

The ZONE

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PAMZ NEWSLETTER

Communicating Information about the Parkland Airshed Management Zone Association "We Care for Our Air"

Shell Demonstrates More Energy, Less Carbon Dioxide

In March of this year the Shell Canada Ltd. Caroline Gas Plant began using an innovative method to generate electricity that uses the waste steam created from processing sour natural gas. The newly commissioned Low Pressure Steam Unit not only improves energy efficiency but also lowers the Carbon Dioxide (CO₂) emissions "footprint" of the plant.

The Shell Caroline plant generates approximately 10 - 11 megawatts of power each day from waste steam - enough to provide half the electricity needed to run the plant. "This provides a huge reduction in our greenhouse gas (GHG) emissions and comes at a time when there is increasing emphasis on climate change," says Roy Kanten Shell Canada's Energy Efficiency and Greenhouse Gas Advisor and chemical engineer who saw the project through from conception to performance testing.

Excess steam from Caroline's operations is condensed back into water and recycled back into the process through a closed loop system. Kanten's idea was to feed the excess low-pressure steam through a turbine first. "The turbine is connected to an electrical generator, which turns a portion of the surplus heat energy directly into electricity," he says.

Jim Brown, Senior Climate Change Advisor for Shell Canada comments that the new unit reduces Caroline's carbon footprint in the province. "We went from buying electricity in Alberta which is largely produced by coal to being partially self-sufficient in provid-



ing electricity for our operations," says Brown. Coal-generated electricity is a major contributor of CO₂ emissions. By not using this energy source, the Caroline gas plant saves approximately 85,000- 90,000 tonnes of CO₂ annually.

According to Kanten, future opportunities may exist for using this process elsewhere. Caroline was an ideal facility due to the extremely sour nature of the natural gas which creates larger amounts of waste steam. Way to go Shell!

Oriole Park School Partners with PAMZ Air Quality Project

The Oriole Park School welcomed a new neighbour in February, well at least temporarily. One of PAMZ's mobile air quality monitoring station's was parked nearby the school gathering air quality data. The unit was parked near the drop-off zone on the west side of Ogden Avenue from mid-February through mid-March. The unit recorded levels of pollutants from motor vehicle tailpipe emissions and other sources in the area. It will return to the same location for a second month of monitoring in October.

"PAMZ approached the Red Deer School District and requested the opportunity to monitor air quality at one of our school sites. Oriole Park volunteered to have the monitoring unit," said Darren Skrepyk, Director of Facilities with Red Deer Public Schools. "It's not that there is an issue at Oriole Park, or at any of our schools. PAMZ was interested in monitoring air quality at parent's drop off zones in general. It should provide us with some interesting information," said Skrepyk.

"Car idling and vehicle emissions have become an increasing concern in general. We are hearing more and more about it in the news" says school principal Cathy Gukert. "When there was a call for a school to have the unit, we welcomed the opportunity."

"At this site we monitored levels and compared them to provincial air quality objectives as well as other urban locations where we have monitored air quality," said PAMZ Executive Director, Kevin Warren. "We have consistently identified emissions from idling vehicles as a major concern for local residents and approached the school district with the idea of monitoring the emissions at parent drop off or bus loading zones. We are pleased to see that Oriole Park School has already instituted an excessive idling avoidance policy for buses that service the school."

The City of Red Deer played an active role in creating the initiative between Red Deer Public Schools and PAMZ. The City is also interested in the results of the monitoring process. "The data being collected at this station provides us with information on the type, amount and potential sources of air pollution in Red Deer," said Pam Vust, Environmental Initiatives Coordinator with the City of Red Deer. "This information will help us develop effective programs to maintain our good air quality." PAMZ expects to have a summary report of its initial findings available to the public in May and a final report including the October monitoring data by the end of the year.

Steps you can take to minimize idling?

- Minimize warm-up idling. This is especially important in winter as emissions double in a cold engine. Drive away after no more than 30 seconds of idling, assuming the vehicle's windows are clear. The best way to warm the engine and all other components is to drive your vehicle.
- Use a block heater to warm the engine before you start it. This reduces engine wear, improves fuel efficiency and reduces emissions by up to 20 percent.
- If you're going to be stopped for more than 10 seconds, turn off the engine. Never leave the vehicle run while you zip into a corner store. There's no question about it - idling gets you nowhere. Instead, it wastes fuel, money and damages the environment.
- Every gallon of fuel that is burned produces about 20 pounds of CO₂. The bottom line: the more fuel you use, the more CO₂ you produce. One of the best ways to cut fuel consumption is to avoid idling. An Idling vehicle gets zero miles per gallon.
- Avoid using remote car starters. They encourage you to start your car long before you are ready to drive it.

PAMZ Welcomes New Board Member - Lorna Watkinson-Zimmer

"Hi, my name is Lorna Watkinson-Zimmer I am the new representative from the City of Red Deer City Council..." Lorna could hardly get the words out when Kevin Warren, Executive Director then said, "I know you, no need for introductions. You were our first person to go through our first Let's Drive Green vehicle emissions test with your Volkswagen Beetle and you failed. Welcome to PAMZ!"

Lorna has done a fair bit of mea culpa since the day of that infamous test. She had no idea how badly her 1973 Sun Bug was spewing out "terrible stuff". After the embarrassment of the press pushing microphones in her face, she made an appointment with a dealership and asked for the car to be put into tip top condition; so good in fact that if Lorna put her nose to the exhaust she would live another day! The car was reported to be in A-1 condition with a hefty bill to show for it!

Air Quality has always been an important part of Lorna's life. As a girl, she and her family, lived outside of Manchester, England. It was a heavily industrialized area with many plants and factories spilling out numerous toxins from their chimneys. The smog at times was especially debilitating for Lorna. She remembers being propped up with many pillows, her mother by her side, willing her to breathe. Lorna's parents were told that for the sake of her health it was imperative they move to a cleaner, dry climate. They moved to the prairies of Saskatchewan where the air was clear, fresh and free of the emissions that had made her life in England so miserable. Since coming to Canada, Lorna feels she has been fortunate to have lived in areas where the air is much safer to breathe.

In February, Lorna attended her first Board meeting and is looking forward to a Board Retreat planned for early May. She feels it will give her a good chance to get to know her colleagues better, learn more about the issues PAMZ faces, and work on strategies and plans for the future. Like other PAMZ members she is committed to the PAMZ vision of clean, clear and fresh air, free from emissions that affect humans, animals or the environment. With PAMZ's many technical terms and extensive environmental lingo, Lorna feels acronym challenged! She believes she has a lot to learn but if one looks at Lorna's record as a City Councillor they'll quickly realize that she will easily meet that challenge and that Red Deer's residents will be well served by PAMZ's newest member!



New Station at Red Deer Riverside Site



The City of Red Deer, PAMZ and Alberta Environment have all worked together to upgrade the Riverside Air Quality Monitoring site located in Red Deer. A new station was installed and retrofitted in February.

"The old station was a trailer built in the 1980's and had been at this location since 2001." Said Kevin Warren, Executive Director with PAMZ. "Although we are replacing the trailer, we will continue to monitor the same substances as before. The Riverside station is part of the National Air Pollution Surveillance Network. Data collected at the station is entered into a province-wide data management system and is available to the public through both the PAMZ and Alberta Environment websites" said Warren.

PAMZ operates and maintains the trailer and equipment, which is supplied by Alberta Environment. Currently this equipment monitors many different substances, including nitrogen and sulphur compounds, carbon monoxide, methane, total hydrocarbons, ozone and fine particulate matter.

In Red Deer, the biggest impact to air quality comes from compounds commonly associated with vehicle emissions. The City of Red Deer has developed a new Corporate Idle Free Policy to reduce its emissions. To find out what you can do to reduce your emissions visit the city's website www.reddeer.ca or call 403-342-8750.

UPCOMING EVENTS

Crossfield and District Synergy Group Info night
May 21, 2009 4:00-8:00 pm Crossfield Community Centre
PAMZ will be giving a presentation on monitoring and air quality from a regional airshed perspective. The ERCB will have their field air monitoring trailer and a FLIR camera for fugitive emission monitoring on display. This session is open to the public. Beef on a bun will be served from 6-7pm.

PAMZ Public Issues Identification Meeting
May 20, 2009 7:00-9:00 PM Delburne Community Hall.
PAMZ is seeking public input on the regional air quality issues it should be addressing and for locating a portable air-quality monitoring trailer within the zone's boundaries. This public meeting is held to receive suggestions and concerns and develop recommendations. Attendance is free, no pre-registration is required. For more info call 403-862-7046

PAMZ Annual General Meeting
June 17, 2009 7:00-8:00 PM Ponoka Fish and Game Club.
Come and hear about PAMZ's plans for future and learn about its achievements over the past year. This meeting is open to the public and no registration is required. For more info call 403-862-7046.

2009 Annual Zones Conference October 19-20th, 2009 Mayfield Inn- Edmonton

The conference will provide information about what Albertans are doing to monitor and manage air quality in Alberta's Nine Airshed Zones. For more information about this event visit www.airshedsCouncil.ca.

The Zone is published three times a year by the Parkland Airshed Management Zone Association (PAMZ), a non-profit society established to monitor and manage air quality issues in the Parkland Region of Alberta. For more information about the association visit our website or contact the PAMZ Executive Director, Kevin Warren.



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