

INTRODUCTION

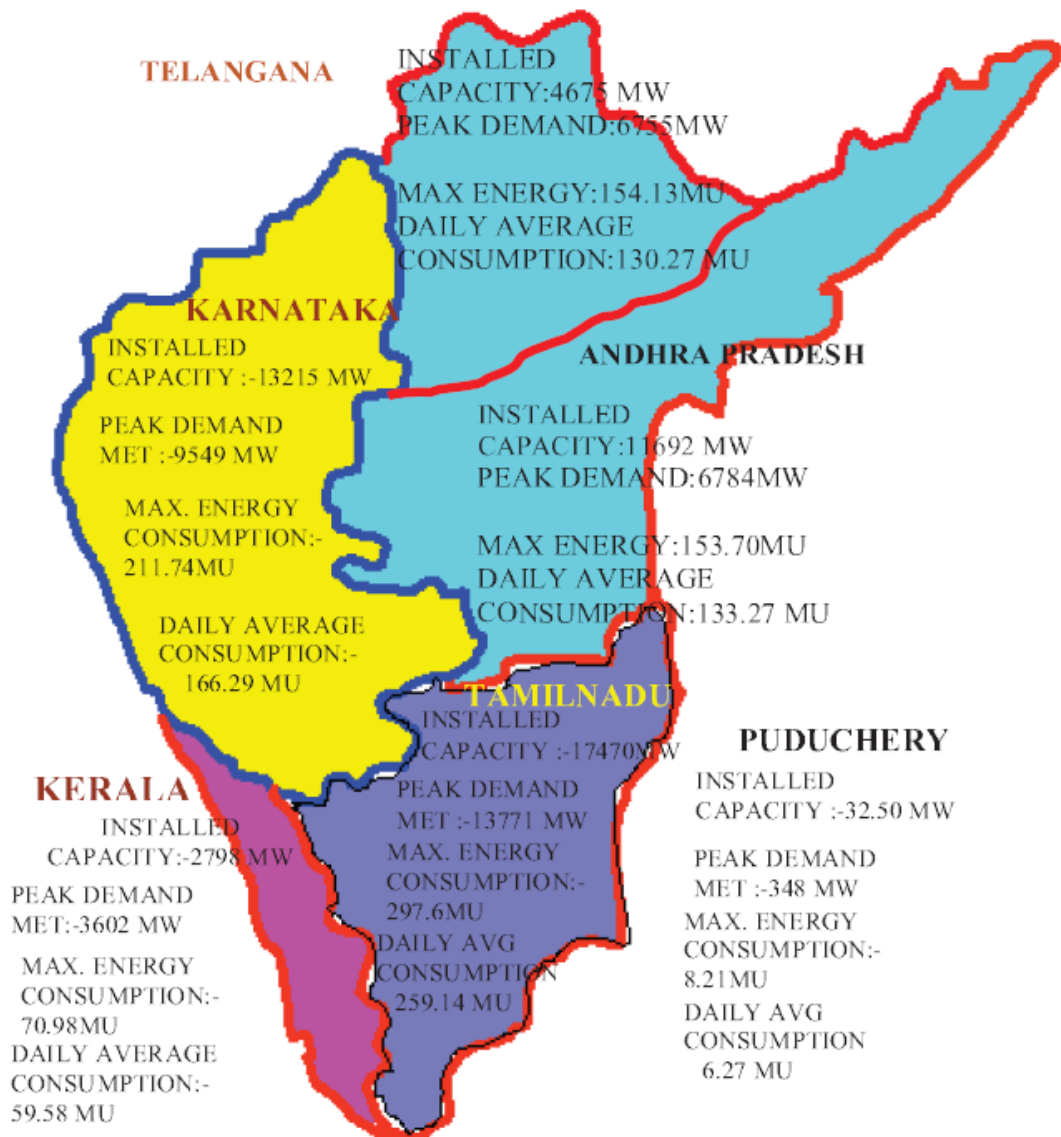
Southern Regional Load Despatch Centre (SRLDC) is one of the five Regional Load Despatch Centres (RLDCs) functioning under the National Load Despatch Centre (NLDC) owned, operated and maintained by Power System Operation Corporation of India Limited (POSOCO). POSOCO is a wholly owned subsidiary company of Power Grid Corporation of India Limited (POWERGRID) incorporated in 2009 with its registered office located in Katwaria Sarai, Delhi.

The development of Indian Electricity System hitherto had been on a regional basis with five RLDCs established in the mid – 1960s having the responsibility to co-ordinate the integrated operation within each region. SRLDC is located at Bangalore, the IT Hub of India and it is the nerve centre for monitoring and coordinating operations of the Southern India Regional Grid comprising the states of Andhra Pradesh, Telangana, Karnataka, Kerala, Puducherry and Tamilnadu.

Amongst the five regions, the North Eastern Region and Eastern Region were the first to be operated in synchronous mode since 1993. Subsequently, these two regions were synchronized with the Western Region in March 2003 and the three connected regions were termed as Central Grid. Later in August 2006 the Central Grid has been synchronized with the Northern Region termed as 'N-E-W grid'. Southern Regional Grid got synchronously connected to the 'N-E-W grid' in December 2013 with the commissioning of one number of 765 KV Raichur-Sholapur S/C line creating the National Grid. The second line of Raichur-Sholapur S/C was commissioned in June 2014. The Southern Regional Grid is connected asynchronously to Eastern Region through 2000/2500 MW HVDC Talcher-Kolar Bipole link and 1000 MW HVDC Gazuwaka B2B link and to Western Region through 1000 MW HVDC Bhadrawati B2B link.

SOUTHERN REGIONAL GRID - AN OVERVIEW

Southern Regional (SR) grid is a large power system comprising of 651000 sq.kms of area encompassing five state systems viz Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Kerala and Union Territory of Puducherry covering Central Sector, State Sector and Independent Power Producing Generating stations. State systems are interconnected with each other through 400 kV grid network and few 765kV & 220 kV inter-state lines.



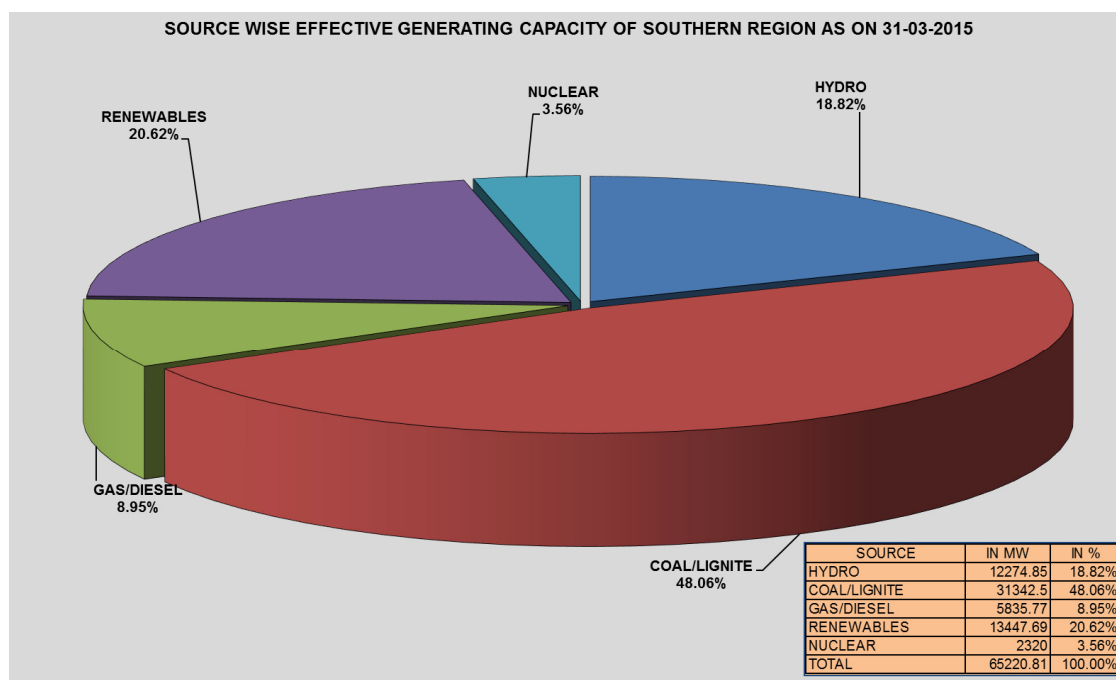
Effective Generation Capacity of SR

- Effective generating capacity as on 31st March 2015 : 65221 MW
- Regional peak demand met (2014-15) : 38090 MW
- Maximum Energy Consumption (2014-15) : 892.7 MU
- Average energy consumption(2014-15) : 745 MU/Day

Transmission systems (as on 31st March 2015)

765 kV A.C	:	1967	Ckt. kms.
+ 500 HVDC	:	2738	Ckt. kms.
400 kV A.C	:	26856	Ckt. kms.
220 kV A.C	:	40456	Ckt. kms.

The source wise effective generating capacities in the Southern Region are as shown below:



Salient features of the Southern Regional Grid

- Third largest geographical area amongst the five regions, covering approx.19.31% of the area & approx. 21.81% of India's population and 24.87% of the Installed Capacity.
- One of the Best Hydro Thermal mix(25% - 75%) facilitating highest operational flexibility
- 2600 MW Capacity Thermal Power Station of NTPC at Ramagundam which is one of the largest capacity generating stations in the country and Kudankulam nuclear power plant is the first 1000MW nuclear power plant installed in the country.
- Largest Pump storage schemes in the country at Srisaillam (900MW), Telangana and at Kadamparai (400MW), Tamil Nadu, brings about economy in scale and operational flexibility.
- Operation of obsolete Gas Generating units at Basin Bridge Gas Power Plant in to Synchronous Condenser mode supporting about 75 to 100 MVAR generation at Chennai.
- 2000 MW capacity (2500MW capacity during extended mode of operation) Talchar-Kolar HVDC interconnection with the Eastern Region is the largest capacity HVDC interconnection in the country.
- 13448 MW Wind Mill & NCE generating capacity is the highest amongst all Regions.
- 25021 MW capacity from Independent Power Producers (IPP's) generating plants, which is also the highest amongst all Regions.