

100 Years of "Free Energy" Myths Debunked

A Radio-Technical and Historical Total Analysis of Parasitic Power Harvesting (RF-Harvesting)

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Introduction:

The Myth of the Magic "Black Box"

For more than a century, the public has periodically heard about charismatic inventors claiming to have constructed devices that can generate massive amounts of electrical current out of thin air. The debate surrounding these inventions is almost always characterized by mysterious theories about "free energy", zero-point energy, over-unity coefficients (Efficiency > 100%), and alleged violations of the laws of thermodynamics.

However, when you strip away the pseudoscientific smokescreen and analyze the devices through the eyes of an experienced radio amateur, Maxwell's equations, and classical radio technology, the mystery falls completely apart. The key to understanding these devices lies in realizing that they are not generators, but rather extremely well-designed, unauthorized receivers. They function via parasitic harvesting (RF-Harvesting) – a process where the device acts as an electromagnetic sponge, soaking up the powerful radio, mediumwave, longwave, and microwave signals from the atmosphere, which others (radio stations, telecom companies, and the military) have already spent enormous sums of money to generate and transmit.

This report maps the historical and technical common thread from Nikola Tesla's early experiments to modern YouTube phenomena.

The Historical Spark – Nikola Tesla in Colorado Springs (1899)



To understand how the "free energy" myths arose, one must rewind time to 1899, when the genius Nikola Tesla performed his famous high-voltage experiments in Colorado Springs.

The experiment and the myth

Tesla placed incandescent light bulbs directly into the ground several kilometers away from his laboratory, and to the astonishment of the spectators, the bulbs lit up wirelessly in the terrain. Ever since, this experiment has been hijacked by the free energy movement as the ultimate proof that Tesla found a method to extract free electricity from the planet itself or the universe.

The true physics

Tesla never claimed that he created energy out of nothing. His system, *The World Wireless System*, was intended as a method to transmit power over long distances by using the Earth and the ionosphere as electrical conductors.

1. Tesla used enormous amounts of conventional electricity from the local coal-fired power plant to drive his gigantic **Magnifying Transmitter** (a huge Tesla coil).
2. He pumped this energy directly into the ground at extremely high voltage, causing the entire ground in the local area to vibrate electromagnetically.
3. When the bulbs lit up in the terrain, the ground simply functioned as a wireless extension cord.

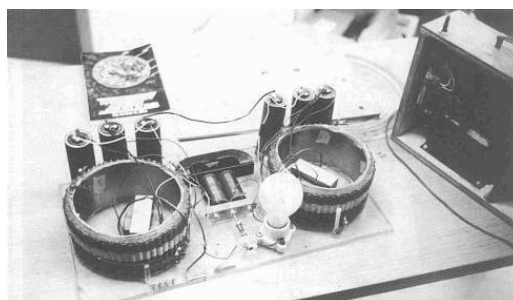
The loss of energy over the distance was gigantic, making the system completely commercially useless. But the experiment proved to future fraudsters that it was possible to make light bulbs light up wirelessly, as long as a sufficiently powerful, external energy source was present in the air or underground.

The "Kalundborg Phenomenon" as Historical Proof

- **The Danish phenomenon:** During the 1960s–1980s, cottage owners in the dense cottage area on Gisseløre exploited the intense electromagnetic field close to the Kalundborg Radio Transmitter. At the time, the transmitter operated at an enormous power of up to 150–300 kW on longwave (243–245 kHz).
- **By stretching long copper wires out in the garden**, these functioned as parasitic antennas in the transmitter's near-field. These collected enough energy for fluorescent tubes inside the small cottage living rooms to light up completely for free, until the Post & Telegraph Service intervened against the "energy theft".
- This historical reality is, among other sources, documented in articles by *Ingeniøren*.

Technical Demystification of Lester Hendershot's Generator

An Amateur Radio Perspective Based on VHF Radio Experience



At the beginning of my amateur radio life in the 1970s, measuring instruments were expensive, and one had to use whatever was available. To tune the output on my 2-meter transmitter, I used a flashlight bulb with a

small coil consisting of a few turns, held it near the tank circuit of the transmitter's output, and tuned the circuit for maximum brightness in the bulb. This was a simple but effective demonstration of wireless energy harvesting via inductive coupling.

When we take this practical experience and apply it to Lester Hendershot's famous "Fuel-less Generator," which was demonstrated in the USA in 1928, the puzzle pieces fall into place:

The geographical epicenter: Hendershot lived and conducted his experiments in Elizabeth (near Pittsburgh, Pennsylvania), very close to the absolute radio boom of the 1920s.

The smoking guns (The radio stations):

- **KDKA (East Pittsburgh):** Owned by Westinghouse and known as the world's first commercial radio giant. Precisely during Hendershot's most active years in the mid-to-late 1920s, they constantly turned up the power, experimenting with massive super-transmitters of 50,000 watts (50 kW) and above.
- **WCAE (Pittsburgh):** The other local mastodon, which transmitted powerfully and stably in the same area on the mediumwave band.
- **The north-south smokescreen:** Hendershot's stubborn claim that his machine absolutely had to face a precise north-south direction to capture "the Earth's magnetic field" was a brilliant red herring. Geographically, Westinghouse's gigantic transmitting mast (KDKA in East Pittsburgh) was located due north of his residence in Elizabeth. The alignment was entirely about turning his coils toward the strongest transmitting mast to maximize signal capture.
- **Basket-weave coils:** The construction of Hendershot's coils was not a magical generator, but the 1920s' most advanced, lossless loop antenna. This special basket-weave method minimized the coil's self-capacitance and provided an ultra-high Q factor (quality factor), which is crucial for extracting maximum energy from a weak field.
- **The bipolar capacitors:** His home-rolled paper and foil cylinders were designed for high-frequency alternating current (RF) and formed a compact, internal LC resonant circuit (a tuner) right in the middle of the coils.
- **The proof of resonance:** Thomson's resonance formula reveals that the components' estimated values of 130 microHenry and 7.8 nF caused the device to go into razor-sharp resonance in the lower mediumwave band around 500–530 kHz. This was the most energy-dense frequency band of the era, as it hosted powerful maritime distress channels and mixing products from the local mega-transmitters.
- **The mechanical buzzer:** Functioned as a non-linear spark gap and a mechanical rectifier that "mixed" and chopped the harvested high-voltage RF from KDKA and WCAE down to a lower frequency and usable current that could light an incandescent bulb.

The "Shielded Box" Test as the Final Proof

The New York Times, March 1928.

When Hendershot exhibited his machine in Pittsburgh, a local research engineer named Dr. F. W. Hochstetter challenged him. Hochstetter stated to the newspaper that the machine was a "fluke" (a coincidence/hoax). He challenged Hendershot to place the generator inside a completely shielded metal box (a Faraday cage), which would block all electrical currents and radio waves in the atmosphere.

Hochstetter said: *"If it keeps running inside the shielded box, I will admit it is a wonderful invention. Otherwise, not."*

Hendershot refused to perform the test and left town shortly after. He knew perfectly well (or discovered) that if you cut the connection to Pittsburgh's massive radio signals, his magical "Free Energy" box would instantly drop stone dead.

The 1930s Crystal Trick – T. Henry Moray



Shortly after Hendershot, a new inventor stepped onto the American stage: **Thomas Henry Moray** from Salt Lake City, Utah.

The Myth and the "Black Box"

In the 1930s, Moray presented a large, closed wooden box with meters on the front, which he called his *Radiant Energy Device*. When he connected a very long outdoor antenna and a solid ground rod to the box, he could – completely without batteries or connection to a wall outlet – draw, he claimed, up to 50 kilowatts (50,000 watts) of stable power. This was enough to light up rows of powerful incandescent bulbs and run heavy electric irons in front of astonished journalists and engineers.

When skeptics accused him of cheating, he took the machine out into Utah's barren deserts or up onto isolated mountain peaks, where he threw the antenna wire up into a dry tree, after which the machine still produced power. Moray claimed that the universe was a "sea of energy" (*The Sea of Energy*), and that his box functioned like a radio tuned to capture cosmic rays from space. His deepest secret was a special component inside the box, which he called his "Swedish crystal."

The True Physics

Moray's device was in reality constructed using exactly the same principle as a crystal radio. A crystal radio requires precisely a very long antenna and a good ground connection to function, and the crystal (the diode) acts as a valve that rectifies the radio waves. Crystal radios do indeed harvest power directly out of the air, but only in the microwatt range – enough for a pair of headphones.

To generate 50 kW and light up 35 powerful incandescent bulbs, enormous amounts of energy are required. The visual setup with the long antenna and the grounding functioned primarily as a brilliant smokescreen for the investors.

The Convenient Sabotage

When investors and independent physicists in the late 1930s tightened the net and demanded permission to dismantle the box to examine the "Swedish crystal," a highly convenient catastrophe occurred: Moray claimed that one of his assistants, in a fit of rage, had taken an axe and chopped the entire machine into small pieces. Moray claimed that he was never since able to recreate the chemical mixture in the crystals. This is a classic rhetorical and practical move in the free-energy world: When the truth is close to being revealed, the machine is destroyed, allowing the inventor to maintain their status as a misunderstood martyr without ever having to answer for their deception.

Technical Demystification of Steven Mark's TPU (Toroidal Power Unit)



Steven Mark, in the foreground, during a demonstration of the 1 kW TPU.

For decades, many have debated how Steven Mark's TPU rings in the 1990s could power incandescent bulbs from 200W up to 1000W during demonstrations in the USA without any visible wires. A YouTube search for "Steven Mark TPU" still shows these demonstrations.

Paradoxically, the key to solving the mystery came from an engineer who was allowed to weigh the mid-sized 200-watt TPU model and noted that it weighed only between 350 and 400 grams.

For an amateur radio experimenter, this extremely low weight is a revelation: it definitively rules out heavy transformer cores, large batteries, or traditional iron cores. There could absolutely not be much iron in that construction. Instead, the phenomenon can be explained entirely by classical radio technology, Maxwell's equations, and electromagnetic resonance in an ultra-light air-core coil.

- **Longwave harvesting in the USA:** In the area of Southern California where Steven Mark operated, the air and the underground were similarly characterized by powerful, low-frequency signals and long waves in the 150–200 kHz range (including aeronautical non-directional beacons (NDB) and military coastal and submarine transmitters) pumping out massive amounts of energy.

The TPU Construction: An Ultra-High-Q Air-Core Loop Antenna

When you are located within the near-field of a powerful longwave transmitter, the electromagnetic field functions as a gigantic, distributed transformer. Videos and eyewitness accounts of the TPU's interior reveal a construction that is the ultimate practical recipe for a resonant circuit with an extremely high Q factor (quality factor).

- **The pure air-core coil (The 200W model):** The fact that the 200W model only weighed 350–400 grams is because it was constructed as a pure air-core coil without any heavy core whatsoever. This eliminated all forms of iron and eddy current losses ($R_{core} = 0$) as well as dielectric losses, which is crucial at high frequencies.
- **Mechanical stability in the large model:** It was only in the very large 1000W model that a Styrofoam core was introduced. Since Styrofoam consists of approximately 98% air, it functioned as an excellent mechanical support for the heavy windings without ruining the electrical properties of the air-core coil.
- **Thick copper wire:** Fairly thick copper wire was used (presumably around 1.5 mm), which significantly reduces the ohmic resistance (R_s) to maximize Q.
- **Large spacing (0.5–1 cm) between the turns:** This "space-winding" drastically minimizes the coil's self-capacitance (C), ensuring it remains a pure inductance that can be forced into perfect resonance from the outside.

The Inventor's Own Words Confirm the Antenna Theory

In his own writings, Steven Mark stated two things that serve as the definitive radio-technical proof ("The Smoking Gun"):

"In the case of my power supply, you create multiple frequencies within the immediate vicinity of the collector coil's circumference... The frequencies are directly related to the collector coil's circumference."

In radio technology, the circumference of an optimal loop antenna is directly locked to the wavelength it is intended to receive. Furthermore, the circumference of the ring will resonate with harmonic overtones, creating standing waves – or precisely "multiple frequencies within the same space," which in theory allows for harvesting from several different nearby powerful radio stations.

"You can begin to collect the power and spread it without the need for amplification, because the signal source also becomes the power source and has the natural tendency to run with amplification."

This is the purest definition of passive resonant amplification within an antenna's near-field. When a high-Q coil is brought into perfect resonance with an external, powerful RF transmitter, the voltage increases exponentially ($V_L = Q \times V_{in}$). The signal source in the air becomes the power source via tight, mutual induction.

The Mixed Signal (approx. 6 kHz) and the Heat Issues

- **The bulbs light up directly on LF/VLF:** An incandescent bulb is a pure ohmic resistance. If you feed raw longwave energy (150–200 kHz) directly into a bulb, it will light up flawlessly on the thermal RMS energy. Steven Mark's own description of the signal as "DC with a lot of noise" was likely due to the common multimeters of the era, which became completely overloaded and confused by the complex RF signal.
- **Oscillations at 6 kHz:** Steven Mark himself explained that the mid-sized 200-watt version had oscillations around 6 kHz, which could be felt as a faint vibration when held in the hand. As a radio amateur, it is natural to assume that this was due to an internal mixing circuit (heterodyne principle) hidden within the sealed ring. When the harvested LF frequencies from the built-in coil array meet in the non-linear semiconductor junctions of the power electronics, intermodulation occurs. This low-frequency 6 kHz mixing product could then be converted into mechanical micro-vibrations within the windings of the air-core coil itself due to Lorentz forces.
- **The vital role of control signals (Phase control):** In his videos, Steven Mark placed great emphasis on the fact that specific "control signals" were absolutely vital for the TPU to work at all. Viewed through the eyes of a radio amateur, this makes perfect sense. When harvesting energy from one or more separate coils – potentially tuned to different frequencies or harmonic overtones – the collected signals must be precisely phase-locked and synchronized. Without active control signals to manage the timing ("gating") in the power electronics' semiconductors, the signals would oppose and cancel each other out. The control signals were thus not a magical ignition key to free energy, but rather necessary electronic phase management to ensure that the energy from the coils was added together in phase and directed into the load.

The Radio-Technical Smokescreen and the Great Investor Deception

When you piece together the radio-technical puzzle, it becomes clear that Steven Mark did not discover a new source of energy, but rather a brilliant way to mask wireless energy harvesting in order to milk investors for money over several years. If he had admitted that the TPU was merely a highly efficient radio receiver, his "free energy" empire would have collapsed. No one invests in a passive antenna that loses power if it is moved away from the near-field.

Today's Radio Parasite – Dr. James Schwartz (Noah's Ark Research)



The myth is alive and well today, and on YouTube you can currently find a series of videos featuring Dr. James B. Schwartz (often called "Ben"), who is the chairman of the so-called Noah's Ark Research Foundation.

The Myth and the "Government Confiscations"

In his videos, Schwartz presents a device called an ERR Flux Generator (Schwartz Flux Generator). It is a closed box that he claims is a wireless, self-sustaining generator capable of delivering up to 900 watts continuously. Over the past few years, it has become a massive trend for Indian DIY and tech channels on YouTube to share diagrams and videos of this machine under titles such as "Dr. Swarts Free Energy Generator - 100% Working".

When listening to Schwartz's own videos, he draws on the exact same conspiratorial excuses as T. Henry Moray. He claims that his first prototypes were "confiscated by the US government," and that when he attempted to mass-produce the machine in Japan in 2002, the Japanese authorities stepped in and seized everything just days before the launch. Now, he claims to operate in the Philippines to evade the authorities.

The Geographical and Technical Exposure

Officially, Dr. James Schwartz and his organization are registered in Fountain Hills, Arizona, USA. For a radio technician, every warning light flashes immediately upon seeing this location. Fountain Hills is located in the absolute periphery of the metropolitan area of Phoenix, Arizona – a region notorious for having some of the most powerful and dense electromagnetic fields in the United States:

- **The Phoenix Valley** houses massive commercial AM and FM transmitting masts that pump hundreds of thousands of watts into the airwaves around the clock.
- **Arizona** is dotted with large, high-tech military bases (including Luke Air Force Base and Fort Huachuca) that utilize extremely powerful radar installations and high-frequency military communication systems.

Schwartz's machine is yet another classic example of **RF Harvesting**. During the demonstrations in Arizona, his closed box filled with coils functions as a parasitic receiver, soaking up the massive amount of electromagnetic pollution pumped out by local commercial masts and military radars. In the videos, this is supported by clever camera edits, and short sequences. If you moved Schwartz's generator far out into a completely shielded deep-sea trench without radio signals, it would instantly drop stone dead.

FINAL CONCLUSION

When tracing the lines from Nikola Tesla's ground-wire experiments in 1899, through Lester Hendershot's mediumwave parasite in 1928, T. Henry Moray's crystal radio trick in the 1930s, Steven Mark's high-Q air-core coil in the 1990s, and up to James Schwartz's modern flux generator in Arizona, the physical truth remains absolute:

None of these inventors have ever produced a single watt of "free energy."

They have all violated or attempted to conceal the laws of thermodynamics using rhetorical smokescreens (such as "north-south alignment," "secret crystals," or "government confiscations"). In reality, they have merely built clever, parasitic receivers. Calling their devices 'Free Energy' is equivalent to placing a small wind turbine directly behind the exhaust pipe of your neighbor's large truck and claiming that you have invented a new form of free, green wind energy. The power has already been produced, paid for, and transmitted by others – the inventors have simply found a way to steal it from the air and mask it as a miracle to attract gullible investors.