What Is Claimed Is:

1. A power system that generates at least one of electrical energy and thermal energy comprising:

at least one reaction chamber comprising;

reactants capable of reacting to form a plasma in the chamber, the reactants comprising:

a) at least one source of nascent H_2O;

b) H_2O;

c) at least one source of atomic hydrogen; and

d) a molten metal;

at least one molten metal injection system configured to deliver the molten metal to the reaction chamber comprising a molten metal reservoir and an electromagnetic pump;

at least one reactants ignition system comprising at least one set of electrodes that are separated to form an open circuit, wherein the open circuit is closed by the injection of the molten metal therebetween to cause the high current to flow and a source of electrical power capable of delivering electrical energy sufficient to cause the current to flow and the reactants to react to form said plasma, wherein said electrical power has a current of less than 2000 A;

a system to recover the molten metal;

at least one power converter or output system converting at least one of light and thermal output of the plasma to electrical power and/or thermal power.

2. The power system of Claim l wherein the electrodes comprise a refractory metal.

3. The power system of Claim 2 wherein the source of electrical power to deliver a short burst of high-current electrical energy sufficient to cause the reactants to react to form plasma comprises at least one supercapacitor.

4. The power system of Claim 1 wherein the electromagnetic pump comprises at least one magnet providing a magnetic field and current source to provide a vector-crossed

current component.

5. The power system of Claim l wherein the molten metal reservoir comprises an inductively coupled heater.

6. The power system of Claim 1 wherein the molten metal ignition system current is in the range of 500 A to 2000 A.

7. The power system of Claim 6 wherein the molten metal ignition system wherein the circuit is closed to cause an ignition frequency in the range of 1 Hz to 10,000 Hz.

8. The power system of Claim 1 wherein the molten metal comprises at least one of silver, silver-copper alloy, and copper.

9. The power system of Claim 1 wherein the reactants comprise at least one of H_2O vapor and hydrogen gas.

10. The power system of Claim l wherein the system comprises an additional reactants injection system to inject additional reactants to the vessel for reaction comprising at least one of a computer, H_2O and H_2 pressure sensors, and flow controllers comprising at least one or more of the group of a mass flow controller, a pump, a syringe pump, and a high precision electronically controllable valve; the valve comprising at least one of a needle valve, proportional electronic valve, and stepper motor valve wherein the valve is controlled by the pressure sensor and the computer to maintain at least one of the H_2O and H_2 pressure at a desired value.

11. The power system of Claim 10 wherein the additional reactants injection system maintains the H_2O vapor pressure in the reaction chamber in the range of 0.1 Torr to l Torr.

12. The power system of Claim 1, wherein said reactants comprise a metal oxide.

13. The power system of Claim 12, wherein said metal oxide is a Group 13, 14, 15, 16, or 17 oxide.