CLAIMS:

1. A capacitive power transmission cable comprising:

- at least two sets of conductive strands, ~~the sets of strands being insulated from~~
  - the sets of strands being insulated from each other and in capacitive relationship, the one with the other and
  - the strands of the sets being distributed in a transverse cross-section of the cable,

whereby the two sets are in capacitive relation to each other;

wherein:

- capacitance between the two or more sets of strands, when all strands of respective sets are electrically connected together, is at least 10 nF/m and
- ~~insulation between~~ the ~~two or more sets of~~ strands ~~is at least 10μm thick~~are laid in layers of opposite twist.

2. A capacitive power transmission cable as claimed in claim 1, wherein the insulation ~~is~~ between ~~17μm and 1079μm~~the two or more sets of strands is at least 10μm thick.

3. A capacitive power transmission cable as claimed in claim ~~1~~2, wherein the insulation is between 17μm and 1079μm thick.

4. A capacitive power transmission cable as claimed in claim 2, wherein the insulation is between 20μm and 540μm thick.

~~4~~5. A capacitive power transmission cable as claimed in any preceding claim, wherein the insulation is by means of insulating coatings of enamel of the type used in so-called "magnet wire".

~~5~~6. A capacitive power transmission cable as claimed preceding claim, wherein the capacitance between the sets of strands is within the range 10 to 170 nF/m for a 3.6kV cable, and 5.5 to 92.5nF/m for a 72.5kV cable.

~~6~~7. A capacitive power transmission cable as claimed in claim ~~5~~6, wherein the capacitance between the sets of strands is within the range 14 to 235 nF/m for a 240V cable, and 5 to 84 nF/m for 145kV cable.

~~7~~8. A capacitive power transmission cable as claimed in any preceding claim, wherein the strands of the two, or more sets, are alternated in their layers.

~~8~~9. A capacitive power transmission cable as claimed in any one of claims 1 to ~~6,~~ 7, wherein the strands can be laid in alternating layers of all one set and then all another set.

~~9~~10. A capacitive power transmission cable as claimed in any preceding claim, wherein:

- the strands of the sets are distributed in a transverse cross-section of the cable, whereby the two sets are in capacitive relation to each other, and

~~whereby the two sets are in capacitive relation to each other, and~~

all of the strands of at least one of the sets having:

- a respective insulation of dielectric strength to enable the sets of conductive strands to remain isolated.

~~10~~11. A capacitive power transmission cable as claimed in any one of claims 1 to ~~9~~10, wherein the insulating coatings can be extruded, wound or woven.

~~11~~12. A capacitive power transmission cable as claimed in any preceding claim, wherein at least one of the sets of conductive strands is uninsulated, with the insulation of the strands of the other set providing the insulation.

~~12~~13. A capacitive power transmission cable as claimed in any preceding claim, wherein all sets of strands have their own insulation.

~~13~~14. A capacitive power transmission cable as claimed in claim ~~12~~13, wherein the respective insulations of the sets are differently coloured to allow their separation for connection at opposite ends of the cable.

~~14~~15. A capacitive power transmission cable as claimed in any preceding claim, including:

- insulation between layers of different sets, whereby the at least two sets are in capacitive relation to each other.

~~15~~16. A capacitive power transmission cable as claimed in claim ~~14~~15, wherein one set of strands is coloured as by tinning, leaving the other set untinned.

~~16~~17. A capacitive power transmission cable as claimed in claim ~~14~~15 or claim ~~15,~~ 16, wherein the interlayer insulation is of polymer tape.

~~17~~18. A capacitive power transmission cable as claimed in claim ~~16~~17, wherein the tape is normally between 30 µm and 1.35mm thick but preferably between 25µm and 2.7mm thick.

~~18~~19. A capacitive power transmission cable as claimed in claim any preceding claim, wherein the strands are provided with polymer insulation between each layer to fill interstices between individual strands.

~~19~~20. A capacitive power transmission cable as claimed in any preceding claim, wherein there are more than four strands per set, normally between 37 and 397 strands per set, but preferably there are between 19 and 547 strands per set.

~~20~~21. A capacitive power transmission cable as claimed in any preceding claim, wherein the strands are laid in layers of opposite twist.

~~21~~22. A capacitive power transmission cable as claimed in any preceding claim, wherein the strands are compressed, as by passing through a die, after addition of each layer.

~~22~~23. A capacitive power transmission cable as claimed in claim preceding claim, wherein the conductors are of copper or aluminium wire, and the insulation is of enamel.

~~23~~24. A capacitive power transmission cable as claimed in preceding claim, wherein layers are of single conductor diameter thickness when the layers are insulated from each other.

~~24~~25. A capacitive power transmission cable as claimed in any preceding claim, wherein the layers comprise two sub-layers of conductors, laid one way and the other.

~~25~~26. A capacitive power transmission cable as claimed in claim ~~23~~24, wherein the sub-layers within each layer are combined by having been braided.

~~26~~27. A capacitive power transmission cable as claimed in preceding claim, including:

- insulation around the capacitively connected sets of strands, and
- a grounding sheath around the insulation, the grounding sheath being in capacitive connection with the capacitively connected sets of strands, with the insulation being sufficiently thick to act as a dielectric causing conductive strands to sheath capacitance to be substantially two orders of magnitude, or more, less than capacitance between the two sets of strands.

~~27~~28. A capacitive power transmission cable as claimed in claim ~~26~~27, wherein the sheath of spirally laid steel wires for armouring and preferably action as an earth conductor.

~~28~~29. A capacitive power transmission cable as claimed in any preceding claim, wherein, for connection of a capacitive, power transmission cable to a supply or a load conductors, a connector block is provided with terminals for a first and second set of conductors.

~~29~~30. A capacitive power transmission cable as claimed in claim ~~28~~29, wherein one terminal in each block is isolated without a supply or load connection terminal, whilst the other is provided with a supply or load terminal.

31. A capacitive power transmission cable as claimed in claim 30~~. A capacitive power transmission cable as claimed in claim 29, ,~~ wherein the supply or load terminal is a bus-bar permanently connected thereto.

~~31~~32. A capacitive power transmission cable as claimed in claim ~~28~~29, claim ~~29~~30 or claim ~~30~~31, including a parallel-connection connector comprising respective terminals for

respective sets of conductors on both sides and with internal interconnections, whereby the one conductor of one length is connected to the one conductor of the other length, and the other conductors are similarly connected.

~~32~~33. A capacitive power transmission cable as claimed in in claim ~~28~~29, claim ~~29~~30 or claim ~~30~~31, including a series-connection connector having a terminal on one side for one set connected internally to a terminal on the other side for one or other set of the other length, and isolated terminals on the respective sides of the connector for the remaining sets to be terminated in.

~~33~~34. A capacitive power transmission cable as claimed in any one of claims 1 to ~~29~~30 in combination with at least two or more such cables, at least one parallel connector of claim 31 and at least one serial connector of claim 32, the cables and the connectors being connected as a long cable of desired capacitance.

~~34~~35. A capacitive power transmission cable as claimed in any preceding claim, the cable including at least one additional set of strands for choice of capacitance of the cable or for straight through connection.

~~35~~36. A capacitive, power transmission cable comprising:

- at least two sets of conductive strands and

all of the strands of at least one of the sets having:

- a respective insulation, whereby the two sets are in capacitive relation to each other,

the conductive strands being laid in layers of opposite twist, with strands of at least ~~two sets in each layer.~~two sets in each layer.

~~36. A capacitive, power transmission cable comprising:~~

- ~~at least two sets of conductive strands, the conductive strands being~~
  - ~~laid in layers of opposite twist, with~~
  - ~~the strands of one or more adjacent layers being of all one set and then radially outwards the strands of one or more adjacent layers being of all another set and~~
  - ~~insulation between the layers of different sets, whereby the at least two sets are in capacitive relation to each other.~~