*Proceedings of the 2010 International Conference on Industrial Engineering and Operations Management*
*Dhaka, Bangladesh, January 9 – 10, 2010*

# Analysis of Potential Wind and Solar Energy at Selected Airport Locations in Canada

**Quazi K. Hassan**
**Department of Geomatics Engineering, and**
**Centre for Environmental Engineering Research and Education**
**Schulich School of Engineering, University of Calgary**
**2500 University Dr. N.W. Calgary, Alberta, Canada T2N 1N4**

**Ahad Ali**
**A. Leon Linton Department of Mechanical Engineering**
**Lawrence Technological University**
**21000 W Ten Mile Road, Southfield, MI 48075, USA**

## Abstract

Both wind and solar energy have huge potential as a source of sustainable / renewable energy. In this paper, we analyzed wind speed and sun-shine hour data from 21 major Canadian airports over 1971-2000. On the basis of this analysis, we further investigate wind and solar energy potential for four locations (i.e. having long term annual average wind speed greater than 4.8 m/s and long term annual average 2000 hours of sun-shine). Our analysis reveals that during the winter month wind energy could be generating much higher than summer month. On the other hand, solar energy can be generated higher in summer month.