I have reason to suspect that...

...parallel capacitance is at least one way of defining the synthesis of reactive power in which the resulting current is out-of-phase with the applied voltage by a full one-half cycle of oscillations, or an angular shift of 180°. This is brought about by converting the back EMF of an inductor into an inversion of current simultaneous with the applied voltage rather than merely a time-delayed back EMF.

By "synthesis of reactive power", I mean to imply the definition of a rotary generator.

According to the [passive sign convention](#), the current is negative while the voltage is simultaneously positive. This variety of extreme reactance (of a negative unity power factor) can easily be converted into watts by passing it through a resistive load to emit heat to boil water and run a steam locomotive or else a steam turbine at a hydroelectric power plant and replace the (common sense) usage of falling water and nuclear power (which are acting as prime movers for the conversion of one form of energy into another form of energy) and avoid the necessity of utilizing a prime mover for all of our energy needs (relegating the use of prime movers into their use as a mere stimulant of input energy amounting to a few micro volts placed as a precharged condition on one capacitor).

This "transcendence" of Michael Faraday's Law of Induction turns capacitors and inductors into generators of reactive power without the necessity of moving any one of these inductors through a magnetic field in order to generate current within that inductor. Nor does it require any significant voltage source to contribute *all* of the circuit's need for an input of voltage which, instead, can readily be supplied via parallel capacitance inducing this *complete* reversal of current simultaneously against its applied voltage within various inductors or spark gaps acting as pseudo-inductors (more likely acting as a specialized version of a conductor).

This condition results in a standing wave pattern composed of energy (which moves), but whose wave pattern does not move. If it was capable of movement, its energy would exit the circuit. But this wave pattern can't exit the circuit (unless it meets up with simple resistance) since some impedances (reactive components) don't/can't see this standing wave pattern and this standing wave pattern doesn't/can't see any impedance. In other words, they mutually fail to interact under the auspices of impedances. Instead, these components act as continuous generators so long as these standing wave patterns survive the passage of time. This style of reactance is invisible to any impedant component

which is aiding or abetting its inversion of current and, thus, one or more inductors, or spark gaps, are contributing to its self-definition of acting as a generator rather than acting as an impedant resistance.

So, Ohm's Law becomes superseded by its multiplicative and additive inverse in which the negation of resistance is divided by voltage squared to yield a negative admittance. To the common person's viewpoint, this amounts to nothing less than: superconductivity at room temperature in which resistance becomes our friend and voltage input must be minimized along the lines of what Nature has already provided us amounting to little different than what the ambient environment provides us and was also utilized by crystal radio sets a century ago, namely: a few micro volts. This is the correct dosage of input voltage to initiate a fundamental precondition for over-reactance to occur if the inversion of current also occurs. This is most likely due to parallel capacitance occurring within one or more inductors as per my hypothesis.

My favorite method for inducing parallel capacitance within an inductor, or a spark gap, is the following circuit...
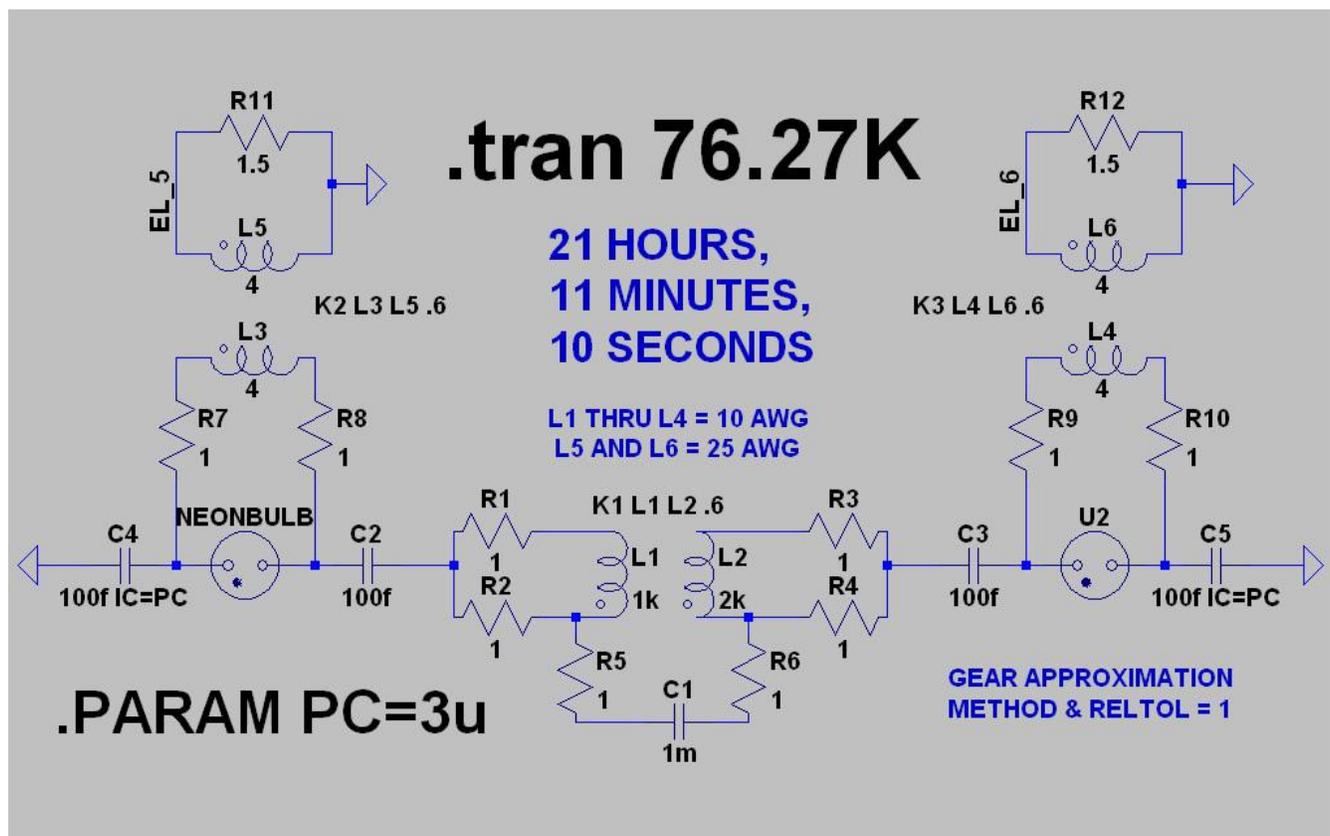

...whose virtual tracings and LTSPICE global settings are...
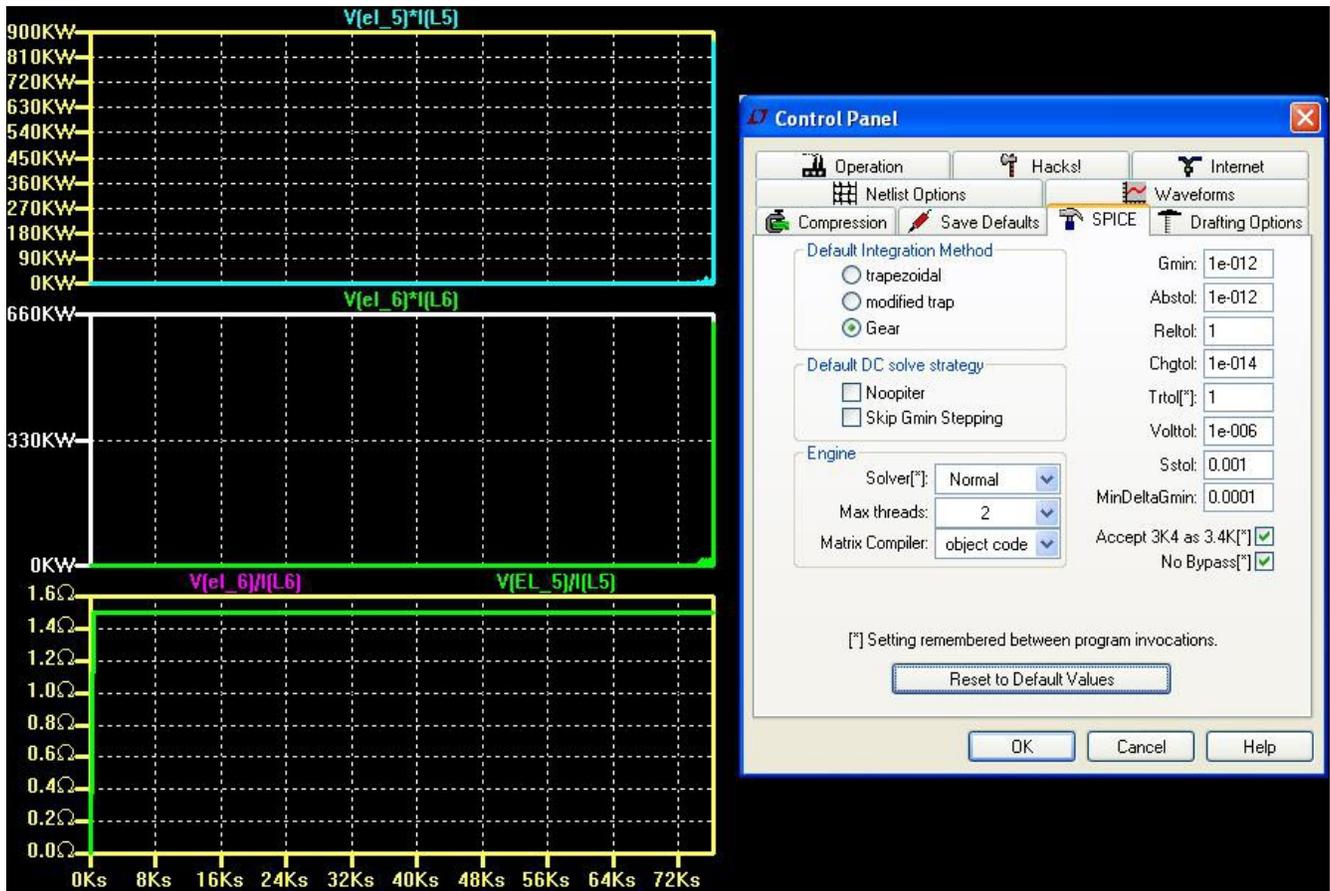
A decent example of parallel capacitance written into the inductors, rather than induced in these inductors up, above, (in which these inductors do not possess any internalized parallel capacitance) is the following example written in Micro-Cap electronic simulator...

C3
1F

L3
.0001
L4
C2

R2
1.5

L1
.0001
L2
C1

1F
1F

1F
C4

D1   D3

D2   D4

R1
1u

Where's the energy coming from?

L3 vs L4 = 10mH vs 8H, 1% of 1%, 25 AWG, ie. Motor Load = Rotor vs Stator. All coils possess resistance in equal units of inductance. So, a 100nH coil possesses 100 nano Ohms of series resistance.

L1 vs L2 = 30mH vs 90mH, 1% of 1%, 25 AWG. All coils also possess 1e+20 Farads of parallel capacitance which represents their magnetic remanence of lots of iron and very little copper. All capacitors possess 3 Ohms of equivalent series resistance.
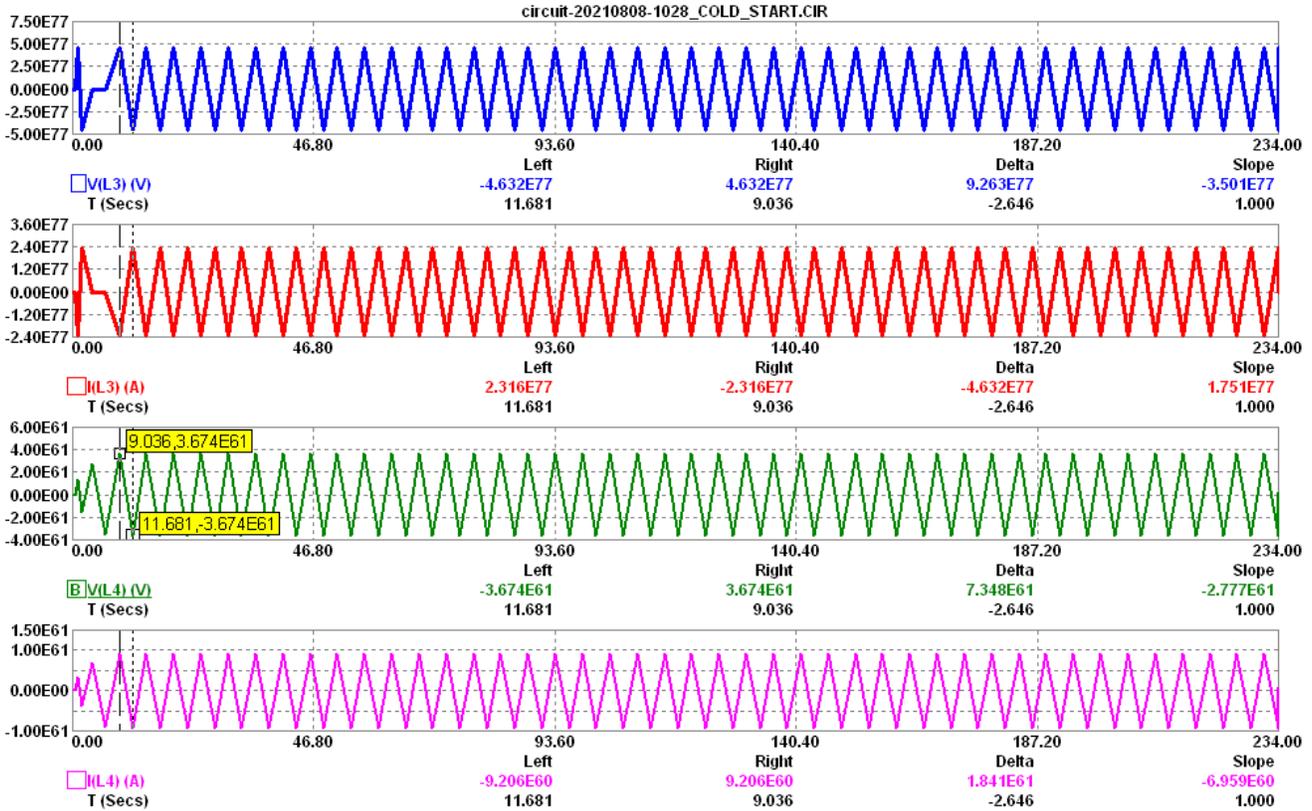
The smaller inductor of each coupled pair, L1 and L3, generates reactance while the larger inductor of each coupled pair, L2 and L4, consumes watts. Everything else consumes watts. Go figure... Notice how small is the coupling percentage?...1% of 1%! Thus, is this device broadcasting power to any coil of wire which is associated with hard magnetic iron or similar. This was the choice for transformer cores of a bygone era.

circuit-20210808-1028_COLD_START.CIR
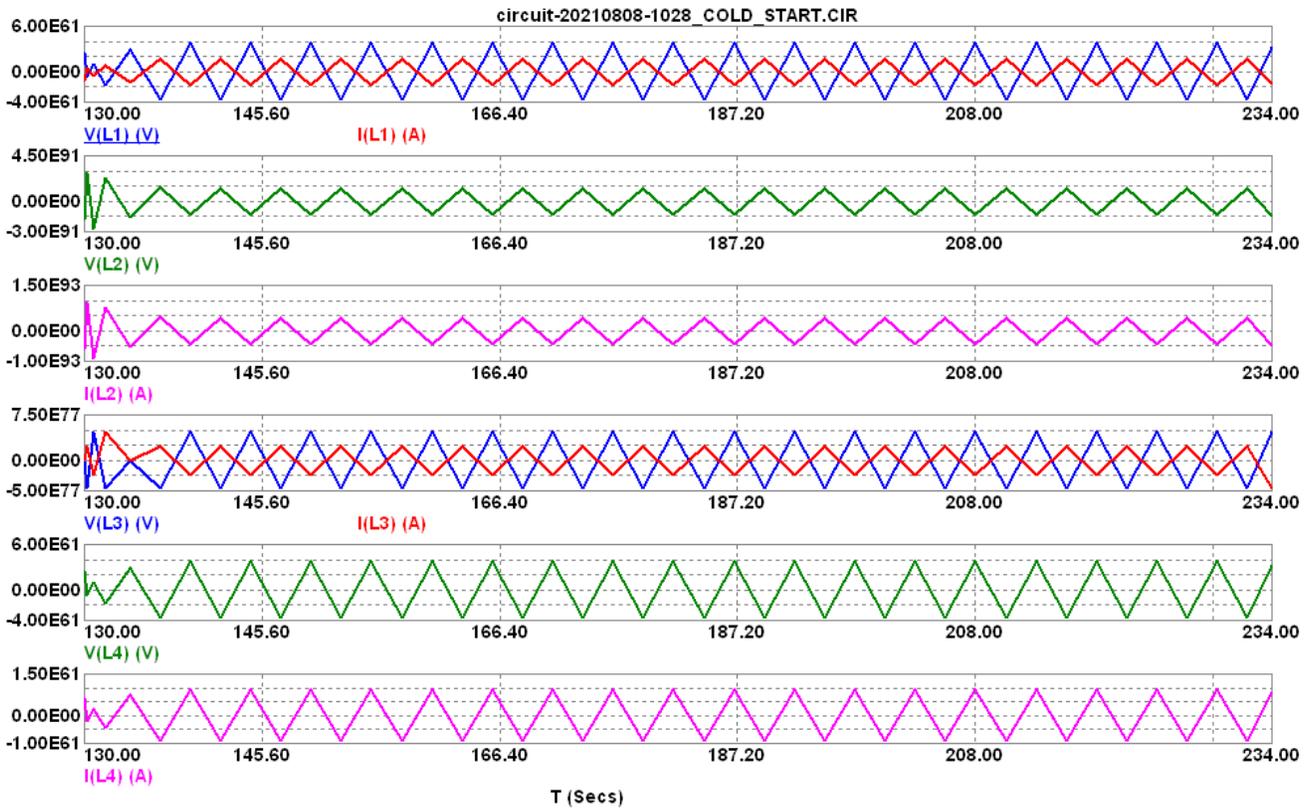
L1 and L3 generate reactance while L2 and L4 consume watts. The volts of L1 is in opposition to the watts of L2. The amps of L3 is in opposition to the watts of L4.

THE ROTOR'S VOLTS AND AMPS ARE OUT-OF-PHASE BY ONE-HALF CYCLE OF OSCILLATIONS, OR 180°. THUS, THE ROTOR IS GENERATING POWER WHILE THE STATOR IS CONSUMING/CONVERTING POWER.

circuit-20210808-1028_COLD_START.CIR

	Left	Right	Delta	Slope
V(L3) (V)	-4.632E77	4.632E77	9.263E77	-3.501E77
T (Secs)	11.681	9.036	-2.646	1.000

	Left	Right	Delta	Slope
I(L3) (A)	2.316E77	-2.316E77	-4.632E77	1.751E77
T (Secs)	11.681	9.036	-2.646	1.000

9.036,3.674E61
11.681,-3.674E61

	Left	Right	Delta	Slope
B V(L4) (V)	-3.674E61	3.674E61	7.348E61	-2.777E61
T (Secs)	11.681	9.036	-2.646	1.000

	Left	Right	Delta	Slope
I(L4) (A)	-9.206E60	9.206E60	1.841E61	-6.959E60
T (Secs)	11.681	9.036	-2.646	1.000

I've got an interesting hypothesis of how this negation of current manages to accumulate power in which a full cycle of oscillation is never allowed to be reached. Instead, each oscillation is subdivided at each quarter cycle by capacitive reactance occurring simultaneous to its opposing quarter cycle of inductive reactance whose net result is the negation of current relative to applied voltage at this point-in-time of an oscillation's quarter cycle.

This negation of current (relative to applied voltage) is due to the squaring of the square root of negative one since each type of reactance, namely: capacitive versus inductive, is a quarter cycle shift of the square root of negative one, but in an oppositional direction (from each other) of 90°.

By the time each oscillation reaches its half-way point, it has already redefined its half-cycle as the termination of the previous cycle and the starting point for the next full length oscillation due to the intrinsic nature of standing waves is that they never reach the culmination of a full-length cycle (unlike

waves which move).

[The study of wave mechanics is far more fruitful than the mere study of electrodynamic theory, alone, since wave behavior supersedes electric theory and is universally applicable to every other energetic discipline, such as: light, heat, motion, and gravity, etc. In fact, I suspect that so-called "black celestial-bodies" are nothing other than a situation in which a star does not emit normal light waves, but emits light waves in which the current phase of those light waves is out-of-phase with its phase of (di-)electric potential by one-half cycle of separation. This is why it cannot be "seen" just as a standing wave of electricity emits zero watts, yet, is very much there (existing as reactive power) even if we can't "see" it.]

Thus, each half-cycle effectively doubles the frequency of oscillations (although simulators multiply by a factor of ten since they are predicated upon a base ten number system).

This doubling of potential energy has a direct impact upon the rate of acceleration of oscillations and the rate of the accumulation of reactive power.

Hence, freely available reactive power (of a complete inversion of current relative to voltage) escalates as per – what is expected of (and what electrical engineers call): "resonant rise is destructive to equipment" implying the accumulation of reactive power becoming potentially destructive if it should leak out as a conversion into heat via a resistive load.