Seeking a Model for the Falstad Transformer

I've long since wondered about the transformer model of Paul Falstad's electronic simulator. According to Paul (in response to an email that I sent him several years ago), it's supposed to have an iron core in his transformer model while his simple inductor is based on an air core model. The transformer model is a challenge on how to translate it into a real world build which behaves, in all cases, equivalent to the simulated model since it is capable of passing D/C to some degree according to his descriptive webpage… [1]

> *"An ideal transformer (with sufficiently large inductance and sufficiently low resistance) can pass DC, but real transformers are not ideal and only work with AC. This transformer passes DC at first, but after a short time, the DC voltage fades due to resistance in the primary [Editor's note: there is no resistance in the primary.] and the finite inductance of the transformer coils."*

Editor's note: I don't think that it matters whether or not a transformer can continuously, or sporadically, pass D/C since reactance can be designed to foster the infinite growth of this (momentary) injection of input as in the following example… [A lack of resistance and a lack of both types of impedances "fosters" negative impedance.] [2]

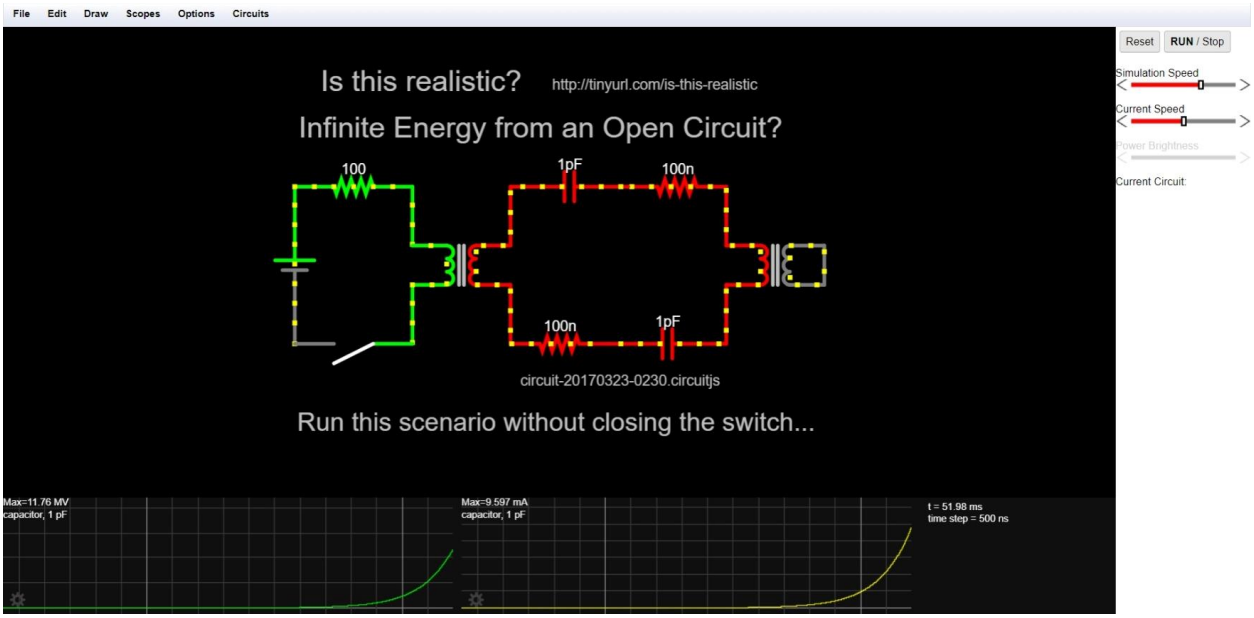

Figure 1 – This example [3] is derived from Paul Falstad's simulation of his transformer which can initially pass D/C before becoming halted due to an inductive impedance in the primary (left side of the left-most transformer). [Footnote 1] But in this example, the simulation has no problem increasing its power in the central module since there's no significant resistance (100 nano ohms) to get in the way. Raise the resistance of either one of the two nano ohm resistors to eliminate the buildup of power. So, his qualification remains unchallenged.

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[1] Transformer w/ DC
[2] Foster's reactance theorem - Wikipedia
[3] http://tinyurl.com/is-this-realistic

My latest guess is that it may be equivalent to two simple (air core) inductors with some kind of linkage between them. Here are some examples...

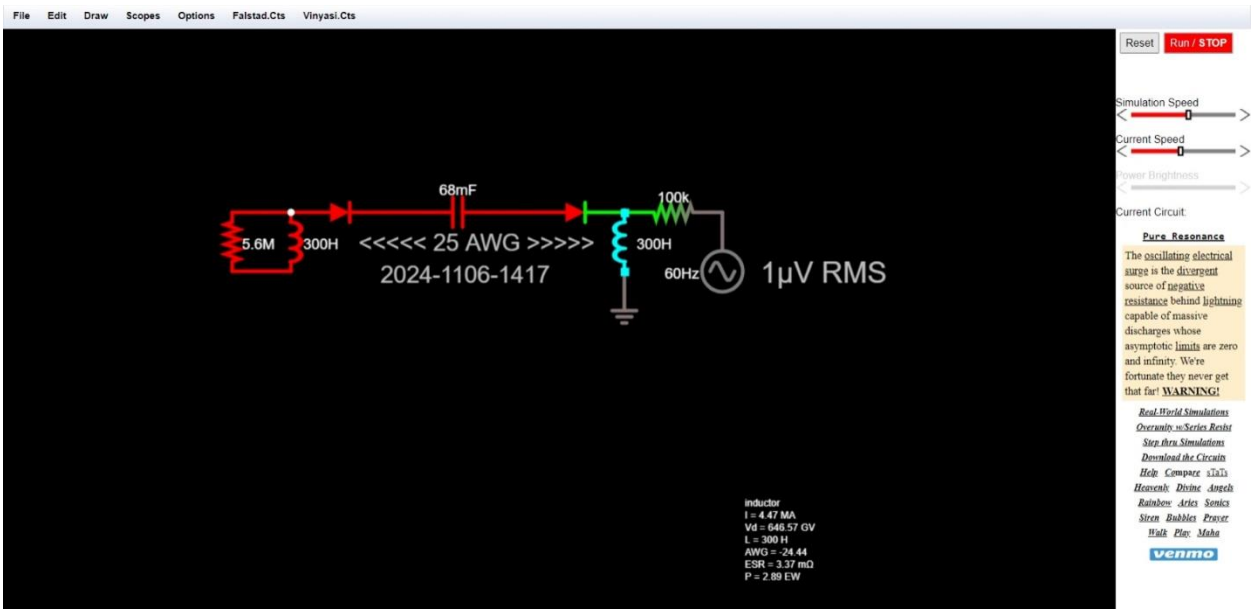

Figure 2 – 2.9 exa watts, aka 3 million Tera watts = 2.9e–18, ...

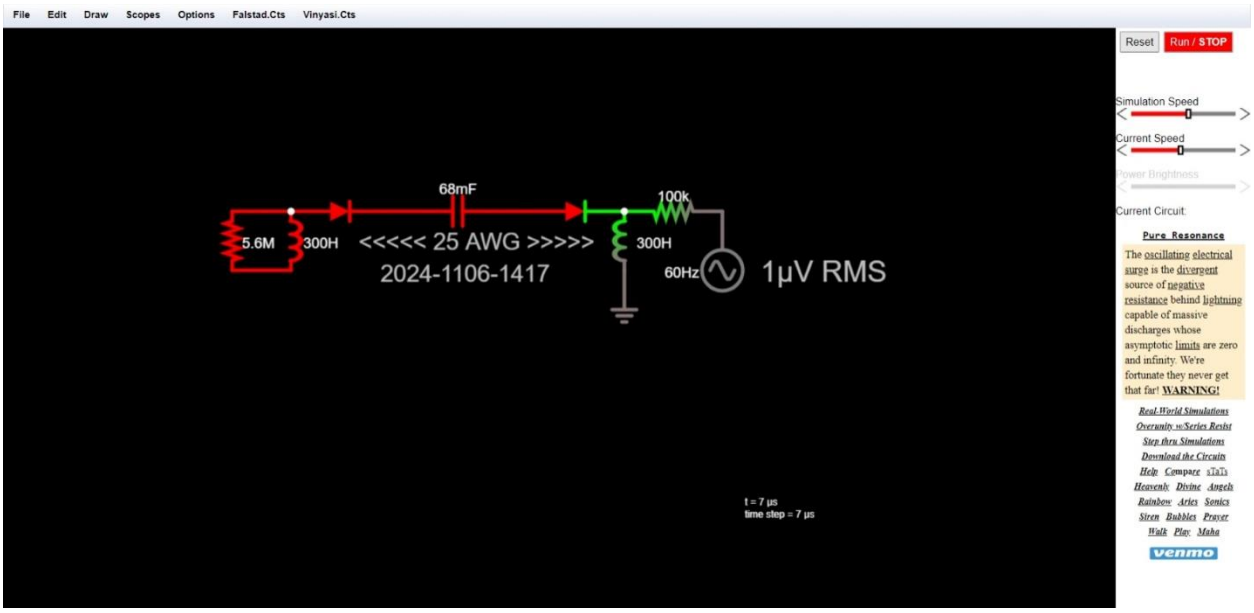

Figure 3 – ... in a single 7µs time step, ...

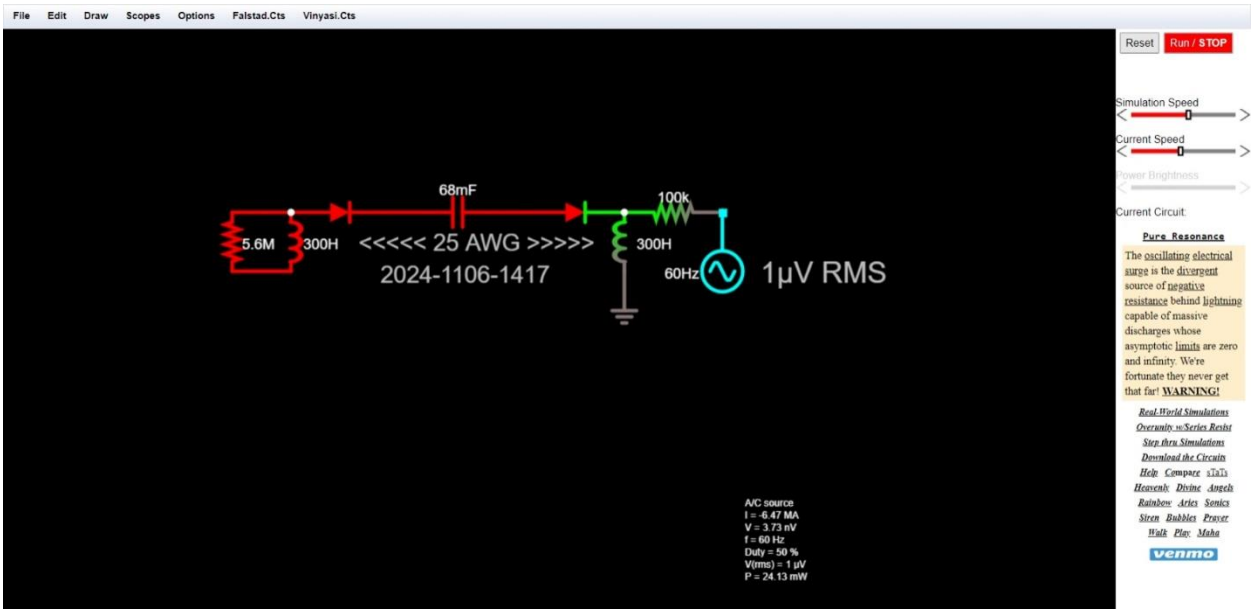

Figure 4 - … supplying the sine wave generator with negative 6 and a half mega amperes while yielding 6 and a half giga volts on the right inductor for a total of 3 million Tera watts (in Figure 2).

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https://vinyasi.info/realsim?cct=$+1+0.000007+2.803162489452614+47+5+30%0Ar+-304+336+-304+384+0+5600000%0Ar+16+336+96+336+0+100000%0AR+96+336+96+384+0+1+60+0.000001414213562373095 2+0+0+0.5%0Al+-256+336+-256+384+2+300+0+-24.439425528%0Al+16+384+16+336+2+300+0+-24.439425528%0Aw+-304+336+-256+336+0%0Aw+-304+384+-256+384+0%0Ax+127+393+230+396+4+24+1%5CcV%5CsRMS%0Ax+-201+367+-9+370+4+19+%3C%3C%3C%3C%3C%5Cs25%5CsAWG%5Cs%3E%3E%3E%3E%3E%0Ad+-256+336+-176+336+1+0.805904783%0Ad+-64+336+16+336+1+0.805904783%0Ac+-176+336+-64+336+2+0.068+0+1+1+1%0Ag+16+384+16+416+0%0Ax+-183+393+-45+396+4+19+2024-1106-1417%0A

It gets better…

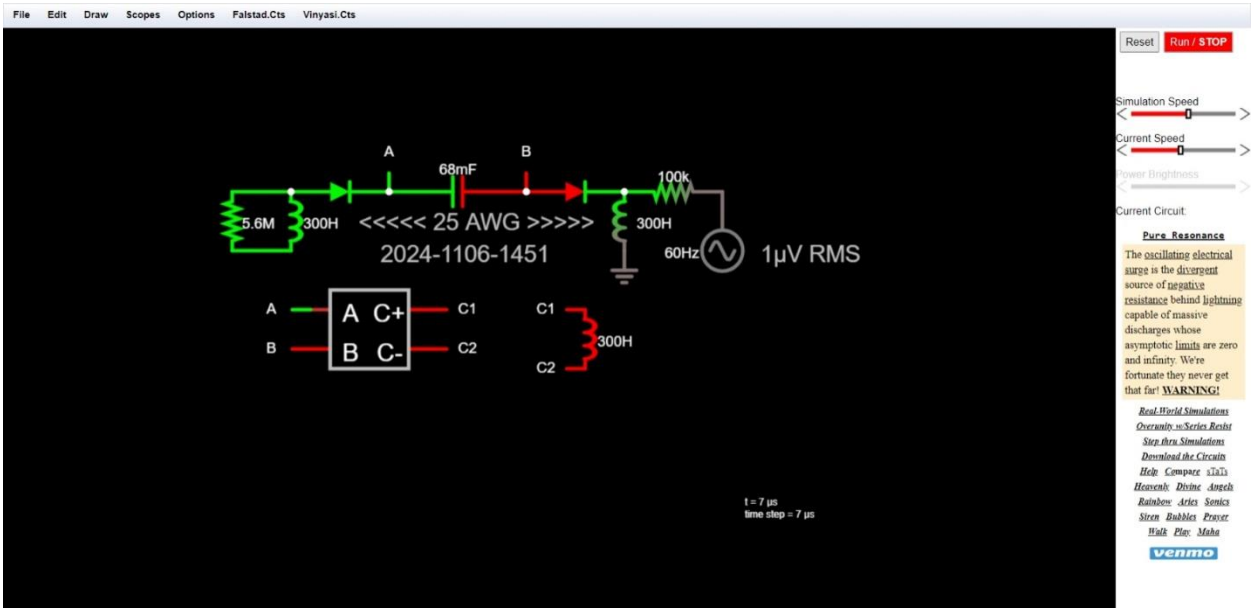

Figure 5 – Infinite watts in a single time step of 7µs on every component except the sine wave generator and the right diode!

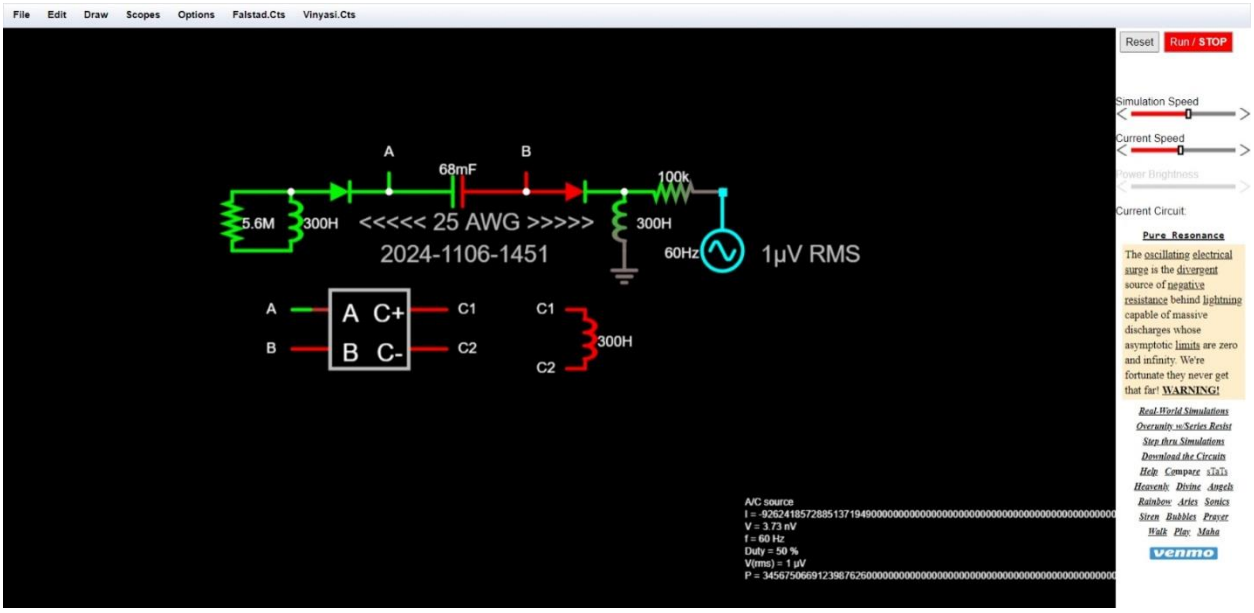

Figure 6 – Less than infinity at the sine wave generator suggesting that this circuit is definitely an overunity device especially since the amperes is negative!

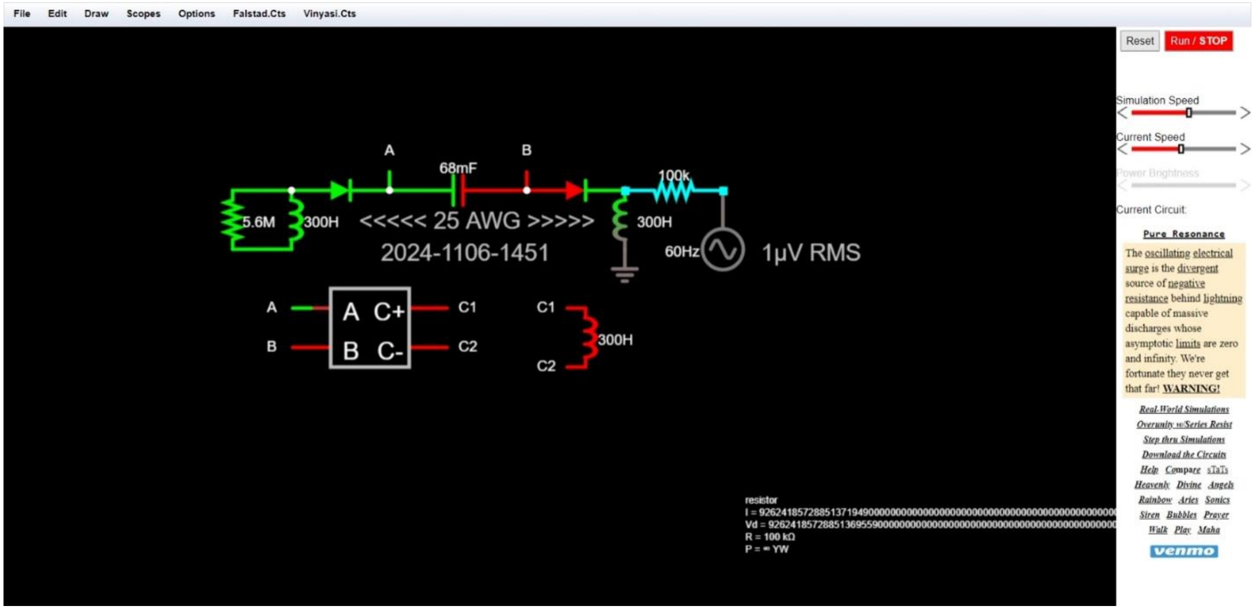

Figure 7 – Output at the 100kΩ resistor is infinite watts written as: ∞ Yotta watts, aka infinity × 10^{24} watts.

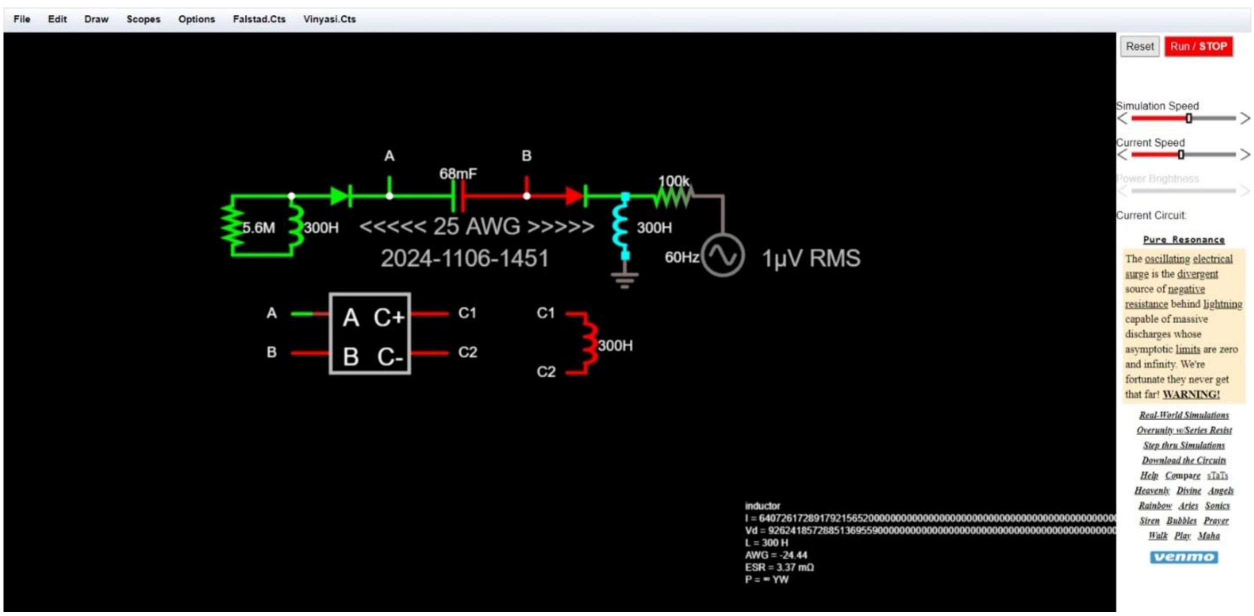

Figure 8 – Infinite Yotta Watts at the right upper inductor.

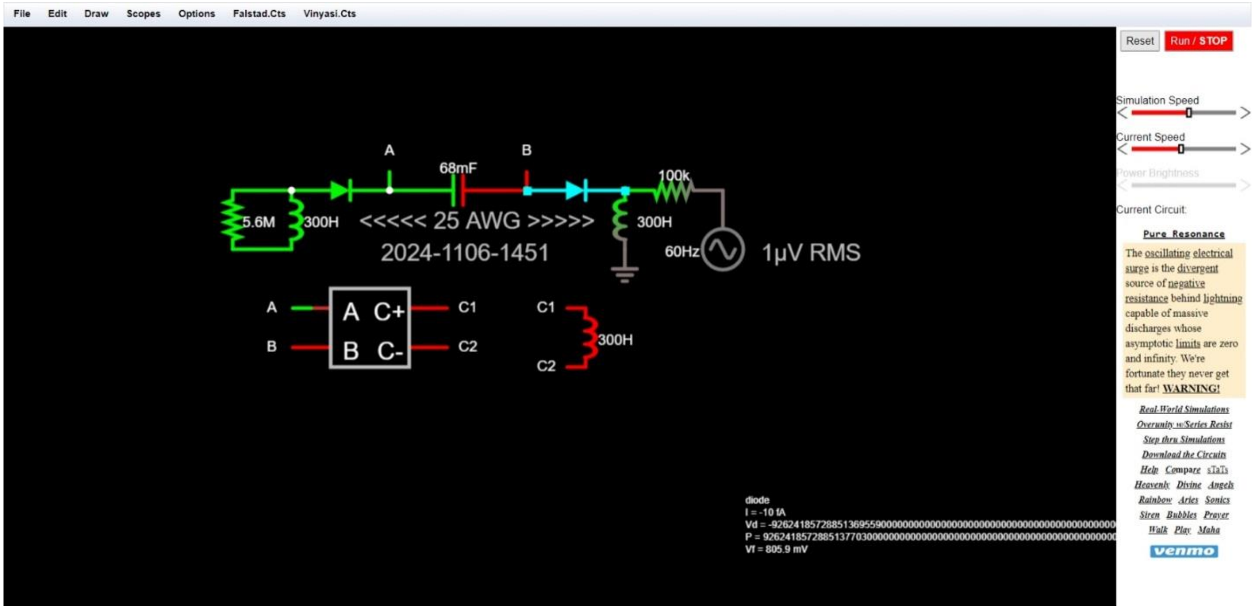

Figure 9 – Like the sine wave generator, the right diode is less than infinite watts of output.

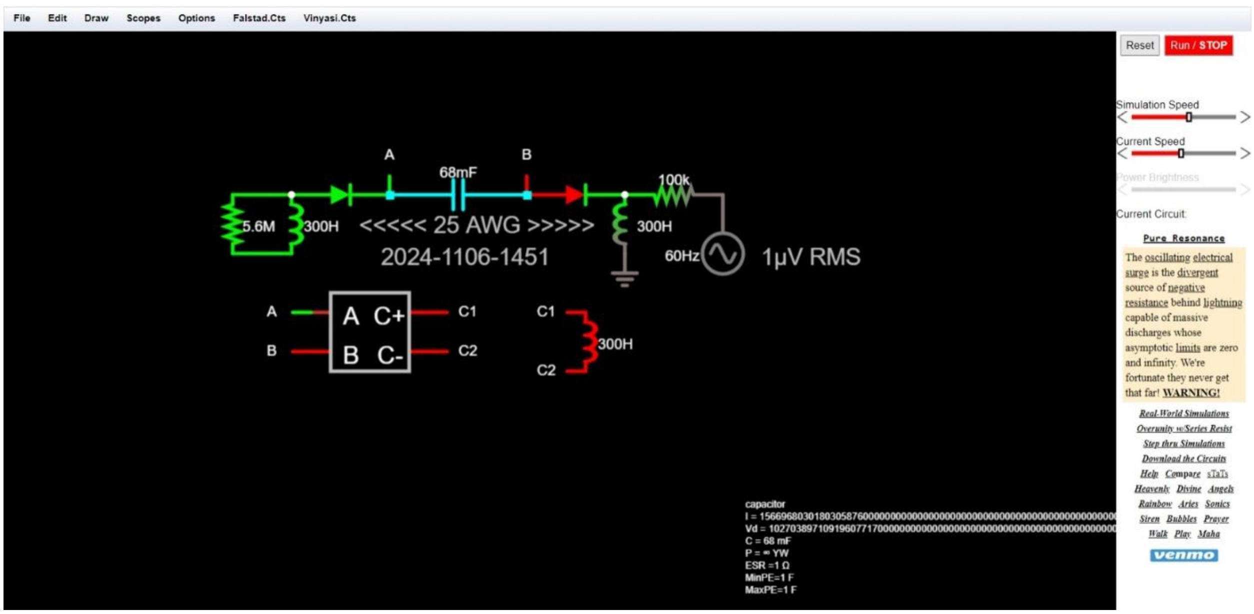

Figure 10 – Infinite watts at the capacitor.

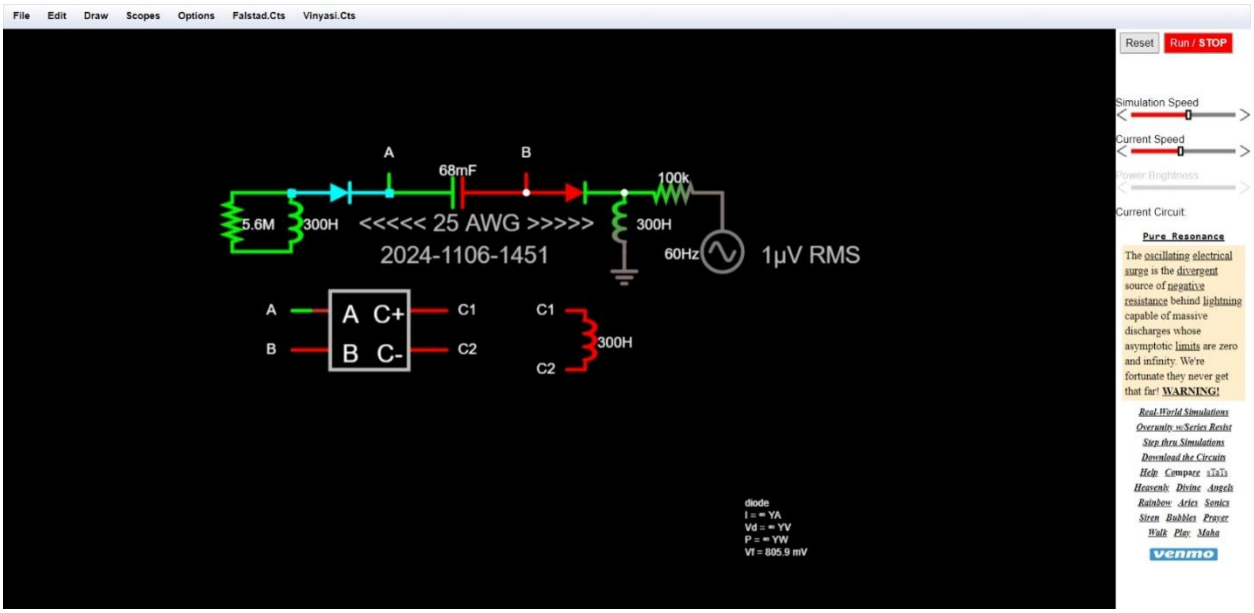

Figure 11 – The left diode has the most output of infinity since, not only is the watts infinite, but both the amperes and the voltage are also infinite!

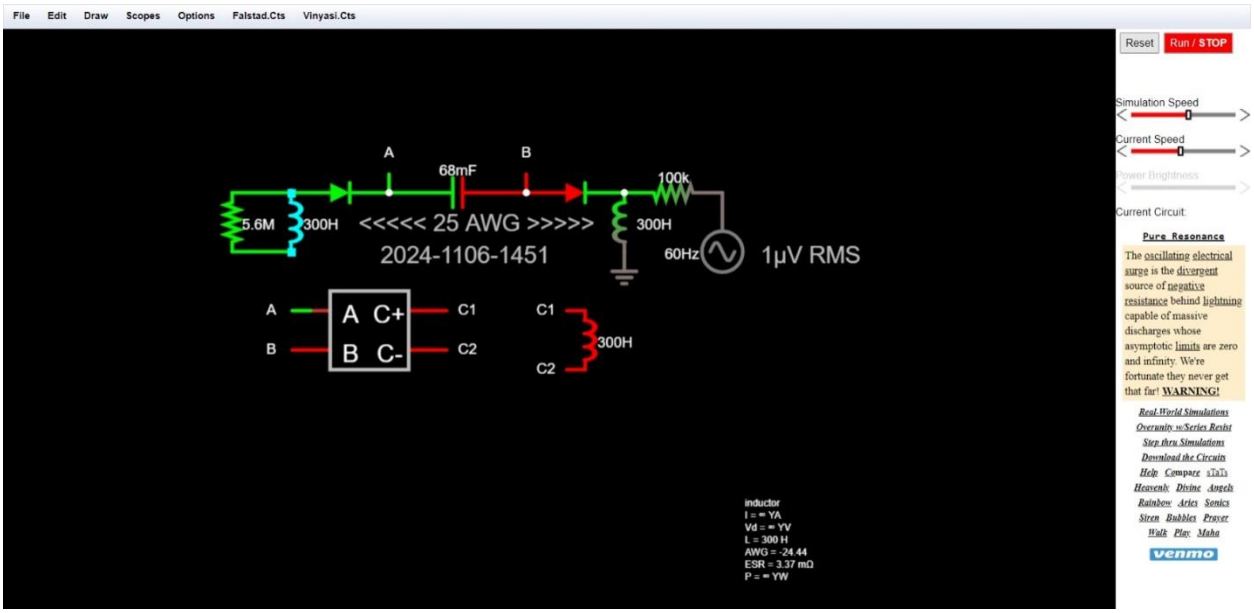

Figure 12 – Like the left diode, the left upper inductor also possesses infinity of watts as well as infinity of amperes and voltage.

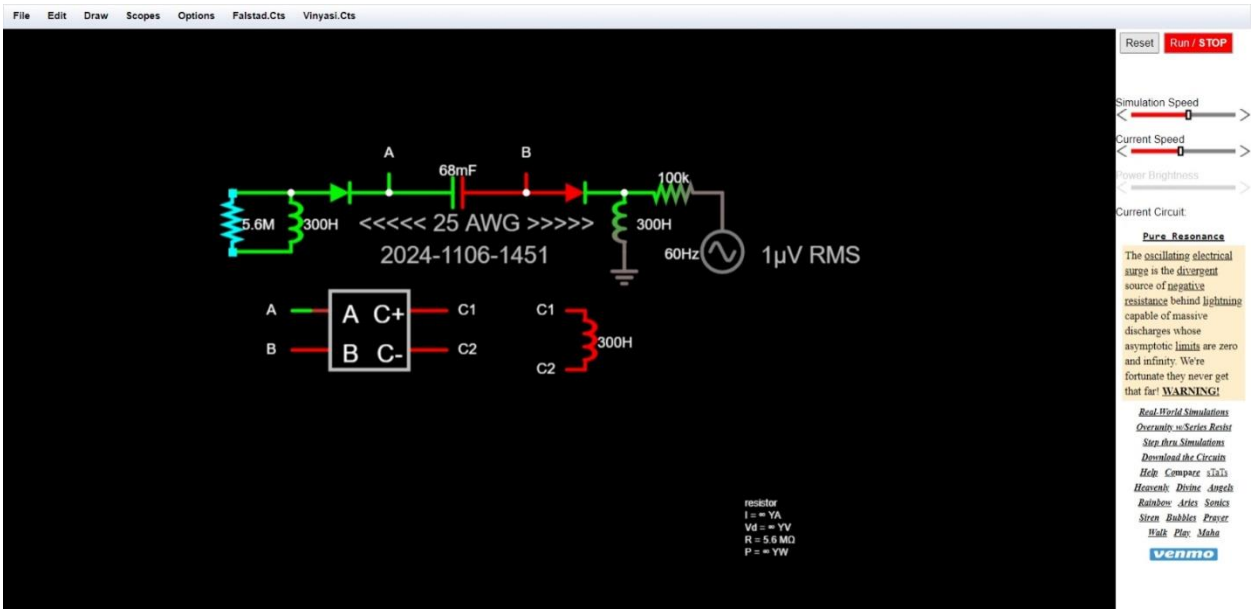

Figure 13 – Infinite watts, infinite amperes, and infinite voltage a the 5.6 mega ohm resistor.

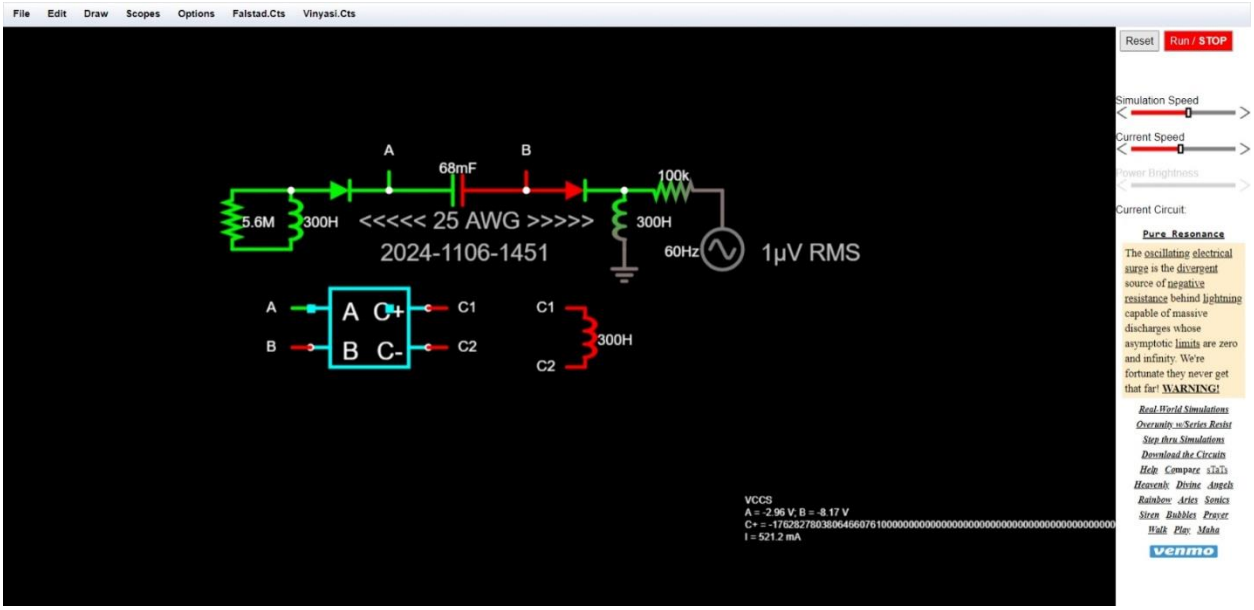

Figure 14 – Lots of current at the voltage controlled current source – less than infinity.

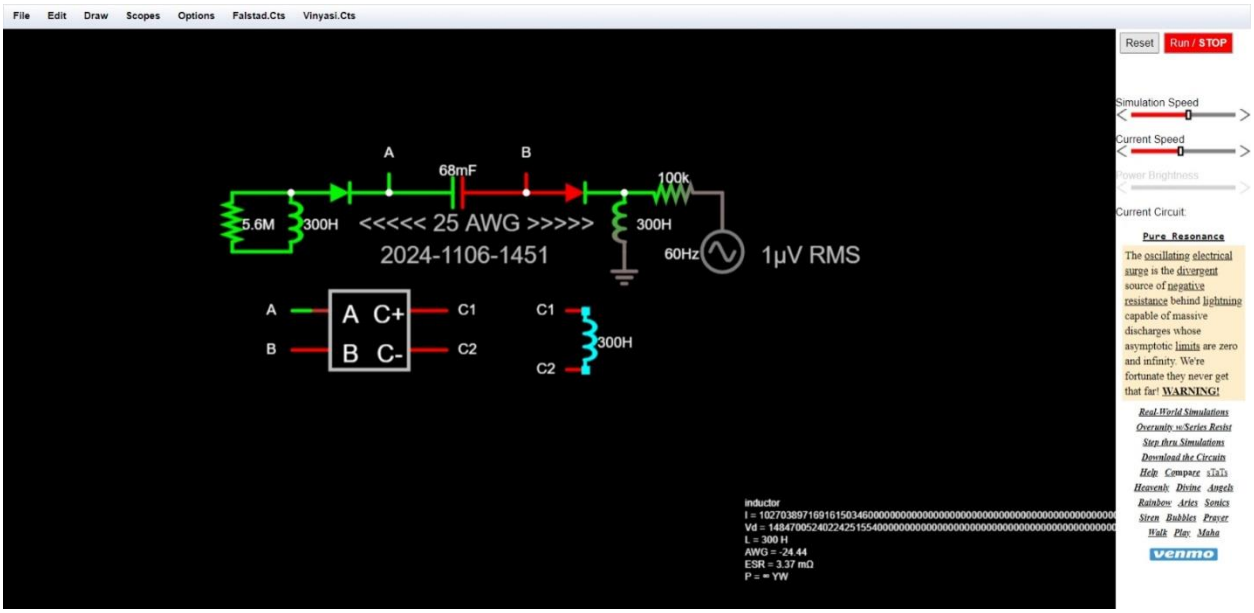

Figure 15 – Infinite watts at the lower right inductor.

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Proposition

I would like to believe (without any proof) that the multiplier of 0.1 which is multiplied against the voltage difference between labels “A” and “B”, within the edit dialog box of the voltage controlled current source (in *Figure 5* through *Figure 15*) represents an artificially induced mutual inductance existing between the two inductors which are on either side of those two labels (of “A” and “B”) owing

to the general tendency (within a lot of my simulated experiments) in which a low mutual inductance can oftentimes induce overunity?...

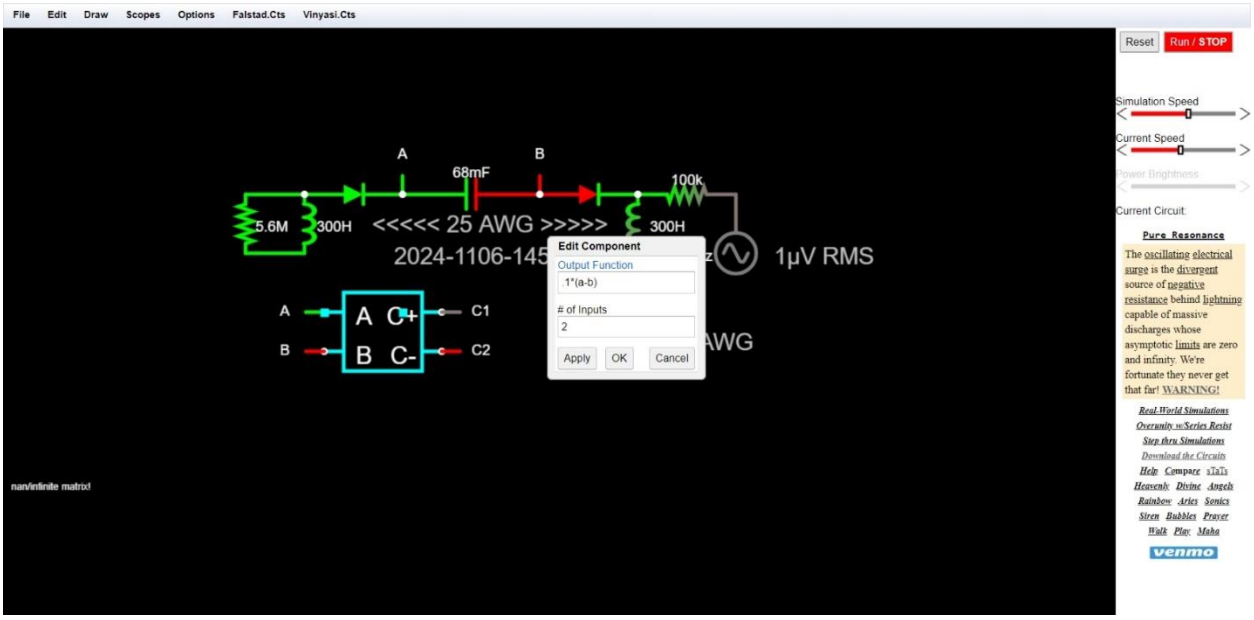

Figure 16 – A one percent (1%) multiplier definitively induces the maximum of overunity, namely: infinity, as noted by the declarative statement of "nan/infinite matrix!"

In this case, any multiplier equal to or less than 98% (0.98) succeeds at inducing a very definitive overunity while anything greater (such as: 99%), but still less than the whole integer of 1 (representing 100%), still manages to induce overunity but not with a definitive declarative statement by the simulator that the limit of infinity has been reached…

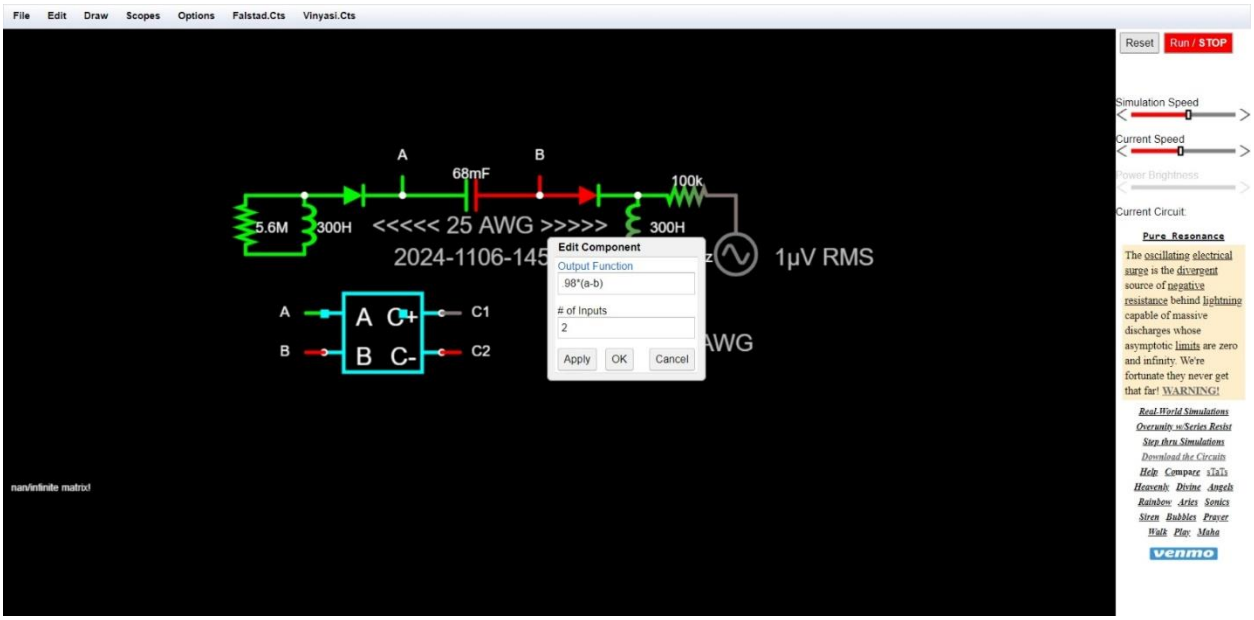

Figure 17 – 98% also results in the declarative statement of "nan/infinite matrix!"

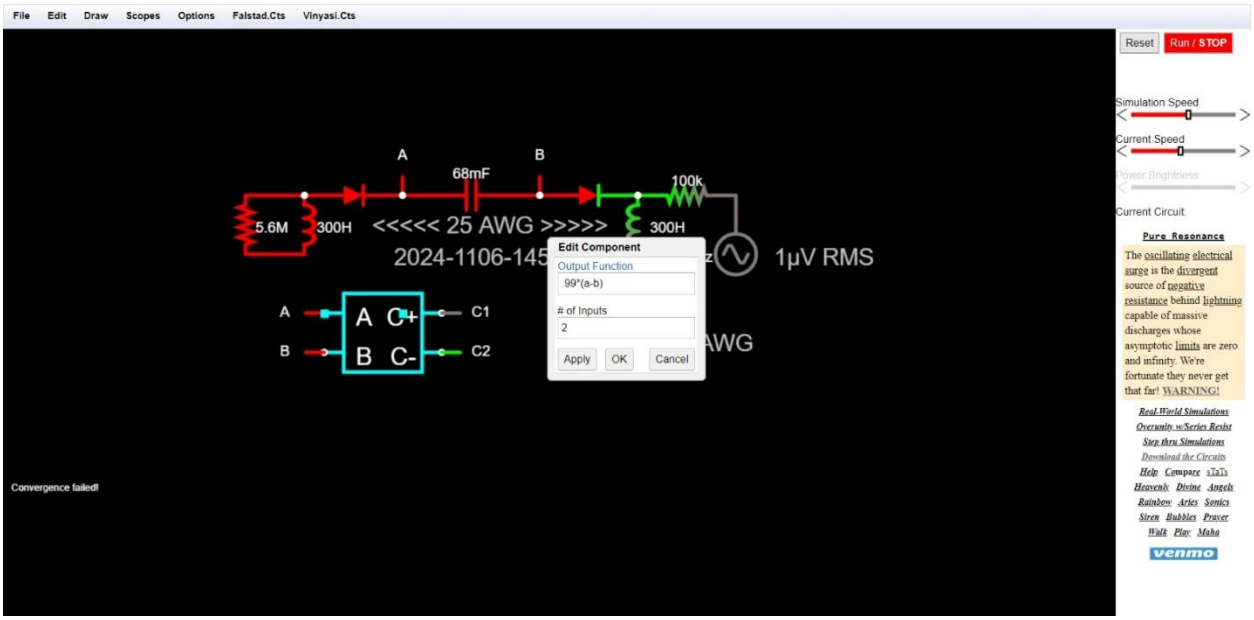

Figure 18 – But a multiplier of 99% causes a malfunction in the simulator's ability to calculate any further resulting in the declarative statement of "Convergence failed!"

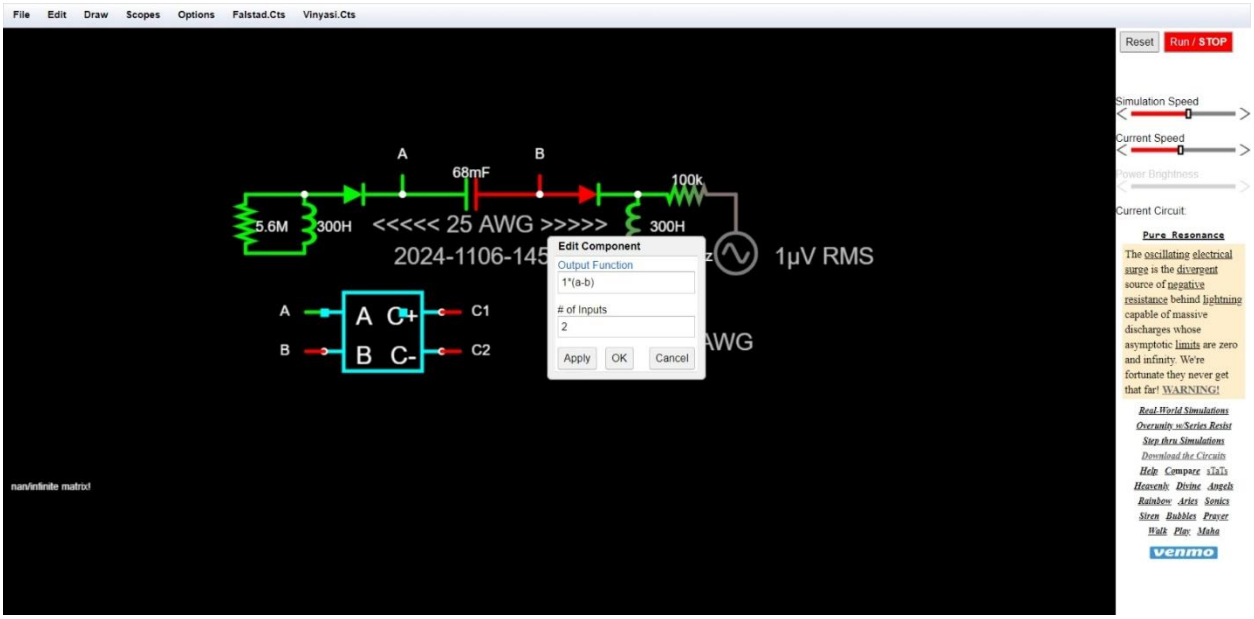

Figure 19 – While a multiplier of 100% (the whole integer "1") has no trouble resulting in a clear-cut and definitive statement of infinite overunity.

Any value of a multiplier greater than 100% still produces overunity since the circuit is overunity without this voltage controlled current source.

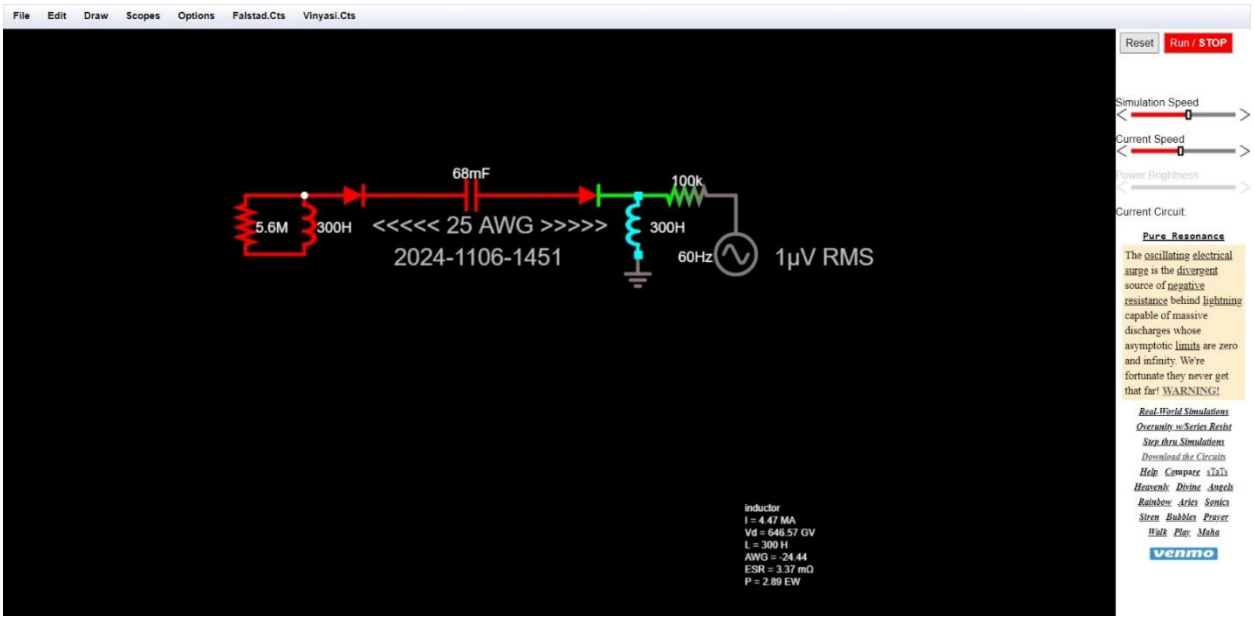

Figure 20 – 2.9 Exa watts on the upper right inductor remains awesome, dude!

Notice how, in all of these examples, the diodes are pointing *towards* the voltage sine wave source indicating that the flow of electron-induced current is forced to move *towards* the sine wave voltage source…

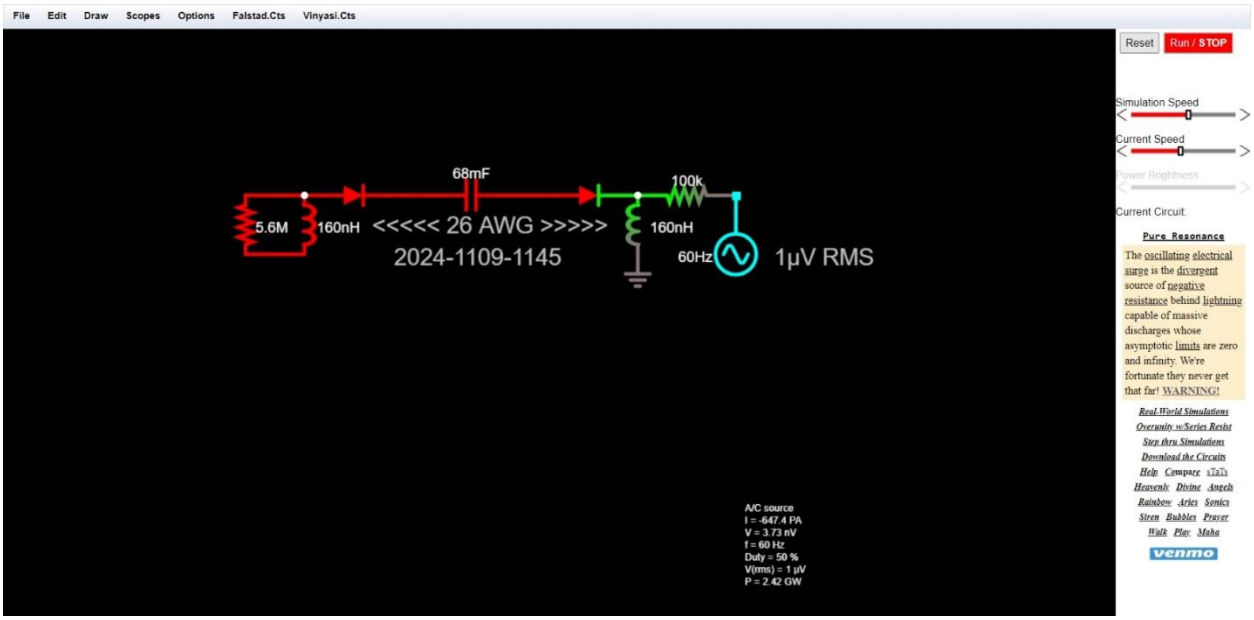

Figure 21 – Negative 650 Peta (650 thousand Tera) amperes indicating that the sine wave generator is being supplied with a heck of a lot of current coming from the circuit. Conclusion? This circuit is generating power to a degree far greater than it is consuming it despite the smallness of the three coils, namely: 160 nano Henrys, each. This design resulted from an inductive calculation on a website (Figure 22) using parameters of a coil radius of 1cm (one centimeter), a solenoid length of 1cm, 2 turns, and a relative permeability of 1.

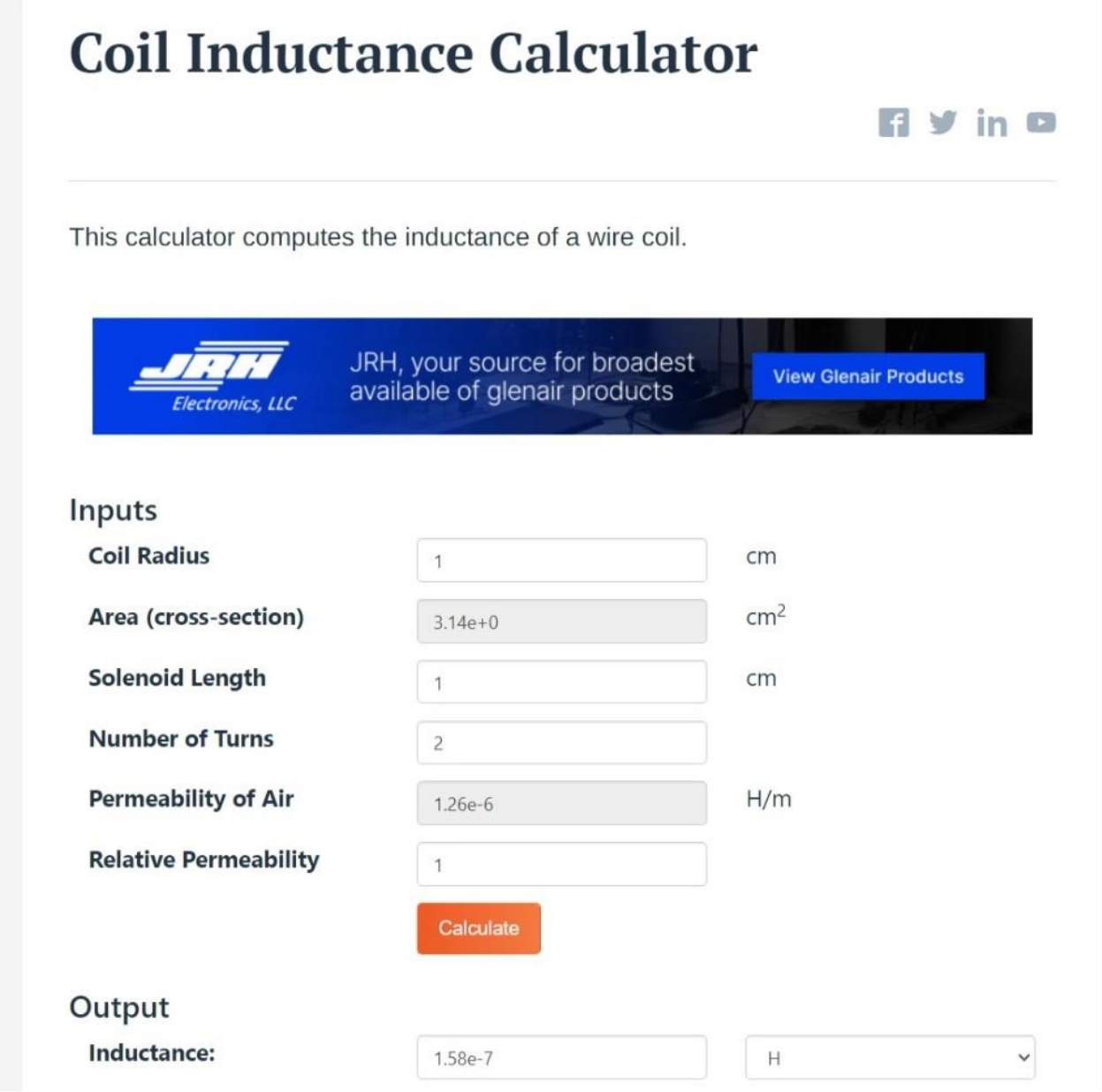

Figure 22

The simulator seems to need a specific time step (representing a wavelength?) of 7 micro seconds in these examples to resonate with the circuit to get the best results, namely: overunity? This may be due to an implication of its design by its author (Paul Falstad) in which a very strong dielectric field (predominating in voltage over current/magnetism) surrounds all of the circuits in each and every simulation which synchronizes each and every component with all of the other components.

Thus, a circuit does not have to “wait” for a 60 cycle sine wave to distribute itself across the entire circuit for each and every component to react. Instead, the reaction is everywhere immediate since nothing “travels” across a dielectric field.

Unlike an electromagnetic field, a dielectric (electrostatic) field is merely a storehouse of potential (measured in voltage). It does not transmit current and, thus, exhibits no magnetism to speak of and no transit time which an electromagnetic wave would require. Thus, there is no time-lag of the flow of information from each component to every other component.

This is the manner in which the universe communicates.

Since space possesses no locations within itself except for the matter which it contains, the dielectric vacuum of theoretical empty space is a singularity without boundaries, no shape/s, nor any dimensions. So, any electrical activity of any sort which deposits a charge of potential at any location will automatically and simultaneously be known at every other location of space without any transit time for this information to reach every other location since nothing of an informational nor an energetic nature has performed any transit.

This is how we bypass the speed of light constant to achieve instantaneous communication!

CETI, [4] eat your heart out!

These conclusions are not fairy-tale presumptions. They are the result of a correct determination of where does a dielectric charge of potential reside? In the dielectric material which is sandwiched in between the two conductive (metallic) surfaces of a capacitor. The dielectric charge is not stored within the conductive plates. Remove the plates, and replace them with fresh plates, and the charge will remain in the dielectric material of the previous arrangement.

The plates of a capacitor merely provide for the convenient charging and the discharging of a capacitor. They also provide for an orientation of polarization of charge which becomes stored within the dielectric material of a capacitor.

But the charge, itself, always and without exception resides within the dielectric material in between the two conductive plates of a capacitor.

This is exactly the same way in which the dielectric medium of empty space behaves.

Give empty space two particles of matter to serve as two “plates” of conductivity (since the electron shells surrounding the atoms of those two particles will provide the conductivity of their orbital shells to serve as a functional analog of a capacitor’s conductive plates), and the space between those two particles of matter will store any charge placed there by those two particles in the form of a voltage difference between those two particles.

Those two particles need not be separated by any specific distance. In theory, any distance between two particles will store a dielectric charge in between those two particles.

Thus, any brain activity of any creature large or small located anywhere within the vastness of material existence will become instantaneously knowable by any other creature who is also located anywhere else.

This is true telepathy, or empathy if you prefer.

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[4] Communication with extraterrestrial intelligence - Wikipedia