

# Aprovecho and Chinese Factory Agree to Mass-Produce Improved Cook Stoves for International Market

High-quality, low-emission and very affordable cooking stoves will soon be available around the world, thanks to a long-term agreement signed by Aprovecho Research Center and Shengzhou Stove Manufacturer in Shengzhou, China, on August 24, 2007. Shengzhou Stove will manufacture the stoves according to Aprovecho's specifications.



Officials from Shengzhou Stove and Aprovecho seal the deal.

Shengzhou Stove will produce three wood-burning stoves for Aprovecho: a household Rocket stove, an institutional Rocket stove with a 60 liter stainless-steel pot, and an extremely low-cost refugee stove.

All of Aprovecho's stoves reflect cutting-edge design that minimizes fuel consumption and harmful emissions, as part of its commitment to improve indoor air quality and reduce global warming.

Shengzhou Stove will manufacture the stoves to meet Aprovecho specifications for performance, fuel efficiency, durability, emissions, and price. The stoves will be shipped from a port near Shanghai to customers all over the world. Shipping to farthest ports will add about 30 cents per stove to the final cost.

The factory is well set up for mass production. The design calls for using high-quality, durable ceramic combustion chambers, which the factory can produce at very reasonable prices. Similar coal-burning stoves that Shengzhou currently manufactures retail in China for the equivalent of U.S. \$1.50 to \$3.00, depending on the size.

Aprovecho is working closely with the Shengzhou Stove owners to ensure that manufacturing conditions are safe and that the materials used are high quality and nonhazardous.



Dr. Ron Severson assisted Aprovecho in creating the collaboration. He is on the faculty of the Lundquist College of Business at the University of Oregon, where he teaches courses in cross-cultural business negotiation

Shengzhou Stove currently produces and sells 2 million combustion chambers for stoves each year. The factory also makes and sells 500,000 coal-burning improved cooking stoves each year. In the last five years, the factory has made and sold approximately 10 million combustion chambers and 2.5 million improved cook stoves.



Mr. Shen, chairman of the Shengzhou Stove board of directors, learned the business from his father.

In the coal-burning stoves now being made, a refractory ceramic combustion chamber fits into a sheet-metal stove body. The chamber is surrounded by perlite and ceramic-fiber insulation. A cast-iron stove top seals the insulation into the stove.





The clay deposit that Shengzhou Stove uses for its ceramic combustion chambers is located on the factory grounds. Earth moving machines bring the clay to large machines that prepare it for use.

The clay is mixed and extruded into different combustion chambers. The refractory ceramic cylinder, shown being extruded here, is used as the combustion chamber in many of the smaller stoves.



Shengzhou Stove's large, clean-burning, coal-fired kiln is also on site. The kiln is 20 meters wide and 55 meters long. Workers here place dry-clay combustion chambers into large tunnels in the kiln for firing.

During firing, workers walk on the roof of the kiln, dropping small amounts of coal into the tunnels where it burns evenly to change the clay combustion chambers into hard ceramic.





Shengzhou Stove is a family business with about 100 employees. It is a well run, pleasant workplace in the country, overlooking a small river.