HOW MUCH ENERGY DOES YOUR AIRPORT CONSUME?

HOW DOES THIS COMPARE TO YOUR PEERS?

Over the last 12 months, Stantec has worked with airports across North America to develop a comprehensive study of terminal building energy and GHG intensity. This study is to support decision makers within the aviation industry to create a more sustainable, energy efficient approach to airport building design and operation.

WHY BENCHMARK YOUR ENERGY USE?

Energy intensity inventories allow for a simple assessment of building performance. They are widely implemented as a cost effective means of profiling building energy consumption and can be used as a building energy comparison tool.

Building energy intensity benchmarks have been developed in North America since the 1970's. However, as a building sector, airports have not been included to date - in either the Canadian or U.S. national energy intensity databases.

'Airports are not routinely tracking energy use. Only 35 percent, overall, reported having an energy use baseline, and fewer than half the respondents tracked energy performance.'

(Transportation Research Board of the National Academies, 2007)

Energy consumption in airports can be difficult to measure due to the complex nature of building type and processes which occur on site. This, coupled with the prevalence of airlines operating individual terminal buildings, has resulted in airport facilities being difficult to benchmark for energy.

HOW CAN OUR STUDY BENEFIT YOUR AIRPORT?

In 2012, Stantec presented participant airports with a cooperative study of their energy and GHG intensity in comparison with peer facilities. Opportunities for reduction in energy consumption and related GHG emissions were identified.

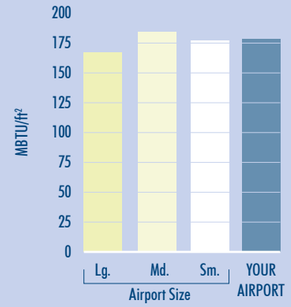
Next year, we will publish a 2013 version of the study which will focus on 2012 utility data. In addition to energy benchmarking, this study will include water baseline intensities for the first time. Water is an increasingly valuable and costly resource and the inclusion of water baselines will be a valuable addition.

1) Edmonton International Airport Terminal Building Expansion - Living Wall
2) Vancouver International Airport - Pier C Expansion
3) Lynden Pindling International Airport - Redevelopment, Nassau, Bahamas

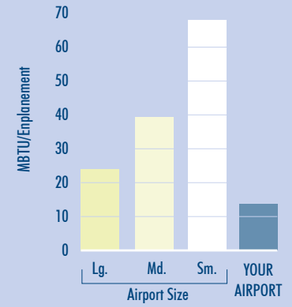
Stantec

HOW DOES YOUR FACILITY COMPARE?

EXAMPLE OF AVERAGE ENERGY INTENSITY PER UNIT AREA



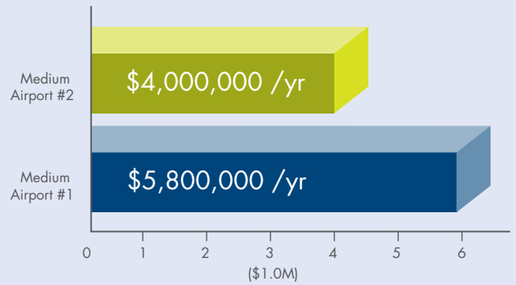
EXAMPLE OF AVERAGE ENERGY INTENSITY PER EPAX



Airport Size Criteria by Enplanement (EPAX)

Large: 8+ Million EPAX
Medium: 1.5–8 Million EPAX
Small: 0–1.5 Million EPAX

2012 RESEARCH FINDINGS



One of the most prominent findings of the 2012 study was revealed on comparison of two facilities of similar size and age within the same climate zone.

If Medium Airport #1 was as efficient as Medium Airport #2, the savings could be up to:

$1,800,000
per year

We can help you identify similar savings!

PARTICIPANTS IN THE 2012 STUDY:
DFW, MBJ, NAS, SFO, SLC, YHM, YKA, YXC, YXJ, YYC, YYZ