CLAIMS

1. A system comprising:

a first tubular having a first inductive coupler disposed on an outer surface thereof;

a second tubular circumferentially disposed around the first tubular and forming an annulus therebetween;

a second inductive coupler disposed on the second tubular;

a parallel inductive coupler disposed on the second tubular;

a first rectifier coupled in parallel to the second inductive coupler and the parallel inductive coupler;

a tank capacitor coupled to the first rectifier; and

a load coupled in parallel with the tank capacitor.

2. The system of claim 1, further comprising:

a third inductive coupler disposed on the outer surface of the first tubular;

a fourth inductive coupler disposed on the second tubular; and

a second rectifier coupled to the fourth inductive coupler and the tank capacitor.

3. The system of claim 2, further comprising:

a fifth inductive coupler disposed on the outer surface of the first tubular;

a sixth inductive coupler disposed on the second tubular; and

a third rectifier coupled to the sixth inductive coupler and the tank capacitor.

4. The system of claim 3, further comprising:

a seventh inductive coupler disposed on the second tubular, wherein the fourth inductive coupler and the seventh inductive coupler are joined at a second junction; and

an eighth inductive coupler disposed on the second tubular, wherein the sixth inductive coupler and the eighth inductive coupler are joined at a third junction;

wherein the second inductive coupler and the parallel inductive coupler are joined at a first junction.

5. The system of claim 4, wherein the first junction, the second junction, and the third junction are tied together.

6. The system of claim 4,

wherein the fourth inductive coupler and the seventh inductive coupler are coupled to a second rectifier, and

wherein the sixth inductive coupler and the eighth inductive coupler are coupled to a third rectifier.

7. The system of claim 1, wherein the load is at least one of a downhole instrument, active electronics, and a cable.

8. The system of claim 1, further comprising a first phase drive coupled to the first inductive coupler.

9. The system of claim 8, further comprising:

a second phase drive coupled to a third inductive coupler, wherein the third inductive coupler is disposed on the outer surface of the first tubular; and

a third phase drive coupled to a fifth inductive coupler, wherein the fifth inductive coupler is disposed on the outer surface of the first tubular.

10. The system of claim 9, wherein the first phase drive operates at a first phase angle, wherein the second phase drive operates at a second phase angle, and wherein the third phase drive operates at a third phase angle.

11. The system of claim 10, wherein the first phase angle is offset 120° from the second phase angle, and wherein the second phase angle is offset 120° from the third phase angle.

12. The system of claim 9, wherein the first inductive coupler, the third inductive coupler, and the fifth inductive coupler are tied together in a delta configuration.

13. The system of claim 9, further comprising:

a fourth inductive coupler disposed on the second tubular:

a sixth inductive coupler disposed on the second tubular;

a second rectifier coupled to the fourth inductive coupler and the tank capacitor; and

a third rectifier coupled to the sixth inductive coupler and the tank capacitor.

14. The system of claim 8, wherein the first phase drive is a single phase drive.

15. A method comprising:

disposing a first tubular at least partially within a second tubular to form an annulus therebetween,

wherein the first tubular has a first inductive coupler disposed on an outer surface thereof, the outer surface facing the annulus,

wherein the second tubular has a second inductive coupler and a parallel inductive coupler disposed thereon,

wherein a first rectifier is coupled in parallel to the second inductive coupler and the parallel inductive coupler,

wherein a tank capacitor is coupled to the first rectifier, and

wherein a load is coupled in parallel with the tank capacitor;

applying a first drive signal to the first inductive coupler to produce an electromagnetic field;

inducing a first induced current on the second inductive coupler and the parallel inductive coupler via the electromagnetic field;

rectifying a first output of the second inductive coupler and a second output of the parallel inductive coupler to provide a first rectified output; and

reducing voltage ripple in the first rectified output via the tank capacitor.

16. The method of claim 15, further comprising transferring power from a phase drive to the load via the first inductive coupler and the second inductive coupler and the parallel inductive coupler, wherein the phase drive is coupled to the first inductive coupler.

17. The method of claim 15, wherein a third inductive coupler and a fifth inductive coupler are disposed on the outer surface of the first tubular,

wherein a fourth inductive coupler and a sixth inductive coupler are disposed on the second tubular, and

the method further comprising:

applying a second drive signal to the third inductive coupler to induce a second induced current on the fourth inductive coupler;

applying a third drive signal to the fifth inductive coupler to induce a third induced current on the fourth inductive coupler, wherein the second drive signal and the third drive signal have the same frequency as the first drive signal;

rectifying a third output of the fourth inductive coupler to provide a second rectified output; and

rectifying a third output of the sixth inductive coupler to provide a third rectified output.

18. The method of claim 17, wherein the second drive signal is out of phase with the first drive signal, and wherein the third drive signal is out of phase with the first drive signal and the second drive signal.

19. The method of claim 18, wherein the second drive signal is 120° out of phase from the first drive signal, and wherein the third drive signal is 120° out of phase from the second drive signal.

20. The method of claim 17, wherein the first rectified output, the second rectified output, and the third rectified output are combined to drive the load.