

Agency: Commerce, Community and Economic Development**Grants to Named Recipients (AS 37.05.316)****Grant Recipient: REACH, Inc.****Federal Tax ID: 92-0070127****Project Title:****Project Type: Maintenance and Repairs**

REACH, Inc. - Energy Efficiency Upgrades to Failing Heating System

State Funding Requested: \$98,000**House District: Juneau Areawide (31-32)**

One-Time Need

Brief Project Description:

This project will provide significant energy cost savings by replacing a failing mechanical heating control system with modern, energy-efficient controls.

Funding Plan:

Total Project Cost:	\$148,000
Funding Already Secured:	(\$50,000)
FY2015 State Funding Request:	(\$98,000)
Project Deficit:	\$0

Funding Details:

REACH, Inc. will spend \$50,000 from its fund balance to install the server and air handling controls in FY14 or early FY15 (Phase I).

Detailed Project Description and Justification:

This project will provide significant energy savings and improve thermal comfort in the REACH building in Juneau. The existing heating/ventilation controls date to the original construction of the building in the 1960s and need to be replaced.

REACH, Inc. is a service organization that grew out of the dream of a group of local families who wanted to organize employment and community activities for their adult children with disabilities. In 1977, REACH opened its doors in the basement of a church in Juneau. What started out as a small family-run program in a basement is now an agency serving over 400 individuals and employing 300 full-time and part-time staff.

The REACH, Inc. building houses core organizational functions including:

- Employment services
- Assisted living and in-home support
- Early intervention/infant learning program
- Intake & Resource
- Family supports
- Community art center (Canvas)
- Administration (Human Resources, Finance, Information Technology, Procurement)
- Support for offices in Haines and Petersburg and itinerant services provided in other northern Southeast communities (i.e., Wrangell, Hoonah, Skagway, Pelican, Gustavus, and Yakutat)

This energy conservation project is designed to reduce REACH, Inc. administrative building's annual heating cost up to 25% (approximately \$21,125 annually) by replacing a failing building heating control system with modern energy efficient digital controls. These upgrades will allow the building heating system to run only as needed, automatically reducing temperature when the building is not occupied. Fan and pump controls will also allow reduced heating system operation when needed.

Phase I (funded with REACH, Inc. funds)

Air Handling Unit Controls Cost: \$50,000

Phase II (legislative request - \$98,000)

Cost projections for Phase II are provided below.

Boiler Room Controls Cost: \$20,000

Heat Zone Controls Cost: \$38,500

Structural and Seismic Upgrades Cost: \$18,000

Supply and Return Fan Motor Replacement Cost: \$15,000

Control System Training (40 hours) Cost: \$6,500

Note: all of the quotes except for the cost for structural and seismic upgrades are provided by Siemens. Modern Mechanical provided the quote for the structural and seismic upgrades (see attachment for details).

Project Timeline:

The Air Handling Unit controls will be installed in FY14 or early FY15; REACH funds are being used for Phase I of the project. Pending legislative funding, Phase II will be completed in FY15.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

REACH, Inc.

Grant Recipient Contact Information:

Name: Millie Ryan
 Title: Executive Director
 Address: 213 Third St.
 Juneau, Alaska 99801
 Phone Number: (907)796-7240
 Email: mryan@reachak.org

Has this project been through a public review process at the local level and is it a community priority? Yes No



FY13 SNAPSHOT

Overview of REACH Services

Infant Learning Program

- ✚ Provides services to families with children from birth to 3 years of age who experience a delay in development or a disability
- ✚ Services are provided in the family's home, child's daycare, or other places in the community that are an important part of the family's life
- ✚ Services include developmental screening and assessments; family services coordination, including information and resources; and pediatric special instruction, speech, occupational and physical therapy
- ✚ Services are provided not just in Juneau but also in northern Southeast Alaska
- ✚ Services are funded with a mix of continuing and time-limited grants and Medicaid and insurance billings
- ✚ Revenues increased by 24% from FY12 (\$719.3) to FY13 (\$892.2)
- ✚ Number of referrals increased 4.9% from FY12 (162) to FY13 (170)
- ✚ Number of enrolled children decreased slightly from FY12 (146) to FY13 (145)

Intake and Resource

- ✚ Gateway to services with REACH, connecting families and individuals within the agency and throughout the community
- ✚ Staff help individuals and families 1) apply for services, including TEFRA (a program that waives family income in order to qualify a child for Medicaid) and short-term financial assistance; 2) secure needed resources from other state and local programs; and 3) provides grant-funded services to individuals on the Developmental Disabilities waitlist or individuals who are not eligible for Medicaid home-and-community based waivers
- ✚ Services are funded with a mix of continuing grants, shared revenue from other REACH programs (\$85.0) and TEFRA
- ✚ REACH received a new three-year Community Developmental Disabilities Grant; FY 13 funding was increased by \$40.0 from FY12

- ✚ Although TEFRA funds are a small part of the budget, they increased 45.0% from FY12 (\$14.9) to FY13 (\$21.6)
- ✚ TEFRA referrals doubled (REACH worked with 30 children in FY13, of whom 14 also received grant-funded services); outreach was expanded to Ketchikan and Prince of Wales Island
- ✚ Number of individuals receiving grant-funded services increased 20.9% from FY12 (91) to FY 13 (110); REACH has been able to serve more people with the same amount of grant funds because several high-needs individuals transitioned from grant funding to Medicaid-funded home and community-based waivers, which freed money up to serve more people
- ✚ Developed plan for coordinating FASD clinics in FY14

Support Services

- ✚ Provides a variety of daily living services, which are provided to individuals with intellectual and developmental disabilities in their own homes, in their families' homes and in the community, to help them live full and enriched lives
- ✚ Services include in-home supports, day habilitation, respite care, shared care, supported living, family habilitation and case management
- ✚ Individuals served range in age from 3 to 59. The types of services and supports provided reflect the needs of individuals with a wide range of living situations. In order to support younger individuals and their families, staff work around school schedules and family activities. Over half of the adults served live in their own place with goals involving household management
- ✚ Staff support individual interests, needs and participation in a wide variety of activities, including cooking or relationships classes, swimming, bowling and behavior therapies
- ✚ Services are funded with Medicaid home and community-based waivers
- ✚ Revenues increased 9.0% from FY 12 (\$4,494.7) to FY13 (\$4,898.1)
- ✚ Number of individuals served decreased slightly from FY12 (85) to FY13 (84)

Assisted Living

- ✚ Provides a variety of assisted living services and supports, including 1) a 6-unit apartment complex and a 4-unit apartment where individuals receive

a varying levels of support, including 24-hour assistance; and 2) round-the-clock assistance to individuals who reside in a variety of living settings, including one of REACH's three group homes (Glacier Woods, Mark Alan and Northland), one supported living community (Mendenhall Woods) and in individual homes scattered throughout the community

- ✚ Services range from in-home assistance with daily living such as personal care, following a schedule and cooking to community activities like shopping, attending appointments, exercising and doing volunteer work
- ✚ Services are funded with Medicaid home and community-based waivers
- ✚ Service recipients also pay rent or room and board, using their own resources and/or their families; some individuals receive housing vouchers to offset the cost of rent
- ✚ Revenues increased 22.3% from FY12 (\$4,177.0) to FY13 (\$5,108.6)
- ✚ Number of individuals served remained the same (23)

Enterprises

- ✚ Helps develop job skills and maintain employment of individuals with disabilities through three business enterprises, which include
 - ✓ Reach Custodial, which provides janitorial services at the Alaska State Museum, the Community Building, State Office Building, Alaska office Building, Court Plaza Building, Dimond Court House and the Governor's Office (state contracts; Juneau and Ketchikan Federal Buildings, Forest Service Ranger Station, Glacier Visitor Center, Federal Aviation Agency Automated Flight Station and the Coastguard Air Station in Sitka (federal contracts; and Alaska Electric Light & Power Company and the Bureau of Vital Statistics (private contracts). In FY13, REACH custodial had \$1,762.5 in sales and employed 2 individuals with intellectual and developmental disabilities. **Note:** REACH Custodial employed 29 individuals with other disabilities. **Note:** The number of individuals employed through REACH's custodial enterprise has decreased by 5% due to the losses of some state contracts and re-negotiation of the Federal Building contract; revenues will be decreased in FY14 although staff continue to look for new contracts that fit REACH's business model
 - ✓ REACH Shredding, which provides confidential document destruction. In FY13, REACH Shredding had \$139.2 in sales and

employed 16 individuals with intellectual and developmental disabilities

- ✓ 9th Street Café in the Juneau Federal Building. In FY13, the 9th Street Café had \$100.5 in sales and employed 12 individuals with intellectual and developmental disabilities

- ✚ Some employees with intellectual and developmental disabilities receive supported employment services, including job coaching and long-term support services, to learn their jobs and maintain their employment in the enterprise businesses over time
- ✚ REACH Enterprise sites also serve as a transitional program to help people learn work skills and habits before securing a job in the community
- ✚ Total revenues increased .079% from FY12 (\$1,989.6) to FY13 (\$2,002.2)

Supported Employment

- ✚ Helps individuals with disabilities secure and maintain employment
- ✚ Services include career exploration, job coaching and long-term supports
- ✚ Helps people get and keep individual jobs in the community as well as at one or more of REACH's three Enterprises
- ✚ Individuals have been placed in businesses such as Fred Meyer's, Rainbow Foods, World Wide Movers, Bridge Senior Center (and Care A Van), Canvas Art Studio, SAIL/ORCA, United Way, CARES Program, Costco, Subway (valley and downtown), Waffle Company and Super 8 Motel
- ✚ In addition, some individuals are being assisted to start their own businesses or market their art
- ✚ 10 staff have completed supported employment training offered by the University of Washington
- ✚ As a Community Rehabilitation Provider, provided services to the Division of Vocational Rehabilitation (DVR) for 25 Individuals with disabilities in Juneau and 12 individuals with disabilities through the Petersburg office. **Note:** REACH started provided services in Petersburg in FY13. **Note:** these services are generally provided to individual who have disabilities other than intellectual and developmental disabilities
- ✚ Services are funded with Medicaid home and community-based waivers, Intake and Resource grant funds and fees-for-service from DVR
- ✚ Overall revenues increased 28.2 % from FY12 (\$897.0) to FY13 (\$1,150.6)

- ✚ Revenues from Medicaid home and community-based waivers increased 26.5% from FY12 (\$869.0) to FY 13 (\$1,099.1); DVR revenues increased 83.9% from FY12 (\$28.0) to FY13 (\$51.5)
- ✚ 16 individuals with intellectual and developmental disabilities were working in jobs in the community

The Canvas

- ✚ Founded in 2006, The Canvas is REACH's community outreach and day habilitation program
- ✚ Includes an Art studio open to anyone in the community interested in taking classes in art, music and pottery
- ✚ Offers a variety of creative pursuits to community members, including children and adults with disabilities
- ✚ Helps REACH artists meet their goals through arts-based programming and helps REACH artists market their creative work
- ✚ In FY13, the Canvas focused attention on creating opportunities for REACH artists to show their work in the community and further participate in Juneau's art scene. As a result, 6 artists had a show at the Alaska State Museum, which included a class taught by those artists to 3 groups of 15 Juneau youth. A Big Brothers Big Sisters art class was taught by a REACH artist. A community play was performed by the Canvas Players in the Canvas Art Gallery. The Canvas also had a booth at various markets around town including the Public Market
- ✚ In FY13, the Canvas contracted with many different instructors to expand artistic offerings and expose REACH artists to new projects and mediums, including glass mosaics, paper mache, paper and bookmaking, jewelry and soldering
- ✚ Focused on filling community classes and increasing attendance; as a result, in FY13 twice as many classes were offered and less than a quarter were cancelled (half of all classes were cancelled in FY12)
- ✚ In order to professionalize the Canvas Gallery, all shows are hung to ADA standards, the gallery is well-lit and aesthetically organized to best showcase the work; as a result, Gallery sales have increased
- ✚ Services are funded through Medicaid home and community-based waivers, Intake and Resource grant funds, fundraising, grants from foundations or corporations and sales of products and classes
- ✚ Although revenues decreased .033% from FY12 (\$654.7) to FY13 (\$652.5), losses decreased 41.8% from FY12 (\$70.4) to FY13 (\$41.0)

- ✚ Number of REACH artists participating in Canvas classes increased 29.4% from FY10 FY12 (34) to FY13 (44)

Quality Assurance

- ✚ Responsible for identifying and implementing an effective system for enhancing the quality and efficiency of REACH services; promoting ethical business practices; identifying, evaluating and reducing the risks to individuals REACH supports as well as the agency as a whole; and ensuring compliance with state and federal regulations
- ✚ Includes the Care Coordination program; Care Coordinators assist children and adults with Medicaid home and community-based waivers to access needed services
- ✚ Care Coordinators are responsible for developing an annual plan of care that describes the medical, social and educational services the individual needs
- ✚ In addition, care coordinators ensure the health and safety of waiver recipients through ongoing monitoring, advocacy and support
- ✚ Revenues increased 96.3% FY12 (\$236.5) to FY13 (\$464.3)
- ✚ Number of individuals who received care coordination services increased 6.3% from FY12 (111) to FY13 (118)

REACH, Inc. – Energy Efficiency Upgrades to Failing Heating System

This project will replace the 1960's era heating system controls in the REACH Building in Juneau, Alaska. Parts of the original controls have failed, including outside air controls and fan timers, causing the heating system to run 24/7 at full speed and temperature which is very inefficient and wasteful. Repair or partial replacement of the original pneumatic control system has been evaluated and determined to be a poor use of funds due to the age of the system. Building controls replacement will also allow for improved thermal zone comfort in the building and CO2 control.

Replacement of the controls will save a minimum of \$21,000 per year, money that can be directed toward improved services and operations.

Upgrades to the heating controls system include:

- Air Handling Unit Controls Cost: \$50,000
- Boiler Room Controls Cost: \$20,000
- Heat Zone Controls Cost: \$38,000
- Structural and Seismic Upgrades Cost: \$18,000
- Supply and Return Fan Motor Replacement Cost: \$15,000
- Control System Training (40 hours) Cost: \$6,500

Total Project Cost: \$148,000. REACH is funding the initial \$50,000 Air Handling Unit control replacement which will include the Direct Digital Controls server required to operate the system.

REACH Funding Request: \$98,000.

Friday, January 24, 2014

Aaron Brakel
Facilities Manager
REACH, Inc.
213 3rd Street
Juneau, Alaska 99801

RE: REACH Building DDC Budget

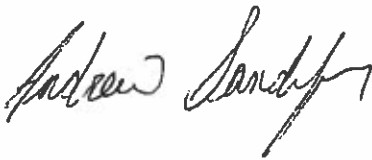
Dear Aaron:

Based on the discussions we have had with your facility managers and executive team, we understand that optimizing energy and controlling your operating costs are your top priorities. Enclosed is Siemens Industry, Inc., Building Technologies Division (Siemens) budgetary proposal, which contains our recommended approach to help you achieve these goals.

Our local account management team and engineers will stay with REACH, Inc. every step of the way to deliver the solutions and support you need today and make the best recommendations to address the challenges in the near future. As a leading global building performance integrator and service provider, you can depend on Siemens to deliver quality services and help you achieve the best return on your investment.

I will contact you within the next week to answer any questions and continue discussing your objectives.

Sincerely,



Andrew Sandefur
Service Sales Executive

Investment & Savings / Value

PRICE SUMMARY

Below are pricing details for the customized solution Siemens recommends for Juneau Reach Alaska. The total project Budget of \$130,000.00 is based on the items outlined in this proposal.

Multi Zone Air Handling Unit Controls Upgrade Budget.....	\$50,000.00
Multi Zone Air Handling Unit Supply and Return Fan Motor Replacement Budget.....	\$15,000.00
Boiler Room Controls Upgrade Budget.....	\$20,000.00
Space Zone Control for 11 Zones Budget.....	\$38,500.00
DDC System Training 40hrs.....	\$ 6,500.00



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REACH
213 Third Street
Juneau, Alaska 99801

Control Upgrade Assessment
January 30, 2013

Purpose

Determine the estimated cost and payback period for upgrading the aging building heating controls. The new control system will provide significant energy cost savings by replacing the old antiquated pneumatic mechanical control system with a modern energy efficient direct digital control system.

Existing Mechanical System

The existing mechanical system has a supply return fan system with a hot deck and cold deck (natural ventilation only) located in the penthouse. This supply fan serves 11 zone damper controls which in turn supply tempered air to the 11 zones throughout the 2 story building. The hot deck is supplied with hot water by a 3-way valve. The 3-way valve is served by a circulation pump from an electric and an oil-fired boiler located on the first floor. Each boiler is capable of carrying the entire buildings heating load. Two central exhaust fans serve the building for exhaust. There is heating water sent throughout the building serving 5 cabinet unit heaters and 8 convectors. Only the cabinet unit heaters have any thermostat control.

Existing Controls

The existing mechanical system is currently being controlled by pneumatic controls for the 11 zone thermostats with a 3-way valve controlling the temperature to the hot deck of the supply fan plenum. Mixed air and amount of outside air is controlled by someone manually going up to the penthouse and manually adjusting a dial to call for more or less outside air. The supply, return and 2 exhaust fans operate 24 hours a day and 7 days a week. A hot deck and natural cooled cold deck serve 11 zones in the penthouse. The 11 zones are controlled by 11 zone thermostats zoned throughout the 2 story building and call for heat or cooling. A new oil-fired boiler and electric boiler have been installed to provide the heat for the entire building. Either can operate and provide adequate heat to meet the demands. At this point the selection from oil to electric is done strictly manually by the maintenance coordinator.

Annual Energy Cost

The oil consumption per month and the electricity cost per month were recorded for the last 3 years. An average yearly cost for electricity is \$34,400 and \$50,100 for oil. Total yearly use is \$84,500. With proposed control changes a minimum savings can be expected of 25% which equates to \$21,125.

Control Upgrades

The controls will be upgraded to Direct Digital Control (DDC) with a central computer showing graphics and all mechanical systems for monitoring and control. The control



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system will have the capability to monitor all systems remotely or provide notifications with alarms. This system will have the capability to upgrade for security, lighting control, and or remote monitoring of most electrical devices.

The supply and return fan will upgrade to speed controllers. This will allow the fans to ramp up and down and operate at a programmed time. All the zones will have thermostats which can provide feedback to the control system. Each of the 11 zones will have a supply temperature monitor and control. Supply air on the hot deck will be controlled based on outside air and with feedback from each zone thermostat this will allow the temperature to reset to the coldest zone. A daily/weekly schedule can be programmed into the occupied times of the building to allow the fan to shut down for a night setback period with a 60F set point on all the zones. This will provide for considerable savings in energy. The convector pump will operate on outside air control, when the outside air is above 55F the pump can shut down. The mixed air sensor on the supply fan can control the amount of outside air accurately while allowing a measurement of carbon dioxide in the return air to try and provide additional energy savings.

The estimated cost for the control upgrade with design and balancing is \$125,000. This would have a minimum payback of less than 6 years with a conservative estimate.

Structural Support Upgrade

The supply fan on the penthouse has been installed on a wooden support standing off the ground approximately 36". The support has wood cross bracing and has been shimmed up all across the floor with wooden shims. The wooden supports has shrunk and twisted causing all the shims to be installed to keep the platform in contact with the bottom of the supply fan. The stand is made of dimensional lumber and requires replacement.

A new metal stand is required to provide adequate support of the fan. The metal stand would be made out of structural channel and bolted to the concrete floor. In order to build this in place the fan will need to be jacked up in place with the new structure installed. The stand will have to be designed and installed with an estimated cost of \$18,000.

Shane D. Hooton

Shane Hooton, PE
Modern Mechanical