

Power Smart Product Incentive Program Success Story



Chemainus First Nation Sports Field The Story

“When we were younger, we used to play soccer until it got dark and you couldn’t see anymore. Now, there’s no excuse for our youth not to play!”

George Harris, Chemainus First Nation traditional speaker

New outdoor sports field lighting provides community benefits along with energy savings

The recent installation of energy-efficient outdoor lighting at two Chemainus First Nation sports fields provides bright, safe lighting for community recreation. The new system also saves energy by using 54 per cent less energy than standard sports lighting. The initiative was the result of a Consultation and Benefits Agreement with the Chemainus First Nation for the Vancouver Island Transmission Reinforcement Project.

“This project has established a new standard for energy-efficient lighting and lighting control of playing fields,” states Power Smart Senior Engineer Alex Rosemann. “And it confirms that there is potential for many such fields to become Power Smart.”

“We have looked into all possible areas where we can optimize the energy efficiency of the project. This includes the lamps, luminaires, a control strategy and lighting design that all fit well together.” adds Roy Hughes, Specialist Engineer with Power Smart Engineering.

The challenge: light up sports fields at a low energy cost

The two tournament-sized soccer fields at the community centre of the Chemainus First Nation had no outdoor lighting, which limited their use. The Chemainus First Nation wanted to install a lighting system to enable the band to hold practices and games in the evenings. Chemainus First Nation representatives Stephen Olsen and Dallas Brock met with BC Hydro’s Aboriginal Relations Department, which asked the Power Smart group to come up with an energy-efficient solution.

The solution: remote-controlled energy-efficient lighting

Power Smart designed a lighting system that is extremely energy efficient and incorporates leading-edge technologies. The system has several innovative features:

- Energy-efficient lights. The system uses 56 energy-efficient metal halide floodlights mounted on nine poles to light the two playing fields. Proper lighting design means that fewer luminaires are needed to provide the required amount of light.
- Luminaires with reflectors that can rotate around the lamp without changing the lamp orientation. With conventional luminaires, both the luminaire and lamp must be tilted in order to direct the light onto the target spot on the field, which can reduce the available light by up to 12 per cent. The installed floodlights have reflectors, which direct the light toward the field without tilting the lamp. This allows the lamps to operate at the highest possible efficiency.

Power Smart makes business sense.

BC Hydro 
powersmart

- **Wireless control system.** A system developed by Echoflex Solutions Inc. of Squamish, provides the right amount of lighting to both fields at the click of a switch. The controls require no batteries or maintenance; clicking the control switch sends a digital command to the system to turn all lights on, turn all lights off, or light either field at 50 per cent or 100 per cent lighting levels. This allows the greatest flexibility, which in turn means the highest energy efficiency. The remote control allows the field lighting to be switched off as soon as lighting is not needed – in many other cases lights are operated on a timed switch which switches the lights off later to ensure that the light is available in case of extra time or other delays. The reduced operating hours also contribute to the energy savings of the project.

The benefits: greater flexibility, lower energy bills

The sports field lighting system saves 13,323 kWh of electricity a year compared with a standard system. This represents energy savings of 54 per cent. In addition, the Chemainus First Nation will enjoy a reduction in staffing costs, since the hand-held lighting controls are remote and no staff member is required to be on site in the evenings to switch on the lights.

The installation of the sports field lighting will enable the fields to be operated longer, allowing children to play longer, especially on the short days of winter. The Chemainus First Nation plans to rent the fields to the wider community, spreading the benefits of a well-lit recreational facility and leading to enhanced community interaction.

Innovative application

The installation of these wireless controls for sports field lighting is the first outdoor installation of this technology in Canada.



Contact BC Hydro

Find out how Power Smart can energize your bottom line. For more information, visit bchydro.com or call **604 453-6400** in the Lower Mainland or **1 866 453-6400** elsewhere in B.C.

Conservation is a great way to start meeting B.C.'s growing need for electricity.

Power Smart makes business sense.

BChydro 
powersmart