

Caring for the Kenai Ideas

Power Production

Alternative and Renewable Energy - Approximately 90 percent of the electric power produced in Southcentral Alaska is generated using natural gas. While this fuel source has provided clean, affordable energy for Alaskans for many years, Cook Inlet Basin natural gas reserves are declining and it's possible the demand for Cook Inlet natural gas may eventually outweigh the supply available. While gas companies and utilities work to develop new gas fields and storage facilities, there is a growing interest in finding alternatives to natural gas.

Students are encouraged to investigate potential alternative sources of energy that could be used to produce electricity for the Kenai Peninsula. Potential energy projects could include wind, tidal, hydroelectric, geothermal, biomass and other sources.

Each alternative energy project will have its own unique set of characteristics, with advantages and disadvantages. Power generation projects are complicated issues that come with a host of questions that need to be addressed. In considering a potential source of power generation, it is important to take into account:

1. The cost of the project and the price of the energy that will be produced.
2. Is the energy available on demand or is it intermittent? If the resource is intermittent (wind, solar, tidal, etc.), what is the added cost to integrate the alternative energy and maintain delivery of firm, reliable power to customers?
3. What is the environmental impact of the project? Will there be effects on air quality, water resources, or wildlife and if so, can these impacts be mitigated?
4. What is the proximity of the project to the electric grid (transmission lines). For example, if a site has excellent wind potential, but is a hundred miles from the nearest transmission line, it probably won't be cost effective to build.
5. Is the technology advanced enough to support a utility scale project?
6. What is the expected lifetime of the project?

Recreation and People:

- How do we provide recreational experiences for people in an environmentally responsible manner? Fishing is a popular recreational activity on the Kenai Peninsula. Are we providing responsible access and infrastructure for the personal use fisheries at the mouth of the Kasilof and Kenai Rivers? How can we manage fish carcasses, trash and human waste in a responsible manner along our river systems that people use for fishing and dip netting?

Issues to explore – The Kasilof and Kenai Rivers offer an opportunity to compare and contrast how each is managed in terms of their respective dip net fisheries. What is being done well, and where can we improve in management? What can I do to effect a positive change, specifically at the mouth of the Kasilof River?

- Trails and fish platforms are a way to provide responsible access to fishery resources. What can I do to assist in the maintenance and upkeep of this type of public access, and in areas without such infrastructure what can I do to help in building the necessary infrastructure to allow people to fish without doing damage to riparian bank areas along the popular fishing rivers.

Issues to explore: Can I volunteer my time or organize a trail building crew to assist cities, the borough and state agencies in building trails and help in their upkeep? Could I organize a team or school organization to help out in keeping our trails clean? Is there an opportunity for adopting a section of trail? Can I get sponsors to underwrite our actions, so that we could earn money for our group for school activities?

Education:

Education is an important aspect of environmental awareness. How can I participate actively in the environmental education process with various groups who live or visit the Kenai Peninsula? Is there a product I could produce for free or for sale that would help in the education process? A brochure, a video, a coloring book? How do people, such as landowners along our rivers, become aware of the important regulations to follow when developing their private property?

Invasive Species:

Invasive species, both plants and animals, can have a profound impact on the ecology in many ways, often with a negative effect on current species. What can I do to help promote awareness of invasive species, and what can I do to help eradicate them before they become a nuisance? Can I create or join in any volunteer efforts to control invasive species?

- Issues to explore: Is there a proposal I could make to the Alaska Board of Fisheries to deal with invasive pike in the waters of the central Kenai Peninsula, which threaten important salmon populations? Can I adopt a section of stream and organize a group activity to eradicate invasive plants along a riparian area or along a trail or road system?

Recycling

- No process to recycle/dispose of used oil filters
- Plastic waste is too costly to ship for recycling
- Not enough people participating in recycling
- Landfills fill up with used tires

Pollution

- Illegal disposal of used oil
- Accidental oil spills
- Improper disposal of hazardous waste
- Air pollution from auto, home and industry
- Leaks from cars, boats, etc. leading to groundwater contamination
- Bilge water from vessels causing water pollution
- Pollution from batteries leading to water contamination

- Vehicle emissions causing air quality problems
- Mining discharges causing water turbidity
- Hydrocarbon contamination in the Kenai River
- Disposal of fish processing waste

Development related issues

- Overuse of rivers causing bank degradation
- Bluff erosion
- Rampant development without planning
- Building too close to rivers; homes & condos
- Untested septic systems near and along river banks
- Culverts that block salmon passage
- Road dust from traffic

River Hydrology

- Creating common data base for stream/river parameters (discharge, fish passages, chemistry, boat usage, etc.)

Other issues

- Global warming and climate change
- Spruce Bark beetle infestation of trees
- Over use of packaging
- Poly fishing line, nets and other solid wastes in streams
- Invasive species – from pike to plants