

# Radar Acquisitions uses waste coal to make briquettes

by Marco Murillo



TOP TO BOTTOM: An example of a field of unmarketable coal waste. Processing the waste coal. Making briquettes. The final briquette product. Photos courtesy Radar Acquisitions Corp.

Present and past coal mines need to get rid of waste or 'junk-coal'. The fact is that many of the coal mines in the eastern part of North America have waste coal ponds and gob piles (unmarketable coal) that have to be reclaimed before the piles become the subject of environmental concerns or spawn possible lawsuits.

Washing of the coal to remove soils and extraneous materials from the run-of-mine coal, when it was first mined, generated many of these waste coals. **Radar Acquisitions Corp.** [RAC-TSXV; RDAQF-OTCBB] has identified at least 40 sites with waste coal ponds or piles in the U.S. The company has entered into agreements to reclaim a handful of these sites, addressing environmental concerns and using the resulting cleaned coal in a re-engineering process for manufacturing energy-dense briquettes, the kind used by coal-fired power plants.

Considerable quantities of fine coal are generated when coal is mined and washed prior to transportation to the end user. Fine coal is often rejected through a water-based slurry to a tailings pond. The know-how to produce a re-engineered briquette from this waste coal is in the hands of Tim Bergen, CEO of Radar. Joining up with New Energy USA, an experienced partner in briquette manufacturing, the group is developing a solid fuel product named Re-Fuel, based on waste coal and biomass on a 5:1 ratio.

What Re-Fuel offers is an extra energy value fuel that can be designed for specific uses, from a feed containing an average of 80% coal, and 20% total-ing inert material and biomass. This fuel creates tax credits. Business profit projections are based on a power generation market keen on CO<sub>2</sub> credits from reclaiming the waste coal and on using bio-waste. Bio-waste can be obtained for free or even at a cost paid for by the owner from communities near the project sites. Re-Fuel has a market of more than 100 coal-fired power plants in Ohio alone with prices for stoker coal at US \$65 to US \$75 per ton, and US \$40 to US \$55 per ton for steam coal.

Linden Swensen, former VP of Kiewit Mining Group and presently directing the joint venture, RPS Fuels, LLC, said that the technology is producing briquettes with at least double the calorific value of coal waste alone. The process combines refuse coal with various biomass materials to produce a product that looks and behaves like coal, but burns much cleaner. The final product can be manufactured to meet end-user specifications, such as size, BTU and carbon credit eligibility. The joint venture has plans to build Re-Fuel plants throughout the Appalachian region of the United States and anticipates four operating plants by the end of 2008. The production of Re-Fuel is also helping the joint venture to qualify for the United States' Section 45 tax credit.

In the context of energy production facilities, this small, almost transportable model plays an important role. It increases the efficiency of a larger-scale power supply chain involving coal mines, dams, and electrical generation. Large-scale systems in western Canada and the U.S. comprise transportation infrastructure and biomass harvesting. In addition, there are district-scale urban systems generating large amounts of sewage, industrial and municipal renewables suitable to be integrated into the technology. The Re-Fuel waste coal treatment system significantly reduces the risk of ground water contamination by removing the coal, a main concern for mining engineers.

The complex part of the process may not be finding the resources, but finding how to compress the carbon-rich material and dealing with the changing properties of the 20% biomass the briquettes incorporates. Biomass feedstock can change from one stock to another from wood mill waste to urban sludge, food industry waste, pulp and paper waste and agri-waste.

Another important aspect the group is managing to control is the moisture content of the briquette. This is done by applying a coating that prevents water absorption by the briquette product. The technology, which is pending a patent, uses various binders, depending on the customer's requirements, that may consist of latex, asphaltenes, lignite or starch.

Radar Acquisitions recently closed a private placement for gross proceeds of \$1.09 million, which will be used to secure waste coal sites for the joint venture with New Energy USA, LLC, evaluate the company's Colorado coal deposit, and for other financial and operating purposes. ■