

Intelligent Power Distribution Solutions

Energising India since 1969...



TECHNICAL ASSOCIATES LIMITED

An ISO 9001:2000 Company

Technical Associates Limited has used its extensive experience in designing and manufacturing power distribution equipment to create intelligent solutions to optimize electricity delivery on rural feeders.

The TAL Rural Load Management Solution is an intelligent solution designed in collaboration with Schneider Electric – a globally recognized leader in automation and power solutions. The RLMS helps convert a Distribution transformer into a micro sub station helping optimize loads between power hungry motors/ pumpsets while ensuring high availability of electricity to rural domestic loads.

Present constraints

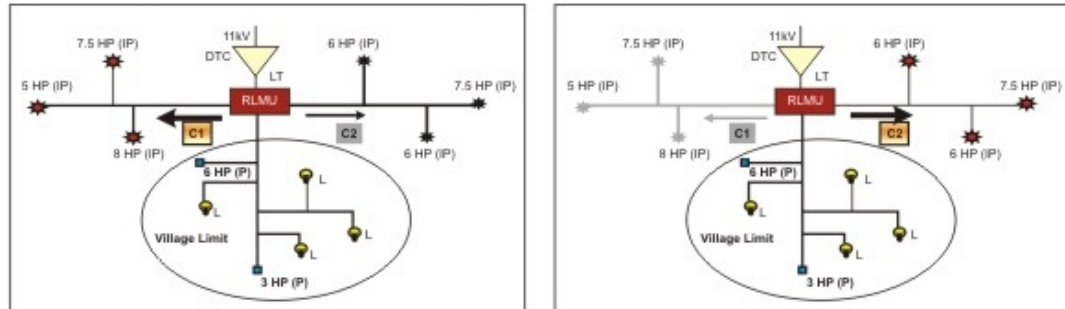
- Households/ commercial establishments need minimum 18 hours of electricity - Rural Domestic loads consume nominal energy
- Irrigation Pumpsets require no more than 6-7 hours of electricity but remain the heavy consumers of power in villages
- Presence of RDLs (Rural Domestic Loads) and IPs (Irrigation Pumpsets) on the same circuit - rural households suffer when IPs controlled through feeder management



WE TRANSFORM THE NATION'S POWER

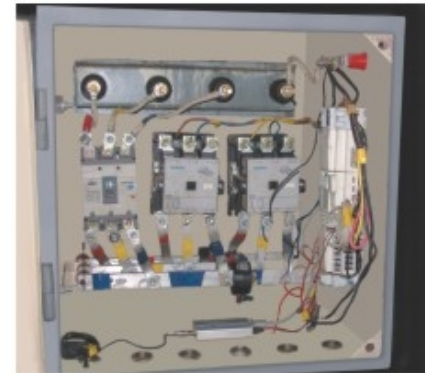
THE TAL RURAL LOAD MANAGEMENT SOLUTION

Symbolic representation of RLMS working



While C1 and C2 govern availability of power to different Irrigation Pumpsets, Rural domestic and commercial loads are able to get continuous 24 hour power

- Builds Intelligence at the Distribution Transformer (DT)
- Allows loads to be split up into Rural Domestic Loads (RDLs) & Irrigation Pumpsets (IPs)– availability of power to RDLs and IPs can be controlled remotely through DT without switching feeders.
- Can be used to stagger availability of power to IPs on single feeder
- When used on multiple feeders, allows RDLs to get maximum available power and IPs to get power as per predetermined schedule
- Allows metering/ remote monitoring/ management at every DT – helps data collection and identification of revenue leaders/ losers
- Convenient – each RLM unit designed for physical mounting on DT – saves cost of additional poles/ supporting frames/ etc.
- Inexpensive – requires minimal modification of existing distribution system
- Immediate delivery – can start providing 18-24 hours of electricity to rural domestic loads immediately post installation
- Rugged – designed for outdoor usage – can withstand extreme weathers



An inside view of the TAL RLMS solution

BENEFITS / ADVANTAGES

- Can provide 18-24 hours of electricity to rural consumers under present constraints.
- Reduces feeder loading by almost 50% and hence reduces losses to almost one-fourth
- Voltage drop reduces by almost 50%
- Possible to provide continuous 3/1 phase supply to rural industrial loads, water supply etc.
- Continuous supply to rural domestic consumers provides fillip to rural economy.
- Improved quality of power supply - better IP consumer satisfaction
- Possible to cater to additional loads without any extra capacity release investment
- No rostering – no unbalanced loading – reduced transformer failure
- Feeder charged continuously – increases metered consumption and revenue for the Power Corporation and Discom .

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