

In-State Energy

Alaska Energy Plan
Alaska Energy Authority

AGIA is Designed to Maximize Alaskans Opportunity to Access Affordable North Slope Gas

- **Off-take Points**
- **Distance Sensitive Transportation Rates**
- **Lowest Reasonable Tariff on Main Line**
- **True “Open Access” Provisions**
- **Does Not Interfere with “Bullet Line”**

True “Open Access”

- Explorers have **Confidence** that
 - Pipeline capacity will be expanded if new gas is found (expansion provisions)
 - New gas will pay a fair transportation rate (rolled-in rates)
- Creates a competitive and active North Slope Gas basin
- Provides long-term careers in the gas basin

How Does AGIA Lower Cost of In-State Gas?

- **The Large Pipeline provides economies-of-scale to keep transportation costs low for a spur line to Alaska markets**
- **Competition in North Slope Gas basin maximizes opportunity to match a willing seller with an Alaskan market**

“Bullet Line”

- **If less than 500 Mcf/d, then the State can provide financial support without conflicting with the AGIA project**
- **Will not provide the economies-of-scale of a spur line off the main line, but may be able to be completed sooner**
- **State needs to evaluate this option when considering other railbelt energy projects**

AEA Energy Plan Goals

- Reduce the cost of energy to Alaska
- Rapidly identify and deploy solutions
- Complete analysis by December 2008

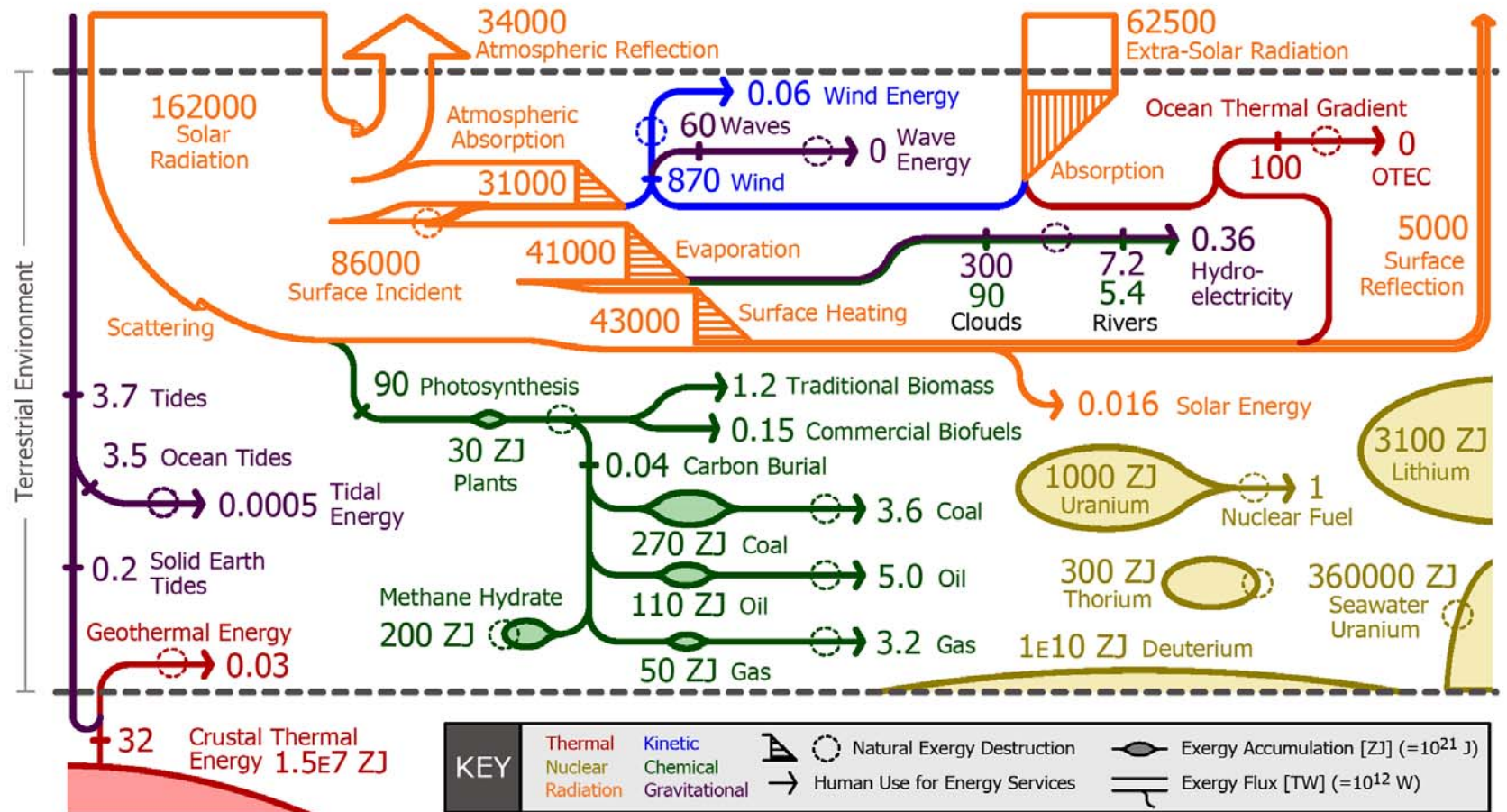
Deploy solutions as soon as identified.

Plan Objectives

- **Identify and deploy energy sources that are vertically integrated, economic, long-term stable priced, and sustainable.**

Guiding Principals

- Provide energy in a form that can be used in existing infrastructure.
- Evaluate costs on a delivered basis.
- Use low-profit business structure.
- Minimize risk of technology failure.
- Engage Alaskans in the solution.
- Seek the lowest cost energy to each community.



Exergy is the useful portion of energy that allows us to do work and perform energy services. We gather exergy from energy-carrying substances in the natural world we call energy resources. While energy is conserved, the exergetic portion can be destroyed when it undergoes an energy conversion. This diagram summarizes the exergy reservoirs and flows in our sphere of influence including their interconnections, conversions, and eventual natural or anthropogenic destruction. Because the choice of energy resource and the method of resource utilization have environmental consequences, knowing the full range of energy options available to our growing world population and economy may assist in efforts to decouple energy use from environmental damage.

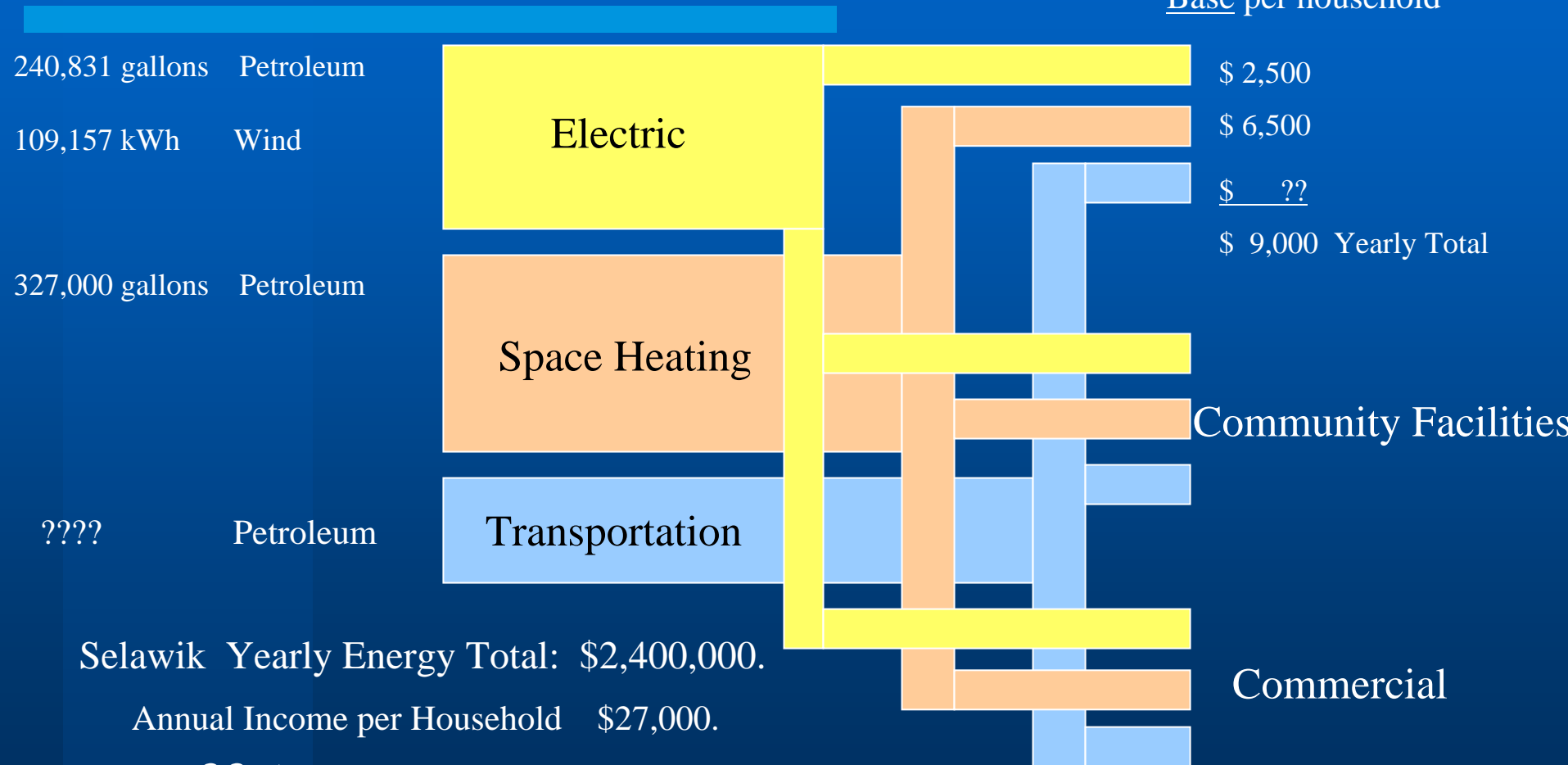
Identify the current fuel usage and costs

- **Initial Usage estimates**
 - Bulk Fuel Loan data
 - Tank Sizing estimate: 1,000 gallons per year per person.
 - PCE participation
 - Crowley and Yukon Western deliveries
 - Enstar
- **Determine the current cost of fuel**

Selawik- Energy Flow Model

FUEL ONLY

Residential
Base per household



???? Petroleum

Electric

Space Heating

Transportation

Selawik Yearly Energy Total: \$2,400,000.

Annual Income per Household \$27,000.

33% of Household Income for fuel

Regional Energy Cost Comparison

● Anchorage (gas)

Electric	\$ 1,117
Heating	\$ 834
<u>Transport</u>	<u>\$ 3,474</u>
Total Energy	\$ 5,425
% of Income	9.8 %

● Southeast (hydro)

Electric	\$ 1,259
Heating	\$ 2,881
<u>Transport</u>	<u>\$ 1,832</u>
Total Energy	\$ 5,972
% of Income	13.8 %

● Fairbanks (Diesel)

Electric	\$ 1,534
Heating	\$ 4,027
<u>Transport</u>	<u>\$ 3,521</u>
Total Energy	\$ 9,082
% of Income	22.4 %

● Rural (Diesel)

Electric	\$ 1,753
Heating	\$ 6,596
<u>Transport</u>	<u>\$ 1,941</u>
Total Energy	\$ 10,291
% of Income	40.2 %

Potential Technologies and Fuels

- Hydroelectric
- Wind
- Solar
- Tidal
- Wave
- Biomass
- Geothermal
- Municipal Waste
- Conservation
- Natural Gas
- Propane
- Coal
- Diesel
- Coal Bed Methane
- Nuclear
- Gasification
- Fischer-Tropsch

Locally Available Fuel Supplies

- **Visits to 25 communities to listen to locals on available energy sources.**
- **Size for the local need**
- **Determine energy delivery method.**
- **Develop energy production and delivery method and costs.**
- **Local Control using Local Fuels to make Local Energy.**

Rapid Option Selection

- **Determine the technology option which will deliver a usable fuel that meets the local needs at the lowest cost.**
- **Local Feedback**

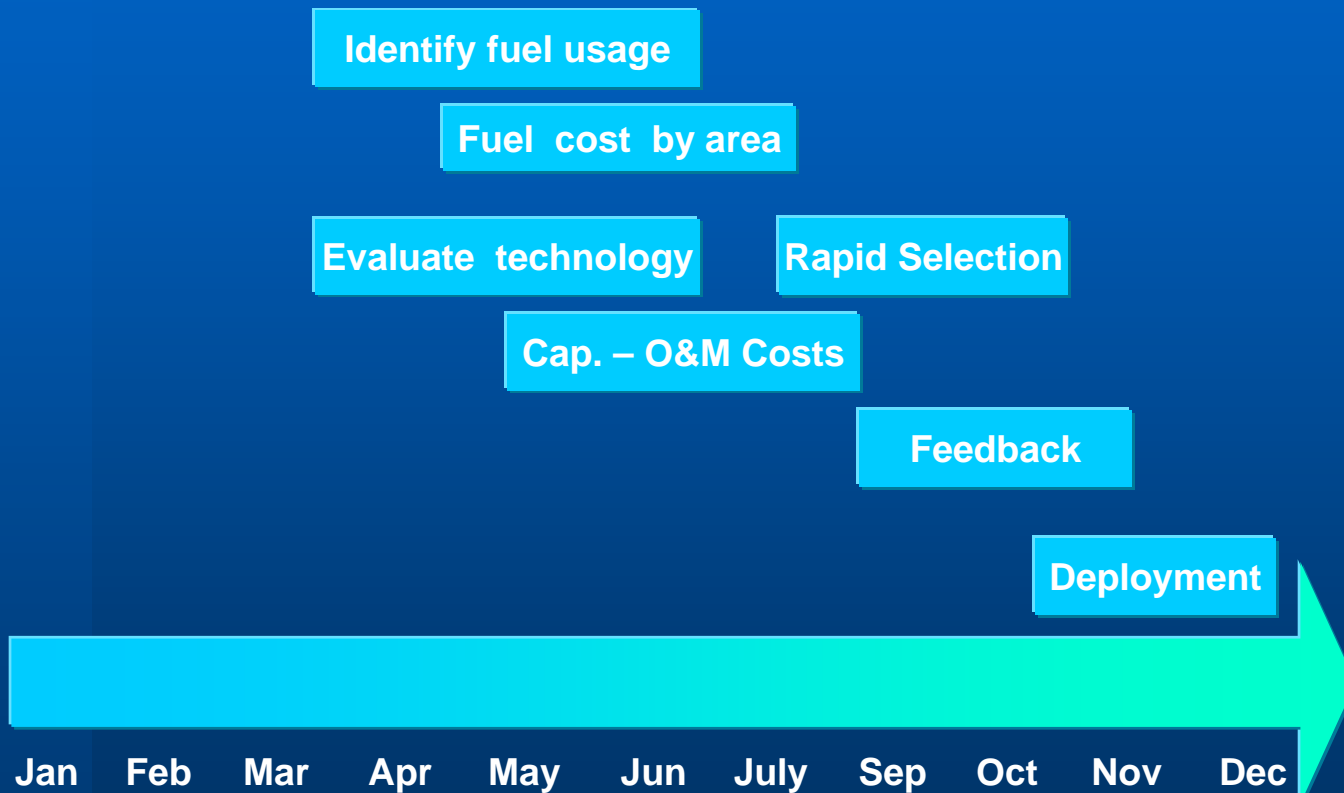
Rapid Deployment for Economic Development

- **Identify new or existing local companies that can provide deployment or support.**
- **Support Power Sales agreements where appropriate**
- **Identify and develop financial institution relationships**
 - **State**
 - **Private**
 - **Public**

Resources

- **Engage both public and private sectors in identifying a solution**
 - **AEA Team and passionate Alaskans**
 - **Local Businesses**
 - **Entrepreneurial Business training**
 - **Financial Institutions**
 - **State of Alaska financial support**

Schedule: Alaska Energy Plan



Current Status

- **Identifying local fuel needs and resources**
- **Evaluating technology**

- **Regional trips to 25 communities complete by June 4th.**
- **1 - 2 teams to cover communities**

- **PowerPoint on the AEA website**
- **Developing the technology matrix.**

Short Term Relief

- Reduction of electric bills for both residential and commercial rate-payers.
- Energy debit cards for each household based on the qualified PFD household members
- Conservation incentive program
- No program is perfect, but they must be just and fair to all Alaskans, avoid unnecessary taxation and have a likelihood of success.

Questions ???

Contact Information:

Alaska Energy Authority

813 W Northern Lights Blvd.

Anchorage, Alaska 99503

(907) 771-3073

www.akenergyauthority.org

Comment e-mails to:

energycoordinator@aidea.org