

NORTHERN LIGHTS COLLEGE ENERGY HOUSE

LOCATION

Dawson Creek, British Columbia

SIZE

802 m²

CAPACITY

199 full-time equivalent students

COMPLETION

2011

ARCHITECT

McFarland Marceau Architects Ltd.

STRUCTURAL ENGINEER

Equilibrium Engineers

CONTRACTOR

Dominion Fairmile Construction

B.C. GOVERNMENT MINISTRY

Ministry of Advanced Education,
Innovation and Technology

PROJECT OVERVIEW

A visit to Energy House on the Dawson Creek campus of Northern Lights College is like a trip to the future of green energy. It also shows the current and future benefits of building with wood.

Energy House, the centerpiece of the Centre of Excellence for Clean Energy Technology, provides certification and trades skills for the renewable energy sector and supports applied research into renewable energy. The multi-use facility produces all of its electricity and heating needs through wind turbine, solar, biomass and geexchange systems, and the structure was built with as much wood as possible. As a result, students have the best learning environment, as well as the best technology to achieve their goals.

Studies show wood has a significant impact on indoor environmental quality, directly benefiting human health and providing greater productivity through improved concentration and lower levels of fatigue for building occupants. By using wood, Energy House is able to offer a warm, welcoming environment for students, staff and visitors with a lower carbon footprint and more efficient operation.

Energy House was designed to achieve the highest LEED platinum certification. It has two classrooms, meeting facilities and working applications of technologies to save energy, conserve water, and use renewable heat. The project was supported through British Columbia's Jobs Action Plan and Industry Canada's Knowledge Infrastructure Program.



Photo courtesy of Northern Lights College

“The building super structure was specifically designed to showcase fir decking and glulam post and beam construction. The exterior and interior wood finishes give the building a very pleasing architectural look, good acoustics and does not look like your normal institutional facility. The wood finishes in the building gives its own personality.”

Murray Armstrong, Northern Lights College
Regional Facilities Manager

WOOD USE

SHOWING ENVIRONMENTAL LEADERSHIP – Energy House demonstrates clean energy technology, and shows students and visitors the efficiency, the effectiveness and the beauty of wood products. Wood construction is a great choice for educational institutions that want to set a good example by moving toward a more environmentally responsible approach to design and construction.

LOCAL MATERIALS, LOCAL BENEFITS – By sourcing wood products and hiring construction trades locally where possible, the project provided economic benefits for northern British Columbia.

All of the wood used for the tongue-and-groove ceiling millwork, wood-finished walls and glulam, cabinetry and countertops came from local forests, including some impacted by the mountain pine beetle.

LINK TO NATURE: POSITIVE ENVIRONMENT – Energy House chose wood for its tangible connection to nature and the outdoors, something that cannot be matched by other building materials. Wood creates productive and high-quality learning spaces for students and teachers, and research has concluded that wood interiors reduce stress.



Photos courtesy of Northern Lights College

FOR MORE INFORMATION

This profile is published by Forestry Innovation Investment, the Government of British Columbia's market development agency for forest products.

For more examples of innovative wood building projects throughout British Columbia, visit:

naturallywood.com