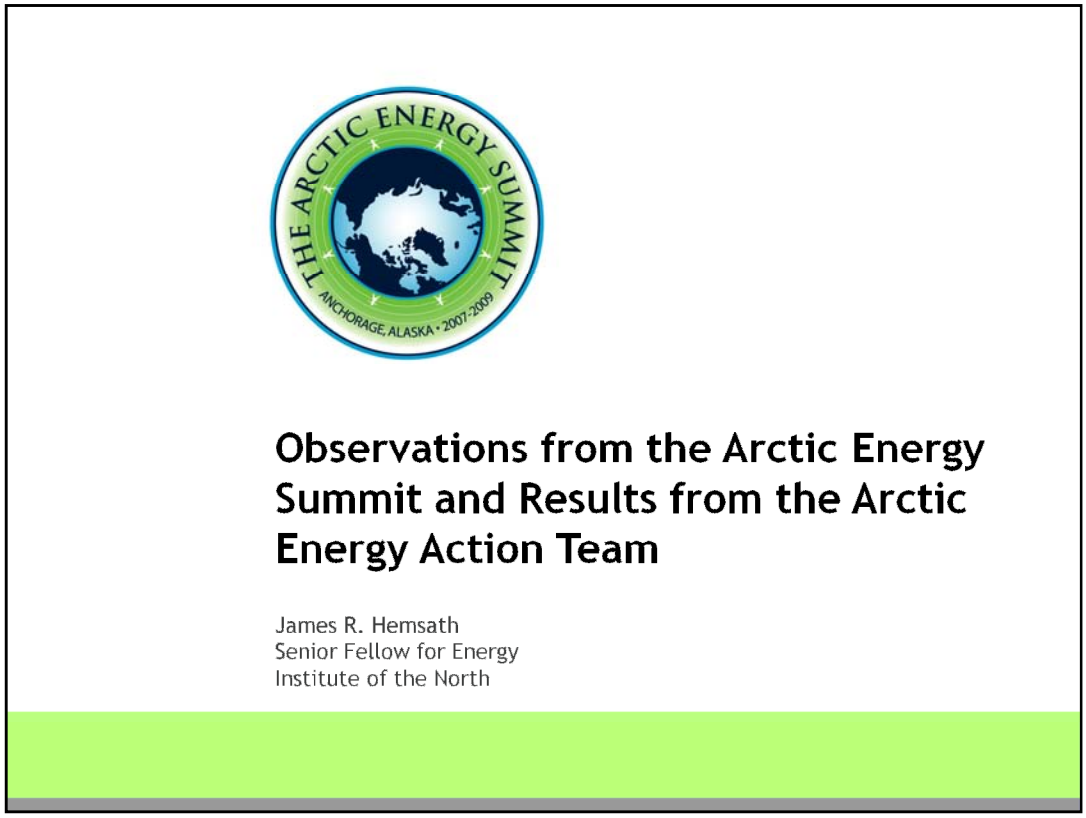


Good morning, my name is James Hemsath and I am the Senior Fellow for energy at the Institute of the North. This morning I will be providing a brief update from our AES Technology Conference and then I will be presenting on our upcoming activities

First, let me tell you about the ION. ION was created by former Alaskan Governor and Former Secretary of the Interior, Wally Hickel, to address issues important to the people of the Arctic, especially as it relates to areas of connectivity - telecommunications, aviation and marine transportation

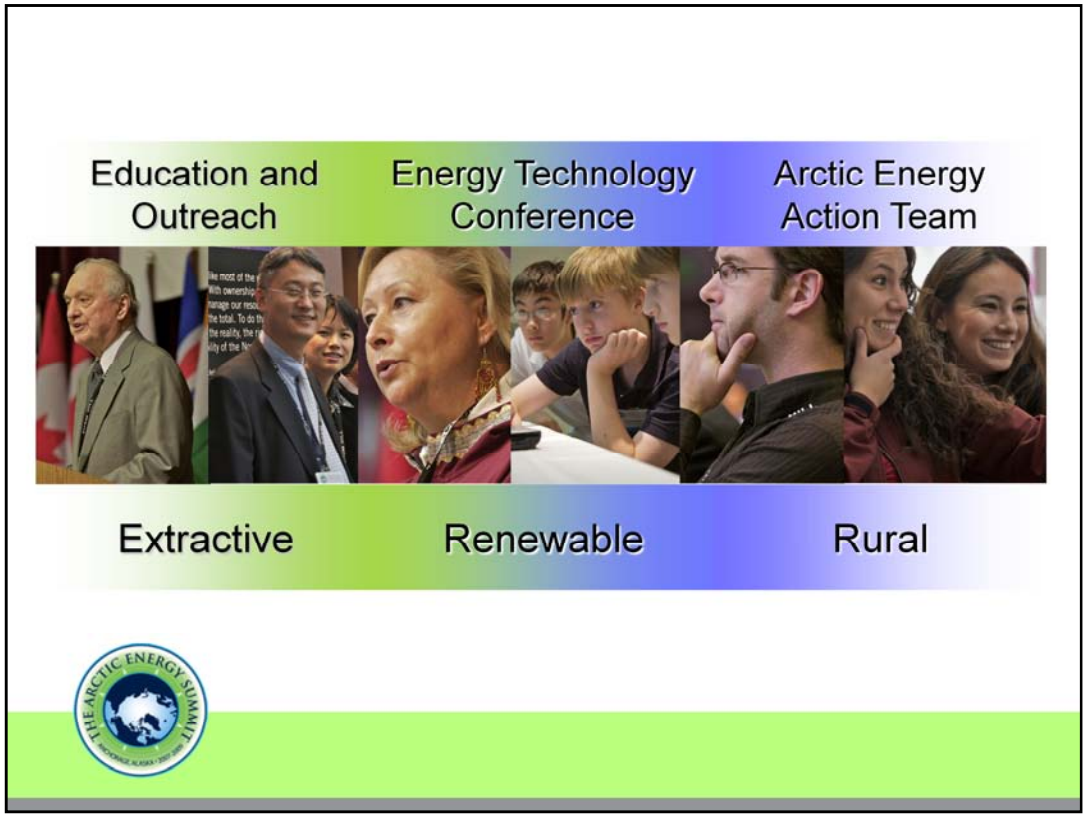
CHANGE

3 Years ago we started discussions looking at energy deployment and at the development of the arctic as an energy province. When we think about the arctic we use expressions such as last frontier, high north, edge of civilization. The impression is about conquering, taking and leaving. A Province implies investing, developing, building - taking ownership for the people of the north.

Our proposal to the IPY was to develop a summit to bring together the people of the arctic to discuss, share and develop a balanced approach to develop extractive, renewable and rural power all in a sustainable way supporting the vision of creating energy wealth while eliminating energy poverty.

IPY approved our proposal in March 2006 and the Arctic Council sanctioned the project later that year.

CHANGE



We looked at the Arctic energy system as having 2 energy sources - extractive and renewable and 2 methods of deployment - external and internal. So our Extractive CHANGE sources - oil, gas, coal, natural gas from coal seams, methane hydrates - all have an external component for the creation of wealth and all have an internal use for the people of the north. Likewise our renewable CHANGE energy sources - wind, geothermal, hydro and biomass have internal and external applications.

And we focused on a very specific internal need CHANGE Rural Energy.

CHANGE The summit will be accomplished through the implementation of 3 activities - the first an Education and Outreach program which currently consists of our website and Synergy Newsletter. If funding allows we will also have an graduate level class in Arctic Energy and an Arctic Energy Atlas.

CHANGE The Technology Conference our Technology Transfer vehicle and CHANGE our Arctic Energy Action Team.

One might also consider that possible theme for next years Arctic Frontiers might lie in a Renewable theme and a Rurul Energy theme.

CHANGE

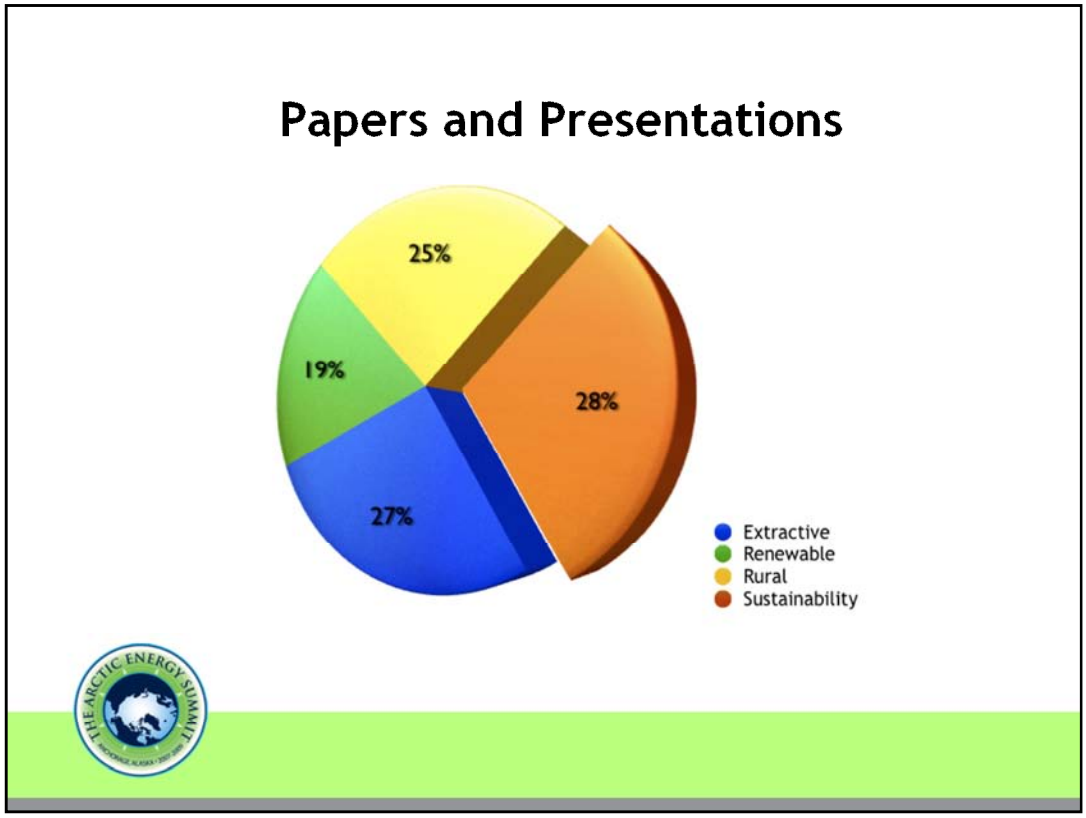
Our technology conference was held this past fall with over 300 people from 14 nations participating. The conference consisted of a series of plenary speakers
CHANGE

including President Grimmson of Iceland,
CHANGE

Technical papers and panels sessions all with the
CHANGE

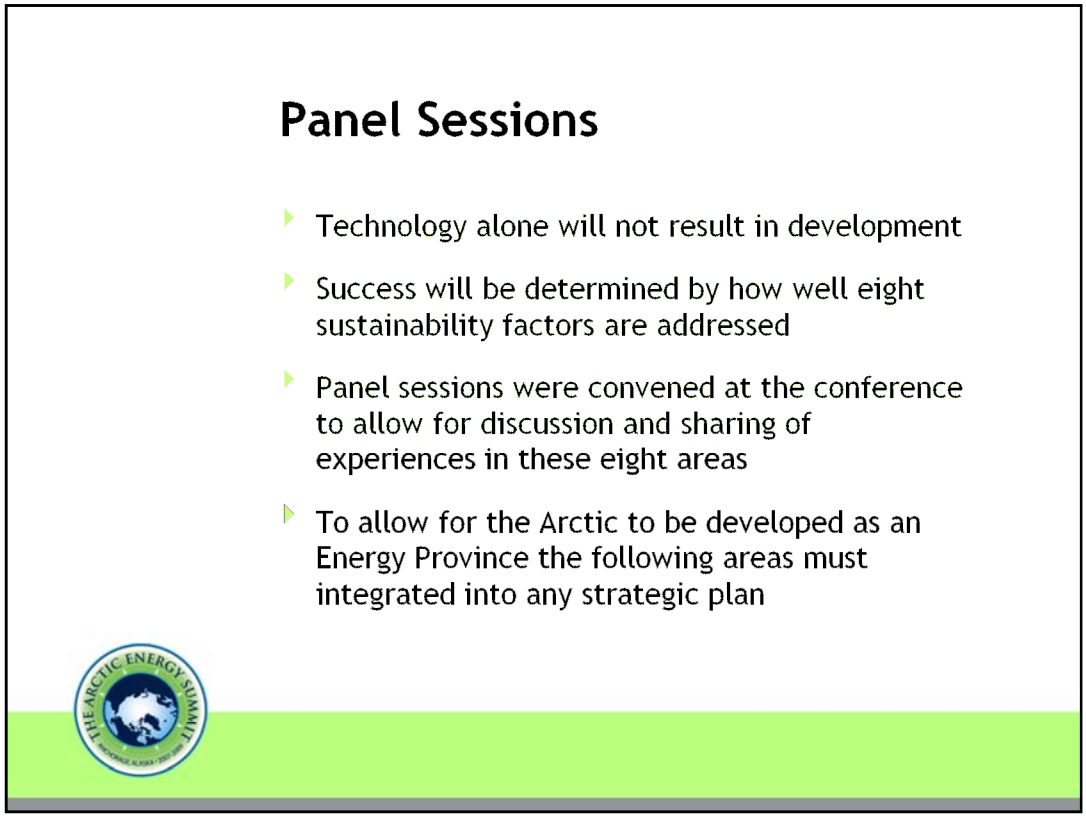
goal of the development of the arctic as an energy province for the people of the Arctic .

CHANGE



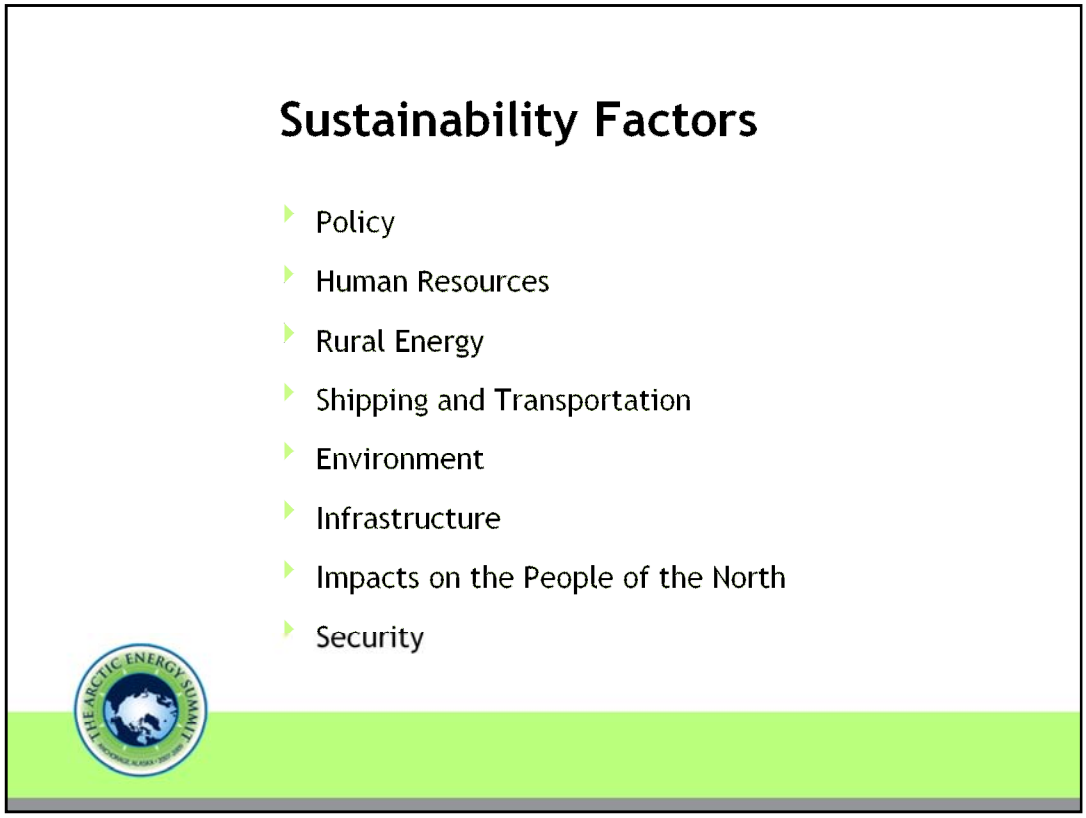
The papers and presentations were grouped roughly into our technology areas.
27% focused on the development of extractive energy
19% focused on renewable energy
25% looked at rural power issues, and
28% focused on a variety of sustainability issues including the environment, education, planning and traditional knowledge

Overall the presentations covered a wide variety of topics from a wide variety of nations. Topics included energy security, integrateing renewable energy sources into village power systems, geothermal applications, methane hydrates, CBM, coal, wind and tidal
CHANGE



Understanding that technology is not the only driver in the implementation of an energy source, we also wanted to initiate dialogues in what we considered 8 key sustainability factors that must be considered in the development of any successful energy project in the arctic

CHANGE

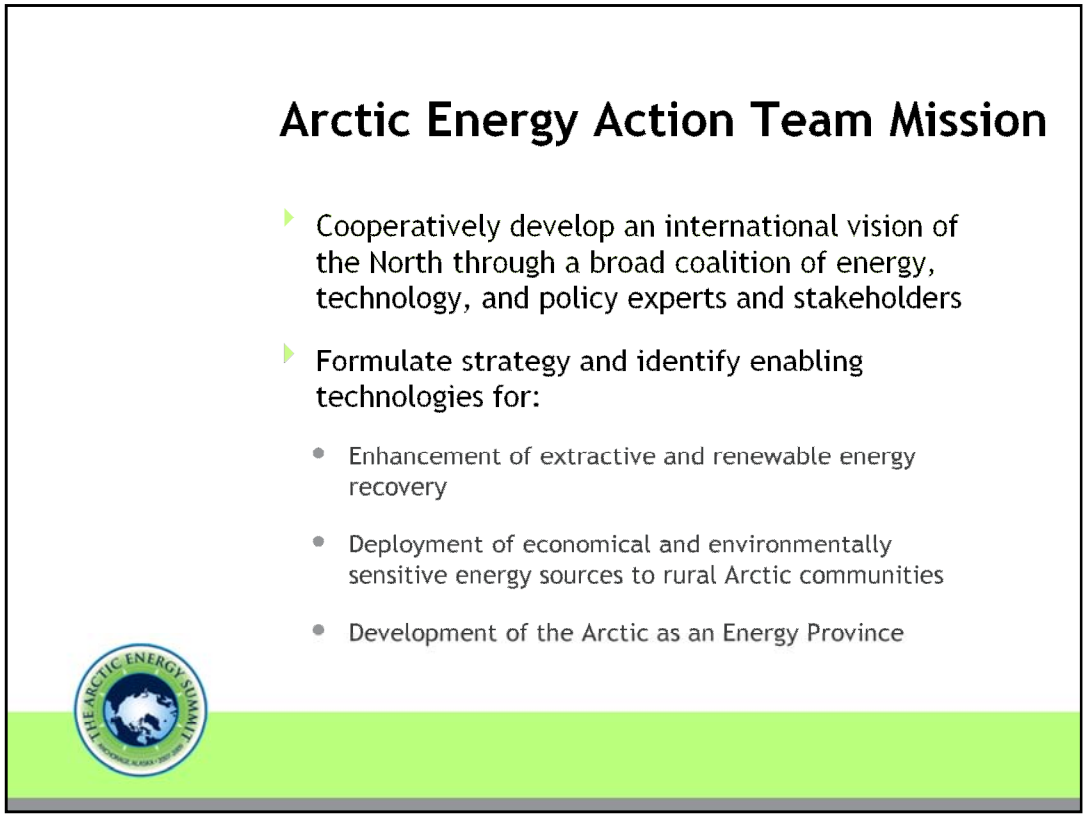


These panels were populated by subject matter experts from a variety of viewpoints, a variety of countries and representatives of the indigenous people of the north.

Specifically we looked at:

These panels formed the nucleus of discussion that would lead to the Arctic Energy Action Team

CHANGE

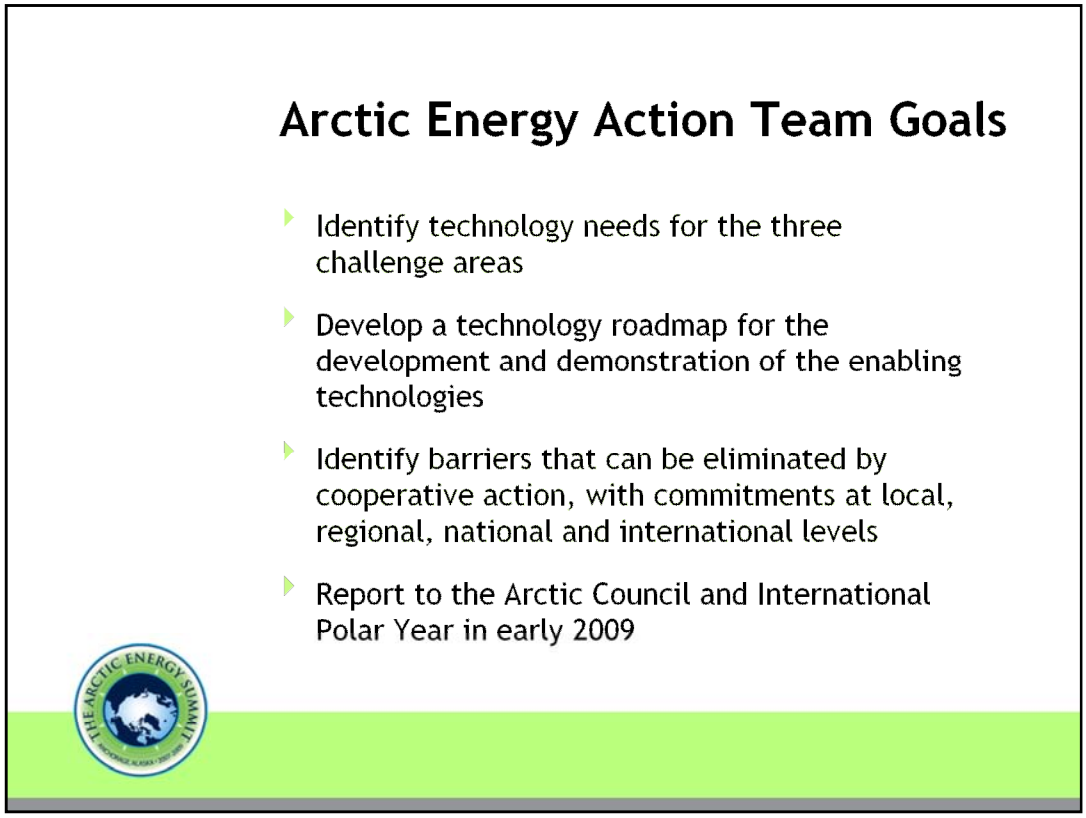


When the Energy Summit was developed our goal was to have a deliverable that would allow any Arctic organization, community or business to take action to bring focus to the development of energy in the north

At the conclusion of the conference 50 individuals convened the first energy action team meeting with the mission of:

And to specifically accomplish these goals

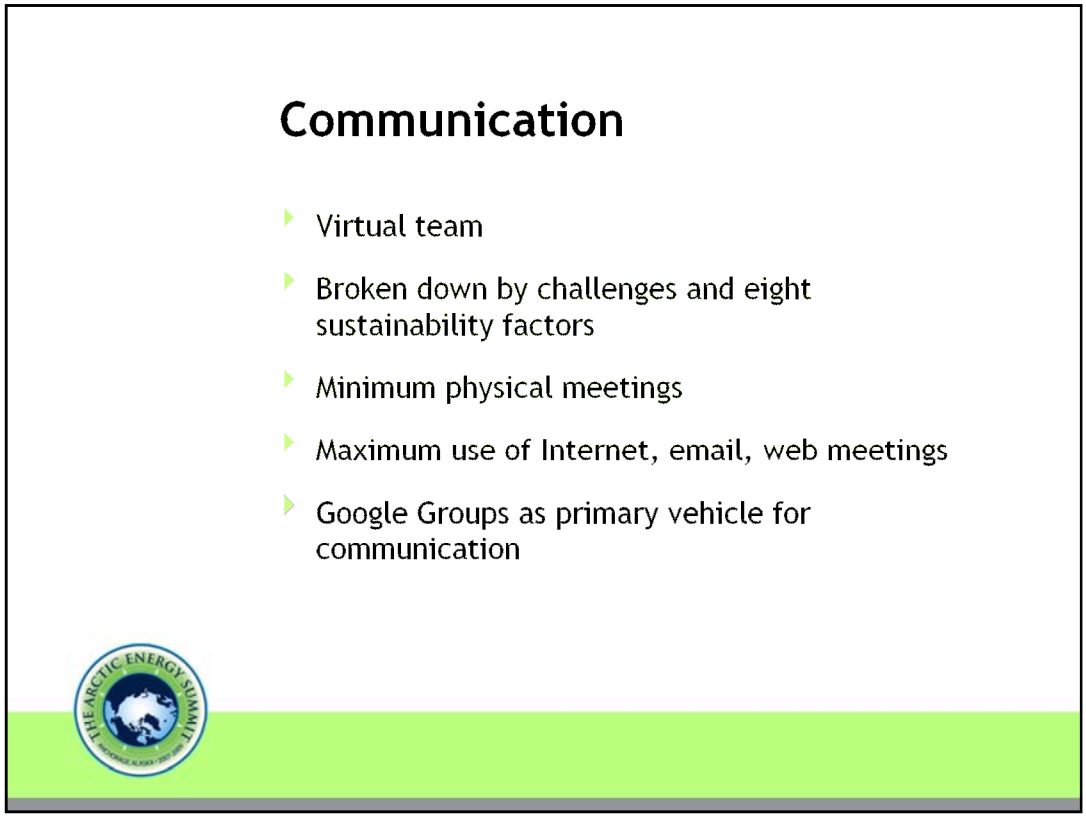
CHANGE



Our end product will be the development of a technology roadmap for the next 20 years, a strategic business plan that will address the economics of the technology in the context of our our functional areas, and a series of future scenarios that that those business plans will fit in.

There are an infinite number of energy issues that need to be discussed, but focusing on the 3 broad energy issues of the conference we will be concentrating on:

CHANGE



The Action Team is a virtual team with minimum physical meetings using the web to reach across multiple time zones to work together in an innovative way.

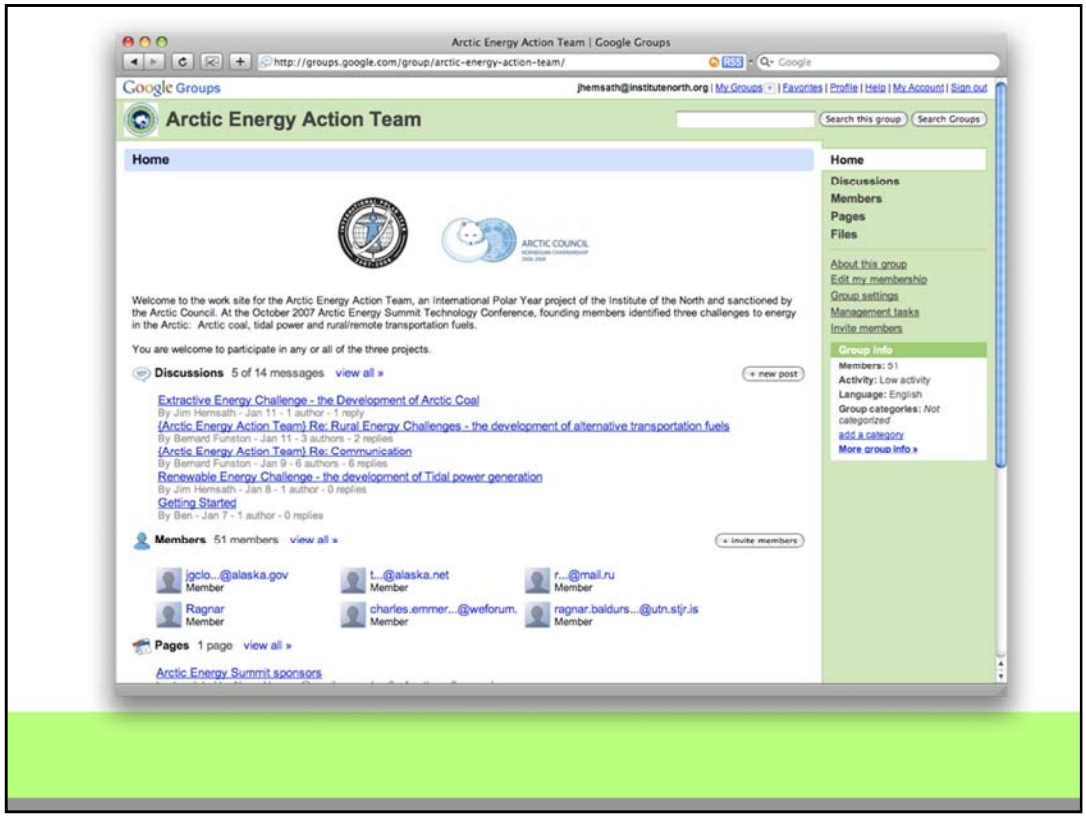
Google Group was chosen for flexibility and ease of registration.

Postings are by topic and work activity

The Arctic Energy Website will be used to store large documents

An invitation for the team explaining our challenges and inviting your participation is available on the table outside the door

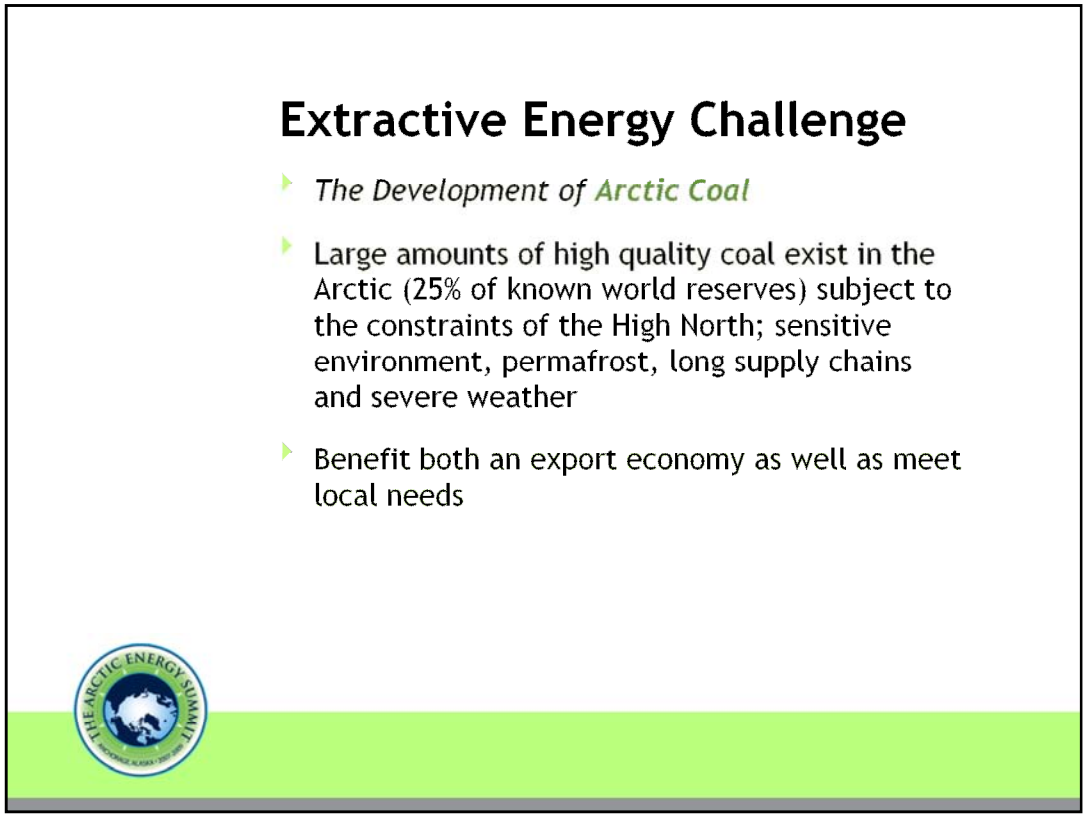
CHANGE



The largest challenge for the Action Team will be task management, we are relying heavily on individual contribution and individual responsibility.

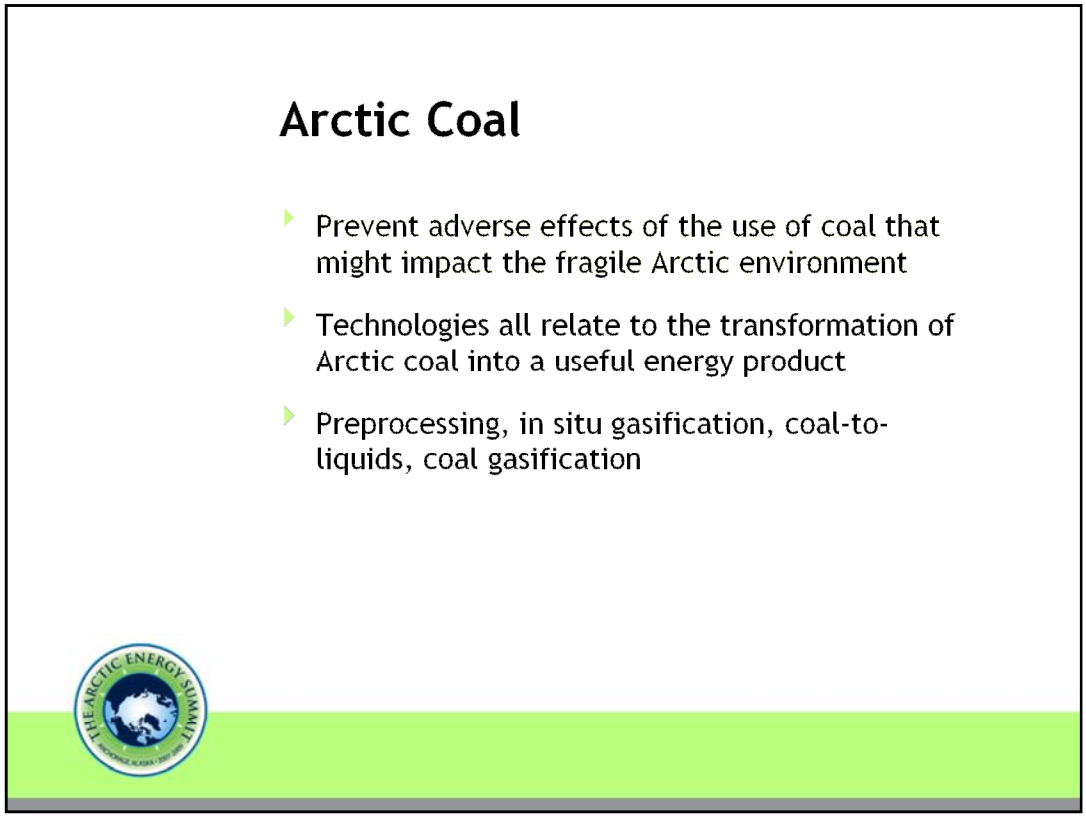
The most effective way to manage this is still developing and your help will be needed.

CHANGE



The development of Arctic Coal

CHANGE

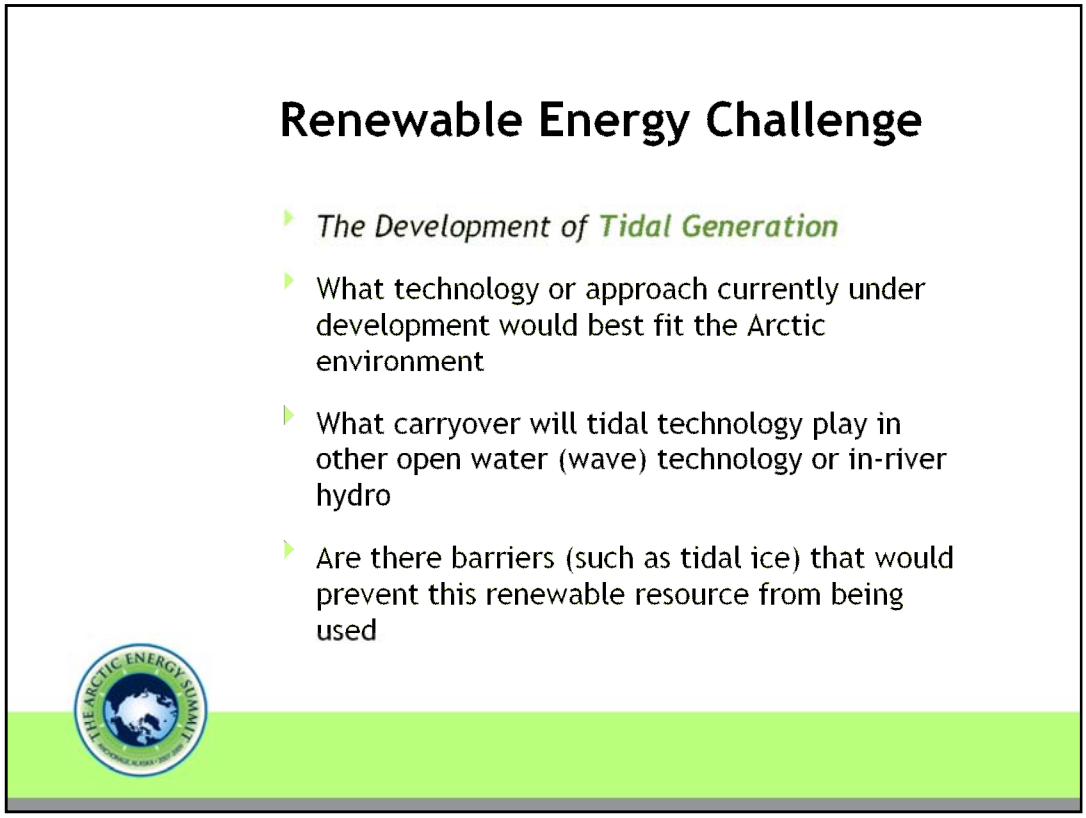


Looked at key issues of use and determined that in this development of this asset assuring that remote use would not impact the environment

That lead us to discuss the development of arctic coal in terms of transformations

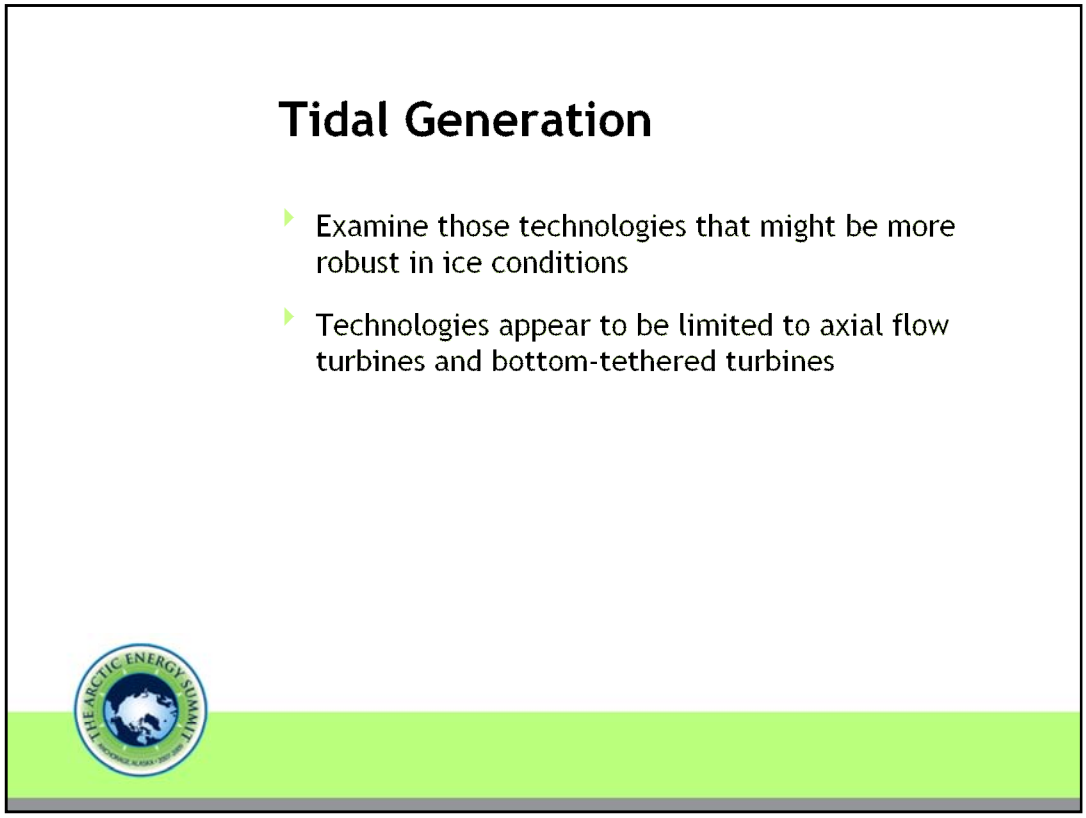
Technologies we are looking at then include …

CHANGE



The development of tidal generation in arctic conditions

CHANGE

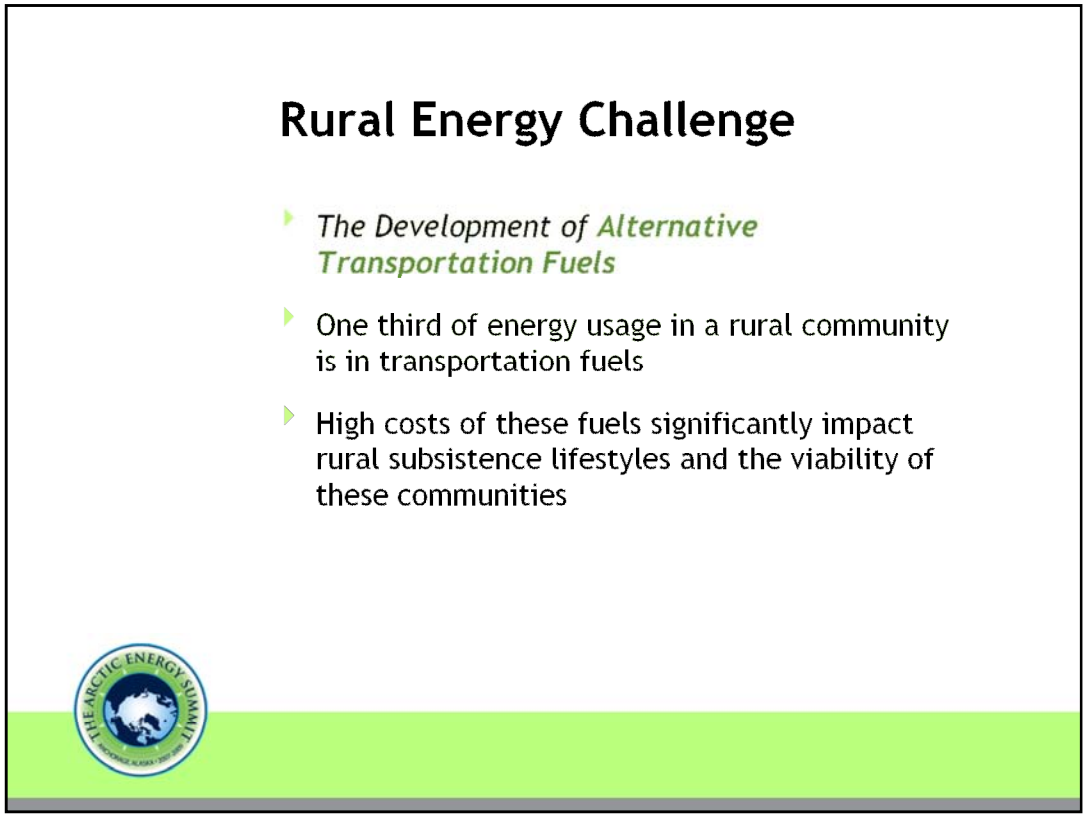


In reviewing the development of tidal generation, arctic conditions were not discussed.

In Alaska, specifically in the Cook Inlet – ice is a very big deal

Therefore we focused on tidal generation technologies that were inherently ice robust and looked at technologies that could be deployed below the ice.

CHANGE

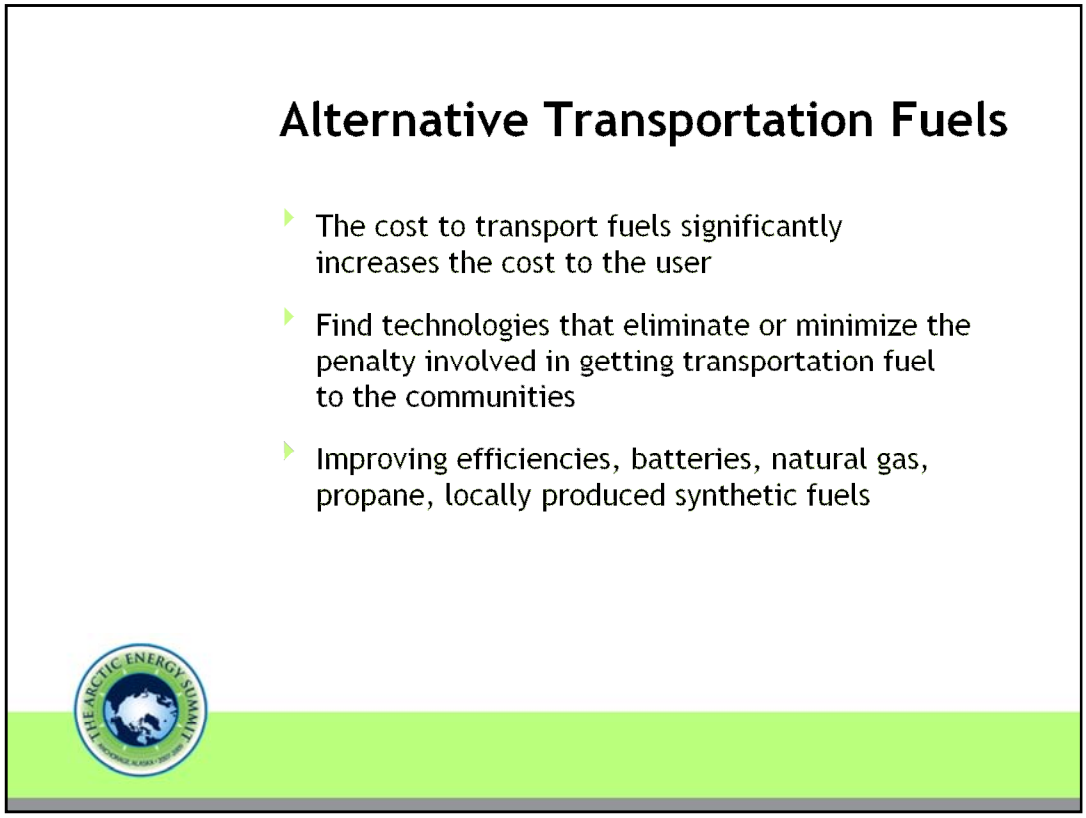


In examining energy patterns in rural Alaska and in other rural arctic areas the distribution of energy load was equally spread between power generation, space heating and transportation fuels.

This balance in itself provides for some unique opportunities for developing energy solutions as the opportunities for multigenerational applications goes up.

However the quickly increasing costs of transportation fuels is creating a crisis at the subsistence level and threatening the very existence of our rural communities drove our decision to focus on transportation fuels as our key energy chanllenge

CHANGE



The problem with replacing existing transportation fuels is that they are so simple to handle and distribute, you can carry gasoline in a bucket, but it's much more difficult to carry hydrogen in a bucket.

Further compounding this problem is that not only the fuel costs going up but the cost of transporting those fuels over long distances is going up as equally fast. A gallon of gasoline in Barrow was selling for $10/gallon, compared to $4/gallon in Anchorage – Transportation is trending at 60% of the cost.

Therefore we want to find technologies that can shorten or eliminate that transportation link – something that could be done locally as well as reducing consumption or eliminating consumption

CHANGE

Our timeline is short - part of the remit of the IPY is an intense focused effort in a short time, our project is no different.

As mentioned individual and group collaboration and self management is absolutely critical to maintaining this timeline.

All of our efforts are focused at delivering a report to the Arctic Council in January 2009, with the presentation to the Arctic Council in April

CHANGE

I want to thank you for this opportunity to brief you on this effort and of course to encourage your participation in the Action Team.

We believe that that the Action Team will put a voice and face to the energy in the Arctic and help shape our culture rather than having it imposed.

CHANGE

We have the opportunity to
make a change in how
the Arctic is viewed and to create
a new energy vision of the north
for the people of the north.

With vision, energy and action
we can lead this change
and make a difference.