

TRIBAL ENERGY

The Energy Group is maintaining a high level of activity. Each member is working separately and together to provide options and ideas for energy conservation. A regular meeting day has been established and it will be the second Thursday every month from 1:30 to 3:30. Meetings usually take place in HR's small conference room. Anyone and everyone that wants to contribute their ideas and enthusiasm is welcome to be part of the team.

The Energy Group has been working diligently to follow through on projects reported in the First Quarter 2012 newsletter - in addition to initiating some new ones.

Jon Paisano continues to work with two consulting firms on two different projects. TSS Consulting is finishing up their study of the feasibility of a waste-to-energy plant that would supply energy and dispose of waste. They are concentrating on agricultural and forest wastes. The study should be complete by the end of May. The second project is the completion of the Tribe's strategic energy plan. RCI Consulting out of Montana will finish this very important project in early May. The Strategic Energy Plan, while an important tool to help direct Tribal energy policy, is also important to have a plan in place when reaching out for funding of energy projects. More and more agencies require a strategic plan be in place before committing funds of any kind.

In February, as part of the Energy Group's outreach commitment, Jon and Johna Boulafentis of the Air Quality department of Nature Resource's ERWM office presented an energy conservation program to the Nez Perce Tribal Housing Authority. There were some give-aways and they discussed recycling, water conservation, air quality tips and other topics with a small but enthusiastic gathering of Housing patrons.

John Wheaton has been working on a project that is aimed at making the East Kamiah Sewer Interceptor operate more cleanly and with greater efficiency – both in energy and manpower. The project is being funded by the United States Department of Agriculture – Rural Development while Indian Health Services is contributing engineering analysis for the project.

The recycling program has gained an Aide I position. The new aide will be doing the recycling and ground

maintenance. Cardboard, aluminum, tin, plastic and paper is being collected at the Boys and Girls Club and other locations on campus. The Veterans Building and Commodity Foods supply much of the cardboard.

The Energy Group, Ann in particular, has also investigated the possibility of a Tribal greenhouse. A greenhouse offers the advantage of controlled growing conditions year around. This last fall/winter the idea was the central topic for discussion among Tribal staff that have plant restoration programs. The primary concept of these discussions was to decrease the cost of the plants used in the annual plant restoration programs by Natural Resources and Fisheries and, at the same time, provide Tribal employment opportunities. One factor considered was that the new Lapwai Waste Water Treatment discharges an average of 87,000 gallons of grey water, suitable for irrigation, every day. At about this same time, Clearwater Paper offered free, for the taking, any of the ten or so greenhouses on their property to government and non-profit institutions from this area.

The Energy Group then enlisted Scott Melton, University of Idaho professor, and his Business 456 senior Quality Management class from the College of Business and Economics to assist the Tribe with a feasibility study to explore more effective ways to use the grey water discharge.



The class, with the Energy Group, took a trip to look at the Clearwater Paper Company's greenhouses. From this visit the team considered the age of the greenhouses, the small benefits gained from the tear down, and the continued operating costs associated with these older style greenhouses relative to modern counterparts.

The report written by Andrew Meaux, Andrew Canegaly and Fred McGlashen, U of I Seniors concluded that using the grey water to grow shrubs and trees for the use of reforestation and land reclamation on the Reservation would not be the highest valued plants for a greenhouse and the number used by the different programs does not support a business model that would be worth the investment.

The report recommends that if the main goal is to provide sustainable employment on the Nez Perce Reservation, an industry like growing tomatoes in a greenhouse would be a good use of the water coming off the treatment plant. The group indicated, to the Tribe, further study is necessary to make a stronger case for viability of the greenhouse industry as a for profit venture on the Reservation.

Our behind-the-scenes-man Anthony Broncheau is doing his usual stellar job of helping the team with grant budgets and, when the deadlines are close, with expert submission and follow up procedures.

After some delays, Terry's project to improve energy efficiency in five Tribal buildings is scheduled to begin in early June. The contracts to replace outdated lighting fixtures and windows and to add needed levels of insulation should be approved by the end of May and work started soon thereafter. The sequence and timing of each project is still undetermined but will be coordinated through Rich Ramsey of the Maintenance Department.

Energy Tip: *A six-inch pan on an eight inch burner will waste more than 40 percent of the stove's energy. Use pots the same size as the burner. Use lids when possible so you can cook at a lower temperature.*



During March, Jon and Terry worked on a grant that would provide funding to explore the possibilities of small scale energy production through hydrokinetics. The funding request, to the Division of Energy and Mineral Development of the BIA, was for \$120,300.

Hydrokinetic energy production is realized by placing small, water-powered turbines in fast flowing water. Much depends on a constant stream flow and a favorable location along distribution/transmission power lines. The Clearwater River seems a perfect fit for this type of electrical generation.



There are several types of equipment used for power production. One type floats on a small platform in the fastest current of the river. Another type can be attached, below the low water level, on

existing bridge pilings. The goal would be to place the generating equipment in the least intrusive manner.

If funding for the feasibility study is received, the scope of work would include, but not be limited to the study of stream flows,



types of equipment best suited to the area, potential energy generated, possible socio-economic impact, placement methodologies, government regulations, fish production impact and costs associated with any such project.

In early April, Jon and Terry worked together again, with help from Ann, on a Source Reduction Assistance grant offered by the Environment Protection Agency. This study would explore the possible reduction of consumption resources such as electricity, water, waste and most importantly fuel that might be realized through a Tribal four day work week.

This study would look most specifically at the reduction in the Tribe's carbon footprint through fuel savings. The fact that a fair percentage of Tribal employees make a round trip commute of at least twenty miles, five days a week, would seem to indicate that the possible savings could be significant.

Research for the grant indicated that, because of the rural location of many of the Tribal offices, the commute, by employees, is estimated at 51,460 miles per week. A four day work week would cut mileage and fuel consumption by 20%.

The State of Utah experimented with a four day week a few years ago and found that it helped cut



overtime hours worked by employees and did reduce some consumption of resources. The state realized a thirteen percent reduction in energy consumption and as much as six million dollars in (2009-11) gasoline costs. Greenhouse gases were cut by more than 12,000 metric tons per year. However, after two years of the experiment, the state returned to a five day week for the convenience of patrons of their offices. *

*Time Magazine/Health, September 7, 2009.

Energy Tip: *Familiarize yourself with your water bill. A significant jump in water usage can signal an undetected leak somewhere in your system.*