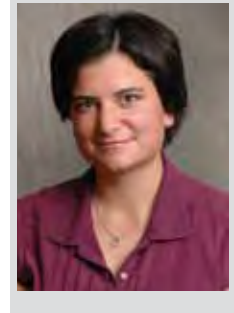


MUNICIPAL IDEAS

RM of Morris: On the ground floor with rooftop technology



Rachel Phillippe, AMM Senior Policy Analyst

Not being selected for a major wind farm project didn't stop the RM of Morris from being interested in wind energy. Recognizing the benefits of this alternative energy, the RM's Council simply decided to apply the technology on a much smaller scale – one building. Working with Winnipeg-based Global Wind Group, the RM of Morris public service garage in Rosenort is now the first building in Canada to have multiple roof-mounted wind turbines.

According to Reeve **Herm Martens**, the municipality wanted to explore other new technology since it has a lot of experience with alternative energy from geothermal heat pumps. A number of local buildings, including a school and a seniors housing complex, already use geothermal for heating and cooling so it was an easy decision for council to use geothermal in the new

public service garage. The new building offered a perfect opportunity to take this green outlook one step further and use vertical axis wind turbines to fully power the geothermal system. Each of the three vertical axis wind turbines generates 1.2 kW and is designed to be mounted on the rooftop, eliminating the cost of a pole.

According to Global Wind Group President **Alex Stuart** the primary benefit of such smaller scale projects is minimizing line loss. In larger wind farms, the electricity travels a considerable distance before being consumed, resulting in lost power along the way. Since the energy is used on-site, the energy goes directly into the system. Another benefit is that vertical axis turbines require very little maintenance. Rather than requiring an expert site visit, routine maintenance simply consists of tightening bolts

with a torque wrench every six months. As well, the bearing and brake mechanisms are not as complex as in horizontal turbines so less maintenance is required. To Stuart, these benefits are an excellent fit for any municipality constructing a new building.

Thanks to using energy efficient materials for lighting and insulation, Reeve Martens says the new building has already reduced the RM's electrical bill from \$1600 for a 40x78 sq. ft. building to \$1200 for an 80x220 sq. ft. building. Although the wind turbines won't help reduce those bills just yet, Stuart points out that investing in wind energy is hedging against the increasing cost of energy. The reality is that energy costs rise over time and it won't take long before the RM of Morris' wind energy is cheaper than tapping in to the grid. In fact, right now the premium for wind energy is only \$0.03/kWh.

RM of Morris Reeve Herm Martens speaks to the audience at the unveiling on June 24. MLA Rob Altemeyer (left) looks on with MLA Mavis Taillieu (second from left) and Alex Stuart, President of Global Wind Group Inc.



Three vertical axis wind turbine lined up on roof peak

“People have been using wind power for ages – it’s just this technology that’s new.”



Craning third vertical axis wind turbine to roof

For more information, photos or to view a video of the turbine installation visit the Global Wind Group website at: www.globalwindgroup.com. For more on the Sustainable Development Innovations Fund, visit www.gov.mb.ca/conservation/pollutionprevention/sdif/

Beyond the potential to save energy costs in the future, the RM of Morris is making sure it benefits from every bit of electricity produced. Since the public service garage doesn’t need the geothermal unit’s cooling capacity, the RM is exploring ways of selling that capacity to neighbouring manufacturing businesses. As well, the RM worked with Manitoba Hydro to install a reversible meter, so that any excess energy is absorbed into the grid.

The RM also benefitted from funding through Manitoba Conservation’s Sustainable Development Innovations Fund (SDIF). The Fund encourages the creation of sustainable communities and provides grant funding to projects that demonstrate partnerships between groups and individuals, pride in the community, and concern for the environment. The RM of Morris contributed \$25,000 to the project and the SDIF provided matching funding to cover the total project cost of \$50,000.

For Reeve Martens, it’s exciting to be in on the ground floor of this new technology, although he is quick to point out that the concept of using wind energy is certainly not new. “People have been using wind power for ages – it’s just this technology that’s new.” Council is proud to be able to

showcase the technology to their community. Stuart agrees that smaller projects are a great way to demonstrate the engagement of the local capital: “A project like this makes it tangible for residents to see how the technology works,” he says. Residents can see how easy it is to install (the installation took less than a day to complete), how quiet and unobtrusive the turbines are, and observe the direct benefit of heating the garage.

The RM of Morris also supports personal wind energy installations and passed a by-law in 2008 to ensure that a variance is not required to install a personal wind turbine. The by-law only requires a permit for safety purposes, such as ensuring the turbine would not harm adjacent buildings or property if it falls down. Although no resident has made use of this so far, Reeve Martens stressed the importance of being prepared and creating a framework that encourages people to consider innovative approaches.

From both the RM and Global Wind Group’s perspective, this project is a resounding success. Although the RM doesn’t have any other new building construction on the horizon, Reeve Martens says this is certainly technology that Council will consider in the future. 🌿



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