



NANAIMO LADYSMITH
PUBLIC SCHOOLS

2017 2018 Budget
February 22, 2017

Learning Together

Department of Facilities **Energy Management** 2020 Vision

Energy Management 2016/17 - A Year In Review

▶ **Increased District Energy Management Initiatives**

- ▶ Energy Cup
- ▶ BC Hydro Team Cleaning article
- ▶ BC Hydro congratulatory letter
- ▶ Carbon Neutral Government recognition
- ▶ Positive stories presented through SD68

Communications Department

Energy Management 2016/17 - A Year In Review

- ▶ **Reporting to external stakeholders**
 - ▶ 2 Strategic Energy Management Plans
 - ▶ 4 BC Hydro Quarterly Reports
 - ▶ 3 Fortis Quarterly Reports
 - ▶ SMARTTool carbon emissions reporting
 - ▶ CNAR reporting

- ▶ **Attended**
 - ▶ Energy Manager forum
 - ▶ Climate Action Symposium
 - ▶ Over 12 BC Hydro webinars
 - ▶ Energy Wise Training Summits

Energy Management 2016/17 - A Year In Review

▶ **Other activities:**

- ▶ Completed a boiler plant upgrade Coal Tyee
- ▶ Advanced design of Hammond bay CNCP/SEP/AFG
- ▶ Advanced design of Cinnabar boiler replacement
- ▶ Advanced design of Park Avenue Mechanical System
- ▶ Implementing SEMP for 16/17
- ▶ Planning for 17/18 SEMP
- ▶ Reviewing closed building heating standards
- ▶ Engineering study to identify fragmented heating systems for potential upgrade
- ▶ Actively reviewing utility invoices for accuracy & PUMA for performance
 - ▶ Example - Found and repaired water leak at JBS

Energy Management 2017 2020 - The Way Forward

Executive Summary:

1. Continued planning, funding and implementing SEMP (energy saving) Initiatives
2. Continued development and expansion of Behavioral Programs
3. Piloting Wireless Thermostats
4. Hammond Bay – CNCP/SEP/AFG Implementation
5. Adjust budget for known rate increases

Energy Management

2017 2020 - The Way Forward

1. Continued planning, funding and implementing SEMP (energy saving) Initiatives

- ▶ **Alignment** – controls utility costs, better quality systems, better operating environment
- ▶ **Measurement** – calculated savings
- ▶ **Timeline** – ongoing
- ▶ **Challenges** – buy-in of change, identifying new initiatives, identification of funding, joint projects
- ▶ **Opportunities** – utility cost avoidance prevents funding required from elsewhere in the District, additional support for capital upgrades

Energy Management 2017 2020 - The Way Forward

2. Continued development and expansion of Behavioral Programs

- ▶ **Alignment** – student & staff engagement, controls utility costs.
- ▶ **Measurement** – positive news stories
- ▶ **Timeline** – ongoing yearly programs
- ▶ **Challenges** – buy-in of change. Enrollment increasing beyond those most passionate.
- ▶ **Opportunities** – learning opportunities which could align with new curriculum.

Energy Management 2017 2020 - The Way Forward

3. Piloting Wireless Thermostats

- ▶ **Alignment** – Remote ability to control thermostats of sites currently without building automation (ie. portables).
- ▶ **Measurement** – Success of piloting
- ▶ **Timeline** – 1-2 years, if pilot is successful
- ▶ **Challenges** – connectivity (ie. internet in portables)
- ▶ **Opportunities** – utility savings & efficiency of Maintenance staff (turning back schedules during holidays won't require a site visit).

Energy Management 2017 2020 - The Way Forward

4. Hammond Bay – CNCP/SEP/AFG Implementation

- ▶ **Alignment** – Would reduce Districts Green House Gas emissions. Improve air quality with project HVAC upgrades.
- ▶ **Measurement** – Completion with minimal disruption to School operation.
- ▶ **Timeline** – Summer 2017 if approved.
- ▶ **Challenges** – Tight summer schedule.
- ▶ **Opportunities** – Mechanical system upgrade, unique opportunity in partnership with RDN.

Energy Management 2017 2020 - The Way Forward

5. Annual Rate Increases

- ▶ **Alignment** – Adjust budget to reflect expected costs
- ▶ **Measurement** – Review variance at the end of the year
- ▶ **Timeline** – 17/18 energy costs
- ▶ **Challenges** – Departments goal is to reduce costs, focus on behavior programs while continuing with capital improvements
- ▶ **Opportunities** – Align behavior programs with education programs to create sustainability, Mechanical/Electrical systems upgrades, review utility bills for anomalies, partnerships, rebates, etc.

2017 2020 – Budget Strategies

Initiative	System Impact	Year 1 Cost	Year 2 Cost	Year 3 Cost
Electricity	Rate Increase	\$34,170	\$34,170+ <u>\$30,314</u> \$64,484	\$34,170+ <u>\$30,314</u> + <u>\$31,223</u> \$95,707
Water	Rate Increase	\$21,375	\$21,375+ <u>\$22,978</u> \$44,353	\$21,375+ <u>\$22,978</u> + <u>\$24,701</u> \$69,054
Sewer	Rate Increase	\$4,750	\$4,750+ <u>\$3,990</u> \$8,740	\$4,750+ <u>\$3,990</u> + <u>\$4,149</u> \$12,889
Garbage Disposal	Rate Increase	\$0	\$15,000	\$15,000+ <u>\$16,500</u> \$31,500
Natural Gas	Market driven. (estimated ,based on U.S. Department of Energy Prediction).	TBD	TBD	N/A

