

MEGA-PROJECT IMPACTS (Socio-Economic-Health)

Host Site: Fairbanks, Alaska June 13, 2008

2008 was a year the Administration and Legislature focused their attention on oil and gas. The Legislative Health Caucus, focused on health, found itself learning about an international study of the social, economic and health impacts to community residents with mega-projects, as well as disasters. Two such events studied by the impacted communities of Fairbanks and Valdez, were because of the TransAlaska Pipeline and the Exxon Valdez. Social scientists have found that across the globe, it is possible to determine a significant hardship potential before construction occurs, or by risk management. If findings determine the potential for serious impacts, compensation or mitigation protects and allows for significantly improved outcomes and greater social and financial rewards for all involved. In the effort to accumulate information and share findings with policy-makers and others on this subject, the Health Caucus scheduled a timely forum in Fairbanks during the Alaska Gasline Inducement Act (AGIA) hearings on June 13, 2008.

Guests and Presenters:

Governor Sarah Palin

Jana Pierce, Senior Consultant for Information Insights | Fairbanks

Kathryn Dodge, PhD, Fairbanks North Star Borough Mayor's Office | Fairbanks

James Edwin, PhD, Professor at the University of Alaska Anchorage, ISER | Anchorage

Beverly Wooley, Director of the Department of Health and Social Services | Juneau



The State is currently considering the gas pipeline construction as proposed by the TransCanada Alaska Company under AGIA. The proposal has been reviewed and recommended by the Commissioners of the Alaska Departments of Natural Resources and Revenue and was submitted by the Governor to the Alaska Legislature for its consideration.

The June 13 Health Caucus focused on the potential social, economic and health impacts that mega-projects such as the proposed natural gas pipeline would have on the State and municipalities and communities.

Jana Pierce from Information Insights presented a summary of the Municipal Impacts of a Gas Pipeline from the 2004 Municipal Advisory Group (MAG) study. The study was based on the producer group's Stranded Gas Development Act (SGDA) proposal for a gas pipeline to Canada. It analyzed the workforce, socio-economic, subsistence, socio-cultural, and revenue impacts to municipal and local governments. The MAG was created to advise the Commissioner of Revenue on economic and revenue impacts to municipalities of pipeline applications. The study also included data from the TransCanada application

The study found that municipalities in general would experience a smaller socio-economic impact from a gas pipeline than that experienced during construction of the Trans-

Alaska Pipeline (TAPS). Alaska now has a much larger population and more diversified economy. The population has doubled and the economic base has more breadth and depth.

The Study anticipated social and economic Impacts in the following areas:

Workforce

New jobs would increase an average of 9,300 per year during construction. Increases would be primarily in construction, engineering, transportation, food services and state & local government. The State workforce could fill 63% of new jobs, including service sector jobs. The remainder would be filled by non-residents. Workforce development efforts in Alaska communities would cost communities \$7 million to meet project needs.

Population

Non-resident workers would increase population by approximately 10,000. This would drive increases in wage inflation, housing costs, school enrollment, traffic accidents, road maintenance and other such services. Resident hire rate is the single biggest driver of population based impacts. Population-induced costs to municipalities to municipalities during construction would approximate \$38 million.

Education Impacts

Assuming the projected high rate of resident hire, every 47 new workers would lead to an increase of one new student, as many non-resident workers do not have or will not bring families. Although there will be increased demand for teachers and support staff, new facilities may not be required as key schools have adequate room. Local funding for education would increase by \$3 million, while State education formula funding would by \$15.1 million.

Health and Social Services

An increase in the use of community clinics and costs related to alcohol and drug abuse is anticipated. The demand for childcare, WIC and emergency food and shelter are expected to increase during construction. The cost of these increases will approximate \$5 million.

Public Safety

Local police, state troopers and VPSOs will experience more calls as crime and traffic accidents increase. A post-construction increase in domestic violence and substance abuse is possible if the economic boom is followed by bust. More subsistence resource protection will be needed. Municipal law enforcement and emergency services planning would increase by \$26 million.

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... from the summary of the Municipal Impacts of a Gas Pipeline from the 2004 Municipal Advisory Group (MAG) study.

-- **Jana Pierce**

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Increased use of drugs and alcohol could lead to changes in social fabric.

Subsistence Impacts

An increase in heavy truck traffic and the operation of construction camps and compressor stations would create dust, noise, sewage, and waste issues. New roads would improve access to subsistence use but also bring competition for subsistence resources. Upgrades to bridges and stream crossings would increase erosion and could impact fisheries. Planning, monitoring, enforcement and mitigation of subsistence impacts would cost municipalities \$12 million.

Socio-cultural Impacts

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Transportation Infrastructure

Pre-construction spending on highways, ports and bridges would occur, as would construction of new access roads – especially in the Upper Tanana area. Spending on road repair would increase during and after construction. New access roads would be constructed, especially in Upper Tanana area. Spending on pipeline-related projects could delay other road, bridge and port projects.

Municipal Impact

The study identified a gap of more than \$100 million between municipal impact costs and pipeline-related tax offsets (\$100 million total impacts less \$11 million tax offsets).

Key to reducing negative impacts and maximizing benefits

High-skills job training for Alaska workers will maximize opportunities for resident hire. Aggressive media campaigns by the State and the pipeline contractors would discourage speculative migration to Alaska for non-specific pipeline jobs.

More and better community impact planning is recommended than occurred for the oil pipeline. This planning must be based on specific, concrete, and actionable information from industry. Funding for community impact planning must be early enough to allow time for realistic planning and adequate for the planning process.

Kathryn Dodge, PhD. Economic Development Specialist for the Fairbanks North Star Borough. Her presentation for the North Star Borough's historic focus on community impacts gave a strong picture of life during the Trans Alaska Pipeline event with Alaska's gas line construction. Kathryn Dodge said that although the pipeline project lasted only a few years, Fairbanks underwent dramatic changes. The

Borough's gross product more than doubled in less than two years, and has never dropped to its pre-pipeline levels.

She said that the population almost doubled, as did residential construction, demand for health care services, crime, traffic, inflation, and sales tax revenue. Fairbanks was not at all prepared for these increases. Housing rentals were virtually nonexistent, basic commodities and groceries were often in short supply and even the utilities were often overloaded.

In addition, many local and municipal employees, including police officers, left to take better paying pipeline jobs, leaving a less qualified local workforce to deal with a vastly increased population.

While Fairbanks should prepare for the assumed gas pipeline boom, it is unlikely to be as dramatic as that experienced during the oil pipeline. The population is larger and more diverse now, and the economic base is much broader and is continuing to expand.

Also, State and local officials are much more likely to participate in taking steps to mitigate impacts. She recommended that the State and Municipality begin the process of identifying the potential changes likely and develop plans to minimize the effect any such changes would have on the municipality.

James Edwin, PhD, Assistant Professor of Evaluation and Public Policy, Institute of Social and Economic Research, University of Alaska Anchorage

Health Impact Assessment of Oil and Gas Development

A gas pipeline project would consist of construction of roads, pads, facilities, transportation, utilities and actual pipeline construction. These activities result in physical changes to the habitat itself, and have the potential to disrupt wildlife by displacing animals and disrupting migration paths. It would produce erosion and runoff causing increased suspended solids in water bodies, providing access for visitors to areas previously not easily accessible, and producing noise which can affect some animals and man.

Potential Activities that Create Impacts

An oil spill in broken ice presents one of the greatest risks for environmental damage. Oil spill drills have repeatedly demonstrated that existing technology is not sufficient to adequately remove oil from certain broken ice conditions. Other fluids, such

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as diesel oil, crankcase oil, saline water, water produced from oil and gas separation, and other chemicals, can also cause serious environmental damage.

Oil and gas seismic surveys have resulted in disruption of marine life.

Much of the infrastructure will not be removed, because companies are not required to remove structure until a unit has ceased production. Dismantlement, restoration and rehabilitation are unlikely.

Energy development can adversely affect aesthetic values by transforming the landscape with an increase in aircraft and a reduction of areas of solitude.

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Potential social impacts of construction include the effect on habitat, hydrology, vegetation and animal populations. Subsistence would also be impacted as noise effects wildlife migration and calving.

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The cumulative impact requires long-term studies and evaluation impacts from multiple stressors. Ecological systems that appear to be functioning can suddenly collapse from stressors once the system reaches a threshold.

Little attention has been paid to human health and potential health impacts on the North Slope. Examples of community concerns include cancer and thyroid problems from contamination of subsistence resources; increases in diabetes, strokes and cardiovascular diseases because of greater reliance on store-bought foods as subsistence resources become scarce; and asthma and respiratory problems because of gas flaring.

Social and psychological problems such as alcohol and drug abuse, domestic violence, depression, anxiety and suicide are also lacking in adequate attention and prevention. In addition, the influx of outside workers into previously isolated villages could lead to unidentified but changing patterns of infectious disease.

Air and water quality can be affected by oil and gas activities. Little

research has been completed to quantify the effects of air pollution from Alaska oil and gas operations.

These are possible impacts, yet none of these concerns have been evaluated in depth in the Environmental Impact Statement process for permitting new developments.

EIS and HIA

Environmental Impact Statements (EIS) are a way of evaluating the potential effects of a proposed project, and forms the basis of the government’s decision regarding whether or not to allow a proposed development (issue a permit.) A typical EIS addresses every aspect of the potential effects on the ecosystem, including individual animal species, air and water quality.

Surprisingly, however, EIS do not include a comprehensive analysis of potential public health effects, aside from occasional brief discussions of contaminant-related concerns. The lack of health information in EISs means that regulators are not clearly considering the potential impacts on local communities in making permitting decisions.

Improvement in Technology

Improvement in technology has resulted in some good news. Oil and gas exploration experience in Alaska resulted in technological improvements that has reduced impacts. These techniques include use of ice roads for exploration during times when the ground is frozen, safe underground injection of wastes, reduced size and number of gravel pads due to directional and multilateral drilling techniques, roadless developments, horizontal directional drilling for pipelines under rivers, and higher pipelines to allow better wildlife passage.

Beverly Wooley, Director of the Division of Public Health, Department of Health and Social Services, said her office is starting to consider ways to strengthen support networks for families in advance of another worker influx.

She said drug and alcohol abuse issues could increase but would not be as serious as in the 1970s due to better corporate policies against workplace abuse and random drug testing. However, she said people should expect increases in the rates of assaults, sexually transmitted diseases, unintended pregnancy and more.



A small pipeline spill above, Delta Junction road to the right.

