

Steve Hamlen
President & CEO

United Utilities, Inc.



Affiliate of United KUC Affiliate of Unicom

September 28, 2004

Ms. Kate Giard
Program Administrator, Rural Alaska Broadband Internet Access Grant Program
Regulatory Commission of Alaska
701 West Eight Avenue, Suite 300
Anchorage, Alaska 99501

Re: Supplementary Funding Request, Rural Alaska Broadband Internet Access Grant Program

Dear Kate,

United Utilities, Inc. (UUI) is seeking additional grant funds in the amount of \$4,661,000 to supplement the funds awarded under the Rural Alaska Broadband Internet Access Grant Program for the existing grant agreement sites (Eek, Chefornak, Kipnuk, Kongiganak, Kwigillingok, Lower Kalskag, Newtok, Nightmute, Tununak, Tuntutuliak and Upper Kalskag to Bethel). In my emails to you dated August 27, 2004 and September 2, 2004 I explained to you that the cost of the project has increased substantially from our original estimated budget in our grant application as a result of a number of unexpected factors. These include project approval delays, the discovery of warm permafrost at eight of the sites, the very high installation costs due to the new engineering design and the increase in the prices for steel and transportation.

In terms of Appendix A, Article 5 and Appendix G, Articles 2.2 and 2.3 of the Grant Agreement any increase in the project's total cost and any increase in DCED's support requires DCED's prior approval and must be documented with a Grant Amendment. Please find herewith seven copies of UUI's Supplementary Funding Request for your consideration. Please also find enclosed a draft Grant Amendment for your review.

UUI respectfully requests that the Commission approve this Supplementary Funding Request as soon as possible in order that the grant project can move forward. UUI is available to meet with you to discuss this Supplementary Funding Request. We would be happy to go through the request in more detail, and have a prepared a presentation for this purpose. Please let me know if you would like to set up a time for such a presentation.

We look forward to hearing from you soon.

Yours truly,

Enclosures: Supplementary Funding Request (7 copies) includes:
Exhibit 1
Exhibit 2 (Confidential)
Exhibit 2 (Redacted)
Exhibit 3 (Confidential)
Exhibit 3 (Redacted)
Draft Grant Amendment

SUPPLEMENTARY FUNDING REQUEST
RURAL ALASKA BROADBAND ACCESS GRANT PROGRAM

September 28, 2004

A. BACKGROUND FOR SUPPLEMENTARY FUNDING REQUEST

On November 3, 2003 United Utilities, Inc. (UUI) submitted an application to the Regulatory Commission of Alaska (RCA) for grant funds to provide broadband Internet services to the communities of Eek, Cheforak, Kipnuk, Kongiganak, Kwigillingok, Lower Kalskag, Newtok, Nightmute, Tununak, Tuntutuliak and Upper Kalskag (via a hub in Bethel) under the Rural Alaska Broadband Internet Access Grant Program ("Program"). The proposed broadband Internet access service is to be delivered on a Terrestrial Wireless Network ("Network").

The major advantages of this Network are:

- **Long-term solution:** The towers have a life expectancy of more than 50 years. Unlike satellite-based services, this critical communications infrastructure does not need to be replaced every 10 to 15 years.
- **Improved performance:** The Intranet will not experience satellite latency and sun outages. The system is more reliable.
- **Increased capacity:** Initial community-to-community Intranet bandwidth will be equivalent to one quarter of the capacity of a typical 36 MHz, 24 transponder satellite. In addition to broadband Internet, the Network infrastructure will also support telemedicine, distance learning and other advanced telecommunications services.

In March 2004 UUI was advised that it was a potential recipient of grant funds under the Program. On August 2, 2004 UUI and the Department of Community and Economic Development (DCED) executed the Rural Alaska Broadband Internet Access Grant Program Grant Agreement. Nine months elapsed between the dates that UUI submitted its grant application and the date that DCED committed funds to UUI for the project under the grant.

Since the submission date of the grant application, the cost of the Network has increased substantially from the estimates set out in the grant application (see Schedule 1, Revised 03/09/2004) as a result of a number of unexpected factors, including:

1. the discovery of "**warm permafrost**" (frozen soil between the temperature range of 30.5° F and 32° F) at eight of the grant sites;
2. very **high installation costs** due to the new engineering design; and
3. the **increase in the prices for steel and shipping.**

Accordingly, in terms of Appendix A, Article 5 and Appendix G, Articles 2.2 and 2.3 of the Grant Agreement, UUI hereby requests:

1. DCED's approval for:
 - a. an increase in the project's total cost to \$12,160,000; and

- b. an increase in DCED's support for this project and an increase in the amount of the Grant Agreement to \$7,198,000 through supplementary grant funding in the amount of \$4,661,000.
2. All approved increases in expenses and grant funds are documented in a Grant Amendment.

B. UUI'S EFFORTS

Since November 2003, UUI has used its best efforts to commence construction during 2004. UUI obtained site control at all grant sites (with the exception of Kalskag, which is pending) and executed leases and easements with the relevant land owners. After acquiring the land for the towers, UUI obtained soil samples and related temperatures at most of the sites, analyzed the samples and commenced the engineering and design of the tower foundations at these sites. Regulatory approvals for the Bethel and Eek sites have been obtained from the required federal, state and local agencies. UUI is awaiting regulatory approvals and permits for Akiak, Kongiganak, Kwigillingok and Tuntutuliak. These approvals are expected by mid October. UUI is also in the process of obtaining approvals, permits, and soil samples for the balance of the grant sites. Much of the preliminary, preconstruction work is complete, and construction can begin in Bethel and Eek.

Since the time of the grant application, UUI has committed its own financial resources for the build-out of the Network. Although DCED did not commit funds to the project until August 2004, with the short construction season in Alaska (and the tight deadline for completing the construction phase of the project under the Grant Agreement) UUI acquired and shipped more than 840 tons of steel and buildings this summer. To date, UUI has spent and committed than \$1,787,000 on materials and equipment for the Network. These materials and equipment are en route to villages or will be staged in Bethel. Site development has commenced in Bethel, Akiak and Tuntutuliak.

C. NEW FACTORS

When preparing the original grant application and budgets, UUI based the Network design, and the design of the buildings, foundations and towers, on preliminary engineering and past tower construction experience. Between 1993 and 1997 UUI built more than ten towers in the Yukon Kuskokwim Delta region. At that time, with the advice of structural and geotechnical engineers, towers were designed to be built in permafrost. Typically a tower designed to be built in permafrost has a driven pile foundation. Each leg of the tower usually requires only a single driven pile. In the nineties, geotechnical tower foundation designs did not rely on temperature measurements i.e. the temperature of the frozen soil was assumed to be less than 30.5° F.

UUI has encountered "warm permafrost" at eight of the grant sites since it began its final engineering for the project. Warm permafrost is a result of global warming. Warming temperatures cause soils with permafrost to lose strength. Above 30.5° F, the structural properties of the soil decrease and more surface area of piling is required to support the

same above-ground load. Towers built in warm permafrost require a very different foundation design than towers built in permafrost. Towers built in warm permafrost require substantial efforts on the part of the owner to mitigate the effects of the gradual warming of permafrost over time. These include the following new design criteria:

Towers constructed with Driven Piles and Thermosyphons:

- Wider tower base.
- Each leg of a tall tower requires 3 to 4 piles (as opposed to one in a permafrost design).
- Piles must be of a certain length and driven to a certain depth (longer piles are driven deeper than a permafrost design).
- Due to multiple piles, each leg of the tower requires a large pile cap (much heavier and more substantial than a permafrost design).
- Thermosyphons installed to remove heat
- Temperature gauges are installed to monitor freeze back and pile performance.
- Additional insulation of the tower pad to reduce summer thaw.

Towers constructed with Drilled Thermal Piles (where soil has poor structural properties):

- Wider tower base.
- Each leg of the tower may require up to 4 thermal piles, which use a special technology to keep the ground frozen.
- Due to multiple piles, each leg of the tower requires a large pile cap.
- Temperature gauges are installed to monitor freeze back and pile performance.
- Additional insulation of the tower pad to reduce summer thaw.

These new foundation designs are substantially more expensive to install than originally planned and the new design criteria have a compounding effect on the cost of the foundations and towers. More steel is required to build the towers due to criteria such as a wider tower base, the increased number of pilings, larger pile caps and longer piles. The new design requires lengthier piles and a larger number of piles to be driven or drilled, which significantly increases the cost of installing the piles. For example, driving 16 long piles takes more time and effort than driving four short piles. Larger equipment (e.g. crane, hammer) is required to drive/drill the piles. The cost of pad construction is increased by the addition of insulation and a wider tower base. Fencing (sometimes predator proof) has now been included in the building budget.

The increase in the amount of steel required to build the towers in warm permafrost has a compounding effect. The total project costs have increased not only because UUI must purchase more steel to build the towers, but also because the price of steel has increased significantly in the past nine months. On average, North American steel prices have increased by 50% since November 2003. The increase in the tonnage of steel has also resulted in increased freight charges. Furthermore, transport carriers added an 8% fuel surcharge to their freight charges this year to account for the increase in the higher cost of fuel due to rising oil prices.

D. SUPPLEMENTARY FUNDING REQUEST

All of these factors combined have required UUI to reassess the project and revise the project's financial schedules. Revised budgets are attached for your consideration. Maintaining the 75:25 funding ratio set out in the Grant Agreement for the construction phase for the Network buildings, foundations and towers, UUI requests supplementary grant funds in the amount of \$4,661,000. When the supplementary funding of \$4,661,000 is added to the original funding request and Grant Agreement amount of \$1,968,000, the total amount of the Grant Agreement relating to buildings, foundations and towers becomes \$6,655,000. (Please note that there has been no change to the start up phase costs which remain \$569,000.) A summary of the Supplementary Funding Request is shown on Exhibit 1. A summary of the Comparison of Budgets is shown on the confidential schedule, Exhibit 2. The revised Construction Phase Total Grant Project Budget is shown on the confidential schedule, Exhibit 3 (which replaces Schedule 1, Revised 03/09/2004). Redacted versions of Exhibits 2 and 3 are also attached.

UUI respectfully requests that the Commission approve this Supplementary Funding Request in the amount of \$4,661,000 as soon as possible so that the project can move forward. UUI requests DCED's approval for (i) an increase in the project's total cost to \$12,160,000 (ii) an increase in DCED's support for this project through supplementary grant funding in the amount of \$4,661,000 and (iii) an increase in the total amount of the Grant Agreement to \$7,198,000. All approved increases in expenses and supplementary grant funding will need to be documented in a Grant Amendment.

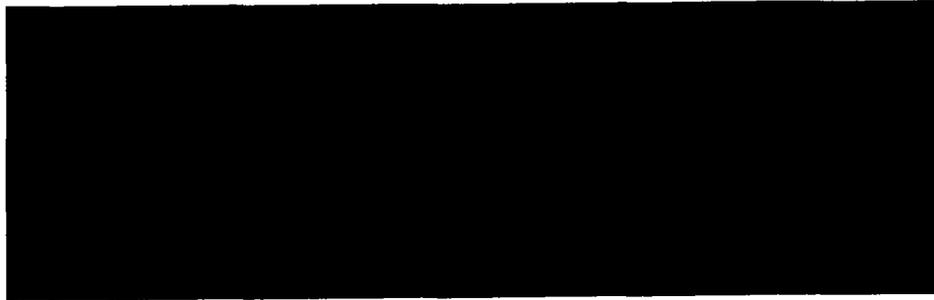
September 28, 2004

**Rural Alaska Broadband Internet Access Grant Program
Supplementary Funding Request
Asset Investment (000)**

	<u>Original Funding Request</u>	<u>Updated Funding Request</u>	<u>Increase in Funding Request</u>
Building	\$ 641	\$ 1,490	\$ 849
Foundation	943	3,489	2,546
Tower	384	1,650	1,266
Subtotal	<u>1,968</u>	<u>6,629</u>	<u>4,661</u>
Antennas	-	-	-
Radios	-	-	-
Multiplexers	-	-	-
Routers	-	-	-
DC Power	-	-	-
Subtotal	<u>-</u>	<u>-</u>	<u>-</u>
Total Construction	1,968	6,629	4,661
Start Up Costs	569	569	-
Total Grant Costs	<u>\$ 2,537</u>	<u>\$ 7,198</u>	<u>\$ 4,661</u>

**Rural Alaska Broadband Internet Access Grant Program
Supplementary Funding Request
Comparisons of Budgets
Asset Investment (000)**

	<u>03-09- 2004 Budget</u>	<u>Updated Budget</u>	<u>Increase in Budget</u>
Building	\$ 855	\$ 1,987	\$ 1,132
Foundation	1,257	4,652	3,395
Tower	512	2,200	1,688
Subtotal	<u>2,624</u>	<u>8,839</u>	<u>6,215</u>



Subtotal	<u>2,020</u>	<u>2,460</u>	<u>440</u>
Total Construction	4,644	11,299	6,655
Start Up Costs	861	861	-
Total Grant Costs	<u>\$ 5,505</u>	<u>\$ 12,160</u>	<u>\$ 6,655</u>

United Utilities, Inc.
Rural Alaska Broadband Internet Access Grant Program
Supplementary Funding Request
Construction Phase
Total Grant Project Budget
Asset Investment (000)

<u>Site</u>	<u>Note Reference</u>	<u>Building</u>	<u>Foundation</u>	<u>Tower</u>	<u>Antenna & Waveguide</u>	<u>Radio</u>	<u>Multiplexer</u>	<u>Router</u>	<u>DC Power</u>	<u>Total</u>
Akiachak	Note 1	\$ -	\$ -	-						\$ -
Akiak	Note 2	-	-	-						147
Bethel	Note 3	302	487	265						1,306
Chefornak		142	463	146						961
Eek		224	564	356						1,449
Kalskag	Note 4	291	323	186						958
Kipnuk		213	531	243						1,197
Kongiganak		268	582	243						1,303
Kwigillingok		174	506	240						1,130
Newtok		-	66	30						171
Nightmute		-	66	27						166
Toksook Bay	Note 5	-	66	49						210
Tuluksak	Note 6	50	368	120						669
Tuntutuliak		32	312	77						510
Tununak	Note 7	291	318	218						1,122
Grand Total		\$ 1,987	\$ 4,652	\$ 2,200						\$ 11,299
Requested to be Under Grant		\$ 1,987	\$ 4,652	\$ 2,200						\$ 8,839
Grant Funding	75.00%	\$ 1,490	\$ 3,489	\$ 1,650						\$ 6,629
Schedule 2, Start Up Grant Funds Requested										
TOTAL GRANT FUNDS REQUESTED										
Life (years)		30.4	50.0	50.0						569
Annual Replacement Reserve		\$ 65.4	\$ 93.0	\$ 44.0						\$ 396.7

Note 1: The wireless radio is necessary to provide service to the grant villages. We are not requesting grant money to offer service to Akiachak
 Note 2: The wireless radio is necessary to provide service to the grant villages. We are not requesting grant money to offer service to Akiak
 Note 3: The building/tower etc. is necessary to provide service to the grant villages, we are not requesting grant money to offer service to Bethel.
 Note 4: The building/tower is on "Kalskag Hill" and requires a \$125,000k power line extension, which is included in the building cost. These facilities will support services to both Lower and Upper Kalskag.
 Note 5: The building/tower etc. is necessary to provide service to the grant villages, we are not requesting grant money to offer service to Toksook Bay
 Note 6: The wireless radio is necessary to provide service to the grant villages. We are not requesting grant money to offer service to Tuluksak.
 Note 7: The building/tower is on "Tununak Hill" and requires a \$150,000 power line extension, which is included in the building cost.

Appendix F, September 29, 2004 -- Budget and Actuals for the Construction Phase

Unified Utilities, Inc. Grant Number _____

Reporting Actual Expenses From: _____ Through: _____

Expense Type	Funding Request				Excluded by UUI from Grant Funding Request				Totals
	Budgeted Actuals Balance	Building	Foundation	Tower				Other	
Bethel		302,000	487,000	265,000				252,000	1,306,000
	Actuals								0
	Balance	302,000	487,000	265,000				252,000	1,306,000
Chefornak		142,000	463,000	146,000				210,000	961,000
	Budgeted								0
	Actuals								0
	Balance	142,000	463,000	146,000			0	210,000	961,000
Ek		224,000	564,000	356,000				305,000	1,449,000
	Budgeted								0
	Actuals								0
	Balance	224,000	564,000	356,000			0	305,000	1,449,000
Kipnuk		213,000	531,000	243,000				210,000	1,197,000
	Budgeted								0
	Actuals								0
	Balance	213,000	531,000	243,000			0	210,000	1,197,000
Kongiganak		268,000	582,000	243,000				210,000	1,303,000
	Budgeted								0
	Actuals								0
	Balance	268,000	582,000	243,000			0	210,000	1,303,000
Kwigilingok		174,000	506,000	240,000				210,000	1,130,000
	Budgeted								0
	Actuals								0
	Balance	174,000	506,000	240,000			0	210,000	1,130,000
Lower/Upper Kalskag		291,000	323,000	186,000				158,000	958,000
	Budgeted								0
	Actuals								0
	Balance	291,000	323,000	186,000			0	158,000	958,000
Newtok			66,000	30,000				75,000	171,000
	Budgeted								0
	Actuals								0
	Balance	0	66,000	30,000			0	75,000	171,000
Nightmute			66,000	27,000				73,000	166,000
	Budgeted								0
	Actuals								0
	Balance	0	66,000	27,000			0	73,000	166,000
Toksook Bay			66,000	49,000				95,000	210,000
	Budgeted								0
	Actuals								0
	Balance	0	66,000	49,000			0	95,000	210,000
Tuluksak		50,000	368,000	120,000				131,000	669,000
	Budgeted								0
	Actuals								0
	Balance	50,000	368,000	120,000			0	131,000	669,000

Appendix F, September 29, 2004 -- Budget and Actuals for the Construction Phase

United Utilities, Inc. Grant Number _____

Reporting Actual Expenses From: _____ Through: _____

Expense Type	Funding Request				Excluded by UII from Grant Funding Request				Totals
	Building	Foundation	Tower					Other	
Tuntutuliak	Budgeted 32,000	312,000	77,000					89,000	510,000
	Actuals 0							0	0
	Balance 32,000	312,000	77,000	0	0	0	0	89,000	510,000
Tununak	Budgeted 291,000	318,000	218,000					295,000	1,122,000
	Actuals 0							0	0
	Balance 291,000	318,000	218,000	0	0	0	0	295,000	1,122,000
Non Community Specific	Budgeted 0	0	0					147,000	147,000
	Actuals 0							0	0
	Balance 0	0	0	0	0	0	0	147,000	147,000
Totals	Budgeted 1,987,000	4,652,000	2,200,000					2,460,000	11,299,000
	Actuals 0							0	0
	Balance 1,987,000	4,652,000	2,200,000	0	0	0	0	2,460,000	11,299,000

Total Actuals This Reporting Period	0	0	0	0	0	0	0	0	0
DCED To Reimburse 75 Percent	0	0	0	0	0	0	0	n/a	0

By signature, the Grantee certifies that the above information is true and correct and in accordance with the provisions of the Grant Agreement.

Grantee Authorized Signature

Date

DCED Approved Payment Amount:

Name and Title

DCED Approval By: