

1BY20ET035: MEGHANA A

1BY20ET048: S VARSHA

1BY20ET053: SHARMILA S

FUTURE OF POWER TRANSFER

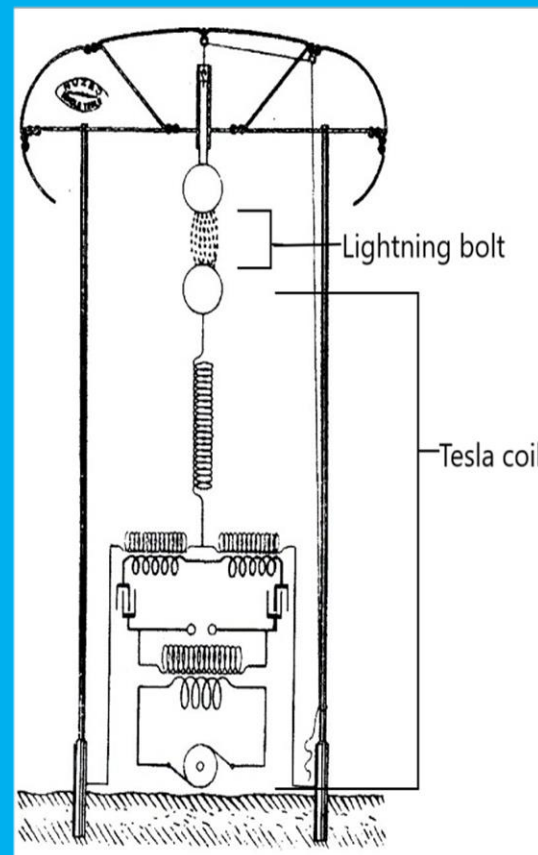
PIONEER



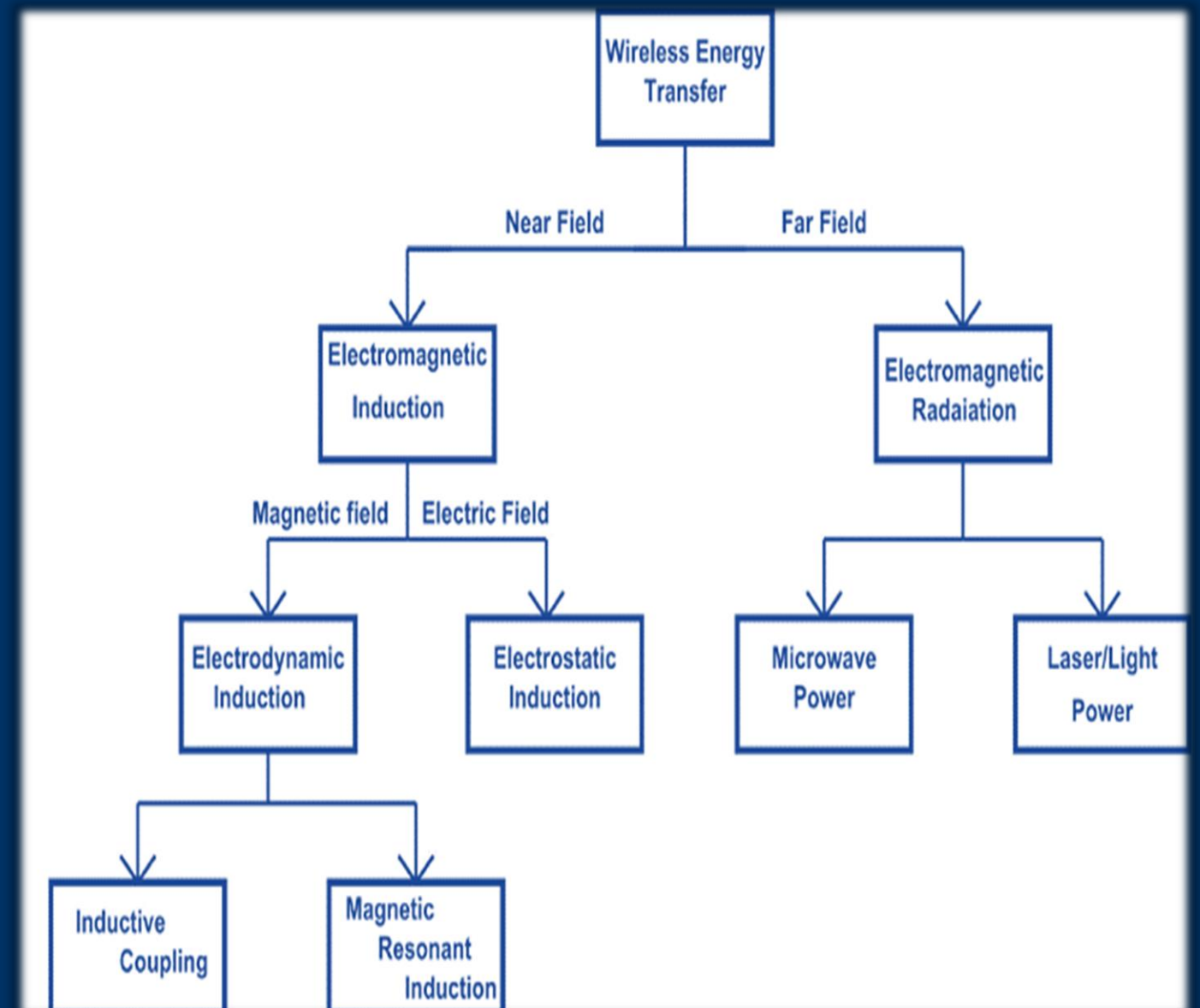
NIKOLA TESLA



TESLA COIL

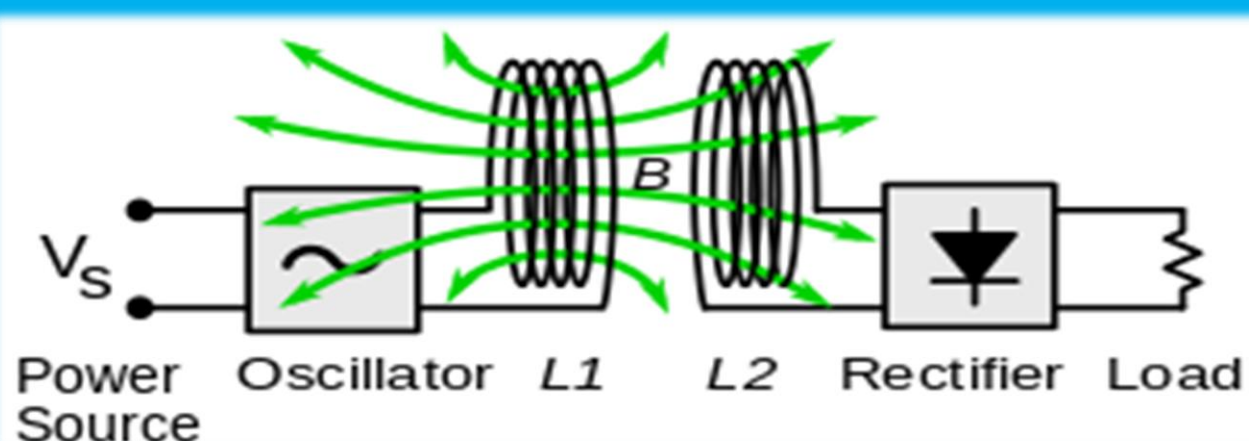


**WARDENCLYFFE
TOWER**

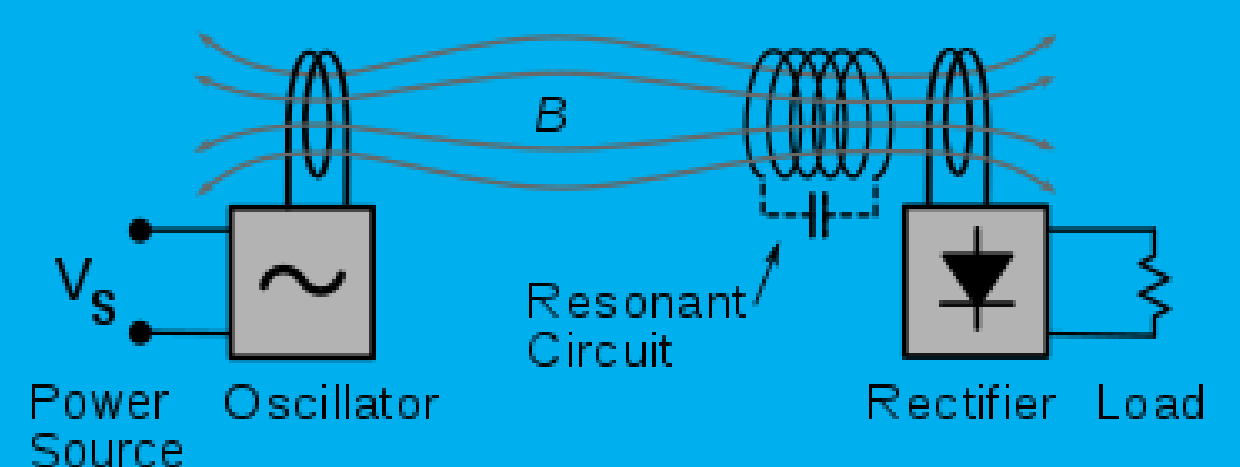


WIRELESS POWER TRANSFER

1. INDUCTIVE COUPLING

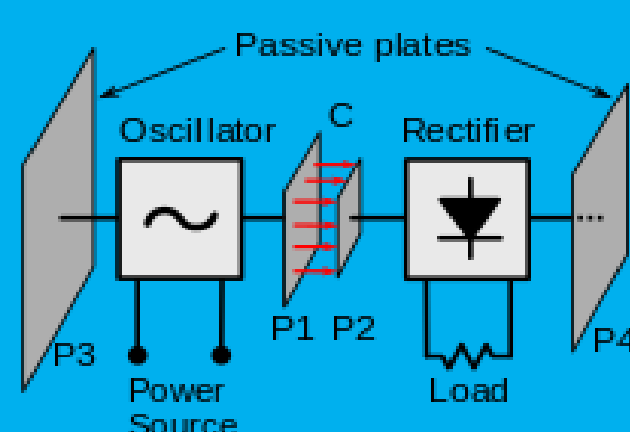


2. RESONANT INDUCTIVE COUPLING

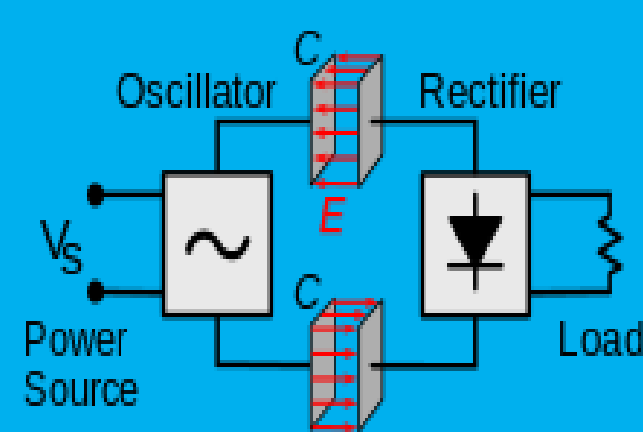


3. CAPACITIVE COUPLING

MONOPOLAR



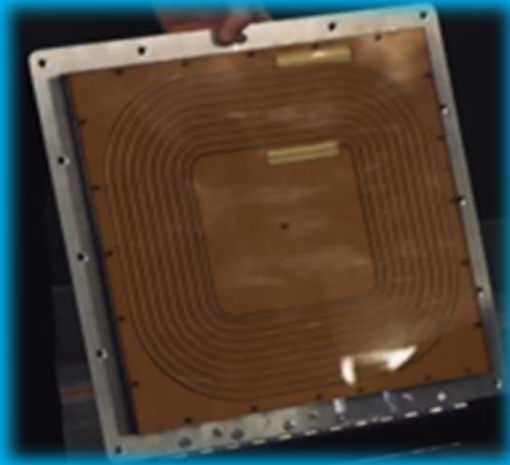
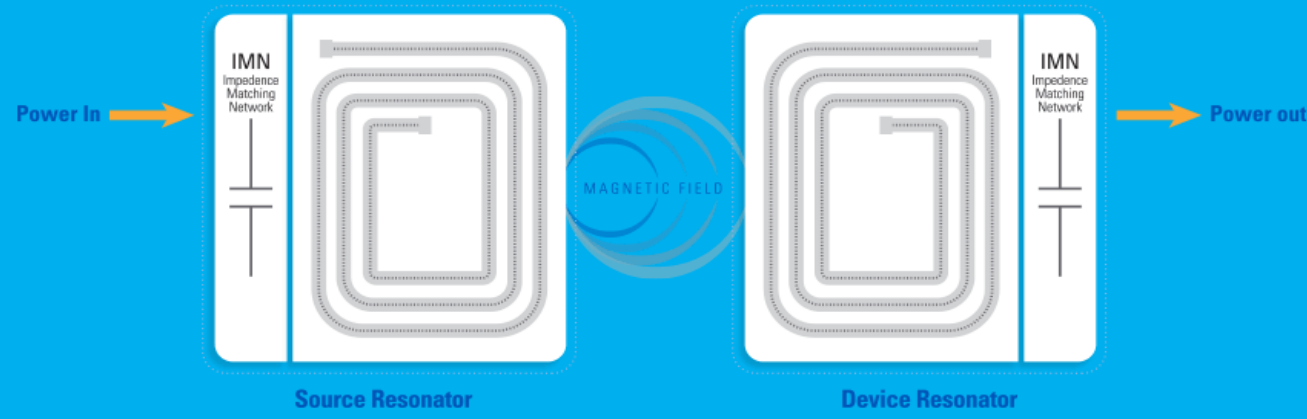
BIPOLAR



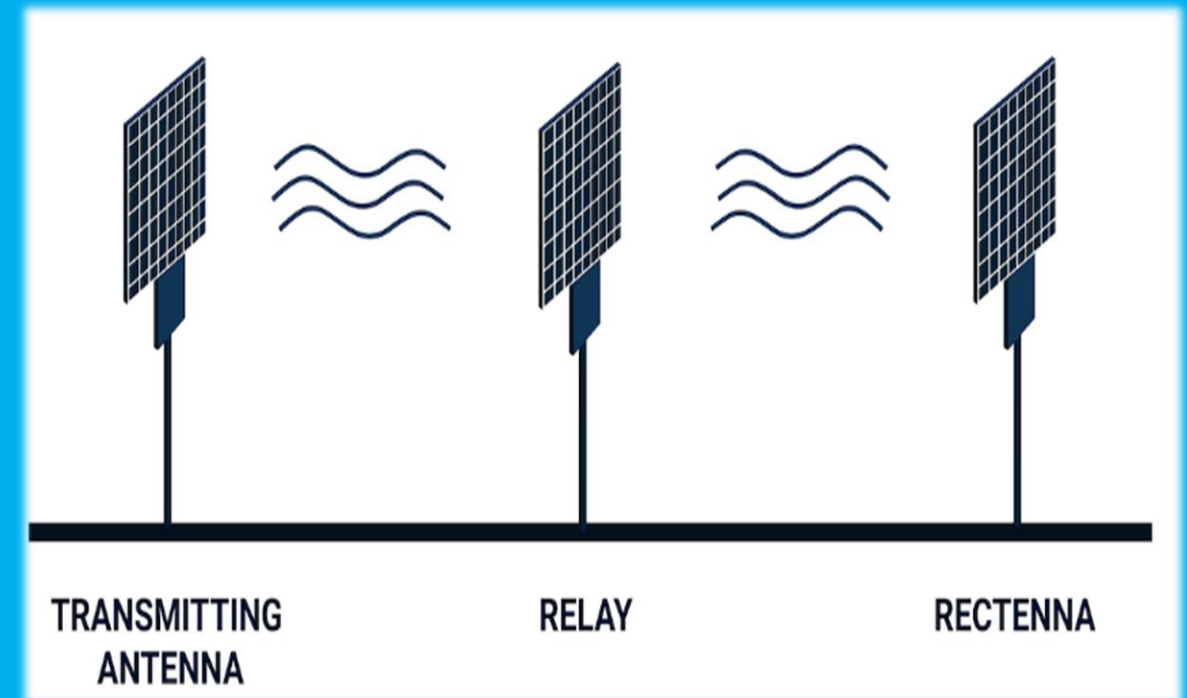


MAGNETIC RESONANCE

Selective energy exchange between efficient coupled resonators.
Tuned and matched source and receiver.



EMROD



MAGNETIC CHARGE



AIR CHARGE



SOLAR POWER SATELLITES



ELECTRIC AVIATION

ADVANTAGES

- Reduces use of wires and batteries
- Sustainable and cost-effective alternative to large generators and micro-grids
- Prevents power outages
- Reduces electricity infrastructure cost
- Increases the mobility, reliability, convenience of an electronic device for users
- Making remote renewable energy more accessible and efficient
- Replacing costly infrastructure over challenging terrain
- Supporting remote communities

DISADVANTAGES

- Limiting the exposure of people and other living beings to potentially injurious electromagnetic fields
- Distance constraints
- High initial cost

FUTURE

- Implantable medical devices
- Wirelessly Powered Urban Transit
- Wirelessly Powered Autonomous Vehicles
- Electric aviation
- Automated Guided Vehicles
- Wirelessly powered drone aircraft
- Solar power satellites

“

Power can be, and at no distant date will be, transmitted without wires, for all commercial uses, such as the lighting of homes and the driving of aeroplanes. I have discovered the essential principles, and it only remains to develop them commercially. When this is done, you will be able to go anywhere in the world – to the mountain top overlooking your farm, to the arctic, or to the desert – and set up a little equipment that will give you heat to cook with, and light to read by. This equipment will be carried in a satchel not as big as the ordinary suitcase.

”

Nikola Tesla
The American Magazine, April 1921