A Jet Engine In My Living Room

A major portion of our heating in Colorado was provided by a high-efficiency woodstove in the living room. It was pleasant to have a nice warm room to hide in, but it did little for our bedroom or the rest of the downstairs rooms.

There were some existing ducts I could have tapped into, and distributed heat with the aid of a blower, but that would have been too easy – and besides, how would that be of any use during a power (or economic) failure?

I reasoned that the stove itself was a great source of energy, and that I could convert some of it into mechanical energy to drive a blower. I was initially considering a low-temperature-difference turbine, but figured the best reliability would be to have no moving parts. Don't laugh, ram-jets do it – if you happen to be current on hyper-sonic fluid dynamics.

Well, I came up with a configuration that I thought might work (without the benefit of a hyper-sonic fluid dynamics calculator), and being a little low on cash I fabricated it out of used flue pipe. My family has had to put up with a lot, and on its maiden voyage the "used" part of the pipe began to pour smoke into the living room.

Suddenly there was a loud roar accompanied by a scream from my wife as a three foot tongue of orange-violet flame was blasting out at about 3-1/2 feet above the floor. After a few seconds the flame ceased, but the experiment was still red hot and continued to spew a 5" diameter blast of scorching air for a few more seconds from the cherry-red device. Apparently the thin crust of creosote in the pipe had ignited and provided the jet fuel.

Looking on the bright side:

- No one was hurt.
- The smoking stopped.
- The house was a little warmer.
- Something about the configuration worked
- I haven't messed with it since.