

C.5.3 [REDACTED] Market

[REDACTED]

[REDACTED]

General Building Characteristic

- Primary Use – retail supermarket
- Age – approximately 20 years old
- # of floors - 1
- Total Building Area – 12,500 ft²
- 100' * 125' rectangular structure
- Energy Types
 - BEL Electricity (Customer number 19754)
 - Butane for bakery oven only
- General Operation Schedule
 - Main floor is open 7:30 am to 9:30 pm Mon-Sat; 7:30 am to 2:30 pm Sun
 - Office is open 9 am to 5 pm Mon-Fri
 - Cool room and ref/freezer room are cooled 24/7
 - Bakery open 9:00 am to 4:30 pm

Building Envelope

- Construction type –
 - Wall
 - corrugated aluminum
 - no insulation
 - Roof
 - Corrugated aluminum
 - No insulation
- Day lighting on roof
 - Yellow corrugated fiberglass, 20 panels with 2.5' x 8' area
- Windows
 - % of wall Area = 0%
- Shading
 - N/A

Controls

- Type of controls
 - Lighting – Manual, metal halides turned on at 6:30 pm
 - AC = Manual, running in cooler rooms 24/7
 - Plug/Process Loads – Manual
- Control Schedules
 - Lighting – on only when occupied
 - AC – 24/7

- Plug/Process Loads – on only when occupied

Utility Rates and Energy Performance

- BEL Customer # = 19754
- 2013 average rate of \$0.247 / kWh
- Annual equivalent consumption – 240,905 kWh
- Electricity use intensity – 19.3 kWh/sf-yr

Row Labels	Sum of Usage (kWh)	Sum of Charges (BZD)	Average of BZD/kWh
January	19691	8338	0.440
February	19403	9758	0.507
March	19497	9811	0.507
April	19396	9771	0.508
May	22390	11242	0.508
Grand Total	100377	48920	0.494

Lighting Types

- Overhead Lighting
 - 34 x 400W metal halide
 - 22 x 120W CFL clusters
 - 7 x 2 x 40W T12
 - 2 x 3 x 32W T8
 - 2 x 4 x 40W T12 in offices
 - 7 x 3 x 23W halogen
 - 2 x 2 x 23W halogen
 - 4 x 13W CFL

Air Conditioning

- Conditioned area in refrigerator/freezer room ~450 sf, approximately 350 sf in cool dry storage and offices = 6.4% of total building is conditioned
- Refrigerator/freezer room
 - 3 split AC units, each with 22,000 Btu/hr, 2010W, 18 SEER
- Cool room
 - 1 split AC unit, assume 12,000 Btu/hr, EER 10
- Office
 - 1 split AC unit, assume 12,000 Btu/hr, EER 10
- 4 small ceiling fans in produce section

Plug & Process Loads

- Refrigerators
 - 3 open chest freezers, old
 - 5 chest freezers, with top

- Large glass door display upright refrigerators, 15 doors wide, old
- Bakery refrigerator, 765W
- Cooking Equipment
 - Bakery oven 200 MBH burner, ½ hp motor

Domestic Hot Water

- None

Energy Conservation Measures (ECM)

- Improve insulation in refrigerator / freezer rooms
- Replace old refrigerators and freezers
- Replace metal halides with LED high bays
- T12 to T8
- Power factor correction (publics just implemented this)

C.5.4 Bowen & Bowen

Date of Audit: August 22, 2013

Completed By: Rene Allen, Young's Engineering Consultancy Limited

General Building Characteristic

- Primary Use – Office
- Age - > 15 years
- No. of Floors – 2 buildings, 2 floors each
- Total Building Area #1 – 10,491.6 ft² : 5245.8 ft²
56'-11" x 92'-2" rectangular structure
- Total Building Area #2: 5,746 ft²
- Energy types – All Electric, No fuel used

General Operation Schedule

- Occupied Monday to Friday 7am -5pm
- After hours cleaning 3hours/day
- Hours open Monday to Friday 9 hours Average 45/week
- Hours closed 15 hours
- Peak # of occupants when open – 80

Building Envelope

- Construction Type

Wall

- Plastered concrete masonry
- No insulation