

Government of Alberta ■

Infrastructure

Energy Efficiency within Alberta Infrastructure Buildings

AEEA Conference

November 4, 2010

Alvin Law

Environmental / Energy Manager

Property Management

Alberta Infrastructure

Alberta ■

Freedom To Create. Spirit To Achieve.

**Government
of Alberta** ■

Government of Alberta ■

Infrastructure

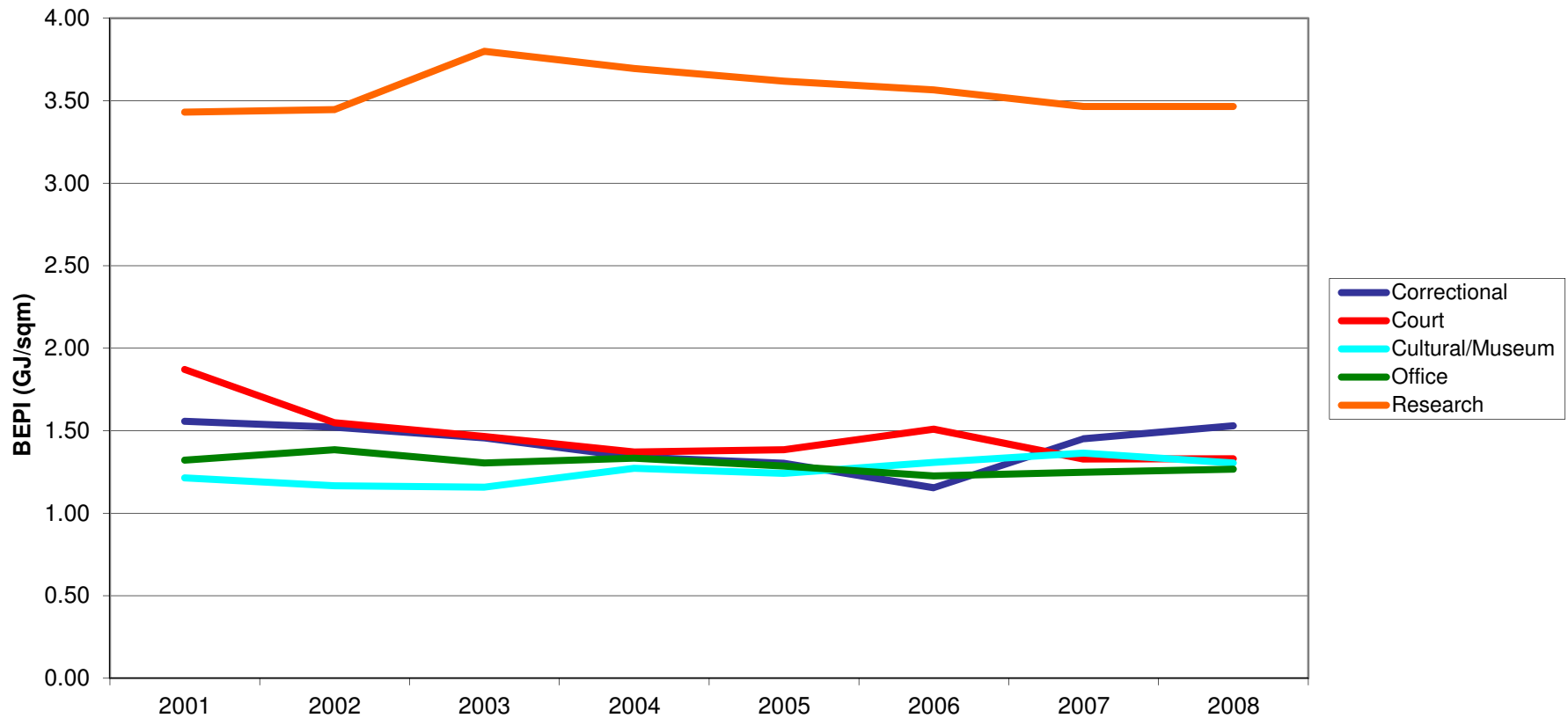
“Through leadership, expertise, and collaboration with our partners, we support the provision of public infrastructure that contributes to the province’s prosperity and quality of life.”

We Provide

- **Support for Health Facilities, K-12 Schools, Post Secondary and Seniors’ Lodges**
- **Delivery of Major Gov’t-Owned Capital Projects**
- **Facility Management Services for 1800 Gov’t-Owned and Leased Facilities**

GREENHOUSE GAS INVENTORY

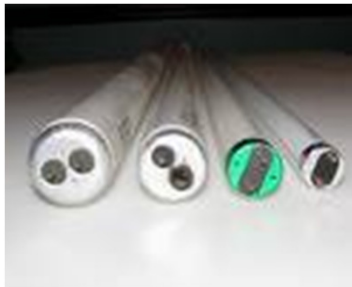
Portfolio Energy Intensity



ENERGY PERFORMANCE CONTRACTING

Energy Performance Contracting initiated in 1995

- Completed retrofits in over 150 facilities
- Various vendors for \$28 Million in projects
- Focused on lighting retrofits, VFD drives, etc.



Contributed to a 10% reduction in energy use
over the last decade

DEMONSTRATION TECHNOLOGIES

Solar Photovoltaic:

- Gov't Centre Power Plant
- Pincher Creek Provincial Building

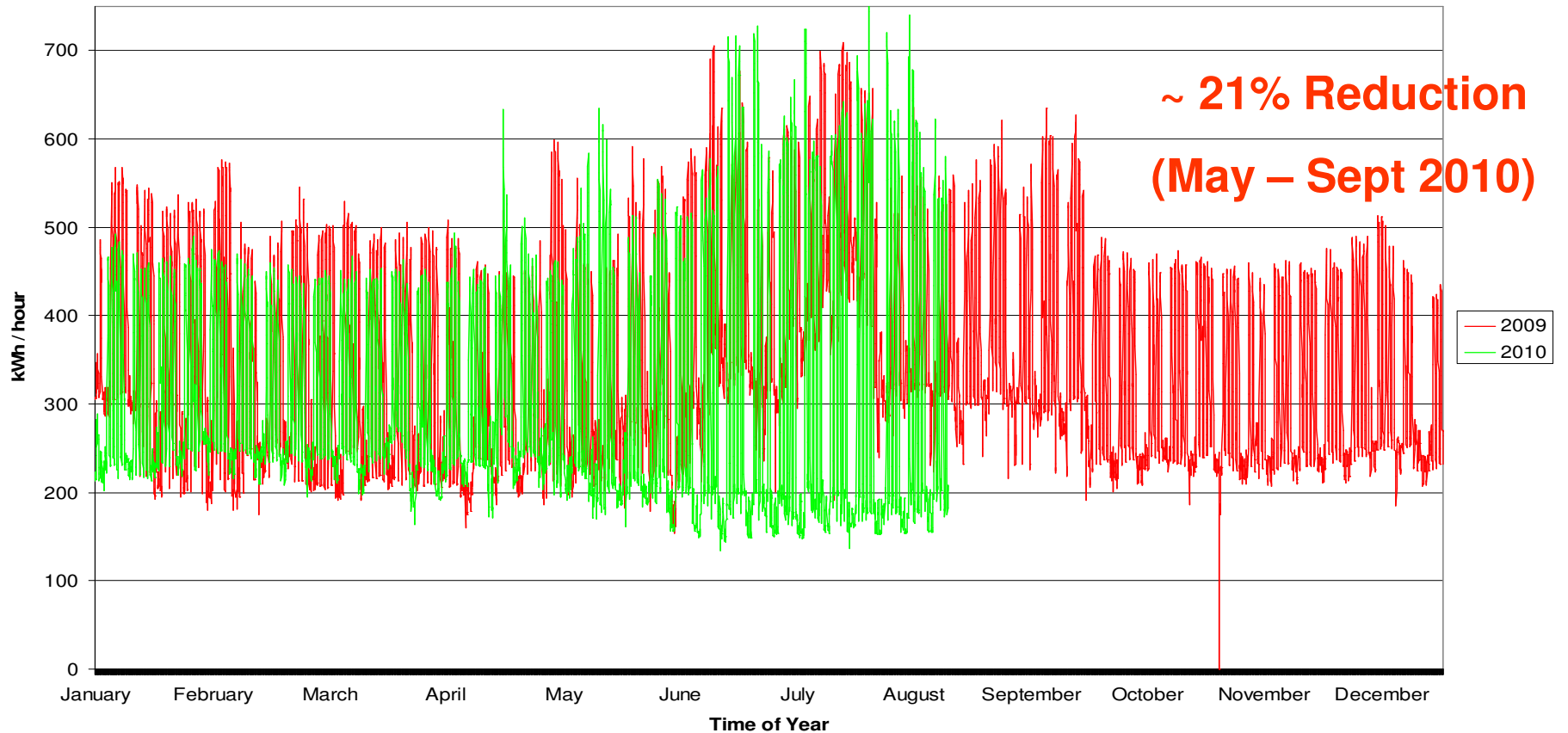
Solar Thermal:

- Pincher Creek Provincial Building
- Lethbridge Correctional Centre



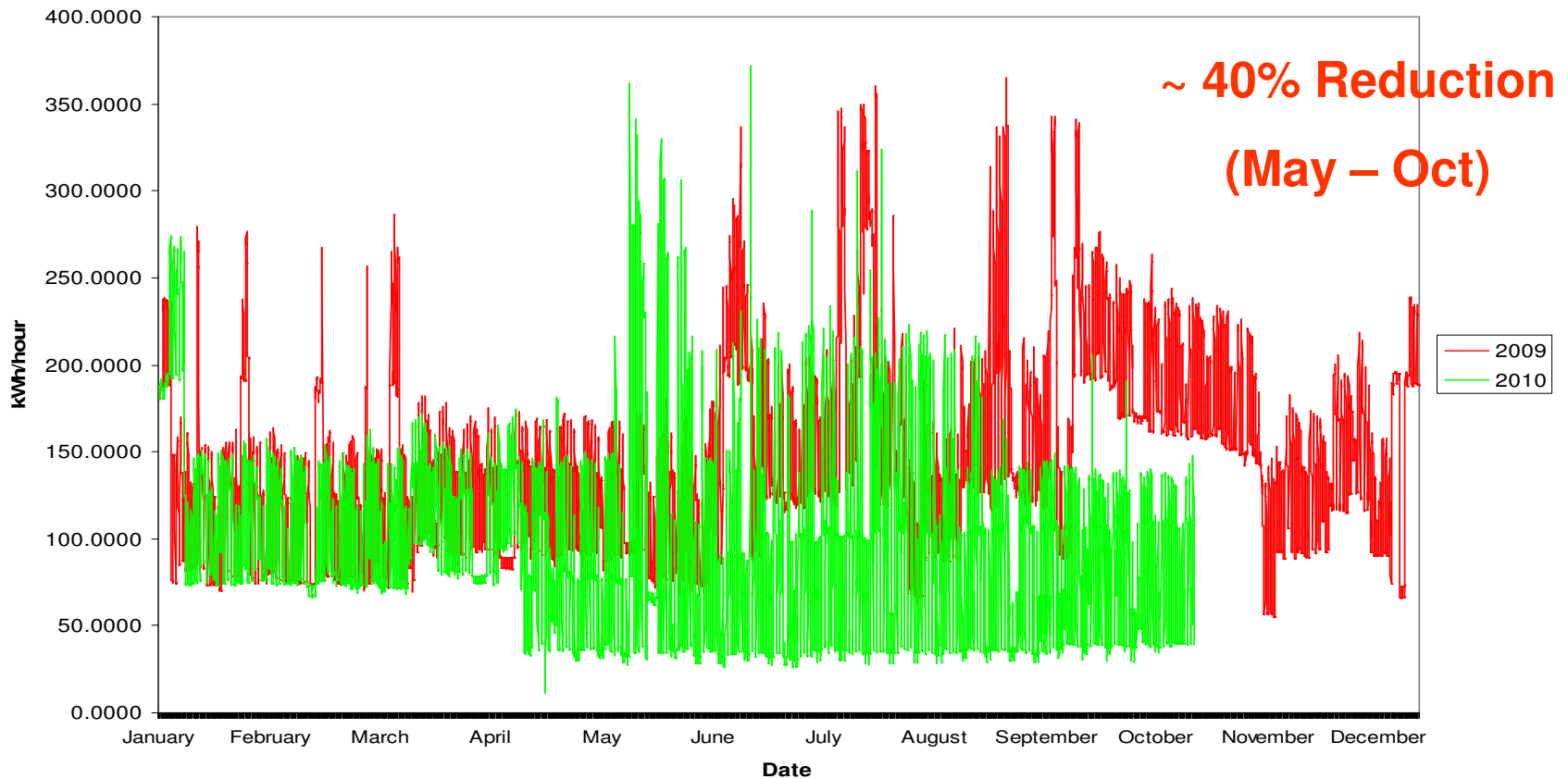
SCHEDULE ADJUSTMENTS

JG O'Donoghue Electricity Usage



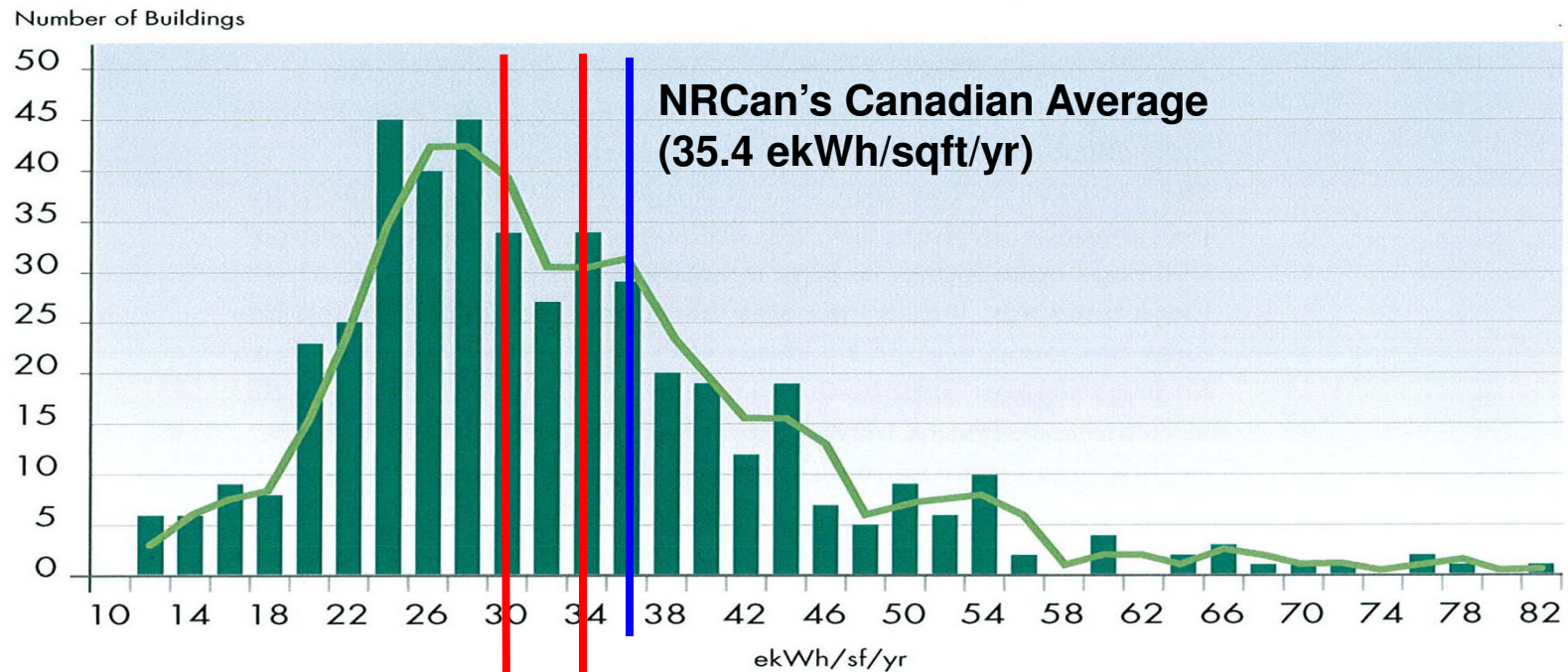
CONTROL SEQUENCE & SCHEDULE ADJUSTMENTS

Percy Page Centre



BOMA BEST CERTIFIED BUILDINGS

Figure 11: ENERGY INTENSITY DISTRIBUTION OF BOMA BEST CERTIFIED OFFICE BUILDINGS



**NRCan's Canadian Average
(35.4 kWh/sqft/yr)**

AI's Owned Office Buildings (32.8 kWh/sqft/yr)

AI's Owned Office Buildings Over 100 000 sqm (29.2 kWh/sqft/yr)

Alvin Law, EIT

Alberta Infrastructure
Property Management
802, 620 - 7 Avenue SW
Calgary, AB T2P 0Y8
(403) 297-4011