

January 31, 2017

Canadian College of Health Leaders
Attn: Julie Bruyère, Coordinator, Corporate Partnerships and Events
292 Somerset Street West
Ottawa, ON K2P 0J6
(613) 235-7218 ext. 236
jbruyere@cchl-ccls.ca

Dear Julie,

Energy sustainability plays an important, yet often unrecognized role in healthcare. I'm proud to be part of an organization that recognizes the importance of being energy efficient and environmentally responsible to the communities we serve. Focused on patient and family-centred care, Horizon Health Network operates 12 hospitals and more than 100 other medical facilities providing services ranging from acute care to community-based health services. With a collaborative, team approach, Horizon leads the way in delivering sustainable, safe and quality healthcare services to residents of New Brunswick.

The Energy Network focuses on the Horizon's Vision – to provide exceptional care, every person, every day. This shared purpose motivates all who work here on a daily basis. We achieve the best results by placing our patients and clients at the centre of our health delivery system.

Through the Energy Network, Horizon's Miramichi Regional Hospital has pioneered our approach to energy sustainability. Our best-practice approach and results oriented track record for energy conservation and efficiency positions us as an excellent candidate for the 2017 Energy and Environmental Stewardship Award.

The results achieved at the Miramichi Regional Hospital include over 2500 equivalent tonnes of CO₂, and demonstrates how much can be accomplished with support, passion and a sustainable framework. Our other healthcare facilities are now following their lead and additional reductions are continually being achieved.



The exemplary model of the Miramichi Regional Hospital combined with the framework and support of the Horizon Energy Network allows for even broader impact for all of the healthcare facilities within Horizon. Continued sustainability is attainable and even more reductions above the already 39 million equivalent kilowatts hours achieved across Horizon will be realized following this model.

The Executive Leadership Team continues to be extremely supportive of the Energy Network's efforts in energy and environmental stewardship and we are very proud of these accomplishments.

These measured and verified results, combined with our commitment, make Horizon Health Network the candidate for the 2017 Energy and Environmental Stewardship Award. We appreciate your acceptance of this nomination.

Sincerely,

A handwritten signature in black ink that reads "Andrea Seymour". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Andrea Seymour, FCCHE
Chief Operating Officer and Vice President Corporate
Horizon Health Network

Energy and Environmental Stewardship Award

The Award

This award recognizes a progressive healthcare organization that has implemented organizational wide initiatives demonstrating environmental responsibility through the reduction of energy usage, the preservation of natural resources and effective waste diversion solutions. Possible initiatives include the implementation of energy efficient building systems and solutions, comprehensive energy and environmental awareness programs, waste management initiatives, and green procurement practices.

The recipient will receive an etched glass trophy, a framed certificate of recognition, paid travel and accommodations to the College's Honouring Health Leadership event and a complimentary registration to attend the National Health Leadership Conference. In addition, the winner will receive \$2,000 cash prize to be directed to the organization's foundation or charity of choice.

Eligibility

All Canadian healthcare organizations are eligible for this award, regardless of size. However, the following criteria must be satisfied:

- demonstrate steps taken to ensure sustainability of environmental initiatives (i.e. energy conservation; water savings; waste disposal and/or diversion initiatives);
- show evidence of results achieved through the implementation of environmental initiatives;
- illustrate initiatives taken to engage staff and the community;
- explain how these initiatives have resulted in an improvement in the overall indoor environment for patients and staff; and
- provide evidence that a culture of sustainability and environmental leadership are in line with the corporate business plan endorsed by the senior management team.

Nominations

Nominations must be made by a member of the College and submitted by **February 1, 2017**. Please use the attached nomination template and include the following in your nomination package:

- a completed nomination form;
- a letter of support from the chief executive officer or designate, who is a member of the College; and
- using the template, describe the energy and environmental stewardship program undertaken, including results. Describe any additional benefits achieved by the facility as a result of the program.

Energy and Environmental Stewardship Award – Nomination Form

Nominations must be made by an individual member of the College.

Nominee:

Prefix: Mr.

Name: Blaine Lynch

Title: Regional Director Facilities Management

Organization: Horizon Health Network

Address: 155 Pleasant Street, Miramichi, New Brunswick, EIV 1Y3

Phone: 506-623-3031

Fax:

Email: blaine.lynch@HorizonNB.ca

Nominator:

Prefix: Mr.

Name: Jeff Carter, CHE

Title: Corporate Director, Capital Assets, Physical Environment & Infrastructure

Organization: Horizon Health Network

Address: 155 Pleasant Street, Miramichi, New Brunswick, EIV 1Y3

Phone: 506-623-5512

Fax:

Email: Jeff.Carter@HorizonNB.ca

Please submit nominations to:

Julie Bruyère, Coordinator, Corporate Partnerships and Events

Canadian College of Health Leaders

292 Somerset Street West

Ottawa, ON K2P 0J6

Tel: (613) 235-7218 ext. 236

Toll free: 1-800-363-9056

Fax: (613) 235-5451

jbruyere@cchl-ccls.ca

Energy and Environmental Stewardship Award – Nomination Template

The following template has been provided to help nominators with the nomination process. Please be sure to complete all sections within the template to the best of your ability. We request that you use this template to submit your nomination.

Summary for Publication (Limit: 250 words)

Please include a synopsis of the nominated program, including highlights of the accomplishments. This information will be published in the College's Leading Practices booklet.

Energy sustainability plays an important, yet often unrecognized role in healthcare. In order to formally recognize the importance of energy sustainability and the long-term impact on patients and communities, Horizon Health Network established its Energy Network in 2013. Under the direction of the Facilities, Engineering and Property Management Department, the Energy Network provides leadership and direction while ensuring sustainability in energy and CO2 equivalent reduction for all Horizon facilities, including five(5) Regional Hospitals, plus a myriad of healthcare facilities of various sizes, service base, and patient populations.

The Miramichi Regional Hospital (MRH) is a 400,000 square foot full service facility and is the first Horizon facility to adopt the Energy Management approach rolled out by the Energy Network. It has been a sustainability leader and outstanding example for all Horizon facilities.

Over the last year, the MRH has achieved measureable and significant reductions including:

- 1) over 8 million equivalent kilowatt hours,**
- 2) over 800 tonnes of greenhouse gas emissions; and,**
- 3) over \$426,000 in actual energy and water cost avoidance**

Through energy projects such as optimization, upgrades and operational improvements, within three years the MRH has achieved \$1 million in energy cost avoidance, reduced over 21.8 million kilowatt hours of consumption and over 2,500 tonnes of greenhouse gas emissions.

This success has provided a stellar platform for Horizon Health Network. There are currently 6 healthcare facilities within Horizon that are actively engaged and reporting success – all with the support of the Energy Network and following the Miramichi Regional Hospital's example.

Contact Information for Publication

Please include a contact name regarding this program. This will appear in the College's Leading Practices booklet. If you do not wish to have contact information published, please indicate "n/a" in the applicable fields.

Please use the nominee contact information provided in the nomination form. (Mark an "X" if applicable.)

Prefix: Mr.

Name: Blaine Lynch

Title: Regional Director Facilities, Engineering & Property Management

Organization: Horizon Health Network
Address: 500 Water Street, Miramichi, NB E1V 3G5
Phone: (506) 623-3031
Fax:
Email: Blaine.Lynch@HorizonNB.ca

Report (Limit: 2,500 words. Please respect the word count limit. The College reserves the right to disqualify nominations that exceed the word count.)

Please use the sections below to describe the nominated program, including results. Describe any additional benefits achieved by the facility as a result of this program. You are welcome to insert graphs, etc. into the sections below.

- 1. Introduction – Please note the square footage of the facility being nominated in this section. If more than one facility is involved in the project, please include the square footage for all facilities.**

In order to formally recognize the importance of energy sustainability and the long-term impact on patients and communities, Horizon Health Network established the Energy Network in 2013. Under the direction of the Facilities, Engineering and Property Management Department, the Energy Network provides leadership and direction while ensuring sustainability in the reduction of energy consumption and greenhouse gas emissions for all Horizon facilities.

The Miramichi Regional Hospital (MRH) was the first Horizon healthcare facility to adopt the Energy Network's Energy Management approach. This **400,000 square foot** full care, 150-bed hospital has been a leader in sustainability and an outstanding example for all Horizon facilities.

Over the last year, the MRH has achieved measureable and significant reductions including over:

- 1) 8 million equivalent kilowatt hours,**
- 2) 800 tonnes of greenhouse gas emissions; and,**
- 3) \$426,000 in actual energy and water cost avoidance**

In just three years, the MRH has achieved \$1 million in energy cost avoidance, and reduced over 21.8 million kilowatt hours and 2,500 tonnes of greenhouse gas emissions.

From projects such as wood boiler optimization and upgrades, ventilation operational improvements, lighting upgrades and energy dashboards, to recycling of cardboard, batteries and metals, the Miramichi Regional Hospital is continuously searching for energy and environmental reduction opportunities. Every initiative, no matter the scale, makes a difference. This reduces the environmental footprint and operational and maintenance costs. Patients benefit by having a comfortable and controlled environment, which contributes in creating an overall positive healthcare experience and allows the savings to be reinvested in direct patient care services.

The success of these initiatives is due to the employees – their increased awareness and collaboration has become embedded in the daily operations. There has been a marked and palpable culture change. MRH is committed and values the strategic continuous improvement approach. This process includes benchmarking facilities (including normalization for weather), identifying and analyzing energy projects, requesting funding, assisting in implementation, and then monitoring the projects for expected energy savings and other

benefits. Results are reported through the Energy Network so that lessons learned and successful projects are shared with other Horizon facilities.

Horizon is dedicated to reducing the environmental footprint and finding innovative solutions in order to create a healthier, efficient facility for patients and employees.

2. Show evidence of results achieved through the implementation of the environmental initiatives. (TOTAL 40 POINTS)

- **Using the table below, identify total utility savings by square foot and greenhouse gas emission reductions. (15 POINTS)**

Energy Source	Annual Savings (\$)	Annual Savings Units	Annual Sq. ft. Reduction
Electricity	\$77,000	800,000 kWh	2.00 kWh/sq.ft.
Natural Gas	N/A	N/A	N/A
Water	\$33,000	15,000 m3 / 15M litres	27.25 Litres/sq.ft.
Steam	Produced onsite; costs captured in oil and hog fuel costs	6 million KGS of steam	14.68 KGS/sq.ft./ 18.6 ekWh/sq.ft (sum of oil+ hog fuel)
Oil	\$247,000	397,000 Litres/ 4.3M ekWh	1.00 litres/sq.ft./ 10.46 ekWh/sq.ft.
Hog Fuel (biomass)	\$69,000	12,000GJ / 3.3M ekWh	0.03 GJ/sq.ft./ 8.13 ekWh/sq.ft.
GHG Emission Reduction	N/A	600 tonnes	0.0015 tonnes/sq.ft.

Energy is continually measured and verified against the baseline year (April 2012 to March 2013 - a government fiscal year). The energy consumption is normalized for weather so measured reductions reflect true savings as a result of the implemented measures and not weather. **The Miramichi Regional Hospital has reduced its total annual facility energy utilization index by 20.60 ekWh/sq.ft.** - the energy equivalent of an average Canadian elementary school! The energy consumption is reported quarterly to the Energy Network and Horizon’s Executive Leadership Team.

The MRH has implemented an Energy Management Information System (EMIS). EMIS continuously monitors energy and water consumption. EMIS is shared within the facility and access is available to directors, managers, the chief engineer and building operators. Employees are engaged – collaborating together to verify results, share lessons learned, discuss improvements, and implement solutions.

The MRH has made significant improvements over the past three years to the heating plant. The wood boiler burns a mix of “hog fuel”, the waste by-product from a local sawmill. This improvement decreases the environmental footprint and reduces oil consumption by 240,000 to 400,000 Litres annually - a cost savings ranging from \$200,000 to \$300,000. In 2012, 79% of the steam was biomass produced. By 2015, 94% of the steam was biomass produced. This renewable resource reduces CO₂ annually by up to 600 tonnes. Operations are now monitored by EMIS dashboards to sustain these improvements.

The MRH recently took buildings operations to the next step by being the first Horizon facility to implement real-time building analytics. Building analytics is software that runs in conjunction with the building automation system. This real-time system computes thousands of algorithms in order to identify areas

needing improvement or potential faults. Thus building operators have a better understanding of their facility, allowing for efficient and improved performance. After only 3 months, many improvements have been made, including resolving scheduling irregularities, static pressure and fan speed optimization in air handling units, and resolving temperature sensor failures and unnecessary damper cycling. Building operators have used these “insights” to take action in order to better manage operations with positive results.

- **Using the table below, identify waste disposal and/or diversion (10 POINTS)**

Waste Type	Quantity or Weight Diverted from Landfills
Cardboard	14,800 lbs
Metal	10,000 lbs
Batteries	12,100 lbs
Bottles	Not measured

- **Other programs such as green cleaning products, environmentally responsible grounds keeping initiatives etc. (15 POINTS)**

MRH is environmentally conscious with grounds keeping. The hospital embraces the natural occurring vegetation and does not spray for weeds. Watering of plants and grassy areas is left to Mother Nature and the hospital does not use additional resources to water vegetation.

3. Demonstrate the steps taken to ensure sustainability of the environmental initiatives, and identify the organizational resources that are in place to help achieve the project’s goals. (25 POINTS)

In order to responsibly serve patients and their communities, Horizon established the Energy Network in 2013 as a means of solidifying their commitment to energy sustainability.

The network is the dedicated resource providing leadership and direction in the reduction of energy consumption for Horizon facilities, including the Miramichi Regional Hospital (MRH). The committee’s framework and terms of reference clearly defines the committee functions, accountability and responsibility of the team:

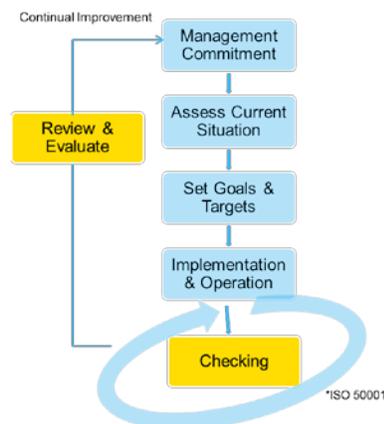
- Leadership in the area of measuring, monitoring, and reduction of energy consumption.
- Active identification of energy reduction opportunities.
- Guidance and technical assistance in the analysis of opportunities to reduce energy consumption.
- Provide a forum under which advice and direction is provided regionally on all issues related to energy costs and energy reduction opportunities.

With Horizon’s encouragement and support, the MRH is not only a provincial leader, but an early adopter in actively piloting and implementing environmental reduction initiatives. This demonstrates how effective leadership combined with the passion of a formal team and framework results in sustainable success, including decreased costs and CO₂emissions. This is a best practice that will help secure environmental long-term sustainability that is supported by the organization’s positive culture.

Resources in place supporting energy initiatives at the MRH include:

- **The adoption of an energy management plan**
- **An Energy Management Information System (EMIS)**
- **Accountability through annual reporting to both senior management and frontline staff**
- **Stable project funding**

Energy is a commodity which we manage and measure. All energy initiatives and savings are monitored, tracked and reported. The most important process change is the implementation of the continuous improvement framework:



This approach, combined with the Energy Network resources, demonstrates dynamic leadership dedicated to implementing long-term, viable solutions using the most effective tools and technologies.

An important aspect of the accountability is having a plan. An Energy Management Plan and report is written annually, although not required in our jurisdiction. These results are reported to the executive management team and government. This helps secure additional funding year over year as well as keeping the hospital focused on energy conservation and efficiency. It also is used to showcase the successes to other hospitals.

EMIS is implemented with full access given to building operators, chief engineers and managers. Operational improvements have resulted in energy reduction, all of which are measured and verified using EMIS. For example, EMIS enables visible checks to confirm scheduling and occupancy of areas being served by air-handling units (AHUs). The graphical dashboards confirm operations are or are not as expected and schedules are easily verified. At the MRH, dashboards verify AHU schedules. The subsequent scheduling adjustments at just one AHU equated to an annual cost avoidance of \$4,000. As a result of this success and with the full support and assistance of the Energy Network, EMIS has been showcased and **now implemented in an additional 5 facilities within Horizon**. The addition of building analytics at the MRH has taken EMIS to the next level and further identified more promptly these irregularities and other operational opportunities. This demonstrates the MRH's leadership and sustainability in implementing reduction initiatives.

The MRH has pioneered many energy initiatives. The evidence of measured and verified energy reduction has built a solid foundation for a continuous optimization energy management, and formed the blueprint of success to be rolled out across Horizon. The MRH team's knowledge merged with the support of the Energy Network is vital in sustaining these energy management practices.

Implementation of this continuous improvement framework combined with energy dashboards, and reporting with full support from facility staff, hospital management, the energy committee and the Horizon Health Network senior executive, has resulted in a 25% energy reduction at the Miramichi Regional Hospital.

- 4. Provide evidence that the environmental initiatives are in line with the corporate business plan, are endorsed by the senior management team and have positively impacted the corporate culture. Moreover, describe the aspirational goals that your organization will continue to strive for in the future, as they relate to energy and environmental stewardship initiatives. (10 POINTS)**

The Energy Network focuses on Horizon's mission of *Helping People Be Healthy*. This shared purpose motivates all who work at Horizon on a daily basis. Best results are achieved through placing our patients and clients at the centre of our health delivery system. This mission is far reaching and understands the importance of building engineering with respect to patient care as evidenced through the establishment of the Energy Network.

Horizon's executive team is fully engaged and supports the Energy Network. As such, an annual report has been developed and presentations are made to the executive team demonstrating the commitment, value and success. The report details the energy consumption, benchmarks, savings, projects completed and other activities such as training and staff engagement.

Communication is a key component in recognizing the energy achievements in facilities and keeping staff engaged as detailed in Question 6's response.

Through the organizational support, the MRH is a proven, exceptional leader in energy management. By sharing successes and communicating lessons learned, hospitals across Horizon have supported and implemented the energy management approach.

The goal is to continue using the continuous improvement approach through the Energy Network while involving people and information, in order to continue to strive for efficient, low-carbon emission healthcare facilities.

- 5. What impact have the environmental initiatives had on quality patient care? Discuss how savings have been reinvested in new patient care initiatives, equipment and other resources. (15 POINTS)**

The MRH, the first adopter of the Energy Network's approach, prioritizes patient care and comfort. This includes the effective, real-time monitoring of air handling unit set points to control patient comfort levels. Being able to reach set points and deliver temperatures more efficiently has resulted in less hot/cold calls, meaning patients and staff are thermally comfortable. By adjusting operational setpoints, humidity is readily controlled, resulting in an improved environment for staff to work in, and patients to recover.

Retrofitting to LED lights improves patient and staff safety by brightening up areas using whiter lights, and because of longer lamp life, there is a decrease in failed lamps. As well, patients and staff now have some ability to dim lights, an option that was not previously available in some areas prior to LED upgrades.

In order to reduce energy consumption, occupancy and daylighting sensors have been installed in areas such as conference rooms, washrooms, and cafeteria and storage areas. This removes the need for staff and

patients to concern themselves with lighting requirements so that focus can be on healthcare, all while energy conservation is occurring.

Energy reduction assists in managing operational and maintenance budgets. However, it also assists with budget approvals for implementing the same or similar initiatives within other Horizon healthcare facilities. A successful initiative, complete with lessons learned and “know-how” that is measured and verified forms the implementation plan for other facilities to adopt as well.

The adoption of energy management plans and EMIS at other Horizon sites is evidence of continued sustainability and a change in culture. Energy savings successes build a solid foundation for additional energy initiatives. The leadership combined with collaboration and sharing of lessons learned is vital in sustaining these energy management practices throughout Horizon. The early adoption of best practices by the MRH has paved the way for an additional five healthcare facilities to be actively involved and implement EMIS with the Energy Network, a successful adoption in only three short years.

6. Beyond the financial savings, describe how being more environmentally focused has positively impacted your organization. Illustrate initiatives taken to engage staff and the community. Share your organization’s philosophy regarding environmental sustainability. (10 POINTS)

Horizon’s strategic priority is to create and sustain an exceptional patient and family centred care environment. Although often not thought of until something goes wrong, energy and environmental management are key contributors to improving the patient care experience.

Sustainability is guided by Horizon’s values where we:

- show empathy, compassion and respect.
- strive for excellence.
- are all leaders, yet work as a team.
- act with integrity and are accountable.

The Facilities, Engineering and Property Management department strives for excellence every day whether managing energy and providing thermal comfort or recycling copper and batteries. Every person and every measure makes a difference to patient comfort as well as the world outside the hospital.

Improved employee and physician engagement is part of Horizon’s strategic plan, including equipping staff with the tools to excel in their roles and offer exceptional patient care. Giving building operators and managers the tools to manage their energy will reduce the hospitals’ environmental footprint and improve patient and staff comfort levels through better managed thermal and humidity controls.

Interactive sessions facilitate the hospitals engagement. Sessions are held with open dialogue to discuss building operations and energy management between facilities and amongst peers. This increases staff morale and reinforces their role in healthcare and the impact it has on the frontline as vital.

Communication is a key component in recognizing the energy achievements in facilities and keeping staff engaged. The network uses a variety of communication tools to target staff such as the Horizon Star, staff newsletter; Connects Extra, the internal blog page; and the department page on intranet. Success stories are often published to recognize energy initiatives and staff for all the exceptional improvements in the healthcare facility.

The Energy Network provides energy tips for all staff and shares ongoing successes regarding environmental stewardship and energy reduction initiatives.

7. Conclusion

Horizon's vision is to provide 'Exceptional care, every person, every day.' Although often not noticed unless it's not working properly, the environment is a key contributor in providing a positive patient care experience. An efficiently operating building serves multiple purposes - decreased utility costs and increased indoor air quality and thermal comfort.

The Miramichi Regional Hospital successful reduction in energy, with the support of the Energy Network, is a great example of how an organization's mission is far reaching and encompasses the benefits of understanding the importance of building engineering and the impact it has with respect to patient care. They are a true leader in the field of energy management who not only encourages incorporating energy efficiency into daily activities, but has also shown the real benefits of energy efficiency, no matter how big or small the project.

How to submit your nomination:

The nomination should include all of the items listed below. The nomination is to be submitted to jbruyere@cchl-ccls.ca as one PDF file. The letter of support should be included in the PDF file as well. Electronic signatures are acceptable.

Please include the following in your nomination package:

- the completed nomination form;
- the completed nomination template; and
- a letter of support from the chief executive officer or designate, who is a member of the College.

Should you have any questions, please contact:

Julie Bruyère, Coordinator, Corporate Partnerships and Events
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Nomination deadline: February 1, 2017

The Honeywell logo is displayed in a bold, red, sans-serif font.