



The Art and Science of Distance Protection



Presented by:

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TECHTALK

Today's Agenda

- Line theory
- Distance-element zones of operation
- Stepped-distance impedance schemes
- Pilot-aided, distance impedance schemes



Vizle Line classifications

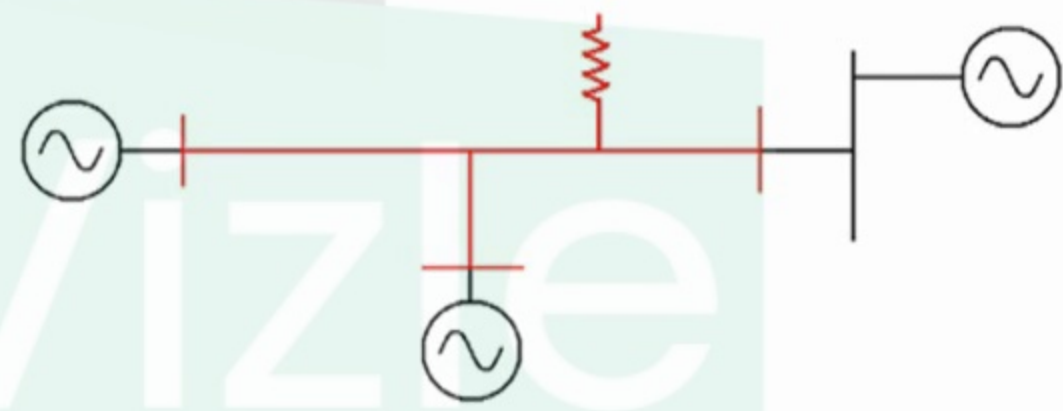
Single-ended
(radial line)



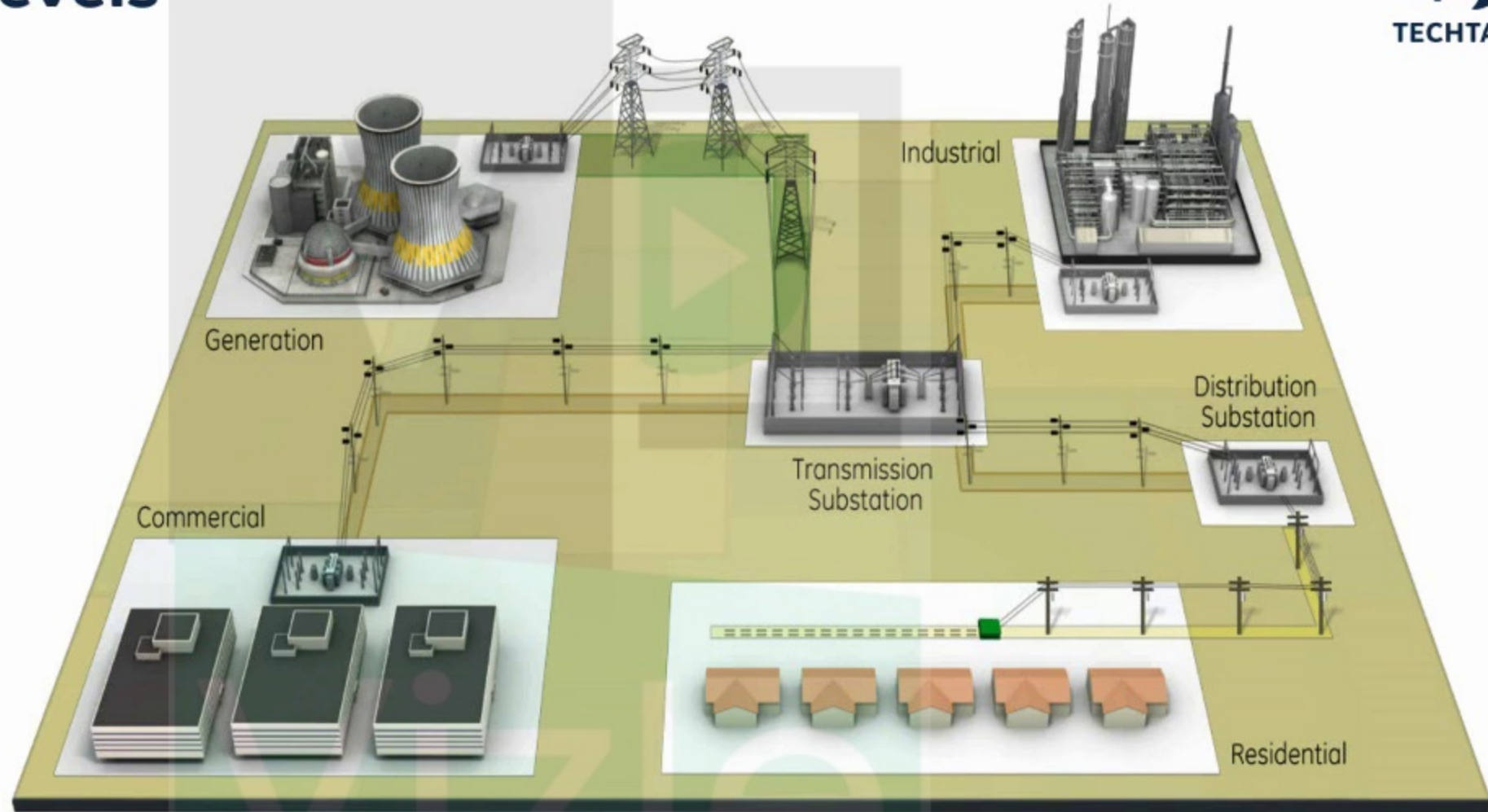
Double-ended



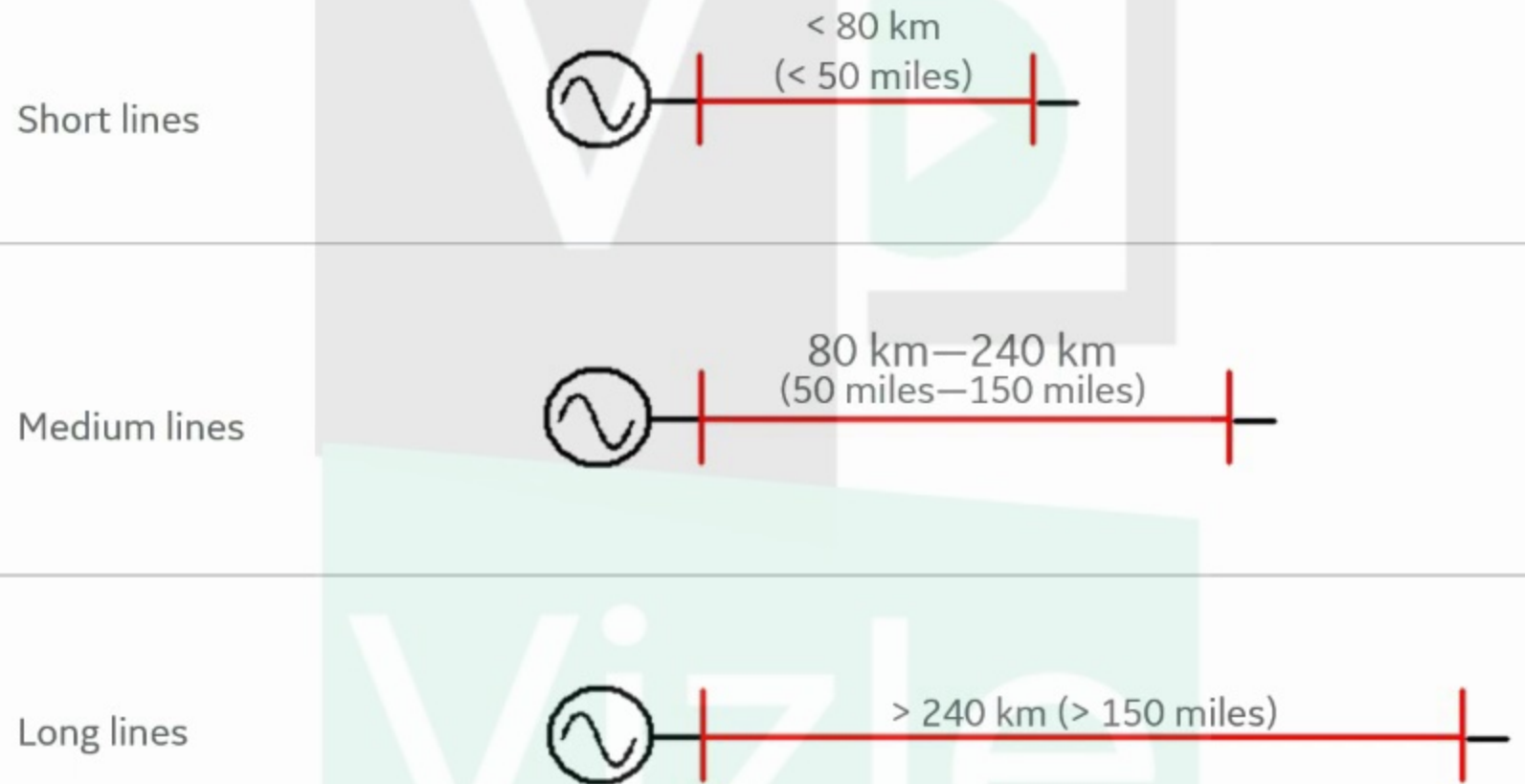
Multi-ended



Vizle **Line voltage levels**



Transmission line classifications by length



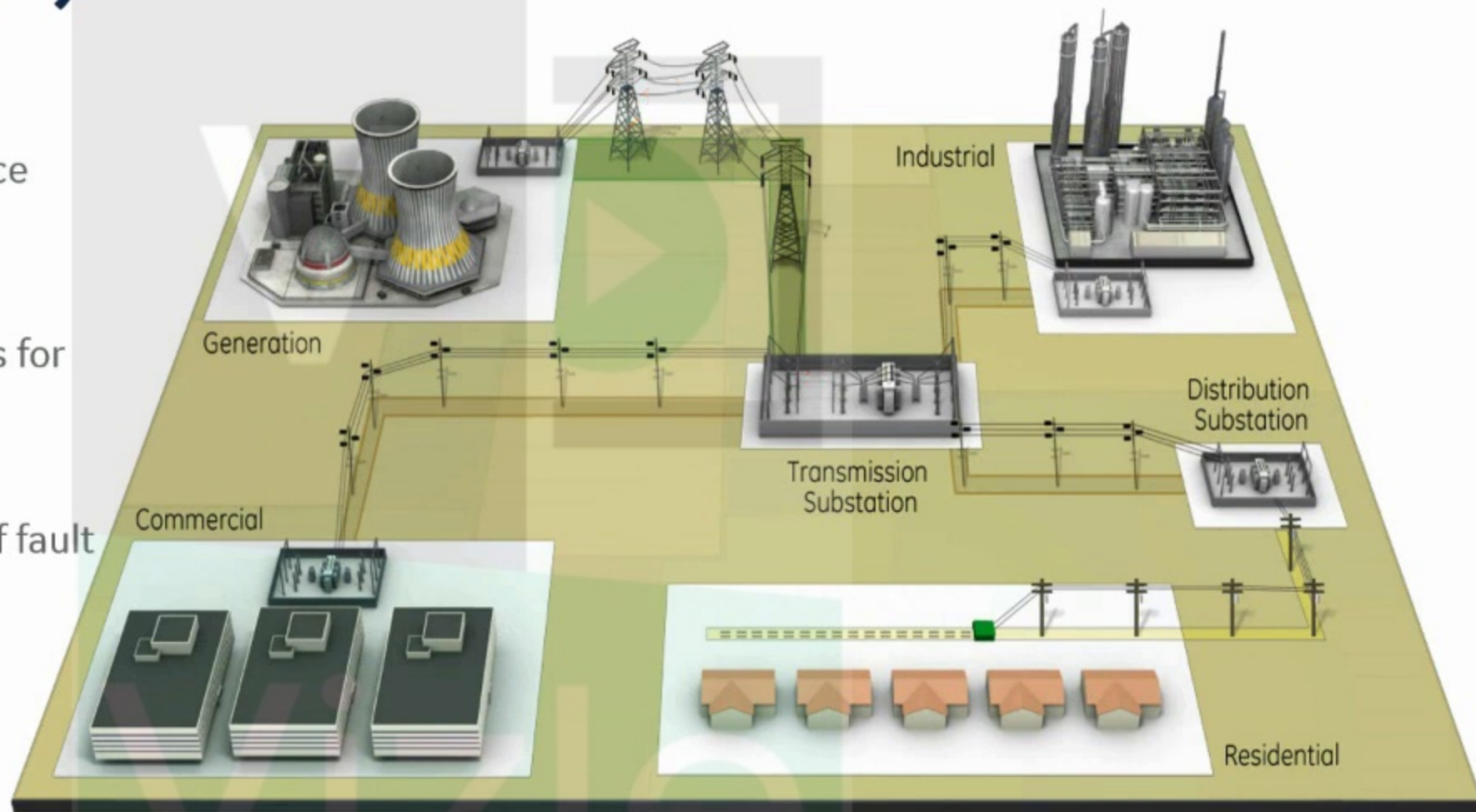
Clear faults quickly

Engineers' job

- Calculate system impedance ratio (SIR)
- Construct line models
- Configure accurate settings for distance relays

Relay job

- Calculate current at time of fault
- Clear faults quickly



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