**MINUTES**
**SENATE FINANCE COMMITTEE**
**March 10, 2004**
**9:05 AM**

## TAPES

SFC-04 # 35, Side A
SFC 04 # 35, Side B
SFC 04 # 36, Side A

## CALL TO ORDER

Co-Chair Gary Wilken convened the meeting at approximately 9:05 AM.

## PRESENT

Senator Lyda Green, Co-Chair
Senator Gary Wilken, Co-Chair
Senator Con Bunde, Vice Chair
Senator Ben Stevens
Senator Lyman Hoffman
Senator Donny Olson

**Also Attending:** SENATOR GARY STEVENS; CRAIG GORMAN, Vice President of Research, University of Alaska Statewide; SCOTT GOLDSMITH, Institute of Social and Economic Research, University of Alaska, Anchorage; THOMAS CASE, Dean, College of Business and Public Policy, University of Alaska, Anchorage; JOE BALASH, Staff to Senator Gene Therriault; PAUL FUHS, Backbone2

**Attending via Teleconference:** From Anchorage: STEVEN PORTER, Deputy Commissioner, Department of Revenue; HAROLD HEINZE, Chief Executive Officer, Alaska Natural Gas Development Authority

## SUMMARY INFORMATION

SB 273-ASMI BOARD/ SEAFOOD TAXES & ASSESSMENTS

The Committee heard from the sponsor. The bill was held in Committee.

SB 241-APPROP: NORTH SLOPE NATURAL GAS

The Committee heard from the sponsor, the Department of Revenue, the Alaska Natural Gas Development Authority and an advocacy

organization. Two amendments were adopted and the bill was reported from Committee.

SB 271-NATURAL GAS DEVEL AUTHORITY PROJECTS

This bill was scheduled but not heard.

Presentation by the University of Alaska
"Economics of UA Research"

Co-Chair Wilken prefaced the presentation by stating that research activities bring "new dollars into our State".

CRAIG GORMAN, Vice President of Research, University of Alaska Statewide, stated that each of the presenters would discuss the role of research and development within the State.

SCOTT GOLDSMITH, Director of the Institute of Social and Economic Research, College of Business and Public Policy, University of Alaska, Anchorage, gave a presentation titled, "The Economic Importance of University Research" [copy on file] as follows.

Page 1
Research is a $264 Billion Industry

[Pie chart demonstrating the distribution of the research conducted in the United States between industry, universities ($36 billion), the federal government, and other non-profit organizations.]

Mr. Goldsmith stated that research is a $250 billion industry, accounting for approximately 2.5 percent of the gross national product. The majority of research is funded by industry, but the federal government and non-profit organizations also fund research. Universities fund approximately 15 percent of total research, which in 2001 was approximately $36 billion. Industry understands research, as it increases productivity growth, is "one of three legs" that drive the economy. Increased capital expenditures, and increased quality of the labor force are the other two "legs" of the economy.

Page 1
Top Research States

State Rank in 1999

| | Amount (Billion $) | Share of GSP (Percent) |
|---|---|---|

| | | | |
|---|---|---|---|
| 1. California | $48.0 | New Mexico | 6.40% |
| 2. Michigan | 18.8 | Michigan | 6.10% |
| 3. New York | 14.1 | Rhode Island | 5.10% |
| 4. Texas | 12.4 | Massachusetts | 4.60% |
| 5. Massachusetts | 12.2 | Maryland | 4.60% |

Page 2
Research in Alaska: How We Compare

| Alaska R&D Profile | rank | amount | % US avg | data |
|---|---|---|---|---|
| Total R&D (million $) | 47 | $196 | | 2000 |
| Industry R&D (million $) | 50 | $9 | | 2000 |
| Academic R&D (million $) | 42 | $116 | | 2001 |
| Population (% US) | 48 | 0.22% | | 2002 |
| Total R&D ($ per capita) | 32 | $467 | 49% | 2001 |
| R&D Intensity (R&D/GSP) | 41 | 1.04% | 38% | 2001 |
| Federal R&D ($ per capita) | 13 | $335 | 116% | 2001 |
| Fed R&D/Total Fed $ | 22 | 3.30% | 72% | 2001 |

Mr. Goldsmith stated that Alaska's research and development ranks just below the median of states in per capita terms, and as a percentage of the gross State product. Alaska ranks even lower in research and development as a percentage of the U.S. average.

Page 2
Funding for University Research is Growing 8% per Year

[Graph showing the increases of federal, institutional and other sources of funding from 1980 through 2002 in billions of dollars]

Mr. Goldsmith noted that "other sources" includes non-profit organizations and private industry. He informed that the growth rate of university research, at over eight-percent annually, is faster than the overall growth rate of the economy.

Page 3
Top Research Universities

University R&D Spending: 2002

| Rank | Institution | Budget (Million $) |
|---|---|---|
| 1 | Johns Hopkins | $999 |
| 2 | UCLA | $693 |

| | | |
|---|---|---|
| 3 | U of Wisconsin | $604 |
| 4 | U of Michigan | $601 |
| 5 | U of Washington | $590 |
| 95 | UAF | $110 |

Page 3
University Research in Alaska: How We Compare

| UAF R&D Profile in 2001 | Rank | Amount (Million $) | US Avg |
|---|---|---|---|
| Total R&D | 95 | $110.0 | |
| Math and Computer Science | 12 | $16.3 | |
| Atmospheric, Earth, Oceanography | 16 | $30.5 | |
| Physical | 54 | $13.6 | |
| Life Science | 150 | $16.6 | |
| Federal Funding | 105 | $55.3 | |
| Institutional Funding | na | $23.6 | |
| Total/Institutional Funding | na | 4.58% | 4.99% |
| Total R&D - All Campuses | 68 | $115.0 | |

Mr. Goldsmith commented that most of University of Alaska research is conducted at the Fairbanks campus.

Page 4
University Research as an Enterprise -
New Money into the Economy

- Import Substitution
  - o Arctic Basic Research
  - o Applied Research on Alaska Problems
- Adding to the Export Base
  - o Footloose Research

Mr. Goldsmith pointed out that almost all funds appropriated to research activities are "new money". Economists characterize two methods of economic growth: import substitution and increasing the export base. A "surprising amount" of arctic research is conducted in other parts of the country rather than in Alaska. Similarly applied research performed on Alaska's problems, such as the engineering of highways and oil and gas production techniques, are also conducted out of the State. Import substitution could be achieved by redirecting more Alaska-related research to be conducted in the State. University research also acts as an

enterprise by adding directly to the export base. He added that research is not tied to a specific location and could be conducted anywhere.

Page 4
University Research as an Enterprise:
Direct Economic Impact 2003 (Million $)

| | |
|---|---|
| $121.6 | Total UA Research* |
| $45.2 | Wages |
| $17.5 | Benefits |
| $33.6 | Contracted Services |
| $8.4 | Capital Equipment |
| $8.1 | Commodities |
| $5.7 | Travel |
| $2.0 | Student Aid |
| $1.0 | Miscellaneous |
| $??? | Visiting Scientists |

Mr. Goldsmith emphasized that research is very labor-intensive, and most of the money spent on wages and benefits remains in the State and is re-circulated through the economy. Contracted services consist of maintenance, professional, business and other services that are often provided locally. Much of the funding expended for capital equipment leaves the State with one exception being construction costs. The commodities component includes items such as paper and fuel, which are mainly purchased by local businesses. The travel funds include travel within and outside of Alaska, supporting both local and outside businesses. Additionally, several facilities in Alaska provide opportunities for visiting scientists to travel to the State to conduct research. These visitors provide economic benefits through their research and as tourists. In summary, much of the costs expended for university research remain in the State where they foster economic activity in a wide variety of local businesses.

Page 5
University Research as an Enterprise:
Total Economic Impact

- Jobs
  - 2,310 Total
  - 1,228 University-full and part time
  - 1,082 Private
- Payroll
  - $80.3 Million-Total
  - $45.2 Million-University
  - $35.0 Million-Private

- Private Business Sales
  - $106.8 Million-Total
  - $42 Million-Direct Procurement
  - $64.8 Million-Indirect

Page 5
University Research as an Enterprise:
Characteristics of Jobs & Industry

- Labor Intensive
- High Wage
- Year Round Jobs (not Seasonal)
- Diverse Job Mix
- High Resident Share
- Stable Industry
- Footloose
- Environmentally Benign
- Low Burden on Government Services
- Tax Base
- Backward Linkages
- Forward Linkages
- "Value Added" Spinoffs

Mr. Goldsmith overviewed these points and added that research activities are less subject to market fluctuations than resource-intensive industries. Research activities also do not compete for government services to the level of other enterprises. The high labor intensity of university research indirectly generates a tax base through support for businesses and establishment of households. Research is primarily located in urban areas with developed economic infrastructures where backward and forward linkages can easily occur.

Senator Bunde requested a definition of backward and forward linkages.

Mr. Goldsmith explained that a backward linkage occurs when the University of Alaska purchases goods or services from a local business. Forward linkages are sales generated as a result of University research activities.

Page 6
University Research as an Enterprise:
Comparison to Metal Mining

- Operating Size
  - $823 Million in Production Value in 2002
  - $77 Million in Payroll
  - 1,153 Average Annual Employment
  - $67,000 Average Annual Wage
  - Local Procurement
- Characteristics
  - Capital Intensive
  - Resource Dependent
  - Resident Share
  - Stability
  - Environmental Impact
  - Competition with other Activities
  - Cost Burden on Government
  - Tax Base
  - Enclave
- Benefit/Cost
  - Jobs
  - Income
  - Tax Base
  - "Value Added" Spinoffs

Page 6
University Research as an Enterprise:
A Role in Future Growth of Alaska

[Bar graph demonstrating the following:]

Projected Alaska Job Growth 2000-2010

| | |
|---|---|
| Health/Social Services | 23,400 |
| Trade | 7,900 |
| Transportation | 4,700 |
| Business/Eng/Acct Services | 4,200 |
| Other Services | 3,400 |
| Lodging | 2,100 |
| Construction | 800 |
| Government | 700 |
| Mining | 500 |
| Manufacturing | 0 |

Page 7
University Research as an Enterprise:
Industries for Alaska's Future

- Oil and Gas
- Tourism
- Seafood
- Mining
- Air Cargo
- Timber
- University Research

Mr. Goldsmith pointed out that the industries with high projected job growth are the services and trade industries. The average wages for new jobs in those industries is less than that of existing jobs. This information suggests that every opportunity must be made to build "base industries" that can drive the economy by providing solid jobs; university research is one of those industries.

Page 7
University Research as an Enterprise:
Growth Potential

- Import Substitution
  - Increase Share of Nationally Funded Research About Alaska
  - Increase Share Locally Funded Research
- Export Growth
  - Maintain Overall Share of Growing Market for Federal Research
  - Increase Share of Nationally Funded Arctic Research
  - Increase Presence in Under Represented Fields

Mr. Goldsmith explained that University research has significant growth potential for two reasons. First, the research budget is growing faster than the overall economy. Second, Alaska has the ability to capture a larger share of research currently being conducted in other parts of the country.

Page 8
University Research as an Enterprise:
Benefit/Cost Analysis

- Cost
  - General Fund Appropriation (FY 03) = $16.6 Million
- Benefits
  - Economic Impact Return per $1 Million of GF
    - Jobs = 139
    - Payroll = $4.8 million
  - "Value Added" Spinoff Returns for Alaska

Page 8
University Research as a Tool for Economic Development

- New Business Creation - ABR Inc.
- Business Innovation - Geoducks
- Information for Business Decisions - Ice Roads
- Public Infrastructure Efficiency - Telemedicine
- Maximize Value of Public Assets - Fisheries Management
- Professional Workforce Development - Engineers
- Resident Expertise Creation - Fisheries

Mr. Goldsmith highlighted one of the significant contributions of university research: the "value added spinoff". In other industries value added refers to profits, but in the university research industry the value added is productivity gains for the entire economy.

Senator Olson referred to the slide titled "Research is a $264 Billion Industry" and noted that 75-percent of the nationwide research industry, some $250 billion, is funded by industry. He asked why the majority of Alaska's research funding comes from the federal government.

Mr. Gorman responded that the nature of research conducted in Alaska is associated with the environment, and the special characteristics of the arctic. In addition, Alaska has a small industrial and manufacturing base. The University of Alaska funds 57-percent of the State's research, and only 7-percent is funded by industry. From a research standpoint, the State is unique in that it is more reflective of a developing country, than of the rest of the U.S.

Mr. Goldsmith added that an important aspect of university research is the student. The federal government considers university research a method to "capture the next generation". Undergraduate and graduate students play an integral role in university research causing it to become "an intrinsic part" of the educational environment.

Mr. Gorman then gave a presentation titled, "Research at the University of Alaska, Role in the State Revenue, Organization, Priorities, Plans" [copy on file] as follows.

Page 1
Some Perspectives

Nationally, Industry conducts 74 % of
R&D, Universities conduct 14%

In Alaska, UA conducts 57% of R&D
and Industries 7%

Average State investment in R&D =
2.5% GSP; Alaska Invests 0.5%

Page 1
UA total research revenue
FY 03: $133M

Good growth pattern:

- FY 98: $77M
- FY 99: $81M
- FY 00: $91M
- FY 01: $109M
- FY 02: $120M

Most $ currently at UAF - growing at all MAUs

Traditionally "academic" - becoming more applied

Mr. Gorman reemphasized the growth of the research industry in Alaska. Traditionally, the majority of University research has taken place at the University of Fairbanks, but it is also occurring in Anchorage and Southeast Alaska. Much of the research conducted in the State is academic or basic research, which studies fundamental processes and characteristics; however, the State is becoming increasingly focused on applied and industrial research. University research is growing and changing in the State of Alaska.

Page 2
UA Revenue by Different Sources
1996 - 2003

[bar graph indicates the following data]

2003
$211,100 - State Appropriated Funds
$133,082 - Externally Funded as a Result of Research
$59,749 - Tuition
$141,509 - Other

1999
$168,963 - State Appropriated Funds
$81,500 - Externally Funded as a Result of Research

$48,685 - Tuition
$104,747 - Other

1996
$171,580 - State Appropriated Funds
$63,816 - Externally Funded as a Result of Research
$48,965 - Tuition
$90,340 - Other

Page 2
UA Revenue by Different Sources
1996 - 2003

[bar graph indicates the following data]

2003
39% - State Appropriated Funds
24% - Externally Funded as a Result of Research
11% - Tuition
26% - Other

1999
42% - State Appropriated Funds
20% - Externally Funded as a Result of Research
12% - Tuition
26% - Other

1996
46% - State Appropriated Funds
17% - Externally Funded as a Result of Research
13% - Tuition
24% - Other

Mr. Gorman commented on the growth of the University of Alaska in comparison to other institutions receiving State appropriated funds. He acknowledged the increase in State appropriation funds to the University, and highlighted the increase in tuition the University implemented.

Mr. Gorman continued that the healthy research environment at the University of Alaska is partially responsible for its ability to attract more students from within the State. Furthermore, a significant amount of University funding is provided by research activities.

Page 3
UAF Funding Sources

(03 Research Expenditures - $m)

| | | |
|---|---|---|
| Direct Federal | | 72.8 |
| DOD | 5.9 | |
| NIH | 5.6 | |
| Interior | 3.9 | |
| Ag | 5.1 | |
| Commerce | 9.1 | |
| NASA | 14.6 | |
| NSF | 18.9 | |
| State Agencies | | 2.2 |
| Direct | 1.4 | |
| From Federal | .8 | |
| Private (Univ, Corp, Found'n) | | 22.1 |
| Direct | 7.6 | |
| Federal Indirect | 14.4 | |
| General Fund | | 14.3 |

(UAA: 3.9, 1.9, 2.8, 2.2)

Mr. Gorman pointed out the diverse sources of the University of Alaska, Fairbanks research funding, but clarified that the federal government contributes the majority of funding. Most federal research appropriations come from the National Science Foundation, which is a very competitive funding source. Increasing efforts are underway to secure additional funds from the National Institute of Health (NIH), as this is the largest federal research funding source and Alaska has been the least successful state in securing NIH funds.

Co-Chair Wilken asked the significance of the numbers following the letters "UAA" at the bottom of the "UAF Funding Sources" slide.

Mr. Gorman explained that those numbers represent the funding sources of research funds for the Anchorage campus of the University of Alaska. He noted that there is a significant difference in the federal funding provided the Anchorage campus versus the Fairbanks campus; however, contributions from State agencies are comparable between the two campuses. The Anchorage campus has historically been well supported by the State. The funding variance between the University of Alaska's Fairbanks and Anchorage campuses demonstrates their unique styles and histories.

Page 3
Large sums from small pieces:
Diversity

864 Active Research Grants and Contracts

340 New awards annually - 120% increase over FY 99

Legislative Performance Measures:
215 Awards in Specified Areas
222 Graduate Students Funded
267 Active Applied Research Projects

Mr. Gorman stated that research funding does not come in large sums, though a few exceptions exist. For example, Alaska receives a sizable amount of computational science research funding, the vast majority of which goes to the Arctic Region Supercomputing Center with an annual budget of approximately $15 million. The Supercomputing Center is funded by the U.S. Department of Defense. The University of Alaska is attempting to increase its utilization of the Supercomputing Center. Currently, approximately 30-percent of the Supercomputing Center's capacity is used by the University, and the other 70-percent is utilized by the Department of Defense.

Page 4
Organized Research Units
Independent:
- Geophysical Institute
- Institute of Arctic Biology
- International Arctic Research Center
- Arctic Region Supercomputing Center
- UAF Museum

Within Schools and Colleges (examples)
- Business Enterprise Institute
- Institute for Social and Economic Research
- Environmental and Natural Resources Institute
- Institute for Circumpolar Health Studies
- Institute of Northern Engineering
- Institute of Marine Science
- Arctic Energy Technology Development Lab
- Alaska Native Language Center
- Minerals Industries Research Lab
- Center for Nanosensor Technology
- Agriculture and Forestry Experiment Station

Mr. Gorman explained that research is conducted by individual faculties or by research centers. Within the University of Alaska there are bi-partite faculties who are active in service and teaching, and tri-partite faculties who participate in service, teaching and research. The majority of the University of Alaska's tenure-track faculty is tri-partite. When a coalescence of interest, or a federal interest exists, research centers are formed to conduct research. The largest, most famous research center in the State is the Geophysical Institute, which was established by

the federal government in 1948. The State is playing an extremely important role in both the national and the international research scene.

Page 4
BOR Strategic Plan
Areas of Statewide Leadership

Anchorage
- Social, Economic Policy
- Health delivery
- Logistics
- Community Engagement
- Complexity
- Finance, Business

Fairbanks
- Biomedical Science
- Engineering
- Fisheries, Marine Science
- Geophysics
- Remote Sensing
- Climate
- Natural Resources
- Native Languages, Culture
- Arctic Research
- Wildlife Biology
- Energy Technology
- Computational Science
- Cold Regions Infrastructure

Southeast
- Government
- Education
- Marine Biology
- Environmental Technology

The University of Alaska's Board of Regents has identified, as part of its strategic plan, areas of leadership within various administrative units. The University cannot afford to be "duplicitous" in its research. At the University of Alaska's Anchorage campus the research focus is on the community, social economics, business and logistics. At the University of Alaska's Fairbanks campus, the research focus is on physical scientists and the arctic. The Southeast campus of the University of Alaska is primarily an undergraduate institution, but research is occurring there as well.

Page 5
SJR 44 (2nd Session, 22nd Legislature)

Draft State R&D Plan (2/03)

Lead Participants: UA, NPRB, Arctic Research Commission, IARPC, ASTF

Objectives:

- Expand and Diversify Alaska's Economy
- Protect Health of Alaskans and Alaska's Environment
- Strengthen State Research Institutions
- Identify ways for Federal and State Governments to work together

Conclusions and Recommendations:

- Value in its own right; strategic tool for economic development
- Establish mechanism for planning and Agency accountability
- Maintain excellence and build competitive capacity
- Establish monitoring networks coupled to analytical capacity
- Improve flow of information to decision makers, public

Key Organizing Principle:

- Alaska Resource Assessment Network

Mr. Gorman informed that the State legislature asked the University to participate with other agencies to develop the State's research and development plan. A draft report was produced, though the State agencies did not participate to the level expected by the University. In the draft report the value of research "in its own right" and as a "strategic tool" was identified. A major conclusion of the draft report was that the State needed a mechanism for planning and developing "enhanced agency accountability" for the State agency's research priorities.

Page 5
Alaska Resource Assessment Network

[Flow chart demonstrating the process of different types of research reaching agencies, decision makers and the public]

Mr. Gorman stressed that the observation of data is important as is disseminating that data. The University needs improved systems for collecting, collating and using data to provide better information to federal and State agencies, decision makers, and the public. He identified a few of the successful observation systems that are in place such as the Alaska Ocean Observing System. A national effort titled the Integrated Ocean Observing System may identify

significant funding which the University of Alaska could compete for to make another observing system available.

Page 6
UA SJR 44 Follow-on

Areas for building capacity at UA:

- Marine Sciences and Fisheries, Land Resource Management, Cold Regions Engineering and Infrastructure (esp. energy technologies), Health and Biomedicine, Education, Coupled Human and Natural Ecosystems
- Improve Competitiveness, Facilities
- Cross - MAU Transportation Research Center, Engineering Reorganization, BEI and Logistics Center, CNT PDDC, NIH Roadmap projects, Computational strategy, AOOS…

Enhance attention to State needs, applied research
Focus business, social, economic researchers on strategies for wealth generation and economic development (UAA CBPP Dean Tom Case will address)
Establish mechanism for continued R&D Planning:
From EPSCoR to SCoR

Mr. Gorman informed that the University would be building capacity in research areas such as health and biomedicine, and marine science and fisheries. The University would be receiving over $80 million from the federal government for FY 06 and FY 07 for an Alaska region research vessel to replace the existing Alpha Helix research vessel. The University intends to increase its competitiveness in the research industry. Committing to high quality research facilities is one technique the University would use to foster research competition.

Mr. Gorman continued that Alaska is an EPSCoR state. EPSCoR is a national program for states that receive less than a certain percentage of National Science Foundation funds. EPSCoR is an experimental program designed to stimulate competitive research. As a participant of the federal Experimental Program to Stimulate Competitive Research (EPSCoR) Alaska is required to form a State committee that coordinates research efforts. The president of the University of Alaska, Mark Hamilton, and the Lieutenant Governor will co-chair the research committee. The committee will attempt to illicit statewide guidance from the State agencies and State government to direct the University's future research.

Co-Chair Wilken asked how long the University has been a participant in EPSCoR.

Mr. Gorman answered the University has been actively involved in EPSCoR for three or four years.

Co-Chair Wilken asked whether digressing from the EPSCoR program would allow the University to qualify for additional funding.

Mr. Gorman affirmed and explained that EPSCoR has specific capacity building programs that generate an average of $3 million dollars from the National Science Foundation and comparable amounts from the National Institutes of Health. Subsequently, the University has focused its research efforts on health and biomedicine, and on cold regions engineering. The University has gained significant capacity in both of these research areas.

Co-Chair Wilken recalled University of Alaska president, Mark Hamilton, addressing EPSCoR when it was just beginning in the State, and detailing how it would grow.

Mr. Gorman detailed that the University of Alaska has successfully completed its "second round" of funding with EPSCoR through the National Science Foundation and is expecting comparable success with the National Institutes of Health. The goals of EPSCoR are to encourage the hiring of new research staff, new facilities, and the promotion of competitive research. The University of Alaska has achieved these goals.

Senator Bunde questioned if researchers are tri-partite by definition, and whether bi-partite faculty play a role in university research.

Mr. Gorman replied that bi-partite faculty are typically not involved in research. The research is conducted by tri-partite faculty, or by special faculty who exclusively participate in research.

Mr. Bunde asked for further clarification of bi-partite faculty.

Mr. Gorman clarified that bi-partite faculty are teachers; their tenure is not based on research.

THOMAS CASE, Dean, College of Business and Public Policy, University of Alaska, Anchorage, gave a presentation titled, "Economic Development and Wealth Generation, Role of the University of Alaska" [copy on file] as follows.

Mr. Case highlighted some of the subjects he would be presenting such as the balance between industry research funding and State and federal research funding. In addition, he stated his intent to

discuss the University of Alaska's statewide strategy for providing linkages between research and its application in order to drive economic development.

Page 1
Economic Development and Wealth Generation

- Our Strategy:
- Growing business opportunities for Alaska through excellence in business education

Mr. Case explained that excellence in business education is the linkage between research and its application. Research is an economic activity, which contributes to advancing knowledge. Research must be applied through business education to produce economic development and wealth generation.

Page 2
Strategies for Wealth Generation
Making Alaska attractive for investment
1. Increase productivity
2. Add value through technology applications
3. Build international connections
4. Expand local business capability

Mr. Case commented that the University of Alaska's Anchorage campus has a logistics program that provides education through special application courses, beginning with certificate courses and continuing to graduate level courses.

Page 2
Wealth Generation
1. Increase Productivity

- Example: Supply chain research for productivity improvements in Alaska business environment
- 10 - 15% improvement in productivity can result from supply chain management optimization
- Current collaborators Mat Maid, Horizon and TOTE
- 10% improvement in material movement within Alaska would be significant for the economy

Page 3
Wealth Generation
2. Add value through technology applications

- Data security and information management requirements since 9-11 increased cost of business by $billions nationwide.

- Business privacy and data security concerns from Sarbannes-Oxley Act and National Security Administration cost $ billions.
- What we teach can save money in Alaska

Mr. Case listed several sectors of need and opportunity such as data security, and specifically software security. The University of Alaska's Computer Information Systems Department faculty within the College of Business and Public Policy have begun a two-year effort to increase the Department's focus on software security. The potential exists for a Masters of Computer and Information Security degree to be offered by the University in partnership with a program offered by the National Security Agency. This degree program would "meet a great need in Alaska."

Senator Bunde asked what profit margin the University receives when research conducted by the University is used to increase the productivity of a business.

Mr. Case replied that he is advocating an increased partnership between the University and local businesses. He referenced a book sponsored by the National Science Foundation titled, "Managing the Industry: University Cooperative Research Center" that gives examples of how universities could better structure their industry partnerships to produce university revenue. The first phase in increasing partnerships is to make the local business community aware of the economic value the University has to offer. The University is not yet receiving profit margins, but as partnerships and a structure for those partnerships are developed in the future, the University will begin to receive financial support for their contribution.

Senator Bunde responded that the University is "obviously an asset for business."

Page 3
Wealth Generation
2. Add value through technology applications

- Master of Computer and Information Security - proposed for Spring 2005 - one of first in US to address this issue for Information Security Professional training
- Results directly from CIS Department research $1,692,650 on cyber-terrorism, internet data security systems, and wireless security

Example:
Chenega/UAA "DoD Data Management Enterprise Systems" Project

Mr. Case informed that Chenega Technical Services received a task from the federal Department of Defense involving logistics data management. Chenega approached the University asking for assistance with the project, and a partnership was formed.

SFC 04 # 35, Side B 09:52 AM

Mr. Case explained that two University faculty members are conducting research for the Chenega project. The faculty members have brought eight research students into the Chenega-University partnership. The students are participating in research application, and gaining industry experience while continuing their education. One of the students has begun a small business in response to his interaction with the Chenega project. This business start-up is an example of the "spin-offs" University and industry partnerships are capable of producing.

Co-Chair Wilken asked if Chenega is a "local" company.

Mr. Case replied that Chenega Technical Services is an Alaska Native corporation.

Page 4
Wealth Generation
3. Build international connections

- Value of Alaska exports (2001): $2.45B
- Chief trading partners: Japan, Korea, Canada, Germany, China, Mexico, Belgium, Russia
- International Trade 10% of Alaska's GSP (2001)
- International R&D investment in UAA:
  - $17M Federal (American Russian Center)
  - 49,000 SME owners and business leaders trained
  - 160 trained in oil/gas project/logistics

Mr. Case detailed the specifics of the American Russian Center. He informed that the American Russian Center was established after the fall of the Soviet Union. Individuals who had lived under a communist regime for 80 years were expected to suddenly adopt and comprehend a free-market economy. The American Russian Center addresses this difficult transition from communism to a free-market economy. The Center has impacted 49,000 Russian owners and business leaders. These individuals have been enabled to enter productive business arrangements with Alaskans and others. An additional 160 Russian individuals were trained in oil and gas projects and

logistics education in order to work with Alaskan oil and gas enterprises.

Senator Bunde told of individuals traveling to Russia at the University's expense, who proceeded to use their Russian experience for private business endeavors. He asked about the policy to protect the intellectual property and products developed at the University's expense.

Mr. Case responded that University protection policies must be closely examined. State ethics laws contain restrictions against certain policy protections; however the ethics laws could be reexamined. The intellectual property rights of the University need to be protected. Other states have developed procedures to foster economic development while protecting their universities. Legislation is currently pending that would amend existing State university policy protection language.

Co-Chair Wilken stated that the Senate Health, Education and Social Services Committee had recently heard the legislation referenced, and that committee passed the legislation.

Page 4
Wealth Generation
4. Build Local Business Capability

- SBDC helped 10,500 clients statewide in 2003
- Generated Small Business Innovative Research awards valued at $768,465 in 2003, and
- A total of $4,265,734 in federal research and development funds to Alaska businesses
- Average 12 interns in businesses per semester

Mr. Case spoke of the activities of the Alaska Small Business Development Center (SBDC). The SBDC is a partner of the University's College of Business and Public Policy.

Page 5
Strategies for Economic Development
1. Build Alaska's skilled labor pool
2. Meet business and community needs
3. Business applications of research
4. Create Alaska's economic opportunity

Page 5
Economic Development
1. Build Alaska's skilled labor pool

- 60% of CBPP graduates are employed in Alaska, 75% remain in Alaska
- 71.5% of CBPP alumni are residents of Alaska
- CBPP graduates earned a total of $42.0 million in 2002

Mr. Case spoke of the achievements of the College of Business and Public Policy

Page 6
Economic Development
2. Meet Business and Community Needs

- Accounting research on IRS tax violation problems in rural Alaska let to Volunteer Tax and Loan Program
- Garnered $2,838,318 in refunds for 5,574 people in villages throughout Alaska

Mr. Case detailed the voluntary income tax preparation program conducted by the College of Business and Public Policy's Accounting Department. The program is the product of a research partnership with the federal Internal Revenue Service. The program research discovered that tax preparation in Alaska's rural villages was problematic, and presented an opportunity for improvement. University faculty and students travel to these rural villages and prepare income tax returns on a voluntary basis.

Page 6
Economic Development
2. Meet Business and Community Needs

- RFID Tag applications for Alaska business to tap into rapidly growing $ billion industry
- Marketing research regarding e-commerce, customer satisfaction and internet marketing

Mr. Case told of Radio Frequency Identification (RFID) tag technology. In October 2003, the federal Department of Defense directed the Department to begin transferring logistics and supply chain management to RFID tag technology. Wal-Mart has since required its primary suppliers to adopt the RFID system. RFID tag technology consists of a small computer chip, which transmits an active signal identifying the tagged object. RFID allows sensors that have the ability to monitor the condition of the object to be embedded into the tag. An example of RFID tag technology is exhibited by tagging Copper River salmon. RFID can determine the temperature and vibrations the salmon has been exposed to throughout the shipping process, and could identify and prohibit counterfeit salmon. Thousands of commercial applications exist for RFID tag technology. In addition, many significant national

security applications exist.

Senator Bunde asked how this product is purchased, and if any protections exist to hinder an outside party from tracking the RFID tags.

Mr. Case replied that this product is in the early stages of development. The University needs to become involved with this project early to ensure that the defense uses would be compatible with commercial use. Many ethical, moral and safety considerations are introduced with the use of this product. .

Page 7
Economic Development
3. Business applications of research

- Experimental Economics Laboratory through Rasmussen Foundation and corporate support for empirical economic research
- Nobel laureate Vernon L. Smith working with faculty and industry to address problems of interest in resource management and property valuation

Mr. Case detailed the University's experimental economics research. The University has extended its relationship with Nobel laureate Vernon L. Smith through funding from the Rasmussen Foundation. The University is also in the process of establishing an experimental economics laboratory.

Page 7
Economic Development
3. Business applications of research

- Business Enterprise Institute partners with businesses to commercialize technology and meet business training and research needs.
- Provided opportunities for student research and spin-off business development

Mr. Case restated the importance of forming University partnerships with local businesses, and highlighted the central role business education plays in achieving those connections.

Mr. Case thanked the State legislature for supporting University programs.

Senator Olson asked the significance of the administrative costs of conducting research in the State of Alaska.

Mr. Gorman explained that the University negotiates an indirect cost rate with the federal government. This rate is added onto the cost of research. Currently the rate established with the State is 25-percent, and the rate for federal research is approximately twice the State rate, or 50-percent.

Senator Olson understood that requests for State conducted research have been inhibited because of high administrative costs in excess of 25-percent. The administrative costs of research in the private industry are as low as ten-percent.

Mr. Gorman clarified that administrative research costs are comparable between the State and the private sector. The ten-percent referenced is typically a fee, not an administrative cost. The University does not require fees for research. The indirect cost rates the University establishes with the State and federal governments are no different than the administrative costs of private industry.

Senator Olson asked if a representative from the private sector would agree with Mr. Gorman's statements.

Mr. Gorman answered, "If he was an honest man he would."

Co-Chair Wilken commented that natural resources such as oil and gas, gold and coal, are commonly identified as strong revenue sources, but University research as an economic enterprise is often forgotten.

AT EASE 10:07 AM / 10:13 AM

#SB273

> SENATE BILL NO. 273
> "An Act relating to the Alaska Seafood Marketing Institute, the seafood marketing assessment, the seafood marketing tax, and the seafood product tax; and providing for an effective date."

This was the first hearing for this bill in the Senate Finance Committee.

Co-Chair Wilken stated this bill, sponsored by Senator Gary Stevens, "reduces the size of the Alaska Seafood Marketing Institute (ASMI) Board of Directors from 25 members to nine, and changes ASMI's tax structure to raise approximately $2.8 million."

Co-Chair Green moved for adoption of CS SB 273, 23-LS1366\E as a working document.

Without objection the committee substitute was ADOPTED as a working document.

SENATOR GARY STEVENS stated that the Joint Salmon Task Force discussed the issues in this bill. The two main issues that need to be addressed within ASMI are the size of the ASMI Board of Directors and the tax structure. This legislation brings ASMI "into the 21st century". This bill would reduce the Board of Directors to seven or nine members. A taxing structure must be established to pay for industry marketing. ASMI is the only organization that broadly markets Alaskan seafood products. A trigger mechanism exists within this bill, which would allow the fishing industry to determine the level of taxation they are willing to accept to fund ASMI. Currently, a one-percent salmon fisherman tax and a processors' tax are in place. This bill would require a vote of the processors, based on their value, to determine the tax; a majority vote would be required to implement a tax rate. The processors could decide to impose a 0.5-percent tax, maintain the current 0.3-percent tax, or they could opt out of the tax entirely. If the 0.5-percent tax were adopted the Board of Directors would have seven members, and if the 0.5-percent tax were rejected two fishermen would be added to the Board of Directors bringing the total membership to nine.

[Note: in this paragraph Senator G. Stevens' references to ASMI relate specifically to the seafood marketing assessment component of ASMI.] Senator G. Stevens furthered that a determination must be made whether rational exists to continue ASMI. He expressed his support of ASMI, but emphasized that the processors should be given the opportunity to determine whether they want ASMI to continue. The processors would then be given the opportunity to decide if they want to keep the current 0.3-percent tax, terminate the tax, or increase the tax to 0.5-percent.

Senator G. Stevens indicated that with the adoption of the committee substitute, the fiscal note would become zero.

Co-Chair Green asked if a revised fiscal note has been prepared to the committee substitute.

Senator G. Stevens answered an updated fiscal note has not been prepared, but noted a representative of the Department of Revenue is present to address the matter.

Co-Chair Wilken shared that members of the Committee have requested

that this legislation be held in Committee until they can fully review the committee substitute. An updated fiscal note could be presented at the next Committee hearing of this bill.

Co-Chair Green also requested an updated sectional analysis of the committee substitute.

Senator G. Stevens clarified that significant changes were made to this legislation in the committee substitute.

Co-Chair Green cited the original sectional analysis and asked if the committee substitute would require that an appropriation from seafood marketing tax receipts not be made using unrestricted general funds.

Senator G. Stevens replied that the committee substitute would involve no general fund spending.

Senator B. Stevens thanked Senator G. Stevens for his efforts on this issue.

Senator B. Stevens emphasized the need to inform industry participants that while the election would determine the amount of the landing tax, revenues from the tax would be utilized for marketing the entire seafood industry, and not just salmon. Concern existed that the a few processors would dictate the tax structure for the entire seafood industry. This concern is unwarranted because though there are a limited number of salmon processors, a large number of other seafood processors exist.

Co-Chair Wilken addressed Senator Hoffman and Senator Olson, and asked them when they would be prepared to take action on this legislation.

Senator Olson replied they would be prepared to take action by the next regularly scheduled Committee meeting in approximately two weeks.

Co-Chair Wilken ordered the bill HELD in Committee.

#SB241

SENATE BILL NO. 241
"An Act making an appropriation to the Alaska Natural Gas Development Authority; and providing for an effective date."

This was the second hearing for this bill in the Senate Finance

Committee.

Co-Chair Wilken stated this bill "makes an appropriation to the Department of Revenue for the analysis and design of a natural gas pipeline."

JOE BALASH, Staff to Senator Gene Therriault, recalled discussions at the previous hearing about the language of Section 1 of this bill. Senator Therriault had asked that the language be relatively broad to allow the Department of Revenue the flexibility to work on gas line issues extending beyond the Alaska Natural Gas Development Authority (ANGDA). In a previous hearing the Committee had questioned the appropriation lapse date of 2009. Senator Therriault is willing to adjusting the lapse date to 2005, as it is expected that the Department of Revenue would complete the analysis provided for in this bill by FY 05.

Mr. Balash stated for the record that the ANGDA Board of Directors endorsed the appropriation this bill would provide the Department of Revenue and passed a resolution, which reads the following.

> The Board of the Alaska Natural Gas Development Authority supports the appropriation of three million dollars in the remainder of FY 04 to the Department of Revenue for work related to bringing North Slope gas to market.

STEVEN PORTER, Deputy Commissioner, Department of Revenue, testified via teleconference from Anchorage and referenced a spreadsheet titled, "Projected Gas Budget for FY 04 and 05" [copy on file]. He reviewed the spreadsheet. He explained that even though the spreadsheet outlines total project costs of $3.7 million, the Department of Revenue is only requesting three million dollars because certain contracts may not occur, and reimbursement agreements may be obtained for the remaining contracts. The Stranded Gas Act contemplates the possibility of negotiating a reimbursement agreement with a party, but does not require a reimbursement. In addition, certain aspects of the contracts, such as in-state gas use, certain State research, and social impacts may be standard in all three contracts. ANGDA would benefit from much of the study work completed on the applications.

Senator Hoffman asked why the lapse date for this legislation is 2009 instead of 2005 considering the appropriation to the Department of Revenue would be expended in FY 05.

Mr. Porter expressed willingness to shorten the lapse date to the year 2005, although the speed in which the negotiations would occur could not be predicted. The intent is to complete negotiations by

the end of fiscal year 2005.

HAROLD HEINZE, Chief Executive Officer, Alaska Natural Gas Development Authority, testified via teleconference from Anchorage that this legislation has evolved to combine funds to address all natural gas projects and issues. The funds requested through this legislation would be utilized to accomplish all the goals of the Authority; the work to be completed by ANGDA would focus on ANGDA's business structure, financial structure and tax status. This effort is important because ANGDA might play a roll in working with the projects detailed in this legislation, and become an aggregator for local utilities in the State. ANGDA must have an understanding of its business standing and structure because it could be handling large financial transactions in the future.

Mr. Heinze added that ANGDA has requested funds in the FY 05 operating budget for the ANGDA staff, the Board of Directors and other administrative functions totaling approximately $200,000 to $250,000. The majority of the projects ANGDA has contemplated are included in the comparative analysis provided for in this legislation. The State has a series of important issues to consider in negotiating a gas pipeline project such as cost estimates, tariff calculations, benefits and markets. This analysis would provide ANGDA with information vital to the feasibility determination, and would determine what interaction ANGDA might have with the other applicants. Lastly, this analysis would aide ANGDA in documenting the benefits North Slope gas would provide to the State.

Mr. Heinze indicated that the ANGDA Board was aware ANGDA would be considered with three other applicants in the analysis this legislation would provide. Though this analysis would not grant ANGDA an ideal level of funding; by participating, ANGDA would obtain information necessary to fulfill the role intended by voters.

Senator B. Stevens asked if the port authority contract is a valid proposal.

Mr. Porter replied that the State is still making that determination.

Senator B. Stevens referenced the "Projected Gas Budget for FY 04 and 05" spreadsheet and asked why no expenses are planned for the negotiation of a contract with the MidAmerican Energy Holdings Company in FY 05. He asked if the Department anticipates reimbursement for expenses incurred in this effort.

Mr. Porter responded that MidAmerican's intent is to complete a contract before the end of FY 04.

Senator B. Stevens suggested that the funds requested for FY 04 expenditures be included in a supplemental appropriation and the funds requested for FY 05 expenditures be included in the FY 05 operating budget.

Amendment #1: This amendment reduces the general fund appropriation from $3 million to $2 million to the Department of Revenue for work related to bringing natural gas from the North Slope to market, on page 1, line 4 of the committee substitute.

Senator B. Stevens moved for adoption.

Co-Chair Wilken objected for an explanation.

Senator B. Stevens affirmed that there is an immediate need for an appropriation of one million dollars to the Department of Revenue, but there is not an immediate need for the FY 05 appropriation. Including the FY 05 expenditures in the FY 05 operating budget would allow the State time to determine whether the port authority contract is valid and provide a more complete explanation of the expenditures outlined in the "Comparative Analysis/Energy Bill and Other Proposals/Issues" spreadsheet. Ample time exists to address these appropriations, and include them in the standard government budget process.

Senator Hoffman asked if Senator B. Stevens would also change Section 2 of the committee substitute.

Senator B. Stevens stated that if Amendment #1 were adopted he would consider offering an amendment to change the lapse date of the appropriation from 2009 to 2005.

Co-Chair Wilken clarified that if Amendment #1 passes one million dollars would be offered as a supplemental amendment to the FY 04 operating budget.

Senator B. Stevens replied that if this legislation is adopted it would take affect immediately. Sufficient time exists to include the FY 04 expenditures in the supplemental amendment to the FY 04 operating budget and make that funding available upon passage of this bill. Additionally, if this amendment passes the lapse date of this appropriation would need to be adjusted to 2005 to coordinate with the second and last appropriation in FY 05.

Co-Chair Wilken asked how the additional $2.7 million would be

appropriated if it were considered necessary.

Senator B. Stevens responded that an allocation would be included in the FY 05 operating budget.

Co-Chair Wilken clarified that these funds would need to be included in the calculations of the existing FY 05 operating budget draft.

Senator B. Stevens remarked that the Department of Revenue would be required to justify the need for the expenditure and the funds would then be appropriated through the FY 05 operating budget. In using the traditional budget process to appropriate funds the legislature would be following the directives of the Office of the Governor.

Senator Bunde spoke in favor of the amendment. He acknowledged the legitimacy of ANGDA, but noted that for twelve years people have complained of "too much government, too much bureaucracy and too much spending". The State has put significant amounts of money into the promotion of private enterprise without receiving any positive return. The amount of funds expended for this effort should be minimized because a positive return is unlikely. An FY 05 operating budget allocation should not be granted.

Senator Hoffman also supported the amendment because it would allow time for additional scrutiny of the appropriation. The documentation is minimal, and a discrepancy exists between the costs projected by the Department of Revenue and the requested appropriation. One million dollars should be adequate to meet ANGDA's need for immediate funding.

A roll call was taken on the motion.

IN FAVOR: Senator Olson, Senator B. Stevens, Senator Bunde, Senator Hoffman, and Co-Chair Green

OPPOSED: Co-Chair Wilken

ABSENT: Senator Dyson

The motion PASSED (5-1-1)

The amendment was ADOPTED.

Amendment #2: This amendment changes the lapse date of the appropriation made in this legislation from June 30, 2009 to June 30, 2005, in Section 2 on page 1, line 7 of the committee

substitute.

Senator B. Stevens moved for adoption.

Co-Chair Wilken objected for an explanation.

Senator B. Stevens asserted that 16 to 18 months is an adequate amount of time to complete negotiations. Furthermore, the Authority would have an opportunity to request additional funds if necessary.

SFC 04 # 36, Side A 10:46 AM

Senator B. Stevens continued that this project might be ongoing. Rather than making a fund source available for five years, the legislature should review and appropriate funds as needed on an annual basis.

Co-Chair Wilken withdrew his objection.

The amendment was ADOPTED without objection.

PAUL FUHS, Backbone2, explained the organization he represents. Backbone2 is the continuation of Backbone1, which was a group of Alaskan citizens that spoke against BP's efforts to take over ARCO's assets in Alaska, and of the concerns over the monopoly that that takeover would create. Backbone2 is a nonpartisan organization whose membership includes former governors, former legislators, current legislators, and Alaskan citizens who are in support of the "expeditious development" of a gas pipeline. Backbone2 is in support of SB 241. Mr. Fuhs thanked Senator Therriault for his political leadership and for respecting the gas pipeline issues the voters supported in the last statewide election.

Mr. Fuhs asserted that decisions made on gas pipeline development are very important to the economy of the State. He referred to a document prepared by Backbone2 titled, "Alaska's Strategic Interests in North Slope Gas Development" [copy on file], and defined it as a fair, and complex statement of the State's gas pipeline issues. He stated that much economic misinformation has been intentionally disseminated regarding the gas pipeline project proposals. In conducting the proposed gas pipeline contract analysis ANGDA and the Department of Revenue would confirm the actual economic impacts of the various gas pipeline contracts. The gas pipeline would be "the long term fiscal plan for Alaska." The State revenues Governor Murkowski envisioned as result of resource development can only be achieved through the construction of a gas

pipeline; there are no resource development projects that could produce greater State revenue. Two independent investment-banking firms have determined that ANGDA's gas pipeline project could produce annual revenues of up to one billion dollars for the State of Alaska. ANGDA's gas pipeline proposal takes the best interest of the State and its citizens into consideration, whereas other project applicants are asking for more concessions from the State.

Mr. Fuhs asserted that the "government should only do things when the private sector cannot." The State has waited for the private sector to build a gas pipeline for thirty years, and it is time that the government takes action, especially given the "dysfunctional" relationships that have developed between the companies operating on the North Slope. MidAmerican has offered a serious gas pipeline project proposal; a partnership between ANGDA and MidAmerican could prove successful.

Mr. Fuhs emphasized the organization's support of this legislation and Amendment #1.

Mr. Porter informed that the Department of Revenue frequently authorizes projects one year before the necessary funding would be available. However, these gas pipeline contracts could not be authorized until funding is received. Amendment #1 would delay the Department in granting contracts. He requested that additional funds be made available to the Department of Revenue in FY 04.

Co-Chair Wilken pointed out that further consideration of this matter could be undertaken when this bill is heard in the House of Representatives. He clarified that Senator B. Stevens' intent in proposing Amendment #1 was to isolate FY 04 expenditures, both expenses and encumbrances.

Mr. Porter replied he would provide the necessary information to Senator B. Stevens.

Co-Chair Green offered a motion to report the bill from Committee as amended with individual recommendations.

There was no objection and CS SB 241 (FIN) MOVED from Committee.

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**ADJOURNMENT**

Co-Chair Gary Wilken adjourned the meeting at 10:57 AM