Is Mutual Inductance Always Conserved?

Can the validation of Maxwell's four equations, particularly pertaining to magnetism, apply to a shorted set of mutual inductances which are related to the Golden Ratio?

Or is energy conservable, but the potentialities of electrical reactance, namely: capacitance, inductance, phase shifts and frequency, not conservable since they're not a manifestation of kinetic energy, but constitute a virtual set of potentialities?

I have discovered a mathematical relationship among a set of three interconnecting mutual inductances which do not conserve their energy over time if two of these mutual inductances possess a pairing of self-inductances and their relationships are formed by three criteria ...

1. The first mutual inductance of MI(1) is the largest of the three. Its minimum value is the

golden ratio $\left(\frac{\sqrt{5}-1}{2}\right)$ of approximately 62% magnetic coupling between a pair of large selfinductances and another pair of very small self-inductances. Let's assume that each large selfinductance (of its pair) is labeled and set to the value of H(1)=1H and that each small selfinductance (of its pair) is $H(2)=2\mu$ H. And let's also assume a pair of alternate magnetic coupling coefficients among all four coils is going to be exactly the golden ratio (for one option) versus exactly 70% (for the alternate option) for the purposes of this illustration.

- 2. Second mutual inductance: two options ...
 - 1. The second mutual inductance of MI(2) magnetically couples the large pair of inductors H(1)=1H to a fifth single self-inductance $H(3)=2\mu$ H of the same self-inductance as is each of the second pair of small self-inductances $H(2)=2\mu$ H This second magnetic coupling MI(2) can be found by subtracting the first mutual inductance MI(1) from unity and taking the square root $\sqrt{1-MI(1)}$. So, if the first magnetic coupling MI(1) is 70%, then the second magnetic coupling MI(2) is approximately 55%.
 - 2. In the alternative, if the first magnetic coupling is exactly the golden ratio, then the second magnetic coupling can be found by an equivalent method of calculation by squaring the

golden ratio. So,
$$\sqrt{1 - \left(\frac{\sqrt{5} - 1}{2}\right)} = \left(\frac{\sqrt{5} - 1}{2}\right)^2 \approx 38 \text{ per cent}$$

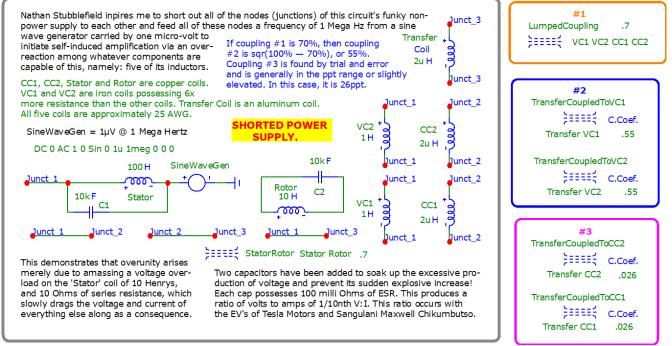
- 3. Third mutual inductance, two options ...
 - 1. If the first magnetic coupling is exactly the golden ratio, then the third magnetic coupling can be found by taking the cube of the golden ratio $\left(\frac{\sqrt{5}-1}{2}\right)^3$. This is equivalent to subtracting two from the square root of five = $\sqrt{5}-2$.
 - 2. Otherwise, if the first magnetic coupling MI(1) is greater than the golden ratio, then this third magnetic coupling MI(3) must be tweaked by trial and error to discover its most efficient percentage of unity. So, if the first magnetic coupling MI(1) is 70%, and the second coupling MI(2) is approximately 55%, then the third coupling MI(3) will be found by tweaking downwards the cube of the second magnetic coupling

 $MI(2)^3 = MI(3)$ in order to achieve maximum efficiency at a value of approximately 26‰ (ppt) simulated in the circuit, whose example, is below.

The theoretical efficiency of this anomaly can be simulated in Micro-Cap 12¹ on a 64-bit computer which minimizes the likelihood of simulator round-off error to the point of unnoticeable obscurity.

And this simulated circuit has most of its nodes shorted out to emphasize its dependency upon mutual inductance and minimize its relevance to voltage drop. This poses a question to adherents of Conservation: *What is Going On, Here?*

A screenshot of its schematic is here ...



Simplest overunity circuit you will ever see.

A screenshot of its output at 94 milli seconds, without any limit to its escalation towards the selfdestruction of its hosting circuit, is here ...

https://commons.wikimedia.org/wiki/File:Simplest-overunity-circuit-you-will-eversee_v4c,_Tesla_Motors_input_requirements_at_94ms.png

Its simulation file is located here ...

http://vinyasi.info/mhoslaw/Parametric%20Transformers/2022/Nov/simplest-overunity-circuit-youwill-ever-see_v4c.cir

And another copy is here ...

https://ufile.io/5tc2xv8w

BTW, which choice of mutual couplings, be it the minimum coupling of the golden ratio for the first coupling of MI(1), or anything greater than this, will be determined by the circuit to which it applies. In other words, one set of couplings may work in one circuit but not in any another. This concept is a broad generalization whose particular relationships of magnetic couplings may vary from one circuit to another.

I am ignorant of the viewpoint of Classical Physics.

¹ http://www.spectrum-soft.com/index.shtm