



- left to Right- Ray Kavanagh with Cindy Strickland and AACE Chinook Patrons

### *Reflections- November 2007 Dinner Meeting*

Arthur Kowalchuk

About 50 Chinook-Calgary members and guests were greeted by President Mahendra Bhatia at the Nov. 14./07 dinner meeting held in the Riverview room of the International Hotel in downtown Calgary. Donna Kainth (Scholarship Director) was invited to announce the bursary endowment embellishment by \$15,000 to SAIT.

He then asked Cindy Strickland to introduce Ray Kavanagh of Hatch Energy, the evening's speaker on Wind Power Engineering. Ray Kavanagh indicated that the following wind power projects have been done or are being done by Hatch Energy in Alberta and British Columbia – Suncor Magrath, Suncor Chin Chute, Creststreet Kettles Hills, Enmax Taber, AltaGas Bear Mountain and Sea Breeze Knob Hill

The first wind power project was done in 1988 using a 12kw generator. Holland used wind power in units to pump water and reclaim land for living space and now have about 9000 windmills for power. In the past 65 years, technology has evolved so that current units now use blades of 42 meter length. The larger size now requires special trucking, with pilot vehicles and careful route planning, as well as cranes for installation on properly constructed concrete bases. Generator sizes vary from 1 to 50 kw output. Power is generated as long as the wind is blowing and there are connections to transmission lines available. As wind does not always blow, connecting wind power with other forms of power generation is recommended. Some of the items to be considered for installation include low frequency sound, bird hazard, farmer's land availability, visual impact, shadow flickering, substations, electrical interconnection, interference with tele-communication and turbine manufacturing. Currently, the popularity of wind power has resulted in loading up of manufacturer's capability, so that new projects will have to wait several years for generators. Regulatory approvals have generally been favorable for wind power and resulted in 30% growth of wind power per year. Currently, wind power costs per kw is comparable to that of hydro and other conventional power generation. The presentation was followed by a question/answer session.