Water Fuel Cell

theoretically infinite. However, physical constraints of components and circuit interaction prevent the voltage from reaching infinity.

The voltage (V_L) across the inductor (C) is given by the equation

$$VL = \frac{V_T X_L}{(X_L - X_C)}$$

The voltage (V_C) across the capacitor is given by

$$VC = \frac{V_T X_C}{(X_L - X_C)}$$

During resonant interaction, the incoming unipolar pulse-train (h) of Figure (1-1) as to Figure (9B) produces a step-charging voltage-effect across Excitor-Array (ER), as illustrated in Figure (9BB) and Figure 16A. Voltage intensity increases from zero "ground-state" to a high positive voltage potential in a progressive function. Once the voltage-pulse is terminated or switched-off, voltage potential returns to "ground-state" or near ground-state to start the voltage deflection process over again.

Voltage intensity or level across Excitor-Array (ER) can exceed 20,000 volts due to circuit (AA) interaction and is directly related to pulse-train (h) variable amplitude input.

RLC CIRCUIT

Inductor (c) is made of or composed of resistive wire (R2) to further restrict D.C. current flow beyond inductance reaction (XL), and, is given by

$$Z = \sqrt{R_I^2 + (X_L - X_C)^2}$$

Dual-inline RLC NETWORK

Variable inductor-coil (d), similar to inductor (c) connected to opposite polarity voltage zone (E2) further inhibits electron movement or deflection within the Voltage Intensifier circuit. Moveable wiper arm fine **"tunes" "Resonant Action"** during pulsing operations. Inductor (d) in relationship to inductor (c) electrically balances the opposite voltage electrical potential across voltage zones (E1/E2).

VIC RESISTANCE

Since pickup coil (a) is also composed of or made of resistive wire-coil (R1), then, total circuit resistance is given by

$$Z = R_1 + Z_2 + Z_3 + R_E$$

Where, R_E is the dielectric constant of natural water

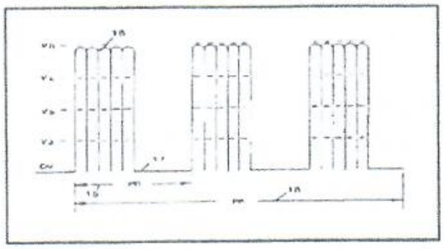

Figure 9B: Variable amplitude unipolar pulse voltage frequency super-imposed onto a 50% duty-cycle pulse-train dynamically controls the hydrogen gas-rate while restricting amp flow.

Ohm's Law as to applied electrical power, which is

$$E = I R$$

Where

$$P = E I$$

Whereby

Electrical power (P) is a linear relationship between two variables, voltage (E) and AMPS (I).

VOLTAGE DYNAMIC

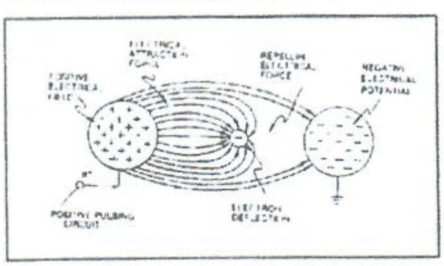

Figure 1-3. Voltage Potential Difference

POTENTIAL ENERGY

Voltage is **"electrical pressure"** or **"electrical force"** within an electrical circuit and is known as **"voltage potential."** The higher the voltage potential, the greater **"electrical attraction force"** or **"electrical repelling force"** is applied to the electrical circuit. Voltage potential is an **"unaltered"** or **"unchanged"** energy-state when **"electron movement"** or **"electron deflection"** is prevented or restricted within the electrical circuit.

VOLTAGE PERFORMS WORK

Unlike voltage charges within an electrical circuit set up an **"electrical attraction force;"** whereas, like electrical charges within the same electrical circuit encourages a **"repelling action."** In both cases, electrical charge deflection or movement is directly related to applied voltage. These electrical **"forces"** are known as **"voltage fields"** and can exhibit either a positive or negative electrical charge.

Likewise, ions or particles within the electrical circuit having unlike electrical charges are attracted to each other. Ions or particles mass having the same or like electrical charges will move away from one another, as illustrated in Figure 1-3.

Furthermore, electrical charged ions or particles can move toward stationary voltage fields of opposite polarity, and, is given by Newton's second Law

$$A = \frac{F}{M}$$

Where

The acceleration (A) of a particle mass (M) acted on by a **Net Force** (F).

Whereby

Net Force (F) is the "electrical attraction force" between opposite electrically charged entities, and, is given by Coulomb's Law

$$F = \frac{q\,q'}{R^2}$$

Whereas