



POWER⚡PLAY

Energizing Our Lives Fueling Alaska's Future

Opening May 2011 in the Special Exhibits Gallery

This exhibition, developed by the UA Museum of the North and the Alaska Center for Energy and Power, demonstrates how Alaskans can power their daily lives. It challenges visitors to think about energy diversification and conservation, explores ways to balance Alaska's energy needs, and highlights cutting edge solutions.

This family-friendly exhibit will feature several hands-on energy stations:

- In the **city engine**, visitors power a model city with marbles representing fossil fuels, hydro, wind, geothermal, biomass, and solar power plants that produce light and sound.
- The **wind station** lets users adjust a wind turbine - the pitch of the blades, the gearbox and the type of load - then activate a wind tunnel and test performance.
- At the **geothermal station**, visitors will run a simulated geothermal power plant to see how the fluid flow and reservoir temperature fluctuate as they use gate-valves to change flow rates.
- A **digital game**, based on Golden Valley Electric Association's model, will let visitors choose a mix of energy sources and see how their choice affects the cost of energy.



Dennis Witmer

Large maps will show how Alaska is isolated from the global energy market, yet integrated as a supplier of fossil fuels. These maps will illustrate the disparity of energy costs across the state, and how energy resources vary by location.



ACEP
Alaska Center for Energy and Power

Help support this original and timely exhibition.

This exhibition is developed by the University of Alaska Museum of the North and the Alaska Center for Energy and Power. The museum receives less than 30% of its operating costs from state funds. Private donations and grants are critical to fulfill the museum's mission.

Energy facts will broaden how visitors view Alaskan's energy picture:

- Our climate dictates that Alaskans use more energy per person than almost any other state.
- Most of the fuel used in rural Alaska is imported from world markets.
- 54% of Alaska's electric power is generated from natural gas; 24% from hydropower.
- Interior Alaska has better solar potential than Seattle or Washington DC.

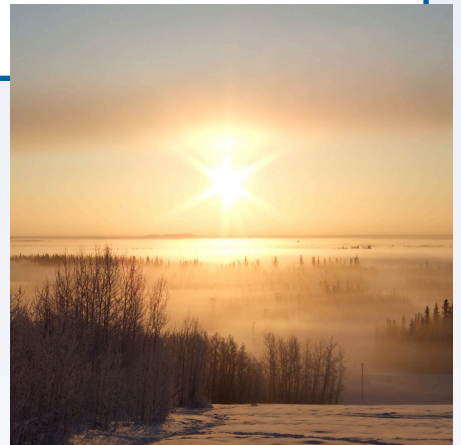
REACH OF THE EXHIBIT:

Over 70,000 local, national and international visitors of all ages will view the exhibit at the UA Museum of the North. Education outreach to over 1,500 local K-12 students.

This exhibit will be designed to travel if sufficient funds are raised.

For further information, please contact:

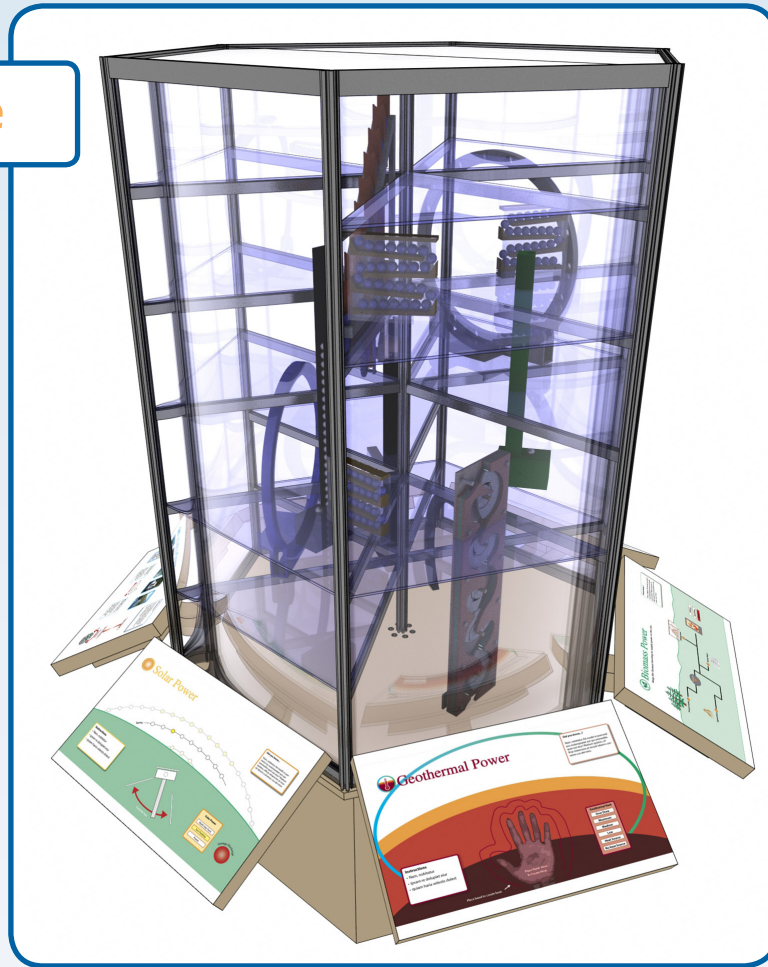
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The sun provides nearly all the energy we use to power our lives. Oil, coal, natural gas, wind, hydro and biomass are all forms of stored solar energy. Geothermal, nuclear and tidal are the only sources not dependent on the sun.

Switch ON: Alaska's Energy Balance - Hands On

City Engine



Solar Power: Track the Sun to supply power to the city.



Biomass Power: Keep the furnace burning to supply power to the city.



Geothermal Power: Create heat to supply electricity to the city.



Wind Power: Maintain best wind speed for your turbines.

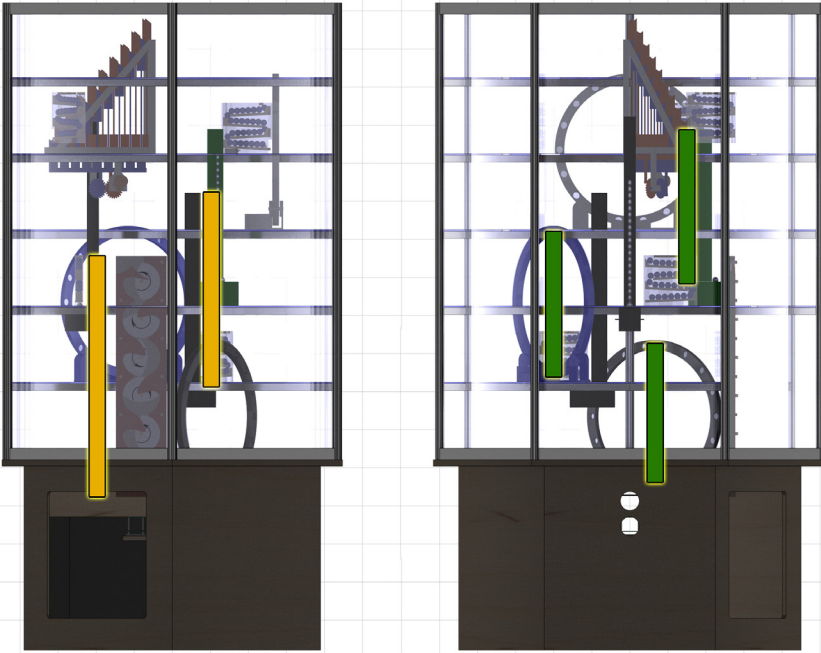


Hydro Power: Select the best turbine for each river.

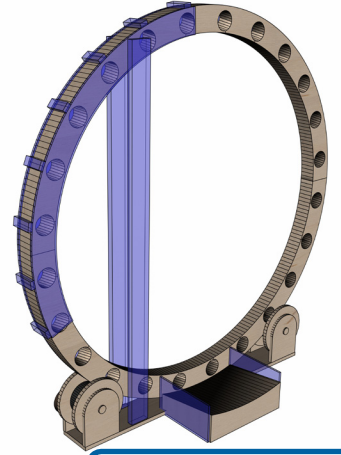


Fossil Fuel: Extend this resource by using renewables.

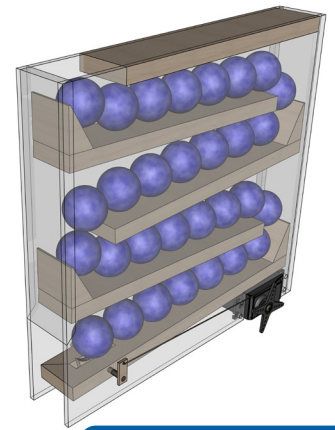
City Engine - Marble Pathways



In the machine, marbles represent packages of energy. Visitors control the flow of marbles by operating renewable energy controls through levers, knobs, their breath and the heat of their hands. The marble pathways represent the contribution of the resources to Alaska's present and future.



Open wheel lifter



Storage Facility

Wind Turbine Testing

