

ALASKA LEGISLATURE SPECIAL COMMITTEE/SUBJECT FILES 8672

2680 SCOMM 120: HOUSE SPEC. COMM. UTILITY RESTRUCTURING, 1999-2000

1-LS1394V

Cook

3/9/00

CS FOR HOUSE BILL NO. 396()

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-FIRST LEGISLATURE - SECOND SESSION

BY

Offered:

Referred:

Finance

Sponsor(s): REPRESENTATIVE BERKOWITZ

A BILL

FOR AN ACT ENTITLED

1 "An Act transferring the assets, liabilities, and responsibilities of the Alaska
2 Municipal Bond Bank Authority and of the Alaska Student Loan Corporation to
3 the Alaska Housing Finance Corporation; and relating to the Alaska Housing
4 Finance Corporation."

5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

6 * Section 1. The uncodified law of the State of Alaska is amended by adding a new
7 section to read:

8 PURPOSE. (a) This bill authorizes the Alaska Housing Finance Corporation to
9 purchase the Alaska Student Loan Corporation and the Alaska Municipal Bond Bank.

10 (b) Recognizing that the Alaska Student Loan Corporation and the Alaska Municipal
11 Bond Bank provide valuable benefits to the State of Alaska, it is important to emphasize that
12 the legislature intends that the functions of the Alaska Student Loan Corporation and the
13 functions of the Alaska Municipal Bond Bank shall continue to be performed.

14 (c) Proceeds from the sale of the Alaska Student Loan Corporation and the Alaska

1 Municipal Bond Bank should be used to augment the power cost equalization and rural
2 electric capitalization fund established in AS 42.45.100.

3 * Sec. 2. AS 09.38.015(c) is amended to read:

4 (c) Property of the state, a municipality, or a [AND OF THE ALASKA
5 MUNICIPAL BOND BANK AUTHORITY OR ANOTHER] state public corporation
6 is exempt.

7 * Sec. 3. AS 14.40.956 is amended to read:

8 Sec. 14.40.956. Cooperation with other authorities. In issuing a bond, the
9 corporation may request the assistance of and work with the Alaska Industrial
10 Development and Export Authority and the Alaska Housing Finance Corporation
11 [MUNICIPAL BOND BANK AUTHORITY]. The Alaska Industrial Development and
12 Export Authority may invest in and issue bonds for space-related projects of the
13 Alaska Aerospace Development Corporation. The Alaska Industrial Development and
14 Export Authority and the Alaska Housing Finance Corporation [MUNICIPAL BOND
15 BANK AUTHORITY] may purchase and market bonds of the Alaska Aerospace
16 Development Corporation.

17 * Sec. 4. AS 14.42.130(b) is amended to read:

18 (b) Public notice of a meeting of the board at which the issuance of
19 corporation bonds under AS 14.42.220 is authorized shall be provided at least 24
20 hours before the meeting.

21 * Sec. 5. AS 14.42.140 is amended to read:

22 Sec. 14.42.140. Minutes of meetings. The board shall keep minutes of each
23 meeting held to carry out its responsibilities under AS 14.42.130 - 14.42.390 and
24 send a certified copy to the governor and to the Legislative Budget and Audit
25 Committee.

26 * Sec. 6. AS 14.42.150 is amended to read:

27 Sec. 14.42.150. Administration of affairs. The board shall manage the assets
28 and business of the corporation and may adopt bylaws and regulations, in accordance
29 with AS 44.62 (Administrative Procedure Act), governing the manner in which the
30 business of the corporation under AS 14.42.130 - 14.42.390 is conducted and the
31 manner in which its powers under AS 14.42.130 - 14.42.390 are exercised. The board

1 shall delegate supervision of the administration of the corporation to the executive
2 director [OFFICER] of the corporation.

3 * Sec. 7. AS 14.42.170 is amended to read:

4 Sec. 14.42.170. Staff. The employees of the Alaska Commission on
5 Postsecondary Education shall serve as staff for the corporation in connection with
6 the exercise of its responsibilities under AS 14.42.130 - 14.42.390.

7 * Sec. 8. AS 14.42.190 is amended to read:

8 Sec. 14.42.190. Budget. The portion of the operating budget of the
9 corporation used in connection with the exercise of its responsibilities under
10 AS 14.42.130 - 14.42.390 is subject to AS 37.07 (Executive Budget Act).

11 * Sec. 9. AS 14.42.200 is amended to read:

12 Sec. 14.42.200. General powers. In addition to other powers granted under
13 AS 14.42.130 - 14.42.390 [IN THIS CHAPTER], the corporation, in the exercise of
14 its power and functions under AS 14.42.130 - 14.42.390, may

15 (1) sue and be sued in its own name;

16 (2) adopt an official seal;

17 (3) adopt regulations under AS 44.62 (Administrative Procedure Act)
18 to carry out the purposes of this chapter;

19 (4) make and execute agreements, contracts, and other instruments
20 necessary or convenient in the exercise of the powers and functions of the corporation
21 under AS 14.42.130 - 14.42.390, including contracts with a person or governmental
22 entity;

23 (5) receive, administer, and comply with the conditions and
24 requirements respecting any appropriation, gift, grant, or donation of property or
25 money;

26 (6) borrow money as provided in AS 14.42.220 [THIS CHAPTER] to
27 carry out its corporate purposes under AS 14.42.130 - 14.42.390 and issue its
28 obligations as evidence of the borrowing;

29 (7) include in a borrowing under AS 14.42.220 the amounts to pay
30 financing charges, interest on the obligations for a period not exceeding one year after
31 the date on which the corporation estimates funds will otherwise be available to pay

1 the interest, consultant, advisory, and legal fees, and other expenses necessary or
2 incident to the borrowing;

3 (8) invest or reinvest, subject to its contracts with noteholders and
4 bondholders, money held under AS 14.42.130 - 14.42.390 by the corporation as set
5 out in AS 37.10.071;

6 (9) collect from a borrower amounts owed with respect to a student
7 loan the corporation has purchased;

8 (10) gather information on student loans available to residents of
9 Alaska and disseminate the information to reasonably assure that qualified residents
10 are aware of financial resources available to those attending or desiring to attend
11 institutions for which loans may be made under AS 14.43.090 - 14.43.325, 14.43.600 -
12 14.43.700, or 14.43.710 - 14.43.750;

13 (11) service student loans held by the corporation;

14 (12) purchase or participate in the purchase of student loans;

15 (13) contract in advance for the purchase or sale of student loans;

16 (14) sell or participate in the sale, either public or private and on terms
17 authorized by the board, of student loans to the Student Loan Marketing Association
18 or to other purchasers;

19 (15) collect and pay reasonable fees and charges in connection with the
20 purchase, sale, and servicing of student loans;

21 (16) enter into agreements with the federal government, including
22 guaranty agreements and supplemental guaranty agreements as described in the United
23 States Higher Education Act of 1965, as necessary to provide for the receipt by the
24 corporation of administrative allowances and other benefits available under the United
25 States Higher Education Act of 1965;

26 (17) administer federal money allotted to the state involving insured
27 student loans and related administrative costs and other matters;

28 (18) enter into agreements with the Alaska Commission on
29 Postsecondary Education relating to student loans [, THE ADMINISTRATION OF
30 THE STUDENT LOAN FUND CREATED UNDER AS 14.42.210,] and the payment
31 of and security for bonds of the corporation issued under AS 14.42.220;

(19) to the extent permitted under contracts with bond holders, consent to the modification of the rate of interest, time of payment of an installment of principal or interest, or other terms of a student loan purchased by the corporation;

(20) procure insurance against any loss in connection with the operation of its programs under AS 14.42.130 - 14.42.390;

(21) provide advisory services to borrowers and other participants in the corporation's programs under AS 14.42.130 - 14.42.390;

(22) enter into credit facility agreements to carry out the purposes of AS 14.42.130 - 14.42.390 and make pledges, covenants, and agreements with respect to the repayment of borrowings under the credit facility agreements;

(23) do all acts necessary, convenient, or desirable to carry out the powers expressly granted or necessarily implied in AS 14.42.130 - 14.42.390 [AS 14.42.100 - 14.42.390].

* Sec. 10. AS 14.42.210(a) is amended to read:

(a) The student loan fund is established in the corporation. The [STUDENT LOAN] fund is a trust fund to be used to carry out the purposes of AS 14.42.130 - 14.42.390 [AS 14.42.100 - 14.42.390], AS 14.43.090 - 14.43.325, 14.43.600 - 14.43.700, 14.43.710 - 14.43.750, and AS 14.44.025. The fund consists of money or assets appropriated or transferred to the corporation for the fund and money or assets deposited in it by the corporation. The corporation may establish separate accounts in the fund.

* Sec. 11. AS 14.42.210(b) is amended to read:

(b) Money and other assets of the student loan fund may be used to secure bonds of the corporation issued under AS 14.42.220, invested in student loans and investments under AS 37.10.071, and used to purchase loans approved under AS 14.43.090 - 14.43.325, 14.43.600 - 14.43.700, or 14.43.710 - 14.43.750.

* Sec. 12. AS 14.42.220(f) is amended to read:

(f) The corporation may not issue bonds under this section, other than refunding bonds, during any two consecutive fiscal years in an aggregate amount greater than \$125,000,000 unless the legislature, by law, approves issuance of a greater amount.

1 * Sec. 13. AS 14.42.270 is amended to read:

2 Sec. 14.42.270. Pledge and agreement of state. The state pledges to and
3 agrees with holders of bonds issued by the former Alaska Student Loan Corporation
4 or by the Alaska Housing Finance Corporation under AS 14.42.220
5 [CORPORATION] that the state will not limit or alter the rights and powers vested in
6 the corporation under AS 14.42.130 - 14.42.390 [AS 14.42.100 - 14.42.390] to fulfill
7 the terms of a contract made by the former Alaska Student Loan Corporation or
8 by the Alaska Housing Finance Corporation under AS 14.42.220
9 [CORPORATION] with the bondholders or in any way impair the rights and remedies
10 of the bondholders until the bonds, together with the interest on them with interest on
11 unpaid installments of interest, and all costs and expenses in connection with an action
12 or proceeding by or on behalf of the bondholders, are fully met and discharged. The
13 corporation may include this pledge and agreement of the state in a contract with
14 bondholders.

15 * Sec. 14. AS 14.42.280 is amended to read:

16 Sec. 14.42.280. Exemption from taxation. The real and personal property of
17 the corporation and its assets, income, and receipts are declared to be the property of
18 a political subdivision of the state and devoted to an essential public and governmental
19 function and purpose, and the property, assets, income, receipts, and other interests of
20 the corporation are exempt from all taxes and special assessments of the state or a
21 political subdivision of the state, including municipalities, school districts, public utility
22 districts, and other governmental units. Bonds of the corporation issued under
23 AS 14.42.220 are declared to be issued by a political subdivision of the state and for
24 an essential public and governmental purpose, and the bonds, interest on them, income
25 from them, and transfer of them, and all assets, income, and receipts pledged to pay
26 or secure the payment of the bonds, or interest on them, are exempt from taxation by
27 or under the authority of the state, except for inheritance and estate taxes and taxes on
28 transfers by or in contemplation of death.

29 * Sec. 15. AS 14.42.290 is amended to read:

30 Sec. 14.42.290. Bonds legal investments for fiduciaries. The bonds of the
31 corporation issued under AS 14.42.220 are securities in which public officers and

bodies of the state, municipalities, insurance companies, insurance associations, other persons carrying on an insurance business, banks, bankers, trust companies, savings banks, savings associations, building and loan associations, investment companies, other persons carrying on a banking business, administrators, guardians, executors, trustees, other fiduciaries, and other persons who are authorized to invest in bonds or other obligations of the state [,] may properly and legally invest funds including capital in their control or belonging to them. Notwithstanding any other provisions of law, the bonds of the corporation issued under AS 14.42.220 are also securities that may be deposited with and may be received by public officers and bodies of the state and municipalities for any purpose for which the deposit of bonds or other obligations of the state is not or may be authorized.

* Sec. 16. AS 14.42.300 is amended to read:

Sec. 14.42.300. Operation of certain statutes excepted. (a) In the exercise of its powers and functions under AS 14.42.130 - 14.42.390, the [THE] corporation

(1) is not a municipality as the term is defined in AS 01.10.060;

(2) except [EXCEPT] as provided in AS 14.42.190, [THE CORPORATION] is not subject to AS 37; and

(3) for [FOR] all other purposes, [THE CORPORATION] is a political subdivision and an instrumentality of the state.

(b) The funds, income, and receipts of the corporation that are obtained by it in the exercise of its powers and functions under AS 14.42.130 - 14.42.390 are not money of the state, nor may real property in which the corporation has an interest be considered land owned in fee by the state or to which the state may become entitled or in any way land belonging to the state, or state land referred to in art. VIII of the Alaska Constitution.

* Sec. 17. AS 14.42.310 is amended to read:

Sec. 14.42.310. Annual audit. The financial records of the corporation that relate to its exercise of its powers and functions under AS 14.42.130 - 14.42.390 shall be audited annually by the legislative auditor or by a certified public accountant approved by the legislative auditor. The legislative auditor may prescribe the form and content of these [THE] financial records of the corporation and shall have access to

1 these records at any time.

2 * Sec. 18. AS 14.42.390 is amended to read:

3 Sec. 14.42.390. Definitions. In AS 14.42.130 - 14.42.390 [AS 14.42.100 -
4 14.42.390],

5 (1) "board" means the board of directors of the corporation;

6 (2) "corporation" means the Alaska Housing Finance [STUDENT
7 LOAN] Corporation (AS 18.56.020).

8 * Sec. 19. AS 14.43.090(a) is amended to read:

9 (a) There is created a scholarship revolving loan fund. The fund shall be used
10 to make scholarship loans to students selected under AS 14.43.090 - 14.43.160, to pay
11 the costs of collecting scholarship loans that are in default if those costs are not
12 recovered from the student, and to pay the costs of administering the fund. Unless the
13 instrument evidencing the scholarship loan has been sold or assigned to the former
14 Alaska Student Loan Corporation or to the Alaska Housing Finance Corporation,
15 repayments of principal and interest on a scholarship loan shall be paid into the
16 scholarship revolving loan fund. If money estimated to be available is inadequate to
17 fully fund estimated scholarship loans for any fiscal year, additional funding from the
18 general fund may be requested and appropriated for that year.

19 * Sec. 20. AS 14.43.090(d) is amended to read:

20 (d) The commission may sell or assign notes and other instruments evidencing
21 scholarship loans to the Alaska Housing Finance [STUDENT LOAN] Corporation and
22 enter into agreements with the corporation relating to loans [, THE
23 ADMINISTRATION OF THE STUDENT LOAN FUND CREATED UNDER
24 AS 14.42.210,] and the payment of and security for bonds of the corporation.
25 Proceeds from the sale or assignment of notes and other instruments shall be deposited
26 in the scholarship revolving loan fund.

27 * Sec. 21. AS 14.43.120(f) is amended to read:

28 (f) Interest on a loan made under AS 14.43.090 - 14.43.160 is equal to the
29 interest rate

30 (1) paid in each year on bonds issued by the former Alaska Student
31 Loan Corporation or the Alaska Housing Finance Corporation under AS 14.42.220;

1 and

2 (2) necessary to pay the administrative cost of the student loan program
3 that is represented by the loan.

4 * Sec. 22. AS 14.43.120(r) is amended to read:

5 (r) The rate of interest, time of payment of an installment of principal or
6 interest, or other terms of a scholarship loan may be modified if required to establish
7 or maintain tax-exempt status under 26 U.S.C. 103 (Internal Revenue Code of 1986),
8 as amended, for the interest on bonds issued by the former Alaska Student Loan
9 Corporation or the Alaska Housing Finance Corporation.

10 * Sec. 23. AS 14.43.120(t) is amended to read:

11 (t) Payment of interest under (l) of this section and forgiveness under (s) of
12 this section are subject to appropriation by the legislature. Money obtained from the
13 sale of bonds by the former Alaska Student Loan Corporation or the Alaska Housing
14 Finance Corporation under AS 14.42.220 may not be appropriated for the payment
15 of interest or the forgiveness of loans.

16 * Sec. 24. AS 14.43.120(u) is amended to read:

17 (u) The commission by regulation shall set a loan origination fee, not to
18 exceed five percent of the total scholarship loan amount, to be assessed upon a
19 scholarship loan that is funded from the student loan fund of the Alaska Housing
20 Finance [STUDENT LOAN] Corporation. The loan origination fee shall be deducted
21 at the time the loan is disbursed. Subject to appropriation, the loan origination fees
22 shall be deposited into an origination fee account within the student loan fund of the
23 Alaska Housing Finance [STUDENT LOAN] Corporation, and subsequently used by
24 the corporation to offset losses incurred as a result of death, disability, default, or
25 bankruptcy of the borrower.

26 * Sec. 25. AS 14.43.255(a) is amended to read:

27 (a) There is created a memorial scholarship revolving loan fund. The fund
28 shall be used to provide educational scholarship loans to students selected under
29 AS 14.43.250 - 14.43.325. Unless the instrument evidencing the memorial scholarship
30 loan has been sold or assigned to the former Alaska Student Loan Corporation or the
31 Alaska Housing Finance Corporation, repayments of a loan shall be deposited into

the memorial scholarship revolving loan fund and shall be used to make new loans.

* Sec. 26. AS 14.43.255(c) is amended to read:

(c) The commission may sell or assign notes and other instruments evidencing memorial scholarship loans to the Alaska Housing Finance [STUDENT LOAN] Corporation and enter into agreements with the corporation relating to loans [, THE ADMINISTRATION OF THE STUDENT LOAN FUND CREATED UNDER AS 14.42.210,] and the payment of and security for bonds of the corporation. Proceeds from the sale or assignment of a note or other instrument shall be deposited in the appropriate memorial scholarship loan fund account.

* Sec. 27. AS 14.43.620 is amended to read:

Sec. 14.43.620. Teacher scholarship revolving loan fund. (a) There is created a teacher scholarship revolving loan fund. The fund shall be used to make scholarship loans to students selected under AS 14.43.600 - 14.43.700. Unless the instrument evidencing the teacher scholarship loan has been sold or assigned to the former Alaska Student Loan Corporation or the Alaska Housing Finance Corporation, repayments of principal and interest on a teacher scholarship loan shall be paid into the teacher scholarship revolving loan fund and shall be used to make new teacher scholarship loans. If estimated funds available are inadequate to fully fund estimated teacher scholarship loans for any fiscal year, additional funding from the general fund may be requested and appropriated for that year.

(b) The commission may sell or assign notes and other instruments evidencing teacher scholarship loans to the Alaska Housing Finance [STUDENT LOAN] Corporation and enter into agreements with the corporation relating to loans [, THE ADMINISTRATION OF THE STUDENT LOAN FUND CREATED UNDER AS 14.42.210] and the payment of and security for bonds of the corporation. Proceeds from the sale or assignment of the notes or other instruments shall be deposited in the teacher scholarship revolving loan fund.

* Sec. 28. AS 14.43.720 is amended to read:

Sec. 14.43.720. Family education loan account. (a) The family education loan account is created within the scholarship revolving loan fund (AS 14.43.090). The account shall be used to make family education loans to families selected under

AS 14.43.710 - 14.43.750, to pay the costs of collecting family education loans that are in default if those costs are not recovered from the family, and to pay the costs of administering the account. Unless the instrument evidencing the family education loan has been sold or assigned to the former Alaska Student Loan Corporation or the Alaska Housing Finance Corporation, repayments of principal and interest on family education loans shall be paid into the family education loan account. If estimated funds available from family education loan repayments are inadequate to fully fund estimated family education loans in a fiscal year, additional funding from the general fund may be requested and appropriated for that year.

(b) The commission may sell or assign notes and other instruments evidencing family education loans to the Alaska Housing Finance [STUDENT LOAN] Corporation and enter into agreements with the corporation relating to loans [, THE ADMINISTRATION OF THE STUDENT LOAN FUND CREATED UNDER AS 14.42.210,] and the payment of and security for bonds of the corporation. Proceeds from the sale or assignment of notes and other instruments shall be deposited in the family education loan account.

* Sec. 29. AS 21.76.080(b) is amended to read:

(b) An expenditure may be made from a joint insurance fund only to

(1) pay claims, losses, or benefits, including interest on them, and the administrative and adjustment expenses incurred in connection with them, involving the types of protection for which the fund provides coverage as specified in the joint insurance agreement;

(2) pay contractual obligations of a joint insurance fund established by a municipal joint insurance arrangement to the Alaska Housing Finance Corporation [MUNICIPAL BOND BANK AUTHORITY] or other lender; and

(3) purchase insurance coverage for members of a municipal joint insurance arrangement on a group basis.

* Sec. 30. AS 44.85.010 is amended to read:

Sec. 44.85.010. Legislative policy. (a) It is the policy of the state

(1) to foster and promote by all reasonable means the provision of adequate capital markets and facilities for borrowing money by municipalities in the

1 state to finance capital improvements or for other authorized purposes, to assist these
2 municipalities in fulfilling their capital needs and requirements by use of borrowed
3 money within statutory interest rate or cost of borrowing limitations, to the greatest
4 extent possible to reduce costs of borrowed money to taxpayers and residents of the
5 state, and equally to encourage continued investor interest in the purchase of bonds or
6 notes of municipalities as sound and preferred securities for investment;

7 (2) to encourage municipalities to continue their independent
8 undertakings and financing of capital improvements and other authorized purposes and
9 to assist them by making capital funds available at reduced interest costs for orderly
10 financing of capital improvements and other purposes especially during periods of
11 restricted credit or money supply, particularly for those municipalities not otherwise
12 able to borrow for capital needs;

13 (3) to assist municipalities to provide for adequate insurance coverage
14 by authorizing the Alaska Housing Finance Corporation [MUNICIPAL BOND
15 BANK AUTHORITY] to issue negotiable or nonnegotiable revenue bonds, notes, or
16 certificates of participation either directly or through an entity it may create for the
17 purpose of providing a self-insurance program for municipalities or municipal joint
18 insurance arrangements organized under AS 21.76.

19 (b) The legislature further declares that

20 (1) the exercise of the powers of the state in the interest of its
21 municipalities is required to further and implement the policies declared in (a) of this
22 section by authorizing the Alaska Housing Finance Corporation to exercise
23 [CREATION OF A STATE BOND BANK AUTHORITY AS A BODY CORPORATE
24 AND POLITIC THAT WILL HAVE] full powers to borrow money and to issue its
25 bonds and notes to make capital funds available for borrowing by municipalities and
26 by granting broad powers to the corporation to function as a bond bank authority to
27 carry out the declared policies, which are in the public interest of the state and its
28 taxpayers and residents;

29 (2) state funds should be applied or authorized to be paid to a state
30 corporation in its capacity as a bond bank authority only to provide adequate
31 assurance and security to the holders of the bonds or notes of the bond bank authority;

(3) the Alaska Housing Finance Corporation [BOND BANK AUTHORITY] should conduct its operations to provide the lowest rates in terms of borrowing to municipalities as is consistent with a self-supporting operation with no expectation of subsidization with state funds; the legislature does not intend that the bond bank authority be utilized as a means to finance municipalities beyond their capability to meet repayment schedules and debt service requirements of bonds or notes.

* Sec. 31. AS 44.85.070 is amended to read:

Sec. 44.85.070. Staff. [THE BOND BANK AUTHORITY SHALL EMPLOY AN EXECUTIVE SECRETARY WHO MAY WITH THE APPROVAL OF THE BOND BANK AUTHORITY SELECT AND EMPLOY ADDITIONAL STAFF AS NECESSARY. EMPLOYEES AND AGENTS OF THE BOND BANK AUTHORITY OTHER THAN LEGAL COUNSEL AND THE EXECUTIVE SECRETARY ARE IN THE CLASSIFIED SERVICE UNDER AS 39.25.] In addition to its staff of regular employees, the bond bank authority may contract for and engage the services of the bond counsel, consultants, experts, and financial advisors the bond bank authority considers necessary for the purpose of developing information, or conducting studies, investigations, hearings, or other proceedings.

* Sec. 32. AS 44.85.080 is amended to read:

Sec. 44.85.080. Powers of bond bank authority. The bond bank authority may

- (1) sue and be sued;
- (2) adopt and alter an official seal;
- (3) make and enforce bylaws and regulations for the conduct of its business and for the use of its services and facilities;
- (4) maintain an office at any place in the state;
- (5) acquire, hold, use, and dispose of its income, revenues, funds, and money to carry out the purposes of this chapter;
- (6) acquire, rent, lease, hold, use, and dispose of other personal property for its purposes under this chapter;
- (7) subject to AS 44.85.100(b), borrow money and issue its negotiable

1 bonds o. notes under this chapter and provide for and secure their payment, provide
2 for the rights of their holders and purchase, hold and dispose of any [OF ITS] bonds
3 or notes issued under this chapter;

4 (8) fix and revise from time to time and charge and collect fees and
5 charges for the use of its services or facilities;

6 (9) to carry out the purposes of this chapter, accept gifts or grants
7 from the United States, or from any governmental unit or person, firm, or corporation,
8 carry out the terms or provisions or make agreements with respect to the gifts or
9 grants, and do all things necessary, useful, desirable, or convenient in connection with
10 procuring, accepting, or disposing of the gifts or grants;

11 (10) do anything authorized by this chapter, through its officers, agents,
12 or employees or by contracts with a person;

13 (11) make, enter into, and enforce all contracts necessary, convenient,
14 or desirable for the purposes of the bond bank authority or pertaining to a loan to a
15 political subdivision, a purchase or sale of municipal bonds or other investments, or
16 the performance of its duties and execution of any of its powers under this chapter;

17 (12) purchase or hold municipal bonds at prices and in a manner the
18 bond bank authority considers advisable, and sell municipal bonds acquired or held by
19 it at prices without relation to cost and in a manner the bond bank authority considers
20 advisable;

21 (13) invest funds or money of the bond bank authority not required at
22 the time of investment for loan to political subdivisions for the purchase of municipal
23 bonds, in the same manner as permitted for investment of funds belonging to the state,
24 except as otherwise provided in this chapter;

25 (14) prescribe the form of application or procedure required of a
26 political subdivision for a loan or purchase of its municipal bonds, fix the terms and
27 conditions of the loan or purchase, and enter into agreements with political
28 subdivisions with respect to loans or purchases;

29 (15) render services to a political subdivision in connection with a
30 public or private sale of its municipal bonds, including advisory and other services, and
31 charge for services rendered;

(16) charge for its costs and services in review or consideration of a proposed loan to a political subdivision or purchase by the bond bank authority of municipal bonds of the political subdivision, whether or not the loan is made or the municipal bonds purchased;

(17) fix and establish terms and provisions with respect to a purchase of municipal bonds by the bond bank authority, including date and maturities of the bonds, provisions as to redemption or payment before maturity, and any other matters which in connection with the purchase are necessary, desirable, or advisable in the judgment of the bond bank authority;

(18) procure insurance against any losses in connection with its property, operations, or assets in amounts and from insurers as it considers desirable;

(19) to the extent permitted under [ITS] contracts with the holders of bonds or notes issued under this chapter [OF THE BOND BANK AUTHORITY], consent to modification of the rate of interest, time and payment of installment of principal or interest, security or any other term of a bond or note, contract or agreement of any kind to which the bond bank authority is a party;

(20) by regulation, create a new entity for the purpose of issuing negotiable or nonnegotiable revenue bonds, notes, or certificates of participation to finance a self-insurance program for municipalities or municipal joint insurance arrangements organized under AS 21.76; the powers, duties, and membership of the new entity shall be limited to the powers, duties, and membership of the authority and stated in the regulation; the new entity shall be a public corporation and an instrumentality of the state with the same legal existence and continuing succession as the bond bank authority; and

(21) do all acts and things necessary, convenient, or desirable to carry out the powers expressly granted or necessarily implied in this chapter.

* Sec. 33. AS 44.85.100 is amended to read:

Sec. 44.85.100. Annual report and audit. (a) Before October 1 of each year the bond bank authority shall make a report of its activities under this chapter for the preceding fiscal year to the governor and notify the legislature that the report is available. The report must [SHALL] set out a complete operating and financial

1 statement covering its operations under this chapter during the year. The bond bank
2 authority must have an audit of its books and accounts kept under this chapter made
3 at least once in each year by certified public accountants. The [AND THE] cost of
4 the audit shall be considered an expense of the bond bank authority, and a copy of the
5 audit shall be filed with the commissioner of revenue and the legislature.

6 (b) The bond bank authority shall include in the report required by (a) of this
7 section an estimate of the amount of revenue bonds of the bond bank authority to be
8 issued under this chapter during the fiscal year following the fiscal year in which the
9 report is submitted. Under this chapter, the [THE] bond bank authority may not
10 issue revenue bonds, other than refunding bonds, in excess of \$50,000,000 during any
11 fiscal year beginning after June 30, 1981, unless the legislature, by law, approves the
12 estimate required by this subsection for that fiscal year.

13 * Sec. 34. AS 44.85.110 is amended to read:

14 Sec. 44.85.110. Annual budget. The bond bank authority shall prepare and
15 submit [AN ANNUAL BUDGET] under AS 37.07 (Executive Budget Act) the portion
16 of the Alaska Housing Finance Corporation budget used in connection with the
17 exercise of its responsibilities under this chapter.

18 * Sec. 35. AS 44.85.120 is amended to read:

19 Sec. 44.85.120. Care and custody of bonds. The bond bank authority, in
20 accordance with AS 36.30 (State Procurement Code), may enter into agreements or
21 contracts with a bank, trust company, banking or financial institution inside or outside
22 the state as may be necessary, desirable, or convenient, in the opinion of the bond
23 bank authority, for rendering services in connection with the care, custody, or
24 safekeeping of municipal bonds or other investments held or owned by the bond bank
25 authority under this chapter, for rendering services in connection with the payment
26 or collection of amounts payable as to principal or interest, and for rendering services
27 in connection with the delivery to the bond bank authority of municipal bonds or other
28 investments purchased by it or sold by it under this chapter, and to pay the cost of
29 those services. The bond bank authority may also, in connection with any of the
30 services to be rendered by a bank, trust company, or banking or financial institution
31 as to the custody and safekeeping of its municipal bonds or investments under this

chapter, require security in the form of collateral bonds, surety agreements, or security agreements in such form and amount as, in the opinion of the bond bank authority, is necessary or desirable.

* Sec. 36. AS 44.85.180(a) is amended to read:

(a) Subject to AS 44.85.100(b), the bond bank authority may issue its bonds or notes in principal amounts that it considers necessary to provide funds for any purposes under this chapter, including

(1) the purchase of municipal bonds;

(2) the making of loans through the purchase of municipal bonds, notes, or certificates of participation secured by an agreement between the bond bank authority and a municipality or a municipal joint insurance arrangement organized under AS 21.76;

(3) the payment, funding, or refunding of the principal of, or interest or redemption premiums on, bonds or notes issued under this chapter [BY IT] whether the bonds or notes or interest to be funded or refunded have or have not become due;

(4) the establishment or increase of reserves to secure or to pay bonds or notes or interest on bonds or notes and all other costs or expenses of the bond bank authority incident to and necessary or convenient to carry out its corporate purposes and powers under this chapter.

* Sec. 37. AS 44.85.180(b) is amended to read:

(b) Except as otherwise provided in this chapter or by the bond bank authority, every issue of bonds or notes under this chapter shall be general obligations payable out of the revenues or funds of the bond bank authority, subject only to agreements with the holders of particular bonds or notes pledging a particular revenue or fund. Bonds or notes may be additionally secured by a pledge of a grant or contributions from the United States or the state or a political subdivision or a person, firm, or corporation, or a pledge of income or revenues, funds or money of the bond bank authority from any source whatsoever.

* Sec. 38. AS 44.85.180(c) is amended to read:

(c) Notwithstanding the provisions of (a) and (b) of this section, the total

1 amount of [BOND BANK AUTHORITY] bonds and notes issued under this chapter
2 outstanding at any one time, except bonds or notes issued to fund or refund bonds or
3 notes, may not exceed \$300,000,000.

4 * Sec. 39. AS 44.85.230 is amended to read:

5 Sec. 44.85.230. Purchase and disposition of own obligations. The bond
6 bank authority may purchase bonds or notes issued under this chapter [OF THE
7 BOND BANK AUTHORITY] out of its funds or money [AVAILABLE FOR THE
8 PURCHASE OF ITS OWN BONDS AND NOTES]. The bond bank authority may
9 hold, cancel, or resell the bonds or notes subject to and in accordance with agreements
10 with holders of its bonds or notes.

11 * Sec. 40. AS 44.85.260 is amended to read:

12 Sec. 44.85.260. Presumption of validity. After issuance under this chapter,
13 all bonds or notes [OF THE BOND BANK AUTHORITY] shall be conclusively
14 presumed to be fully authorized and issued under the laws of the state, and a person
15 or a municipality is estopped from questioning their authorization, sale, issuance,
16 execution, or delivery by the bond bank authority or the former Alaska Municipal
17 Bond Bank Authority.

18 * Sec. 41. AS 44.85.270(a) is amended to read:

19 (a) The bond bank authority shall establish and maintain a special fund called
20 the "Alaska municipal bond bank authority reserve fund" in which there shall be
21 deposited or transferred

22 (1) all money appropriated by the legislature for the purpose of the
23 fund in accordance with the provisions of (g) of this section;

24 (2) all proceeds of bonds required to be deposited in the fund by terms
25 of a contract between the bond bank authority or the former Alaska Municipal Bond
26 Bank Authority and [ITS] bondholders or a resolution of the bond bank authority or
27 the former Alaska Municipal Bond Bank Authority with respect to the proceeds of
28 bonds;

29 (3) all other money appropriated by the legislature to the reserve fund;
30 and

31 (4) any other money or funds of the bond bank authority that it decides

1 to deposit in the fund.

2 * Sec. 42. AS 44.85.270(b) is amended to read:

3 (b) Subject to the provisions of (h) of this section, money in the reserve fund
4 shall be held and applied solely to the payment of the interest on and principal of
5 bonds issued under this chapter [OF THE BOND BANK AUTHORITY] as the
6 interest and principal become due and payable and for the retirement of bonds; and the
7 money may not be withdrawn if a withdrawal would reduce the amount in the reserve
8 fund to an amount less than the required debt service reserve except for payment of
9 interest then due and payable on bonds and the principal of bonds then maturing and
10 payable and for the retirement of bonds in accordance with the terms of a contract
11 between the bond bank authority or the former Alaska Municipal Bond Bank
12 Authority and [ITS] bondholders and for which payments of other money of the bond
13 bank authority is not then available. In this subsection, "required debt service reserve"
14 means, as of the date of computation, the amount required to be on deposit in the
15 reserve fund as provided by resolution of the bond bank authority or the former
16 Alaska Municipal Bond Bank Authority.

17 * Sec. 43. AS 44.85.270(f) is amended to read:

18 (f) Notwithstanding any other provision of this chapter, bonds may not be
19 issued under this chapter [BY THE BOND BANK AUTHORITY] unless there is in
20 the reserve fund the required debt service reserve for all bonds then issued and
21 outstanding and for the bonds to be issued; however, the bond bank authority may
22 satisfy this requirement by depositing as much of the proceeds of the bonds to be
23 issued, upon their issuance, as is needed to meet the required debt service reserve.
24 The bond bank authority may at any time issue its bonds or notes for the purpose of
25 increasing the amount in the reserve fund to the required debt service reserve, or to
26 meet whatever higher or additional reserve that may be fixed by the bond bank
27 authority with respect to the fund.

28 * Sec. 44. AS 44.85.270(i) is amended to read:

29 (i) All references to the "reserve fund" in this section include special accounts
30 within the reserve fund which may be created [BY THE AUTHORITY] to secure the
31 payment of particular bonds. The commissioner of revenue may lend surplus money

1 in the general fund to the bond bank authority for deposit to any account in the
2 reserve fund in an amount equal to the required debt service reserve. The loans shall
3 be made on such terms and conditions as may be agreed upon by the commissioner
4 of revenue and the bond bank authority, including, without limitation, terms and
5 conditions providing that the loans need not be repaid until the obligations of the
6 corporation secured and to be secured by the account in the reserve fund are no longer
7 outstanding.

8 * Sec. 45. AS 44.85.290 is amended to read:

9 Sec. 44.85.290. Application of funds. Money or investments in a fund or
10 account of the bond bank authority established or held for bonds, notes, indebtedness,
11 or liability to be paid, funded, or refunded by issuance of bonds or notes issued under
12 this chapter, unless the resolution authorizing the bonds or notes provides otherwise,
13 shall be applied to the payment or retirement of the bonds, notes, indebtedness or
14 liability issued or incurred under this chapter, and to no other purpose.

15 * Sec. 46. AS 44.85.310 is amended to read:

16 Sec. 44.85.310. Default in payment. If the bond bank authority defaults in
17 the payment of principal of or interest on [AN ISSUE OF] notes or bonds issued
18 under this chapter [AFTER THEY BECOME DUE], whether at maturity or upon call
19 for redemption, and the default continues for 30 days, or if the bond bank authority
20 fails or refuses to comply with this chapter or defaults in an agreement made with the
21 holders of [AN ISSUE OF] notes or bonds issued under this chapter, the holders of
22 25 percent in the aggregate principal amount of the outstanding notes or bonds of that
23 issue, by instrument filed in the office of the clerk of the district court of the first
24 judicial district and executed in the same manner as a deed to be recorded, may
25 appoint a trustee to represent the holders of those notes or bonds for the purposes
26 provided in this chapter.

27 * Sec. 47. AS 44.85.320(a) is amended to read:

28 (a) A trustee appointed under AS 44.85.310 [THIS SECTION] may, and shall
29 in the trustee's name, upon written request of the holders of 25 percent in principal
30 amount of the outstanding notes or bonds,

31 (1) by civil action enforce all rights of the noteholders or bondholders,

1 including the right to require the bond bank authority to collect rates, charges, and
2 other fees and to collect interest and amortization payments on municipal bonds and
3 notes held by it adequate to carry out an agreement as to, or pledge of, the rates,
4 charges, and other fees and of the interest and amortization payments, and to require
5 the bond bank authority to carry out any other agreements with the holders of the notes
6 or bonds and to perform its duties under this chapter;

7 (2) bring a civil action upon the notes or bonds;

8 (3) by civil action require the bond bank authority to account as if it
9 were the trustee of an express trust for the holders of the notes or bonds;

10 (4) by civil action enjoin anything that may be unlawful or in violation
11 of the rights of the holders of the notes or bonds;

12 (5) declare all the notes or bonds due and payable, and if all defaults
13 are made good, then with the consent of the holders of 25 percent of the principal
14 amount of the outstanding notes or bonds, annul the declaration and its consequences;

15 (6) the trustee, in addition to the foregoing, has all the powers
16 necessary for the exercise of functions specifically set out or incident to the general
17 representation of bondholders or noteholders in the enforcement and protection of their
18 rights.

19 * Sec. 48. AS 44.85.410(1) is amended to read:

20 (1) "bond bank authority" means the Alaska Housing Finance
21 Corporation (AS 18.56.020) in its capacity as a bond bank authority while
22 carrying out its functions under this chapter [MUNICIPAL BOND BANK
23 AUTHORITY ESTABLISHED BY AS 44.85.020];

24 * Sec. 49. AS 44.85.420 is amended to read:

25 Sec. 44.85.420. Short title. This chapter may be cited as the Alaska
26 Municipal Bond Bank Authority Act or the Alaska Municipal Bond Bank Act. [IN
27 TRANSACTIONS INVOLVING GENERAL OBLIGATION BONDS OF
28 MUNICIPALITIES, THE ALASKA MUNICIPAL BOND BANK AUTHORITY
29 CREATED BY THIS CHAPTER MAY BE REFERRED TO AS THE ALASKA
30 MUNICIPAL BOND BANK WITH THE SAME LEGAL EFFECT AS IF THE
31 REFERENCE WERE TO ALASKA MUNICIPAL BOND BANK AUTHORITY.]

1 * Sec. 50. AS 14.42.100, 14.42.110, 14.42.120, 14.42.160, 14.42.210(c); AS 39.25.110(12);
2 AS 39.50.200(b)(33); AS 44.85.020, 44.85.030, 44.85.040, 44.85.060; 44.85.410(2);
3 AS 44.99.030(a)(8), and 44.99.030(a)(13) are repealed.

4 * Sec. 51. The uncoded law of the State of Alaska is amended by adding a new section
5 to read:

6 TRANSITION. (a) The assets and liabilities of the Alaska Student Loan Corporation
7 and the Alaska Municipal Bond Bank Authority are transferred to the Alaska Housing Finance
8 Corporation on the effective date of this Act.

9 (b) Regulations of the Alaska Student Loan Corporation or the Alaska Municipal Bond
10 Bank Authority in effect on the effective date of this Act remain in effect until repealed or
11 amended by the Alaska Housing Finance Corporation. The regulations may be amended by
12 the Alaska Housing Finance Corporation any time after this Act takes effect.

13 * Sec. 52. The uncoded law of the State of Alaska is amended by adding a new section
14 to read:

15 ALASKA HOUSING FINANCE CORPORATION MAY PURCHASE CERTAIN
16 LOANS. (a) Notwithstanding any other provision of law, the Alaska Housing Finance
17 Corporation may purchase, at an appropriate discount mutually satisfactory to the board of
18 directors of the Alaska Housing Finance Corporation and the board of directors of the Alaska
19 Student Loan Corporation, the student loans that are held on the day immediately before the
20 effective date of this Act by the Alaska Student Loan Corporation. The Alaska Student Loan
21 Corporation shall deposit the full amount received under this subsection in the general fund.

22 (b) Notwithstanding any other provision of law, the Alaska Housing Finance
23 Corporation may purchase, at an appropriate discount mutually satisfactory to the board of
24 directors of the Alaska Housing Finance Corporation and the board of directors of the Alaska
25 Municipal Bond Bank Authority, the loans that are held on the day immediately before the
26 effective date of this Act by the Alaska Municipal Bond Bank Authority. The Alaska
27 Municipal Bond Bank Authority shall deposit the full amount received under this subsection
28 in the general fund.

POWER COST EQUALIZATION PROGRAM

RESTRUCTURING

The proposal is to restructure PCE so that:

- ◆ PCE is funded without Railbelt consumer subsidies
- ◆ PCE is phased out over time
- ◆ Electric systems can be rebuilt as they age
- ◆ Economic development projects can be constructed as electric systems are rebuilt.

Alaska Energy Foundation

Under this plan, the Alaska Science & Technology Foundation will be reinvented as the Alaska Energy Foundation (AEF). AEF will continue many of the ASTF missions, such as research and education. Instead of the miscellaneous projects that ASTF has funded in the past, the new AEF will focus on economical energy development projects throughout the state.

Annual earnings from the current \$100 million ASTF endowment and the 4-Dam Pool will fund this new foundation. The AEF Board will determine how to distribute the funds. These funds can be used to pay for:

- ◆ Power Cost Equalization**
- ◆ 4-Dam Pool Reinvestment**
- ◆ Electrical System Upgrades**
- ◆ Statewide Energy Projects**
- ◆ Energy Research and Development**
- ◆ Aerospace Corporation Operations & Capital**
- ◆ Science Education**

ALASKA ENERGY FOUNDATION ANNUAL FUNDING

This foundation will be funded from two sources:

1. annual earnings from the \$100,000,000 endowment, approximately \$14.5 million, and
2. annual 4-Dam Pool proceeds, approximately \$9.5 million

Total Annual Funding equals \$24 million.

PCE Reduction and Capitalization Plan

A. Reduction Plan

1. PCE payments to be reduced by \$850,000 each year (5% of \$17M); PCE to be phased out by FY 2019.
2. Lump sum payments to be made to electric utilities on May 1 and September 1 each year. The annual amount will be determined by the prior year's kilowatt usage.

This allows the utility to plan ahead. For example, electric utilities:

- ◆ will be able to purchase bulk fuel (barge deliveries) for the winter, thereby reducing their operating costs
- ◆ will have funds to perform preventative maintenance prior to winter
- ◆ will be able to plan cash flow for years in advance
- ◆ will decrease utility management and administration costs preparing monthly PCE reports and requests to DCRA and APUC

B. Capitalization Plan

- ◆ Reductions to PCE will be placed into an Electric Utility Rebuilding fund.
- ◆ 20% of 4-Dam Pool will continue to fund statewide energy projects.
- ◆ The State will be able to provide increasing funds over time, to rebuild power systems as they age.
- ◆ Federal Funds (USDA) can be leveraged to rebuild plants.
- ◆ Rebuilt plants can meet increased power demands associated with economic development projects.

Power Cost Equalization Reduction and Capitalization Plan

Reduction Plan

The amount of the reduction equals 5% annually (\$850,000).

Capitalization Plan

The amount of the PCE capitalization grows 5% annually (\$850,000).

<u>State Funds</u>		<u>State Funds</u>		<u>Federal Match</u>	<u>TOTAL</u>
<u>PCE Funding</u>	<u>PCE Capitalization</u>	<u>4-Dam Pool</u>	<u>USDA Funds</u>	<u>Capitalization</u>	
FY 99	\$ 17,000,000				
00	16,150,000	\$ 850,000	\$ 1,900,000	\$ 2,750,000	\$ 5,500,000
01	15,300,000	1,700,000	1,900,000	3,600,000	7,200,000
02	14,450,000	2,550,000	1,900,000	4,450,000	8,900,000
03	13,600,000	3,400,000	1,900,000	5,300,000	10,600,000
04	12,750,000	4,250,000	1,900,000	6,150,000	12,300,000
05	11,900,000	5,100,000	1,900,000	7,000,000	14,000,000
06	11,050,000	5,950,000	1,900,000	7,850,000	15,700,000
07	10,200,000	6,800,000	1,900,000	8,700,000	17,400,000
08	9,350,000	7,650,000	1,900,000	9,550,000	19,100,000
09	8,500,000	8,500,000	1,900,000	10,400,000	20,800,000
10	7,650,000	9,350,000	1,900,000	11,250,000	22,500,000
11	6,800,000	10,200,000	1,900,000	12,100,000	24,200,000
12	5,950,000	11,050,000	1,900,000	12,950,000	25,900,000
13	5,100,000	11,900,000	1,900,000	13,800,000	27,600,000
14	4,250,000	12,750,000	1,900,000	14,650,000	29,300,000
15	3,400,000	13,600,000	1,900,000	15,500,000	31,000,000
16	2,550,000	14,450,000	1,900,000	16,350,000	32,700,000
17	1,700,000	15,300,000	1,900,000	17,200,000	34,400,000
18	850,000	16,150,000	1,900,000	18,050,000	36,100,000
19	-	17,000,000	1,900,000	18,900,000	37,800,000
TOTALS	\$ 178,500,000	\$ 178,500,000	\$ 38,000,000	\$ 216,500,000	<u>\$ 433,000,000</u>

PROPOSED PCE FUNDING

Amount Needed:		Funding Sources		
		<u>ASTF Foundation</u>	<u>4-Dam Pool</u>	<u>Total PCE Funds</u>
FY 00	\$ 16,150,000	\$ 12,250,000	\$ 3,900,000	\$ 16,150,000
01	15,300,000	11,400,000	3,900,000	15,300,000
02	14,450,000	10,550,000	3,900,000	14,450,000
03	13,600,000	9,700,000	3,900,000	13,600,000
04	12,750,000	8,850,000	3,900,000	12,750,000
05	11,900,000	8,000,000	3,900,000	11,900,000
06	11,050,000	7,150,000	3,900,000	11,050,000
07	10,200,000	6,300,000	3,900,000	10,200,000
08	9,350,000	5,450,000	3,900,000	9,350,000
09	8,500,000	4,600,000	3,900,000	8,500,000
10	7,650,000	3,750,000	3,900,000	7,650,000
11	6,800,000	2,900,000	3,900,000	6,800,000
12	5,950,000	2,050,000	3,900,000	5,950,000
13	5,100,000	1,200,000	3,900,000	5,100,000
14	4,250,000	350,000	3,900,000	4,250,000
15	3,400,000	-	3,400,000	3,400,000
16	2,550,000	-	2,550,000	2,550,000
17	1,700,000	-	1,700,000	1,700,000
18	850,000	-	850,000	850,000
	\$ 161,500,000	\$ 94,500,000	\$ 67,000,000	\$ 161,500,000

4-Dam Pool Funds

Fy '00 Budget includes \$9,493,720 from the 4-Dam Pool. This money is split three ways:

1. 40% (\$3.8M) is placed back into the 4-Dam Pool
2. 40% (\$3.8M) is placed into PCE
3. 20% (\$1.9M) is placed into power projects.

(NO CHANGES ARE PROPOSED)

REMAINING ALASKA ENERGY FOUNDATION FUNDS

After PCE and the 4-Dam Pool Reinvestment are paid, there are remaining funds. These funds are to be distributed as determined by the AEF Board.

These funds can be used in the following example categories:

- ◆ Aerospace Operations & Capital
- ◆ Science Education
- ◆ Energy Resource Science, Research, & Development
- ◆ Electrical Generation Research & Development
- ◆ Electrical System Upgrades

Alaska Energy Foundation - Expenditures and Reinvestments

	<u>Total Annual AEF Funds</u>	<u>PCE</u>	<u>4-Dam Pool Reinvestment</u>	<u>Annual AEF Science, Education & Project Funds</u>
FY 00	\$ 24,000,000	\$ 16,150,000	\$ 3,900,000	\$ 3,950,000
01	24,000,000	15,300,000	3,900,000	4,800,000
02	24,000,000	14,450,000	3,900,000	5,650,000
03	24,000,000	13,600,000	3,900,000	6,500,000
04	24,000,000	12,750,000	3,900,000	7,350,000
05	24,000,000	11,900,000	3,900,000	8,200,000
06	24,000,000	11,050,000	3,900,000	9,050,000
07	24,000,000	10,200,000	3,900,000	9,900,000
08	24,000,000	9,350,000	3,900,000	10,750,000
09	24,000,000	8,500,000	3,900,000	11,600,000
10	24,000,000	7,650,000	3,900,000	12,450,000
11	24,000,000	6,800,000	3,900,000	13,300,000
12	24,000,000	5,950,000	3,900,000	14,150,000
13	24,000,000	5,100,000	3,900,000	15,000,000
14	24,000,000	4,250,000	3,900,000	15,850,000
15	24,000,000	3,400,000	3,900,000	16,700,000
16	24,000,000	2,550,000	3,900,000	17,550,000
17	24,000,000	1,700,000	3,900,000	18,400,000
18	24,000,000	850,000	3,900,000	19,250,000
19	24,000,000	-	3,900,000	20,100,000
	\$ 480,000,000	\$ 161,500,000	\$ 78,000,000	\$240,500,000

**Annual Reinvestment Funds For Science, Education,
and Capital Energy Projects**

	<u>Annual AEF Science, Education & Project Funds</u>	<u>Energy Projects</u>	<u>Science & Research</u>	<u>Science Education</u>
FY 00	\$ 3,950,000	\$ 1,316,667	\$ 1,316,667	\$ 1,316,667
01	4,800,000	1,600,000	1,600,000	1,600,000
02	5,650,000	1,883,333	1,883,333	1,883,333
03	6,500,000	2,166,667	2,166,667	2,166,667
04	7,350,000	2,450,000	2,450,000	2,450,000
05	8,200,000	2,733,333	2,733,333	2,733,333
06	9,050,000	3,016,667	3,000,000	3,000,000
07	9,900,000	3,900,000	3,000,000	3,000,000
08	10,750,000	4,750,000	3,000,000	3,000,000
09	11,600,000	5,600,000	3,000,000	3,000,000
10	12,450,000	6,450,000	3,000,000	3,000,000
11	13,300,000	7,300,000	3,000,000	3,000,000
12	14,150,000	8,150,000	3,000,000	3,000,000
13	15,000,000	9,000,000	3,000,000	3,000,000
14	15,850,000	9,850,000	3,000,000	3,000,000
15	16,700,000	10,700,000	3,000,000	3,000,000
16	17,550,000	11,550,000	3,000,000	3,000,000
17	18,400,000	12,400,000	3,000,000	3,000,000
18	19,250,000	13,250,000	3,000,000	3,000,000
19	20,100,000	14,100,000	3,000,000	3,000,000
	\$ 240,500,000	\$ 132,166,667	\$ 54,150,000	\$ 54,150,000

***NOTES: 1. Annual Distributions to Each Category Dependent Upon
AEF Board Actions**

**2. Depending upon the type of Energy Projects, federal match funds
are available.**

PCE Plan Results:

PCE will be funded, but not by urban taxes

PCE will gradually fade away

Electric Systems will be upgraded, so Alaskans won't be faced with paying many millions to rebuild broken down systems in the future

Economic development can occur when power systems are capable of increased loads.

Costs to oversee the current PCE program will be reduced in DCRA and APUC.

SCOMM

120:12



Alaska State Legislature

UTILITIES RESTRUCTURING COMMITTEE

State Capitol
Juneau, Alaska
99801-1182
Phone: (907) 465-6820
Fax: (907) 465-2273
bill_hudson@legis.state.ak.us

Bill Hudson Chair
John Cowdery Vice Ch.
Brian Porter
Norman Rokeberg
Pete Kott
John Davies
Ethan Berkowitz
Joe Green Alt.

AGENDA

January 26, 2000

8:00 a.m.

House Judiciary Committee Room

1. **Regulatory Commission of Alaska**
Nanette Thompson, Chair
Activity Update, Concerns, Recommendations

2. **Future Business of Committee**
Identify Priorities; future agendas

REGULATORY COMMISSION OF ALASKA



About the RCA...

Utility rates and services affect every Alaskan. Utility customers deserve reasonable utility rates and reliable service. The Commission works to ensure just and reasonable rates and high quality, reliable service.

Reasonable rates and reliable service can enhance economic development and be determining factors in business decisions to start up operation in, or relocate to, Alaska.

Who is the RCA?

The RCA has five commissioners, each appointed by the Governor and confirmed by the Legislature for a six year term.

The current commissioners are:

G. Nanette Thompson, Chair

Bernie Smith

Patricia M. Demarco

Will Abbott

James S. Strandberg

The RCA has a staff of 46 who are responsible for providing professional staff support for Commission decisions and for carrying out the Commission's policies.

What does the RCA do?

The RCA (AS 42.04, 42.05, 42.06, and other statutes) regulates public utilities by certifying qualified providers of public utility and pipeline services; and ensuring that they provide safe and adequate services

and facilities at just and reasonable rates, terms, and conditions. This keeps rates as low as possible while allowing the utility to earn a fair return. The commission also determines the eligibility and the per kilowatt-hour support for electric utilities under the Power Cost Equalization program (AS 42.45).

When do we need the RCA?

In most cases, when utilities request changes in either their rates or types of services they provide, the RCA provides notice to the public and allows thirty days for comments. The Commission then acts to approve or disapprove the utility's proposal.

Public notice appears as an ad in the local newspaper or is posted in the local post office.

Who is Regulated by the RCA?

Most companies providing telephone, electric, gas, water, sewer, garbage, or steam services to ten or more customers are required to have a certificate to operate. A public utility or pipeline carrier must obtain a certificate of public convenience and necessity, which describes the authorized service area and scope of operations of the utility. A certificate may be issued only if the commission finds the applicant to be fit, willing, and able to provide the utility service requested.

The rates, services, and practices of many utilities are economically regulated by the Commission. Other utilities are not economically regulated. These include city-owned utilities, very small utilities, cable TV and cellular phone service, and cooperatives whose members have voted to de-regulate.

The Commission also regulates oil pipeline companies that operate within the State.

Where is the RCA?

The RCA is located at 1016 West Sixth Avenue, Suites 300 and 400, Anchorage, Alaska. (907) 276-6222, (907) 276-0160 Fax, (907) 276-4533 TTY, (800) 390-2782 (outside Anchorage)

The RCA holds most public meetings in Anchorage, although the Commission may hold hearings in affected communities throughout the state.

 [Back to RCA's Home Page](#)

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Last Update: August 3, 1999

Commissioners of the Regulatory Commission of Alaska



Commissioner Thompson began serving on the RCA on July 1, 1999. She was nominated by her colleagues and appointed by Governor Knowles as Chair. Her term expires June 30, 2004. Ms. Thompson served on the Alaska Public Utilities Commission from 1995 to 1996.

Ms. Thompson is admitted to the practice of law in Alaska (since 1983) and Washington (since 1982). She has seventeen years of experience as a lawyer in private practice representing business and individual clients and as an Assistant Attorney General for the state of Alaska. After graduating with honors in International Relations from Stanford in 1978, she earned her law degree from the University of Washington in 1982. Ms. Thompson is active in community activities. She served on the Salvation Army's Booth Home Advisory Board from 1989 to 1994, acting as President in 1994. She has served on the Campfire Boys and Girls Board from 1995 to the present. She enjoys being a soccer mom and Girl Scout leader. She and her husband, Bill Cooke, have five children ranging in ages from ten to twenty four.

On July 1, 1999, Gov. Tony Knowles, appointed Commissioner Bernie Smith to the new Regulatory Commission of Alaska, with a term expiring June 30, 2003.

Mr. Smith came to the RCA after serving 16 years with Tesoro Alaska Petroleum Company. While employed with Tesoro he held positions as Manager of Alaska Government Affairs & Special Projects, Senior Engineer, and Project Engineer. In 1973, Mr. Smith graduated from Texas A&M University, with a Bachelor of Science Degree in Engineering Technology. He has been active in several community organizations, currently serving as President Elect of Chugiak-Eagle River Chamber of Commerce. At the time of his appointment he was a member of the Alaska Board of Marine Pilots. He served as President and board member of the Boys and Girls Club of the Kenai Peninsula, and was a board member of Nikiski Fire Service Board.



Mr. Smith and his wife, Jeanne Mercurio, first came to Alaska for a nine month job in 1980. They returned to Alaska in 1983 to raise their family. The Smith's resided in Kenai until 1996 at which time they moved to Eagle River, where they currently reside with their two sons, Dylan (17) and Cory (15).



Patricia DeMarco, Ph.D. was appointed by Governor Tony Knowles to a three-year term on the Regulatory Commission of Alaska beginning on July 1, 1999. Commissioner DeMarco previously occupied the position of President of the Anchorage Economic Development Corporation for four years. She brings to the Commission a strong interest in utility infrastructure as a mechanism to expand the economic potential of Alaska. She has a multi-disciplined approach to solving problems and views the role of regulation as a catalyst

for change.

Dr. DeMarco came to Alaska in 1995 from Connecticut where she had a twenty-year career in various aspects of electric utility regulation, planning and operation. She also started a non-profit corporation to diversify the defense dependent economy, especially the area served by the five utilities in the Connecticut Municipal Electric Energy Cooperative.

Dr. DeMarco received her formal education in her hometown at the University of Pittsburgh. She holds a Bachelor of Science and a Doctorate degree in biology and spent seven years in biochemical genetics research.

In private life, she is the wife of Joseph Barkowski, owner of Alaska Joe Fishing Charters. They live in Anchorage with their two dogs. Dr. DeMarco serves on the Board of Directors of the Anchorage Symphony Orchestra and is a member of the Anchorage Log Cabin Quilters and Downtown Rotary.

Will Abbott was appointed to the Regulatory Commission of Alaska on July 1, 1999 and his term ends June 30, 2001.

Mr. Abbott previously worked at the Alaska Housing Finance Corporation, the Municipality of Anchorage, a local environmental firm and the U. S. Air Force.

Mr. Abbot is married and has two sons.





Appointed in 1999, Jim Strandberg is an engineer with 29 years experience as a professional engineer in Alaska. Born in Anchorage and a life long Alaskan, he attended the University of Alaska Fairbanks and received a Bachelor of Science in Mechanical Engineering in 1970, and a Masters of Science in Arctic Engineering in 1983. Strandberg is a registered mechanical and civil engineer in the State of Alaska, and has worked extensively in rural and urban areas of the state in his professional practice, 15 years of which were in Fairbanks.

Early in his career, Strandberg worked on the design team for the Trans-Alaska Pipeline, and was stationed in Anchorage, Fairbanks and Houston, Texas. His work centered on field testing and the production of design criteria documents for construction work pads and re-vegetation.

As a Mechanical and Utilities designer, he worked in private practice to design buried steam and hot water district heating systems at a number of locations in Alaska. He has also done systems upgrade design for thermal coal-fired power stations, as well as feasibility and cost of service analyses for co-generation power systems.

Strandberg was program manager for the \$15 million federally funded upgrade of the Poker Flat Research Range, which is owned by the Geophysical Institute, University of Alaska Fairbanks.

Married for 28 years, Jim and his wife Emiko have two grown children, Roy and Erica, each of who are pursuing an Engineering Career.

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Regulatory Commission of Alaska

What if I have a complaint or question about a utility?

First, the Commission recommends that you try to resolve the problem directly with the utility.

If it is unresolved, you may file an informal complaint with the RCA either by letter, phone, or in person. Your complaint should describe the problem you experienced and how the utility has responded.

What will the staff do?

Staff will contact the utility to determine its position. Then Staff will review the complaint, governing statutes, the utility's tariff, and RCA orders, to decide whether the complaint is valid.

If you are not satisfied with Staff's decision, you may file a formal complaint directly with the Commission.

For more information contact

Agnes Pitts

Consumer Protection

(907) 276-6222

(907) 276-0160 Fax

(907) 276-4533 TTY

1-800-390-2782

(within the State)

send E-mail to Consumer Protection

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Last Update: August 18, 1999

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Alaska State Legislature

UTILITIES RESTRUCTURING COMMITTEE

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John Cowdery Vice Ch.
Brian Porter
Norman Rokeberg
Pete Kott
John Davies
Ethan Berkowitz
Joe Green Alt.

AGENDA

April 5, 2000
8 a.m. Capitol 120
The Status of Telecommunications in Alaska

Invited Speakers:

✓ Lt. Governor Fran Ulmer
Telecommunications Information Council

✓ Greg Berberich, Vice President
Matanuska Telephone Association

✓ Mark Vasconi - Director, Regulatory Affairs
AT&T Alascom

✓ Bill Behnke - Senior Vice President, Marketing
General Communications Inc. (GCI)

✓ Mary Ann Pease, V.P. External Relations,
Alaska Communications Systems

✓ Marc Farmer, Regional Business Manager
National Rural Telecommunications Cooperative

✓ Dave Lewis, Operations & Maintenance Manager
Alaska Fiber Star

✓ Jack Rhyner, President & General Manager
TelAlaska, Inc.

Karen Morgan, Acting Director,
Information Technology Group, Dept. of Administration

— Did not testify
ran out of time

AT&T Alascom Testimony Before The Utility Restructuring Committee

Mark Vasconi

AT&T Alascom Regulatory Affairs Director

April 5, 2000

Thank you Mr. Chairman and members of the committee. Good morning. My name is Mark Vasconi and I am AT&T Alascom's Director of Regulatory Affairs. First, I'd like to take the opportunity to thank the committee for holding this hearing on the status of Telecommunications in Alaska. Telecommunications is a vitally important piece of the State's infrastructure and AT&T Alascom is glad to participate in this forum.

I'd like to focus my brief comments this morning on a couple of main points. First, I'd like to share with you a brief overview of AT&T Alascom's operations in Alaska; Second, I'd like to inform you of the investments we are making in telecommunications infrastructure and third I'd like to discuss what I consider a major challenge shared by Long Distance carriers in providing service in Alaska.

As you probably know, AT&T Alascom is the largest long distance carrier operating in Alaska. Not only do we provide Long Distance service we also provide local service in Anchorage as well as internet service in many communities in the state. Revenues from our long distance operations were approximately \$278M in 1999 and we employ about 440 people in Alaska. Additionally, as Carrier of Last Resort, we are the only ubiquitous telecom provider in Alaska as our facilities provide long distance service to every community in Alaska with more than 25 full time inhabitants. Even though many of the locations are extremely remote we take the obligation of Carrier of Last

resort very seriously and have worked in the past years to continue to upgrade service to the bush as well as to Alaska communities located on the road system.

In order to provide long distance service to the State's communities AT&T Alascom owns, operates and maintains over 200 earth stations and related facilities as well as an extensive microwave network along Alaska's road system. The microwave network also provides service throughout SE Alaska along a route that roughly follows the Alaska Marine Highway. We also operate Aurora II, a satellite that provides service primarily to the Bush.

Turning now to investments that AT&T Alascom has made in the network. Since AT&T purchased Alascom in 1995, we have made investments in a new switch in Anchorage which "ties" our Alaska network to AT&T's global network and upgraded our microwave system to digital capabilities. To date, AT&T Alascom has invested roughly \$45M in replacing the Aurora II satellite which scheduled to "go dark" during the third quarter of 2001. Aurora III is scheduled to be launched during the first quarter of 2001, in advance of Aurora II's end of life. In 2000, we will spend another \$65 Million in preparing Aurora III for launch. Once the satellite is launched and in place, maintenance and operating costs for Aurora III will be roughly \$8 Million per year.

In addition to replacing Aurora II, AT&T Alascom has been upgrading its earth station facilities around the state. When AT&T purchased Alascom in 1995, earth station equipment and technology was nearly 20 years old. Replacement parts were hard to find, a call between satellite-served Bush communities involved a double-hop, which degraded FAX transmissions, and naturally, consumers wanted better service. Given the

shortcomings of analog satellite service, as well as GCI's impending entry into the Bush, in 1996 AT&T Alascom embarked on an upgrade of bush earth stations which is bringing digital service to communities served by satellite. By January 2001, AT&T Alascom will have completed a program to upgrade 105 Earth Stations with a relatively new technology called Demand Assigned Multiple Access, or DAMA. These upgrades will cost about \$31 million and will bring improved service to consumers in the Bush. Under the old technology, a call between two satellite- served villages had to go up to the satellite twice. Under DAMA Technology, the call has to "hit" the satellite only once. The elimination of this "double hop" reduces the delay and provides more reliable voice and FAX communications. Additionally, by January 2001, AT&T Alascom will spend another \$4M in upgrading the remaining earth stations to digital capability. In all, by January 2001, the earth station upgrades costing about \$35 million and the replacement of Aurora II at about \$108M will insure continued long distance service to rural Alaska at substantially improved levels.

As one can see, these projects take time and are very expensive. These investments also demonstrate that AT&T Alascom continues to honor its obligation as Carrier of Last Resort and is extending its commitment to provide service to all customers in Alaska at a competitive price.

In providing long distance to Alaska customers one of the greatest challenges we face is providing service at competitive rates while earning a positive return on our costs. When one examines the costs we incur in providing long distance service, the single

largest cost is in the payment AT&T Alascom makes to local exchange carriers to access their networks to originate and terminate long distance calls. In 1999, the cost to AT&T Alascom for these so-called access charges accounted for approximately \$26M. To put this cost in perspective, in-state access charges equate to about \$.133 per minute while our average revenue per minute is approximately \$.22 per minute. In other words, for every dollar of toll revenue AT&T Alascom receives for an in-state toll call, approximately 60% goes to the Local Exchange carriers in Alaska. At access charges of about \$.133 Alaska has some of the highest access costs in the nation.

While access charges have remained high in Alaska over the years, toll rates, driven by competition have steadily declined. In 1991 at the inception of in-state competition, the average revenue per minute for toll service was about \$.32 per minute. Today it is at about \$.22 per minute. That is a drop of about 32% and that is exactly what you would expect from the workings of competition. Access charges on the other hand have budged only slightly over that same time period. Aside from the conclusions that one can draw on the effectiveness of competition versus monopoly service in bringing prices down, access charges at existing levels have effectively created a floor on how low LD rates can go. Presently AT&T Alascom and its IXC competitors are offering service for as low as \$.15 per minute with no associated monthly recurring charge – at access rates of \$.133, it is difficult to offer rates much lower than present levels.

As we see it, there are two mechanisms that can bring access charges in line with the realities of today's telecom markets. First is regulatory review of how access charges

are determined and second, is the development of competitive facilities that provide carriers such as AT&T Alascom an alternative means by which to access customers. AT&T Alascom supports the RCA's continuing efforts to examine access charge development and also hopes the commission will continue to create an environment which fosters competition in local markets. These two efforts will ultimately drive prices to costs and provide customers with more competitive alternatives.

With that I conclude my presentation and am glad to entertain your questions.

Telecommunications Information Council

Activities Update

Office of the Lt. Governor/Feb. 23, 2000

The Telecommunications Information Council (TIC), created by statute in 1988, is charged with developing policies related to telecommunications and information technology. Membership includes the Governor, commissioners of all departments, representatives of the Alaska Court System and the Legislative Affairs Agency, and one member of the public. Two legislators, one from the House and one from the Senate, serve as non-voting members. In 1995 Governor Knowles designated Lt. Governor Ulmer to chair the TIC, which meets quarterly.

TIC Committees

TIC Policy Committee: This is an executive committee of the TIC that sets the agendas for the TIC and its advisory committees and serves as a driving force behind major policy initiatives. Members are Lt. Governor Ulmer, Annalee McConnell of OMB, Commissioner Shively, Commissioner Poe, Commissioner Cross, Deputy Commissioner Smith of DPS, Deputy Commissioner Chase of DMVA and Chancellor John Pugh of the University of Alaska Southeast. Staff advisers include the director of the Department of Administration's Information Technology Group and the Lt. Governor's chief of staff and special assistant for telecommunications. The Policy Committee meets approximately twice a month.

TIC Technical Advisory Committee: Each department has designed one of their top information technology specialists to serve on the TAC. The committee is asked to advise the TIC on a variety of technical issues, such as standards, security and evaluations of capital projects proposed by state agencies. The TAC, chaired by John Lindback, chief of staff to the Lt. Governor, meets monthly.

TIC Advisory Committee on Emergency Communications: This group, chaired by Deputy Commissioner Del Smith of Public Safety, meets as needed for departments with an interest in emergency communications (DPS, DMVA, DH&SS, DOA) to make recommendations on issues that cross department lines. The current focus of this group is the migration of land mobile radios to a new federally mandated standard.

TIC Advisory Committee on Geographic Information: This recently appointed group will concentrate on geographic information systems and how the state can work in partnership with federal agencies and the private sector. The full range of geographic information issues will be discussed, including the emergence of high-resolution satellite imagery and its potential uses by state agencies and the University of Alaska.

TIC Initiatives

Creation of a State Telecommunications and Information Technology Plan: In 1996 the TIC developed and adopted a state plan that provided a blueprint for agencies, the public and telecommunications providers. An update of that plan is scheduled for early 2001.

Boosting the State of Alaska's presence on the Internet: At the direction of TIC, the State of Alaska's offerings of information, services and transactions on the internet has dramatically increased. Alaskans can now go to the web to read public notices of all kinds, check the ferry and railroad schedules, view the latest election results, check on the status of their Permanent Fund dividend application, apply for state job, purchase a fishing license, renew a car registration, purchase a special license plate, review campaign contribution information, download an application for a business license, and much, much more.

Setting standards for state government: The TIC promotes efficiencies within state government by setting technology standards for state agencies. As a result of TIC actions, all state agencies are now using the same suite of desktop software products, which makes it easier for state employees to communicate with each other. State government now has a statewide email system, allowing technicians in most agencies to spend time on other priorities.

Online training of state employees: A partnership between the Gartner Group, a leading technology consulting firm, the state of Alaska and the University of Alaska, led to creation of a unique online technology training program for state employees and University of Alaska students. State employees can now access hundreds of online training courses from home or work, provides obvious benefits to the state and improves the long-term "employability" of workers.

Special projects and initiatives:

- The potential uses of satellite imagery by state agencies was the focus of a TIC-sponsored conference last December.
- A telecommunications partnership project that involves seeking proposals from telecommunications providers to take over portions of the state-owned telecommunications network is now underway.
- The TIC, in partnership with the University of Alaska, created a videoconferencing system to service state agencies.
- Cost efficiencies for public television and rural television (ARCS) were achieved when the TIC directed implementation of a digital system.

Other Telecommunications/IT Related Projects and Initiatives

FCC State and Local Advisory Committee on Universal Service: Lt. Governor Ulmer was appointed to serve on this committee, which provides advice to the Federal Communications Commission on state and local communications issues, such as continuation of the education rate for educational institutions, state and local authority over location of transmission towers, etc.

Denali Commission survey on rural telecommunications services: The Denali Commission, co-chaired by Lt. Governor Ulmer, recently approved up to \$50,000 for a survey of the telecommunications services available in rural Alaska communities and what residents they pay for them. When the survey is completed, policy makers will be able to determine the price and availability of services such as telephones, cable television, internet for each village in rural Alaska.

Digital signatures: Regulations to implement Alaska's new digital signature will take effect shortly. Certification authorities, the businesses that sell digital signature certificates to the public, will soon be able to register with the state of Alaska.

Jobs for Alaskans in the technology industry: The Alaska Science and Technology Foundation last week approved a pilot project to identify, recruit, and place 50 new information technology apprentices into a minimum of 20 Alaska companies. This will be done through formation of a consortium composed of businesses, educational institutions and other organizations with an interest in economic development and training.

Telemedicine: The State of Alaska is participating in partnership with federal agencies, telecommunications providers and health care providers to assess the best uses of telemedicine applications in Alaska, how to break the barriers to effective use of telemedicine in our state, and strategies to finance development costs.

National Recognition for Alaska

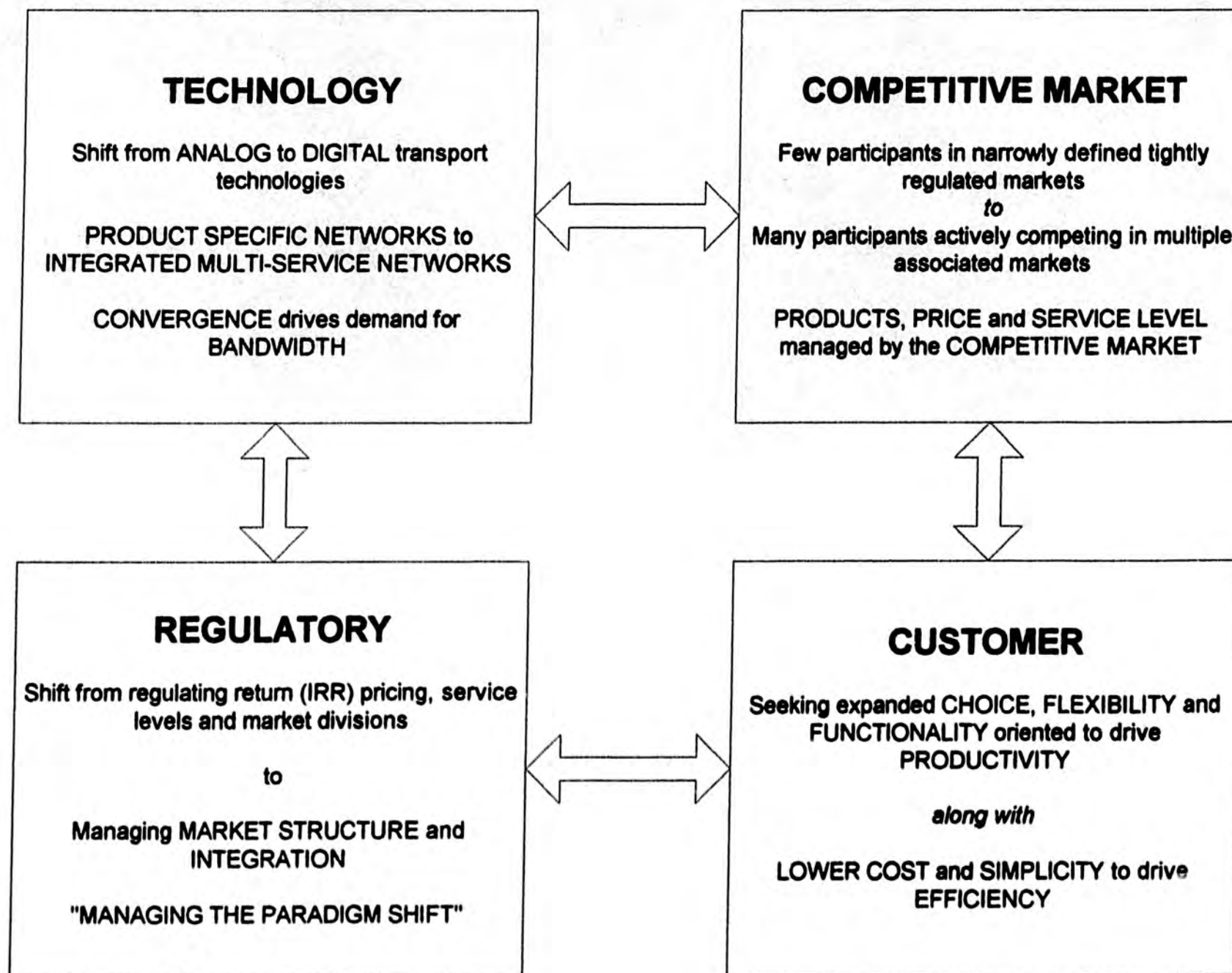
The State of Alaska has just been ranked second in the nation among all 50 states for facilitating electronic commerce. The Digital State Award is granted by the Center for Digital Government. Last year, the state placed 9th overall. The State also won a coveted "Best of the Web" award from Government Technology Magazine. The National Association of State Chief Administrators selected Workplace Alaska and the Alaska Division of Motor Vehicles Partnership Program for its 1999 Overall Award for Innovation. In addition, the DMV program earned an innovator in technology award from the Smithsonian and *Computerworld* Magazine.

GENERAL COMMUNICATION, INC.
LEGISLATIVE BRIEFING
APRIL 5, 2000

- Industry Forces and Future Trends
- Alaska, Leading and Lagging the Industry
- GCI Technology Initiatives, Current and Future
- The Internet in both Urban and Rural Alaska
- Internet Economics
- Subsidies and Incentives

BILL BEHNKE
SENIOR VICE PRESIDENT
907-265-5579
bbehnke@gci.com

FORCES WITHIN THE TELECOMMUNICATIONS INDUSTRY



GCI Technology Initiatives

BACKBONE TRANSPORT RELATED

- **DAMA Bush Earth Station Network**
 - Improved quality (single hop calling between stations)
 - Improved data capability (high speed dial-up data)
 - Reduced capital and operating cost (sites manufactured vs individually constructed, more efficient use of transponder resources)
 - Investment: \$25M+
- **Alaska United – OC192 Fiber Optic System with point of presence in Fairbanks, Valdez, Anchorage, Juneau and Seattle, Washington**
 - System initially equipped for OC-48 (25% of design capacity), GCI will begin upgrading the system this summer to its full OC-192 capacity
 - Upgrade required 18 months following “ready for commercial service” date, roughly 18 months ahead of forecasted schedule.
 - Investment: \$125M+
- **Galaxy XR – Launched on 1/24/00, GCI accepted as “ready for commercial service”, March 2000**
 - Satellite located at 123 degrees west longitude,
 - Custom designed spot beam provides exceptionally strong coverage throughout Alaska
 - Investment: \$50M

LOCAL NETWORK RELATED

- **Hybrid Fiber/Coax Networks – Fairbanks, Juneau, Anchorage**
 - Used for voice, data and cable entertainment
 - Allows expanded cable programming services (more channels)
 - Reverse amplified for cable modem applications
 - Used to provide fiber directly to large businesses and multi-tenant complexes.
- **Digital Cable Services**
 - Expanded cable programming and Home Move Theater (pay-per-view) options
 - 7,500+ subscribers

- **Cable Modems**

- "Hypernet" Cable Modem (high speed cable modem) service available in Anchorage, Fairbanks and Juneau
- Internet Access and LAN Extension (Work at Home)

- **Local Services**

- GCI is currently providing commercial and residential local service in Anchorage, serving approximately 28% of the Anchorage market.
 - 45,000+ residential and commercial in Anchorage market
- Involved in negotiation process (as defined by the 1996 Telecom Act) to provide local service in Fairbanks and Juneau. *GCI anticipates offering local service in Fairbanks and Juneau sometime during the next 12 to 18 months.*

- **Wireless Services**

- PCS license acquired
-

Total Local Network Investment: \$70M+

OTHER SIGNIFICANT INVESTMENTS

- **Convergent Billing Systems**

- Driving towards single bill for local, long distance, Internet, Cable and wireless
- Investment: \$15M

FUTURE GCI TECHNOLOGY INITIATIVES

- **Urban Markets:**

- Fully protected fiber service through mutual restoration agreements or construction of additional facilities (6 months -2 years)
- Lower cost building penetrations resulting in expanded availability of cable modem service in commercial facilities not traditionally served by cable. (6 months – 1 year)
- Wireless data (current orientation to low speed, some beta high speed wireless products) – (6 months –2 years)
- Reduced cable modem installation cost through the deployment of DOCSIS and MCNS technology (cable modems likely to be integrated into “off the shelf” PC systems) allowing users “plug and play” installation (1-3 years)
- Cable telephony – allows for the delivery of local telephone service over the cable plant (requires resolution of certain network power issues)

- **Rural/Satellite Serviced Markets:**

- Switched data over DAMA earth stations (1-2 years)
- Asymmetric delivery of satellite IP data (2-3 years)
- Refinement of shared “outroute” technology (2-3 years)
- Wireless data for high speed Internet access (3-4 years)
- Deployment of DOCSIS or MCNS technology in cable service areas (1-3 years)

URBAN MARKETS TYPICALLY FIBER OR MICROWAVE SERVED	RURAL MARKETS SATELLITE SERVED
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Dial-up Access	Providers Pricing Service Levels Issues Future Opportunities	Several Providers, Local and National Pricing FREE to \$25.00/account Service levels comparable to the national standards Expanded availability of 56kbs dial-up service	Typically 1-2 providers in regional centers, Few communities outside of the regional centers have local dial-up Internet access Pricing \$19.99 to \$50.00/account Where available, the service is typically lower than the national average due to the high underlying cost of providing service (transport and bandwidth) and the relatively small population base Local dialtone and transport cost/subscriber Reduced transport cost as a result of asymmetric delivery, shared outroute
High Speed Access, Consumer	Providers Technology Pricing Service Levels Issues Future Opportunities	Several Local Providers (typically telcos and cable companies) 1st generation cable modem, xDSL, limited wireless Pricing FREE to \$25.00/account Service levels equal or better than the national average Complex installation, proprietary technology for cable modem subscribers, limited xDSL service area, limited wireless service area 2nd generation cable modems (DOCSIS, MCNS), integrated cable modems, wireless access, expanded xDSL coverage, increased competition	None available today
High Speed Access, Commercial	Providers Technology Pricing Service Levels Issues Future Opportunities	Several Local Providers Direct Access, xDSL and cable modem Varies widely depending on service and capacity Service levels vary	Several providers, typically carriers (delivery over public and private network facilities) Varies widely depending on service and capacity Rural customers typically subsidized schools, libraries and health corporations Reduced costs associated with lower cost transport, potential use of wireless technology for local distribution

GENERAL ECONOMICS OF INTERNET ACCESS IN SATELLITE SERVED MARKETS

Regional Center

Dialtone

Cost of Business Dialtone	\$	35.00	
Subscribers/Line		4.5	
Cost/Subscriber	\$		7.78
Satellite Access (\$4 to \$6/subscriber)	\$		4.00
Technical Support	\$		2.75
Invoice, Billing and Collections	\$		1.00
Bad Debt	\$		1.00
Customer Service and Account Administration	\$		1.50
Total Cost/Subscriber	\$		18.03

Capital Investment Required	\$	100,000.00
Available Subscribers		200

Payback	<u>Payback in Months</u>
At \$25.00/Subscriber	72
At \$30.00/Subscriber	42
At \$35.00/Subscriber	29
At \$40.00/Subscriber	23

Bush Village

Dialtone

Cost of Business Dialtone	\$	35.00	
Subscribers/Line		2	
Cost/Subscriber	\$		17.50
Satellite Access (\$4 to \$6/subscriber)	\$		9.00
Technical Support	\$		2.75
Invoice, Billing and Collections	\$		1.00
Bad Debt	\$		1.00
Customer Service and Account Administration	\$		1.50
Total Cost/Subscriber	\$		32.75

Capital Investment Required	\$	50,000.00
Available Subscribers		30

Payback	<u>Payback in Months</u>
At \$25.00/Subscriber	(215)
At \$30.00/Subscriber	(606)
At \$35.00/Subscriber	741
At \$40.00/Subscriber	230
At \$50.00/Subscriber	97

SUBSIDIES AND INCENTIVES

- **SUBSIDIES OF ONE FORM OR ANOTHER MAY BE NEEDED TO INITIATE THE DEPLOYMENT OF CERTAIN ADVANCED SERVICES IN RURAL ALASKA.**
- **INCENTIVES NEED TO BE CAREFULLY STRUCTURED TO ENCOURAGE:**
 - **RETAIL COMPETITION**
 - **REDUCES UNIT COST**
 - **PROVIDES INCENTIVE FOR INNOVATION**
 - **PROVIDES INCENTIVE TO FOCUS ON SERVING THE CUSTOMER**
 - **TECHNOLOGY DEVELOPMENT**
 - **REDUCES COST**
 - **INCREASES FUNCTIONALITY**
 - **PROMOTES PRODUCTS THAT BETTER MEET CUSTOMER NEEDS**

Alaska State Legislature

Utilities Restructuring Committee

April 5, 2000

My name is Marc Farmer and I am the Northwest Regional Business Manager for NRTC, National Rural Telecommunications Cooperative Association. I am responsible for the Northwest Territory including Alaska, Washington, Oregon, Idaho, Utah, and Nevada and have worked in the utility industry for 14 years.

NRTC has a membership of over 1,000 rural electric and telephone utilities throughout the United States, including 15 in Alaska. We have been actively involved in bringing telecommunications products and services to rural America since 1986 through its member utilities. We started by delivering programming for C-Band satellite owners and provided \$125 million to partner with GM Hughes to launch DirecTV. We now have 1.5 million subscribers to satellite programming in rural areas that we serve. We have also added 10 additional programs and services including Internet, Computer Solutions, and wireless communications such as 220 MHz. The Alaska Rural Electric Cooperative Association is heavily involved in bringing 220 MHz wireless communications through NRTC to Alaska. They purchased the license in 1998 and are in the process of building out the infrastructure to deliver voice, data, and GPS capabilities this year.

The future lies in the digital arena, which NRTC is uniquely positioned to deliver to rural America. With over 1.5 million subscribers in the satellite world, we have the knowledge, experience, and the proven ability to bring products and services to the rural marketplace. This kind of success has not gone unnoticed as many of the emerging technologies are approaching us to deliver their products and services. Some of these include cellular radio, cellular phone, and we are currently in negotiations to deliver two way interactive broadband via satellite, which will bring internet, voice, audio, and data services at speeds 10 times faster than land lines.

Bringing bandwidth to villages and rural areas has two issues. How to get the bandwidth there, and how to distribute it once it is brought in. Satellite will be able to deliver the bandwidth regardless of terrain or distance. While DSL (Digital Subscriber Line) is a very good solution for urban and some suburban areas, it is very costly for rural areas. In an effort to make sure rural area receive the same level of services at competitively priced rates, we will be involved in the delivery of digital bandwidth via satellite.

We are intimately involved in the Federal Legislative efforts to provide a loan guarantee of \$1.25 billion to deliver local television programming to the rural areas of America. We have the financial backing already in place to put NRTC in the drivers seat to be the ones selected to build, launch, and operate the satellites to deliver local in to local programming. We are working now to include in the final consolidated bill the two pieces missing to make it work, the additional spectrum and orbital slots.

NRTC will need to know, that if we are successful in our efforts, what if any financial assistance would the states of Hawaii and Alaska be willing to contribute to launch these services to cover their prospective constituencies? NRTC contributed \$125 million of the \$600 million it took to launch DirecTV, and it will take another sizable contribution to acquire and back the loan guarantees to successfully launch local programming and additional programming and services. We stand ready to move forward. It is our intention to have Alaska and Hawaii included in all of our efforts. NRTC is ready, willing, and able to participate in your efforts as well. Together we can make sure that ALL of rural America receives the best the digital world has to offer.

For your information, I wanted to let you know we have two additional projects that are in the beta-testing mode. We are in the process of testing the ability to read gas, water, and electricity meters simultaneously, and to monitor home security systems all in wireless mode.

NRTC is bringing the future of telecommunications to both the electric and telephone worlds in rural America at competitive rates by aggregating the abilities, buying power, marketing power, and experience of its 1,000 members.

Telecommunications Partnering Project

The State currently spends over \$26 million annually to provide communication services for state agencies. Over \$20.5 million of that is spent in direct payments to vendors for contractual services and equipment. This includes everything from phones and local dial tone connectivity to data and radio services. State government has seen an explosion of demand for internet, intranet, video, LAN/WAN, and other enhanced telecommunications services and expects the demand to grow as the state continues to deploy automated systems that improve services to state residents. In the past, due largely to state and federal telecommunications regulations, the state has acquired telecom systems piecemeal, awarding individual contracts for frame relay, long distance and other services. At least six large multi-year contracts have recently expired or will expire within the next year. Through a new initiative called the Telecommunications Partnering project, the state plans to tap one contractor to take responsibility for end-to-end connectivity and take advantage of the emerging competitive environment in Alaska.

In developing its Telecommunications Partnering project, the Department of Administration aims to provide state agencies with access to advanced communications technology and at costs equal to or less than those being charged now. That includes emerging "convergence" technology, for sending voice communications over Internet Protocol-based networks and for merging voice and data on high-speed Asynchronous Transfer Mode networks.

A secondary goal is to encourage the availability of high-speed, advanced communications services to non-state entities and residents, particularly in rural areas where service is not commercially available today. This will be particularly necessary as state agencies make more services available on the internet and continue to privatize or partner with non-profit and other governmental organizations for services that were previously provided by state agencies.

The Information Technology Group (ITG) is the state entity charged with the responsibility to provide statewide telecommunications to serve and support the needs of state agencies. In addition to the services that ITG provides through contracts solicited and managed by ITG, ITG owns and operates an extensive microwave system (State of Alaska Telecommunications System (SATS)). SATS was developed primarily to provide two-way radio communications for life/health/safety response along the state's major highway routes. It is also used for a variety of communication needs, such as voice and data communications. The system is currently underutilized, yet there are an increasing number of requests received from both private and other governmental entities to gain access to SATS. A third goal of this project is to open access to SATS so that public telecommunications providers can deploy services in rural areas that have not been cost effective in a stand alone environment.

U.S. Senate passes rural TV bill

THE ASSOCIATED PRESS

ANCHORAGE - The U.S. Senate has approved a bill that would help pay for satellite delivery of local television and Internet service to rural areas.

Alaska Sen. Ted Stevens predicted Friday that Alaska companies would organize to develop a system for giving rural Alaskans access to satellite TV and high-speed Internet service.

The Senate legislation, which was approved Thursday on a 97-0

vote, would provide loan guarantees for satellite deliveries of local television programming in areas outside the largest 40 markets.

An amendment sponsored by Stevens ensures that Alaska and Hawaii would receive "fair consideration" in the approval of loans. The loan program is capped at \$1.25 billion.

Similar legislation has cleared two House committees and is expected to be voted on soon by the full House.

4-2-00

Juneau Empire

S. 2097 - Passed U.S. Senate

H.R. 3615 - In House Hearings

CORRECTION

**THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION**



Rev. 6/98

Central Microfilm Services
Department of Education & Early Development
State of Alaska

Telecommunications Partnering Project

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The Administration held meetings with members of the public and state agencies in the fall regarding the objectives of the Telecommunications Partnering project and to obtain feedback.

As a result of that feedback, bids were solicited in October in order to find a contractor to assist the state in the preparation and completion of a Request for Proposals (RFP) document to obtain comprehensive telecommunications services. Eleven proposals were received from a variety of national firms. Gartner Group was selected and will be on site during the second week of January to kick off the project. Gartner Group will assist the state with developing a request for proposals for release in spring 2000.

A key task will be interviewing state agencies and working with a Steering Committee of key stakeholders to gain an understanding of their present and, most importantly, future telecom requirements. In addition, meetings will be held with telecommunications providers throughout the process to ensure the RFP is structured to result in solutions that can be implemented in Alaska's environment and within available budgets.

It is anticipated that a comprehensive telecommunications contract can be signed in July.

* This testimony was to be presented at the 4/5/00 URC meeting but was cancelled due to lack of time.

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RURAL TELEVISION & INTERNET SERVICE LEGISLATION BRIEF SUMMARY

Federal Legislation:

S.2097 Passed the full Senate

H.R. 3615 Still in hearings in the House.

IMPACT ON ALASKA

The intention of both bills is to provide loan guarantees for rural television providers who meet the criteria of final legislation. The emphasis has to be placed on loan guarantee. The effect is to lower the effective interest rate on commercial loans to rural television providers for capital equipment purchases by having a government guarantee on the loans. The rural television provider still must come up with a business plan that lender will loan money against.

When looking at rural television, the monthly cost of capital is less than 10% of the monthly operating costs for such a service. Of the monthly operating expenses, the largest single item is the cost of satellite capacity at \$90,000. per month. From this standpoint, **the legislation in front of Congress has little effect on the success or failure of a rural television service unless the loan guarantee is used to reduce the cost of satellite capacity.**

NRTC POSITION

The National Rural Telecommunications Cooperative (NRTC) supports the loan guarantee program and is instrumental in lobbying for its quick passage. The NRTC hopes to use the loan guarantee program to purchase a satellite or satellites for providing rural television. This should have the effect of reducing the \$90,000 per month bill for an Alaska service, IF the satellite provides coverage to rural Alaska.

DIFFERENCES IN THE TWO BILLS

***S2097 includes preferences for those rural television services which provide broadband Internet delivery (such as to a Digital Service Line provider - DSL) and to Emergency Alert System (EAS) support. These are logical things to provide as the technologies of video delivery and broadband delivery complement each other.**

***HR 3615 includes provisions mandating free carriage of broadcast signals with local content. S2097 is silent on the issue. The impact of the House language may be to make a viable rural television service difficult to set up in Alaska.**

*S2307 is currently under consideration by the Senate and deals with broadband deployment in rural America. It is a loan program set up under the Rural Utilities Service of the Department of Agriculture.

ENHANCING INTERNET ACCESS

Two things to consider:

- a. How to put bandwidth in the village?
- b. How to move it around once it is there?

To put bandwidth in a rural Alaskan village, there must first be a satellite. The most common way of moving a lot of Internet content over satellite is part of a digital video broadcast (DVB) carrier, so there is a relationship between television and the Internet in the digital world.

There are several ways to move bandwidth around in a village, once it is there. Digital Subscriber Line (DSL) is one way. Cable modems are another. Another is wireless. We are not aware of any DSL services in rural Alaska, other than MTA's service area. There is one cable modem system in Whittier and one being installed at St. Paul. It is our understanding that wireless is deployed in Toksook Bay and McGrath.

The current environment in most villages provides bandwidth to two entities, but does not allow them to distribute it to other users. The first is Universal Service Fund support of Internet service to schools, and the second is subsidized bandwidth to rural healthcare providers (E-Rate).

The net result of both these subsidized approaches is that there will be some bandwidth on the ground in a village, but not everyone will have access to it. Carried to its logical conclusion, the structure of both of these subsidy programs could result in ATT-Alascom and GCI running out of satellite bandwidth before they run out of villages that want service, and only clinics and schools will have internet access.

We are not talking small amounts of money; a T-1 (1.54 Mbps) over a satellite costs between \$18,000 and \$20,000 per month. A rural clinic subsidized by the USF only pays about \$930 per month for this.

"We are kind of in a situation of trying to grow corn in the desert. Until someone puts in the dam to store the water, we really don't need an irrigation system to water the field."

Tom Brady, Microcom

Bill Summary & Status for the 106th Congress

Item 2096 of 2337

PREVIOUS | NEXT**PREVIOUS:SUMMARY | NEXT:SUMMARY****NEW SEARCH | HOME | HELP | ABOUT SUMMARIES**

S.2097Sponsor: Sen Burns, Conrad R. (introduced 2/24/2000)Related Bills: H.R.3615

Latest Major Action: 3/30/2000 Passed Senate

Title: A bill to authorize loan guarantees in order to facilitate access to local television broadcast signals in unserved and underserved areas, and for other purposes.

MOST RECENT SUMMARY:

2/24/2000--Introduced.

Launching Our Communities' Access to Local Television Act of 2000 - Establishes the Local Television Loan Guarantee Board to approve or disapprove loan guarantees under this Act. Allows loan guarantees to be approved only to the extent provided for in advance in appropriations Acts.

Requires such loans to be used to finance the means by which local television broadcast signals will be delivered to an unserved or underserved area, with a loan priority for unserved areas. Prohibits the Board from approving a loan which will serve one of the 40 most populated designated market areas.

Limits: (1) each loan guarantee to 70 percent of the total cost of a project; and (2) the aggregate value of all loan guarantees to \$1.25 billion.

Requires the Administrator of the Rural Utilities Service to administer all loan guarantees approved under this Act. Requires loan applicants to enter into stipulated performance schedules with respect to the local television signals to be provided through the project.

Outlines procedures governing loan application and credit requirements, default procedures, and recovery of payments for breach of conditions.

Authorizes the Board to charge and collect a loan guarantee fee and use such fee to cover administrative costs.

Requires an annual audit and report concerning the loan guarantee program.

Prohibits any loan guarantee from being approved after December 31, 2006.

Subjects all loan applicants to Federal copyright provisions relating to the required retransmission of local television stations.

Authorizes appropriations for FY 2001 through 2006.

Bill Summary & Status for the 106th Congress

Item 1 of 1

PREVIOUS:SUMMARY | NEXT:SUMMARY
NEW SEARCH | HOME | HELP | ABOUT SUMMARIES

H.R.3615Sponsor: Rep Goodlatte, Bob (introduced 2/10/2000)Related Bills: S.2097

Latest Major Action: 3/31/2000 House preparation for floor

Title: To amend the Rural Electrification Act of 1936 to ensure improved access to the signals of local television stations by multichannel video providers to all households which desire such service in unserved and underserved rural areas by December 31, 2006.

MOST RECENT SUMMARY:

2/10/2000--Introduced.

Rural Local Broadcast Signal Act - Amends the Rural Electrification Act of 1936 to authorize the Administrator of the Rural Utilities Service to make loan guarantees (through a specified date) to providers of multichannel video services, including direct broadcast satellite licensees, to improve access to local television broadcasting to all households desiring such service in unserved and underserved rural areas.

Requires loan guarantee approval by the National Telecommunications and Information Administration.

Sets forth satellite carrier loan guarantee qualifications.

Authorizes appropriations.

Sets forth conditions under which a borrower shall be obliged to carry local broadcast signals without charge.

Telecommunications 2000 in Alaska



Clark James Mishler

BY TOM BRADY

Most of us think of telecommunications in terms of the end product and the most common product we think of is the telephone. Normally we don't even consider television or the Internet in the same sentence. Even so, telecommunications is not just about telephones, television or the Internet. It's about bandwidth (bits of data) and how to get more of it. Whether you log onto your computer or watch TV, the core business of telecommunications is delivering bandwidth to consumers.

In Alaska, any discussion of telecommunications must look at urban and rural parts of the state as being distinctly separate markets and technological areas. More importantly, when you get to rural Alaska you encounter a regulatory structure for distribution and sale of telecommunications services.

Types of Bandwidth

Broadcast Bandwidth: Most people associate this with television but as television has moved into the digital world, lead by satellite television providers, this also has come to mean broadcast data. This type of bandwidth provides one-way service only, so it is not suitable for telephone. Coaxial cable or some type of wireless system is normally the source of broadcast bandwidth.

Two-way symmetrical: The best example of this is the plain old telephone. Most telecommunications are developed in the two-way symmetrical model, that is the bandwidth in both directions is equal.

Two-way asymmetrical: The Internet is driving this form of bandwidth because at the consumer end a 10-kilobit request for a Web page can result in a megabit of multimedia content. It's

called asymmetrical because the bandwidth from the consumer to the network (Internet) is typically much less than the bandwidth from the network to the consumer. For example, some forms of digital subscriber line services offer 768 kilobits-per-second to the network (upstream) and up to 6 megabits from the network (downstream). Cable modem service is asymmetrical also.

Providing Bandwidth to the Consumer

Telephone Cable: This is where it all started and it hasn't fundamentally changed since Alexander Graham Bell. Most consumers are getting their two-way bandwidth this way. In capacity terms, the telephone line in your home today can download at 56 kilobits per second. Digital Subscriber Line service is the newest technology using copper telephone cable. A DSL line can download up to 6 megabits per second—or in other words, can pack a little over 100 pounds of sugar in today's one pound bag.

Coaxial Cable: This is how cable television is typically delivered to the home. Normally associated with broadcast bandwidth, cable systems can be upgraded to support two-way bandwidth. Today's cable modem service is the most common example of two-way bandwidth over cable.

Fiber Optic: Fiber is the workhorse of wide-band telecommunications. It is fiber that normally feeds the telephone cable, coaxial cable and wireless networks. Many large business consumers have direct access to fiber, but even then the final delivery to the individual is normally over a telephone-type or coaxial cable.

Wireless: Most people think of this as cell phones but it is really a lot more. There are two distinct forms of wireless bandwidth. The first is terrestrial radio systems that provide telephone, Internet and television services from transmitters in the local area. The second is satellite systems that cover large areas. Satellite systems are the workhorses of the television industry and have a special niche in providing communication networks for large national retailers such as Wal-Mart, Chevron and Safeway.

Urban Bandwidth 2000 and Beyond

Broadcast Bandwidth: Look for a significant increase in broadcast bandwidth and more programming or channels as companies become more efficient in using the bandwidth. Today most broadcast bandwidth is used to bring analog television signals to the home.

As GCI Cable and Alaska Choice Television convert from analog to digital service, there will be a several-fold increase in the number of available channels, and the introduction of television enhanced by broadcast Internet content. With two-way Internet services available over these same networks, entertainment should be a rapidly evolving experience.

With local broadcasters putting in digital television transmitters, plan on an increase in the number of off-the-air channels (channels you can pick up free with cable or rabbit ears), but also plan on some type of pay broadcast television service to offer more than the basic fare. The largest increase in raw bandwidth and content will probably come from satellite providers.

Direct Broadcast Satellite Services have always been digital, and as newer generation satellites come into service allowing smaller receive antennas, even urban users will have an expanded choice of television providers. As more providers are capable of serving the market the price will probably not decline, but future price increases by cable operators will be held in check by competition from other providers.

Two-Way Bandwidth: Most consumers don't really care whether they get service over asymmetrical or symmetrical bandwidth. The main issue is price. Consequently, most of the new bandwidth coming into service over the next five years is likely to be asymmetrical.

The prime driver in this is the basic asymmetry of the Internet from the user's perspective. Unless you are hosting a large Web site and have a large telecommuting work force, the economy of digital subscriber line services and possibly cable modems in providing both voice and Internet service will drive both business and residential sectors to look at a DSL or cable modem alternatives.



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Since DSL can use the same wire for both telephone and Internet service, a logical price point for entry-level DSL service would be two home telephone lines plus Internet service (about \$49 per month). GCI's first DSL-like offering is considerably more than that, but when ATU (ACS) enters the DSL market, this price should change substantially.

DSL does have a significant limitation. If your home or business is located more than 18,000 cable feet (not as the crow flies) from a telephone central office, then DSL may not be an option. Technology may push this limit outward, but not in the near future.

Terrestrial wireless services operating in frequencies ranging from 2 to 32 gigahertz frequency bands could also have a significant effect on the prices for bandwidth. Currently the only publicly available wireless Internet service is provided by Spectrum Wireless in the unlicensed ISM (Industrial, Scientific and Medical) frequency band. This is not likely to be the only wireless, high-speed data alternative over the next five years.

We should anticipate the frequencies employed by Choice Television and WantTV will eventually be used for services other than television. In addition, there are other licensed wireless services just now emerging. These wireless services will be especially valuable for consumers too far away from telephone central offices to use DSL, and those not on an existing cable system. Traditional cellular services will roll out new data services to complement their existing voice offerings, but the speed will be limited compared to other services. Maybe we will even get integrated messaging where e-mail and voice mail go to the same point (hopefully with better junk mail filters).

Intrastate and interstate two-way bandwidth for private networks should see a significant price decline over the next five years as competition between Alaska FiberStar, KANAS and GCI heats up. However, this bandwidth will still cost between three to four times as much as its Lower 48 counterpart for interstate service. While intrastate bandwidth will on the surface be less expensive due to competition, the price of a telephone call in state may not decline much due mainly to the regulatory structure.

While I can call Queen of England for 10 cents a minute, it still costs me at least 14 cents a minute to call the governor. Until the regulatory structure changes its ways, this disparity will remain. The major future issue is the pricing model for bandwidth. Today, the regulatory structure not withstanding, the cost of telecommunications is distance sensitive. Generally speaking, the further the distance the higher the price. The Internet is chipping away at this model and replacing it with another. The new model is speed of access and quality of service.

Rural Bandwidth 2000 and Beyond

While fiber optic bandwidth is the main source for two-way bandwidth distributed in urban areas, most of rural Alaska has only one source and that is satellite. Unfortunately, satellite bandwidth is the most expensive two-way bandwidth you can buy and good satellite bandwidth in rural Alaska is hard to find.

Cable systems will probably be the first to distribute high bandwidth two-way services since they are the most capable systems in place. After that, DSL and wireless alternatives will probably be the next to develop.

None of these can progress unless there is a source of broadband services to feed the local distribution system. At today's prices of \$1,500 for 64 kilobits provided to schools and libraries, broadband service may mean 128 kilobits for many smaller villages. The \$1,500 price is extremely low given the price structure of the satellite industry in general and the probability of this price changing significantly is not very great.

The most likely development in rural bandwidth is augmenting the basic 64-kilobit service with some form of asymmetrical Internet service. This could substantially improve the quality of rural Internet service while keeping it affordable.

All is not bleak or expensive in rural Alaska. Broadcast bandwidth from multiple satellites has dramatically changed the world of television in rural homes. While initial adopters spent \$1,000 or more for their systems, the next generation of Direct Broadcast Satellites, coupled with the satellite providers' incentive programs, should bring the

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TELECOMMUNICATIONS

initial investment price to under \$500 for 200 or more channels of video. The downside of this DBS product is the pressure it will place on rural cable systems to add channels or lose subscribers and it doesn't have Alaska content. However, rural cable systems have the opportunity for new revenue from Internet services.

The final unknown in rural Alaska is the regulatory structure at both the state and federal level. In the near-term, this structure will probably limit the entry of new players trying to provide conventional voice services through new technology such as the Internet because it is geared to subsidize switched telephone networks. In the largely unregulated world, this type of switched network design is being replaced by packet-based (Internet type) networks. In addition, the same regulatory structure will limit Internet deployment in the small villages to schools because service to schools is subsidized and service to the village is not.

Unless the regulatory structure and the businesses it supports evolve, in five to seven years they could be rendered largely obsolete by deployment of Ka

band satellite systems such as Teledesic and Spaceway. This will give individual users a competitive alternative the regulators are unable to control. In addition, these systems offer the greatest promise of putting urban and rural Alaska on somewhat equal footing for access to bandwidth.

Conclusion

Bandwidth in Alaska for the next five years is going to be a function of where you live. In Anchorage I can listen to Internet radio stations from around the world but I can't tune in Ketchikan because the speed and quality of their connection to the Internet isn't good enough. Providing affordable, high-speed access to the Internet in rural Alaska will be one of the dominant issues in Alaska telecommunications over the next few years and will become a major topic in the rural versus urban debate. The impact on the state can be substantial both in terms of the cost of providing state services in rural Alaska and in developing rural economies in an age where what you have access to is more important than where you live. □



For the last six years, Tom Brady has worked in small business as general manager of AmRussCom and manager of Data Services for Microcom. Brady has assisted in developing a successful telecommunications business in Russia and in developing new satellite television and data alternatives for rural Alaska. In addition, he is the project manager for Microcom's technical support contract with the State of Alaska for the Satellite Interconnection Project. Having been an Alaska resident since 1975, Brady has seen the development of technology over time throughout Alaska and was a pioneer for cable television in state when he laid the groundwork for the first cable system at Eielson Air Force Base in 1976.

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About AFS

Alaska Fiber Star is a privately owned Alaskan Limited Liability Corporation (LLC), which builds and operates fiber optic cable systems and infrastructure within Alaska.

AFS is a subsidiary of WCI and is a member of the WCI Group of companies, which includes AFS, WCI Cable and WCI LightPoint. WCI is a privately owned communications company developing fiber optic systems internationally. WCI's shareholders are a subsidiary of AMP Life Limited, an international financial services company with assets exceeding US \$120 billion and a privately owned Australian investment company.

**The AFS Network**

The Alaska Fiber Star next-generation network is a fiber optic infrastructure developed to provide interconnection between the major telecommunication networks and markets in Alaska and the Lower 48. Our network, which follows the Alaska Railroad right-of-way between Anchorage and Fairbanks and is buried to an average of four feet, crosses 200 roads and straddles some 200 bridges. From Anchorage, the AFS Network extends to Whittier and Valdez, and connects to Juneau and the Lower 48 through a submarine cable system, owned and operated by our sister company, WCI Cable.

The AFS cable interfaces with the WCI Cable Network at the cable landing facility in Whittier. The WCI Cable Network is monitored and controlled by the Anchorage Network Operations Control Center (NOCC).

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For corporate matters, including accounts, vendors, sales and marketing, please contact our Alaska headquarters.

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We serve customers in Anchorage, Elmendorf Air Force Base, Eagle River, Wasilla, Talkeetna, Cantwell, Healy, Clear, Clear Air Station, Nenana, Eielson Air Force Base, Ft. Wainwright, Fairbanks, Whittier and Valdez.

Anchorage-Lower48 Capacity

Together with our affiliate, WCI Cable, we provide DS1, DS3, OC3 and OC12 levels of connectivity between Anchorage and the Lower 48. The WCI Cable Network also includes service to Juneau. More information about WCI Cable is available at www.wcicable.com.

IP Product

Our IP Product is currently in test mode - we expect delivery of this product by the end of first quarter 2000.

Colocation

For colocation information, please contact our affiliate, WCI LightPoint at info@wcilightpoint.com or go to www.wcilightpoint.com. WCI LightPoint is a member of the WCI Group of Companies and provides reliable, flexible carrier neutral and secure colocation facilities throughout the U.S. and around the world.

For more information about AFS products and services, please contact the AFS Marketing Department at (907) 365-7250 or email us at info@alaskafiberstar.com.



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November 17, 1999

WCI LightPoint Provides Premier Colocation Services to Worldwide Fiber

October 12, 1999

Alaska Fiber Star Affiliated Company, WCI Cable, Inc. Supplies Fiber Optic Capacity

September 29, 1999

University of Alaska to Light Up New Optical Fiber Link

September 23, 1999

WCI Cable Turns Up NorthStar Network, Linking Alaska with the Lower 48

July 10, 1999

WCI Cable's 15GBPS Fiber Optic NorthStar Network Transmits First Light from the Oregon Coast to Alaska

March 25, 1999

WCI Cable, Inc. and Alcatel, Ship Fiber Optic Cable for the NorthStar System

March 1999

WCI Cable, Inc. and Alaska Fiber Star Confirm September Service for WCIC's NorthStar Cable System Including an Internet Protocol Capability

November 30, 1998

Alaska Telecommunication Companies to Launch Affordable, Dedicated, High Speed Internet Access Over Existing Telephone Lines

November 29, 1998

Fiber Optics Bringing Telecom Revolution



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Applications

The advent of high-speed, high-capacity, low interference fiber optic cable brings a host of new technical advancements, as well as business and educational possibilities, to Alaskans and the global community.

Through the latest innovations in fiber optic technology, Alaska Fiber Star's next-generation network provides a highly reliable and secure foundation for cutting-edge developments such as telemedicine and e-commerce.

Distance Education

The University of Alaska operates a number of facilities throughout Alaska. In addition to taking classes at UA's various regional campuses, many students take advantage of the University's distance education courses. For example, students living in Palmer or Nome can enroll in the correspondence version of a course offered by the University of Alaska Anchorage or the University of Alaska Fairbanks. More bandwidth means more options for Alaska's students including an increased availability of resources such as electronic libraries, films, discussion groups and teleconferencing.

Internet2

In the fall of 1999, WCI Cable provided the University of Alaska with an OC12 connection to the University of Washington in Seattle. This gift enabled UA to connect to the next generation Internet2 high-speed research and education network, placing UA among the top ten universities in the US for high-speed next-generation Internet connectivity. ([AFS press release, 10/99](#))

Internet2 is a group of over 150 member universities working with corporate and affiliate partners to "develop advanced Internet technology and applications vital to the research and education missions of higher education."

Telemedicine

Telemedicine will allow a doctor in Fairbanks or Anchorage to look at images, make a diagnosis and relay real time treatment instructions to a public health nurse in rural Alaska. Fast, high-bandwidth fiber optic networks are key in the successful development of this technology. With so many Alaskans living far from the state's population centers, advancements such as telemedicine bring the latest medical technologies to the vast regions of Alaska.

E-commerce

The latest trend in business, e-commerce is revolutionizing the way people shop and many Alaskans are taking their business and businesses online. Reliable, high-speed Internet connections are critical to businesses that want to compete and succeed in the fast-changing world of e-commerce.



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Index of Terms

ADM (Add Drop Multiplexer) - A multiplexing function that allows lower speed digital channels to be added or dropped from a high speed optical carrier channel in a wire center or other location.

ADM Station (Add Drop Multiplexer Station) - Facilities located along the Alaska Fiber Star Network which house ADM equipment.

Analog - A form of transmission which sends the signal in a form analogous to the original signal (as opposed to digital transmission which uses binary code to represent information).

ATM (Asynchronous Transfer Mode) - A means of high-speed switching, able to support high bandwidth multimedia applications.

Bandwidth - 1) The range of transmission frequencies that a communication channel is capable of carrying without excessive attenuation, 2) the range of transmission speeds that a communication channel is capable of carrying without excessive errors. In digital communications, bandwidth is typically measured in bits per second (bps).

Bit - The smallest unit of data recognized by computers. With digital technology, a bit is represented as a "1" or a "0."

BLSR (Bi-Directional Line Switched Ring) - A method of SONET transport in which half of the working network is sent counter-clockwise over one fiber and the other half is sent clock-wise over another fiber. BLSR offers bandwidth advantages (125% to 200% greater than UPSR) for distributed traffic in single-ring architectures.

Bps (Bits per second) - The number of bits sent each second.

Byte - Eight bits.

Channel Capacity - The measure of the digital bandwidth being sold, stated in Gigabits per second (Gbps), Megabits per second (Mbps) or bits per second (bps).

Digital - The use of binary code to represent and transmit information (as opposed to analog transmissions which send the signal in a form analogous to the original signal).

DS0 (Digital Signal Level 0) - A 64,000 bits per second digital signal.

DS1 (Digital Signal Level 1) - A 1.544 million bits per second digital signal. Equal to 24 DS0s or one T1. 24 voice channels.

DS3 (Digital Signal Level 3) - A 51.84 million bits per second digital signal. Equals 28 DS1s, 28 T1s, one T3, one STS1 or one OC1. 672 voice channels.

OC1 (Optical Carrier Level 1) - Equal to one DS1, 51.840 million bits per second.

OC3 (Optical Carrier Level 3) - Equal to three DS3's, 155.52 million bits per second.

OC12 (Optical Carrier Level 12) - 622.08 million bits per second.

OC48 (Optical Carrier Level 48) - 2.488 thousand million bits per second.

OC192 (Optical Carrier Level 192) - Equal to 192 x 51.840 million bits per second (9.953 thousand million bits per second).

Fiber Optic - A thin filament of glass with a protective outer coating through which a light beam carrying communications signals may be transmitted by means of multiple internal reflections to a receiver which translates the message. Alaska Fiber Star's network consists of fiber optic cable.



Gbps (Gigabits per second) - One Gbps means one thousand million (one billion) data bits per second.

IP (Internet Protocol) - A set of protocols used on the Internet to perform addressing functions for networks.

ISP (Internet Service Provider) - Vendors who provide access to the World Wide Web and Internet via telephone lines.

Mbps - In telecommunications, Mbps means one million bits per second.

MBps - One million bytes per second.

Multiplexing - The technique of combining multiple single channels onto a single aggregate channel for sharing facilities and bandwidth.

POP (Point of Presence) - The point at which local traffic (voice, video, data) is handed off to long distance companies.

Real Time - No perceived delay in voice transmissions.

SONET - A high bit rate transport method, specifying a synchronous transport (level 1) of 51.84 Mbps.

UPSR (Unidirectional Path Switched Ring) - A method of SONET transport in which all working traffic is transmitted in one direction. UPSR is preferred for interconnected rings with numerous signals crossing the rings.

VoIP (Voice Over Internet Protocol) - Voice communications over the Internet

For more information go to:

- [Fundamentals of Telecommunications](#)
- [Nortel Networks](#)
- [Alcatel](#)

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Frequently Asked Questions**What does Alaska Fiber Star sell?**

- We provide wholesale DS1, DS3, OC3 and OC12 levels of intrastate channel capacity on our fiber optic cable backbone.

Who are your customers?

- Our customers are primarily interexchange telecommunications carriers and other large non-carrier users.

To where does your network connect?

- Our network links Fairbanks and Anchorage and connects to Whittier and Valdez. Through our sister company, WCI Cable, we connect to Juneau and the Lower 48. AFS serves customers in Anchorage, Elmendorf AFB, Eagle River, Wasilla, Talkeetna, Cantwell, Healy, Clear, Clear AS, Nenana, Eielson AFB, Ft. Wainwright, Fairbanks, Whittier and Valdez.

Do you have any plans to extend your network?

- WCI is reviewing options for extending the AFS and WCIC service areas.

Do you connect to my house?

- As a carrier's carrier, we do not operate in the retail marketplace. We sell wholesale channel capacity to providers who connect to your home.

How does your product benefit me?

- Our state of the art fiber optic cable enables your providers to offer you more broadband services, such as those offered in the Lower 48. We also provide competition in the marketplace, which lowers prices for the consumer.

Is Alaska Fiber Star publicly owned?

- AFS is a privately owned Alaskan Limited Liability Corporation (LLC).

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