

19 December 2023 DEH (SL) SAEC [Part 1 of 2]

Typical "TF LinGen V2 Design"

This device uses "Transverse (Magnetic) Flux in a simple to fabricate design that can achieve **significant Output Power** while requiring **only minimal Input Power** (as shown below).

THIS IS A "NEW APPROACH" TO EXCESS ENERGY GENERATION (EEG)

A straight forward power source (e.g. 3.0V SuperCap or conventional Capacitor or fast charge battery) drives, for example, a full "H Bridge" (N then S current flow) which in turn, feeds the N and S Pole Coils in series. All poles are driven concurrently in a square wave sequence; for example: high is current in one direction and low is current in the other direction creating a N then S then N then S sequence.

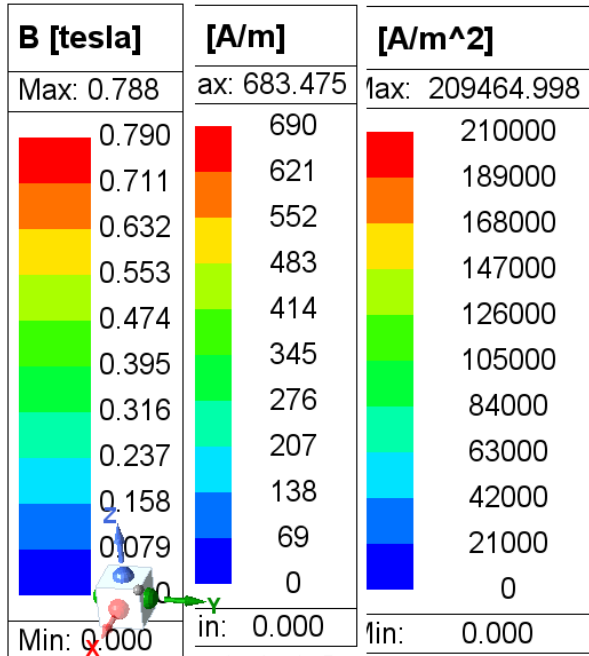
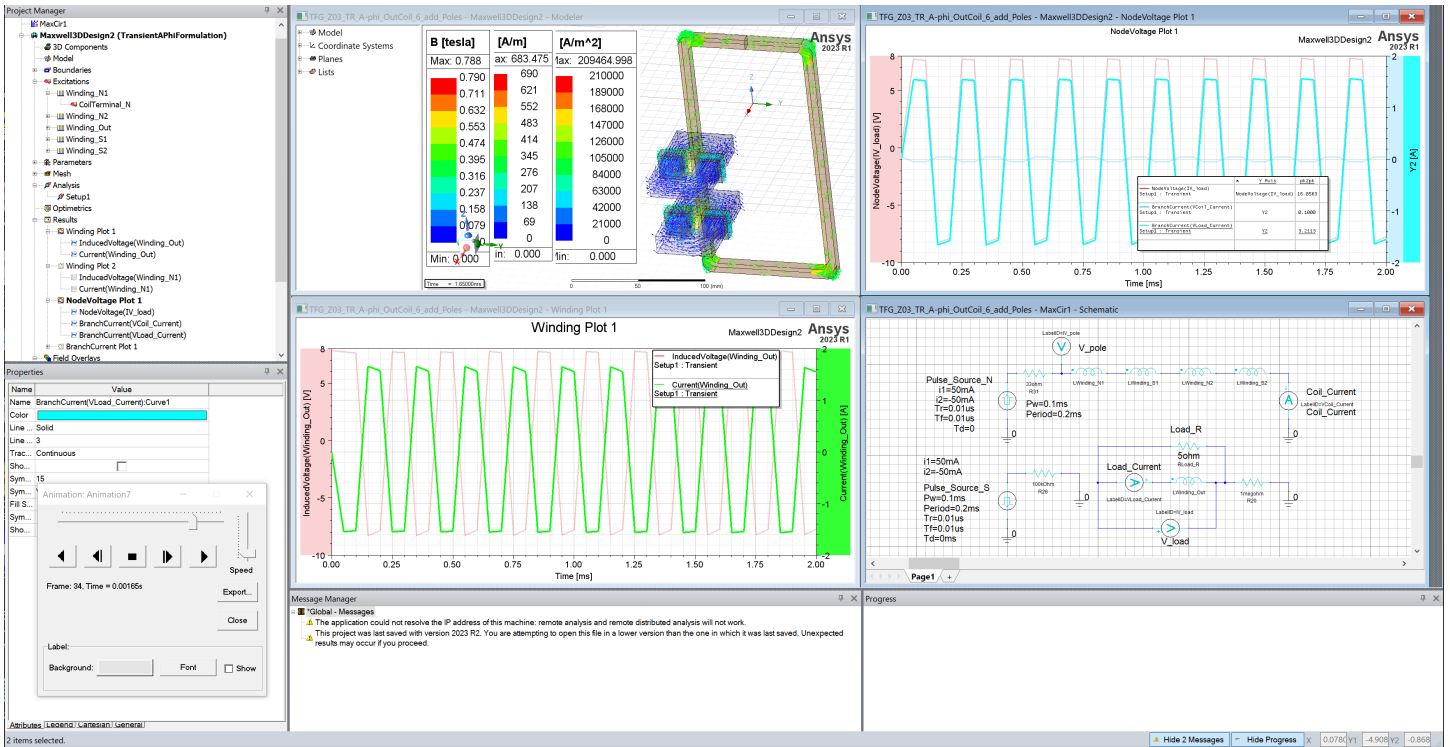
Recall; in an electromagnet, more current or more windings, as well as, a fast rise/fall time or higher frequency (faster pulse rate) can increase the output power; at least up until magnetic saturation is reached, then very little improvement is seen (refer to the B-H Curve).

Many Pole pairs can be place around the "loop" to increase the output as needed.

Please note that this "Invention" is subject to one or more Provisional Patent Applications but you are free to build various devices and experiment with the concepts!

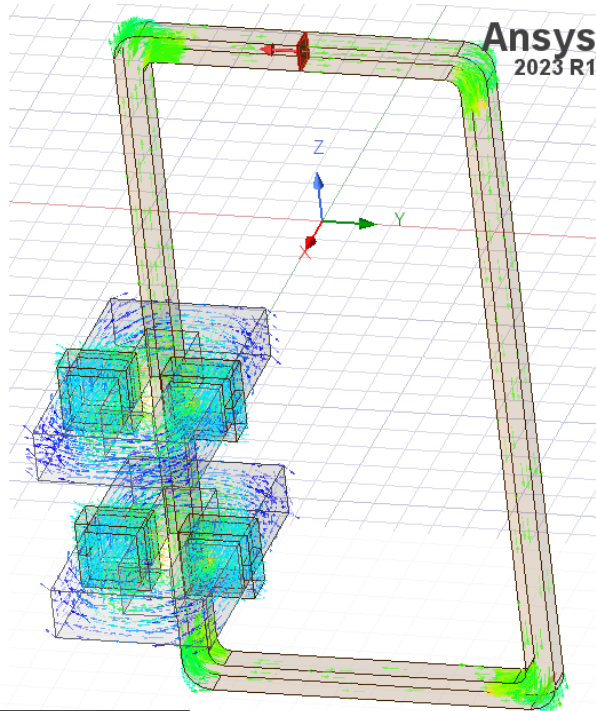
TFG_Z03_TR_A-phi_OutCoil_6_add_Poles

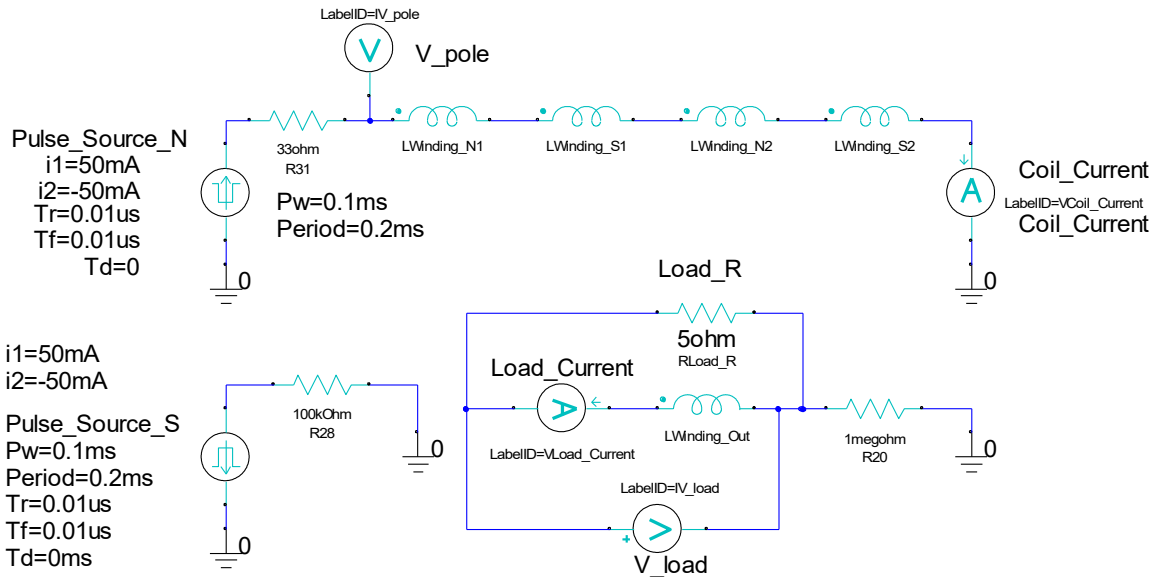
Single Pulse Source, 100mA, Pw=0.1mS, Period=0.2mS, Rseries=33ohm, 80 turns, 4 Coils series, OutCoil 5 turns, 5 ohm Load resistor. 16 Vout x 3.2 Aout = 51.2 Watts.



Time = 1.90000ms

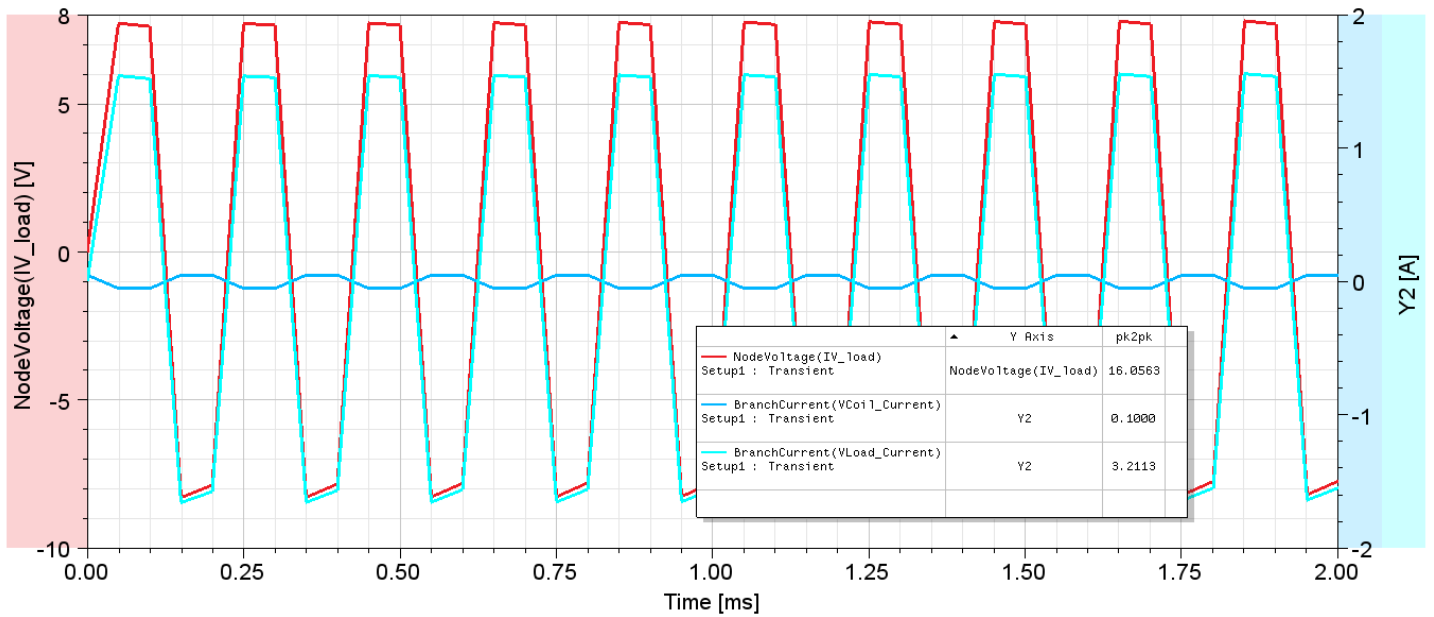
0 50 100 (mm)

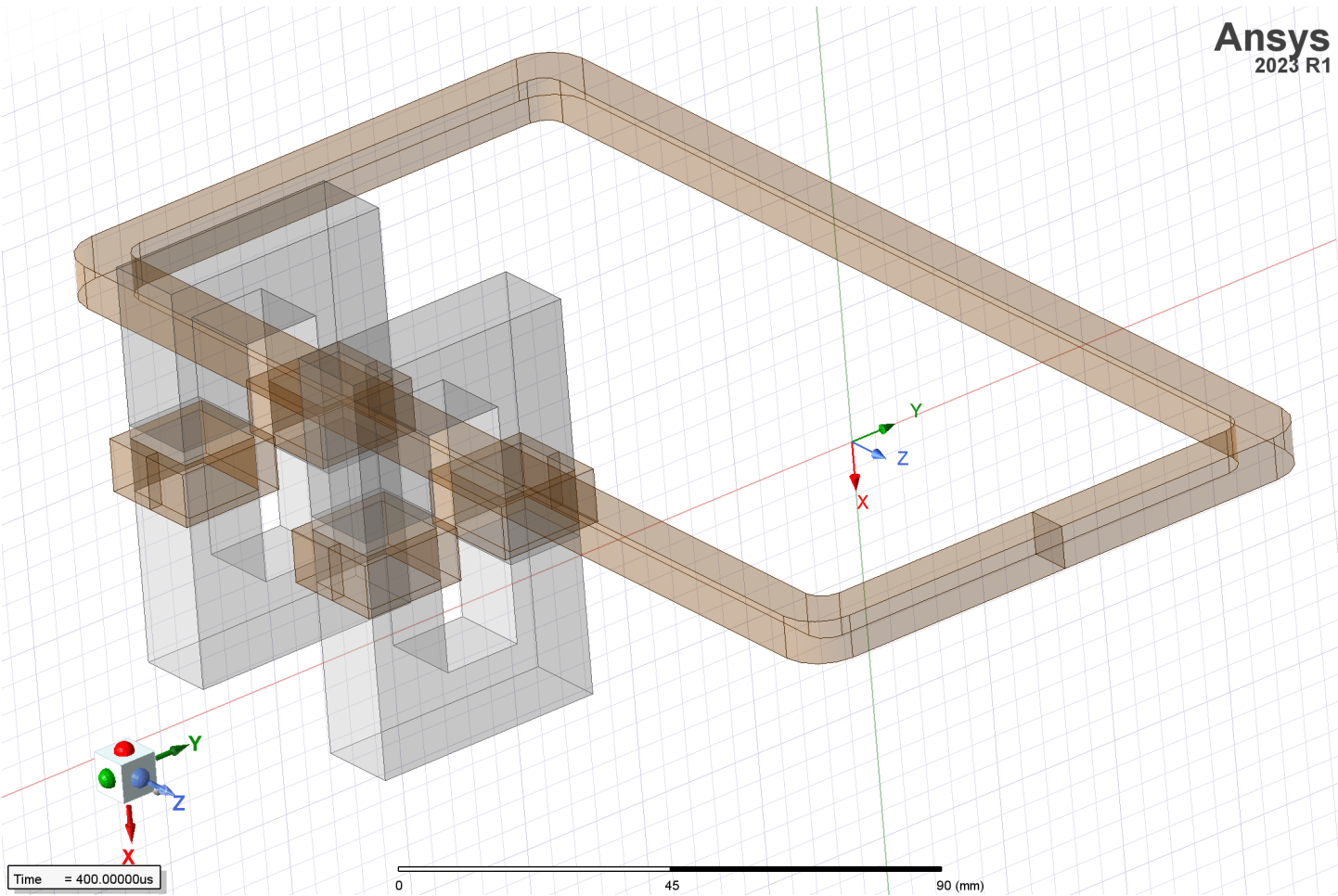




NodeVoltage Plot 1

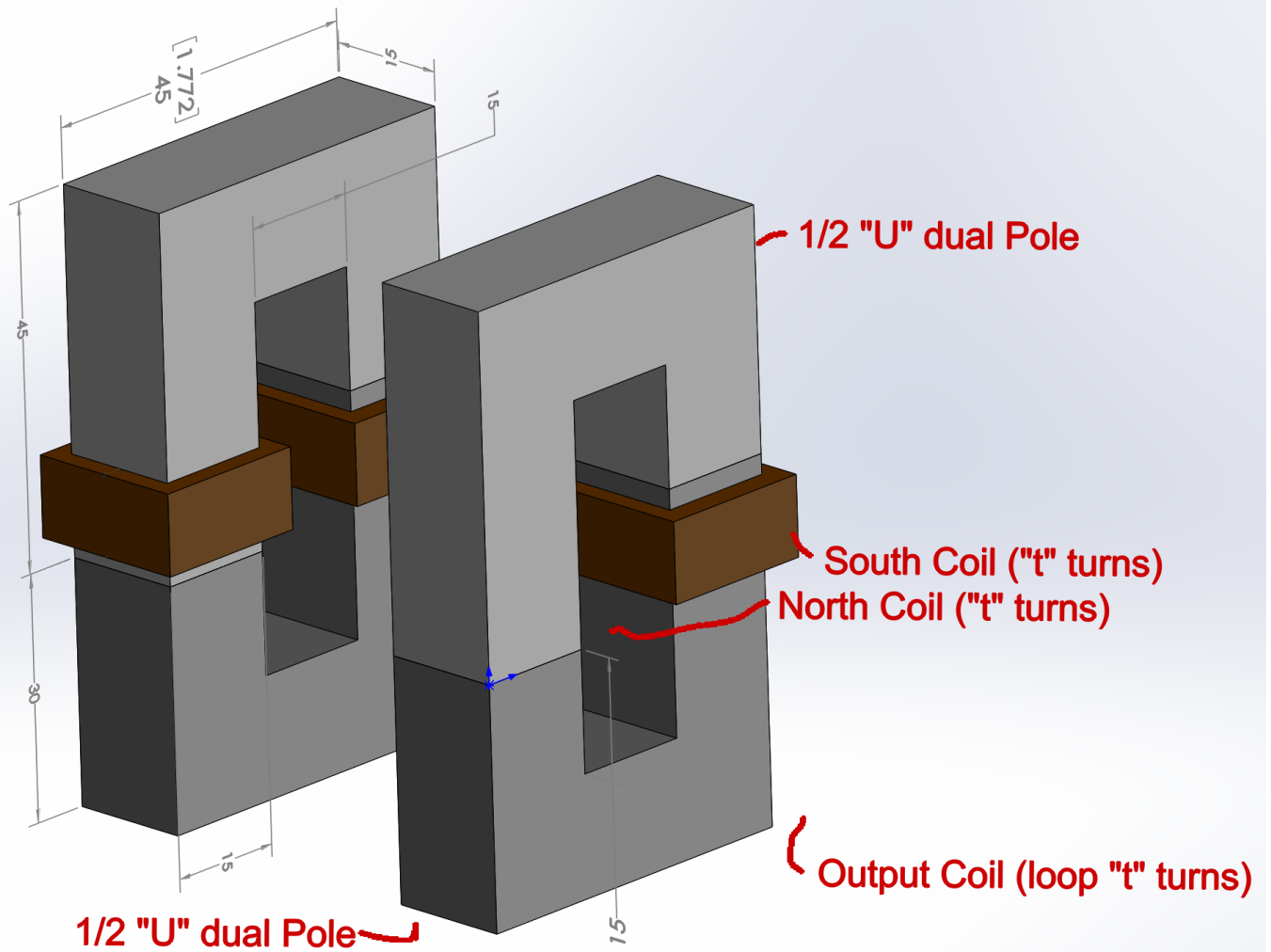
Maxwell3DDesign2 **Ansys**
2023 R1





Time = 400.000000us

0 45 90 (mm)



Output loop Coil and North Coil removed for clarity

NOTE: Coil winding turns, applied current, physical pole dimensions, fill factors and physical layout are a part of the design optimization process. Typically the "B" is around 1.2 Tesla.

Solarlab (SL) Part 1 of 2 Draft