

The ZONE

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PAMZ NEWSLETTER

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

Eco-Friendly Technology at TAQA North



TAQA North has demonstrated that technology can significantly reduce its greenhouse gas emissions. Managing Director Frederic Lesage commented "we are a firm believer in the power of technology and its ability to make our operations more efficient and environmentally friendly". Today, they are harnessing technology to improve the environment.

TAQA North has been spearheading a scheme to use solar power as an alternative energy source to power their well-site equipment. In the past, the valves, instruments, pumps and communications devices for well-site water separation were powered by pneumatic processes fuelled by natural gas or propane. The solar power separator packages have become a common site at many of TAQA North's central area properties and

are utilized whenever possible. Together, they provide a continuous reduction in greenhouse gas emissions equivalent.

In addition to solar power reducing greenhouse gas (GHG) emissions, there is also no venting of valuable gas, the unit makes virtually no sound and it enhances workplace safety. This fusion of green technology and innovative thinking has helped cut running costs.

Another innovative application of technology is the installation of very precise electronic controllers at TAQA North's gas processing facilities. These controllers significantly improve the efficiency of their gas processing facilities and save greenhouse gas emissions at the same time. As an example TAQA NORTH used these controllers to optimize the steam balance at their Crossfield gas plant. By producing only the exact amount of steam necessary to operate the plant TAQA has significantly reduced the amount of fuel they burn in their steam boilers, and consequently reduced the plant's greenhouse gas emissions.

TAQA North's other facilities have utilized REMvue air fuel ratio system on gas driven compressors reducing fuel consumption by 6-10% and additionally they have also installed solar/wind air compressors to feed existing pneumatic venting controllers. Low bleed instruments are also replacing continuous bleed instruments. They have also worked closely with third party companies gathering power and emission data and implementing ideas where possible to continually strive to reduce emissions.

It's yet another example of how smart thinking and technological innovation can make real and lasting improvements.

AltaGas's Harmattan Gas Plant to add Cogeneration Facility

Cogeneration is the simultaneous production of two or more forms of useful energy (usually electricity and heat) from a single fuel source. By combining the two outputs into one process, efficiencies are increased and carbon emissions are reduced.

AltaGas Income Trust's Harmattan Gas Plant, located 20 km west of Didsbury, recently applied to the Alberta Utilities Commission to add a 15 megawatt cogeneration facility to its operation.

The plant's current steam supply comes from conventional natural gas-fired boilers in operation since the plant was built in 1961. The cogeneration facility will allow these older boilers to be shut down and, instead, the steam will be supplied by the cogeneration process.

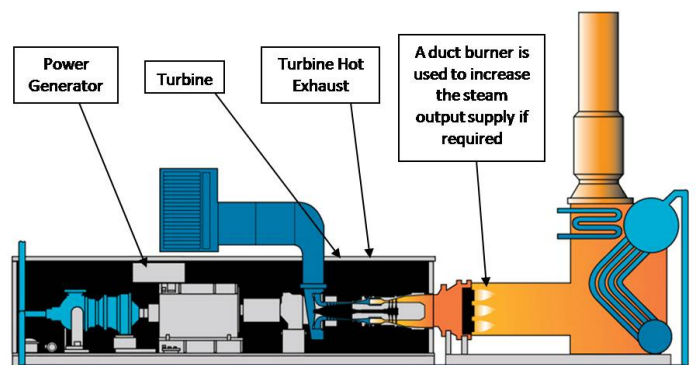
The new facility and its power grid interconnection will be located entirely within the existing plant boundary. Construction is anticipated to begin in May 2010 and be completed in September 2010.

The Harmattan cogeneration facility will utilize a natural gas-driven turbine to generate power and to create hot exhaust for use in the production of steam. Its overall efficiency will be over 85% lower heating value, which is excellent when compared to typical fossil fuel generation facilities.

Approximately 13 megawatts of electricity, enough electricity to power 5,000 homes, will be produced and sent back to the provincial power grid. The new facility will eliminate almost 50 tonnes of CO₂ pollution every year. That's the equivalent of removing about 8,000 cars from the road!



Harmattan Gas Plant



Proposed Cogeneration Schematic

PAMZ Member Profile– Wayne Ungstad

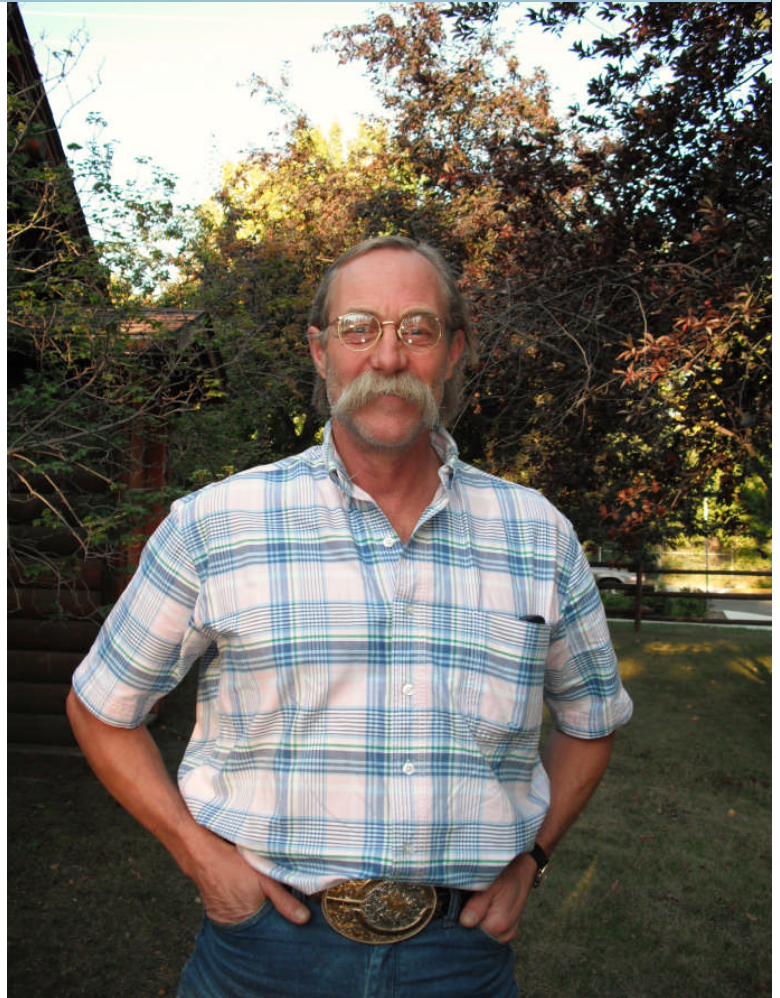
Wayne Ungstad has been a PAMZ Board member for almost two years representing the Ponoka Fish and Game Association. Wayne is a beef rancher who raises a herd of Black Angus northwest of Ponoka close by his family's original homestead (est 1926). He and his four siblings have lived in the area since moving from Edmonton when he was four.

After the drought of 2002 and the mad-cow disease scare of 2003, Wayne decided he had to look into other sources of income aside from ranching. This search and a longstanding interest in the environment led to his decision to return to school. He is currently attending the University of Alberta and pursuing degrees in science and environmental management as well as taking a Cree language course at Maskwachees Cultural College.

In addition to PAMZ and the Ponoka Fish and Game Association, Wayne volunteers on a number of other organizations, all with a common environmental thread. Wayne is the chair of the Organic Network of Alberta's communication committee, sits on the Board of Directors for the JJ Colette Natural Area and most recently has been working hard with a group looking to establish an Airshed east of PAMZ.

Wayne has been involved in the Battle River Watershed Alliance and several Clean Air Strategic Alliance projects including the Electricity Emissions Management Framework Project Team. This fall he became involved in Environment Canada's Comprehensive Air Management System project (BLIERS), focusing on the upstream oil and gas and pipeline sectors.

Wayne says, "my environmental attitude doesn't stop at my gate." His latest project is increasing the ecosystem biodiversity of his ranch. By connecting ecologically sensitive areas through shelterbelts he hopes to increase species diversity and ultimately the health of his land.



PAMZ Participates in the Successful ZoneVolution Conference

On October 19-20th, the Alberta Airsheds Council (AAC) hosted over 170 delegates at the ZoneVolution: The 2009 Alberta Airshed Zones Conference held at the Mayfield Inn in Edmonton.

Delegates came from across Alberta and Canada to listen, learn and share their expertise about airshed zones, air monitoring and management through a series of comprehensive information sessions that explored emerging issues in air policy and science in Alberta. The conference's theme was change, tracing the evolution of Alberta's Airsheds since formation and exploring how current initiatives and technical advances are shaping the future.

PAMZ played a major role in organizing and hosting the conference; its executive director, Kevin Warren was on the conference organizing committee and chaired the technical session stream. Several PAMZ board and committee members also attended. All nine airshed zones and several air monitoring service and equipment vendors had well-visited information booths in the exhibition component of the conference. The highlight of the event was the Gala Dinner speaker, Brian Keating, the well-known head of conservation outreach at the Calgary Zoo. His presentation "A Little Sex, A Little Adventure, and a bit of Passion" was a profound and awe-inspiring presentation.

TWG Recognizes Outgoing Chair

The PAMZ Technical Working Group recently recognized the outstanding contributions of its outgoing chair, Shane Lamden, of NOVA Chemicals who chaired the group from September 2006 through November 2009.

At a special ceremony held on January 15, Shane was presented with a plaque recognizing his contributions by the new chair of the Technical Working group, Aaron Rognvaldson, of Husky Energy. Shane leaves some large boots that will be tough to fill but Aaron is up for the job! Look for a profile on Aaron in an upcoming issue of the Zone.



Shane Lamden and Aaron Rognvaldson

UPCOMING EVENTS

Environment Education Workshop

February 23, 201- Provincial Building, Red Deer, Ab

From Information to Action: How to more effectively reach your audience. For details and to register, email Phil Boehme at phil.boehme@gov.ab.ca or phone 403-340-7195.

ACE 2010 Calgary Air & Waste Management Assoc. (AWMA) Annual Conference & Exhibition

June 22-25, 2010 Calgary Telus Convention Centre, Calgary, AB

Building on a theme of "Energy and the Environment" the ACE 2010 Technical Program will explore a range issues including the future of fossils fuels, alternative energy solutions and greenhouse gas emissions management, innovation and technology. For more information visit www.awma.org/ACE2010.

The Zone is a newsletter 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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