

# The way to over unity using charge separation

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Thinking for a long time as what to call this paper! I decided to just call it “over unity using charge separation”, though it is not the complete story, it is one of the most important parts of the way towards over unity.

Consider the following, and then think about charge separation, think of how a **CAPACITOR** separates charges and then recombine:-

The definition of a **positive ion** is an electrically charged atom, or group of atoms, formed by the **loss of one or more electrons**. The number of protons does not change but the **reduction** in electrons gives the atom a positive charge.

The definition of a **negative ion** is an electrically charged atom, or group of atoms, formed by the **gaining of one or more electrons**. The number of protons in the atom does not change but the extra electrons give it a negative charge.

The particles that carry charge through wires in a circuit are **mobile electrons**. The electric field direction within a circuit is by definition the direction that positive charges are **pushed**. Thus, these negatively charged electrons move in the direction opposite the electric field. But while electrons are the charge carriers in metal wires, the charge carriers in other circuits can be **positive charges, negative charges or both**. In fact, the charge carriers in semiconductors are simultaneously both positive and negative charges **travelling in opposite directions**.

The **Electric field** is an electric property associated with each point in **space** when charge is present in any form, including **changing charge within capacitors**. The magnitude and direction of the electric field is expressed by the value of  $E$ , called electric field strength or electric field intensity or simply the **electric field**.

Knowledge of the value of the electric field at a point, without any specific knowledge of what produced the field, is all that is needed to determine what will happen to electric charges close to that particular point.

Instead of considering the electric force as a direct interaction of two electric charges at a distance from each other, one charge is considered the source of an electric field that extends **outward into the surrounding space**, and the force exerted on a second charge in this space is considered as a **direct interaction** between the electric field and the **second charge**.

Now if we look at a capacitor, it stores energy electrostatically from an electric field between two plates. When there is a **potential difference** across the plates (e.g., when a capacitor is attached across a battery), an electric field develops across the dielectric, causing positive charge (+Q) to collect on one plate and negative charge (-Q) to collect on the other plate. If a battery has been attached to a capacitor for a

sufficient amount of time, no current can flow through to the capacitor. However, if an **accelerating or alternating voltage** is applied across the leads of the capacitor, a **displacement current can flow**. Capacitance is expressed as the **ratio** of the electric charge (Q) on each conductor to the **potential difference (V)** between them. This potential voltage difference is one of the points of interest. Consider two capacitors with different charges which are instantly connected in parallel for a micro second, it is similar to shorting a charged capacitor, a huge current is generated as the charges within the two want to balance.

The electric field inside a capacitor, between the plates, when the capacitor is charging, causes a magnetic field between those plates, the same as if a current is passing through a wire, this is called a curl magnetic field. See:- **Magnetic Field from a Charging Capacitor**<sub>1</sub>

**Solenoid coils:-**

**Electromagnetism:-**

A solenoid, when energised with DC, becomes an electromagnet.

**Magnetic Field:-**

The magnetic field lines inside a solenoid are concentrated and run parallel to the **axis** of the coil, creating a strong and relatively uniform field.

**Field Direction:-**

The direction of the magnetic field can be determined using the right-hand rule. If you curl your fingers in the direction of the current flow, your thumb points in the direction of the magnetic field.

**Field Strength:-**

The strength of the magnetic field is influenced by the current and the number of coil turns. Increasing either will increase the field strength.

**Core Material:-**

The material inside the solenoid (the core) also affects the magnetic field. This is important to remember as it affects the fields inter-reaction within the “core capacitance”.

Now considering all of the previous, think about the following:-

**STEAP. (Space Time Energy Absorption Pump)**

**From the centre to the outside in the “form” of two toroids with a gap, not really two toroids but one, formed by the “apparent” doubling over, and re-bending around to leave a gap for “connections” and “magnetic field regulation”.**

(Magnetic field regulation will not be considered here, this will work without as long as the unit is kept in the same magnetic **orientation**).

A capacitor is built in the form of two individually **shorted coils (bifilar)**. These coils form capacitor plates, not only that, form a paramagnetic core over which another bifilar coil is wound. This over wound bifilar coil will have capacitance to **both** the core coils in the form of a distributive capacitance, but **individually**, because the source ground of one is not the same as the source ground of the other. The capacitance is distributive because these secondary coils are not shorted they are both inductors and capacitor plates, and have a current flowing through them from different power sources. These secondary coils form unusual plates because they are biased positive and negative at each end of the coils by using precharged capacitors in **series** with these coils. The biasing takes place when the circuit is made by the switching of Mosfet switches in a sequence controlled by a clock.

Designed into the system are other coils which are external to the coils mentioned above. These form the charging routes to the two core **positive** plates, and a combined charge separation coil, **output coil**, where there is finally two positive voltages at each end of that coil. It is that output coil, and another coil, which are the connecting, “shorting” route between the two capacitors. The final output voltage (differential + voltage) is dependant on the switching frequencies.

Three switches are used, two are connected to the same source ground, and one to the other source ground, the current flow is via a common mode choke where the magnetic field discharges when the switches turn OFF. The basic way that a DC to DC boost converter works is charging and discharging the magnetic field stored in one ferrite core of a single choke. Used in STEAP is a common mode choke, there are two positive source voltages along with their associated grounds. This will lead to differential voltages between the two different capacitances within the STEAP system. Two discharges from one source, and one discharge from the other.

Two of the route coils act as a “shorting” connection between these two capacitances, this generates a huge current within those coils, as if you were shorting a capacitor, charges want to balance, but here it passes through a coil where there is both DC and AC at the same time. The switching sequence, and discharge creates a special situation where a similarity to a standing wave is created. This is all achieved by the re-organisation of the electrons which were moved when the core capacitances were charged in the beginning.

This defies the conservation of energy laws as we see it, or is there another explanation as to why this works! Looking at moving **electrons** as in a capacitor, making one plate more positive than the other, described in the beginning, and then by using a metal inside a magnetic field which has more **free electrons in the outer ring of its atom**, the power generation can be increased. Example:- copper has one, tin has two and tungsten has four free electrons in the outer ring, it is what makes the metal paramagnetic. The electrons are there to start with, they can be moved into a higher energy state by agitation using magnetic fields, moved and accumulated, separated from the positive protons until required as power with a resistive load at the output **when they reverse**. Where as in a DC to DC boost converter, voltage is

increased at the cost of the current, no OU, in STEAP the voltage is increased and also the current from higher energy electron states.

The real trick to a self running OU generator is in how part of the energy created is returned to the front of the unit. Many may think that you just take energy from the output and return it! No this does not lead to OU, this would collapse the function of an OU generator, it is normally not possible. The return energy has to be a **bi-product of the generator function which does not load it down**. STEAP does this, it uses the directly changing magnetic fields generated within the capacitances, charge and discharge. This is a new type of transformation where the electric field, E field, of the changing charge within the “core”, produces a changing magnetic field which induces current **directly** into the special **second “coil plate”** of the core. This makes one plate of the capacitors also a collective coil.

The agitation of the electrons in the core, generates heat, similar to the heating of a metal inside an induction heater, heat is a bi-product of STEAP and has to be controlled, it is how the electrons are agitated into a **higher energy state**, as in a filament (heater) inside an electronic valve (tube).

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[https://msuperl.org/wikis/pcubed/doku.php?id=184\\_notes:examples:week14\\_b\\_field\\_capacitor](https://msuperl.org/wikis/pcubed/doku.php?id=184_notes:examples:week14_b_field_capacitor)

To be continued.