

## St. Joseph's Healthcare Hamilton adopte RETScreen et obtient des résultats précis

Kent Waddington

***RETScreen Expert Energy Management software has proven to be exactly what the doctor ordered to substantiate the value energy management initiatives bring to St. Joe's bottom line.***



**RETScreen**  
Expert

St. Joe's Hamilton, un membre du système de santé de St-Joseph, est un centre multisite, régional et tertiaire reconnu pour la qualité de ses soins respiratoires, réinaux et urinaires, ses soins psychologiques et de toxicomanie, ses services chirurgicaux, ses chirurgies oncologiques et ses soins destinés aux femmes et aux nourrissons.

Avec environ 5 000 employés, 700 médecins et 1 000 bénévoles surveiller plus de 777 lits de soins de courte et de longue durée et de soins aux nourrissons, et plus de 50 000 visites annuelles au service d'urgence, St. Joe est un endroit très occupé qui consomme une grande quantité de ressources, y compris l'électricité, le gaz naturel et l'eau.

La gestion de ces ressources incombe au gestionnaire d'énergie Mike McKnight, qui est responsable de la surveillance et de l'analyse de la consommation des services publics, de la planification et de la mise en oeuvre d'initiatives comme les rénovations qui maximisent la conservation des services publics, de soutenir la gestion du bilan énergétique et la haute direction dans la prévision des besoins et des attentes énergétiques. Grâce au logiciel de gestion d'énergies RETScreen Expert, le travail de Mike McKnight est devenu beaucoup plus facile.

RETScreen est une plateforme de gestion d'énergies propres complète et conçue au Canada qui permet aux professionnels et aux décideurs de l'énergie et des bâtiments de soins de santé d'identifier et d'évaluer la viabilité des projets d'efficacité énergétique, d'énergie renouvelable et de cogénération, et de mesurer et vérifier la performance énergétique réelle et actuelle de bâtiments comme les hôpitaux, les établissements de soins de longue durée et les centrales électriques.

La beauté de RETScreen repose dans sa capacité à aider les gestionnaires d'énergie à mesurer et à vérifier la performance énergétique réelle et à repérer d'autres possibilités d'économies d'énergie. RETScreen peut aussi aider à identifier, évaluer et optimiser la viabilité technique et financière de projets d'énergie tout en améliorant leur résilience face aux effets des changements climatiques.

JJ Knott, le chef de HealthCare Energy Leaders Canada de la Coalition canadienne pour un système de santé écologique et expert RETScreen certifié dit : « En utilisant RETScreen, un gestionnaire d'énergie ou une équipe de gestion d'énergie peut rapidement analyser les économies de coûts, la faisabilité et les réductions d'émissions liées aux mesures de conservation d'énergie proposées. RETScreen peut



*A wide range of services occurs within St. Joseph's Healthcare Hamilton's Juravinski Innovation Tower including Diagnostic Imaging, Respiratory Health, Complex Care, Nephrology and Acute Mental Health.*

*aussi être utilisé pour prioriser les projets futurs en fonction de l'analyse de la valeur nette, du rendement des investissements, de l'analyse coût-avantage et des flux de trésorerie futurs. Le logiciel permet aux établissements de soins de santé de surveiller*

# St. Joseph's Hamilton Healthcentre

et de suivre les économies d'énergie et de rapporter les économies cumulatives résultant de projets réalisés, avec des valeurs de référence ajustées en fonction des dates de réalisation des projets. »

Mike McKnight « RETScreen s'est avéré être un logiciel de gestion d'énergie très complet qui nous donne une bonne indication du rendement énergétique et qui nous aide à élucider notre rendement énergétique, particulièrement lorsque des équipements comme des systèmes de traitement de l'air, des chaudières ou des refroidisseurs ne fonctionnent de façon optimale. »

He also finds RETScreen, "Very useful if you are working on a behavioural shift in energy consumption as the software can identify the savings that can accrue by adopting conservation measures."

## Why RETScreen?

Months after a number of energy conservation measures were implemented at St. Joe's, it was time to look at a regression analysis of the hospital to see how things were really performing so McKnight created and populated an Excel® spreadsheet but quickly discovered the spreadsheet would not be easy to maintain. He found it took a lot of thought and manipulative effort to get results – results that RETScreen could provide quickly and easily.

Canvassing his energy manager community for a better way, he learned RETScreen was the software of choice whereupon he downloaded a trial version and was hooked. After uploading his data, he quickly saw how intuitive RETScreen was and how easily he could populate appealing graphs that he could use to share a variety of energy conservation success stories. "A tremendous benefit to me currently is that I can quickly generate easy-to-read graphs that I can share with management. These graphs highlight the positive changes that have been occurring at the hospital and provide a clear indication of the value that our energy management initiatives are having at St. Joe's," claims McKnight.

Having mastered the basics of RETScreen, McKnight is now aiming to learn how to update the regression analysis with as little effort as possible and hopes to soon venture into the financial portion of RETScreen to help he and his team with project scoping.

*“Measuring energy that is NOT consumed can be tricky, but with the help of RETScreen, you can understand how your facility historically performed compared against your current performance to reveal a clear picture of the savings resulting from your improvements, and for that reason, RETScreen should be considered as an essential energy management tool.”*

Mike McKnight, Energy Manager, St. Joe's Hamilton

## A cautionary tail about forecasting

Management is always looking to find operational cost savings, so when you have a year of favorable weather, says McKnight, "They may push that you operate next year with the same utilities budget from the past year. Using historical weather data allows you



Mike McKnight, St. Joseph's Healthcare's Energy Manager, is taking a hands-on approach to energy conservation at the hospital and loves seeing the savings accumulate (with the help of RETScreen).

to support the request to ' earmark ' a larger utilities budget. As the year progresses, it will allow you to correlate the variance from budget as the weather varies from the 'norm'."

Knowing when a project was completed and plotting those event dates on a CUSUM graph equips you with a visual representation of the energy impacts. The CUSUM baselines can also be adjusted to reflect cumulative energy savings from project completion dates forward. This is a great tool to use to promote a project and roll it out campus wide. It also makes it far easier to approach management with a request if they can see the impact it has had in another area.

## A teaching moment

The simplicity of initializing and using RETScreen is to be applauded. Download your energy data, ensure it has the proper headings to comply with RETScreen's formatting, then do a simple bulk upload. McKnight does caution, however, on too much data granularity. Having access to

hourly meter reading and trying to use that data for analysis can slow down the software so he suggests aggregating data to daily values.

*“One thing I have learned is to keep it simple,” says McKnight. “Don’t overcomplicate things. Roll data up weekly. Even if you have a very low power weekend, an analysis at the weekly level will still provide a very accurate image of your weekly energy consumption which can then be used to predict annual values.”*

**“Don’t overcomplicate things.  
Keep it simple. Roll data up to  
‘weekly’ levels.”**

### Parting words

McKnight’s hope is that one day, he will be able to update his Excel spreadsheet and have RETScreen automatically pick up the changes. In the meantime, he is sold on RETScreen as an invaluable energy management tool.

The software has allowed him to continue to focus on future energy project at St. Joe’s and not have to worry about spending an inordinate amount of time analyzing the results from past projects. *“The only thing I need to think about,” he says “Is keeping a log of the changes I’ve made so that I can add those annotations to the CUSUM.”*

Moving forward, he plans to continuing update his software model and watching the CUSUM grow in the direction of favourable energy savings.

*“RETScreen has become my greatest advocate for showing the tangible benefits of energy management and maintaining a position within the Hospital. Also, when it comes time to budgeting for the upcoming fiscal years, it will be a simple and calculated approach – even with the ever-changing political landscape trickling into the cost of energy.”*

*“If you are working on lots of energy improvements (big or small) or trying to drive a cultural shift to one of a conserver mentality, then you need to create a Regression Analysis & CUSUM to support the savings, and what better way to accomplish that then with the help of RETScreen!”*

Visit the RETScreen website (<https://www.nrcan.gc.ca/energy/software-tools/7465>) to download the advanced complimentary premium ‘viewer mode’ version of the software and see why it is so aptly suited to assisting Canada’s health care facility and energy managers in taking a data-driven approach to managing energy use. From benchmarking, to consumption tracking and GHG emissions, energy audits and more, RETScreen provides a solution for health care energy professionals to take control of their facility portfolio.

Interested in rapidly developing an understanding and gaining hands-on experience with RETScreen? Check out RETScreen’s eLearning channel which has a wide variety of short videos on different aspects of the software: [https://www.youtube.com/channel/UCyFMjG\\_OXXGtRVnsiTim0IQ](https://www.youtube.com/channel/UCyFMjG_OXXGtRVnsiTim0IQ). If you’d like more in-depth training, consider taking the three-day Certified RETScreen® Expert (CRE) course (<https://cietcanada.com/programs/cre>) which includes access to a fully-functioning 90-day trial subscription. Depending upon your location, training subsidies may be available to help reduce your cost.

Be the first to learn about software updates and receive other RETScreen-related news. Sign up to receive communications and alerts by sending an e-mail to [nrcan.retscreen.nrcan@canada.ca](mailto:nrcan.retscreen.nrcan@canada.ca).

HealthCare Energy Leaders Canada looks forward to assisting you in implementing RETScreen in your health care organisation and helping you develop a sound energy management plan. Reach us at [jj.knott@greenhealthcare.ca](mailto:jj.knott@greenhealthcare.ca) or visit us at: <http://greenhealthcare.ca/retscreen/>

### Credits

We would like to thank Mike McKnight, Energy Manager from St. Joseph’s Healthcare Hamilton, and his St. Joe’s team for assisting in the development of this Case Study.

### HealthCare Energy Leaders Canada

The Coalition and HealthCare Energy Leaders Canada looks forward to assisting you in implementing RETScreen in your health care organisation and helping you develop a sound energy management plan. Reach us at [jj.knott@greenhealthcare.ca](mailto:jj.knott@greenhealthcare.ca) or visit us at: <http://greenhealthcare.ca/retscreen>

*The Canadian Coalition for Green Health Care is Canada’s premier green health care resource network and is leading the evolution of green in Canada’s health sector as a national voice and catalyst for environmental change. Collaboratively, we strive to reduce health care’s ecological impact from compassionate care delivery while providing a nurturing platform upon which to discuss and promote best practices, innovation, environmental responsibility and climate change resiliency. [www.greenhealthcare.ca](http://www.greenhealthcare.ca)*

*This publication possible thanks to financial support from Natural Resources Canada. RETScreen Clean Energy Management Software is the property of the Government of Canada. The RETScreen logo is used with permission.*