

## the autogenous PAGD technology

Over a decade ago, Alexandra and I succeeded in isolating a novel regime of plasma discharge, which we termed the autogenously pulsed abnormal glow discharge, or autogenous **PAGD** for short.

This plasma regime involves spontaneous pulsation of a saturated glow discharge by a mechanism of auto-electronic emission. And, as in vacuum arc discharges, the autogenous **PAGD** employs anomalous cathode reaction forces -- of the type that Dr. **Harold Aspden** has, for now over 40 years, been drawing attention to, and which appear to confirm the substance of his **Law of Electrodynamics**.

The observed pulsation is said to be autogenous because under specific values of diverse physical parameters it occurs (1) with very low applied fields, (2) it is triggered by an auto-electronic emission, and (3) it functions without the need for an external pulse-forming mechanism.

We also designed direct electromotor and inverter applications for the autogenous **PAGD** regime where a direct coupling between a plasma discharge and specific types of motors is sought. We believe we have also discovered that these anomalous cathode reaction forces are the source of an excess energy contributed by the 'vacuum state', that is, by the Plenum, when it is tapped under the various conditions we have isolated and described in great detail.

To capture the energy in excess of breakeven, we designed a simple converter circuit which we named the **XS NRG™** System. Essentially it employs 2 battery banks, one at the input and the other at the output of the autogenous **PAGD** reactor plus associated circuitry. Comparing prolonged resistive battery discharges performed before and after operation of the vacuum tube in the autogenous **PAGD** regime yielded typical breakeven efficiencies of 5X and greater.

Over the years we have conducted far more work at our laboratory than we have been able or willing

to publish. One is results summary describing a manually operated, stand-alone performance of the **XS NRG™** conversion system, also referred to as the "Ping-Pong control method". The idea was to approach a free-running system.

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### Some Correa patents:

Correa, P. and A. Correa. **Energy conversion system**. Canada patent 2,147,153. 1997.

Correa, P. and A. Correa. **Direct current energized pulse generator utilizing autogenous cyclical pulsed abnormal glow discharges**. U.S. patent 5,502,354. 1996.

Correa, P. and A. Correa. **Electromechanical transduction of plasma pulses**. U.S. patent 5,416,391. 1995.

Correa, P. and A. Correa. **Energy conversion system**. U.S. patent 5,449,989. U.S. patent 5,449,989. 1995.

### website

<http://www.globalserve.net/~lambdac>: Correa, P. and A. Correa. **Power from auto-electronic emissions**. 1996 and, Correa, P. and A. Correa. **The Correa/Reich affair**. 1996

### selected publications

Aspden, Harold. **Power from space: the Correa invention**. **Energy science report No. 8**. Sabbiton Publications, Southampton.

Carrell, M.. **An overview of the Correa invention**. **Infinite Energy**. Volume 2, Issue 8. 1996. p. 10-4.

Carrell, M.. **The Correa PAGD reactor: errata and supplement**. **Infinite Energy**. Volume 2, Number 9. 1996. p. 33-6.

Correa, P. and A. Correa. **Excess energy (XS NRG) conversion system utilizing autogenous pulsed abnormal glow discharge (PAGD)**. **Proceedings, 3rd International Symposium on New Energy**, Denver Colorado, 1996. p. 43-62.

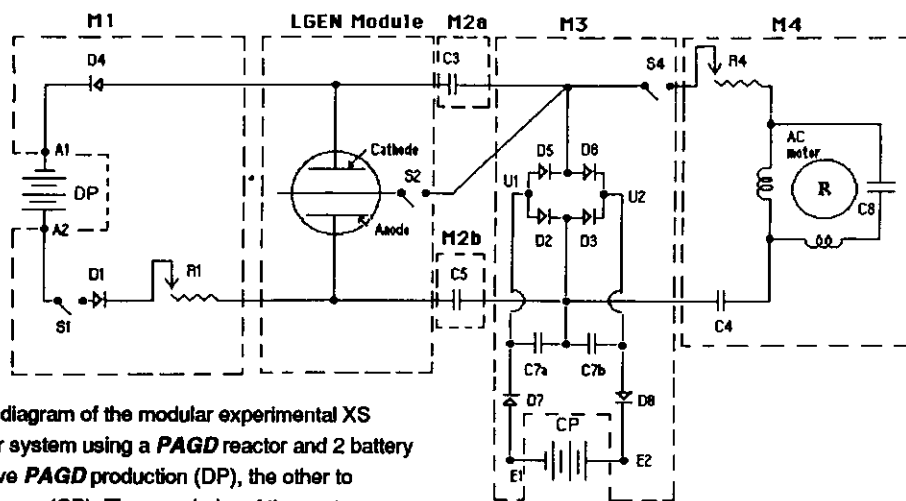
Correa, P. and A. Correa. **Metallographic and excess energy density studies of LGEN cathodes subject to a PAGD regime in vacuum**. **Infinite Energy**. Volume 3, Issue 17. 1998 p. 73-8.

Mallove, Eugene [editor]. Volume 2, Number 7. 1996. [entire issue dedicated to Correa findings.]

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## the ping-pong control method

1) The fundamental circuit of Figure 1 (corresponding to Fig. 9 of the U.S. Energy Conversion System patent) employs a single reactor and 2 separate battery packs of unequal size, at the input (drive pack) and at the output (charge pack) of the system, to isolate the two and enable us to measure integral power lost *versus* integral power gained after **PAGD** operation of the reactor. These measurements are best performed by long-term resistive discharges of both battery packs before and after **PAGD** production runs. This means separate current and voltage measurements that are integrated over time for separate input and output batteries.



**Figure 1.** Circuit diagram of the modular experimental XS *NRG™* converter system using a *PAGD* reactor and 2 battery packs, one to drive *PAGD* production (DP), the other to collect excess energy (CP). The remainder of the system consists of M1 (input module), M2a and M2b (filtering and transducing interface), M3 (regulator) and M4 (optional motor).

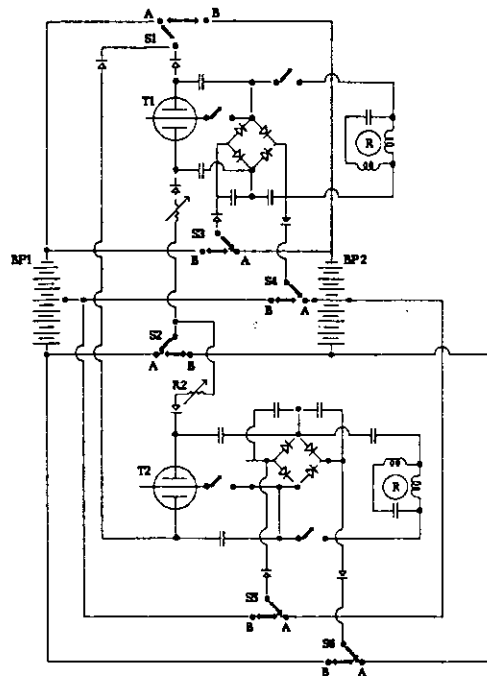
2) In the present work with a Ping-Pong system, the circuit employed is fundamentally that described in Figure 2 (or Fig. 12 of the cited US patent, except that a single reactor is utilized for purposes of minimizing any variance associated with the utilization of different reactors). The experiment consists of employing 2 battery packs and beginning with 1 pack as the driver and the other pack subdivided into 2 charge packs placed in series. The first 2 *PAGD* production runs therefore charge the second pack in its totality, with each *PAGD* run charging 1/2 of the second pack. Final runs 3 and 4 have these conditions reversed: the second battery pack now serves as drive pack, to charge, via 2 other *PAGD* production runs, the first battery pack which in turn is subdivided into 2 charge packs. Resistive-measurements of power for both packs are made before each experiment and after a full Ping-Pong cycle of 4 *PAGD* runs.

## results

The results were obtained from 5 separate experiments performed with 2 identical battery packs, BPA and BPB (46 lead acid gel cells each), without a resistive measurement step before reversal of their functions -- as driver or charge packs.

A representative example of the results from one such experiment is shown in Figures 3 & 4. In both graphs, closed symbols refer to resistive discharges performed before the Ping-Pong cycle and open symbols to discharges performed after-

ward, *i.e.* performed after 4 consecutive *PAGD* production runs. If operation of the XS *NRG* System failed to capture energy in excess of break-even, we should expect the curves obtained for either battery pack after performance of the *PAGD* runs to exhibit a lower level - or a substantially



**Figure 2.** Inport and output commutation for a basic XS *NRG™* converter with 2 parallel driven reactors with series outputs at the charge pack and using 2 identical drive charge packs BP1 (BPA) and BP2 (BPB). Once charged, the second pack BPB functions as a drive pack to recharge BPA. This defines a full *ping-pong cycle* of battery charging.

"Ping-Pong" Systems and as obtained by other methods of measurement.

To date, excess energy values as high as 200 to 300 mWh/pulse, that is up to 1000 Joules per pulse, have been obtained at pulse rates on the order of less than 0.05 PPS, in the XS NRG Converter circuits. An example is shown in Figure 6 utilizing our data acquisition Superscope system: From left to right are shown current, voltage and power for input and output pulse waveforms. On the lower sequence, the resolution of the current panel on the left is amplified 10X on the ordinate to permit us to visualize input current, which peaks at 0.3A. The output current clips for 5 milliseconds

ured for the duration of the sample was over 20X in terms of power - 46W in, versus 1kW out.

### conclusion

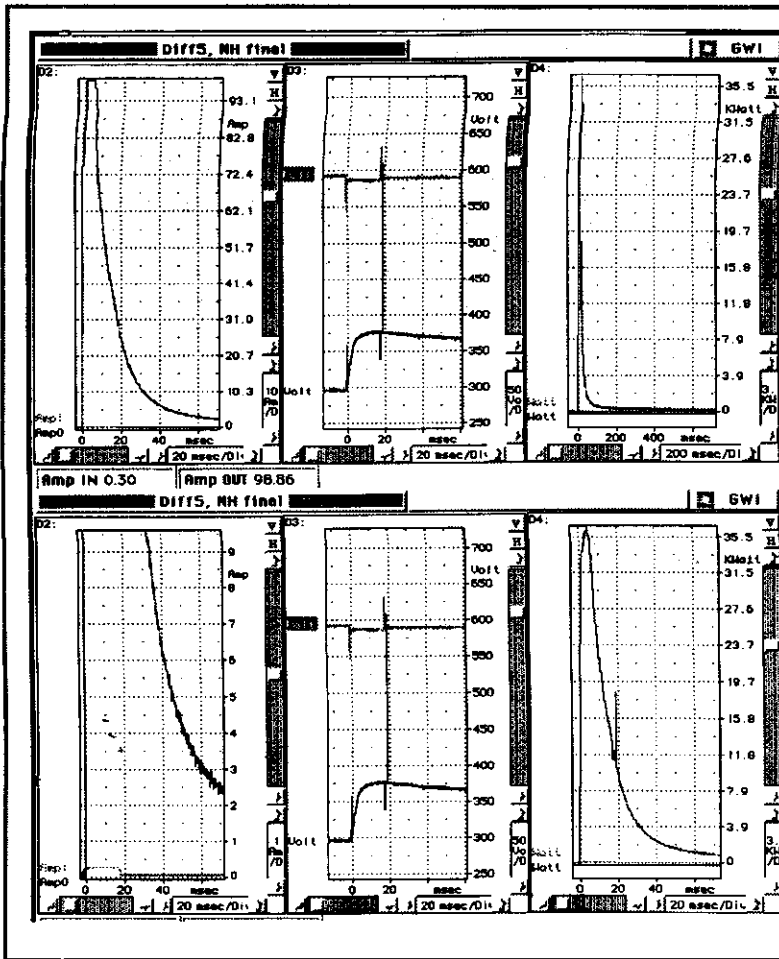
The results of these experiments demonstrate that the over-unity condition of greater than breakeven energy return in the XS NRG system is a verifiable fact utilizing varied methodologies. The excess energy values per pulse obtained by integration of power discharges from reliable batteries match the results we have previously reported employing other approaches: the data acquisition system analysis, the oscilloscopic data (see Correa, P. and A.. *Metallographic and excess energy density*

*studies of LGEN cathodes subject to the autogenous PAGD regime in vacuum.*) and the prolonged resistive battery discharges for drive and charge packs not subject to ping-pong cycling.

### A note of caution

At this point a note of caution regarding verification of these facts is in order: After many years of work with the autogenous PAGD and vacuum arc discharges, we have come to the conclusion that auto-electronic emission mechanisms always tap Aether energy. But this coupling with the 'vacuum state' is one that can either obey the 2nd Law or violate it instead. In this respect, there is a curious relation between these 2 alternative outcomes of operation of these types of plasma systems. To begin with, (1) operation of the PAGD/IVAD (interrupted vacuum arc discharge) reactors outside of the parameters of area, gap distance, vacuum, residual gas, work-function, current and voltage input, pulse extinction and pulse rates, ranges of the cathode voltage drop, etc, etc, which we have specified before, is a total and

complete non-starter. Next, (2) utilization of transformer-type couplings consistently yields negative excess energy results, because of inductive conversion of tapped energy in the form of a magnetic reaction of the Aether medium. This may well be what did not happen, but should have, in the power station that **Alexandr Chernestkil** is



well above 100A (estimated at ca. 135 A), as can be seen from the left panel on the top. The right panel on the lower sequence shows the power waveform with the time resolution of the abscissa amplified ten-fold. Despite the clipping of the output current pulse, the breakeven efficiency meas-

reputed to have destroyed - a balancing of action and reaction. And if this normal safety valve failed, it is most likely because, despite magneto-inductive couplings, a situation of resonance might well have taken place there and then. (3) Capacitative isolation of the system fares no better, not just because the tendency for the vacuum to deploy a negative resistance is counteracted, but also because the dynamic capacitance of the tube is interfered with. This is a strange phenomenon, but of direct correlation with the total incapacity to charge a top-notch electroscopes, even one with its case grounded, on *certain* days. Furthermore, any placement of a capacitor in parallel with the vacuum gap remits the reactor to operation as a strobotron-type device. (4) Another common mistake is a lack of control of the constant heat and power dissipated by the glow phase of the discharge, which is especially promoted by unregulated or current-regulated supplies, inductive couplings, etc. (5) So too is the utilization of relays and vacuum switches in the design of single pack controllers or in the automation of dual pack systems - which introduces vacuum and/or atmospheric arc discharges, coupling of dynamic gap inductances, resistances and capacitances, with all manner of unwanted outcomes.

### **aether energy conversion scenarios**

The positive tapping of energy from the Plenum may take place without this captured excess energy being converted into electric energy. There are 4 different conversions that happen or are likely to happen under these conditions, and which couple to -- as well as may hinder -- the electric conversion. Here I will only mention 2 actions which also appear to be linked and have already made their way to the published literature -

(1) One is the conversion of the energy deployed by the anomalous cathode reaction forces into excess heat, as Aspden explicitly considered in his 1977 British patent. Essentially, this is the mechanism whereby a vacuum arc discharge which is uninterrupted proceeds, under controlled parameters, to generate excess energy in the form of heat.

(2) The other is what Aspden calls "The proton factor" in his 1988 paper, the same factor which, in several of his rather interesting papers and letters, **Paul Rowe** has reported. Here we are

confronted with the condensation of mass-energy out of the Aether by the action of the discharge.

### **epilogue**

There is another story I would still like to tell you about, that of one **Heinrich Anton Müller**, born in 1865 in Boltingen, Switzerland, from humble origins. Having worked in the hillside vineyards Vaud canton near Lake Geneva, Müller invented an ingenious vine trimmer. However, in the process of trying to patent it, his counsel, agents and sponsor colluded to expropriate his invention - and the lucrative exploitation of the vine trimmer was pursued by them and still others. When Müller openly rebelled against this, he was promptly institutionalized in the psychiatric hospital at Münsingen, near Bern, under the standard pretext that he suffered from schizo-paranoid ideas of grandeur and persecution. Seeing himself incarcerated for life for the crime of having invented a machine whose use was of value and profit to others who stole his rights, Müller promised never again to invent another machine which was of use to anybody, in the hope that his machines never again could be stolen, never again be employed for profit, never again be subject to trade and exchange. So, **M. Thévoz** writes in his 1976 book, *Art Brut*:

"Müller occupied himself with drawings and inventions, the latter with a view to achieving perpetual motion."

This he claimed to have successfully accomplished sometime later (Figures 6 and 7), in a form that reminds one of the *Bessler Wheels* (see Collins, J., *Perpetual motion: an ancient mystery solved?* 1997). His machines - consisting of many wheels engaged in a ceaseless whirl - recall the contemporary efforts of **Man Ray** to transform useful objects into useless ones. Müller would have succeeded in doing so with a perpetual motion machine, a machine which, by its constant capture of energy, by its constant performance of movement, should be in principle considered the most useful there could ever be.

Yet, the notion that such a machine could exist is at once dangerous for our social system and rejected as foolish, as an impossibility. It is dangerous to our social system because there is this common perception that it would make society

independent from the oil, coal and nuclear industries - and dangerous because it evokes the notion that if Space is brimming with energy, then power can be had for free. This is also part of Müller's notion - the realization that a perpetual machine ultimately cannot be sold or find a market, even if the inventor is determined to succeed.

But why are such machines rejected as foolish and impossible? Because they raise the specter of getting something from nothing. Yet, consider for a moment what such a machine is, in the words of **Thomas Phipps Jr.**, *it begets something for something, even if unequal, not something from nothing!*

Now consider what it stands for in our social world: perpetual motion has been banned to the asylum, to the freak show - where it still finds a way to sell itself - precisely because everybody, the scientist and the common man, persists in believing that it can only equate to getting something from nothing. Here is where we find the Müller effect, so to speak, where the scientist can only escape by art, and the artist by science - where the machine of the highest utility is useless for the existing social system. It is only fitting that all of Müller's machines were destroyed by order of the hospital management, without a further thought being given to them. After all, what could a paranoid-schizophrenic possibly have to offer?

□ **Paulo N. Correa**

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We test and rate appliances for their electromagnetic field characteristics.