



ELC System planners feel that investments in protective relaying, including the support of suitable communications systems, represent the lowest cost way to improve system reliability and safe transfer limits.

[Optimizing relay system investments](#) does not mean adding relays, however, but rather opting for high quality elements and selective use of redundancy logic.

Relaying is a discipline in which developing countries will do well to improve application and maintenance skills.

[Voltages](#): Distribution voltages have generally increased over the past. However, the 15---20 kV distribution still appears the best choice for many systems, particularly those serving urban areas as or highly concentrated customers.

An exception is the case where rural distribution predominates and feeders are unusually long, wherefore 35 kV may be a better choice.

### [Distribution Automation](#)

Developing countries often have more incentives for load control, both in extending the existing transmission and distribution systems and in accommodating generation capacity deficit.

They are also less sensitive to the reliability degradation inevitable with intentional load trips.

### [Distribution Systems](#)

[Systems cost comparison](#): in making economic comparisons, it's ELC Engineers normal practice to compare automated systems with manually operated ones, having introduced manual control options which may enhance the flexibility of many existing systems.

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