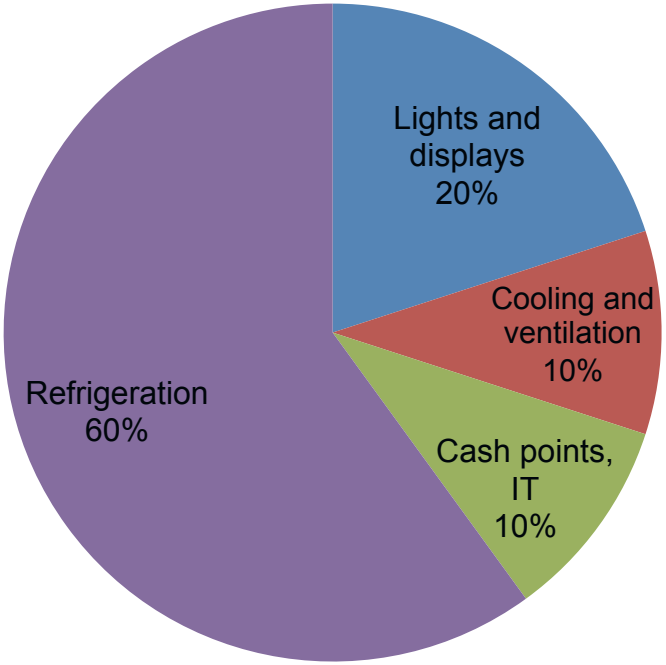
Lighting and refrigeration consume most electricity in stores

General Retailer



Higher in summer and in department stores

Grocer

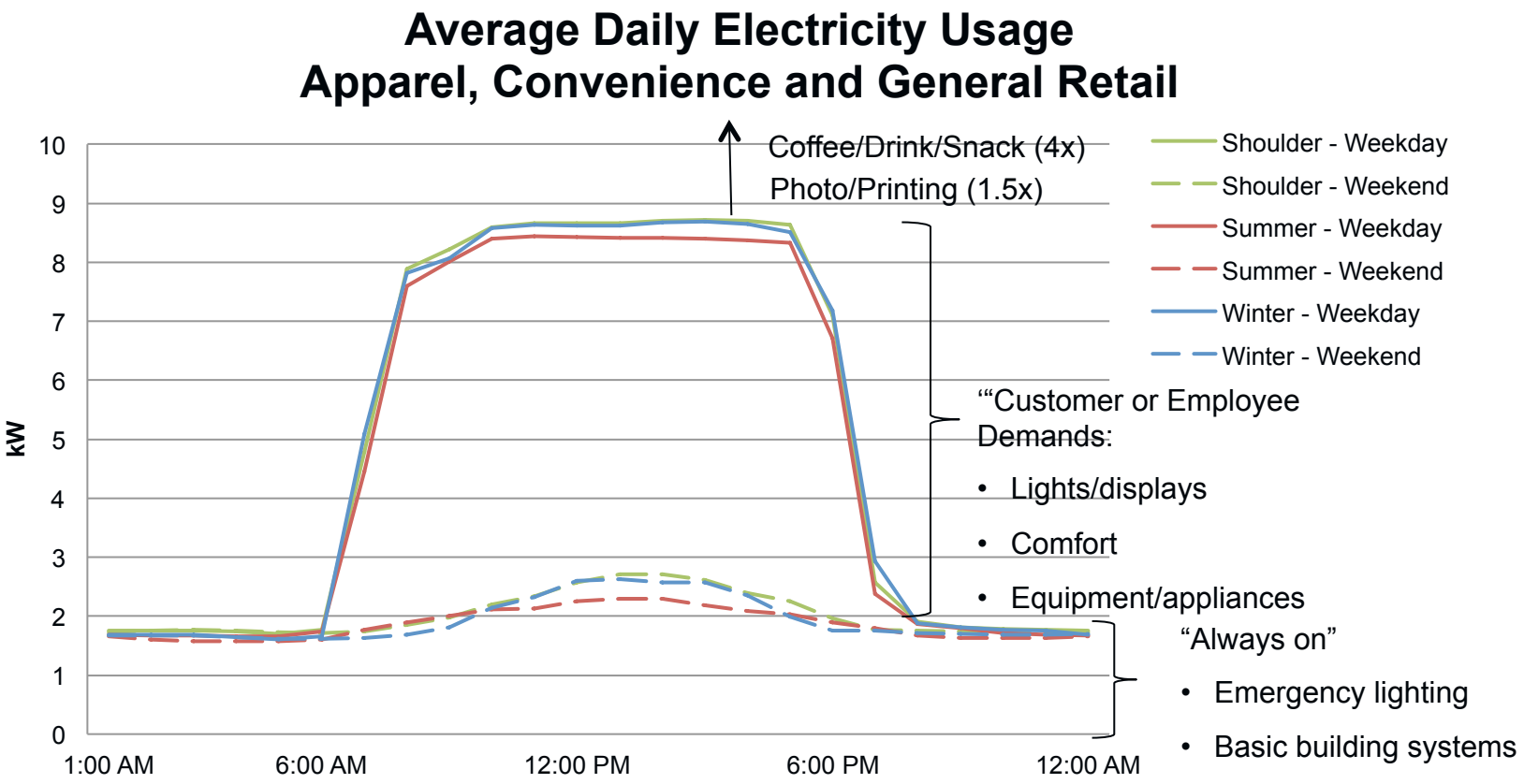


Higher in summer

Higher in summer

Sources: Loop Initiatives interviews with large retailers. Small retail assumed to be similar (lack of data/analysis).

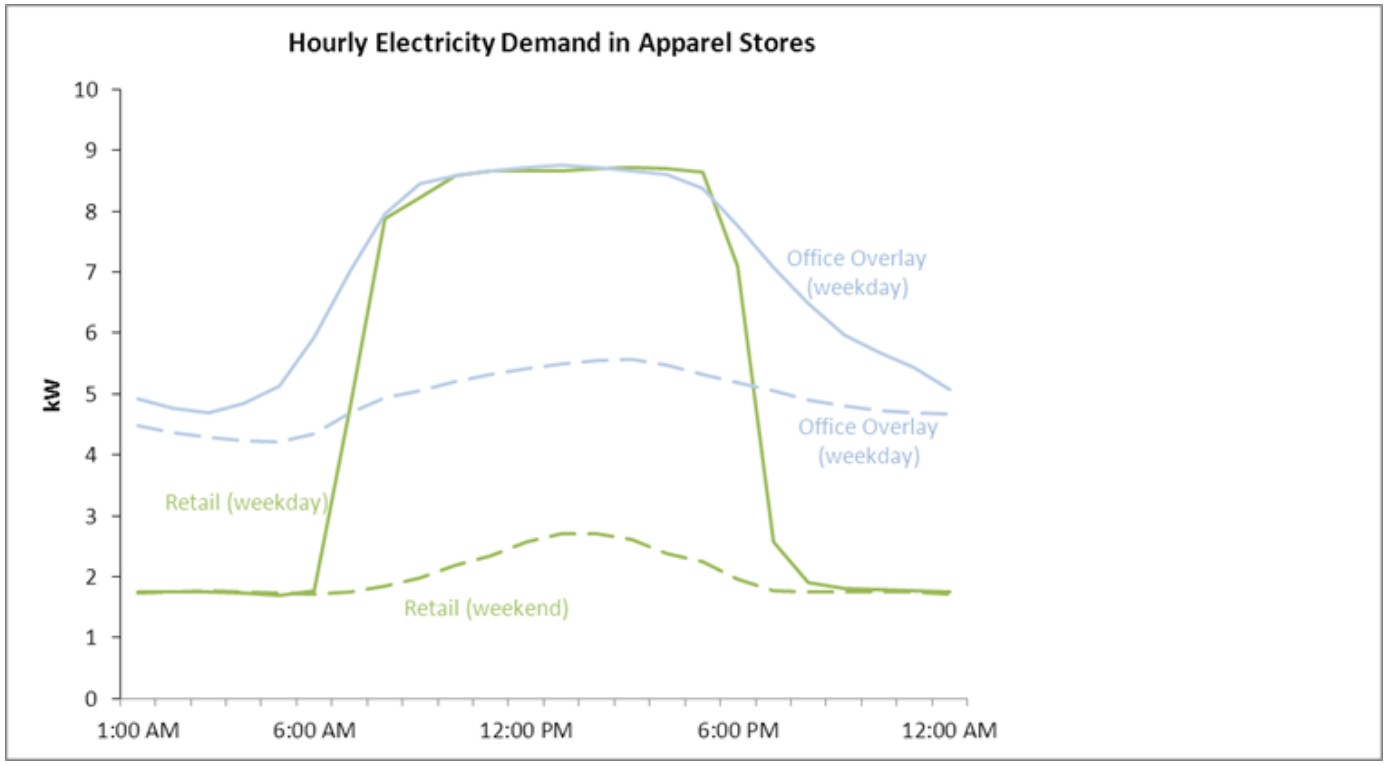
Retail electricity consumption is a function of opening hours



Source: Halsall Building Energy Database; Actual 2012 data from 34 retailers located in Toronto indoor office complex mall.

Retailers are relatively more exposed to TOU than consumers with a larger share of steady use

Retail vs. Office Electricity Consumption Profile



Source: Halsall Building Energy Database.

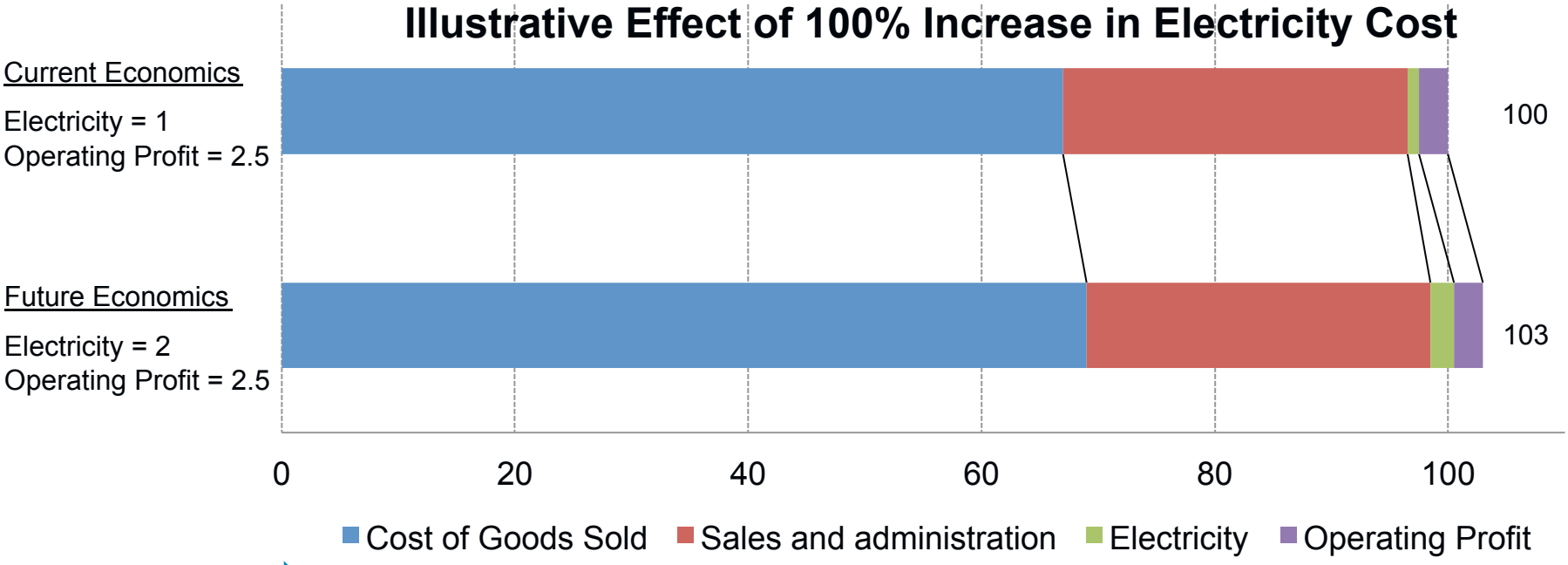
Electricity can represent a significant cash cost for a small retailer

Typical Daily Electricity Use for a 1,500 ft² Shop

Retail Category	Annual Electricity Use (kWh)	Estimated Annual Cost ($)	Equivalent FTE Cost
Apparel	35,620	3,562	17%
Coffee/Drink/ Snack	171,596	17,160	83%
Convenience	41,182	4,118	20%
General Retail	34,518	3,452	17%
Photo/Printing	34,896	3,490	17%

Notes: Actual electricity use for sample of 34 retailers operating 65hrs/wk; estimated cost of 10 cents/kWh; estimated annual salary cost of $20,700 (min. wage, CPP, EI).

A doubling of electricity cost requires a 3% increase in sales to obtain same profit



Two Strategies to Mitigate Electricity Price Increase: Increase sales with 3% OR decrease fixed costs with 3%

Sources: Loop Initiatives interviews with large retailers. Review of retailer financial statements published in annual reports.

Electricity Management

For large retailers electricity management is a key competitiveness factor

Observed Management Strategies at Large Retailers

- Execute bill audits: check invoices and compare metered consumption and applicable rates
- Implement utility management system: access to all consumption and cost data in one location and analytical tools
- Invest in energy efficiency where positive ROI
- Bulk supply (retail) contracts: lock in or hedge electricity costs
- Demand response: obtain advance warnings of black-outs and obtain compensation for shut down
- Own generation: avoid peak rates; sell electricity to distributors at premium rates

Significant investments in know-how and technology are required to manage risk and opportunity

Sources: Loop Initiatives interviews with large retailers.

Due to lack of expertise, small retailers are more exposed to price increases

Small Retail Disadvantages

- Electricity management is not a core competency - difficult to access, interpret and take action on electricity data – *"No one in the company would know % breakdown of electricity use"* [general manager, small retailer]
- Unaware of options to reduce electricity use *"We need lights and computers to run the business"* [vice president, small retailer]
- Not affordable to hire specialized staff or outsource to third party providers
- Often covered by TOU rates (where SMART meters have been installed)
- Typically unaware of changes to rates until after the fact - "*It just showed up on our bill*" [energy manager, chain of smaller outlets]
- Sense that they have no power - "*We have tried to get the data for more than two years and we are still trying*" [energy manager, chain of smaller outlets]

Support programs needed to enable level playing field

Sources: Loop Initiatives interviews with large and small retailers.

Large retailer management experience shows potential, but execution barriers exist

Common Strategies to Reduce Electricity Demand

Base Load	Peak Load	Total Demand
• JIT scheduling of ventilation, cooling and lights • Equipment testing and maintenance • Fridge "curtains" • Minimum requirements for store cleaning and stocking	• Dimmed lights • Reduced cooling • Systems shut down	• Light retrofits (e.g. LED) • Upgrades of fridges, freezers and chillers • Switch to closed fridges and freezers • On-site renewable generation

Issues to Execute Strategies:

- **Access to expertise**
- **Negative sales impact**
- **Significant capital requirements**
- **Available technology**
- **Customer mindset**

Sources: Loop Initiatives interviews with large retailers.

Large retailers do not feel they can control a large share of their cost, reducing incentives to take action

Potential Components of Electricity Bills

Type of Charge	Observed Charges	
Consumption Charge	• Global adjustment • Wholesale operation charge • Special purpose fee	
Demand Charge	• Distribution charge • Lost revenue adjustment • Transformer allowance	• Shared savings charge • Transmission charge
Fixed Charge	• Local access fee • Customer charge • Basic charge	• Electric energy charge • Administration charge • Delivery charge

Sources: Energy industry research. Loop Initiatives interviews with large retailers.

Present contract structures dis-incentivize retailers to manage electricity

High-level Overview of Contract Structures

Contract Structure	Applicable Retail	Subject to TOU	Ability to Influence		
			Consumption Charge	Demand Charge	Fixed Charge
Retail contracts with wholesalers	Large chains; Very large stores		✓	✓	
TOU pricing with local retail distributor	Small stores; Street location (non-mall)	✓	✓		
Billed directly by local retail distributor	Small stores; Street location (non-mall)		✓	✓	
Billed via landlord based on fixed/ leased area rate	Shared building; Shopping centre location				
Billed via landlord based on sub-meter	Shopping centre location	✓	✓		

LACK OF INCENTIVE TO TAKE ACTION

LACK OF INCENTIVE TO TAKE ACTION

Source: Loop Initiatives analysis.

At present, retailers do not appear to be significantly concerned about black-outs

System Reliability – Interview Synthesis

- Electricity system reliability is very important due to impact on sales, employee/customer safety and security/theft
- In interviews, retailers did not indicate that black-outs are a major concern at current service levels, especially when compared with large and/or unpredictable price increases
- Most supply disruption is managed by battery back-up power provided by landlord, rented or own generator capacity
- Large scale disruption is most critical as electronic transactions (e.g. Interac, Visa) are not feasible

 Source: Loop Initiatives interviews with large and small retailers.

Battery power is typically used during periods of shorter black-outs; presence of generators varies

Factors Driving Backup Capacity

	Electricity Draw	Code Requirement	Health & Safety	Insurance Requirement	Internal Decision
Battery Power to Enable Max 6 hours of Critical Operations	Emergency Lighting	✓	✓	✓	
	Security System	✓		✓	✓
	Point of Sale System				✓
Generators to Enable Business Operations	Refrigeration				✓
	Lights				✓
	Building System				✓

Source: Loop Initiatives interviews with large and small retailers.

Economic context: crucial

- Intense pressure on profit margins
  - Increased minimum wages
  - Competition
  - A struggling economy
- Factor cost increases matter: higher costs → lower employment

Energy and business

- Energy: not just a fixed cost of doing business, it dramatically influences retail success

Communication

- Better communication in the language of retailers
  - Accessibility of usage data
  - Explanation of programs
  - Two-way dialogue

Reliability

- Spoilage, payment processing & security
- Priority is cost certainty and control

Cost certainty and control

- Mitigation strategy
- Lumpiness
- Predictable prices
- Appropriate demand forecasts
- Balanced, effective incentives
- Improved planning

Thank you

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