India and the Idea of Wireless Electricity

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• A concept put by Tesla in 1907.
• Recently put forward by researchers at MIT, where they tried to eliminate the need of wires.
• Works on the principle that if two coils are resonant with each other and are vibrating at high frequencies, transfer of power in terms of magnetic lines of forces occurs.

Witricity: The basics
How it works:
Highly resonant devices are tuned to the same frequency and exchange energy via an oscillating magnetic field.

Highly resonant devices transfer electrical energy over distance through coupled magnetic field.

AC Power Input to Source Resonator + Specially Designed Capture Resonator = Highly Resonant Energy Transfer
• One of the few nations having over 35% of power wastage in terms of thefts and other illegal usages.
• Most complex electricity system in the densely populated areas.
• Rural areas are highly deprived of regular power requirements.
The highly selective resonant fields must be tuned to transmitting as well as receiving ports. Hence, the legal bodies can stop the thefts in a far more effective way.
The denser populated areas will be more safe in terms of electrical hazards.
• Rural areas suffer from a perennial shortage of qualified manpower and resources.
• With the wireless technology, electrical systems become easy to set up even in the larger fields where one needs to have electricity based sprinkler systems.
• The industries are one of the highly rapid sectors that always require an equipment upgrade.
• This results in varying power requirements which often increases.
• Setting up walls or corridor floor with resonant sources can reduce their wiring requirement by quite an extent.
• The magnetic fields are non radiating in nature, hence the safety is very well assured.
• Unlike installing unconventional source based systems solar plants, there is not much of a high initial investment and better is the efficiency of the system.
• Much of a less investment than compared unconventional energy plants.
• Escape the “Material Management” of electrical wires.
• Feel the devices actually getting “smart”.
• Reduce down the illegal usage of power in the society.
• Give various electrical appliances a mobility quotient.
• All current commercial devices can be made to work under this technology, all they need is resonant receiving coil near their source.
It has been almost 3 years that the technology has been rediscovered.
Efficiency is around 55%, which is still quite high compared to other non conventional energy based mobile power systems.
Commercially viable.
• Garages acting as charging ports for electric cars and car batteries.
• All household electronics can be made work operate easily without any wire hassles.
• Once commercialized, it can be applied in multistoried buildings and public places.
References

- http://www.mahadiscom.in/photo_anti-drive1.shtm