

Dear CCHRC member,

We hope this letter finds you off to a great start in 2010. The Cold Climate Housing Research Center had a productive finish to 2009 and we are excited to share our progress with you in this newsletter.

Also, please join us in welcoming new CCHRC Board Members **Jerry Herring** and **Lauri Strauss**. Herring and Strauss were elected to fill seats C and D, respectively, as outgoing members Chuck Renfro and Clai Porter termed out. Thank you, Chuck and Clai for your years of service!

Product Testing Lab

Long-held plans for a CCHRC Product Testing Laboratory have come to fruition, and the accomplishments are already accumulating. CCHRC is developing the Product Testing Lab thanks to generous support from the Alaska Housing Finance Corporation, the Wallace Research Foundation, and CCHRC corporate members. Plans are also in the making to expand the Product Testing Lab's role in CCHRC by working directly with companies interested in testing their products in Alaska.

Insulating Paints

A recently completed product test included two insulating paints that claimed a remarkable potential for homeowners to achieve energy savings. CCHRC evaluated the paints by several means, and determined that both lack any measurable effect in reducing heat transfer or heating demand. This work has received coverage by Energy Design Update and GreenBuildingAdvisor.com.

Safe and Effective Exterior Insulation Retrofits

The Product Testing Lab is also continuing CCHRC's tradition of conducting research in different regions of Alaska using our Mobile Test Laboratory. Upon completion of a multi-year project in Juneau, the mobile laboratory returned to Fairbanks to test wall retrofit techniques using exterior foam insulation. With the current push to retrofit homes, it is important to understand how moisture transfer is affected by common exterior insulation methods. Is there danger of moisture accumulation leading to rot or mold in the walls? This project will examine the potential for moisture accumulation as a function of exterior insulation R-value and the presence of double vapor barriers.

Certified Alaska Tough

CCHRC will soon be launching a novel certification program for building products focusing specifically on energy efficiency and suitability of products for cold climates. Certified Alaska Tough will not duplicate existing certification programs, but instead will build upon their contributions. The first product line for certification will be residential windows. More details will be available soon.

Outreach

The CCHRC has a **new website!** We've had more than 1600 visits to the website since it went live, which is a significant increase in traffic from the old site. Of those visits, 38% have been new visitors with the rest being returning visitors. The average visitor spends more than six minutes on the site, and views more than four pages!

The new site:

- Updates the look of CCHRC homepage.
- Is significantly easier to navigate.
- Places all research documents publications, videos and other information in easily accessible locations.
- Allows for staff to easily update and make changes.
- Allows room for growth.
- Expands pages for the CCHRC board, staff, facility and much more.
- Demonstrates CCHRC's cold climate knowledge on building, energy, and other topics.

To view the new page, visit www.cchrc.org.

CCHRC continues to collaborate in new ways with other organizations that are doing similar work. In the past few months, CCHRC Outreach staff has joined the Alaska Energy Authority's "Energy Efficiency and Conservation Workgroup" and collaborated with the City of Fairbanks on a proposed rainwater and pollutant abatement education effort. Both efforts will help us "get the word out" to the interested public -- in ways we haven't been able to in the past.

Look for the CCHRC display at the Wisdom and Associates Training Center in Anchorage. Thanks to Mr. Wisdom's generosity, CCHRC will (as of February 7) host a display of current research projects, building education and membership materials at the business' new center at Lake Otis and Tudor Roads. We are grateful to Wisdom and Associates for this opportunity. If you have a storefront and would be willing to allow CCHRC to set up a small rack or stack of materials, please contact Suzanne Bishop (suzanne@cchrc.org).

October saw a "changing of the guard" on the Outreach Team. Danielle Ayers stepped down from the Director post in order to further her education. Fortunately she opted to stay on as the team's graphic designer, working part time. Suzanne Bishop, formerly the Outreach Librarian, has stepped into the Director position. Ilya Benesch has moved from Outreach to the Design team. There he will be working on the SNS projects and continue to field questions from the public. Ty Keltner's responsibilities have broadened, and his new title, Public Relations Specialist/Media, better reflects his role in all things audio-visual, media relations, the website and as a generally helpful guy.

Sustainable Northern Shelter

After months of negotiation and paperwork between the Tagiugmiullu Nunamiullu Housing Authority and the Village of Anaktuvuk Pass, a family has moved into the prototype house that was built last summer! The electrical, ventilation, and sewage treatment systems are being monitored. Data collected from this monitoring will assist us in the designs of future houses.

The Sustainable Northern Communities and Sustainable Northern Shelter Department has been pressing forward on new housing design projects in the villages of Point Lay and Quinhagak. Community charettes were held in both villages this past fall. Both of these meetings had great turn out from the community with many members expressing a deep interest in the design of the houses. Both projects also present interesting challenges based on their locations. In Point Lay, the soil conditions and the ice wedge polygon structure of the land are providing the basis for unique foundation design

considerations. The windy location of Quinhagak is allowing for designs that are dealing with heavy wind loading and water infiltration challenges. Both of these projects are scheduled to begin construction this spring/summer.

Research

Recent efforts towards the Combined Heat and Power (CHP) project at CCHRC have focused on researching the state of the existing technology and identifying potential collaborators for a small-scale biomass CHP demonstration project. The potential technologies identified include: gasification, Rankine Cycle, Organic Rankine Cycle (ORC), and Stirling Engine. At this time a commercial or near-commercial biomass CHP system, on a scale appropriate to this project, has not been identified.

CCHRC is currently concentrating on identifying companies capable of collaborating successfully on a custom design/fabrication system for this project. A small number of potential partners have been identified as candidates. CCHRC is in discussions with these companies to more completely define the project and products, determine project costs, and determine the viability of each of the potential options.

PORTAL

The PORTAL continues to host a monthly series of consumer **classes** taught by Alaska Craftsman Home Program. The two-hour evening classes help homeowners tackle their home energy retrofits by teaching them about insulation, ventilation, doors and windows, heating systems and more.

AHFC's Bob Ferguson came to CCHRC to meet with Fairbanks-based energy raters in mid-December. Other AHFC officials also participated in the meeting via teleconference to communicate updates and changes within the state's Home Energy Rebate Program. Currently all the program funding has been allocated. The program will still be taking new participants, but only as money rolls back into the program from homeowners who did not collect their rebates before their 18-month deadlines. Those wanting to get on the waitlist for As-Is energy ratings should still call the PORTAL (907-455-4328) or visit www.akrebate.com.

Meanwhile, homeowners participating in the rebate program continue to consult with the PORTAL on paperwork and program guidelines. As of December 31st, AHFC reports more than 700 Fairbanks North Star Borough residents have finished their home energy retrofits and have collected their rebates. About 3,200 more homeowners in the Fairbanks area continue to improve their homes before their 18-month deadlines.

Our Members

We are happy to welcome our new members. At the **Corporate level**: Interior Alaska Building Association and Wisdom & Associates. At the **Foundation level**: Edgetech I.G., Shannon & Wilson, Inc., Specialty Products, Inc. and Spinell Homes, Inc. At the **Sustaining level**: Award Windows and Pike's Waterfront Lodge. At the **Small Business level**: Alaska Craftsman Home Program, Central Alaska Engineering, Cornerstone Custom Homes, Corvus Design, Ketchikan Indian Community, Patenaude-Trempe Inc., RIM First People, Rural Energy Enterprises, Inc. and The Petersen Group, Inc. At the **Individual level**: Cole Sonafrank, Colin Craven, David Owens, Lauri Strauss, Michelle Doyle, Nate Mohatt,

Rose Baumes, Sidney Kelley, Suzanne Bishop, Todd Hume and Tracy Antonovich. At the **Student level**: Michael Berrie and Lynn Church. Thank you for your support. And as always, thank you for the continued support from our members who recently renewed their membership!