

# CANADIAN GAS TURBINE NEWSLETTER



February, 1997; Vol, No. 1

*Industrial Application of Gas Turbines Committee  
Canadian Gas Association*

## ***IAGT Chairman's Corner***



Welcome to the premier issue of the IAGT's Canadian Gas Turbine Newsletter, your information window to the gas turbine industry in Canada. The Newsletter is planned as a semi-annual publication to address issues pertinent to the gas turbine industry in Canada and to inform you, the reader, about

upcoming events and new developments of interest to all of us connected to the industry. Contributions to the Newsletter are welcome and can be sent via mail, e-mail, or fax to the address on the back page.

On behalf of the IAGT Committee, Vice Chairman Paul Colwell of Union Gas and I would both like to take this opportunity to thank all of those who have been involved with and contributed to the success of the Committee and the Biennial Symposium since its inception. In particular, we would like to thank Ross Keyes of the CGA and our past two Chairmen, Ted Traynor of Pratt & Whitney Canada and Pat Campbell of NOVA, for their dedication and effort in keeping the Committee together, as well as expanding and diversifying the membership within the Canadian Gas Turbine Industry. The IAGT Committee members would appreciate any and all feedback on the Newsletter.

*Dave McWatt, PEng. Chairman -  
IAGT Committee*

## ***1995 IAGT Symposium Banff, Alberta***

The 11th Symposium which was held in Banff in October, 1995 was a resounding success with over 150 delegates in attendance. The variety, quality, and technical scope of the papers and the presentations were excellent. Papers on a wide range of relevant topics including gas turbine technology and applications; operations and maintenance; performance; cogeneration and combined cycle; and emissions and environmental were presented over the three day session. The "Best Paper" award went to Mark Lai of the National Research Council of Canada and Peter Cheney of the Department of National Defence Canada for their paper titled "CFD Analysis of the Allison 570K Gas Turbine Combustor". Congratulations to Mark and Peter.

## ***1997 IAGT Symposium October 15-17, 1997***

Mark your calendars, make your plans - the 12th IAGT Symposium will be held in Banff, Alberta, on October 15 through October 17, 1997. The theme for the Symposium will be "*Gas Turbines - The Drive for Efficiency*". The "Call for Papers" has already gone out and, if you have not received your advance notification and 'call for papers', please call any of the Committee members to get your name and Company affiliation put on our mailing list. Through our Sponsor, The Canadian Gas Association, a block of rooms at the Banff Springs Hotel has been reserved and details will follow with the preliminary program in the Spring of 1997.

## ***IAGT Committee***

The Industrial Applications of Gas Turbines (IAGT) Committee, formed in 1973 under the sponsorship of the National Research Council of Canada, is a Technical Advisory Group to Canadian Industry and Government. The Group provides a forum for the exchange and dissemination of ideas, and the communication of new developments related to the Industrial Application of Gas Turbines in Canada.

Presently under the sponsorship of the Canadian Gas Association, the IAGT Committee's specific functions relate to the organization of a biannual Technical Symposium for the presentation of technical papers and discussion panels covering all aspects of industrial gas turbine operation, as well as providing a forum for reviewing directives, guidelines, codes and practices, as issued by Regulatory Agencies, which impact directly on the industrial application of gas turbines.

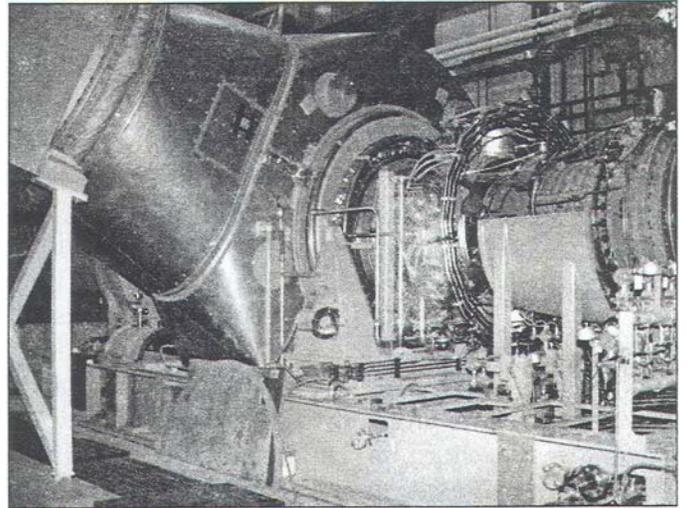
The IAGT Committee includes the following members who volunteer their time and effort to the success of the Canadian Gas Turbine Industry:

Paul Colwell	<i>Union Gas Limited</i>
Lloyd Cooke	<i>Liburdi Engineering Ltd</i>
Glen Dunn	<i>NOVA Gas Transmission</i>
Peter Elder	<i>Delta Projects</i>
David Golson	<i>Petro-Canada Resources</i>
Lawrence Kaempffer	<i>Westinghouse Canada</i>
Ross Keyes	<i>Canadian Gas Association</i>
Manfred Klein	<i>Environment Canada</i>
Dave McWatt	<i>TransCanada PipeLines</i>
James Noordermeer	<i>Gryphon Int'l Engineering</i>
Steve Robinson	<i>Rolls-Royce (Canada)</i>
Thomas Robinson	<i>Alberta Natural Gas</i>
Gordon Rogers	<i>Gordon Rogers &amp; Assoc.</i>
Ted Traynor	<i>Pratt &amp; Whitney</i>
Kenneth Walls	<i>Solar Turbines Canada</i>

## **WHAT'S NEW**

### ***Pipeline***

***TransCanada PipeLines*** have recently installed their first two DLE Dry Low Emissions Industrial RB211-24G engines at Stations 92 - Kapuskasing and Station 110 Haileybury, Ontario. The units, capable of achieving NOx and CO emission



*RB211-24G DLE installation at TransCanada Station 110*

levels below 25 ppmv, were completed in October, 1996. An additional seven 28MW DLE 24G units are planned for 1997 at Stations 5 Cabri, 13 - Caron, 21 - Grenfell in Saskatchewan and Stations 60 - Martin, 75 - Nipigon, 88 Calstock, and 102 - Potter in Ontario.

***Alberta Natural Gas Company Ltd. (ANG)*** placed an order in March 1996 with Nuovo Pignone for a PGT 16 gas turbine driven compressor set. This unit will be the first LM1600 to be supplied with dry low emissions combustors, guaranteed to achieve 25 ppmv of both NOx and CO. The unit is to be delivered in May 1997 for installation at ANG's Elko compressor station in southeastern British Columbia.

**PetroCanada** is installing six Solar Saturn gas turbines driving reciprocating compressors for gas gathering duty in north east British Columbia in early 1997. The reciprocating compressors were chosen for flexibility in handling the wide range of operating pressures and the gas turbine is better suited for the sour fuel gas service.

**Hibernia's** new oil production platform is proceeding for towout in preparation for commencement of operations in June 1997, 300 km offshore from Newfoundland. The platform, largest of its type in the world, will rely on four GE LM2500PE gas turbines packaged by DresserRand, two for power generation and two for gas re-injection.

## ***IPP Independent Power Production and Cogeneration***

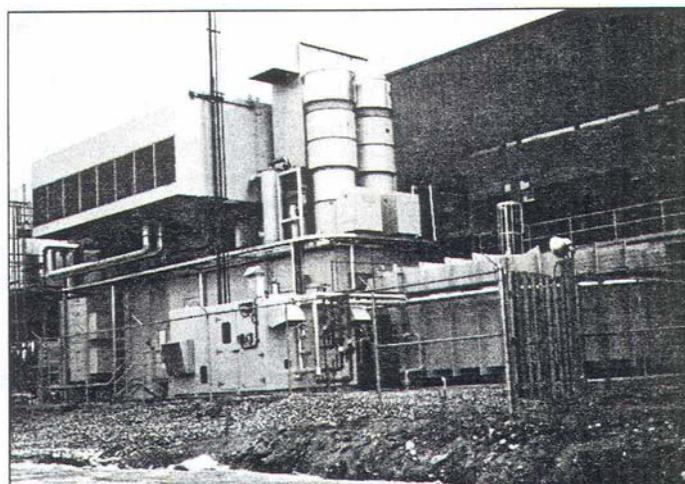
**Whitby Cogeneration** is first in the world with the installation of the new 40% efficient, 50 MW Westinghouse/Rolls-Royce Trent package. Commissioning is underway with Nicholls Radtke Ltd as the turnkey contractor.

**Northland Power's** Iroquois Falls 100 MW combined cycle plant is running and in the final stages of commissioning. The plant uses two GE LM6000PA gas turbines and a GE steam turbine. Delta Construction is the turnkey contractor.

**TransCanada PipeLines** is installing two 40 MW Enhanced Combined Cycle Power plants at its North Bay and Kapuskasing sites with start up scheduled for December, 1996. Each plant uses a P&W FT8 gas turbine combined with an ABB steam turbine which also utilizes waste heat from an existing pipeline gas turbine unit.

**Commercial Alcohols Inc. (CAI)** is installing an European Gas Turbine (EGT) 4.9 MW Typhoon gas turbine-generator set in the fall of 1997 at its ethanol plant in Chatham, Ontario. The Typhoon engine is packaged by Stewart and Stevenson will be equipped with EGT's Dry Low Emissions system. Fluor Daniel of Calgary are the project EPC engineers.

**Potter Station Power** of Tunis, Ontario completed the installation of an LM6000 package generator set in the fall of 1996. The gas turbine package was supplied by Stewart and Stevenson, installed by Bluebird Construction Inc, and engineered by Gryphon International Engineering.



*LM6000 installation at Potter Power Station in Tunis, Ontario*

**TransAlta Energy** recently started up the first LM6000 Dry Low Emissions gas turbine in Canada at its Windsor Cogeneration plant, supplying thermal energy to Chrysler's van plant. The unit was packaged by Stewart and Stevenson and is one of TransAlta's fleet of nine LM6000 units world wide.

## ***Upgrades and Overhaul/Maintenance***

***U. S. Turbine Corporation*** was purchased by Rolls-Royce in July, 1996. U. S. Turbine designs, packages, tests, and services custom engineered gas turbine and reciprocating engine generator sets from 0.5MW to 5MW, including Allison Turbines. The company employs 100 people with headquarters in Mainville, Ohio and offices In St. Catharines, Ontario.

***Liburdi Engineering*** is completing an 18,000 sq. ft. expansion to it's Hamilton, Ontario facility with move in set for the end of 1996. The addition will double existing shop space and will be used for additional automated welding, powder metallurgy and coating facilities in support of Liburdi's expanding turbine component repair business.

***TransCanada PipeLines*** is installing retrofit packages to convert three existing Cooper Rolls RB211-24G engines to the DLE dry low emissions standard at Stations 55, 99 and 127 in Ontario in 1997. In addition to these installations, planning is in progress for four more RB211-24G DLE retrofits in 1998.

## ***Marine Service***

***HMCS Ottawa***, the twelfth and final Canadian Patrol Frigate, was commissioned at Cornwall, Ontario in September 1996. The main propulsion is provided by two LM2500PE gas turbine units for each of the Frigates in the fleet.

*Thank you to Trevor Whitfield of TransCanada Pipelines for designing the IAGT logo.*

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*Canadian Gas Turbine News Letter* is issued on a regular basis to advise the Canadian gas turbine industry of new developments. We invite you to circulate this issue to your colleagues and submit your ideas for articles. If you would like to receive copies of future issues of NewsLetter, please contact Dr. Shahrzad Rahbar at the address above or fill in the form below and fax to 416 498-7465.

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