Gateway Casinos Gamble on

GREEN!

Gateway Casinos & Entertainment has been in operations since 1992 and has grown significantly to manage 12 locations throughout British Columbia and Alberta, with development in-progress in Ontario. Gateway credits their claim to success comes from prioritizing exemplary gaming and entertainment options to ensure a quality experience for all customers. To go above and beyond, Gateway is also mindful of their environmental impact and pursues innovative technologies to improve their buildings' energy performance.

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Case Study (GRAND VILLA CASINO)

Most recently, the Grand Villa Casino in Burnaby completed its installation of an ingenious waste-heat recovery system. Since 1996, the Grand Villa Casino has undergone much growth and development to become the flagship location. When they reopened the expanded building, there was a reoccurring issue of overheating during the summer months due to the insufficient size of the air conditioning system's single cooling tower.

Gateway Casinos & Entertainment Energy Operations Manager, Jeff Lee, knew that the addition of a second cooling tower was the ideal solution to properly service the site without interruption, but this came with a hefty price tag. After several years of planning, there was still no room in the budget to spend on this project. "We were running out of options and it seemed like this project would never be approved. We began to accept that the facility will be hot every summer," Jeff recalls. "That's when we looked at it from an energy management angle. It made sense and ultimately led to project approval." The second cooling tower was installed and activated July 2014 to lower the work load of the single unit and also significantly lower the building's electrical demand and consumption by 1.1 GWh, enough to power over 100 homes for an

Grand Villa Casino's second cooling tower sitting next to the original unit has been tied in to offset the workload and therefore the electrical demand required in order to keep the gaming floor comfortably cool all year round. This implementation saved 1.2 GWh of electricity.

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entire year. This reduction actually offsets more than the energy consumption of the extra 200 slot machines added to the site this year and last. Over one year later, this massive project that failed for 3 years to get an authorizing signature is nearly fully paid off by its energy savings.

An innovative twist to this project was the utilization of waste heat normally rejected from these cooling towers into atmosphere. Instead, it's captured and redirected back into the casino as a free energy source to preheat the building's domestic hot water supply through 5 new storage tanks. This implementation helps to save an annual 3,600 GJ of natural gas and reduces over 200 ton of greenhouse gases.

To set the bar even higher on this project, Grand Villa took on another original implementation and purchased renewable natural gas. FortisBC delivers this alternative fuel from local biogas plants that capture methane to prevent the gas from contributing to the atmosphere's greenhouse effect. Being virtually identical to tradition natural gas without the harsh environmental impact, it's cleaned and injected into the gas line for distribution. Grand Villa is the first – and currently the only – casino in the world to utilize renewable natural gas.