**ALBERTA INSTITUTE OF POWER ENGINEERS**

**April Meeting & Tour: NAIT Power Engineering**

**11762 – 106 Street**

**Edmonton AB   T5G 2R1**

**Room C-111 (Power Engineering Bldg.)**

**Guest Speaker: Mr. Lorne Shewfelt, PE, C.E.T.**

**Date / Time: Tuesday, April 21, 2015 @ 6:30 PM**

**Mr. Lorne Shewfelt, TransAlta Utilities Corporation**, will conduct a presentation on wind power generation, with emphasis on the Alberta experience, discussing:

- How a wind turbine works

- Design considerations and placement

- The impact of wind power in the world, in Canada, and in Alberta

- Disadvantages, limitations, and concerns with wind power

- The effect of wind power on operation of the electrical grid

\*\* Parking – Paid meter parking and/or at the Parkade, on the east side of 106 streets and 118 Ave.

**Following Lorne’s presentation we will tour the Alternate Energy Facility at NAIT**

The main energy products used by consumers include electrical power, liquid transportation fuels, and combustible gases for heat generation. Many of the other alternative energy technologies (such as wind, solar PV (on roof), hydro, and fuel cells) focus primarily on power generation. Biomass, on the other hand, can be used to produce all three major categories of energy products: for example, combustion of wood pellets to generate electricity, fermentation to produce bioethanol as a transportation fuel, and anaerobic digestion of sewage to generate methane, a combustible gas. This 2-year program explores the many opportunities for using a variety of biomass feedstocks to produce various energy products and other value-added products.

Students learn to assess solar photovoltaic and thermal energy potential by calculating the system needs and requirements based on demand loads.

The facility offers a broad foundational understanding of the wide range of energy storage technologies, their designs and operating fundamentals, applications, market prospects and challenges. By the end of this program students are able to compare the relative performance of energy storage systems.

**EVERYONE INCLUDING NON-MEMBERS AND SPOUSES ARE WELCOME!!!!**