



# NEWSLETTER

## PROBUS CLUB VANCOUVER

#252-2025 West 42nd Avenue, Vancouver B.C. V6M 2B5 (604) 261-6818

*Clubs for retired and semi-retired professional and business persons, former executives and others*

**NEXT MEETING: Tuesday September 18/01**

\*\*\*Please note this is the Annual Meeting\*\*\*

**TIME: 9:30 AM**

**LOCATION: Stanley Park Pavilion**

**SPEAKER: Allan McEachern**

**TOPIC: To be announced**

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**Minutes from August 21, 2001**

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**Attendance: 91 and 1 guest**

**Vice-President Norm Weitzel** opened the meeting at 0958 AM. He gave the report of the Nominating Committee composed of himself, **John Hopkins**, and **Doug Lambert**. Nominees are as follows:

**President: Norm Weitzel**

**Vice-President: Don Farquhar**

**Secretary: Dennis Creighton**

**Treasurer: Bill Wallace**

An election for the above officer positions will be held at the annual meeting on September 18, 2001. Additional Nominations must be conveyed to the nominating Committee at least twenty-four hours in advance of the Annual meeting. **John Hopkins** will become Past President. Appointed committee chairs, as listed on the second page of the *Newsletter* have agreed to serve for another year.

The Management Committee met Wednesday August 29, 2001. **Tom McCusker** reported that there are 56 paid tickets for the Lillooet train tour on September 11. Participants should be at the station by 0630. All day parking is \$4.00. **Hugh Legg** announced that our next speaker will be The Honourable Allan McEachern.

Michael Rosenberg from Ballard Power Systems was introduced by **David King**. The speaker started by giving an overview of Ballard Power Systems. There are over 800 employees. It has an extensive development, testing, and manufacturing infrastructure and has over 550 patents issued or pending. The company is in a strong financial position with over \$700 million and has several well placed strategic partners.

Fuel cells basically combine hydrogen with oxygen to produce electricity, water and heat. There is high efficiency, zero emissions, and no vibrations with this process. There are a number of factors making fuel cell technology desirable such as world wide need for more power, and a greater need for "premium" power from computers and high tech equipment (power free of distortion), the deregulation of utilities has opened up competition for power delivery, environmental issues are demanding cleaner technology and on site energy production is becoming more desirable because there is an inability to site high voltage long distance power lines.

The markets that Ballard is pursuing are for fuel cells in transportation, stationary plants and portable power. Ballard's first commercial product will be a portable product introduced later this year. Bus engine marketing should occur 2002. Its first stationary plants will be marketed in 2003 and finally automobiles powered with fuel cells will come on stream between 2003-5.

The "brown-outs" situation associated with the greater demand for power with a loss in reliability of delivery has created a large potential market for reliable pollution-free portable generators. Gas, diesel, and propane generators won't work in an



**President:**

John Hopkins  
604-985-8422

**Director,**

Probus Canada  
Pidge McBride  
604-274-0446

**Past President:**

Roy E. Williams  
604-926-4727

**Vice-president:**

Norm Weitzel  
604-925-3574

**Secretary:**

Don Farquhar  
604-948-9908

**Treasurer:**

Bill Wallace  
604-947-0340

**Speakers Committee:**

Fred Cotton  
604-266-7060

**Membership**

**Committee:**  
Dick Matthews  
604-922-0358

**Visits and**

**Entertainment:**  
Tom McCusker  
604-261-4763

**House Committee:**

Doug Lambert  
604-266-2422

**Newletter Editor:**

Roy Williams  
604-926-4727

**Greeters Committee:**

Leo Sauve  
604-925-2702

**Rotary Liaison:**

John Hoyle  
604-926-2667

**Historian and**

**Archivist**  
Peter McCabe  
604-224-4870

apartment because of emissions and noise. Batteries don't last long enough for power replacement during a rolling brown-out. A fuel cell with a 3-4 hour delivery, no harmful emissions and relatively silent will work very well as an emergency residential backup. Along with this are markets for fuel cells in construction sites, leisure activities, boats, RV's and special events. A two match-box sized 100 Watt unit will operate for 5-6 hours. A 1 kW unit is the size of a computer terminal. A 250 watt unit is the size of an igloo ice box container and will run for 1 1/2 hours on a butane canister.

The markets for stationary power units include standby power, remote power sources, residential power, premium power sources and distribution generation. Ballard is developing products for standby and continuous stationary products. It's first product in 2003 will be a stand-by product while it's first continuous product will be available in Japan in 2004. Ballard currently has five 250 kW field trial units being tested in the USA, Europe and Japan. A 50 kW unit is enough power for 50-60 homes or a small industrial facility. These units will be tested for 2 years with the results input back into the product development process. The 250 kW is a continuous duty product and will not be Ballard's first stationary product.

The advantages of fuel cell powered automobiles over the internal combustion engine include: high torque giving high performance, environmentally clean, low maintenance (few moving parts), quiet, 2-3 times more fuel efficient, sufficient power to service on-board extras, more reliable, and the much smaller unit allows greater freedom for designers. A mid sized car can be powered by the Mark 900 unit which generates 80 kW (110 HP). With volume manufacturing of >300,000 units per year it is anticipated that the cost for a fuel cell would be approximately the same as for an internal combustion engine. A number of pictures of operating prototype automobiles were shown from a number of auto manufacturers including Daimler-Chrysler, Ford, Honda and Nissan. Infrastructure is an issue. Will all service stations offer Hydrogen at the pump? Technicians will have to be in place. No particular fuel at this point in time appears to be the winner. Gasoline is difficult to reform to fuel cell needs. Methanol is an easier fuel to process. Natural gas is more suitable for stationary power units.

**Questions:** fuel cells can be designed to be used in back-up situations and PEM fuel cells start up quickly and respond to load changes; cost targets for a residential unit stated by Ballard's competitors is in the \$500-700kW range to be competitive with electricity delivered by the grid in North America; fuels for fuel cell systems include natural gas, propane, butane, and hydrogen; hydrogen is a fuel and must be respected, but in many ways is as safe or safer than gasoline (it dissipates quickly, it's lighter than air, less energy per unit volume); reforming of gasoline into hydrogen is difficult and creates emissions; diesel truck market is not an early market; first patent expires in 2009, most expire much later.

The speaker was thanked by Don Farquhar for his interesting and informative presentation.

Don Farquhar  
Secretary





## PRESIDENT'S MESSAGE

The September meeting is the Club's Annual Meeting at which time I will step down and Norm Weitzel will become President.

I wish to take this opportunity to extend my sincere thanks to each member of the Management Committee for their dedicated support and efforts, in both the growth of the Club and the many activities which have occurred.

The varied and diverse membership of the Club, in my opinion, is an important strength and has provided many ideas and suggestions, not only for the various top quality speakers we have had, but also the well attended and enjoyable trips.

It has been an honour and pleasure to have served as your President this past year.

Sincerely,  
John Hopkins

## NOTICES AND ENTERTAINMENT:

Roy Williams has been appointed Editor of the Probus Club Newsletter. He will be responsible for ensuring that all material is submitted on time for publication. The deadline for submitting copy is **two weeks plus one day before the Probus Club meeting date**. For information please contact Roy at 604-926-4727 or E-mail [roytwitch@home.com](mailto:roytwitch@home.com).



## SEPTEMBER GREETERS:



**KEN WEAVER**  
**KEN STRONGE**

## ALLAN McEACHERN

Allan McEachern was born May 20th, 1926 in Vancouver. He was educated at Vancouver and Penticton Public schools and graduated from UBC, with a B.A. degree in 1949 and an LL.B in 1950. He is married to Mary Newbury, a Justice of the Court of Appeal.

After practising law with Russell and DuMoulin from 1950 to December 31st, 1978, he was appointed Chief Justice of the Supreme Court of British Columbia on January 1st, 1979. On September 7th, 1988 he was appointed Chief Justice of the Court of Appeal of British Columbia and retired from that position on May 20th, 2001. Allan has a wonderful ability to work hard and persuade his colleagues to do the same. He has presided over some of the most difficult trials and appeals. He has the admiration of the members of the legal profession for his industry and high standards and has made many contributions to the administration of justice.

