The particular integral of eq. (38) may be obtained by first assuming that the solution has the form:

$$\phi = \frac{A\rho(0)}{\epsilon_0} \, \mathrm{Real}\left(e^{2ik_rR} \cos\left(e^{ik_rR}\right)\right) \quad -(44)$$

where A is to be determined. Substituting Eq. (44) in Eq. (38) gives:

$$A = \frac{\mathrm{Real}\left(e^{2ik_rR}\cos\left(e^{ik_rR}\right)\right)}{k^2\left(1 - 4e^{2ik_rR}\cos\left(e^{ik_rR}\right) + 5e^{3ik_rR}\sin\left(e^{ik_rR}\right) + e^{4ik_rR}\cos\left(e^{ik_rR}\right)\right)}$$

$$= \frac{r^2\cos(kr)}{1 + k^4r^4\cos(kr) + 5k^3r^3\sin(kr) - 4k^2r^2\cos(kr)} \quad -(45)$$

Therefore the particular integral is:

$$\phi = \frac{\rho(0)}{\epsilon_0}\left(\frac{k^2r^4\cos^2(kr)}{1 + k^4r^4\cos(kr) + 5k^3r^3\sin(kr) - 4k^2r^2\cos(kr)}\right) \quad -(46)$$

which has the correct S.I. units of volts = J C^{-1}. Resonance occurs in the scalar potential in volts of eq. (46) when:

$$1 + k^4r^4\cos(kr) + 5k^3r^3\sin(kr) = 4k^2r^2\cos(kr) \quad -(47)$$

In the particular case:

$$kr = 2\pi n \qquad -(48)$$

the resonance condition is given by the quadratic equation:

$$x^2 - 4x + 1 = 0, \quad x = k^2 r^2 \qquad -(49)$$

which has the roots

$$x = 2 \pm \sqrt{3}. \qquad -(50)$$

Therefore there are two resonance peaks at:

$$x = 3.732 \text{ and } 0.268. \qquad -(51)$$

This result is also obtained numerically in Section 3. To obtain this result it has been assumed that the initial driving charge density oscillates according to a cosinal function on the right hand side of Eq. (36). A more complicated initial driving function may be used according to circuit design or similar. The important result is that resonance occurs in the voltage, and this surge in voltage is caused by the spin connection of space-time. The voltage obtained in this way may be used for new energy.

In the limit:

$$r \to \infty \qquad -(52)$$

eq. (35) reduces to the Poisson equation:

$$\frac{d^2\phi}{dr^2} = -\frac{\rho}{\epsilon_0} \qquad -(53)$$

used in the standard model. Eq. (46) may be rewritten as:

$$\phi = \frac{\rho(0)}{\epsilon_0} \frac{\cos^2(\kappa r)}{\left(\frac{1}{\kappa^2 r^4} + \kappa^2 \cos(\kappa r) + \frac{5\kappa}{r} \sin(\kappa r) - \frac{4}{r^2} \cos(\kappa r) \right)} \quad -(54)$$

and in infinite r limit this equation becomes:

$$\phi \xrightarrow[r \to \infty]{} \frac{\rho(0)}{\epsilon_0} \left(\frac{\cos(\kappa r)}{\kappa^2} \right) \quad -(55)$$

so that:

$$\frac{d^2 \phi}{d r^2} = -\frac{\rho(0)}{\epsilon_0} \cos(\kappa r) = -\frac{\rho}{\epsilon_0} \quad -(56)$$

Q.E.D. In this limit is known that the scalar potential is { 21 }:

$$\phi = \frac{1}{4\pi \epsilon_0} \int \frac{\rho(\underline{r}')}{|\underline{r} - \underline{r}'|} d^3 r' \quad -(57)$$

so:

$$\left(\frac{\cos(\kappa r)}{\kappa^2} \right) \xrightarrow[r \to \infty]{} \frac{1}{4\pi \rho(0)} \int \frac{\rho(r')}{|\underline{r} - \underline{r}'|} d^3 r'. \quad -(58)$$

This is a mathematical check on the self-consistency of the analytical solution (46) of the resonance equation (35). Physically however the spin connection cannot vanish unless r becomes the radius of the universe. This is because the electromagnetic field is always spinning space-time in ECE theory. Similarly, the gravitational field is always curving space-time. MH theory (standard model) has no conception of the spin connection.