

First Prize

*Electricity Distribution Companies
(DISCOMs)*

SOUTHERN POWER DISTRIBUTION COMPANY LIMITED

Chittoor (Andhra Pradesh)

Unit Profile

APSPDCL has the total consumer base of around 10 million + Consumers, of which Domestic category dominated the total number of consumer base contributing to 73% followed by 16% in agriculture category. Number of consumers from Non-domestic (Commercial), industrial and urban local body categories contributed to around 8%, 1% and 2% respectively.. Category-wise share of consumption during FY 2014-15 is given below:



Figure 1: % share of number of consumers in category wise

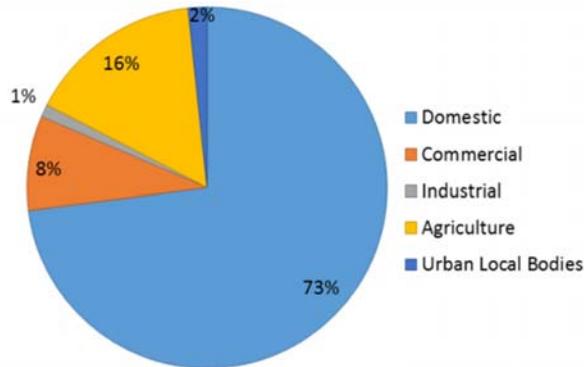
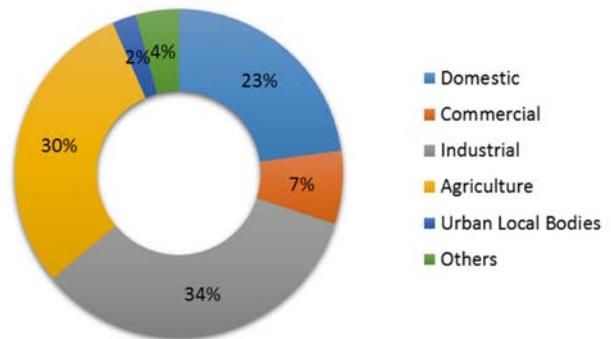


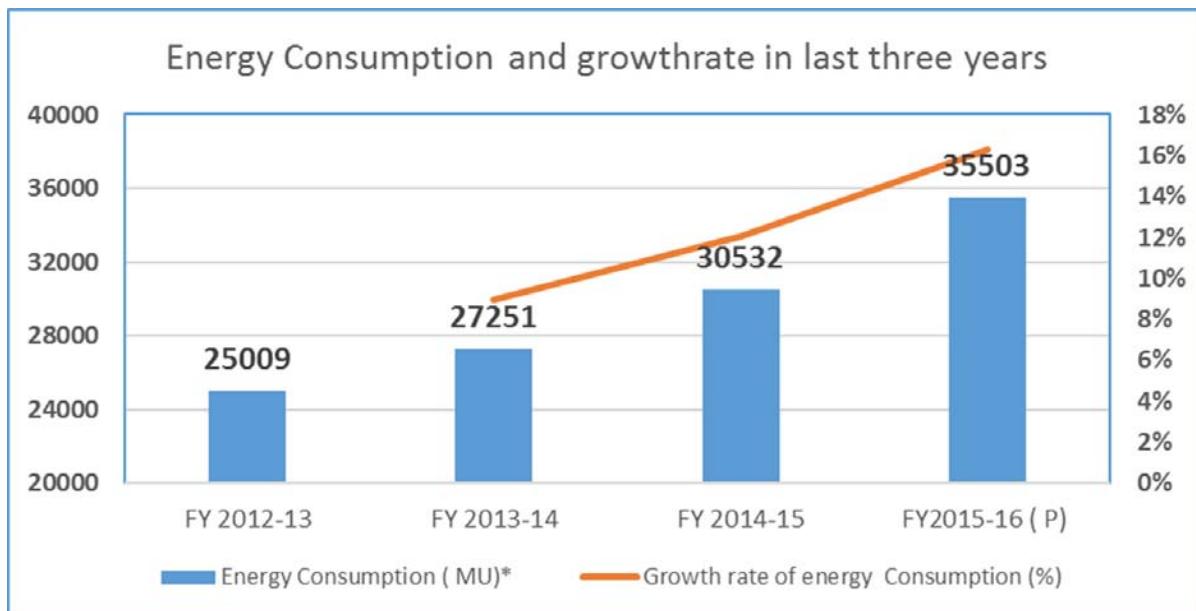
Figure 2: % share of energy consumption in sector wise



However, with regard to energy consumption during FY 2014-15, Industrial consumer category dominated the consumption max and contributed to around 34% (9,062 MU) of total electricity consumption followed by 30% (7,903 MUs) and 23% (6,102 MUs) by agriculture and domestic categories respectively

Energy Consumption

Energy Consumption Growth rate on Last three years:



Energy consumption in the APSPDCL area is growing at the rapid pace, due to amplified energy demand from the urban areas, Agriculture and Industry sectors. From last three years it is observed that average growth rate of energy consumption of around 12%, Above figure presents the energy consumption and growth rate in last three years in APSPDCL.

Energy Conservation

Several DSM and energy conservation measures have been undertaken in the Southern Power Distribution Company of AP Limited (APSPDCL). These include:

1. **DSM based Energy Efficiency lighting program (DELP) program in Domestic Sector:** as part of the project distributed of 2 Nos. 7 W LED bulbs to the domestic consumers as replacement to inefficient incandescent bulbs. As a pilot completed this project in the Guntur and Ananthapur circles. Based on success of the pilot, same is scale up to remaining six circles in the utility.
2. **KVAh Billing:** In order to reduce the difference between energy consumed (kWh) and apparent power (kVAh), APSPDCL has introduced kVAh billing to all HT consumers and LT Industrial and commercial consumers of 10 kW and above since 2011-12.
3. **Time of Day (TOD) Tariff:** Introduced of TOD tariff during 6.00 PM to 10.00 PM to HT consumers in the utility, by levying Rs. 1.05/ kVAh on energy consumption during the period from 6.00 PM to 10.00 PM in addition to the normal energy charges at respective voltages.
4. Installed appropriate capacitors banks on agriculture feeders covering up to 1 million agricultural pump sets. In addition, utility also insists new connections to install suitable capacitors for their pump sets.
5. Implemented High Voltage Distribution System (HVDS) with 16 kVA and 25 kVA small distribution transformers (185,749 Distribution Transformers) that cover around 431,799 (37%) of agriculture pump sets.
6. Created awareness among the farmers on installation of ISI standard pump sets replacement to sub-standard pump sets including all new connections. Besides, frictionless foot valves and HDPE pipes were also introduced along with the standard pump sets.
7. Installed a total capacity of 280 kW roof top based solar photo voltaic power system at its corporate office and circle offices as a pilot project to harness solar power.
8. Erected the 100 Nos. new 33/11 KV substations.
9. Erected the 217 nos. of 11 KV 2MVAR capacitor banks.