An air of excitement and optimism currently prevails at the Berlin Housing Authority, and one can sense it among staff and residents alike. Quality of life in general has been uplifted with the implementation of their new Energy Reduction Project. Big strides have been made that will save energy, save funds and make life better for residents with less impact on the environment. Changes have been made in the way heat and hot water is generated, delivered and maintained in living areas, and also to the indoor air quality. They did a lot of work” Said Theresa, one of the residents, “They did a wonderful job! I feel like making a sign, you know, you see them everywhere ‘I love it here!’ “ She exclaimed happily.

That positive feeling extends into the City of Berlin, struggling for many years now with its own changing economy. The new wood pellet heating industry is helping to revitalize the city and is being implemented in many places. The initiative to change over to wood pellet boilers supports the local forest industry, creates jobs and work for local contractors. The benefits extend even farther into the entire Northern Forest Region as we move away from our dependence on foreign oil, and to a greater use of wood, a locally renewable energy source! BHA is proud to be a large supporting part of this initiative for our region.

The BHA’s 55 units were all in need of upgrades as they were using oil-fired boilers for heat and hot water installed in the early 1970’s. The first step was to obtain an energy audit and Energy Reduction Plan from Buffalo Energy. Savings were projected. NH Housing Finance Authority approved a loan under their Greener Homes Program for $254,480 in December of 2011. NHHF’s Ted Wilkinson, helped Berlin Housing Authority navigate grant resources and requirements. Ted’s technical expertise was critical in securing the finance package.

The Northern Forest Center catalyzed a new way of thinking for BHA. They encouraged "outside the box" heating solutions and the installation of pellet boilers based on efficiency, fuel accessibility and cost measures. BHA is proud to be a partner in the support of our local Northern New Hampshire economy through fuel and technology purchases.

Perfect timing, Berlin was named as one of three “target communities” to receive assistance under the newly formed Berlin Better Buildings program, financed by the NH Community Development Finance Authority (CDFA). BetterBuildings NH was funded through an American Recovery and Reinvestment Act (ARRA) grant awarded to the New Hampshire Office of Energy & Planning. OEP contracted Community Development Finance Authority to manage the three-year project and plans included expanding the program to additional New Hampshire communities. The extra funding helped to cover the cost of the new boilers, a large silo to store 26 tons of wood chips on site, a conveyer to feed the furnaces, and some additional sprinkler heads for fire safety. Because there was another funder prepared to cover the extra expenses.

Tri-County CAP’s Weatherization Program helped us implement water and appliance efficiency measures in all of the apartments. With the funding in place, the dream could now be realized at BHA.

New Energy Star refrigerators were purchased locally from Top Furniture. New water fea-
tures with low flow devices were installed on showerheads, sink faucets, and toilets which are ADA height making them easier for handicapped and older residents to access. Exhaust fans in the bathrooms have a “hands free 24 hours smart timer” with a manual override. They sense air quality and humidity and go on or off automatically. Programmable thermostats were installed in every apartment, with a high setting of 72 degrees. New high-efficiency circulation pumps were installed, and old indirect-fired hot water storage tanks were decommissioned, reducing wait time for hot water in the facility. Crawlspace under the units were completely redone, adding weatherstripping, a continuous vapor barrier to the earthen floors, foam insulation, and ventilation fans with automatic humidistat controls.

“It’s a big improvement! ... I don’t have to touch the thermostat, they programmed it. I can put it on automatic or manual. Sometimes my TV gives off heat and it picks that up, but I can adjust it. It is comfortable here...said Geraldine, one of our senior residents. One of the handicapped residents, Mike Eastman, appreciates the automated features with his limited mobility: “The fan is a wonderful addition since I came, it keeps moisture from forming on the walls, and comes on by itself. Everything to me is a plus. The people who did the work were really good, things went really well, they were super courteous and very conscientious...”

Last but not least, the old boiler room was completely gutted, new wood pellet boilers replaced the old oil-fired boilers, along with the storage silo, vacume pellet system and additional sprinklers for safety. All this is expected to result in an annual savings of $40,000 to the BHA.

The implementation of the Energy Reduction Project not only made the residents happy, it gave a boost to the local economy by pumping one-half million dollars back into the community, since all local businesses were used to deploy the plan. In a small community like Berlin, businesses often work together well because of being familiar with other businesses’ needs and capabilities.

One of the ways this helped was by recycling. Old material was recycled whenever possible, further saving resources and reducing expense since disposal of old materials can be costly. For example; Berlin Housing Authority applauds Nordic Construction Services’ Dave Estes who hauled two tanks to a maple products company to be repurposed. Mary-Jo Landry states,"It is a pleasure doing business with a company that finds a reuse for materials that are functional and can provide an economic benefit." Nordic was one of the many local vendors involved in the boiler room replacement project under the watchful eye of Brian Lang.

Brian Lang of Brian Lang Home Remodeling became the point person for the $337,000 contract and was committed to hiring as many local providers as possible: including Nordic Construction, Northwoods Electric, Gosselin Plumbing, Presidential Insulation and Munces. Andre Caron of Caron Enterprises was hired as Clerk of the Works and his intimate familiarity with engineering and City processes enable us to navigate the permit and installation phases in a timely and efficient manner. Pellet boilers were purchased from Maine Energy Systems in Bethel, ME.

In these uncertain times we thank our dedicated staff and Commissioners who continue to set our direction on such a positive course. This was one of the largest projects undertaken by BHA with ninety-seven housing units updated with energy saving, cost saving, quality-of-life
enhancing features. Without the vision and tenacity of our Board of Commissioners and Executive Director Mary Jo Landry, none of this would have been possible. "We do it for our residents, who may be your family or your neighbors or someone you know from a store you frequented. Many are still contributing members of our community. We owe it to them and our future generations to be responsible stewards for our seniors, our disadvantaged and our natural resources. This means providing a comfortable, positive, healthy place for them to live."