UNIVERSITY OF ALBERTA

Solar Photovoltaic

Agriculture and Forestry Building Atrium | 2017

The Agriculture and Forestry Building atrium is made with energy efficient glass panes that limit heat exchange and are embedded with translucent photovoltaic (PV) panels which generate power for the building. Locally manufactured Douglas fir beams frame the glass panels, forming the shape of a mineral crystal. This space fosters student and staff engagement and is even available for private events.

Solar photovoltaic panels gather sunlight and convert it into electricity

ENVIRONMENTAL IMPACT

Each year, 7.5–8 tonnes of CO_2 emissions will be prevented from entering the atmosphere

Contributes to UAlberta's target of reducing greenhouse gas emissions by 17 per cent below 2005 levels by 2020

INNOVATION & TECHNOLOGY

The solar PV system is rated for 10 kW of electricity production, which is used to provide some of the building's power needs

Careful consideration was required to balance the benefits of the panels producing electricity and letting sunlight through to provide heat and natural light to the space

ESTIMATED SAVINGS

$1,000 per year in energy cost savings

Cost for the installation of the PV system was mostly avoided as the glass on the old atrium was scheduled to be replaced

PROJECT TEAM

- Energy Management and Sustainable Operations
- Agricultural, Life and Environmental Sciences
- Planning and Project Delivery

LESSONS LEARNED

The exceptional shape of the building required planning to map out the panels, especially in regards to how snow would land on the exterior.

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ENvision
INTELLIGENT ENERGY REDUCTION