We claim:

1. A circuit for generating electrical energy, comprising:

a pulse generator for generating a continuous stream of pulses;

a capacitor coupled to the pulse generator;

a tube having a cavity therein coupled to the capacitor;

an output for receiving an electrical output emitted from the tube; and

at least one oscillator component coupled to the tube, wherein the oscillator component includes an inductor coupled to one end of the tube and the capacitor.

2. The circuit of claim 1, wherein the tube is filled with material having a predetermined permittivity or permeability larger than a vacuum.

3. The circuit of claim 1, further including a pump for pumping fluid through the tube.

4. The circuit of claim 3, wherein the fluid exchanges heat with the tube.

5. The circuit of claim 1, wherein the tube cavity has a semiconductor or metal at least partially filling the cavity.

6. The circuit of claim 1, wherein the tube has a cross-section that is one of the following: round, square, rectangular, elliptical or oval.

7. The circuit of claim 1, further including a negative resistance coupled in series with the capacitor.

8. A method for generating electrical energy, comprising:

generating a continuous input stream of pulses;

applying the input stream of pulses to a tube having a cavity therein, wherein the tube is filled with material having a predetermined permittivity or permeability larger than a vacuum; and

outputting an electrical signal from the tube, wherein the continuous stream of pulses is at a first frequency and further including generating a signal at a second frequency greater than the first frequency using an oscillator circuit coupled to the tube..

9. The method of claim 8, further including transmitting the continuous input stream of pulses through a negative resistance.

10. The method of claim 8, wherein the tube has a cross-section that is one of the following: an N-sided polygon, round, elliptical or oval.

11. The method of claim 8, wherein the tube is an elongated cylinder.

12. The method of claim 8, wherein the tube has fluid pumped therethrough.

13. The method of claim 12, further including applying thermal energy to the fluid.

14. An apparatus for generating electrical energy, comprising:

a pulse generator to generate a continuous stream of electrical pulses having a first power;

a tube having a cavity therein coupled to the pulse generator, the tube for providing electrical energy to a load, wherein the cavity is filled with material having a permittivity or permeability greater than a vacuum or air; and

an oscillator coupled in series with the tube, wherein the electrical pulses are at a first frequency and the oscillator generates pulses at a second frequency, greater than the first frequency.

15. The apparatus of claim 14, wherein the tube is configured to receive heat that is converted into electrical energy having a second power, greater than the first power, to the load.

16. The apparatus of claim 14, further including a thyristor coupled in series with the oscillator.