



के वि प्रा

C E A



दक्षिण क्षेत्रिय विद्युत समिति

SOUTHERN REGIONAL POWER COMMITTEE

बेंगलूर

BANGALORE

वार्षिक रिपोर्ट

ANNUAL REPORT

2013-14

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CONSTITUTION OF SOUTHERN REGIONAL POWER COMMITTEE
(As on 31.03.2014)

Chairperson : Shri Suresh Chanda

CMD, APTRANSCO, Hyderabad

MEMBERS

- | | | |
|-----|---------------------------|---|
| 1. | Shri Suresh Chanda | CMD, CEA, APTRANSCO, Hyderabad |
| 2. | Shri P.K. Pahwa | Member (GO & D) I/c, New Delhi |
| 3. | Shri Mohd. Anwaruddin | Director (Grid, Tr. & Management), APTRANSCO, Hyderabad |
| 4. | Shri K. Vijayanand | Managing Director, APGENCO, Hyderabad |
| 5. | Shri Kartikeya Misra | CMD, APNPDCL, Warangal |
| 6. | Shri G. Kumar Naik | Managing Director, KPTCL, Bangalore |
| 7. | Shri M.R. Kamble | Managing Director, KPCL, Bangalore |
| 8. | Shri S. Naveen Kumar Raju | Managing Director, PCKL, Bangalore |
| 9. | Shri S. Sumanth | Director (Transmission), KPTCL, Bangalore |
| 10. | Shri H.S. Keshavamurthy | Chief Engineer (E), SLDC, KPTCL, Bangalore |
| 11. | Shri M. Sivasankar | CMD, KSEB, Thiruvananthapuram |
| 12. | Shri Vikraman Nair | Director (Tr. & System Opn.), KSEB, Thiruvananthapuram |
| 13. | Shri S. Venugopal | Director (Finance), KSEB, Thiruvananthapuram |
| 14. | Shri M. A. Rawther | Director (Distribution & Gen), KSEB, Thiruvananthapuram |
| 15. | Shri K. Gnanadesikan | Chairman, TNEB, Chennai |
| 16. | Shri S. Akshaya Kumar | Managing Director I/c, TANTRANSCO, Chennai |
| 17. | Shri P. Annadurai | Director (Distribution), TANGEDCO, Chennai |
| 18. | Shri K. Viswanathan | Director (Opn), TANTRANSCO, Chennai |
| 19. | Shri P.R. Meena | Secretary (Power), Govt. of Puducherry, Puducherry |
| 20. | Shri R.P. Sasmal | Director (Operations), PGCIL, Gurgaon, Haryana |
| 21. | Shri I.J. Kapoor | Director (Commercial), NTPC, New Delhi |
| 22. | Shri S. Rajagopal | Director (Power), NLC, Neyveli |
| 23. | Shri G. Nageswara Rao | Director (Operations), NPCIL, Mumbai |
| 24. | Shri S.K. Soonee | CEO, POSOCO, New Delhi |
| 25. | Shri P.R. Raghuram | Executive Director, POSOCO, SRLDC, Bangalore |
| 26. | Shri Sanjeev Mehra | Managing Director, TPTCL, Noida |
| 27. | Shri MCS Reddy | Chief Operating Officer, UPCL, Bangalore |
| 28. | Shri Satish Jindal | Chief Operating Officer (Trading), JSWEL, New Delhi |
| 29. | Shri S.R. Bhat | Member Secretary I/c, SRPC, Bangalore |

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- | | |
|-------|---|
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मुख्य प्रसंग
व
प्रमुख
उपलब्धियाँ

HIGHLIGHTS
&
SALIENT
FEATURES

प्रमुख बार्ते / HIGHLIGHTS

स्थापित क्षमता / Installed Capacity (Source CEA) :

जल / Hydro	:	11,398.03 MW
गैस / Gas	:	4,962.78 MW
तापीय / Thermal (Coal)	:	26,582.50 MW
नाभिकीय / Nuclear	:	1,320.00 MW
कुल स्थापित क्षमता (ज+गै+ता+ना) / Total Installed Capacity (H + G + Th + Nu)	:	44,263.31 MW
डीजल / Diesel	:	939.32 MW
पवन / Wind+RES	:	13,127.33 MW
कुल योग / Total (Source CEA)	:	58,329.96 MW
पिछले वर्ष की तुलना में वृद्धि / Net increase over previous year	:	04.42 %

माँग / Demand :

प्रभान्धित अधिकतम चरम भार / Maximum peak load catered	:	36,985 MW
पिछले वर्ष की तुलना में वृद्धि / Net increase over previous year	:	+ 4557 MW
अधिकतम आबंधित माँग / Maximum Unrestricted Demand	:	39,885 MW
निस्रतम माँग / Minimum Demand	:	21,431 MW
क्षमता में कमी (मे.वा) / Demand Shortage (MW)	:	920 to 6,508 MW
क्षमता में कमी (%) / Demand Shortage (%)	:	02.70 to 16.68 %

प्रणाली भार घटक / System Load Factor : **82 %**

कुल ऊर्जा उत्पादन / Gross Energy Generation : **2,58,310 MU**

पिछले वर्ष की तुलना में वृद्धि / Net increase over previous year : **+ 08.79 %**

ऊर्जा का उपयोग / Energy Consumption (Gross) : **2,64,019 MU**

आबंधित ऊर्जा आवश्यकता / Unrestricted Energy Requirement : **2,82,816 MU**

ऊर्जा में कमी (%) / Energy Shortage (%) : **02.73 to 17.16 %**

फ्रीक्वेंसी रेजीम / Frequency Regime :

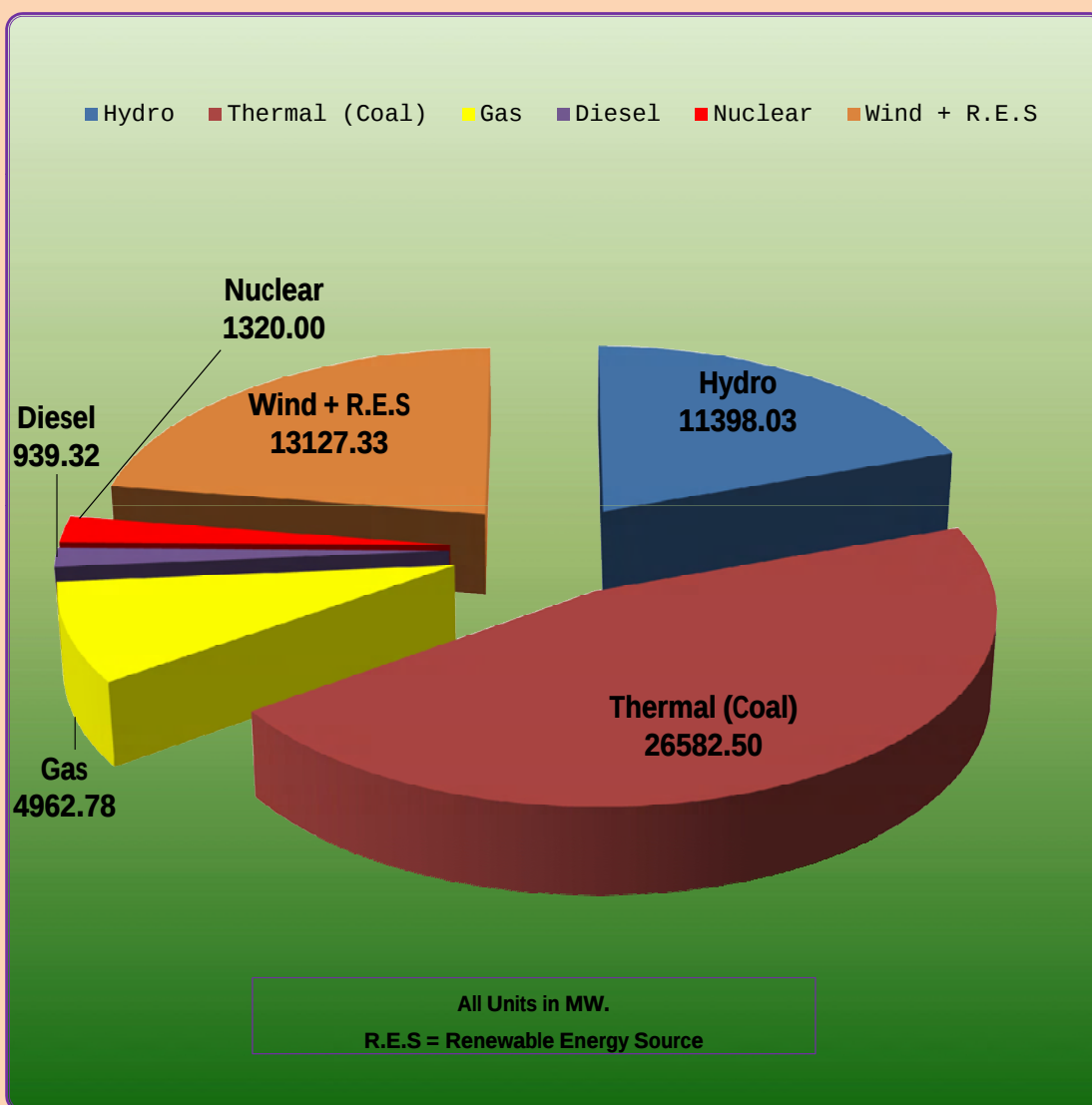
आई.ई.जी.सी की फ्रीक्वेंसी 16.02.2014 तक, 49.7 Hz से 50.2 Hz तक और 17.02.2014 से 49.9 Hz से 50.05 Hz तक होने का समय	
Time of frequency remained within IEGC Range between 49.7 Hz to 50.2 Hz upto 16.02.2014 and there afterwards 49.9 Hz to 50.05 Hz w.e.f. 17.02.2014	:
	83.67 %

वास्तविक ऊर्जा विनिमय / Actual energy exchanges :

पश्चिम क्षेत्र को निर्यातित ऊर्जा / Energy Export to WR	:	0.11 MU
पूर्व क्षेत्र को निर्यातित ऊर्जा / Energy Export to ER	:	64.82 MU
पश्चिम क्षेत्र से आयातित ऊर्जा / Energy Import from WR	:	7852.79 MU
पूर्व क्षेत्र से आयातित ऊर्जा / Energy Import from ER	:	6623.39 MU

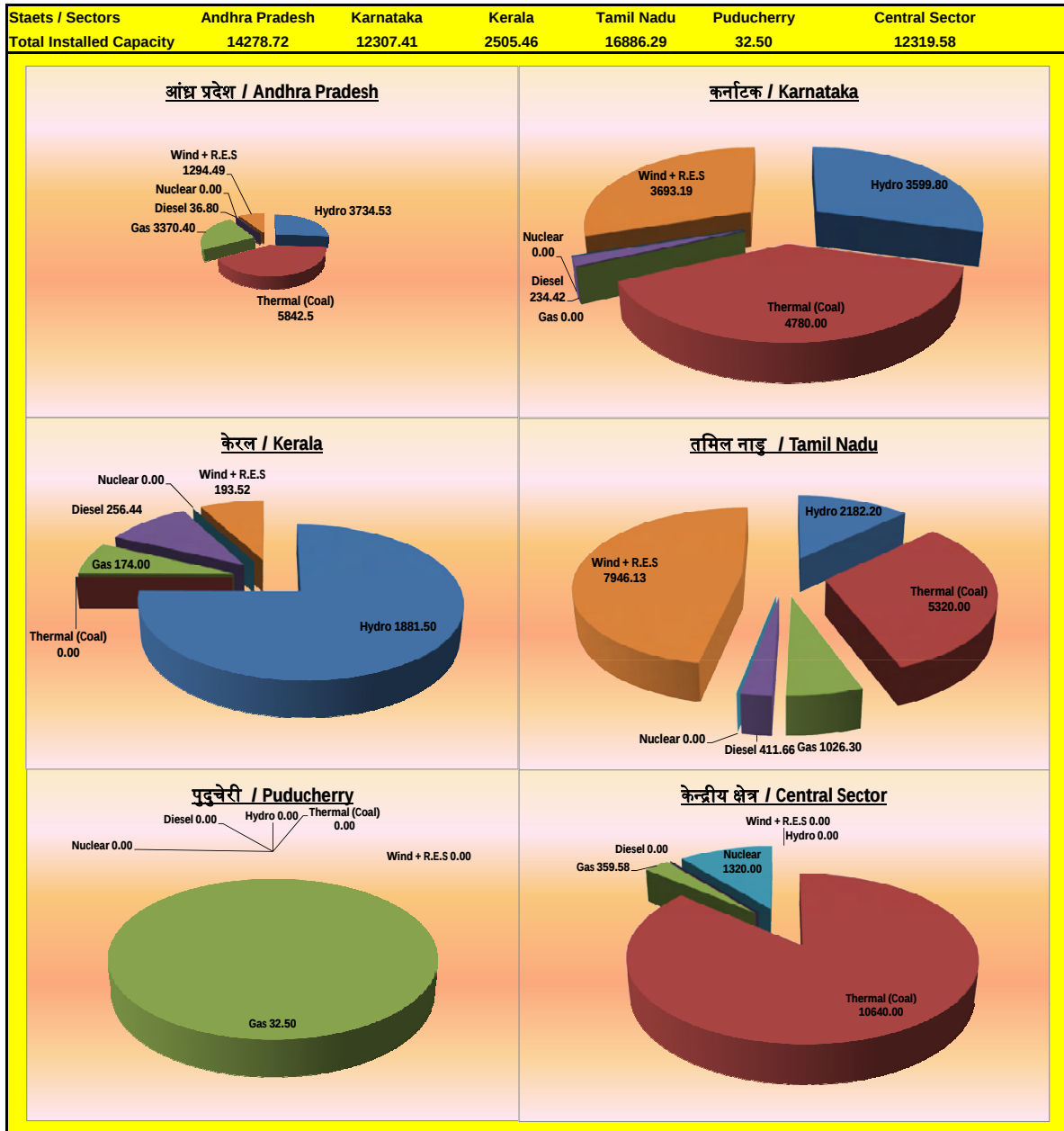
31 मार्च 2014 को दक्षिण क्षेत्र की स्थापित क्षमता का विभाजन
Break-up of Installed Capacity in Southern Region (Fuel wise)
according to CEA as on 31.03.2014

Total Installed Capacity in Southern Region = 58329.96 MW



31.03.2014 को दक्षिण क्षेत्र की राज्य वार स्थापित क्षमता (के.वि.प्रा. के अनुसार)

Installed Capacity of States in Southern Region as on 31.03.2014 in MW
(according to CEA)



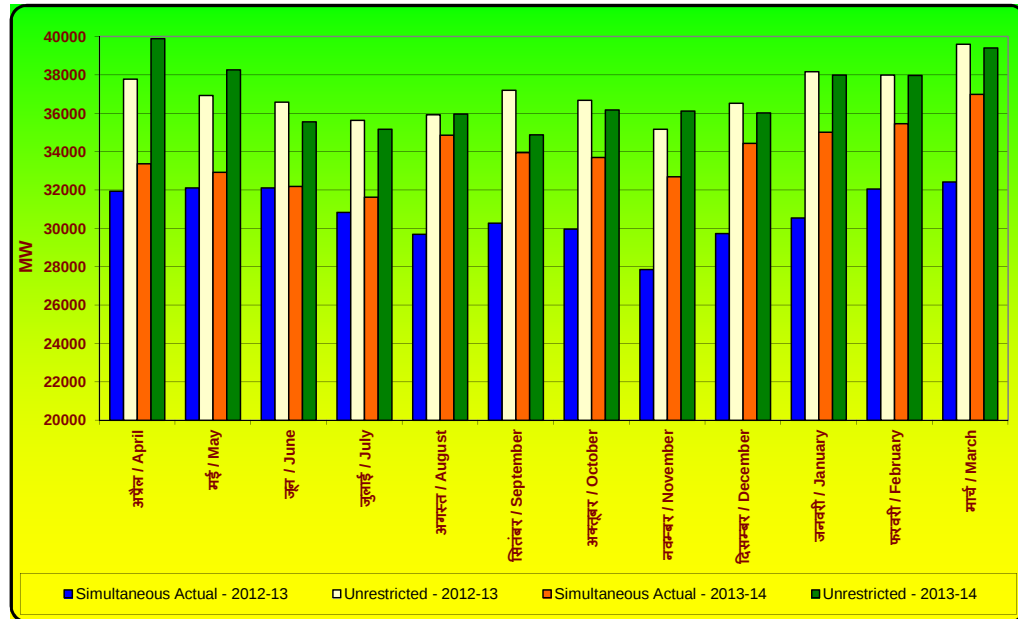
दक्षिण क्षेत्र / Southern Region

2013-14 के दौरान महीनावार अधिकतम मांग एवं अपेक्षित ऊर्जा Month wise Maximum Demand and Energy Requirement during 2013-14

मांग / Demand

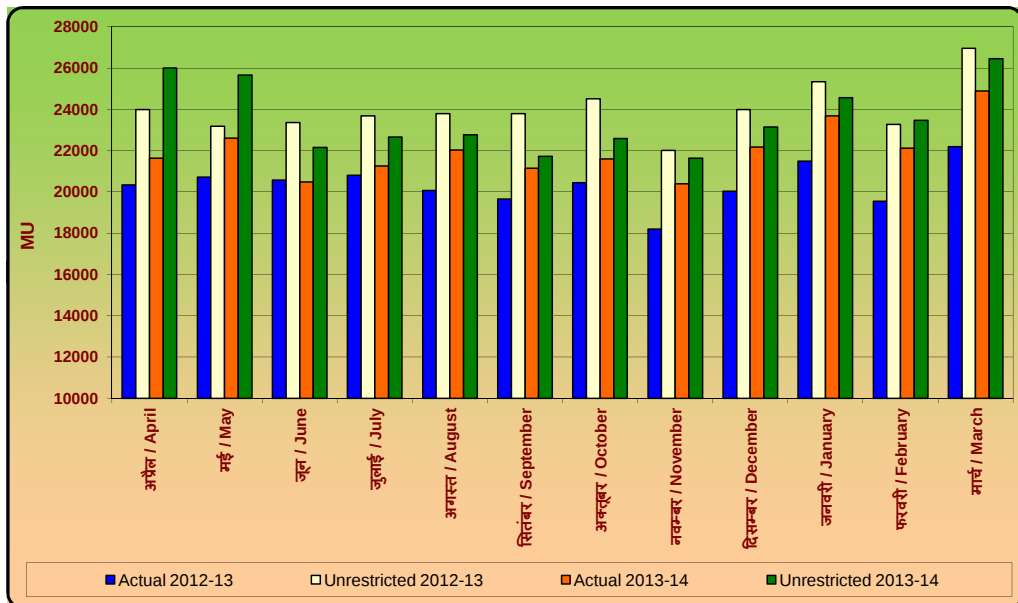
MAX DEMAND : 36985 MW on 24.03.2014 ,

MAX U.R DEMAND = 39885 MW



अपेक्षित ऊर्जा / Energy Requirement

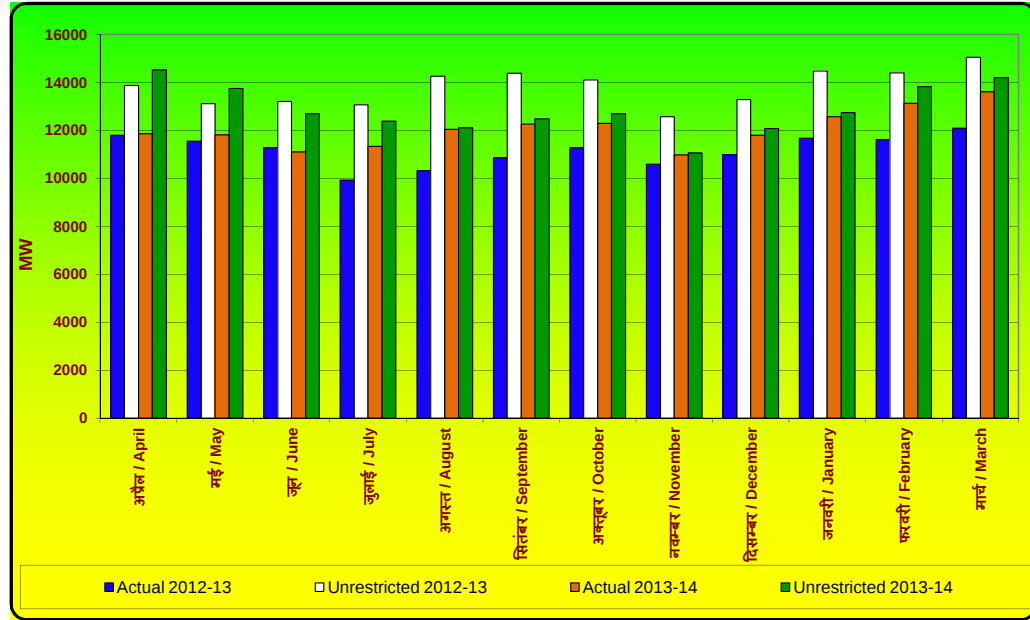
Total Consumption during 2013-14 = 264019 MU, Energy Requirement (2013-14): 282816 MU



आंध्र प्रदेश / Andhra Pradesh
2013-14 के दौरान महीनावार अधिकतम मांग एवं अपेक्षित ऊर्जा
Month wise Maximum Demand and Energy Requirement
during 2013-14

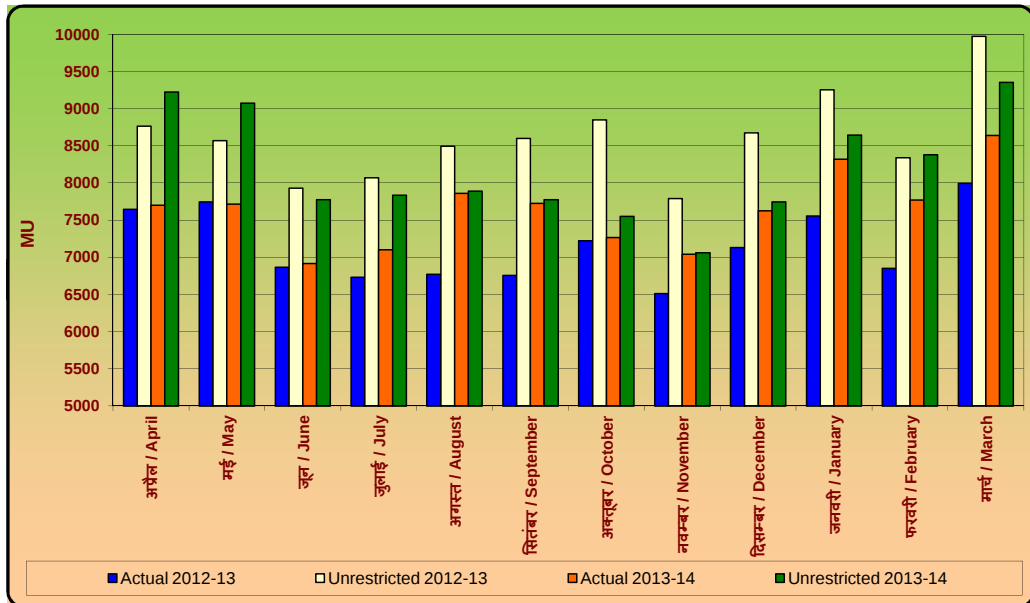
मांग / Demand

MAX DEMAND : 13621 MW on 23.03.2014, MAX U.R DEMAND = 14529 MW



अपेक्षित ऊर्जा / Energy Requirement

Total Consumption during 2013-14 = 91683 MU, Energy Requirement (2013-14) : 98308 MU

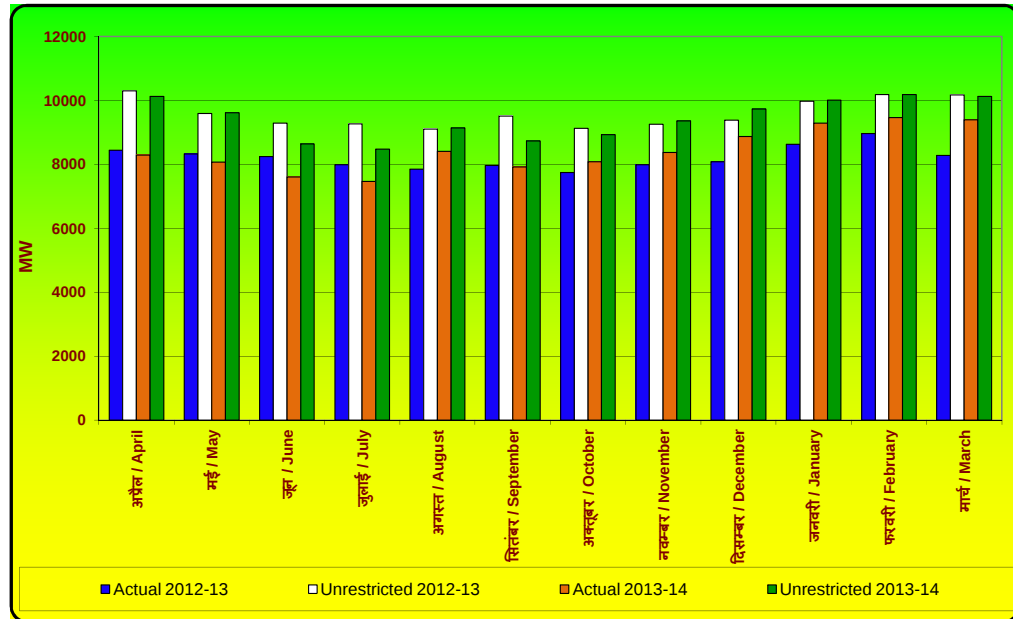


कर्नाटक / Karnataka

2013-14 के दौरान महीनावार अधिकतम मांग एवं अपेक्षित ऊर्जा Month wise Maximum Demand and Energy Requirement during 2013-14

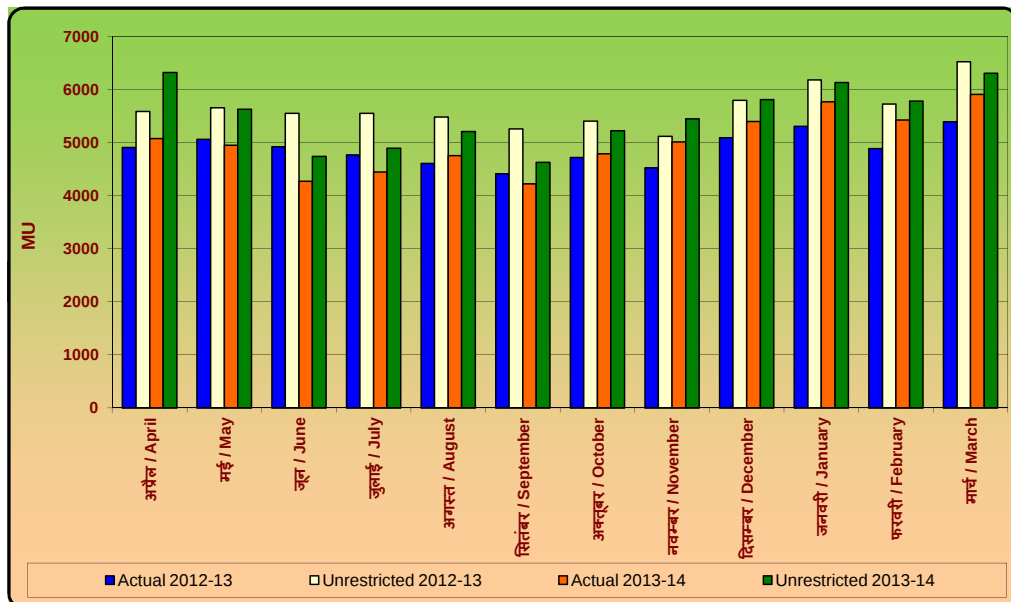
मांग / Demand

MAX DEMAND : 9467 MW on 13.02.2014, MAX U.R DEMAND = 10184 MW



अपेक्षित ऊर्जा / Energy Requirement

Total Consumption during 2013-14 = 59989 MU, Energy Requirement (2013-14) : 66089 MU

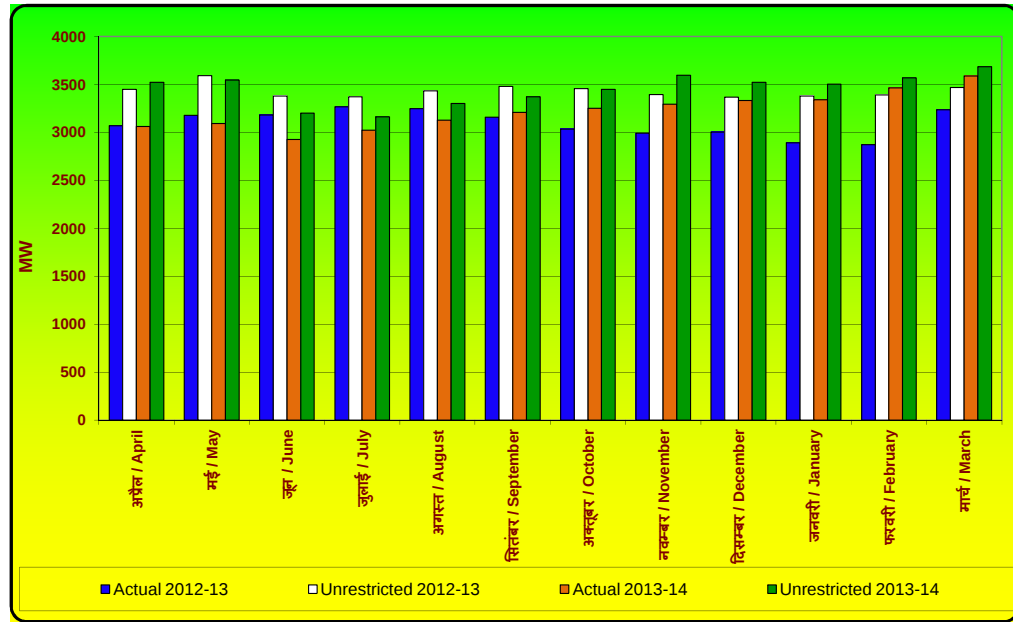


केरल / Kerala

2013-14 के दौरान महीनावार अधिकतम मांग एवं अपेक्षित ऊर्जा Month wise Maximum Demand and Energy Requirement during 2013-14

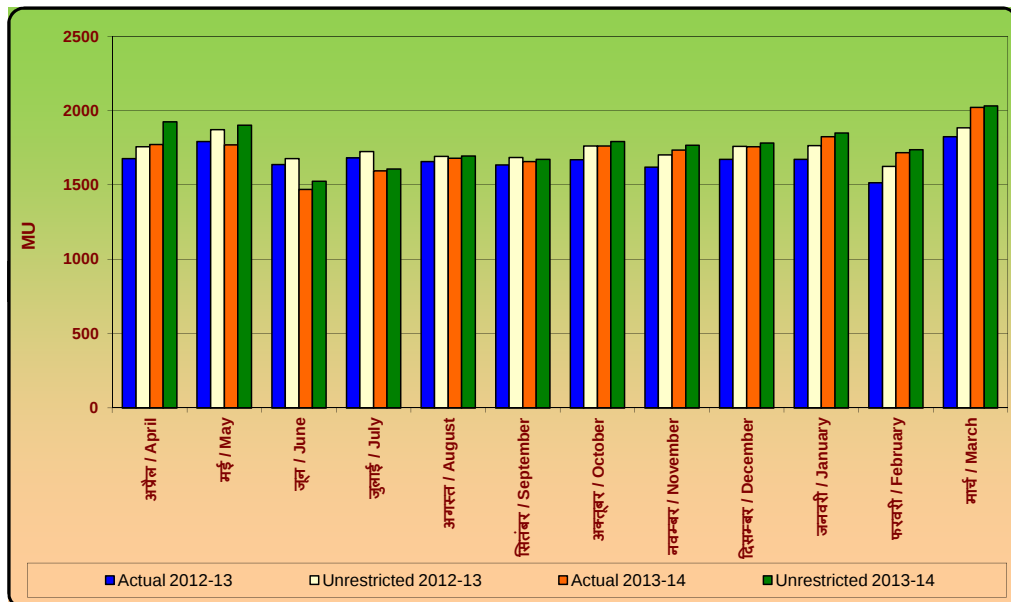
मांग / Demand

MAX DEMAND : 3588 MW on 18.03.2014, MAX U.R DEMAND = 3686 MW



अपेक्षित ऊर्जा / Energy Requirement

Total Consumption during 2013-14 = 20757 MU, Energy Requirement (2013-14) : 21283 MU

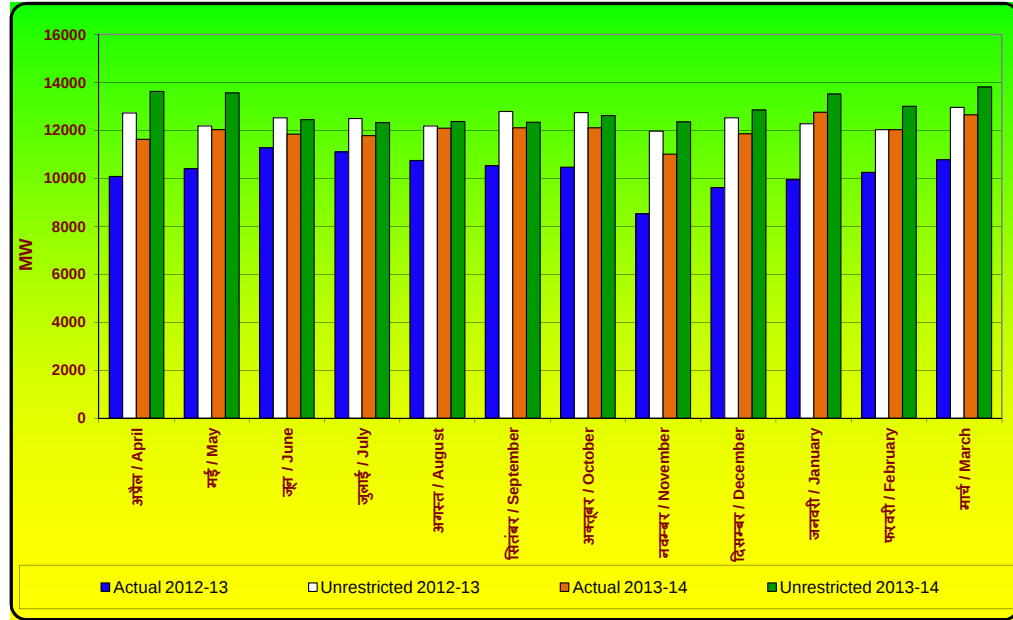


तमिल नाडु / Tamil Nadu
2013-14 के दौरान महीनावार अधिकतम मांग एवं अपेक्षित ऊर्जा
Month wise Maximum Demand and Energy Requirement
during 2013-14

मांग / Demand

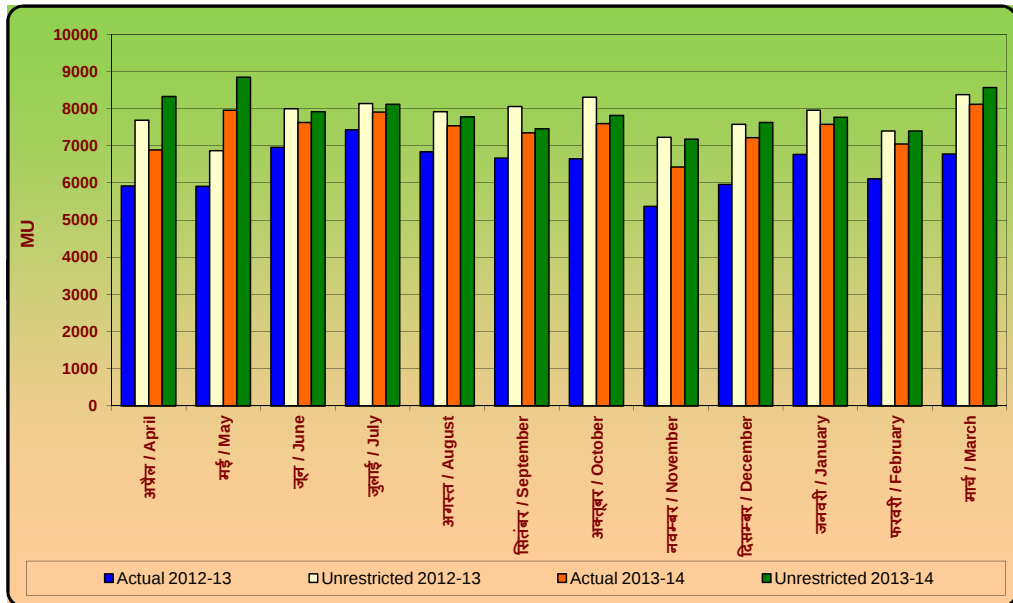
MAX DEMAND : 12764 MW on 29.01.2014,

MAX U.R DEMAND = 13817 MW

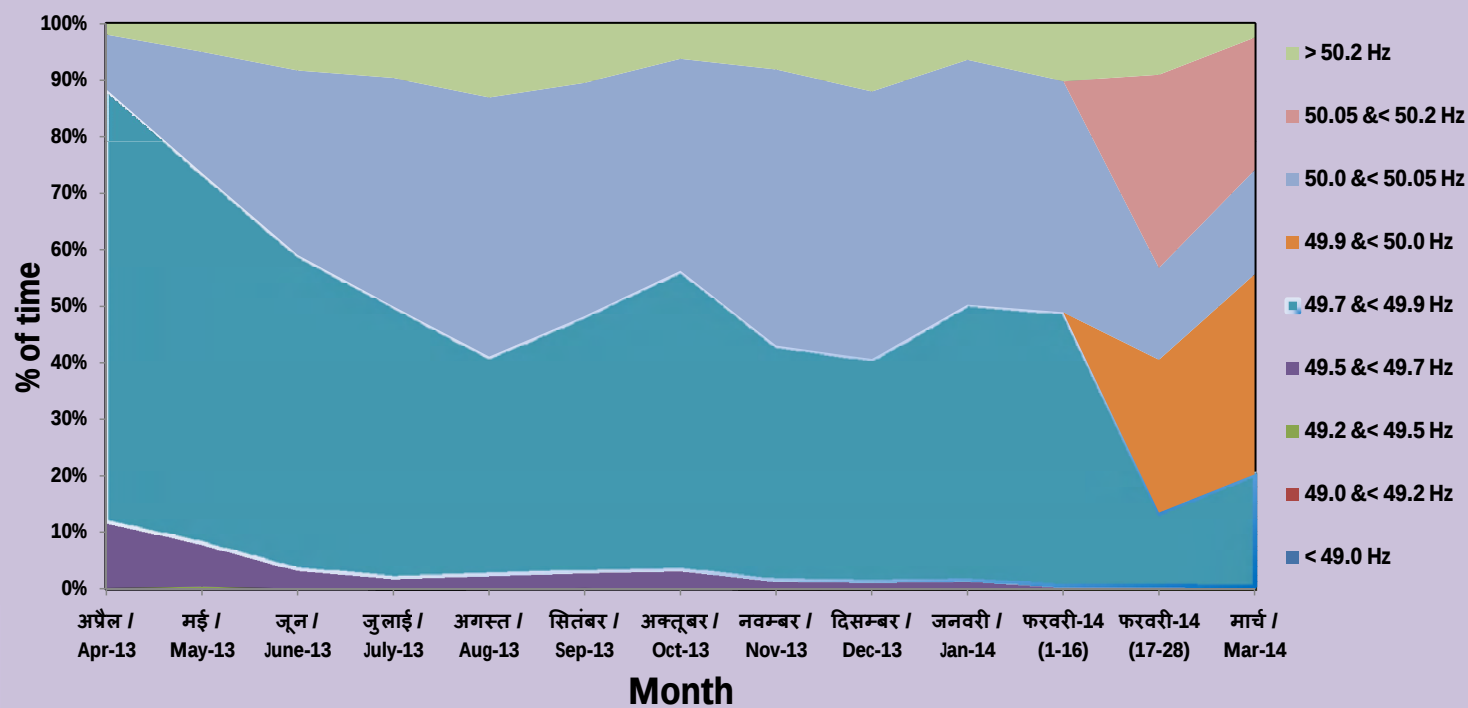


अपेक्षित ऊर्जा / Energy Requirement

Total Consumption during 2013-14 = 89270 MU, Energy Requirement (2013-14) : 94792 MU

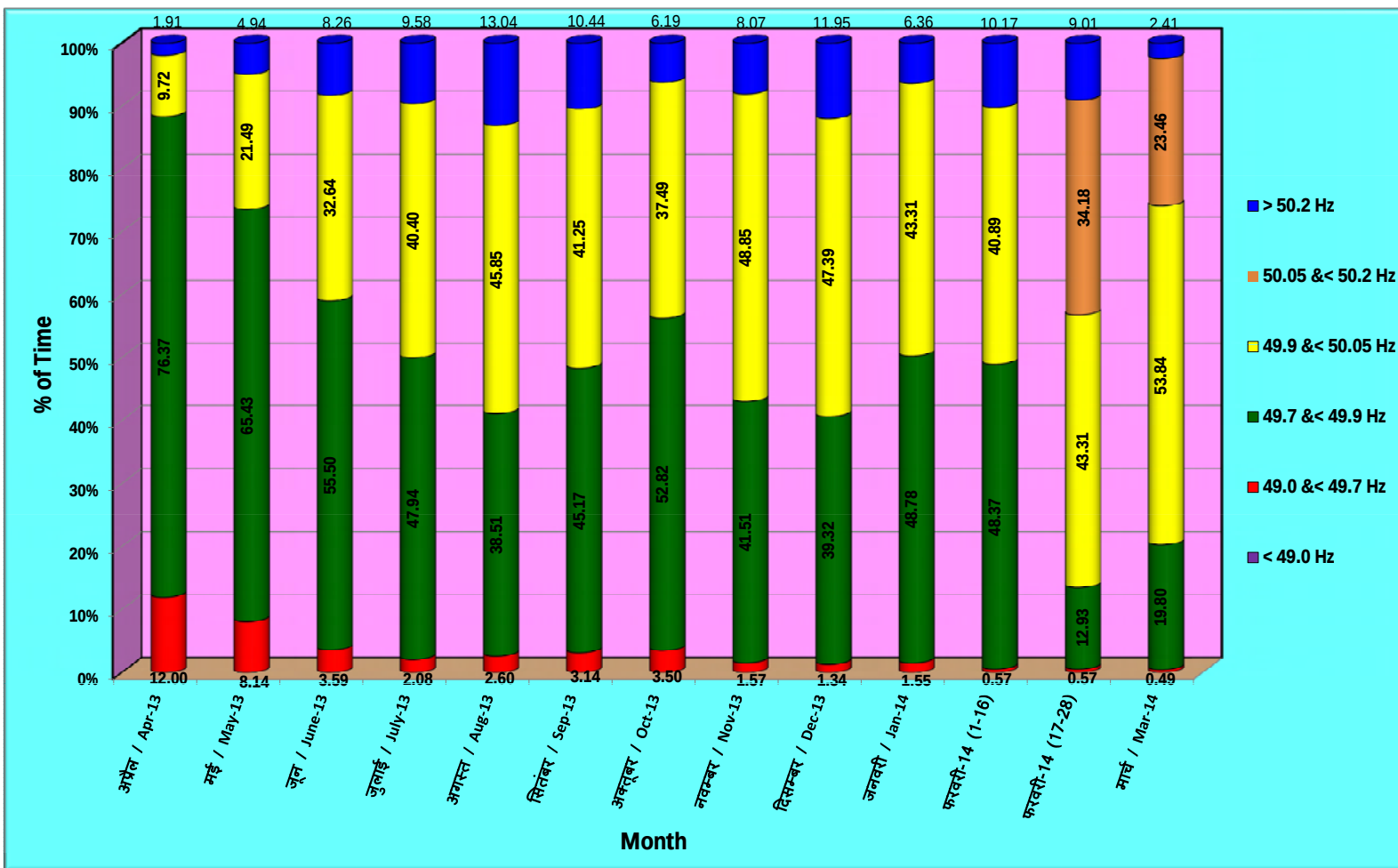


वर्ष 2013-14 में दक्षिण क्षेत्र की फ्रीक्वेन्सी Southern Grid Frequency during 2013-14



2013-14 के दौरान दक्षिण क्षेत्र की फ्रीक्वेन्सी रूपरेखा

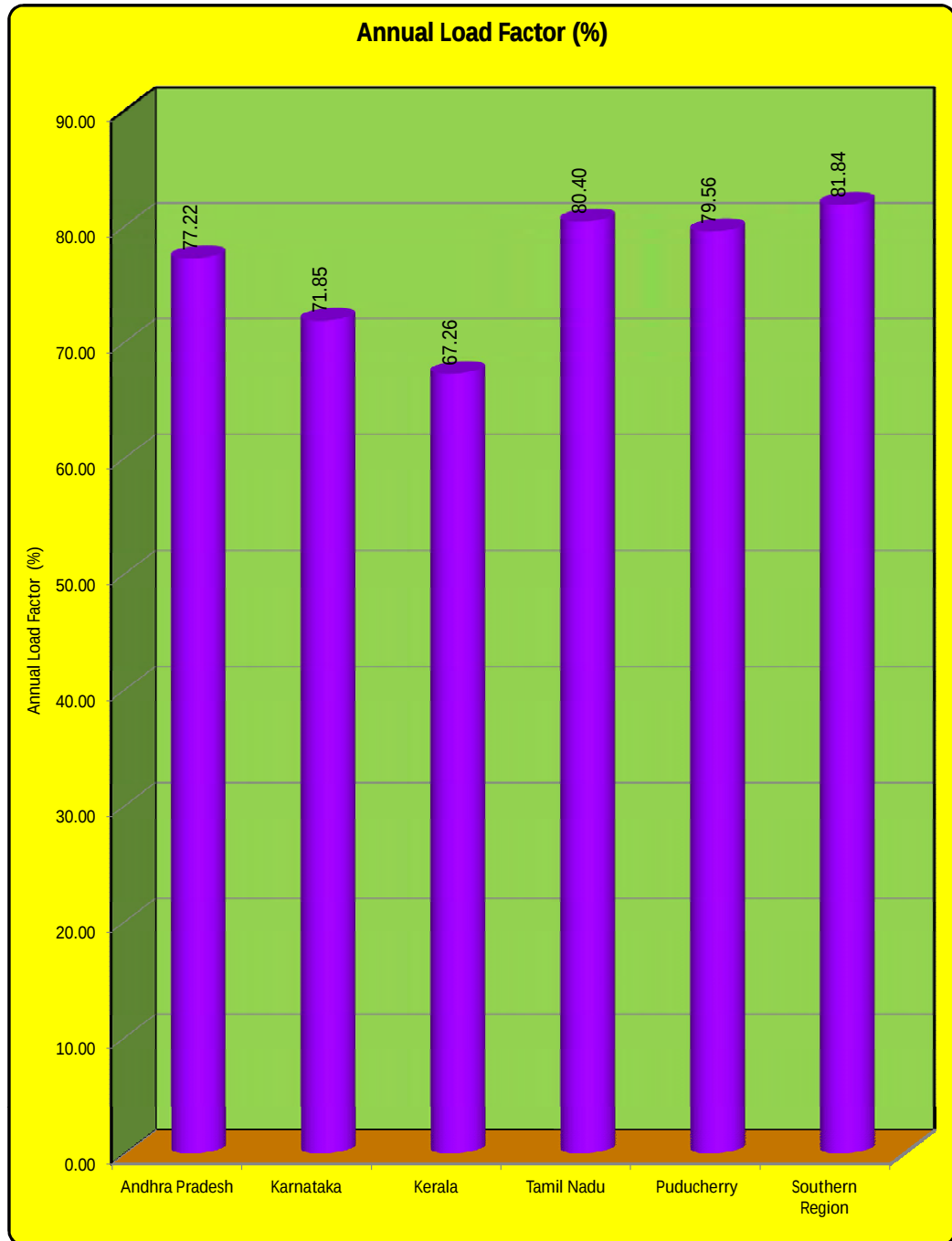
Frequency Profile of Southern Region during 2013-14



MAXIMUM DURING THE YEAR 50.81 Hz on 21 April 2013
 MINIMUM DURING THE YEAR 48.84 Hz on 07 June 2013
 AVERAGE DURING THE YEAR 49.98 Hz

वर्ष 2013-14 के लिए दक्षिण क्षेत्रीय प्रणालियों का
वार्षिक लोड फैक्टर (प्रतिशत में)

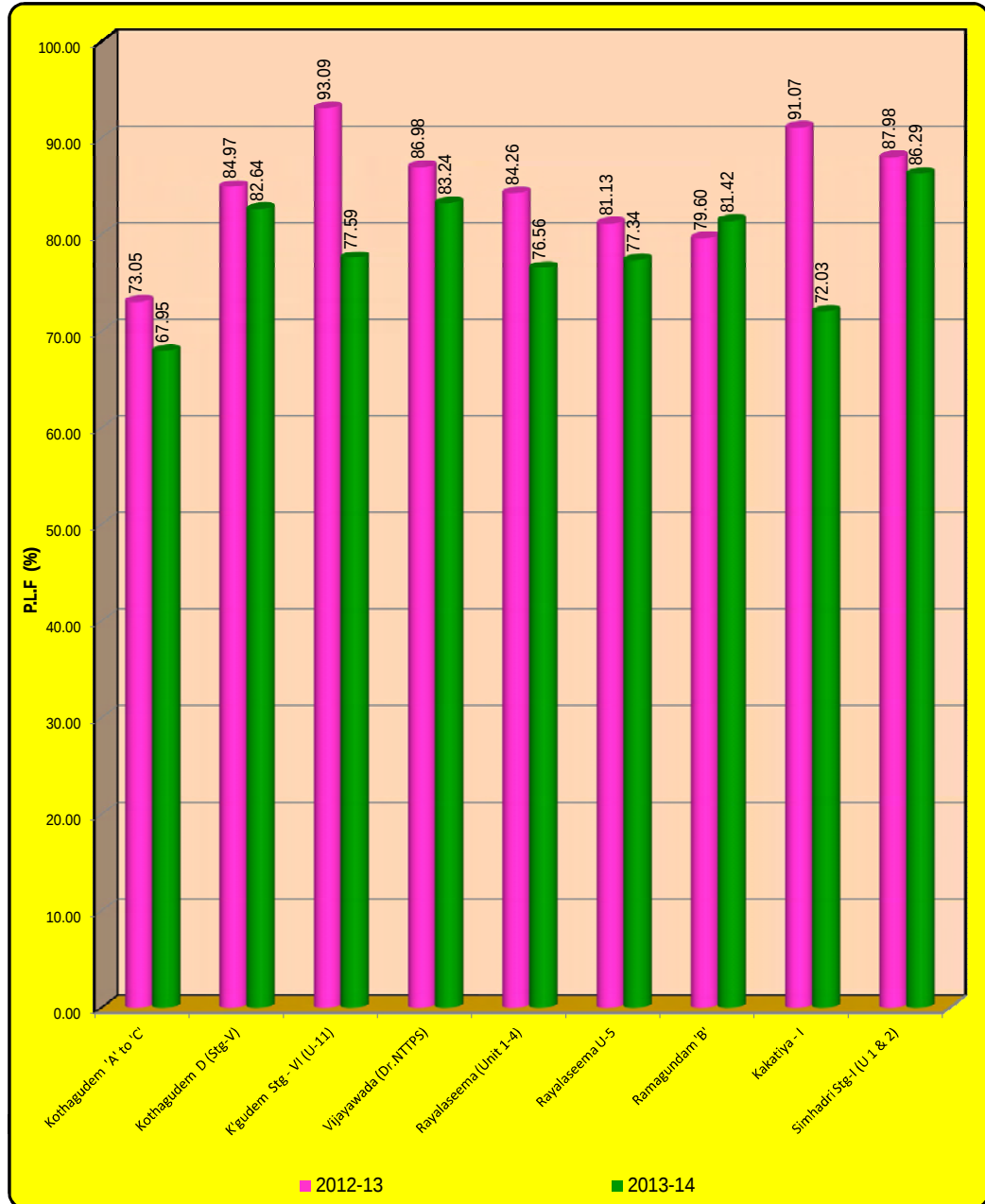
**Annual Load Factor (in percentage) of
Southern Regional Systems for 2013-14**



वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

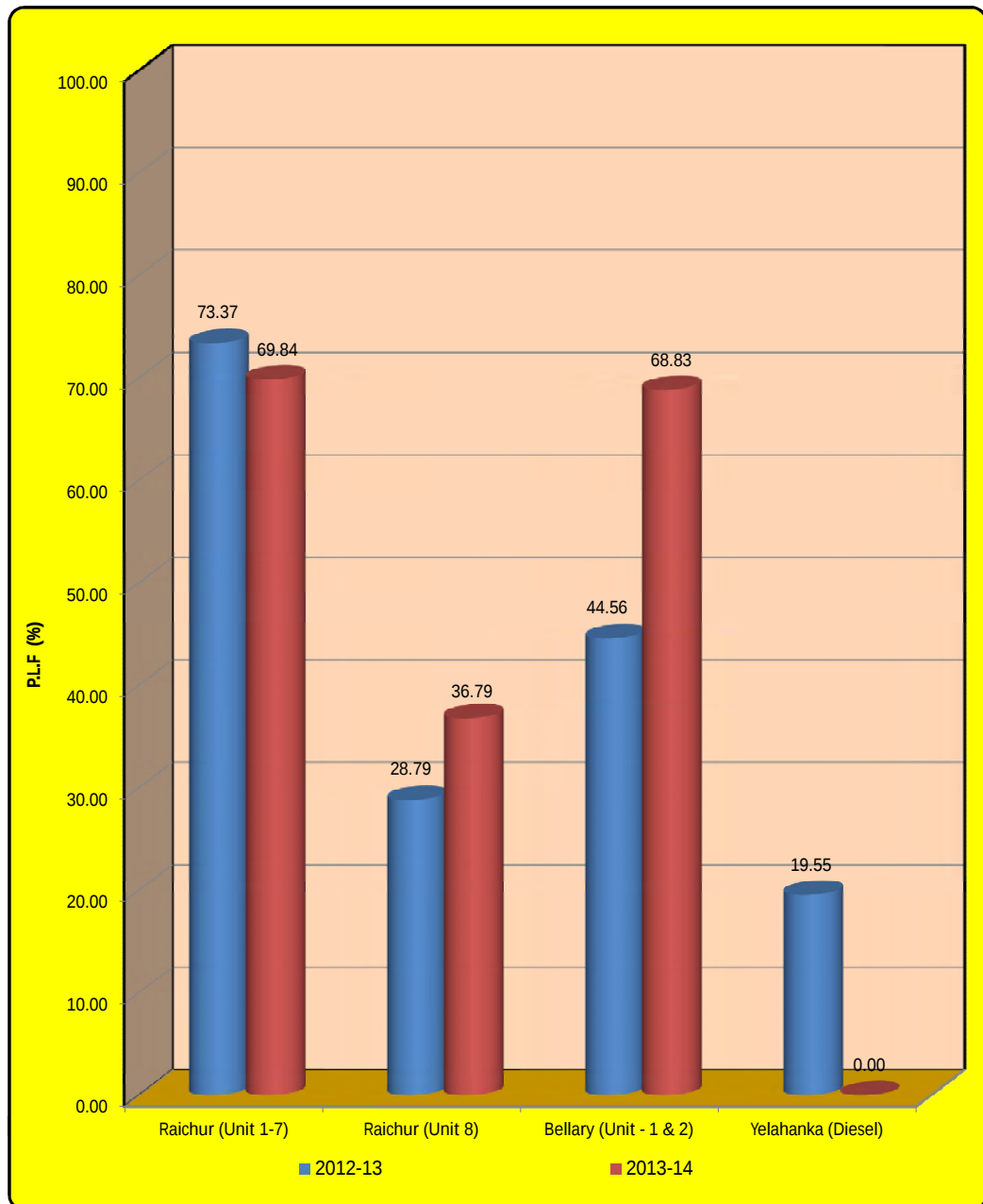
आंध्र प्रदेश / Andhra Pradesh



वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

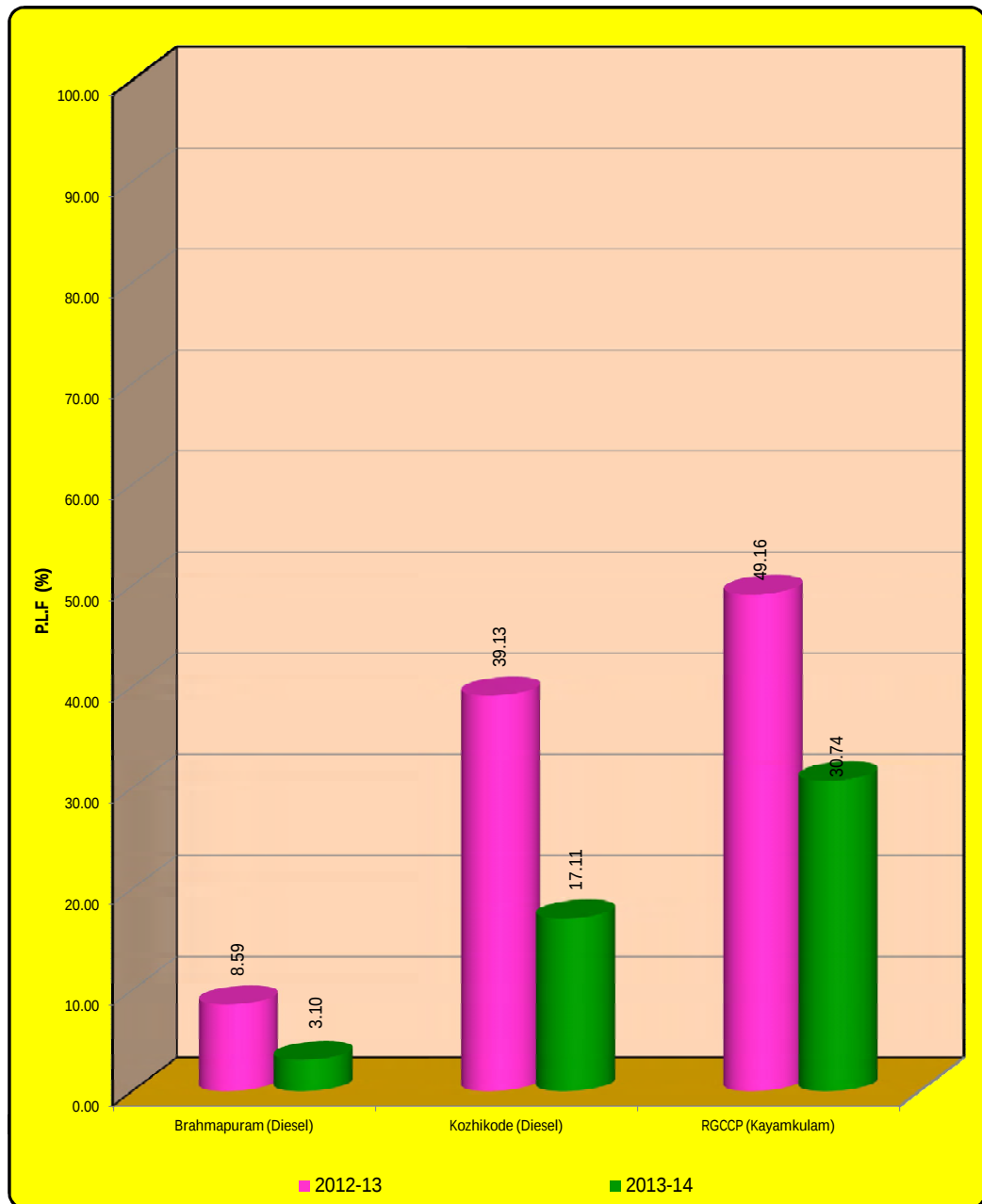
कर्नाटक / Karnataka



वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

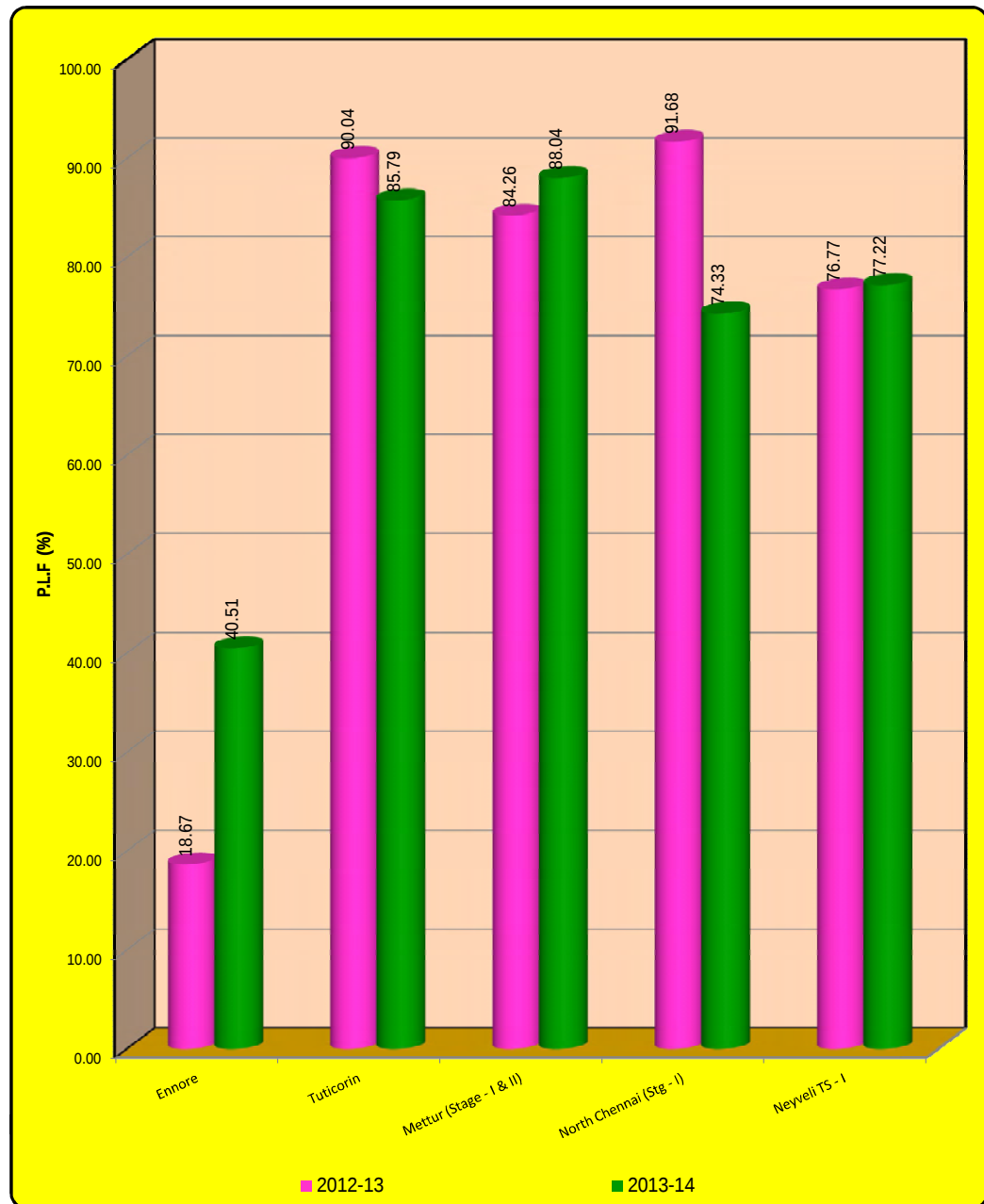
केरल / Kerala



वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

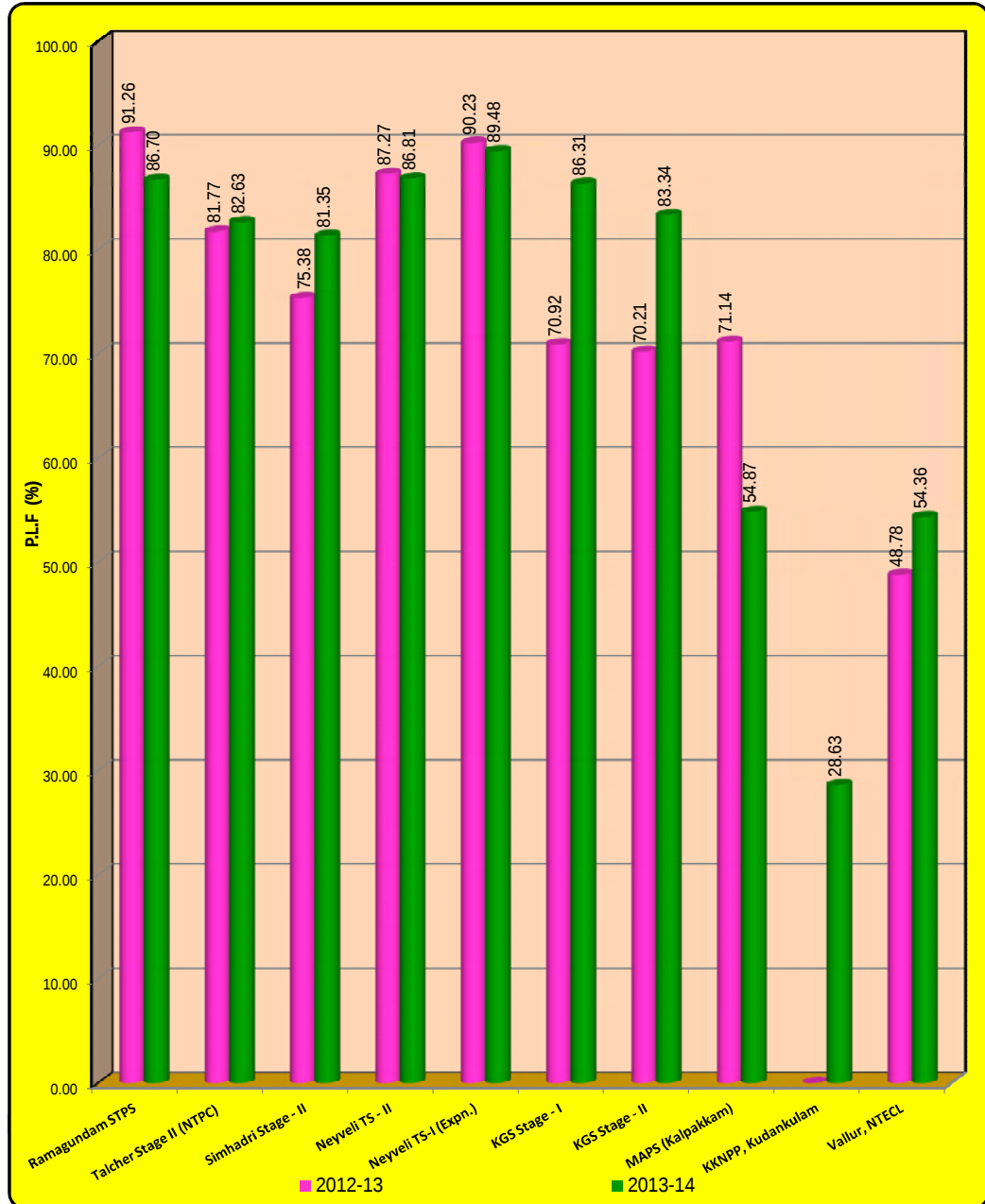
तमिल नाडु / Tamil Nadu



वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

केन्द्रीय उत्पादन केंद्र / Central Generating Stations

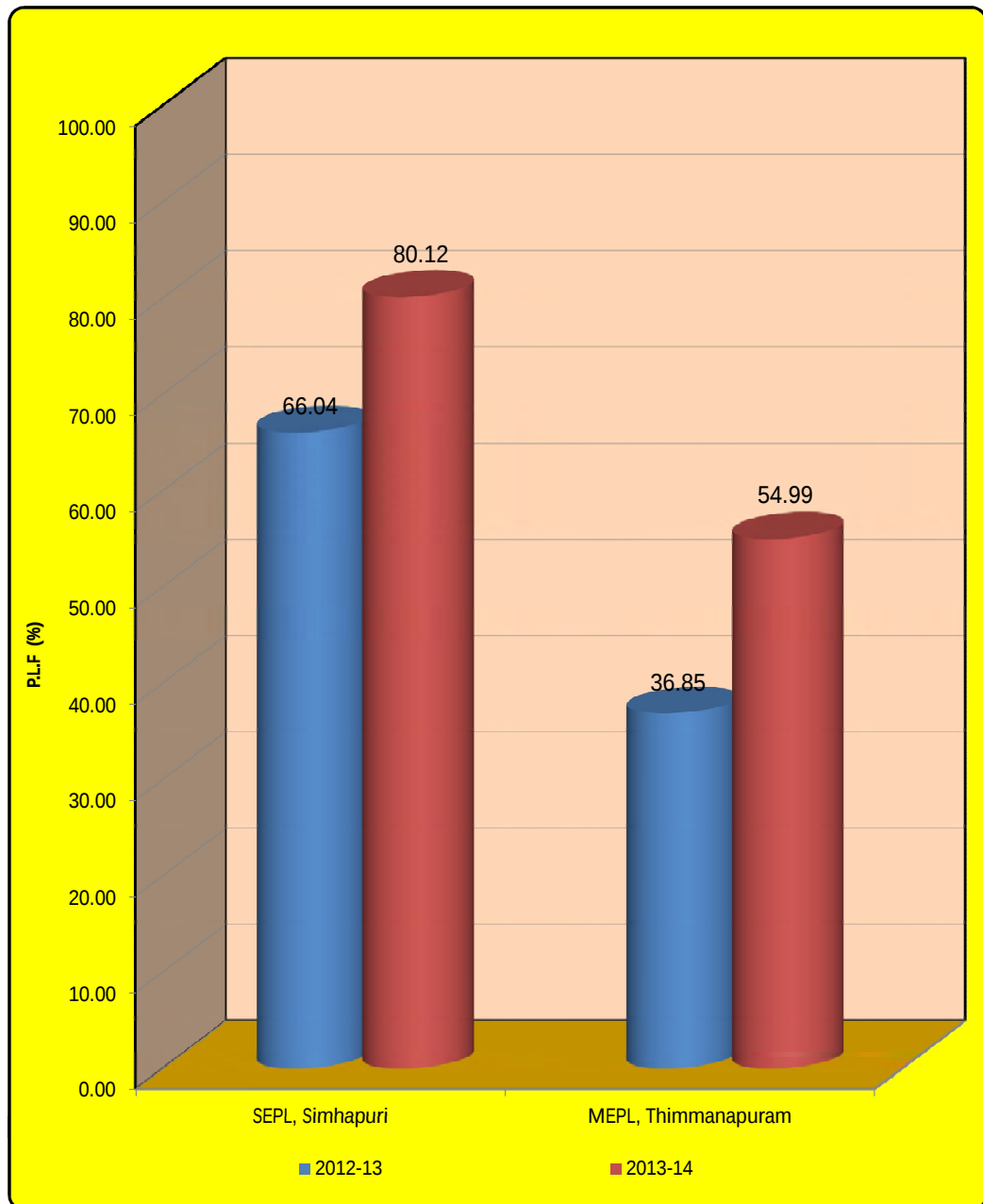


वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

आई.एस.टी.एस से जुड़े व्यापारी विद्युत संयंत्र

Merchant Power Plants directly connected to ISTS

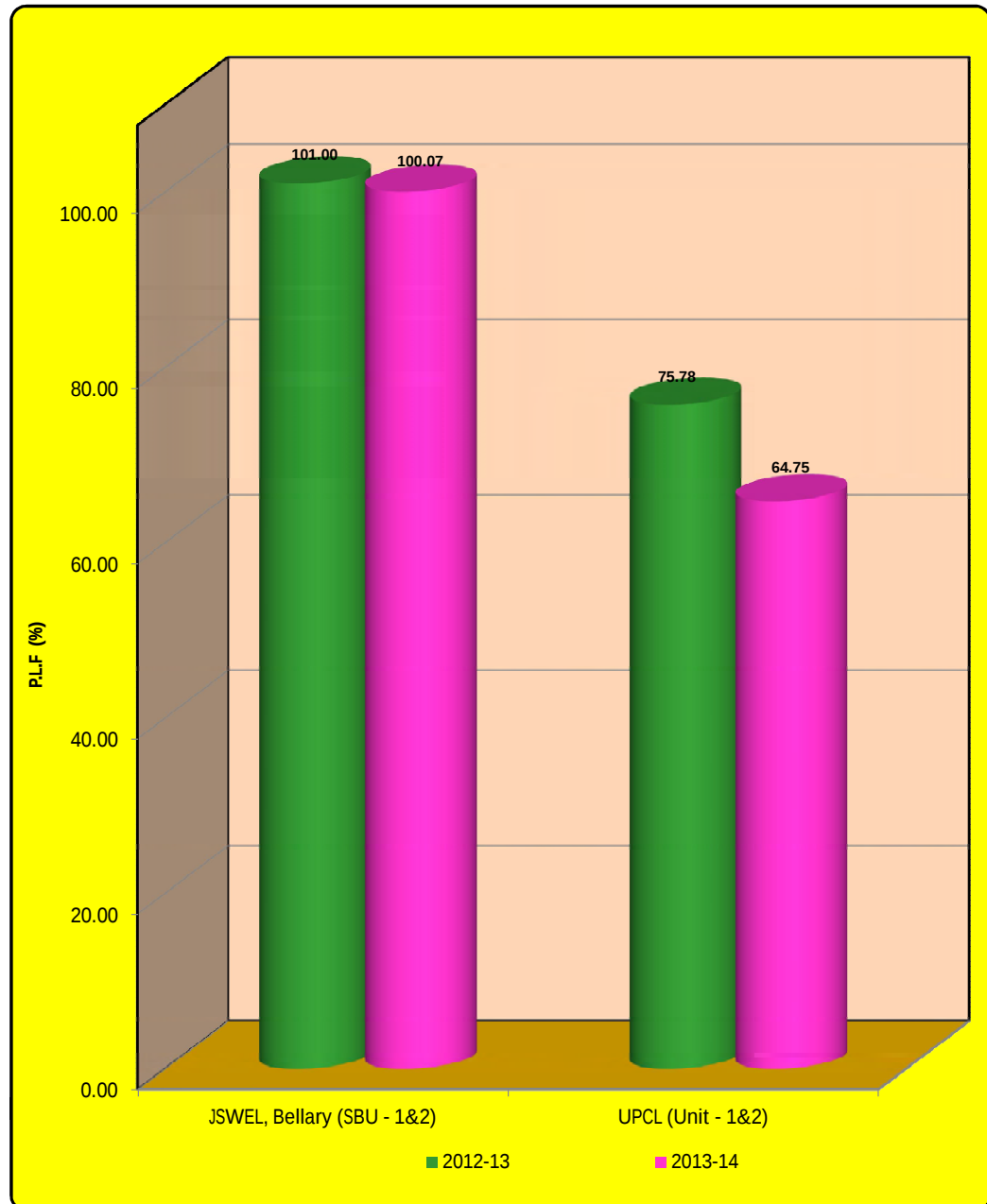


वर्ष 2013-14 में विद्युत केन्द्रों के प्लांट लोड फैक्टर

Plant Load Factor of Power Stations for 2013-14

राज्यों की ग्रिड से जुड़े प्रमुख आई.पी.पी.

Major IPPs connected to State Grid



अध्याय

अध्याय - I

दक्षिण क्षेत्रीय विद्युत समिति

परिचय :

दक्षिण क्षेत्रमें, दक्षिण भारत के चार राज्य अर्थात् आंध्र प्रदेश, कर्नाटक, केरल, तमिल नाडु साथ में संघशासित पुदुचेरी भी शामिल है। इस क्षेत्र का विस्तार 637,000 वर्ग किलोमीटर है तथा यह संपूर्ण भारत के विस्तार के 20 प्रतिशित है।

दक्षिण क्षेत्र के विद्युत मानचित्र को प्रदर्श - I में दिया गया है।

1 समिति की सदस्यता, कार्य एवं संगठनात्मक संरचना :

1.1 दक्षिण क्षेत्रीय विद्युतसमिति की सदस्यता:

दिनांक 29.11.2005 एवं 09.05.2008 को संशोधित भारत सरकार के दिनांक 25.05.2005 के संकल्प के अनुसार दक्षिण क्षेत्रीय विद्युत समिति की सदस्यता निम्न प्रकार से होगी :

- i) सदस्य (ग्रिड प्रचालन) केंद्रीय विद्युत प्राधिकरण (के.वि.प्रा) ।
- ii) प्रत्येक केंद्रीय उत्पादक कंपनी, केंद्रीय पारेषण युटिलिटी (सीटीयू), राष्ट्रीयभार प्रेषण केंद्र (एन.एल.डी.सी), तथा दक्षिण क्षेत्रीय भार प्रेषण केंद्र (एस.आर.एल.डी.सी) के एक एक प्रतिनिधि ।
- iii) दक्षिण के प्रत्येक राज्य की उत्पादन कंपनी, पारेषण युटिलिटी, राज्य भार प्रेषण केंद्र, राज्य द्वारा नामित किसी भी एक राज्य वितरण कंपनी एवं चक्रानुक्रम व वर्णानुक्रम में राज्य में कार्यरत किसी एक निजी वितरण कंपनी के एक एक प्रतिनिधि ।
- iv) क्षेत्र के प्रत्येक संघ शासित क्षेत्र में कार्यरत विद्युत उत्पादन / पारेषण/ वितरण आदि से संबंधित संस्थाओं की तरफ से संघशासित क्षेत्र के प्रशासन द्वारा नामित एक प्रतिनिधि।
- v) 1000 मे. वा. से अधिक स्थापित क्षमतावाली प्रत्येक स्वतंत्र विद्युत उत्पादक कंपनियों (केंद्रीय उत्पादन कंपनी एवं राज्य सरकार के स्वामित्व की उत्पादन कंपनियों को छोड़कर) के एक प्रतिनिधि।

- vi) वर्णानुक्रम एवं चक्रानुक्रम में, क्षेत्र में प्रचालित अन्य सभी स्वतंत्र विद्युत उत्पादकों (जो मद (ii) से (iv) तक शामिल नहीं हैं) के एक प्रतिनिधि।
- vii) पिछले वर्ष 500 एम यू से अधिक व्यापार किए गए बिजली की व्यापारी कंपनियों की वर्णानुक्रम एवं चक्रानुक्रम में एक प्रतिनिधि।
- viii) सदस्य सचिव, द.क्षे.वि.स – संयोजक।

1.2 कार्य :

द.क्षे.वि.स.को निम्नलिखित कार्य सौंपे गए हैं :

- i) ग्रीड निष्पादन को सुधारने हेतु क्षेत्रीय स्तर पर प्रचालन का विश्लेषण करना।
- ii) अंतर-राज्य / अंतर- क्षेत्रीय विद्युत प्रसरण को सुगम बनाना।
- iii) केंद्रीय/ राज्य प्रारेषण युटिलिटियों के साथ अंतः एवं अंतर क्षेत्रीय पारेषण प्रणाली की योजना कार्य को सुकर बनाना।
- iv) क्षेत्र के विभिन्न उत्पादक कंपनियों के साथ-साथ क्षेत्र को विद्युत आपूर्ति करनेवाली अंतर-राज्य उत्पादक कंपनियों की मशीनों के अनुरक्षण की वार्षिक तौर पर योजना तैयार करने में समन्वय करना एवं मासिक तौर पर अनुरक्षण कार्यक्रम की समीक्षा करना।
- v) मासिक आधार पर पारेषण प्रणाली के आउटेज की योजना तैयार करना।
- vi) ग्रीड के सुस्थिर प्रचालन की दृष्टि से, प्रचालन योजना अध्ययन एवं संरक्षण अध्ययन करना।
- vii) उचित वोल्टता को बनाए रखने हेतु, प्रणाली अध्ययन समिति के माध्यम से रियाक्ति व कंपेन्सेशन की आवश्यकता की समीक्षा करना एवं संस्थापित कैपेसिटरो की मानिट्रिंग करना।
- viii) क्षेत्र के विद्युत प्रणाली प्रचालन में मितव्ययता एवं दक्षता से संबंधित मामलों में एक मत बनाना।

1.3 दक्षिण क्षेत्रीय विद्युत समिति के सचिवालय की संगठनात्मक संरचना:

31.03.2014 के अनुसार द क्षे वि स के अधिकारियों की सूची संलग्नक-1 में दी गई है

2013 -14 के दौरान दक्षिण क्षेत्रीय विद्युत समिति की संगठनात्मक संरचना एवं पदासीन स्टॉफ की स्थिति निम्न प्रकार है :

स्टाफ आवंटन

पदनाम	पदों की संख्या	31.03.2014 के अनुसार भरे गए पद
अ. राजपत्रित		
1 सदस्य सचिव	1	1
2 अधीक्षक अभियंता	3	2
3 सहायक सचिव / का.अ	7	7 + 1 *
4 सहायक कार्यकारी अभियंता	9	3
5 सहायक अभियंता	2	-
6 सहायक अभियंता (सिविल)	1	1
7 निजी सचिव	1	-
आ. अराजपत्रित		
1 तकनीकी अधिकारी	1	-
2 कनिष्ठ अभियंता (सिविल)	1	-
3 नक्षा नवीस श्रेणि-I	2	2
4 नक्षा नवीस श्रेणि-II	1	-
5 सहायक	1	-
6 आशुलिपिक श्रेणि-I	5	3
7 आशुलिपिक श्रेणि-II	1	1
8 हिंदी अनुवादक	1	1
9 उच्च श्रेणि लिपिक	1	1
10 भंडारी	1	-
11 अवर श्रेणि लिपिक	4	1
12 वाहन चालक	2	1
13 चपरासी (एम.टी.एस)	6	4
14 चौकीदार (एम.टी.एस)	2	1
15 मेकानिक प्लंबर	1	-
16 मददगार (एम.टी.एस)	1	-
कुल	55	30

*एक कार्यकारी अभियंता पद को अधीक्षक अभियंता पद के बदले में प्रचालित किया जा रहा है

1.4 वित्तीय विवरण :

वित्तीय वर्ष 2013-14 के दौरान दक्षिण क्षेत्रीय विद्युत समिति द्वारा किए गए वास्तविक खर्च निम्न प्रकार है:

मुख्य शीर्ष -2801	खर्च (रु.में)
द.क्षे.वि.स (योजनेतर) [क्षेत्रीय समन्वय 2801.01.04]	
अ) वेतन	1,31,82,329
आ) समयोपरि भत्ता	10,975
इ) यात्रा खर्च	6,34,617
ई) कार्यालय खर्च	5,49,904
उ) चिकित्सा खर्च	92,584
ऊ) प्रशासनिक खर्च	89,766
ऋ) लघु कार्य	14,61,050
----- कुल	----- 1,60,21,225
द.क्षे.भा.प्रे.कें (योजनेतर) [भार प्रेषण केंद्र 2801.01.02]	खर्च (रु.में)
अ) वेतन	89,40,563
आ) समयोपरि भत्ता	9,000
इ) यात्रा खर्च	6,49,961
ई) कार्यालय खर्च	21,99,932
उ) अन्य प्रभार	4,49,871
ऊ) चिकित्सा खर्च	87,373
ऋ) प्रशासनिक खर्च	89,797
ए) विज्ञापन एवं प्रसारण	7,640
----- कुल	----- 1,24,34,137
लघु निर्माण कार्य-2801.02.17.27	0
क्षेत्रीय विद्युत समितियों का सबलीकरण	

अध्याय - II

क्षेत्रीय ग्रिड निष्पादन

2.1 विद्युत आपूर्ति स्थिति:

वर्ष 2013-14 के दौरान दक्षिण क्षेत्रीय ग्रिड का अधिकतम मांग 36,985 मे.वा रही जो, पिछले वर्ष की तुलना में 4557 मे.वा अधिक है। अनिर्बंधित अधिकतम मांग 39,885 मे.वा रही। वर्ष 2013-14 के दौरान कुल मांग की कमी 2.70 % से 16.68 % तक रही। मांग की कमी आंध्र प्रदेश में 0.53 % से 18.92 %, कर्नाटक में 7.21 % से 18.43 %, केरल में 2.67 % से 13.02 %, तमिल नाडु में 2.04 % से 14.89 % तथा पुदुचेरी में 0 % से 9.12 % रही। रजिस्टर किए गए मासिक लोड पैटर्न, अधिकतम एवं अनिर्बंधित मांग, भंडारण क्षमता आदि से संबंधित संघटकवार विवरण **अनुलग्नक - II** दिए गए हैं।

मार्च 2014 के दौरान दक्षिण क्षेत्र के सकल अधिकतम ऊर्जा उपभोग 803 मि.यू / प्रति दिन रहे। वर्ष 2013-14 के दौरान दक्षिण क्षेत्र का सकल ऊर्जा उपभोग 774 मि.यू / प्रति दिन के औसत में, 2,64,019 मि.यू रही, जो पिछले वर्ष की तुलना में 8.22 % अधिक है। ऊर्जा की क्षेत्रीय मासिक कमी 2.73 % से 17.16 % तक रही। ऊर्जा की कमी आंध्र प्रदेश में 0.31 % से 17.18 %, कर्नाटक में 6.14 % से 20.28 %, केरल में 0.50 % से 7.83 %, तमिल नाडु में 1.45 % से 17.16 % तथा पुदुचेरी में 0.09 % से 5.28 % रही। मासिक सकल ऊर्जा उपभोग, अपेक्षित अनिर्बंधित ऊर्जा, ऊर्जा की कमी एवं महीनावर ऊर्जा उपभोग की औसत आदि से संबंधित संघटकवार विवरण **अनुलग्नक -III** में दिए गए हैं।

राज्यों द्वारा विभिन्न भार विनियम उपायों को लागू किया गया है। वर्ष 2013-14 के दौरान दक्षिण क्षेत्र में लागू विनियामक उपायों के विवरण **अनुलग्नक -V** में दिए गए हैं।

2.2 दक्षिण क्षेत्र की स्थापित क्षमता :

वर्ष 2013-14 को दक्षिण क्षेत्र की स्थापित क्षमता 58,329 मे.वा थी (आधार : के.वि.प्रा.)। पिछले वर्ष की स्थापित क्षमता 55,859 मे.वा की तुलना में 4.42 % की वृद्धि हुई है। इस में जल विद्युत के

11,398 मे.वा (19.54 %), तापीय+गैस+डीज़ल के 32,485 मे.वा (55.69 %), नाभिकीय - 1,320 मे.वा (2.26 %) और हवा+आर.ई.एस के 13,127 मे.वा (22.51 %) शामिल हैं। 31.03.2014 के अनुसार जल एवं तापीय अनुपात 26 : 74 रहा है।

वर्ष 2013-14 की अवधि में कार्यारंभ किए गए विद्युत उत्पादन एककों के विवरण **अनुलग्नक - XV** में दिए गए हैं।

30.03.2014 के अनुसार दक्षिण क्षेत्र की राज्यवार उत्पादन स्थापित क्षमता (के.वि.प्रा की सूचना के अनुसार) को **अनुलग्नक - VI** में दर्शाया गया है। वर्ष 2009-10 से 2013-14 तक की अवधि में दक्षिण क्षेत्र की स्थापित क्षमता से संबंधित विवरण **संलग्नक - VII** में दिए गए हैं। वर्ष 2009-10 से 2013-14 के दौरान दक्षिण क्षेत्रीय प्रणाली की स्थापित क्षमता में हुई वृद्धि को **प्रदर्श - II** में दर्शाया गया है।

2.3 अधिकतम मांग :

वर्ष 2013-14 के दौरान रिकार्ड की गई अधिकतम माँग (मार्च 2014 में) 36,985 मे.वा रही, जो पिछले वर्ष की माँग 32,428 मे.वा की तुलना में 4557 मे.वा की वृद्धि नज़र आती है। वर्ष 2013-14 के दौरान प्रत्येक संघटक की, रजिस्टर की गई प्रणाली की अधिकतम माँग, अनिर्बंधित माँग और रजिस्टर की गई निम्नतम माँग आदि निम्नांकित हैं :

राज्य	रजिस्टर की गई अधिकतम माँग	निर्बंधित अधिकतम माँग	रजिस्टर की गई निम्नतम माँग
आंध्रप्रदेश	13621 (23.03.2014)	14529 (अप्रैल-13)	5945 (09.10.2013)
कर्नाटक	9467 (13.02.2014)	10184 (फरवरी-14)	3856 (01.06.13 & 09.09.13)
केरल	3588 (18.03.2014)	3686 (मार्च-14)	1259 (16.06.2013)
तमिल नाडु	12764 (29.01.2014)	13817 (मार्च-14)	6612 (03.11.2013)
पुदुचेरी	333 (21.03.2014)	351 (अगस्त-13)	130 (12.09.2013)
दक्षिण क्षेत्र	36985 (24.03.2014)	39885 (अप्रैल-13)	21431 (04.11.2013)

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र के संघटक राज्यों के रजिस्टर की गई मासिक अधिकतम माँग, अनिर्बंधित माँग एवं क्षेत्र के समांतर अधिकतम माँग के साथ-साथ मासिक सकल अधिकतम माँग (सकल व एक्स-बस), आदि से संबंधित विवरण **संलग्नक-II** में दिए गए हैं। साथ में दक्षिण क्षेत्र के संघटक राज्यों के रजिस्टर की गई निम्नतम माँग तथा कमी आदि के विवरण भी **संलग्नक - II** में दिए गए हैं। वर्ष

2009-10 से 2013-2014 तक की अवधि में दक्षिण क्षेत्र के प्रणाली के राज्यों के पीक लोड एवं दक्षिण क्षेत्र के पीक लोड को प्रदर्श-III में दर्शाया गया है।

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र की महीनावार विविधताकारक 1.032 से 1.093 के बीच रहा, जिसे अनुलग्नक-II दर्शाया गया है।

दक्षिण क्षेत्र के वार्षिक लोड डयूरेशन कर्व को प्रदर्श - IV में दर्शाया गया है। राज्य एवं क्षेत्र के कार्य दिवस (क्षेत्रीय पीक लोड दिवस) के टिपिकल लोड कर्व और क्षेत्रीय निम्नतम माँग दिवस को क्रम श : प्रदर्श-V और प्रदर्श-VI में दर्शाए गए हैं।

2.4 ऊर्जा उत्पादन और उपभोग :

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र के विद्युत केंद्रों में उत्पादन आंकड़े, संलग्नक-VI में दिए गए हैं। साथ में वर्ष 2013-14 की अवधि में, दक्षिण क्षेत्र के विद्युत केंद्रों के निष्पादन आंकड़े भी संलग्नक-VIII में दिए गए हैं। वर्ष 2013-14 के दौरान क्षेत्र के जल, तापीय+गैस+डीज़ल, नाभिकीय, राज्य विंड मिल तथा आई.पी.पी.यों में ऊर्जा उत्पादन की मात्राक्रमश : 32,973 मि.यू (12.77 %), 1,54,194 मि.यू (59.69 %), 9,760 मि.यू (3.78 %), 45 मि.यू (0.02 %) और 61,337 मि.यू (23.74 %) है। वर्ष 2012-13 एवं 2013-14 में विद्युत उत्पादन के विक्षेपित आंकड़े नीचे प्रस्तुत किए गए हैं :-

प्रकार	2012-13 (मि.यू)	2013-14 (मि.यू)	% वृद्धि (+) % कमी (-)
जल	21,188	32,973	+55.62 %
तापीय + गैस + डीज़ल	1,47,402	1,54,194	+ 07.08 %
नाभिकीय	8,181	9,760	+ 01.19 %
विंड मिल + सोलार (राज्य)	44	45	+ 19.29 %
आई.पी.पी	60,617	61,337	+ 02.43 %
कुल	2,37,432	2,58,310	+ 08.79 %

पिछले वर्ष की तुलना में वर्ष 2013 -14 के दौरान क्षेत्र के विद्युत उत्पादन में 0.89 % की वृद्धि पायी गई है। वर्ष 2013-14 में राज्यवार उत्पादन एवं उपभोग के आंकड़े संलग्नक-X में दिए गए हैं। राज्य प्रणालियों एवं क्षेत्रीय ग्रिड के उत्पादन में हुई वृद्धि को प्रदर्श - VII, VIII व IX में दर्शाया गया है।

31 मार्च 2014 के अनुसार दक्षिण क्षेत्र के संघटकों द्वारा सर्वाधिक ऊजा उपभोग इस प्रकार है :

आंध्र प्रदेश	:	293.84 मि.यू	22.03.2014 को
कर्नाटक	:	208.66 मि.यू	26.03.2014 को

केरल	:	68.66 मि.यू	31.03.2014 को
तमिल नाडु	:	281.20 मि.यू	26.03.2014 को
दक्षिण क्षेत्र	:	856.67 मि.यू	26.03.2014 को

2.5 प्रणाली की फ्रीक्वेन्सी :

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र की मासिक औसतन फ्रीक्वेन्सी 49.84 HZ और 50.03 HZ के बीच रही, जबकि, वर्ष 2012-13 में यह 49.68 HZ और 49.94 HZ के बीच रही। संपूर्ण वर्ष में कुल 83.67 % समय में आई.ई.जी.सी. रेंज की सीमा (16.02.2014 तक 49.7 HZ से 50.2 HZ एवं 17.02.2014 से 49.90 HZ से 50.05 HZ) के अंदर रही और ग्रिड का प्रचालन किया गया जो, पिछले साल 2012-13 में 91.07 % की तुलना में कम है। संपूर्ण अवधि में प्रवृत्त विभिन्न फ्रीक्वेन्सी रेंज एवं उनकी समयावधि की प्रतिशत ताइसप्रकार है :

प्रणाली की फ्रीक्वेन्सी	2011-12	2012-13	2013-14
49.0 HZ से कम	00.09	00.01	00.00
49.0 HZ और 49.2 HZ के बीच में	00.24	00.03	00.01
49.2 HZ और 49.5 HZ के बीच में	05.26	02.78	00.09
49.5 HZ और 49.7 HZ के बीच में	82.53	26.10	03.29
49.7 HZ और 49.9 HZ के बीच में		57.68	50.94
49.9 HZ और 50.0 HZ के बीच में			
50.0 HZ और 50.05 HZ के बीच में	10.36	11.43	37.94
50.05 HZ और 50.2 HZ के बीच में			
50.2 HZ से अधिक	01.52	01.97	07.73
आई.ई.जी.सी. रेंज 49.90 HZ से 50.05 HZ तक (नई रेंज 17.02.2014 से) *	92.89	91.07	83.67
फ्रीक्वेन्सी की औसत (Hz)	49.76	49.80	49.98

*

17.02. 2014 से पहले आई.ई.जी.सी. फ्रीक्वेन्सी रेंज 49.7 HZ से 50.2 HZ थी।

* 17.09.2014 से पहले आ.ई.जी.सी. फ्रीक्वेन्सी रेंज 49.5 HZ से 50.2 HZ थी।

* 2011-12 के दौरान आई.ई.जी.सी. फ्रीक्वेन्सी रेंज 49.5 HZ से 50.3 HZ थी।

2013-14 के महीनावार फ्रीक्वेन्सी स्तर से संबंधित विवरण संलग्नक – X में दिए गए हैं।

2.6 वोल्टता प्रोफाईल :

बृहद उप केंद्रों की वोल्टता स्तर को अनुलग्नक – XXII में दिया गया है, जो अधिकांश समय संतोषजनक रहा है। कुछ उप केंद्रों में गणनीय अवधि में वोल्टता अधिक रही। वर्ष 2013-

14 के दौरान संघटकों द्वारा स्थापित किए गए कैपसाटिरों के विवरण अनुलग्नक - XXI में दिए गए हैं। जबकि, कुछ 400 कि.वो. नोड में कम वोल्टता भी पाई गई।

2.7 प्लांट लोड फैक्टर :

वर्ष 2013-14 एवं उसके पिछले वर्ष 2010-11, 2011-12 एवं 2012-13 से संबंधित संपूर्ण दक्षिण क्षेत्र एवं संघटक राज्यों के तापीय विद्युत केंद्रों के औसतन प्लांट लोड फैक्टर को नीचे दर्शाया गया है। विवरण अनुलग्नक - VIII में प्रस्तुत किए गए हैं। विद्युत केंद्रों के आउटपुट के

तापीय विद्युत केंद्रों का प्लांट लोड फैक्टर की औसत				
संघटक प्रणाली	2010-11	2011-12	2012-13	2013-14
आंध्र प्रदेश	80.57	83.46	84.16	78.00
कर्नाटक	64.00	73.20	61.71	69.43
केरल	16.09	14.12	25.25	10.75
तमिल नाडु	73.36	77.90	77.94	66.87
रामगुंडम एस.टी.पी.एस	90.27	93.07	91.26	86.70
तालचेर स्टेज - II	86.14	85.00	81.77	82.63
एन.एल.सी. स्टेज - II	83.40	85.87	87.27	86.81
एन.एल.सी. टी.एस - I विस्तार	81.42	82.47	90.23	89.48
सिंहाद्री स्टेज - II	---	89.79	75.38	81.35
आर.जी.सी.पी	60.41	22.37	49.16	30.74
वल्लूर (एन.टी.ई.सी.एल)	---	---	48.78	54.36

विवरण को अनुलग्नक - IX में दिए गए हैं।

2.8 प्रणालियों का लोड फैक्टर :

संघटक प्रणाली	2009-10	2010-11	2011-12	2012-13	2013-14
आंध्र प्रदेश	78	74	81	80	77

कर्नाटक	70	68	72	74	72
केरल	65	65	66	71	67
तमिल नाडु	83	82	83	78	80
पुदुचेरी	77	77	76	82	80
दक्षिण क्षेत्र	81	80	84	86	82

वर्ष 2013-14 और उसके पिछले वर्ष 2010-11, 2011-12 व 2012-13 के दौरान, दक्षिण क्षेत्र एवं संघटक प्रणालियों की वार्षिक लोड फैक्टर को नीचे दर्शाया गया है :-

संघटक प्रणालियों के लोड फैक्टर को **अनुलग्नक – IV** में दिया गया है ।

2.9 ग्रिड का परस्पर प्रचालन :

वर्ष के दौरान दक्षिण क्षेत्र के संघटक राज्य आंध्र प्रदेश, कर्नाटक, केरल, तमिल नाडु और पुदुचेरी के विद्युत प्रणालियों का समांतर प्रचालन किया गया । वर्ष 2013-14 के दौरान अंतर-राज्य एवं अंतर-क्षेत्रीय लाईन और प्रमुख लाईनों की खुली अवधि के विवरण **अनुलग्नक – XI** दिए गए हैं । 765 कि.वो रायचूर-सोलापुर लाईन के साथ दिनांक 31.12.2013 को दक्षिण क्षेत्र को एन.ई.डबल्यू ग्रिड के साथ समकालिक किया गया ।

2.10 पड़ोसी राज्यों / क्षेत्रों के साथ प्रचालन :

दक्षिण क्षेत्र ने अन्य क्षेत्र के यू आई पावर, द्विपक्षीय विनिमय और पू.क्षे और उ.क्षे के अंतर राज्य केंद्रों से शेयर की प्राप्ति के साथ विद्युत विनिमय किया । अन्य सभी क्षेत्रों के साथ दक्षिण क्षेत्र द्वारा विद्युत विनिमय, बैक-टु बैक एच.वी.डी.सी. केंद्र चंद्रापुर (मार्ग : रामगुंडम-चंद्रापुर लाईन), गजुवाका (मार्ग : जयपुर-गजुवाका लाईन) तथा तालचेर इंटर कनेक्टिंग पाईट द्वारा किया गया । केवल दक्षिण क्षेत्र के लिए समर्पित पूर्वी क्षेत्र में स्थित तालचेर स्टेज - II के लिए तालचेर-कोलार एच.वी.डी.सी.लिंक ही निष्क्रमण माध्यम है ।

2.11 ऊर्जा विनिमय :

दक्षिण क्षेत्र के अंतर राज्य उत्पादन केंद्रों एवं पूर्वी क्षेत्र के एन.टी.पी.सी. केंद्रों से, पात्रता, शेड्यूल, साथ में द्विपक्षीय विनिमय, ग्रिड से वास्तविक ड्रावल, विद्युत नष्ट आदि से संबंधित संघटकवार विवरण नीचे दिए गए हैं :

राज्य	ग्रिड से पात्रता मि.यू में	ग्रिड से शेड्यूल मि.यू में	ग्रिड से निवल शेड्यूल मि.यू में	वास्तविक मि.यू में
आंध्र प्रदेश	19,334	18,708	30,818	31,260
कर्नाटक	13,152	12,547	8,022	7,634
केरल	9,350	9,235	10,879	11,374
तमिल नाडु	21,440	21,324	28,198	27,831
पुदेचेरी	2,552	2,466	2,465	2,321

टिप्पणी : पात्रता, शेड्यूल एवं वास्तविक आंकड़े उत्पादन के स्थान से लिए गए हैं। इस विषय से संबंधित महीना वार विवरण अनुलग्नक – XII में दिए गए हैं।

वर्ष 2013-14 के दौरान किए गए अंतर-क्षेत्रीय वास्तविक विद्युत विनिमय के आंकड़े इस प्रकार हैं:

जिस क्षेत्र से	जिस क्षेत्र के लिए	मि यू
पू क्षेत्र	द क्षेत्र	6623.39
द क्षेत्र	पू क्षेत्र	64.82
प क्षेत्र	द क्षेत्र	7852.79
द क्षेत्र	प क्षेत्र	0.11

महीनेवार विवरण अनुलग्नक–XII में दिए गए हैं। अंतर राज्य उत्पादन केंद्रों के लाभार्थियों की एक्स-बस अनुसूची के साथ-साथ, अंतर / अंतः क्षेत्रीय अनुसूचित द्विपक्षीय विनिमय को अनुलग्नक – XII में दर्शाया गया है।

31 मार्च 2014 के अनुसार, दक्षिण क्षेत्र में स्थित अंतर राज्य उत्पादन केंद्रों से, दक्षिण क्षेत्र के लाभार्थियों के हिस्सा के आबंटन संबंधित विवरण अनुलग्नक –XIII में दिए गए हैं।

2.12 जलाशयों का स्तर :

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र के बृहद जलाशयों में रिकार्ड किए गए महीनावार स्तर, सक्रिय भंडारण एवं आर्तस्त ऊर्जा आदि से संबंधित प्रमुख विशेषताएँ अनुलग्नक -XIV एवं प्रदर्श -X में दी गई हैं।

2.13 उत्पादन योजनाओं की प्रगति :

दिनांक 31.03.2014 के अनुसार निर्माणाधीन उत्पादन योजनाओं की प्रगति से संबंधित विवरण अनुलग्नक -XVI में दिए गए हैं।

2.14 निर्माणाधीन उत्पादन केंद्र, पारेषण लाईन एवं उपकेंद्रों की प्रगति के विवरण :

वर्ष 2013-14 के दौरान कार्यारंभ किए गए 765 कि.वो 400 कि.वो और 220 कि.वो पारेषण लाईनों के विवरण अनुलग्नक – XIX में दिए गए हैं।

वर्ष 2013-14 के दौरान कार्यारंभ किए गए 220/230 कि.वो या उससे अधिक क्षमता वाले पारेषण लाईनों के विवरण अनुलग्नक – XX में दिए गए हैं।

वर्ष 2013-14 के दौरान कार्यारंभ किए गए 765 कि.वो 400 कि.वो और 220 कि.वो उपकेंद्रों के विवरण अनुलग्नक – XVII में दिए गए हैं।

वर्ष 2013-14 के दौरान निर्माणाधीन 765 कि.वो 400 कि.वो और 220 कि.वो उपकेंद्रों के निर्माण की प्रगति के विवरण अनुलग्नक – XVIII में दिए गए हैं।

अध्याय - III

ग्रिड संरक्षण

3.1 ग्रिड व्यवधान एवं ग्रिड संरक्षण से संबंधित गतिविधियाँ :

ग्रिड संबंधित घटनाएँ एवं ग्रिड व्यवधानों का वर्गीकरण :

केंद्रीय विद्युत प्राधिकरण ने ग्रिड की घटनाओं के लिए जी.आई-1 और जी.आई-2 और ग्रिड व्यवधान की तीव्रता के आधार पर बढ़ते हुए क्रम में गिव्य1 से गिव्य 5 तक वर्गीकरण करके ग्रिडमानक जारी किया है।

ग्रिड संबंधित घटनाओं का वर्गीकरण :

वर्ग जी.आई-1 : ग्रिड के एक अथवा अधिक पावर सिस्टम एलिमेंट जैसे, जनरेटर, पारेषण लाईन, ट्रांसफार्मर, शंट रियाक्टर, सीरीस कैपासिटर और सटैटिक वी.ए.आर कांपनसेटर का ट्रिप होना, जिसके लिए उप-केंद्र में आपूर्ति में नष्ट के बिना अथवा ग्रिड के नष्ट का एकीकरण 220 केवी पर भार उत्पादन को रिशेड्यूलिंग की आवश्यकता हो।

वर्ग जी.आई-2 : ग्रिड के एक अथवा अधिक पावर सिस्टम एलिमेंट जैसे, जनरेटर, पारेषण लाईन, ट्रांसफार्मर, शंट रियाक्टर, सीरीस कैपासिटर और सटैटिक वी.ए.आर कांपनसेटर का ट्रिप होना, जिसके लिए उप-केंद्र में आपूर्ति में नष्ट के बिना अथवा ग्रिड के नष्ट का एकीकरण 400 केवी या उससे अधिक भार उत्पादन को रिशेड्यूलिंग की आवश्यकता हो।

ग्रिड व्यवधानों का वर्गीकरण :

वर्ग जी डी - 1 : पूर्वपद उत्पादन अथवा क्षेत्रीय ग्रिड के भार में दस प्रतिशत से कम क्षति पहुँचने पर।

वर्ग जी डी - 2 : पूर्वपद उत्पादन अथवा क्षेत्रीय ग्रिड के भार में बीस प्रतिशत से कम क्षति पहुँचने पर।

वर्ग जी डी - 3 : पूर्वपद उत्पादन अथवा क्षेत्रीय ग्रिड के भार में बीस से तीस प्रतिशत तक क्षति पहुँचने पर ।

वर्ग जी डी - 4 : पूर्वपद उत्पादन अथवा क्षेत्रीय ग्रिड के भार में तीस से चालीस प्रतिशत तक क्षति पहुँचने पर ।

वर्ग जी डी - 5 : पूर्वपद उत्पादन अथवा क्षेत्रीय ग्रिड के भार में चालीस या उससे अधिक प्रतिशत तक क्षति पहुँचने पर ।

दक्षिण क्षेत्र में घटित ग्रिड की घटनाएँ एवं व्यवधानों के विवरण क्रमशः **अनुलग्नक XXV-GD1 एवं अनुलग्नक XXV - GI 1&2** में दिए गए हैं ।

3.2 संरक्षण समन्वयन उपसमिति के कार्य :

दक्षिण क्षेत्रीय विद्युत समिति की संरक्षण उप समिति द्वारा, दक्षिण क्षेत्र ग्रिड में घटित ग्रिड व्यवधान, प्रणाली की कुछ घटनाएँ और अन्य ट्रिपिंग आदि का विश्लेषण किया गया और उनके पुनः घटित होने से बचने हेतु, परिहारोपाय सूचित किया ।

संरक्षण उप समिति के कार्य संक्षिप्त रूप में इस प्रकार हैं :

- अ) ग्रिड व्यवधान, प्रणाली की घटनाएँ, अन्य ट्रिपिंग आदि का विश्लेषण करना और उनके पुनर्गठित होने से बचने हेतु परिहारोपाय सुझाना ।
- आ) ग्रिड की सुरक्षा के रखरखाव के लिए क्षेत्रीय प्रणालियों में संरक्षणात्मक रिले सेटिंग में समन्वयन करना ।
- इ) ग्रिड में अपनाई गई कम फ्रीक्वेंसी लोड शेडिंग योजना, डीएफ/डीटी लोड शेडिंग योजनाओं व अन्य संरक्षण योजनाओं का आवधिक समीक्षा करना ।
- ई) उपरोक्त मामलों के संबंध में ग्रिड व्यवधान की जाँच समिति द्वारा किए गए सिफारिशों के कार्यान्वयन की समीक्षा करना ।
- उ) ग्रिड की सुरक्षा को सुनिश्चित करने हेतु आयात / उत्पादन में होने वाली नुकसान को कम करने के लिए विशेष संरक्षण योजनाओं से संबंधित सुझाव देना, उस पर चर्चा करना एवं उन्हें कार्यान्वित करना ।

3.3 संरक्षण समन्वयन उपसमिति में विचार किए गए मामलें :

दक्षिण क्षेत्रीय विद्युत समिति की संरक्षण उप-समिति की बैठकों में संघटक प्रणालियों में घटित हादसा अथवा माईनर ट्रिपिंग पर विस्तृत विचार-विमर्श किया गया। दोहराने से बचने हेतु संरक्षण समिति के सलाहों संघटकों द्वारा कार्यान्वयन के लिए स्वीकार किया गया।

वर्ष 2013-14 के दौरान द.क्षे.वि.स के संरक्षण उप-समिति में संघटकों द्वारा निम्नलिखित मामले पर विचार विमर्श / कार्यान्वयन किया गया :

- अ) प्रणाली की खराबी / व्यवधान के दौरान उनको सुधारने हेतु, संघटक प्रणालियों में प्रदत्तसादा अंडर फ्रीक्वेन्सी रिले के सेटिंग से प्राप्त किए गए भार राहत एवं समिति द्वारा सिफारिश किए गए आवश्यक परिहारोपायों को संघटकों द्वारा कार्यान्वयन की समीक्षा की गई।
- आ) दिनांक 16 जुलाई 2014 को नई दिल्ली में संपन्न राष्ट्रीय विद्युत समिति की बैठक में यह सहमति दी गई कि, स्वयंचालित अंडर फ्रीक्वेन्सी लोड शेडिंग योजना के लिए 49.2 Hz से लेकर चार स्तर होंगे। इसके प्रचालन के विभिन्न स्तर 49.2 Hz, 49Hz, 48.8 Hz और 48.6Hz है। दक्षिण क्षेत्र में लागू किए गए संशोधित यू एफ आर सेटिंग को पांचवे अध्याय में दिया गया है।
- इ) संघटक प्रणालियों के डीएफ/डीटी रिले के प्रचालन की आवधिक समीक्षा की गई। इस योजना के प्रभावी कार्यान्वयन के लिए उस के प्रचालन एवं प्राप्ताराहत की मात्रा की आवधिक मानिट्रिंग की गई।
- ई) संरक्षण उपसमिति ने ब्लैक स्टार्ट रिस्टोरेशन के लिए एक समकालिक सुविधा की व्यवस्था की शिफारीस की और के.पी.टी.सी.एल ने उसको लागू किया है।
- उ) विद्युत मंत्रालय / के.वि.प्रा. के निदेशानुसार, संघटकों द्वारा उनके 220 कि.वो एवं उससे अधिक क्षमता के उपकेंद्रों के बैटरियों की दुरुस्ती की रिपोर्ट दी गई और समिति की बैठक में इस पर चर्चा की गई।
- ऊ) विद्युत मंत्रालय / के.वि.प्रा के निदेशानुसार दक्षिण क्षेत्र में सभी 220 कि.वो एवं उससे अधिक क्षमता के उपकेंद्रों के संरक्षण प्रणालियों के नवीकरण एवं उन्नयन से संबंधित विस्तृत परियोजना रिपोर्ट तैयार की गई और उसे के.वि.प्रा/ विद्युत मंत्रालय को प्रस्तुत किया गया। विस्तृत परियोजना रिपोर्ट में निम्नलिखित विषयों को जोड़ा गया :

- संरक्षण समपरीक्षा के दौरान पाई गई कमियों के विवरण ।
- रिले और रिले पैनल जैसे संरक्षण उपकरण, सीटी, सीवीटी/पीटी जैसे एक्सिलरी सप्लाय मापन उपकरण और सर्क्युट ब्रेकरस, आइसोलेटर आदि (आर व यू कार्यक्रम में के अधीन है) जैसे नियंत्रण उपकरण आदि के विवरण के साथ बनावट, रेटिंग तथा विनिर्माण का वर्ष शामिल करना है।
- अनुरक्षण के लिए पुर्जे।
- उपरोक्त से संबंधित लागत अनुमान ।
- संरक्षण समपरीक्षा के दौरान पाई गई कमियों को दूर करने के लिए समय सीमा / अनुसूची ।

सभी राज्य युटिलिटी / संघटकों ने विस्तृत परियोजना रिपोर्ट को प्रस्तुत किया है जिसे केविप्रा / विद्युत मंत्रालय को अग्रेषित कर दिया गया ।

- ऋ) संरक्षण उपसमिति के मंच पर, दक्षिण क्षेत्र के संघटकों से क्षेत्र के 220 किवो एवं उससे अधिक क्षमता के उपकेंद्रों के उपकरणों की विफलता का डेटा उस स्थाई समिति (विभिन्न संगठनों के विशेषज्ञ युक्त)को भेजने की अपेक्षा की गई थी जिसे 220 किवो एवं उससे अधिक क्षमतायुक्त उपकेंद्रों के उपकरणों की विफलता के अन्वेषण के लिए गठित की गई थी। दक्षे के संघटकों द्वारा 220किवो एवं उससे अधिक क्षमतायुक्त उपकेंद्रों के उपकरणों की विफलता संबंधित डेटा को आवश्यक कार्रवाई के लिए, के वि प्रा को भेजी जा रही थी।
- लृ) विद्युत मंत्रालय/ केविप्रा के निदेशानुसार दक्षिण क्षेत्र में लिए गए सुधारोपायों का लागू कर दिया गया और दैनिक आधार पर केविप्रा को उसकी सूचना दी गई। .
- एँ) एनएलडीसी / एसआरएलडीसी के शिफारिस के अनुसार, संरक्षण उपसमिति के फोरम ने 765 किवो सोलापुर- रायचूर लाईन के लिए एसपीएस लागू करने की सहमति दी और दक्षिण क्षेत्र में (कूडंकुलम एसपीएस के लिए हाल ही में पहचाने गए लोड ट्रिगर हो सकता है) लोड शेडिंग के लिए 800 मे वा भार में टयून करने के लिए दक्षिण क्षेत्र के संघटकों द्वारा पहचाना गया। इन्हे दक्षे में लागू किया गया।

- ऐ) दक्षिण क्षेत्र में खराबी की स्थिति में पारेषण उपकरणों के अव्यवस्थित ट्रिपिंग से बचने हेतु, पारेषण लाईनों के संरक्षण के लिए रिले सेटिंग में एक एकरूप तत्व को अपनाने के विषय पर भी चर्चा की गई।

3.4 संरक्षण के संबंध में सी ई आर सी द्वारा जारी किए गए आदेश:

- अ) याचिका संख्या: 263/एम.पी/ 2012 पर सी.ई.आर.सी द्वारा दिनांक 19.12.2013 को जारी किए गए आदेश :

आदेश:

सभी द क्षे संघटकों को निदेश दिया जाता है कि, समय समय पर दक्षेविस द्वारा निर्धारित राहत को सुनिश्चित करने हेतु अतिरिक्त फीडर को पहचानें और यूएफआर डीएफआर/डीटी रिले लगाए। माननीय सीईआरसी ने सभी संघटकों को निदेश दिया है कि, अध्याय-5 में दिए गए अनुसार एयूएफआर द्वारा राहत की मात्रा को लागू किए जाने पर, दक्षेविस एवं दक्षेभाप्रेके द्वारा अनुपालन रिपोर्ट प्रस्तुत करें और इस आदेश के एक महीने के अंदर डीएफ/डीडी रिले के सही ढंग से कार्यरत होने की रिपोर्ट प्रस्तुत करें।

कार्यवाही :

उपरोक्त आदेशक को समय पर लागू करने के विषय पर संरक्षण उपसमिति की बैठकों में प्रकाश डाला गया और आवधिक तौर पर स्थिति की चर्चा की गई। दिनांक 19.12.2013 के माननीय सीईआरसी में बताए गए अनुसार संघटकों को कार्यान्वयन की प्रगति को, द.क्षे.वि.स और द.क्षे.भा.प्रे.के को प्रस्तुत करने की अपेक्षा की गई।

- आ) आई.ए 36/2013 के साथ याचिका संख्या: 146/एम.पी/ 2013 पर सी.ई.आर.सी. द्वारा दिनांक 20.02.2014 को जारी किए गए आदेश :

आदेश :

- (i) माननीय सी ई आर सी ने प्रतिवादियों को, संरक्षण समपरीक्षा के फेस-I व फेस-II में किए गए शिफारिसों को क्रमशः 01.05.2014 और 01.09.2014 तक लागू करने का निदेश दिया है।

- (ii). माननीय आयोग ने दक्षेविस को निदेश दिया कि, फेस-। सेटिंग के क्रियाकलापों के कार्यान्वयन से संबंधित रिपोर्ट को दिनांक 01.06.2014 प्रस्तुत करें।
- (iii). माननीय अयोग ने दक्षेविस को यह भी निदेश दिया कि, फेस-।। में बताए गए कार्य के संबंध में भी आयोग को द्विमासिक रिपोर्ट प्रस्तुत करें।

कार्यवाही :

- (i) उपरोक्त आदेशक को समय पर लागू करने के विषय पर संरक्षण उपसमिति की बैठकों में प्रकाश डाला गया और आवधिक तौर पर स्थिति की चर्चा की गई। दिनांक 20 फरवरी 2014 के माननीय सी.ई.आर.सी. में बताए गए अनुसार संघटकों को कार्यान्वयन की प्रगति को, द.क्षे.वि.स. और द.क्षे.भा.प्रे.कें को प्रस्तुत करने की अपेक्षा की गई।
- (ii). बैठक में एफ.आई.आर / ट्रिप अनालिसिस रिपोर्ट, ई.एल, डी.आर आदि के काम नहीं करने के संबंध में प्रकाश डाला गया। दक्षेविस/दक्षेभाप्रेकें द्वारा इस मामले को आई ई जी सी के अनुच्छेद 1.5 के अधीन लिया गया। संरक्षण उपसमिति के फोरम ने संघटकों से अपेक्षा की कि, आई.ई.जी.सी / के.वि.प्रा के विनियमों में विनिर्दिष्ट अनिवार्यता के अनुसार ट्रिपिंग के 24 घंटों के अंदर द.क्षे.भा.प्रे.केंद्र के वेब अप्लिकेशन में संपूर्ण रिपोर्ट को अध्यतन।

इ) याचिका संख्या: 167/स्वयं-प्रेरित/ 2012 पर सी.ई.आर.सी द्वारा दिनांक 22.02.2014 को जारी किए गए आदेश :

आदेश :

- (i) माननीय सीईआरसी ने सभी क्षेत्रीय विद्युत समितियों को यह सुनिश्चित करने का निदेश दिया कि, सभी उपयोगकर्ता द्वारा अनुमोदित संरक्षण तत्व को अपनाया गया हो।
- (ii) माननीय सीईआरसी ने सभी आईएसटीएस लाईसेंस प्राप्तकर्ताओं को निदेश दिया कि, पोसोको एवं क्षे वि समितियों के साथ डिस्टेन्स प्रोटेक्शन रिले सेटिंग को अध्यतन बनाने के विवरण को प्रस्तुत किया जाए।

- (iii) माननीय आयोग ने सभी राज्य भार प्रेषण केंद्रों को निदेश दिया कि, इस आदेश जारी करने के तीन मास के अंदर अपने नियंत्रण कमरों में साउंड रिकार्डिंग सिस्टम को लगाया / सक्रिय किया जाए।

कार्यवाही :

उपरोक्त आदेश को समय पर लागू करने के विषय पर संरक्षण उपसमिति की बैठकों में प्रकाश डाला गया और आवधिक तौर पर स्थिति की चर्चा की गई। दिनांक 22.02.2014 के माननीय सी.ई.आर.सी में बताए गए अनुसार संघटकों को कार्यान्वयन की प्रगति को, द.क्षे.वि.स और द.क्षे.भा.प्रे.के को प्रस्तुत करने की अपेक्षा की गई।

3.5 दक्षिण क्षेत्र में आईलैंडिंग योजनाएँ :

- अ) संरक्षण समनवयन उपसमिति ने दक्षिण क्षेत्र के लिए दो आईलैंडिंग योजना का प्रस्ताव रखा है। प्रथम स्टेज पर 48.3 Hz दक्षिण ग्रिड दो ग्रिडों में विभाजित किया जाएगा। वे हैं सुधारित एस1 और सुधारित एस2। दूसरे स्तर में 47.9 Hz पर चार आईलैंड कार्यरत होंगे। सुधारित एस 1 प्रणाली में, संपूर्ण आंध्र प्रदेश (जिसमें तेलंगाणा भी शामिल है), कर्नाटक, चेन्नै, होसूर (त.ना), और उत्तर केरल शामिल है। सुधारित एस 2 प्रणाली में, तमिल नाडु शेष भाग और केरल के शेष भाग शामिल है। कोई डिस्कनेक्शन नहीं हुआ अर्थात् सकल भार अखंडित रहा।
- आ) संरक्षण समिति ने निम्नलिखित आईलैंडिंग योजना के कार्यान्वयन के लिए सहमति दी और उसे के.वि.प्रा / टास्क फोर्स को सूचित किया गया :
- ✓ सुधारित एस 1-एस-2 आईलैंडिंग योजना।
 - ✓ रामगुंडम- हैदराबाद आईलैंडिंग योजना।
 - ✓ चेन्नै आईलैंडिंग योजना- वेल्लूर एन.टी.ई.सी.एल, एन.सी.टी.पी.एस, जी.एम.आर, एम.ए.पी.एस आईलैंडिंग योजना।
 - ✓ कूडकुलम, तूत्तुकुडी, शबरिगिरि, तिरुवनंतपुरम आईलैंडिंग योजना।
 - ✓ कुंडा, कोयमबतूर, ईरोड, नैवेली, मेट्टूर आईलैंडिंग योजना।
- इ) सभी 220 के.वी एवं अधिक क्षमता के लाईनों के लिए समिति ने सिंगल फेस ऑटो “रीक्लोसिंग योजना” की समीक्षा की एवं शिफारिस की।

ई) दक्षिण क्षेत्र में 10 पी.ए.मयू की स्थापना की गई जिनमें, 6 पी.ए.मयू, एस.आर.एल.डी.सी पाईलट परियोजना के अधीन और 4 पी.ए.मयू एन.आर.एल.डी.सी पाईलट परियोजना के अधीन थे। एस.आर.एल.डी.सी परियोजना के अधीनस्त पी.ए.मयू को निम्नलिखित स्थानों पर स्थापित किया गया :

- 1) रामगुंडम उत्पादन केंद्र 400 के.वी बस (एन.टी.पी.सी)
- 2) विजयवाड़ा उप-केंद्र 400 के.वी बस (पावर ग्रिड)
- 3) श्रीपेरंबुदूर (चेन्नै) उप-केंद्र 400 के.वी बस (पावरग्रिड)
- 4) सोमनहल्ली (बेंगलूर) उप-केंद्र 400 के.वी बस (पावर ग्रिड)
- 5) त्रिशूर उप-केंद्र 400 के.वी बस (पावर ग्रिड)
- 6) नरेंद्र उप केंद्र 400 के.वी बस (के.पी.टी.सी.एल के “वीसैट” के माध्यम से)
(पावर ग्रिड)

एन.आर.एल.डी.सी. पाईलट परियोजना के अधीन निम्नलिखित स्थानों पर पी.ए.मयू की स्थापना की गई।

- अ) कोलार उप-केंद्र 400 के.वी बस (पावर ग्रिड)
- आ) गूटी उप-केंद्र 400 के.वी बस (पावर ग्रिड)
- इ) गाजुवाका उप-केंद्र 400 के.वी दक्षिण बस (पावर ग्रिड)
- ई) तिरुनेलवेली उप-केंद्र 400 के.वी बस (पावर ग्रिड)

3.6 दक्षिण क्षेत्र में 220 कि.वो एवं उससे अधिक क्षमता युक्त उपकेंद्रों संरक्षण समपरीक्षा :

- ❖ 30 व 31 जुलाई 2012 को घटित नये ग्रिड व्यवधान के रिपोर्ट में की गई शिफारिसों के आधार पर, दक्षिण क्षेत्र में यूएफ और डीएफ / डीटी रिले की संरक्षण समपरीक्षा की। पाये गए विचार एवं की गई शिफारिसों के अनुसार दक्षिण क्षेत्र के 220 के.वी और अधिक स्तर के क्रिटिकल सब्सटैसंस की संरक्षण समपरीक्षा की गई।
- ❖ जुलाई 2013 मास के दौरान निम्नलिखित उपकेंद्रों की संरक्षण समपरीक्षा की गई :
 - एच.वी.डी.सी कोलार उपकेंद्र
 - एच.वी.डी.सी गजुवाका बैक टु बैक उपकेंद्र
 - 400 कि.वो मुनिराबाद उपकेंद्र

- 400 कि.वो कोच्ची उपकेंद्र
 - 400 कि.वो डिचीपल्ली उपकेंद्र
- ❖ समपरीक्षा की टिप्पणियाँ एवं अभ्युक्तियों को संबंधित संघटकों को अनुपालन करने हेतु भेजा गया।

3.7 दक्षिण क्षेत्र में नई विशेष संरक्षण योजना (एसपीएस) :

संरक्षण उपसमिति द्वारा दक्षिण क्षेत्र में लागू करने हेतु निम्नलिखित एसपीएस की सुझाव दी गई:

- (1). जिंदल एस.पी.एस : संरक्षण उपसमिति द्वारा जिंदल स्टील वर्क्स (जे.एस.डब्ल्यू) आई.पी.पी, के लिए एक एस.पी.एस का सुझाव दिया गया, जिसके तहत जब लिंगापुर लाइन-1 अथवा लिंगापुर लाइन-2 की वोल्टेज 99 के.वी तक कमी अथवा फेस वोल्टेज 78 प्रतिशत तक हो जाती और करंट 1000 ए से बढ़ जाने पर, 200 माइक्रो सेकंड की देरी पर लाइन अपने आप ट्रिप होती । इसको जे.एस.डब्ल्यू ने के.पी.टी.सी.एल के सहयोग से दिनांक 17.04.2013 को लागू किया ।
- (2). यू.पी.सी.एल एस.पी.एस : प्रक्रियात्मक विलंब से बचने हेतु, जनरेटर ब्रेकर के ट्रिपिंग के लिए टर्बाइन संरक्षण पैनल के वर्तमान माध्यम के बदले में सीधा डीसीएस (वितरित नियंत्रण प्रणाली) में सुधार लाने के सुझाव संरक्षण उपसमिति द्वारा यूपीसीएल को दिया गया। इसको यू.पी.सी.एल. ने के.पी.टी.सी.एल. के सहयोग से दिनांक 20.04.2013 को लागू किया ।
- (3). विजयवाड़ा-नेल्लूर एसपीएस : विजयवाड़ा-नेल्लूर 400 के.वी लाइन में आकस्मिकता पश्चात दबाव (एन-1) से राहत के लिए संरक्षण उपसमिति ने एक एसपीएस योजना का सुझाव दिया। यदि 400 किवो विजयवाड़ा-नेल्लूर डी/सी लाइन ट्रिप होता है और ट्रिपिंग के पहले प्रति सर्क्यूट में बहाव 550 मे.वा से अधिक हो, उत्पादन को बंद करना है अथवा जी.एम.आर वेमगिरी, गौतमी, कोनसीमा, जेगुरुपाडु-1। और लैन्को के एक एक आई.पी.पी उत्पादन एकक को ट्रिप करना होगा । एस.पी.एस में सकल उत्पादन बंद करने के लिए

430 मे.वा के लिए ट्यून करने की परिकल्पना की गई है। इस एस.पी.एस को पावर एवं आई.पी.पी यों द्वारा एपीट्रेन्स्को के सहायोग से लागू किया गया।

- (4). नेल्लूर-आलमट्टी / श्रीपेरंबुदूर एस.पी.एस : नेल्लूर-आलमट्टी / श्रीपेरंबुदूर लाईन में आकस्मिकता पश्चात दबाव(एन-1) से राहत के लिए संरक्षण उपसमिति ने एक एसपीएस योजना का सुझाव दिया। यदि 400 कि.वो नेल्लूर-आलमट्टी डी/सी का एक लाईन ट्रिप होता है और ट्रिपिंग के पहले प्रति सर्क्यूट में बहाव 520 मे.वा से अधिक हो, एस.ई.पी.एल और एम.ई.पी.एल के एक एक आई.पी.पी उत्पादन एकक को ट्रिप करना होगा। एस.पी.एस में सकल उत्पादन बंद करने के लिए 300 मे.वा के लिए ट्यून करने की परिकल्पना की गई है। इस एस.पी.एस को 23.05.2013 से लागू किया।
- (5). कूडंकुलम एस.पी.एस : लाईनों में दबाव से राहत देने के लिए संरक्षण उपसमिति द्वारा एक एस.पी.एस का सुझाव दिया गया। कूडंकुलम न्यूक्लियर पावर प्लांट में एक या दो यूनिटों के ट्रिप होने पर, ट्रिपिंग यूनिटों की संख्या के आधार पर सिग्नल-1 अथवा सिग्नल-2 दिखाई देता है। ट्रिप सिग्नल-1: 800 मे.वा लागू कर दिया गया है और ट्रिप सिग्नल-2 : 710 मे.वा चुन लिया गया है जिसे के.के.एन.पी, कूडंकुलम के दूसरी यूनिट के कार्यारंभ के साथ लागू करने की संभावना है।
- (6). चित्तूर-तिरुवलम एस.पी.एस : आंध्र प्रदेश नेटवर्क के अपस्ट्रीम लाईन के ओवर लोडिंग के नियंत्रण के लिए 220 के.वी चित्तूर-तिरुवलम एस/सी लाईन के ट्रिपिंग के लिए एक एस.पी.एस का सुझाव संरक्षण उपसमिति द्वारा दिया गया। इस एस.पी.एस को 27.07.2013 से लागू किया गया।
- (7). सूलूरपेट-गुम्मिडिपूंडी एस.पी.एस : आंध्र प्रदेश नेटवर्क के अपस्ट्रीम लाईन के ओवर लोडिंग के नियंत्रण के लिए सूलूरपेट-गुम्मिडिपूंडी एस/सी लाईन के ट्रिपिंग के लिए एक एस.पी.एस का सुझाव संरक्षण उपसमिति द्वारा दिया गया। इस एस.पी.एस को 27.07.2013 से लागू किया गया।

- (8). **765 के.वी सोलापुर-रायचूर लाईन एस.पी.एस :** जब विद्युत बहाव 800 मे.वा से अधिक हो अथवा इस लाईन के ट्रिप होने के कारण इस लाईन से विद्युत का आयात 800 मे.वा से अधिक हो तो, दक्षिण क्षेत्र में 500 मे.वा के भार के ट्रिपिंग के लिए ट्रिप सिग्नल-1 और पश्चिम क्षेत्र में 500 मे.वा भार ट्रिपिंग के लिए ट्रिप सिग्नल-2 का संचालन होगा। यह एस.पी.एस प्रचालन में है।

3.8 कोलार में तालचेर-कोलार एच.वी.डी.सी.इंटरट्रिप योजना :

तालचेर-कोलार एच.वी.डी.सी लिंक पूर्वी एवं दक्षिण क्षेत्र को अनुल्यकालित तौर पर जोड़ता है। लिंक की क्षमता 2000 मे.वा (संवर्धित क्षमता में 2500 मे.वा) हैं। अधिक विद्युत बहन के समय इस लिंक के एक या दोनों अंत में ट्रिप होने से, विद्युत का नष्ट होने से एवं नए ग्रिड में तुरंत पावर इंजक्ट करने से दक्षिण क्षेत्र में फ्रीक्वेन्सी अस्थिर हो जाती है और परिणाम स्वरूप लाईन ओवर लोड हो जाता है। इस समस्या से बचने हेतु कोलार में एस.पी.एस का डिज़ाइन करके लागू कर दिया गया है। आकस्मिकता की स्थिति में एस.पी.एस के प्रचालन से दक्षिण क्षेत्र में अपेक्षित मात्रा में लोड शेड हो जाता है। साथ में तालचेर में भी एस.पी.एस लागू कर दिया गया है जिससे तालचेर-कोलार एच.वी.डी.सी लिंक के ट्रिप होने पर, तालचेर स्टेज-II के उत्पादक केंद्रों में उत्पादन कम / ट्रिप हो जाता है।

दक्षिण क्षेत्रीय ग्रिड में लगाए गए इंटर ट्रिप योजना से, जब कभी तालचेर-कोलार ± 500 कि.वो एच.वी.डी.सी प्रणाली ट्रिप होने पर, सिग्नल एवं बाईपोल आउटेज के दौरान 400 किवो कोलार केंद्र से प्राप्त सिग्नल के माध्यम से संघटक प्रणालियों में संबंधित लोड शेडिंग करके आयात के नष्ट की क्षतिपूर्ति करने में सहायता मिलती है। आयात के नष्ट की मात्रा के आधार पर कोलार में सिग्नल 1, सिग्नल 2 और सिग्नल-3 का उत्पादन किया जाता है जिसे, लोड शेडिंग करके राहत देने की दृष्टि से संघटक प्रणाली के चुने गए स्थानों के लिए, वाईड बैंड नेटवर्क संचार माध्यम से पारेषित किया जाता है।

2000 मे.वा (प्रचालन के लिए विस्तारित) से अधिक क्षमता में प्रचालित किए जाने की वजह से सिग्नल 3 के लिए लाजिक / फीडर्स चुने गए हैं और उसे लागू कर दिया गया है।

तालचेर-कोलार एच.वी.डी.सी.लिंक के ट्रिपिंग के दौरान प्रत्याशित भार राहत केविवरण

क्र सं	संघटक प्रणाली	प्रत्याशित भार राहत मे.वा में			
		सिग्नल 1	सिग्नल 2	सिग्नल 3	कुल
1	आंध्र प्रदेश	150	160	124	434
2	कर्नाटक	350	100	109	559
3	केरल	NIL	215	123	338
4	तमिल नाडु	293	235	144	672
द.क्षे में कुल भार राहत		793	710	500	2003

ट्रिप सिग्नल – II :

ट्रिप सिग्नल-II के प्रचालन बंद होने से बचने हेतु एसपीएस सिग्नल-II संशोधित लाजिक निम्नप्रकार है, जिसका दिनांक 30 मई 2012 से लागू किया गया है :

स्थिति 1 : ((500 मे.वा < विद्युत नष्ट < 1000 मे.वा) व पोल ब्लॉक) अथवा
((1400 मे.वा < विद्युत बहाव < 1900 मे.वा) व पोल ब्लॉक) अथवा
(एक पोल में एस/डी (500 मे.वा < विद्युत बहाव < 1000 मे.वा))
अन्य पोल ब्लॉक = ट्रिप 1

स्थिति 2 : (650 मे.वा < विद्युत बहाव $\leq$ 1150 मे.वा) व लाईन की खराबी
वपोल ब्लॉक = ट्रिप 1

स्थिति 3 : ((विद्युत नष्ट > 1000 मे.वा) & पोल ब्लॉक) अथवा
(विद्युत बहाव > 1900 मे.वा) व पोल ब्लॉक) अथवा
(एक पोल में एस/डी (विद्युत बहाव > 1000 MW)) अन्य पोल ब्लॉक = ट्रिप 2

स्थिति 4 : (विद्युत बहाव > 1150 मे.वा) & लाईन की खराबी व पोल ब्लॉक = ट्रिप 2

जहाँ,

विद्युत नष्ट = कोलार में डीसी पावर (टी-2) सेकंड - टी-सेकंड में कोलार में डीसी पावर

टी = ब्लॉक सिग्नल उपलब्ध होने के तत्काल समय

विद्युत बहाव = (टी-2) सेकंड में कोलार डी सी पावर

ट्रिप सिग्नल– III :

जब एच.वी.डी.सी पर विद्युत बहाव 2000 मे.वा से अधिक हो और एच.वी.डी.सी तालचेर-कोलार ट्रिपिंग हो तब एच.वी.डी.सी कोलार एस.पी.एस-विस्तार ट्रिप सिग्नल-III, 500 मे.वा भार को ट्रिप कर देता है। सिग्नल को चालू कर दिया गया है और उसका दिनांक 05.06.2013 को कृत्रिम परीक्षण किया गया है।

3.9 कूडंकुलड इंटर-टुरल सुरकुषल तंत्र :

कूडंकुलड इंटर-टुरल सुरकुषल तंत्र टुरल सलग्नल-1 के लललल डुरलललन डें है। टुरल सलग्नल-2 के लललल डुरल की डलतुरल को ऑनल गलल है ऑलसे केकेएनडलडल के डूनलट-2 के करलरलंऑ के सलथ ललगू कललल ऑलएगल। रलऑलवलर डुरल रलहत नलडुनडुरलल से है: :

कूडंकुलड उतुडलदन के टुरलडलंग के दूरलन डुरलललशल डुरल रलहत के वलवरण

कुर सं	संऑटक डुरललल	डुरलललशल डुरल रलहत डे वल डें		
		सलग्नल 1	सलग्नल 2 *	कुल
1	ऑंध्र डुरदेश	177	160	337
2	कनरुलटक	193	100	293
3	केरल	132	215	347
4	तडलल नलडु	298	235	533
द.कुषे डें कुल डुरल रलहत		800	710	1510

* टुरल सलग्नल-1 के लललल डुरल की डलतुरल ऑन लललल गलल है ऑलसे ललगू करनल डलकी है।

3.10 संरकुषण सडनुवड उड-सडलतल की डैठकें :

वरुष 2013-14 के दूरलन संरकुषण सडलतल की डैठकें नलडुनलनुसलर सडनुन हुई ऑलसकी सूऑी, अनुलगुनक -XXIV डें दी गई है।

अध्याय - IV

वाणिज्यिक एवं ऊर्जा लेखाकरण गतिविधियाँ

4.1 उपलब्धता आधारितदर (ए.बी.टी) के अधीन ऊर्जा लेखाकरण :

सी.ई.आर.सी के विनियम / आदेशों एवं द.क्षे.वि.स के निर्णयों के अनुसार द.क्षे.वि.स सचिवालय द्वारा, नियमित तौर पर दक्षिण क्षेत्र की ऊर्जा लेखाकरण किया जा रहा है। ऊर्जा लेखाकरण में एस.आर.एल.डी.सी द्वारा प्रदत्त आंकड़ों के आधार पर साप्ताहिक अनिर्धारित इंटरचेंज (यू.आई), विचलन लेखा, रियाक्टीव ऊर्जा लेखा, मासिक क्षेत्रीय ऊर्जा लेखा (आर.ई.ए) और क्षेत्रीय पारेषण लेखा (आर.टी.ए) तैयार किये जाते हैं।

4.1.1 अनिर्धारित लेन-देन प्रभार लेखा / विचलन प्रभार लेखा :

समय समय पर संशोधित सी.ई.आर.सी (अनिर्धारित लेन-देन प्रभार) विनियम के अधीन लगाए जाने वाले यू.आई प्रभार जिसमें अतिरिक्त यू.आई भी शामिल है, की विवरणी रविवार मध्य रात्री को समाप्त होने वाले साप्ताहिक तौर पर तैयार की जाती है तथा उसे मंगलवार के दिन संघटकों को जारी किया जाता है।

सी.ई.आर.सी (विचलन समाधान तंत्र एवं संबंधित मामले) विनियम 2014, 17.02.2014 से लागू है। इस विनियम के आरंभ ने सी.ई.आर.सी (अनिर्धारित लेन-देन प्रभार) विनियम 2009 को बदल दिया है। तदनुसार, विचलन के लिए अतिरिक्त प्रभार सहित विचलन प्रभार की विवरणी को रविवार मध्य रात्री को समाप्त होने वाले साप्ताहिक तौर पर तैयार किया जाता है तथा उसे मंगलवार के दिन संघटकों को जारी किया जाता है।

मूल एवं संगणित आंकड़ों के साफ्ट कॉपी फाइलों को 15 मिनट के समय खंड में वेबसाइट में अपलोड किया जाता है ताकि क्षेत्रीय संघटकों द्वारा उसे डाउनलोड किया जा सके।

4.1.2 रियाक्टीव ऊर्जा प्रभार लेखा :

रविवार मध्य रात्री को समाप्त होने वाले सात दिनों की अवधि के लिए साप्ताहिक तौर पर सी.ई.आर.सी द्वारा विनिर्दिष्ट दर पर वी.ए.आर प्रभार की विवरणी तैयार की जाती है और उसे उन क्षेत्रीय संघटकों को मंगलवार के दिन जारी किया जाता है, जिन्होंने सप्ताह के दौरान कम / अधिक

वोल्टता में रियाक्टिव ऊर्जा प्राप्त / इंजक्ट किया है। संगणन के साफ्ट कॉपी को वेबसाईट में अपलोड किया जाता है ताकि क्षेत्रीय संघटकों द्वारा उसे डाउनलोड किया जा सके।

4.1.3 क्षेत्रीय ऊर्जा लेखा (आर.ई.ए) :

विभिन्न प्रभागों के बिलिंग एवं भुगतान के उद्देश्य से मासिक क्षेत्रीय ऊर्जा लेखा तैयार करके जारी किया जाता है। मास के 6 तारीख से पहले अंतिम एवं 20 तारीख से पहले अंतिम लेखा तैयार करके जारी किया जाता है। क्षेत्रीय ऊर्जा लेखा को वेबसाईट में अपलोड किया जाता है ताकि, क्षेत्रीय संघटनों द्वारा डाउनलोड किया जा सके। मासिक क्षेत्रीय लेखा में निम्नलिखित विवरण भी शामिल किए जाते हैं :

- अ) ए.बी.टी के अधीनस्थ तापीय अं.रा.उ.केंद्रों की तापीय एककों की उपलब्धता फैक्टर का संगणन।
- आ) अं.रा.उ.केंद्रों के लाभार्थी संघटकों के आबंटित क्षमता के हिस्से का प्रतिशत।
- इ) ए.बी.टी के अधीनस्थ अं.रा.उ.केंद्रों की लाभार्थी संघटकों के आबंटित क्षमता शेयर की भारत प्रतिशत।
- ई) द.क्षे के अं.रा.उ.के एवं अन्य क्षेत्रों के अं.रा.उ. केंद्रों से लाभार्थियों के लिए निर्धारित ऊर्जा।
- उ) अल्प आवधिक ओपन अक्सेस पर अंतः / अंतर क्षेत्रीय विनियम के विवरण।
- ऊ) राज्य के स्वामित्व के पारेषण लाईनों के लिए वीलिंग प्रभाग के विवरण।

द.क्षे.वि.स सचिवालय द्वारा संगणित क्षेत्रीय ऊर्जा लेख की उसके जारी करने के 15 दिनों की अवधि तक क्षेत्रीय संघटकों द्वारा जाँच / सत्यापन किया जा सकता है। यदि कोई त्रुटि पाई / रिपोर्ट की जाती है तो उसे सुधारकर संशोधित लेखा जारी किया जाता है।

4.1.4 क्षेत्रीय पारेषण लेखा (आरटीए) और क्षेत्रीय पारेषण विचलन लेखा (आर.टी.डी.ए) :

समय समय पर संशोधित सी.ई.आर.सी (अंतर राज्य पारेषण की साझेदारी) विनियम 2010 के अनुसार, कई नामित ग्राहकों के लिए महीने के प्रथम कार्य दिवस को, उसके पिछले महीने का मासिक क्षेत्रीय पारेषण लेखा जारी किया जाता है।

आई.एस.टी.एस एवं सी.टी.यू के ग्राहकों के लिए प्रतिमास 15 तारीख तक उसके पिछले महीने का क्षेत्रीय पारेषण विचलन लेखा तैयार करके जारी किया जाता है।

4.2 वाणिज्य उप- समिति की बैठकें :

समय समय पर संशोधित सी.ई.आर.सी (भारतीय विद्युत ग्रिड कोड) विनियम 2010 के प्रावधानों के अनुसार द.क्षे.वि.स की वाणिज्य उप समिति की बैठकें आयोजित की गईं। बैठकों के विवरण अनुलग्नक-XXIV में दिए गए हैं।

अध्याय - V

प्रचालन, संरक्षण एवं प्रणाली अध्ययन गतिविधियाँ

5.1 वर्ष 2013-14 के दौरान प्रचालन से संबंधित मुख्य विशेषताएँ :

- दिनांक 31 दिसंबर 2013 के दिन द.क्षे ग्रिड को 765 कि.वो रायचूर-सोलापुर लाइन के माध्यम से एन.ई.डबल्यू ग्रिड के साथ जोड़ दिया गया ।
- संघटकों के सहयोग से एस.आर.एल.डी.सी द्वारा आंध्र प्रदेश में 21.11.2013 को ' ब्लैक स्टार्ट रिस्टोरशन' पर, कार्यशाला आयोजित की गई ।
- कूडंकुलम एस.पी.एस तंत्र (ट्रिप सिग्नल 1 व 2) और एच.वी.डी.सी कोलार ट्रिप सिग्नल 3 एस.पी.एस के कृत्रिम अभ्यास दिनांक 05.06.2013 को किया गया ।
- 400 कि.वो विजयवाडा-नेल्लूर लाइन पर एसपीएस लागू करने के संबंध में जोर दिया ।
- समय विस्तारित आउटेज के संबंध में संघटकों के साथ चर्चा की गई। संघटकों द्वारा विभिन्न आउटेज एवं पुनस्थापन की प्रगति की सूचनाएँ दी गई।
- कोयले के भंडारण की नियमित मानिट्रिंग की गई एवं युटिलिटियों के साथ चर्चा की गई । उत्पादकों एवं एम.सी.एल के सहभागिता के साथ हैदराबाद में एक विशेष बैठक का आयोजन किया गया था ।
- एस.आर.एल.डी.सी ने, 'इंपार्टेंट ग्रिड एलिमेंट्स ऑफ सदरन रीजन' ' रियाक्टिव पावर डाक्युमेंट ऑफ एस.आर.' ' ऑपरेटिंग प्रोसीजर ऑफ एस.आर' और पिछले वर्ष की वार्षिक रिपोर्ट जारी की ।
- एस.आर.एल.डी.सी ने नवंबर, 2013 के दौरान 'रियाक्टिव पावर' एवं 'ब्लैक स्टार्ट ऑपरेशन प्रोसीजर-2014' पर दस्तावेज जारी किया ।

- एम.वी.ए.आर क्षमता परीक्षण समिति जिस में द.क्षे.वि.स, द.क्षे.भा.प्रे.के और तीसरे सदस्य राज्य उत्पादन केंद्र से शामिल है, द्वारा उत्पादन एककों का एम.वी.ए.आर क्षमता का परीक्षण किया गया। वर्ष 2013-14 के दौरान निम्नलिखित उत्पादन केंद्रों का परीक्षण किया गया :

- एपीजेनको के केंद्र (श्रीशैलम, वी.टी.पी.एस) – नवंबर 2013
- के.पी.सी.एल के केंद्र (रायचूर, नागझारी, कद्रा, कोडसल्ली) – जनवरी 2014

- 28 मई 2013 को द.क्षे में एस.आर.एल.डी.सी / एन.एल.डी.सी द्वारा अतिप्रजन प्रबंधन प्रक्रिया और एफ.आर.सी पर कार्यशाला का आयोजन किया गया।
- भद्रावती बैक 2 बैक लिंक में 'फ्रिक्वेंसी कंट्रोलर' का परीक्षण दिनांक 22 नवंबर 2013 को सफलतापूर्वक संपन्न हुआ।
- द.क्षे के लाभार्थी क्षेत्रीय इकाईयों के ड्रावल में अचानक परिवर्तन के विषय पर प्रचालन समन्वय समिति की बैठकों में चर्चा की गई और अचानक परिवर्तन की नियंत्रण को लागू करने की शिफारिस की गई।
- अंतर राज्य लाईनों को बंद करने की स्थितियों में नियमित मॉनिटरिंग किया गया।
- एन.टी.पी.सी और एन.एल.सी ने साल भर उत्कृष्ट प्लेंट लोड फैक्टर और उत्कृष्ट उपलब्धता को बनाये रखा।
- उत्पादन केंद्रों के अनिवार्य आउटेजों की नियमित मॉनिटरिंग किया गया।
- आर.जी.एम.ओ के क्रियान्वयन की नियमित फालो अप किया गया।
- डी.एस.एम तथा सक्षम ऊर्जा कार्यक्रमों को पहचानने एवं उसे कार्यान्वित करने की दृष्टि से अधिकतम एवं निम्नतम मांग अनुपातों पर विचार विमर्श किया गया।
- आई.ई.जी.सी के अनुसार अवरोधक भार को चार समूहों में रखने के विचार में नियमित तौर पर ध्यान दिया गया। भार के चार समूह इस प्रकार है :

- ✓ अनुसूचित पावर कट / लोड शेडिंग
- ✓ अनिर्धारित लोड शेडिंग के लिए भार

- ✓ यू.एफ.आर एवं डीएफ/डीटी रिले के माध्यम से शेड किए जाने वाले भार
- ✓ किसी भी एस.पी.एस योजना के अधीन

- आई.ई.जी.सी के अनुसार स्वयंचालित डिमांड साईड मैनेजमेंट योजनाओं का लागू करने के बारे में नियमित तौर पर ध्यान दिया गया ।
- दिनांक 7 सितंबर 2013 से 49.2 Hz फ्रीक्वेन्सी के नये स्तर-1 के साथ ए.यू.एफ.आर संरक्षण योजना को लागू किया ।
- कर्नाटक को एन.टी.पी.सी के कायले आधारित केंद्रों के अनाबंटित विद्युत में से, जे.एन.एन.एस.एम योजना के अधीन सोलार पावर से बंडलिंग के लिए 45 मे.वा विद्युत को आबंटित किया है । इसे दिनांक 16 अगस्त 2013 के 00.00 बजे से लागू किया गया ।
- कर्नाटक को 29.12.2013 के 00.00 बजे से राजस्थान से 20 मे.वा और द.क्षे.एन.टी.पी.सी के कायले आधारित केंद्रों के अनाबंटित विद्युत में से, 20 मे.वा विद्युत को आबंटित किया ।
- भार उत्पादन संतुलन रिपोर्ट की समीक्षा हर तिमाही में आवधिक तौर पर की गई और समीक्षा की रिपोर्ट को दक्षेविस के वेबसाईट में अपलोड किया गया ।
- उत्पादन केंद्रों एवं पारेषण इकाईयों के लिए आउटेज के विचलन को दक्षेविस के वेबसाईट में अपलोड किया गया और उसे माननीय सी.ईआर.सी को भी सूचित किया गया ।
- प्रचालन समन्वय समिति की बैठकों में नियमित तौर पर लंबित फील्ड इन्पुटों की चर्चा की गई ।
- एस-1 और एस-2 कॉरिडार में अतिप्रजन से संबंधित विषय पर, परिहारोपाय ढूँढ निकालने हेतु चर्चा की गई ।
- आंकड़ों (दैनिक उत्पादन रिपोर्ट एवं मासिक प्रचालन रिपोर्ट) को केंद्र द्वारा के.वि.प्रा को सीदा ऑनलाईन में प्रस्तुत करने के विषय पर भीजोर दिया गया ।
- एस.एल.डी.सी, कर्नाटक ने संपूर्ण वर्ष में एक उत्कृष्ट रिकार्ड सहित सख्त अनुशासन का अनपालन शून्य उल्लंघन संदेश के साथ किया है ।

- प्रसस की बैठक में, संघटको द्वारा दिए गए उत्पादन एवं पारेषण एलिमेंटों के योजित आउटेज का दक्षेविस द्वारा विश्लेषण किया गया और दक्षेभाप्रेकें के परामर्श के साथ वर्ष के दौरान उसका सावधान जाँच करके अनुमोदन भी दिया गया।
- विचलन समाधान तंत्र 17 फरवरी 2014 के 0.00 बजे से लागू है।
- दिनांक 17 फरवरी 2014 से आईजीसी फ्रीक्वेन्सी रेंज को 49.7 Hz - 50.2Hz से 49.9 Hz – 50.05 Hz के लिए परिसीमित किया गया।
- दक्षिण क्षेत्र की केंद्रीय प्रणालियों के लिए 'फाईबार ऑप्टिक संचार प्रणाली' के स्थापन की परियोजना के अधीन सहायक संचार उपकरणों सहित निम्नलिखित ओ.पी.जी.डब्ल्यू संचार लिंकों का काम पावरग्रिड द्वारा पूरा कर दिया है और दिनांक 01.04.2014 से वाणिज्य प्रचालन चालू कर दिया गया है :
 - बेंगलूर-होसूर से सेलम में लिलो (25.52 कि.मी)
 - मदुरै-तिरुच्ची से कारैकुडी में लिलो (48.87 कि.मी)
 - तिरुनल्वेली-कूडंकुलम (72.71 कि.मी)
 - चित्तूर-तिरुवलम (21.02 कि.मी)
 - कोलार- श्रीपेरंबुदूर से तिरुवलम में लिलो (12.07 कि.मी)
 - श्रीपेरंबुदूर - चित्तूर (95.82 कि.मी)
- निम्नलिखित ओ.पी.जी.डब्ल्यू संचार लिंकों को दिनांक 01.01.2014 से वाणिज्य प्रचालन के लिए घोषित कर दिया गया है :
 - 400 कि.वो पालक्काड़ – 220 किवो पालक्काड़ (केएसईबी क्षेत्र)
 - 400 कि.वो कारैकुडी – 230 किवो कारैकुडी (टीएनईबी क्षेत्र)
 - कायंकुलम – पल्लम
 - कायंकुलम – कुंडारा
 - उडुमलपेट - त्रिचूर से 220 कि.वो पालक्काड़ लिलो (केंद्रीय क्षेत्र)

- ध्वनि संचार माध्यम अनुपलब्धता और वैकल्पिक अतिरिक्त डेटा चैनल रखने के विषय पर नियमित तौर पर प्रकाश डाला गया।

5.2 संघटक प्रणालियों में यू.एफ.आर :

दिनांक 21 अगस्त 2013 को संपन्न तकनीकी समन्वय समिति की विशेष बैठक में अनुमोदित शिफारिस के अनुसार, निम्नलिखित टेबल में दर्शाए गए अनुसार ए.यू.एफ.आर संरक्षण योजना को चार स्तरों में संशोधित किया गया। 49.2 Hz के नए स्तर को दिनांक 7 सितंबर 2013 से जारी किया गया। संघटक प्रणालियों में लगाए गए 'फ्लैट अंडर फ्रीक्वेंसी रिले' 49.2Hz, 49.0 Hz, 48.8 Hz और 48.6 Hz के सेटिंग पर, दक्षिण क्षेत्रीय ग्रिड में अंडर फ्रीक्वेंसी लोड शेडिंग योजना जारी की गई है। क्षेत्र में विभिन्न सेटिंग में प्राप्त भार राहत के विवरण निम्नलिखित सारणी में दिए गए हैं :

संघटक प्रणालियों में यू.एफ.आर के विवरण

क्र सं	स्तर → राज्य ↓	स्तर – I 49.2 Hz / इन्स्ट.	स्तर – II 49.0 Hz / इन्स्ट.	स्तर– III 48.8 Hz / इन्स्ट.	स्तर– IV 48.6 Hz / इन्स्ट.	कुल प्रत्याशित मे वा
1	आंध्र प्रदेश	809	812	822	825	3268
2	कर्नाटक	576	578	586	588	2328
3	केरल	204	205	208	209	826
4	तमिल नाडु	740	744	753	756	2993
5	पुदुचेरी	21	21	21	22	85
कुल राहत		2350	2360	2390	2400	9500

अंडर फ्रीक्वेंसी लोड शेडिंग योजना के प्रचालन को, प्रसस एवं संरक्षण समिति की बैठकों में नियमित तौर पर अनुवीक्षण किया जा रहा है। प्रचालन में कोई विसंगति होने पर उसे और संघटकों द्वारा लिए जानेवाले सुधारोंपायों की समीक्षा भी की जाती है।

5.3 डीएफ/डीटी संरक्षण योजना :

दक्षिण क्षेत्रीय ग्रिड में निम्नलिखित सेटिंग के साथ डीएफ/डीटी संरक्षण योजना प्रचालन में है। 0.2 Hz की कमी में 49.5Hz में ट्रिप होनेवाली सेटिंग के साथ अतिरिक्त स्टेज को दिनांक 1

नवंबर 2012 से लागू किया गया है। योजना के अधीन प्राप्त भार राहत के विवरण निम्नलिखित सारणी में दिए गए हैं :-

- ट्रिप (स्टेज-I) के लिए - 49.5 Hz, 0.2 Hz / सेक. इन्स्ट की कमी।
- ट्रिप (स्टेज-II) के लिए - 49.3 Hz, 0.3 Hz / सेक. इन्स्ट की कमी।

दक्षिण क्षेत्र में प्रस्तावित डीएफ/डीटी रिले भार राहत

क्र स	Stage → संघटक प्रणाली↓	स्टेज-I में भार राहत 49.5 Hz, 0.2 Hz / सेक फ्रीक्वेन्सी की कमी(डीएफ/डीटी)	स्टेज-II में भार राहत 49.3 Hz, 0.3 Hz / सेक फ्रीक्वेन्सी की कमी(डीएफ/डीटी)	डीएफ/डीटीसे कुल भार राहत
1	आंध्र प्रदेश	712	1767	2479
2	कर्नाटक	474	737	1211
3	केरल	172	175	347
4	तमिल नाडु	624	559	1183
5	पुदुचेरी	18	0	18
द.क्षे का सकल भार राहत		2000	3238	5238

संशोधित सेटिंग में परिवर्तन की अपेक्षा होने पर इन सेटिंगों की समीक्षा की जाएगी।

5.4 प्रणाली अध्ययन :

द.क्षे.वि.स के सभी सदस्यों के प्रतिनिधियुक्त प्रणाली अध्ययन उप-समिति को क्षेत्र के अंदर आवश्यक कैपासिटर्स की संख्या का निर्धारण करने हेतु अध्ययन करने का काम सौंपा गया है। साथ में द.क्षे.वि.स / टी.सी.सी द्वारा निदेशित प्रचालन भार वहन अध्ययन अथवा अन्य तकनीकी अध्ययन भी किया जाता है। क्षेत्र में वार्षिक अधिकतम मांग की स्थिति के लिए अपेक्षित शंट कांपन्सेशन के निर्धारण हेतु विद्युत प्रणाली अध्ययन किया जाता है। आई.ई.जी.सी अनुच्छेद 5.2 (एस) में निम्नानुसार परिभाषित प्रणाली की वोल्टता को बनाए रखने की दृष्टि से कैपासिटर्स की आवश्यकता का निर्धारण किया जाता है जो निम्न प्रकार है :

कल्पित वोल्टता	अधिकतम	न्यूनतम
765	800	728
400	420	380
220	245	198
132	145	122
110	121	99
66	72	60

दक्षिण क्षेत्रीय ग्रिड के पावर मैप जिसमें सभी अंतर राज्य / अंतर क्षेत्रीय लाईनों के साथ 765 कि.वो, 400 कि.वो एवं 220 कि.वों के सभी लाईनों को दिखाया गया है, को आवधिक तौर पर अद्यतन बनाया गया ।

अध्याय - VI

आयोजित बैठकें

वर्ष 2013-14 के दौरान आयोजित बैठकों में निम्नलिखित प्रमुख मुद्दों पर ध्यान दिया गया :

6.1 द.क्षे.वि.स / टी.सी.सी की बैठकें :

6.1.1 दिनांक 18 मई 2013 को बेंगलूर में संपन्न द.क्षे.वि.स की 22 वी बैठक (उसके पिछले दिन संपन्न टी.सी.सी की 21वी बैठक) में लिए गए प्रमुख निर्णय :

- ❖ मानी हुई सहमति एवं अन्य रूपात्मकताओं से संबंधित द.क्षे.वि.स के सोच को एन.पी.सी के सामने रखने के लिए सहमति दी गई। एन.पी.सी में एन.टी.पी.सी और पी.जी.सी.एल को भी शामिल करने के लिए के.वि.प्रा को शिफरिस भेजने की सहमति दी गई।
- ❖ संपूर्ण क्षेत्र के हित में होने के कारण से तीन योजनाओं (जी.एस.ई.एस का कार्यान्वयन, संरक्षण नवीकरण एवं उपकेंद्रों एवं रियाक्टीव पावर कंट्रोल का उन्नयन) को पी.एस.डी.एफ से निधि उपलब्ध कराने की सहमति दे दी।
- ❖ समिति ने पावर सिस्टम प्लैनिंग की स्थाई समिति की 35वी बैठक एवं दिनांक 4 जनवरी 2013 को संपन्न दीर्घकालिक अक्सेस और कनेक्टिविटी अप्लिकेशनों विषय पर आयोजित 15वी बैठक में चर्चा की गई एवं सहमति दी गई मदों को अनुमोदित किया।
- ❖ समिति ने यह अनुमोदित किया कि, जहाँ कहीं बाकी हो उसके लिए भारतीय स्टेट बैंक के उधार के व्याज दर को अपनाया जाए।
- ❖ पावरग्रिड द्वारा चुने गए विस्तार में पारेषण उपलब्ध मानने की सहमति समिति द्वारा दी गई।

6.1.2 दिनांक 18 मई 2013 को बेंगलूर में संपन्न द.क्षे.वि.स की 23 वी बैठक (उसके पिछले दिन संपन्न टी.सी.सी की 22वी बैठक) में लिए गए प्रमुख निर्णय :

- ❖ समिति ने एन.पी.सी के सदस्य के रूप में एन.एल.डी.सी और सी.टी.यू को शामिल करने हेतु अनुमोदन दे दिया। यह सहमति दी गई कि, एन.पी.सी की बैठक के लिए कार्यसूचि

यदि कोई हो, द.क्षे.वि.स के सदस्य सचिव के माध्यम से ही भेजा जाए। यह भी निर्णय लिया गया कि, एन.पी.सी में एन.एल.डी.सी और सी.टी.यू को सदस्य के रूप में शामिल करने से संबंधित मामले को, द.क्षे.वि.स के अध्यक्ष द्वारा केंद्रीय विद्युत प्राधिकरण के अध्यक्ष के पास मामला ले जाएंगे।

- ❖ समिति द्वारा यह सहमति दी गई कि, द.क्षे.वि.स के अध्यक्ष, विद्युत मंत्रालय के सचिव (विद्युत) को एक पत्र लिखकर इकाईयों द्वारा योजित संरक्षण उन्नयन के लिए पूर्वव्यापी वित्त पोषण के प्रावधान के साथ पी.एस.डी.एफ से सहायता की अपेक्षा करेंगे। यह भी अभिमत हुआ कि, प्राथमिकता, एवं जरूरत के अनुक्रम के संवितरण का एक तंत्र भी हो। इकाईयों द्वारा अन्य पक्षीय समपरीक्षा से संबंधित शिफारिसों को प्राथमिकता के आधार पर विभिन्न स्तरों में लागू किया जाएगा। क्रियाकलापों की अनुसूची को एक महीने के अंदर प्रस्तुत करना होगा जिसकी चर्चा संरक्षण उपसमिति की बैठकों में की जाएगी।
- ❖ यह सहमति दी गई कि, गुजरात से द.क्षे के लिए प्रस्तावित एच.वी.डी.सी लिंक के संबंध में द.क्षे.वि.स के अध्यक्ष द्वारा केंद्रीय विद्युत प्राधिकरण के अध्यक्ष के साथ मामला उठाया जाएगा।
- ❖ समिति ने वोल्टता नियंत्रण के लिए जी.एम.आर और लैनको द्वारा उपयोग के लिए रियाक्टरों को अनुमोदित किया। इस लेख में ऊर्जा उपभोग को क्षेत्रीय नष्ट के रूप में लिया जाएगा।
- ❖ यह सहमति दी गई कि, कोयले की अपूर्ति से प्रभावित विभिन्न बुनियादी ढाँचों के मामले को विद्युत मंत्रालय के माध्यम से रेल्वो बोर्ड / रेल मंत्रालय के साथ उठाया जाएगा और पटरियों के अतिप्रजन आदि से द.क्षे द्वारा समना की जा रही बाधा पर प्रकाश डाला जाएगा।
- ❖ स्थाई समिति की 36वी बैठक में जिन योजनाओं को अंतिम रूप दिया गया उन्हें समिति ने अनुमोदन दिया। .
- ❖ समिति ने यह नोट किया कि, सभी निर्विवादित भुगतानों को अन्य भुगतानों के साथ न जोड़कर भुगतान किया जाए। राज्यों के बीच आपस में बातचीत करके विवादित मामलों की चर्चा / समापन किया जाएगा।

- ❖ समिति ने 765/400 कि.वो महेश्वरम एवं 765/400 कि.वो निज़ामाबाद उपकेंद्रों को एस.आर.एल.डी.सी के साथ 'फाईबर संपर्क' प्रदान करने हेतु निम्नलिखित पारेषण लाईनों में ओ.पी.जी.डब्ल्यू के लिए अनुमोदन दिया :
 - ✓ 400 कि.वो निज़ामाबाद-डिचीपल्ली लाईन
 - ✓ 765 कि.वो हैदराबाद (महेश्वरम) – निज़ामाबाद लाईन
 - ✓ 400 कि.वो हैदराबाद – महेश्वरम - कर्नूल लाईन
- ❖ विशेष मामले के रूप में समिति ने दिनांक 10 जनवरी 2014 से एच.वी.डी.सी तालचेर-कोलार लिंग के शटडाउन के लिए अनुमोदन दिया ।

6.1.3 दिनांक 15 मार्च 2014 को चेन्नै में संपन्न द.क्षे.वि.स की 24वी बैठक (उसके पिछले दिन संपन्न टी.सी.सी की 23वी बैठक) में लिए गए प्रमुख निर्णय :

- ❖ समिति ने वित्तीय वर्ष 2014-15 से एन.टी.पी.सी तमिल नाडु एनर्जी कंपनी लि (एन.टी.ई.सी.एल) को द.क्षे.वि.स के सदस्य के रूप में शामिल करने के लिए सहमति दी ।
- ❖ समिति ने सोमनहल्ली-धर्मपुरी (न्यू सेलम), धर्मपुरी 765/400 कि.वो उपकेंद्र और धर्मपुरी (न्यू सेलम) – सेलम एलिमेंटों के कार्यारंभ की सहमति दी ।
- ❖ समिति ने दिनांक 21 मई 2014 से 45 दिन के लिए 400 कि.वो सोमनहल्ली – होसूर सिंगल सर्क्युट लाईन को नितरंतर शटडाउन की सहमति दी ।
- ❖ समिति ने पावरग्रिड के प्रस्तावानुसार मदुरै उपकेंद्र में आई.सी.टी -1 के तृतीयक वाईडिंग के माध्यम से अनावश्यक विश्वासार्ह साह्यक विद्युत आपूर्ति की स्थापना को अनुमोदन दिया ।
- ❖ समिति ने के.पी.टी.सी.एल के हूडी एवं नेलमंगला केंद्र में वर्तमान के सी&आर पैनल को सभी अतिरिक्त पुर्जों की लागत एवं सभी कर सहित, आई.ई.सी 61850 के लिए सुसंगत पैनल (8) में बदलने की लागत को संशोधित करके रु 3,61,16,458/- के लिए अनुमोदन प्रदान किया । सी&आर पैनलों को बदलने की लागत का भुगतान, सीदा के.पी.टी.सी.एल को द.क्षे के अन्य संघटकों द्वारा किया जाएगा ।

- ❖ समिति ने पावरग्रिड द्वारा ए.एम.आर योजना के कार्यान्वयन के लिए अनुमोदन दिया । अन्य क्षेत्र / इकाईयों के अनुभवों के आधार पर पावरग्रिड एक उचित तकनीक को सुदृढ़ करेगा ।
- ❖ प्रक्रिया को अंतिम रूप देने के पश्चात 220 कि.वो अप्पर सिलेरु-बलिमेला लाईन के इस चेतावनी के साथ तीन महीने के लिए प्रायोगिक प्रचालन के लिए सहमति दी कि, उत्पादन का बैकडाउन न हो । लाईन का प्रचालन (स्विच आफ / ऑन) ए.पी.एस.एल.डी.सी की आवश्यकताओं के अनुसार होगा । 220 कि.वो चिक्कोडी - कोल्हापुर लाईन का प्रायोगिक प्रचालन जून / जुलाई 2014 के दौरान रेडियल मोड में होगा । तत्पश्चात पैरलल मोड में प्रचालन पर विचार किया जाएगा ।
- ❖ यह सहमति दी गई कि, उच्च क्षमता लिंक के लिए लोअर सिलेरु-बरसूर के राईट ऑफ वे मामले के उपयोग से संबंधित प्रस्ताव को पावर सिस्टम योजना की स्थाई समिति को पेश किया जाए ।
- ❖ समिति ने दिनांक 1 जनवरी 2014 से 765 कि.वो रायचूर-सोलापुर सिंगल सर्क्यूट लाईन और 765/400 कि.वो रायचूर उपकेंद्र के वार्णिज्य प्रचालन के लिए अनुमोदन दिया ।
- ❖ समिति ने यह सहमति व्यक्त की कि, यदि पी.एस.पी.सी.एल का अनुकूलकर प्रत्यावर्तन न होने पर, यू.पी.सी.एल को कहा जाए कि विद्युत खरीदी करार को रद्द करें और 30 अप्रैल 2014 तक नये लाभार्थी को चुने। निम्नलिखित बातों को भी नोट किया गया :
 - यू.पी.सी.एल / के.पी.टी.सी.एल / पी.एस.पी.सी.एल से संबंधित एल.टी.ए विवरण सी.टी.यू / एन.एल.डी.सी द्वारा सूचित नहीं किया गया है जो, क्षेत्रीय पारेक्षण लेखा / क्षेत्रीय ऊर्जा लेखा संगणन के लिए अपेक्षित है ।
 - मामले (कर्नाटक के लिए एल.टी.ए की मात्रा) का स्पष्ट समाधान नहीं होने से, प्रभावित इकाईयों को माननीय सी.ई.आर.सी में जाने की जरूरत पड़ सकती है ।
- ❖ यह शिफारिस की गई कि, यू.पी.सी.एल में 'अतिरिक्त बे' के लिए जगह ढूँढ निकालने के लिए केंद्रीय विद्युत प्राधिकरण को एक समिति गठित करने की अपेक्षा की जाए ।

- ❖ समिति ने पावरग्रिड द्वारा अपने दिनांक 10 मार्च 2014 के पत्र के जरिए सूचित संशोधित संचार नेटवर्क के लिए अनुमोदन दिया ।
- ❖ समिति ने केवल स्टार्ट अप पावर की प्राप्ति के लिए, नागपट्टनम में नैवेली –तिरुच्ची डी/सी लाईन के एक सर्क्यूट लिलो के लिए अनुमोदन दिया ।

6.3 वाणिज्यिक समिति की बैठकें :

सी.ई.आर.सी की अधिसूचना के आधार पर तिमाही बैठकें संपन्न हुई जिसमें यू.आई एवं रियाक्टीव लेखा की जाँच की गई एवं अन्य वाणिज्यिक विषयों पर भी चर्चा की गई । आयोजित बैठकों की सूची अनुलग्नक -XXIV में दी गई है ।

अध्याय - VII

रिपोर्ट एवं प्रमाणीकरण

7.1 द.क्षे.वि.स द्वारा प्रणाली प्रचालन, भार उत्पादन संतुलन एवं प्रणाली अध्ययन के आंकड़ों से संबंधित विभिन्न रिपोर्ट तैयार की जाती है। वर्ष 2013-14 के दौरान द.क्षे.वि.स द्वारा जारी की गई रिपोर्ट / प्रमाण पत्र के विवरण नीचे दिए गए हैं।

- अ) दैनिक प्रणाली निष्पादन रिपोर्ट
- आ) साप्ताहिक प्रणाली निष्पादन रिपोर्ट
- इ) मासिक प्रगति रिपोर्ट
- ई) भार उत्पादन संतुलन रिपोर्ट
- उ) पिछले वर्ष की वार्षिक रिपोर्ट
- ऊ) वर्ष 2013-14 के लिए पावरग्रिड के दक्षिण क्षेत्रीय प्रारेषण प्रणाली साथ में आर.जी.सी.सी.पी.पी (कायंकुलम) से संबद्ध पारेषण योजना की उपलब्धता का महीनेवार प्रमाणीकरण
- ऋ) वर्ष 2013-14 की वार्षिक आउटेज योजना की आवधिक समीक्षा
- लृ) वर्ष 2014-15 की वार्षिक आउटेज योजना
- एँ) दीर्घावधि का आउटेज

अध्याय - VIII

राजभाषा कार्यान्वयन

8.1 प्रशिक्षण :

दिनांक 31 मार्च 2014 के अनुसार कार्यालय के सभी अधिकारियों एवं कर्मचारियों को हिंदी का कार्यसाधक ज्ञान प्राप्त है।

8.2 पत्राचार एवं अनुवाद :

देश के चारों क्षेत्र के केंद्रीय सरकारी कार्यालयों को भेजे गए कुल 3880 पत्रों में से 3336 पत्रों को हिंदी / द्विभाषी में भेजा गया। इस प्रकार हिंदी पत्राचार की प्रतिशत 86.0% रही, जो गृह मंत्रालय, राजभाषा विभाग द्वारा 'ग' क्षेत्र के लिए निर्धारित लक्ष्य 55% से अधिक है।

वर्ष के दौरान कार्यालय द्वारा राजभाषा अधिनियम के धारा 3(3) के अधीन कुल 483 दस्तावेज जारी किए गए और सभी दस्तावेजों को द्विभाषी रूप में ही जारी किया गया।

8.3 राजभाषा कार्यान्वयन समिति की बैठकें :

कार्यालय में सदस्य सचिव की अध्यक्षता में एकराजभाषा कार्यान्वयन समिति का गठन किया गया है। प्रत्येक तिमाही में नियमित तौर पर समिति की बैठकें आयोजित की गईं। वर्ष में कुल चार बैठकें आयोजित की गईं। सभी बैठकों में कार्यालय में राजभाषा कार्यान्वयन में हुई प्रगति की समीक्षा की गई एवं और भी प्रगति करने हेतु उपायों पर चर्चा की गई।

8.4 प्रोत्साहन योजनाएँ :

कार्यालय में हिंदी के प्रयोग में प्रगति लाने के उद्देश्य से हिंदी में काम करने वाले अधिकारियों एवं कर्मचारियों के लिए राजभाषा विभाग द्वारा विनिर्दिष्ट प्रोत्साहन योजना जारी

की गई है। रिपोर्ट की अवधि 2013-14 में वर्ष 2012-13 के दौरान हिंदी में काम किए गए कुल 10 अधिकारियों एवं कर्मचारियों को नकद पुरस्कार प्रदान करके प्रोत्साहित किया।

8.5 हिंदी दिवस एवं हिंदी पखवाड़े का आयोजन :

कार्यालय में दिनांक 16.09.2013 को हिंदी दिवस तथा दिनांक 16.09.2013 से 30.09.2013 तक हिंदी पखवाड़ा मनाया गया। पखवाड़े के सुसंदर्भ में कार्यालय के अधिकारियों एवं कर्मचारियों के लिए विभिन्न प्रतियोगिताएँ एवं अन्य कार्यक्रम आयोजित किए गए। प्रतियोगिताओं के विजेताओं को नकद पुरस्कार एवं प्रमाण पत्र के साथ संलग्न किया गया।

8.6 हिंदी कार्यशालाएँ :

रिपोर्ट के वर्ष की अवधि के दौरान कार्यालय के अधिकारियों एवं कर्मचारियों के लिए चार एक दिवसीय कार्यशालाओं का आयोजन किया गया था। अधिकारियों एवं कर्मचारियों ने कार्यशाला में सक्रिय रूप में भाग लिया।

Chapters

CHAPTER I

SOUTHERN REGIONAL POWER COMMITTEE

INTRODUCTION :

Southern Region comprises the four Southern States namely Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and the Union Territory of Puducherry encompassing an area of approximately 6,37,000 Square Kilometres, constituting about 20% of the total area of India.

The Power Map of the Southern Region is given in **Exhibit I**.

1 MEMBERSHIPS, FUNCTIONS AND ORGANISATIONAL SET UP

1.1 MEMBERSHIP OF SRPC :

As per Government of India Resolution dated 25.05.2005 followed by Amendment Resolutions dated 29.11.2005 and 09.05.2008, the Membership of SRPC is as follows:

- i) Member (Grid Operations), Central Electricity Authority (CEA).
- ii) One representative each of Central Generating Companies, Central Transmission Utility (CTU), National Load Despatch Center (NLDC) and the Southern Regional Load Despatch Center (SRLDC).
- iii) From each of the State in the region, the State Generating Company, Transmission Utility (STU), State Load Despatch Center (SLDC), one of the State owned distribution companies as nominated by the State Governments and one Distribution Company by alphabetical rotation out of the private distribution companies functioning in the region.
- iv) From each of the Union Territories in the region, a representative nominated by the administration of the Union Territory concerned out of the entities engaged in generation/transmission/distribution of electricity in the Union Territory.

- v) A representative each of every generating company (Other than Central Generating Companies or State Government owned generating companies) having more than 1000 MW installed capacity in the region.
- vi) A representative of the generating companies having power plants in the region (not covered in (ii) to (v) above) by alphabetical rotation.
- vii) One member representing the electricity traders in the region by alphabetical rotation, which has trading volume of more than 500 million units during the previous financial year.
- viii) Member Secretary, SRPC - Convener.

1.2 FUNCTIONS :

The following functions have been assigned to SRPC :

- i) To undertake Regional Level Operation Analysis for improving Grid performance.
- ii) To facilitate Inter-State/Inter-Regional transfer of power.
- iii) To facilitate all functions of planning relating to Inter-State/Intra-State Transmission System with CTU/STU.
- iv) To coordinate planning of maintenance of generating machines of various Generating Companies of the region including those of Inter-State Generating Companies supplying electricity to the Region on annual basis and also to undertake review of maintenance programme on monthly basis.
- v) To undertake planning of outage of transmission system on monthly basis.
- vi) To undertake operational Planning Studies including Protection Studies for stable operation of the Grid.
- vii) To undertake planning for maintaining proper voltages through review of reactive compensation requirement through System Study Committee and monitoring of installed capacitors.
- viii) To evolve consensus on all issues relating to economy and efficiency in the operation of power system in the region.

1.3 ORGANISATIONAL SET-UP OF SOUTHERN REGIONAL POWER COMMITTEE SECRETARIAT :

List of Officers in SRPC as on 31.03.2014 is at **Annexure - I**

The organisational set up of Southern Regional Power Committee Secretariat detailing the staff allocation during 2013 - 14 is given as follows :

STAFF ALLOCATION

Name of the Post	No. of Posts	Posts filled up as on 31-03-2014
A. Gazetted :		
1. Member Secretary	1	1
2 Superintending Engineer	3	2
3 Assistant Secretary / EE	7	7 + 1 *
4 Asst.Executive Engineer	9	3
5 Assistant Engineer	2	-
6 Assistant Engineer (Civil)	1	1
7 PS	1	-
B. Non- Gazetted :		
1 Technical Officer	1	-
2 Junior Engineer (Civil)	1	-
3 D'Man Gr – I	2	2
4 D'Man Gr - II	1	-
5 Assistant	1	-
6 Stenographer Gr – I	5	3
7 Stenographer Gr – II	1	1
8 Hindi Translator	1	1
9 UDC	1	1
10 Store Keeper	1	-
11 LDC	4	1
12 Driver	2	1
13 Peon (MTS)	6	4
14 Chowkidar (MTS)	2	1
15 Mech. Plumber	1	-
16 Helper (MTS)	1	-
TOTAL	55	30

* One Executive Engineer Post operated against vacant post of S.E.

1.4 FINANCIAL PARTICULARS :

The actual expenditure incurred by the SRPC Secretariat during the financial year 2013-14 is as follows :

Major Head - 2801	Expenditure (Rs)
<u>SRPC (Non-Plan)</u> [Regional Coordination – 2801.01.04]	
a) Salaries	1,31,82,329
b) Over Time Allowance	10,975
c) Travel Expenses	6,34,617
d) Office Expenses	5,49,904
e) Medical Expenses	92,584
f) Adm. Expenses	89,766
g) Minor Works	14,61,050
----- TOTAL	----- 1,60,21,225
<u>SRLDC – (Non-Plan)</u> [Load Despatching Station – 2801.01.02]	Rs
a) Salaries	89,40,563
b) Over Time Allowance	9,000
c) Travel Expenses	6,49,961
d) Office Expenses	21,99,932
e) Other Charges	4,49,871
f) Medical Expenses	87,373
g) Adm. Expenses	89,797
h) Advt & Publicity	7,640
----- TOTAL	----- 1,24,34,137
Minor Works- 2801.02.17.27 Strengthening of RPCs	Nil

CHAPTER II

REGIONAL GRID PERFORMANCE

2.1 POWER SUPPLY POSITION :

The Registered Maximum Peak Demand of the Southern Regional Grid during the year 2013-14 was 36,985 MW indicating an increase of 4557 MW over the previous year. The Unrestricted Maximum Demand was 39,885 MW. The overall Demand Shortage in the Region was of the order of 2.70 % to 16.68 % during the year 2013-14. The maximum monthly Demand Shortages were of the order of 0.53 % to 18.92 % in Andhra Pradesh, 7.21 % to 18.43 % in Karnataka, 2.67 % to 13.02 % in Kerala, 2.04 % to 14.89 % in Tamil Nadu and 0 % to 9.12 % in Puducherry. The constituent wise details of monthly load pattern viz. Registered Peak Demand, Unrestricted Demand and Capacity Shortages are given in **Annexure - II**.

The Maximum Gross Energy Consumption of Southern Region was 803 MUs/day during the month of March 2014. The Total Gross Energy Consumption of the Southern Region for the year 2013-14 was 2,64,019 MUs at an average of around 724 MUs/day, which was 8.22% more than that of previous year. The Monthly Regional Energy Shortages varied from 2.73 % to 17.16 %. The Energy Shortages were of the order of 0.31 % to 17.18 % in Andhra Pradesh, 6.14 % to 20.28 % in Karnataka, 0.50 % to 7.83 % in Kerala, 1.45 % to 17.45 % in Tamil Nadu and - 0.09 % to 5.28 % in Puducherry. The constituent-wise details of Monthly Gross Energy Consumption, Unrestricted Energy Requirement, Energy Shortages and Month-wise Average Energy Consumption/day are given in **Annexure - III**.

Load regulations were effected by the States in varying measures. Details of regulatory measures in force in Southern Region during 2013-14 are given in **Annexure-V**.

2.2 SOUTHERN REGION INSTALLED CAPACITY :

The Installed Capacity of Power Plants in Southern Region at the end of financial year 2013-14 was 58,329 MW (Source : CEA) with a net increase of 4.42 % over that of last year Installed Capacity of 55,859 MW. The total Installed Capacity comprises Hydro : 11,398 MW (19.54 %), Thermal+Gas+Diesel : 32,485 (55.69 %) Nuclear : 1,320 MW (2.26%) and (Wind + R.E.S) : 13,127 MW (22.51 %). The Hydro Thermal ratio was 26 : 74 as on 31.03.2014.

The details of Generating Units commissioned during the year 2013-14 are given in **Annexure-XV**.

The State-wise Installed Generation Capacity as on 31.03.2014 in the Southern Region (As reported by CEA) are given in **Annexure - VI**. The details of Installed Capacity during the period 2009-10 to 2013-14 in respect of Southern Region are given in **Annexure - VII**. The growth of Installed Capacity of Southern Regional System during the year 2009-10 to 2013-14 is given in **Exhibit - II**.

2.3 MAXIMUM DEMAND :

Southern Region Maximum Demand recorded during 2013-14 (in the month of March 2014) was 36,985 MW as compared to 32,428 MW in the previous year indicating an increase of 4557 MW. The registered System Peak Demands, Unrestricted Demand and registered Minimum Demand for each constituent of the Region during the year 2013 - 14 are given below :

State	Registered Peak Demand	Max. Unrestricted Demand	Registered Minimum Demand
Andhra Pradesh	13621 (23.03.2014)	14529 (Apr-13)	5945 (09.10.2013)
Karnataka	9467 (13.02.2014)	10184 (Feb-14)	3856 (01.06.13 & 09.09.13)
Kerala	3588 (18.03.2014)	3686 (Mar-14)	1259 (16.06.2013)
Tamil Nadu	12764 (29.01.2014)	13817 (Mar-14)	6612 (03.11.2013)
Puducherry	333 (21.03.2014)	351 (Aug-13)	130 (12.09.2013)
SR	36985 (24.03.2014)	39885 (Apr-13)	21431 (04.11.2013)

The details of monthly registered Peak Demand of Constituent States of Southern Region, Unrestricted Demand and the monthly aggregate Peak Demand as well as monthly Simultaneous Peak Demand of the Region (Gross & Ex-Bus MW) during the year 2013-14 are furnished at **Annexure - II**. Also the details of the monthly registered Minimum Demand of the Constituent States of the Southern Region and the Demand Shortages are given in **Annexure - II**. The growth in Southern Regional States Peak Demand and the SR Peak Demand during the year 2009-10 to 2013-14 are shown in **Exhibit - III**.

Month-wise diversity factor in respect of Southern region varied from 1.032 to 1.093 during the year 2013-14 and is indicated in **Annexure - II**.

Annual Load Duration Curve of Southern Region is shown in **Exhibit - IV**. Typical load curves for a working day (Regional Peak Demand day) and Regional Minimum Demand day for the Region and the States are shown in **Exhibit - V** and **Exhibit - VI** respectively.

2.4 **ENERGY GENERATION & CONSUMPTION :**

The Generation Statistics of Power Stations in the Southern Region during the year 2013-14 are given at **Annexure-VI**. Also the Performance Statistics of Power Stations in the region during the year 2013-14 are given at **Annexure - VIII**. The quantum of Hydro, Thermal+Gas+Diesel, Nuclear, State Wind Mill & IPPs Energy Generation in the Region during 2013-14 was 32,973 MUs (12.77 %), 1,54,194 MUs (59.69 %), 9,760 MUs (3.78 %), 45 MUs (0.02 %) & 61,337 MUs (23.74 %) respectively. Break-up of Energy Generation in 2012-13 & 2013-14 are presented as follows :-

Type	2012-13 (MU)	2013-14 (MU)	% Increase (+) % Decrease (-)
Hydro	21,188	32,973	+ 55.62 %
Thermal + Gas + Diesel	1,47,402	1,54,194	+ 07.08 %
Nuclear	8,181	9,760	+ 01.19 %
Wind + Solar (State)	44	45	+ 19.29 %
IPPs	60,617	61,337	+ 02.43 %
Total	2,37,432	2,58,310	+ 08.79 %

was an increase of + **08.79** % in Total Energy Generation in 2013-14 over the previous year. State-wise Generation and Consumption data for the year 2013-14 is given in **Annexure - X**. The growth of generation of the State Systems and Regional Grid is represented in **Exhibit-VII, VIII & IX**.

The details of highest ever Energy Consumption met in a day by Constituents of Souther Region, as on 31st March, 2014 are as follows :

Andhra Pradesh	:	293.84 MU on 22.03.2014
Karnataka	:	208.66 MU on 26.03.2014
Kerala	:	68.66 MU on 31.03.2014
Tamil Nadu	:	281.20 MU on 26.03.2014
Southern Region	:	856.67 MU on 26.03.2014

2.5 **SYSTEM FREQUENCY :**

The monthly average frequency of the Southern Regional Grid varied between 49.84 Hz and 50.03 Hz during the year 2013-14 as against 49.68 Hz and 49.94 Hz during 2012-13. 83.67 % of the time, the Grid operated within the IEGC range (49.7 Hz to 50.2 Hz up to 16.02.2014 and thereafter 49.90 Hz to 50.05 Hz w.e.f. 17.02.2014) which is less than that of last year 2012-13, i.e. 91.07 %.

System Frequency	2011-12	2012-13	2013-14
Below 49.0 Hz	00.09	00.01	00.00
Between 49.0 Hz and 49.2 Hz	00.24	00.03	00.01
Between 49.2 Hz and 49.5 Hz	05.26	02.78	00.09
Between 49.5 Hz and 49.7 Hz	82.53	26.10	03.29
Between 49.7 Hz and 49.9 Hz		57.68	50.94
Between 49.9 Hz and 50.0 Hz			
Between 50 Hz and 50.05 Hz	10.36	11.43	37.94
Between 50.05 Hz and 50.2 Hz			
Above 50.2 Hz	01.52	01.97	07.73
Within IEGC Range 49.9 Hz to 50.05 Hz. (new range w.e.f. 17.02.2014) *	92.89	91.07	83.67
Average Frequency (Hz)	49.76	49.80	49.98

- * IEGC Frequency Range prior to 17.02.2014 was 49.7 Hz – 50.2 Hz
- * IEGC Range of Frequency prior to 17.09.2012 was 49.5 Hz – 50.2 Hz
- * IEGC Range of Frequency during 2011-12 was 49.2 Hz – 50.3 Hz

Details of month-wise frequency profile during the year 2013-14 are given in **Annexure - X**.

2.6 VOLTAGE PROFILE :

The voltage levels at the major sub-stations as given in **Annexure - XXII** were generally satisfactory for most of the time. At few sub-stations, high voltages prevailed for considerable period of time. The details of Capacitor Installations by the Constituents during the year 2013-14 are given in **Annexure-XXI**. However, Low Voltage conditions were also experienced at a few 400 KV nodes.

2.7 PLANT LOAD FACTORS :

The Average Plant Load Factors of Thermal Power Stations in the Southern Region as a whole and for the Constituent States for the year 2013-14 as well as for the previous years 2010-11, 2011-12 & 2012-13 are indicated as follows. Details are given in **Annexure - VIII**. The details of outages of Power Stations are given in **Annexure - IX**.

Average Plant Load Factors of Thermal Power Stations

Constituent System	2010-11	2011-12	2012-13	2013-14
Andhra Pradesh	80.57	83.46	84.16	78.00
Karnataka	64.00	73.20	61.71	69.43
Kerala	16.09	14.12	25.25	10.75
Tamil Nadu	73.36	77.90	77.94	66.87
Ramagundam STPS	90.27	93.07	91.26	86.70
Talcher St-II	86.14	85.00	81.77	82.63
NLC II	83.40	85.87	87.27	86.81
NLC- TS I Expansion	81.42	82.47	90.23	89.48
Simhadri Stage – II	---	89.79	75.38	81.35
RGCCP	60.41	22.37	49.16	30.74
Vallur (NTECL)	---	---	48.78	54.36

2.8 SYSTEM LOAD FACTORS :

The annual Load Factors of the Southern Region and Constituent Systems during 2013-14 and the previous years 2009-10, 2010-11, 2011-12 & 2012-13 are indicated below :

Constituent System	2009-10	2010-11	2011-12	2012-13	2013-14
Andhra Pradesh	78	74	81	80	77
Karnataka	70	68	72	74	72
Kerala	65	65	66	71	67
Tamil Nadu	83	82	83	78	80
Puducherry	77	77	76	82	80
Southern Region	81	80	84	86	82

The Load Factor of the Constituent Systems is given in **Annexure - IV**.

2.9 INTERCONNECTED OPERATION OF THE GRID :

Power Systems of the Constituent States of Southern Region viz, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Puducherry operated in parallel during the year. The details of inter state & inter-regional lines and the duration for which major tie lines were open during the year 2013-14 is given in **Annexure - XI**. Southern Region was synchronized to NEW Grid through 765 kV Raichur – Sholapur Line on 31.12.2013.

2.10 OPERATION WITH NEIGHBOURING STATES / REGIONS :

Southern region had exchanges of power with constituents of other Regions UI Power, Bilateral Exchanges and availing of shares from ER & NR ISG Stations. Southern Region had Energy Exchanges with all the other regions through the back-to-back HVDC stations at Chandrapur (via Ramagundam-Chandrapur lines), Gazuwaka (via Jeypore-Gazuwaka lines) and Talcher Interconnecting point. Talcher-

Kolar HVDC link is an evacuation scheme for Talcher Stage II station dedicated for Southern Region located in Eastern Region.

2.11 ENERGY EXCHANGES :

The constituent wise details of entitlements and schedules from ISGSs in SR and NTPC stations in ER, including bilateral exchanges and actual drawals from the grid including losses are given as follows :

States	Entitlement from Grid (MU)	Total Schedule from Grid (MU)	Net Schedule from Grid (MU)	Actual Drawal (MU)
Andhra Pradesh	19,334	18,708	30,818	31,260
Karnataka	13,152	12,547	8,022	7,634
Kerala	9,350	9,235	10,879	11,374
Tamil Nadu	21,440	21,324	28,198	27,831
Puducherry	2,552	2,466	2,465	2,321

Note : Entitlement, Schedule & Actual Figures are at Generator Periphery. The month wise details of the same are furnished in **Annexure-XII**.

The actual Inter Regional Energy Exchanges during the year 2013-14 are given below

From	To	MU
ER	SR	6623.39
SR	ER	64.82
WR	SR	7852.79
SR	WR	0.11

The month wise details are given in **Annexure - XII**. The details of inter / intra regional scheduled bilateral exchanges are given in **Annexure - XII**, along with ex-bus schedules of beneficiaries from Inter State Generating Stations.

The details of allocation of shares to the various beneficiaries of Southern Region from ISG Stations located in Southern Region as on 31st March 2014 are given in **Annexure - XIII**.

2.12 RESERVOIR LEVELS :

Salient features viz. Month-wise levels recorded, live storage and inflows in major hydel reservoirs in the Southern Region during 2013-14 are given in **Annexure - XIV** and **Exhibit - X**.

2.13 PROGRESS OF GENERATION SCHEMES :

The progress of Generation Schemes under construction in the Region as on 31.03.2014 is given in **Annexure - XVI**.

2.14 PROGRESS OF TRANSMISSION LINES / SUB STATIONS UNDER CONSTRUCTION :

The details of 765 kV, 400 KV and 220/230 kV Transmission Lines commissioned during the year 2013-14 are given in **Annexure - XIX**.

The progress of construction of 220/230 kV and above Transmission Lines as on 31.03.2014 are given in **Annexure - XX**.

The details of 765 KV, 400 KV & 220 kV Substations commissioned during the year 2013-14 are given in **Annexure - XVII**.

The progress of construction of 765 KV, 400 & 220 kV Substations as on 31.03.2014 are given in **Annexure - XVIII**.

CHAPTER III

GRID PROTECTION

3.1 GRID DISTURBANCES AND PROTECTION RELATED ACTIVITIES :

Categorisation of Grid Incidents and Grid Disturbances :

Central Electricity Authority has issued Grid Standard, which classifies Grid Incidents as GI-I, GI-2 & Grid Disturbances from GD-1 to GD-5 in the increasing Order of Severity.

Categorisation of Grid Incidents :

Category GI-1 : Tripping of one or more Power System Elements of the Grid like a Generator, Transmission Line, Transformer, Shunt Reactor, Series Capacitor and Static VAR Compensator, which requires re-scheduling of generation or load, **without total loss of supply at a sub-station or loss of integrity of the Grid at 220 kV;**

Category GI-2 : Tripping of one or more Power System Elements of the Grid like a Generator, Transmission Line, Transformer, Shunt Reactor, Series Capacitor and Static VAR Compensator, which requires re-scheduling of generation or load, **without total loss of supply at a sub-station or loss of integrity of the Grid at 400 kV and above;**

Categorisation of Grid Disturbances :

Category GD-1 : When **less than 10 %** of the antecedent generation or load in a regional grid is lost;

Category GD-2 : When **10 % to less than 20 %** of the antecedent generation or load in a regional grid is lost;

Category GD-3 : When **20 % to less than 30 %** of the antecedent generation or load in a regional grid is lost;

Category GD-4 : When **30 % to less than 40 %** of the antecedent generation or load in a regional grid is lost;

Category GD-5 : When **40 % or more** of the antecedent generation or load in a regional grid is lost.

The details of Grid Disturbances and Grid Incidents, which occurred in the Southern Region have been enclosed as "**Annexure XXV - GD 1**" and "**Annexure XXV - GI 1&2**" respectively.

3.2 FUNCTIONS OF PCSC :

The Protection Sub-Committee of SRPC analyzed the Grid Disturbances, System Occurrences and other trippings that occurred in the Southern Regional Grid and suggested measures to avoid their reoccurrence.

The functions of the Protection Coordination Sub-Committee in brief are as follows:

- a) Analysis of the Grid Disturbances, System Occurrences and other trippings and to suggest measures to avoid their recurrence.
- b) Coordination of settings of protective relays in the Regional System to maintain the security of the Grid.
- c) Periodical review of under frequency load shedding schemes, df/dt Load Shedding schemes and other protection schemes adopted in the Grid.
- d) Review of the implementation of recommendations made by the Inquiry Committee of the grid disturbances in the region concerning to above matters.
- e) To suggest, discuss and implement Special Protection Schemes to take care of major loss of import / generation so as to ensure security of the Grid.

3.3 ISSUES DELIBERATED IN PCSC :

The system occurrences and minor trippings that took place in the constituent systems were discussed in detail in the Protection Coordination Sub-Committee meetings. Necessary guidelines / remedial measures, suggested by the Protection committee were taken up for implementation by the Constituents to avoid its reoccurrence.

The following issues were deliberated / implemented by the constituents in the Protection Sub-Committee of SRPC during the year 2013-14:

- a. The load relief obtained at different settings of under frequency relays provided in the constituent systems was reviewed for their correctness during system occurrences / disturbances and necessary remedial measures were recommended by the committee for implementation by the constituents.
- b. As per the decision taken in the second meeting of National Power Committee (NPC), held on 16th July, 2013 at New Delhi, it was agreed that there would be four stages for Automatic Under Frequency Load Shedding Scheme (AUFLS) starting with 49.2 Hz. The various stages for AUFLS operation are 49.2 Hz, 49 Hz, 48.8 Hz and 48.6 Hz. The details of revised UFR settings implemented in the Southern Region are shown in **Chapter 5**.
- c. The operation of df/dt Relays in the Constituent Systems was reviewed periodically. The operation of this scheme and the quantum of load relief obtained were also monitored regularly for effectiveness.
- d. PCSC Forum recommended for provision of Synchronizing Facility at Hubli Substation for Black Start Restoration and the same was provided by KPTCL.
- e. As per the directions of MOP / CEA, the Healthiness of Batteries of 220 kV and above Sub-Stations were reported by the Constituents and the same was discussed during the PCSC meetings.
- f. As per the directions of MOP / CEA, the Detailed Project Report (DPR) in respect of renovation and up-gradation of protection system of all 220 kV and above substations in the Southern Region were prepared and submitted to CEA / MOP. The following were envisaged in the DPR :
 - Details of the deficiencies observed during Protection Audit
 - Details of existing protection equipments like Relays and Relay Panels, Auxiliary Supplies, Measuring Equipments like CT,

CVT / PT etc. and Control Equipments like Circuit Breaker, Isolators etc. (covered under R&U programme) should also include Make, Ratings and Year of Manufacturing of the respective equipment

- Details of Spares to be maintained
- Details of the Cost Estimates in respect of the above
- Timeline / Schedule to complete the rectification of all deficiencies, detected during the protection audit

All the State utilities / Constituents submitted the DPR and the same were forwarded to CEA / MOP.

- g. In the PCSC forum, the SR Constituents were requested to send the Equipment Failure Data of 220 kV and above Sub-Stations in the Southern Region to the Standing Committee (comprising of experts from various organizations), that was formed to investigate the failure of equipments at 220 kV and above Sub-Stations. The SR Constituents were sending the Equipment Failure data (of 220 kV and above Sub-Station) to CEA for further needful.
- h. As per the directions of MOP / CEA, the remedial measures taken for the critical tripping events in the Southern Region were compiled and sent to CEA on daily basis.
- i. As per the recommendations of NLDC / SRLDC, the PCSC forum agreed for the implementation of SPS for 765 kV Sholapur - Raichur Line and the loads were identified by the Southern Regional Constituents to the tune of 800 MW of Load Shedding in SR (newly identified loads for Kudankulam SPS could be triggered) and the same was implemented in SR.
- j. Issue regarding adoption of uniform philosophy to the relay settings for the protection of transmission lines in Southern Region to avoid indiscriminate tripping of transmission elements during fault condition was deliberated.

3.4 ORDERS ISSUED BY HON'BLE CERC IN CONNECTION WITH PROTECTION :

a. Hon'ble CERC issued Order dated 19.12.2013 in respect of Petition No. 263/MP/2012 :

Order :

All SR constituents are directed to identify the additional feeders and install UFR, df/dt Relays to ensure the relief as decided by SRPC from time to time. Hon'ble CERC directed all Constituents to submit Compliance Report duly certified by SRPC and SRLDC on implementation of quantum of relief by AUFR as per the table furnished in **Chapter 5** and proper functioning of df/dt Relays within one month of issuing this order.

Action Taken :

The timely compliance of the above order was highlighted in the PCSC meetings and the status was discussed periodically. The Constituents were requested to submit the progress of implementation to SRPC and SRLDC, as specified in the Hon'ble CERC Order dated 19.12.2013.

b. Hon'ble CERC issued Order dated 20.02.2014 in respect of Petition No. 146/MP/2013 with I.A. 36/2013 :

Order :

- (i) Hon'ble CERC directed the respondents to implement the recommendations of the Protection Audit works as mentioned in Phase-I and Phase-II by 01.05.2014 and 01.09.2014 respectively.
- (ii). The Hon'ble Commission directed SRPC to coordinate the protection setting issue and submit a report regarding implementation of Phase-I activities by 01.06.2014.
- (iii). The Hon'ble Commission further directed SRPC to submit bimonthly status report to the Commission in respect of the works mentioned in Phase-II.

Action Taken :

- (i). The timely compliance of the above order was highlighted in the PCSC meetings and the status was discussed periodically. The Constituents were requested to submit the progress of implementation to SRPC and SRLDC, as specified in the Hon'ble CERC Order dated 20th February, 2014.
- (ii). Issues regarding non-furnishing of FIR / Trip Analysis Report, EL, DR, etc. were highlighted in the meeting. SRPC / SRLDC had taken up the issue under Clause 1.5 of IEGC. PCSC forum requested the Constituents to send / upload the complete Tripping Reports in the SRLDC web application within 24 hours, as mandated in IEGC / CEA Regulations.

c. Hon'ble CERC issued Order dated 22.02.2014 in respect of Petition No. 167/Suo-Motu/2012 :

Order :

- (i) Hon'ble CERC directed RPCs shall ensure that the approved protection philosophy is adopted by all users.
- (ii) Hon'ble CERC directed ISTS licensees to submit details of updated distance protection relay setting of all inter-regional lines with POSOCO & RPCs.
- (iii) The Hon'ble Commission directed all SLDCs to install/activate sound recording system in their control rooms within three months from the date of issue of this order.

Action Taken :

The timely compliance of the above order was highlighted in the PCSC meetings and status was discussed periodically. The Constituents were requested to submit the progress of implementation to SRPC and SRLDC as specified in the Hon'ble CERC Order dated 22.02.2014.

3.5 ISLANDING SCHEMES IN THE SOUTHERN REGION :

- a. The Protection Coordination Sub Committee (PCSC) proposed for two stages of Islanding Schemes for Southern Region. In the first stage (i.e) at 48.3 Hz,

the SR system would split in to two Grids namely Modified S1 and Modified S2. In the second stage, four islands would operate at 47.9 Hz. Modified S1 System comprises the entire Andhra Pradesh (including Telangana), Karnataka, Chennai, Hosur (TN) and North Kerala. Modified S2 System comprises the rest of Tamil Nadu and rest of Kerala. There is no load disconnection i.e all loads are intact.

b. The Protection Coordination Sub Committee agreed for implementation of the following Islanding Schemes and the same was communicated to Task Force / CEA.

- ✓ Modified S1-S2 Islanding Scheme.
- ✓ Ramagundam –Hyderabad Islanding Scheme.
- ✓ Chennai Islanding Scheme-Vallur NTECL, NCTPS,GMR, MAPS
- ✓ Kudankulam, Tuticorin, Sabarigiri, Thiruvananthapuram Islanding Scheme.
- ✓ Kundah, Coimbatore, Erode, Neyveli, Mettur Islanding Scheme.

c. PCSC reviewed and recommended for Single Phase Auto Reclosing Scheme for all the 220 kV and above lines.

d. There were 10 PMUs installed in the Southern Region, out of which, 6 PMUs were under SRLDC Pilot Project and 4 PMUs were NRLDC Pilot Project. PMU's under SRLDC Pilot PMU Project were installed at the following Locations.

- 1) Ramagundam Generating Station 400 kV Bus (NTPC)
- 2) Vijayawada Sub- Station 400 kV Bus (POWER GRID)
- 3) Sriperumbudur (Chennai) Sub- Station 400 kV Bus (POWER GRID)
- 4) Somanahalli (Bangalore) Sub- Station 400 kV Bus (POWER GRID)
- 5) Thrissur Sub- Station 400 kV Bus (POWER GRID)

- 6) Narendra Sub Station 400 kV Bus (Through VSAT of KPTCL)
(POWER GRID)

PMU's were installed under NRLDC Pilot PMU Project, at the following Locations.

- 1) Kolar Sub- Station 400 kV Bus (POWER GRID)
- 2) Gooty Sub- Station 400 kV Bus (POWER GRID)
- 3) Gazuwaka Sub- Station 400 kV South Bus (POWER GRID)
- 4) Thirunelveli Sub- Station 400 kV Bus (POWER GRID)

3.6 PROTECTION AUDIT OF 220 KV AND ABOVE SUBSTATIONS IN THE SOUTHERN REGION :

- ❖ As per the recommendations of the Enquiry Committee Report of the New Grid Disturbance, occurred on 30th & 31st July 2012, the Protection Audit of 220 KV and above level Critical Substations of the Southern Region had been carried out.
- ❖ Protection Audit of the following Substations had been carried out during the month of July 2013.
 - HVDC Kolar SS
 - HVDC Gazuwaka Back to Back SS
 - 400 KV Munirabad SS
 - 400 KV Kochi SS
 - 400 KV Dichipally SS
- ❖ The observations and remarks of audit were sent to the Constituents, concerned for compliance.

3.7 NEW SPECIAL PROTECTION SCHEMES (SPS) IN THE SOUTHERN REGION :

The following new SPS have been suggested by PCSC for the implementation in Southern Region :

- (a). **Jindal SPS** : An SPS was suggested by PCSC for Jindal Steel Works (JSW) IPP, when Voltage of Lingapur Line 1 or Lingapur line 2 at JSW drops to 99 kV or 78% of Phase Voltage and Current exceeds 1000 A, the lines will trip after a time delay of 200 msec. The same was implemented by JSW in coordination with KPTCL on 17.04.2013.
- (b). **UPCL SPS** : An SPS was suggested by PCSC to UPCL to modify the existing SPS logic for tripping the Generator Breaker directly from the DCS (Distributed Control System) instead of routing through Turbine Protection Panel to reduce the time delay of processing. The same was implemented by UPCL in coordination with KPTCL and the same was confirmed on 20.04.2013.
- (c). **Vijayawada – Nellore SPS** : An SPS Scheme was suggested by PCSC to relieve Post Contingency Stress (N-1) on 400 kV Vijayawada - Nellore Line. If one of the 400 kV Vijayawada - Nellore D/C Line trips and line flow of each circuit before tripping is above 550 MW, then back down generation or trip one Generating Unit of each IPPs at GMR Vemagiri, Gouthami, Konaseema, Jegurupadu-II and Lanco. The Total Generation Back Down envisaged in the SPS was to the tune of 430 MW. The SPS was implemented by PGCIL and IPPs in coordination with APTRANSCO.
- (d). **Nellore – Almathy / Sriperumpudhur SPS** : An SPS was suggested by PCSC to relieve Post Contingency Stress (N-1) on Nellore – Almathy / Sriperumpudhur Line. If one of the 400 kV Nellore - Almatti D/C Line trips and Power Flow on each Circuit before tripping is above 520 MW, then trip one Generating Unit of each IPPs of SEPL and MEPL. Total Generation Back Down envisaged in this SPS was to the tune of 300 MW. The SPS was implemented w.e.f 23.05.2013.
- (e). **Kudankulam SPS** : An SPS was suggested by PCSC to Kudankulam for relieving stress on Lines. In case of tripping one or two units at Kudankulam Nuclear Power Plant, Trip signal-1 or Trip signal-1&2 will be generated depending on number of Tripping Units. Trip signal-I : 800 MW has been

implemented and Trip Signal-II : 710 MW has been identified and expected to be implemented while commissioning 2nd Unit of KKNPP, Kudankulam.

- (f). **Chittur - Tiruvalum SPS** : An SPS was suggested by PCSC for tripping of 220 kV Chittur - Tiruvalum S/C Line to contain over loading of upstream lines of Andhra Pradesh Network. This SPS was implemented w.e.f 27.07.2013.
- (g). **Sulurpet - Gummidipoondi SPS** : An SPS was suggested by PCSC for Sulurpet - Gummidipoondi S/C Line in case of over loading of upstream lines of Andhra Pradesh Network. This SPS was implemented w.e.f 27.07.2013.
- (h). **765 kV Sholapur – Raichur Line SPS** : When the Power Flow is above 800 MW or the loss of import of Power through this line is above 800 MW due to tripping of this line, Trip Signal 1 will be generated to trip 500 MW of Load in Southern Region and Trip Signal 2 will be generated to reduce the generation in Western Region by 500 MW. This SPS is under operation.

3.8 TALCHER - KOLAR HVDC INTER - TRIP SCHEME AT KOLAR :

Talcher – Kolar HVDC Link connects Eastern and Southern Region asynchronously. The Link Capacity is 2000 MW (2500 MW with augmented capacity). Tripping of one or both poles of this link, when it is carrying high quantum of power causes frequency instability in Southern Region due to loss of power and due to sudden injection of power in the NEW grid, it may result in the line overloading. SPS had been designed and implemented at Kolar end to overcome this problem. With the operation of SPS, during the contingency, required quantum of load is shed in SR. Also SPS has been implemented at Talcher and generation reduction / tripping of units are carried out in Talcher stage - II Generating Station on tripping of poles of Talcher-Kolar HVDC Link.

The Inter-trip Scheme provided in Southern Regional Grid helps in compensating the loss of import whenever Talcher - Kolar $\pm$ 500kV HVDC System trips, by shedding corresponding loads in Constituent Systems through the signal initiated at 400 kV Kolar Station during single and Bi-Pole outage. Based on the quantum of Import Loss, Signal 1, Signal 2 and Signal 3 are generated at Kolar and is

transmitted through wide band communication network to the identified locations in the Constituents System to give relief by load shedding.

Since the Link was operating on more than 2000 MW (extended more of operation) as and when necessitated by Grid conditions, the logic / feeders for Signal 3 were identified and implemented.

Details of Load Relief expected during tripping of Talcher - Kolar HVDC

Link

S.No	Constituent System	Expected Load Relief in MW			
		Signal 1	Signal 2	Signal 3	Total
1	ANDHRA PRADESH	150	160	124	434
2	KARNATAKA	350	100	109	559
3	KERALA	NIL	215	123	338
4	TAMIL NADU	293	235	144	672
Total Load Relief in SR		793	710	500	2003

Trip Signal – II :

Trip Signal – II was implemented w.e.f. 30th May, 2012 to overcome the overloading of line. Logic for the Trip Signal – II is as follows :

- Condition 1 : ((500 MW < Power Loss $\leq$ 1000 MW) & Pole Block) or
 ((1400 MW < Power Flow $\leq$ 1900 MW) & Pole Block) or
 (Under One Pole s/d (500 MW < Power Flow < 1000 MW))
 Other Pole Blocks = Trip 1
- Condition 2 : (650 MW < Power Flow $\leq$ 1150 MW) & Line Fault & Pole
 Block = Trip 1
- Condition 3 : ((Power Loss > 1000 MW) & Pole Block) or
 (Power Flow > 1900 MW) & Pole Block) or
 (Under One Pole s/d (Power Flow > 1000 MW)) Other Pole
 Blocks = Trip 2
- Condition 4 : (Power Flow > 1150 MW) & Line Fault & Pole Block = Trip 2

Where,

Power Loss = DC Power at Kolar at (t-2) sec - DC Power at Kolar at t sec.

t = The time instant when Block Signal is available.

Power Flow = DC Power at Kolar at (t-2) sec.

Trip Signal – III :

HVDC Kolar SPS-Extension Trip Signal – III trips 500 MW of Loads while tripping of HVDC Talcher - Kolar one or Bi-pole tripping and Power Flow on HVDC Poles is more than 2000 MW. The Signal was completed and mock tested on 05.06.2013.

3.9 KUDANKULAM INTER - TRIP DEFENCE MECHANISM :

Kudankulam inter-trip defense mechanism is under operation for Trip Signal 1. The Loads for the Trip Signal 2 has been identified and will be implemented while commissioning Unit 2 of KKNPP, Kudankulam. The State-wise Load Relief details are as follows :

Details of Load Relief expected during tripping of Kudankulam

Generation

S.No	Constituent System	Expected Load Relief in MW		
		Signal 1	Signal 2 *	Total
1	ANDHRA PRADESH	177	160	337
2	KARNATAKA	193	100	293
3	KERALA	132	215	347
4	TAMIL NADU	298	235	533
Total Load Relief in SR		800	710	1510

* Loads identified for Trip Signal – II. Scheme yet to be implemented.

3.10 MEETINGS OF PROTECTION CO-ORDINATION SUB COMMITTEE :

The Protection Co-ordination Sub-Committee Meetings of SRPC held during the year 2013-14 were as follows and also listed in **Annexure – XXIV**.

CHAPTER IV

COMMERCIAL AND ENERGY ACCOUNTING ACTIVITIES

4.1 ENERGY ACCOUNTING UNDER AVAILABILITY BASED TARIFF (ABT) :

Accounting of Energy for the Southern Region Grid is being carried out by SRPC Secretariat regularly in line with CERC regulations / orders and decisions of SRPC. The Energy Accounting involves preparation of Weekly Unscheduled Interchange (UI) / Deviation Account, Reactive Energy Account, Monthly Regional Energy Account (REA) and Regional Transmission Account (RTA) based on the data, provided by SRLDC.

4.1.1 Unscheduled Interchange Charges / Charges for Deviation Account:

A statement of Unscheduled Interchange Charges including Additional Unscheduled Interchange Charges levied under CERC (Unscheduled Interchange charges) Regulations, as amended from time to time was prepared on weekly basis for the seven day period ending on the penultimate Sunday mid-night and issued to all Constituents by Tuesday.

CERC (Deviation Settlement Mechanism and related matters) Regulations, 2014 came into force on 17.02.2014. On commencement of this Regulation, CERC (Unscheduled Interchange charges) Regulation, 2009 had been repealed. Accordingly, a statement of charges for deviation including additional charges for deviation, levied under the Regulations, was prepared on weekly basis for the seven day period ending on the penultimate Sunday mid-night and issued to all constituents by Tuesday.

The softcopy of files, with 15 minutes-time block-wise, basic and computed data, were uploaded on SRPC website to enable downloading by the Regional Entities.

4.1.2 Reactive Energy Charges Account :

A statement of VAR Charges was prepared on weekly basis for the seven day period ending on the penultimate Sunday mid-night and issued by Tuesday to all Regional Entities, who have a net drawal / injection of reactive energy under low /

high voltage conditions and levied at the rates specified by Hon'ble CERC. The soft copy of computed files was uploaded on SRPC website to enable downloading by the Regional Entities.

4.1.3 Regional Energy Account (REA) :

Regional Energy Accounts on monthly basis are prepared and issued for the purpose of billing and payment of various charges. The month-wise provisional REA were issued latest by 6th and final REA by 20th of the following month. The REA was uploaded on SRPC website to enable downloading by the Regional Entities. The monthly REAs, inter-alia comprises the following details :

- a) Plant Availability Factor of ISGS (Thermal) covered by ABT
- b) Percentage of Allocated Capacity Share of Beneficiaries in ISGS
- c) Weighted Average Percentage of Allocated Capacity Share of Beneficiaries in ISGS covered by ABT.
- d) Energy Scheduled to the beneficiaries from ISGS of SR and ISGS in other Region.
- e) Details of Intra / Inter Regional Exchanges on Short Term Open Access (STOA).
- f) Details of Wheeling Charges for State Owned Transmission Lines.

All Regional Energy Accounting calculations carried out by SRPC Secretariat are open to all Regional Entities for any checking / verification for a period of 15 days. If any mistake is reported / detected, the mistakes are rectified then revised accounts are being issued.

4.1.4 Regional Transmission Account (RTA) & Regional Transmission Deviation Account (RTDA) :

In line with CERC (Sharing of IST Charges and Losses) Regulations, 2010 as amended from time to time, monthly Regional Transmission Accounts applicable for various designated customers were prepared and issued for the previous month on next working day after issue of REA of the month.

Regional Transmission Deviation Account was also prepared and issued by 15th of every month for the previous month to all designated ISTS Customers and CTU.

4.2 MEETINGS OF THE COMMERCIAL SUB – COMMITTEE :

Meeting of Commercial Sub-Committee of SRPC were conducted in line with the provisions of CERC (Indian Electricity Grid Code) Regulations, 2010 as amended from time to time. Details of meetings held have been listed in **Annexure No.XXIV**.

CHAPTER V

OPERATION, PROTECTION & SYSTEM STUDIES ACTIVITIES

5.1 OPERATIONAL HIGHLIGHTS DURING 2013-14 :

- SR Grid was linked with NEW Grid through 765 kV Raichur – Sholapur Line on 31st December, 2013.
- SRLDC conducted the Workshop on Black Start Restoration Procedures at Andhra Pradesh on 21.11.2013 with the co-operation of utilities.
- Mock Exercise of Kudamkulam SPS Mechanism (Trip Signal 1 & 2) & HVDC Kolar Trip Signal 3 SPS completed successfully on 05.06.2013.
- Implementation of SPS on 400 kV Vijayawada - Nellore Line was followed up.
- Prolonged outages of units and elements were followed up with constituents. Information about various outages and progress on revival was furnished by the constituents.
- Coal Stock position was regularly monitored and followed up with utilities. Three Numbers of special meetings were also conducted at Hyderabad with the participation of MCL and Generators.
- SRLDC released the 'Important Grid Elements' Document of Southern Region, "Operating Procedure of SR" & "Annual Report" for the previous year.
- SRLDC released documents on "Reactive Power" and "Black Start Restoration Procedure 2014" during the month of November, 2013.
- Testing of MVAR capability of the Generating Units was successfully carried out by MVAR Capability Testing Committee, comprising members from SRPC, SRLDC with a third member from Central / State Generating Station. The following Generating Stations were tested during 2013-14 :
 - APGENCO Stations (Srisailam, VTPS) - November, 2013
 - KPCL Stations (Raichur, Nagihari, Kadra, Kodalalli) – January, 2014
- SRLDC / NLDC conducted Workshop on Congestion Management Procedure and FRC on 28th May 2013 in SR.

- Testing of Frequency Controller Mode at Bhadravathi B2B Link was completed successfully on 22nd November 2013.
- Sudden change in drawl by the Beneficiary Regional Entity of SR was deliberated in OCC meeting and measures were recommended for implementation and to control sudden changes.
- Closing of Inter State lines was regularly monitored.
- NTPC and NLC Stations maintained high Plant Load Factor (PLF) and Plant Availability Factor (PAF) throughout the year.
- Forced Outages of Generating Stations were regularly monitored.
- Implementation of RGMO was regularly followed up.
- Maximum to Minimum Demand ratios were highlighted to identify and implement DSM and Energy Efficiency Programmes.
- Arranging of interruptible loads into 4 groups as mandated by IEGC was regularly followed up. The 4 groups of loads are as follows :
 - ✓ Scheduled Power Cuts / Load Scheduling
 - ✓ Loads for Unscheduled Load Scheduling
 - ✓ Loads to be shed through UFR and df/dt Relay
 - ✓ Loads to be shed under any SPS Scheme
- Implementation of Automatic Demand Side Management Schemes as per IEGC was regularly followed up.
- The AUFR Protection Scheme with new Stage – I at Frequency 49.2 Hz was implemented w.e.f. 7th September, 2013.
- Karnataka was allocated 45 MW Power from Unallocated Power of coal based stations of NTPC for bundling with Solar Power under JNNSM Scheme. This was implemented w.e.f. 00:00 Hours of 16th August 2013.
- 20 MW of Solar Power from Rajasthan & Equivalent Power of 20 MW from unallocated power of NTPC Stations of SR was allocated to Karnataka w.e.f. 00:00 Hours of 29.12.2013.
- The Load Generation Balance Report was periodically reviewed every quarter of the year and the reviewed report was also uploaded in the website of SRPC.
- Outage Deviation Report for Generators and Transmission utilities was being hosted on SRPC website and was being communicated to Hon'ble CERC.
- Pending field inputs were regularly followed up in the OCC meetings.

- Issues relating to congestion in S1-S2 corridor were deliberated in detail to identify measures to relieve congestion.
- Online submission of data (Daily Generation Report, Monthly Operation Report) by the station to CEA was followed up.
- Strict Grid Discipline was observed by SLDC, Karnataka throughout the year with an excellent record of NIL violation messages.
- SRPC analysed the Planned Outage of Generators and Transmission elements furnished by constituents/Entities in the OCC meeting in consultation with SRLDC and approved them after thorough scrutiny of the same during the year.
- Deviation Settlement Mechanism came into force from 00:00 Hours of 17th February, 2014.
- IEGC Range of Frequency was narrowed down to 49.9 Hz – 50.05 Hz from 49.7 Hz – 50.2 Hz w.e.f. 17th February, 2014.
- The following OPGW Communication Links, along with associated communication equipment under the project establishment of Fiber Optic Communication System for Central Sector Stations' projects of Southern Region have been completed by PGCIL to put under CoD by 01.04.2014
 - LILO of Bangalore - Salem to Hosur (25.52 km)
 - LILO of Madurai - Trichy at Karaikudi (48.87 km)
 - Tirunelveli – Kudankualm (72.71 km)
 - Chittor – Tiruvalam (21.02 km)
 - LILO of Kolar - Sriperambudur to Tiruvalam (12.07 km)
 - LILO of Sriperambudur - Chittor (95.82 km)
- The following OPGW Communication Links were declared under commercial operation w.e.f. 01.01.2014 by PGCIL :
 - 400 kV Palakkad – 220 kV Palakkad (KSEB Sector)
 - 400 kV Karaikudi – 230 kV Karaikudi (TNEB Sector)
 - Kayamkulam – Pallom
 - Kayamkulam – Kundara
 - LILO of Udumalpet - Trichur to 220 kV Palakkad (Central Sector)
- Issue regarding standby data channel and non-availability of voice communication was regularly followed up.

5.2 UFR in Constituent Systems :

As per the recommendation approved in Special TCC Meeting held on 21st August, 2013, AUFR Protection Scheme was revised to have 4 stages as shown in the following table. The new stage of 49.2 Hz was implemented w.e.f. 7th September, 2013. Hence, the under frequency load shedding scheme is in operation in the Southern Regional grid with the revised settings of 49.2 Hz, 49.0 Hz, 48.8 Hz & 48.6 Hz instantaneous on the flat Under Frequency Relays (UFR) provided in the constituent systems. The details of the load relief expected at different stages in the Region is given in the table as follows :

Details of provision for UFR in Constituent Systems

Sl.	Stage → State ↓	Stage – I 49.2 Hz / Inst.	Stage – II 49.0 Hz / Inst.	Stage – III 48.8 Hz / Inst.	Stage – IV 48.6 Hz / Inst.	Total Expected MW
1	Andhra Pradesh	809	812	822	825	3268
2	Karnataka	576	578	586	588	2328
3	Kerala	204	205	208	209	826
4	Tamil Nadu	740	744	753	756	2993
5	Puducherry	21	21	21	22	85
Total Relief		2350	2360	2390	2400	9500

The operation of under frequency load shedding scheme is being monitored regularly in the OCC and Protection committee meetings and any discrepancy in its operation were reviewed and corrective measures taken by the constituents for its effectiveness.

5.3 df/dt Protection Scheme :

The df/dt protection scheme is in operation in the Southern Regional grid with the following settings. The additional Stage with settings to trip at 49.5 Hz with rate of fall of 0.2 Hz / sec. was implemented **w.e.f. 1st November, 2012**. The details of the load relief proposed through this scheme is given in the table furnished below :

- 49.5 Hz with rate of fall of 0.2 Hz / sec. inst. - for trip (Stage – I)
- 49.3 Hz with rate of fall of 0.3 Hz / sec. inst. - for trip (Stage – II)

Load Relief by df/dt Relays proposed in Southern Region

Sl	Stage → Constituent System ↓	<u>Load Relief at Stage I</u> 49.5 Hz and 0.2 Hz/Sec fall of frequency (df/dt)	<u>Load Relief at Stage II</u> 49.3 Hz and 0.3 Hz/Sec fall of frequency (df/dt)	<u>Total Relief from df/dt</u>
1	Andhra Pradesh	712	1767	2479
2	Karnataka	474	737	1211
3	Kerala	172	175	347
4	Tamil Nadu	624	559	1183
5	Puducherry	18	0	18
Total Load Relief in SR		2000	3238	5238

These settings would be reviewed when the system requires change in the revised settings.

5.4 SYSTEM STUDIES :

The System Studies Sub Committee in which all the members of SRPC are represented, is entrusted with the tasks of carrying out studies for assessing quantum of capacitor requirement in the region, operational load flow studies or any other technical studies referred by the SRPC/TCC Power System Studies for assessment of shunt compensation required in the Regional grid is done for the annual peak load conditions. The capacitor requirement is assessed with a view to maintain system voltage at all the buses in the range, as defined in the IEGC section 5.2 (s), which is as follows:

Nominal Voltage	Maximum	Minimum
765	800	728
400	420	380
220	245	198
132	145	122
110	121	99
66	72	60

The Power Map of Southern Regional Grid showing all 765 kV, 400 kV and 220 kV lines including all the interstate / Inter-regional lines was periodically updated.

CHAPTER VI

MEETINGS HELD

The Important issues considered during the Meetings held during the year 2013-14 are as under :

6.1 MEETINGS OF THE SRPC/TCC :

6.1.1 Important decisions taken in the 22nd Meeting of SRPC held at Bangalore on 18th May 2013 (21st Meeting of TCC held the previous day) :

- ❖ It was agreed that the concerns of SRPC regarding ‘**Considered Concurrence**’ and other modalities would be taken up with NPC. Membership of PGCIL and NTPC to NPC would also be recommended.
- ❖ The Committee recommended that the three schemes (Implementation of GSES, Protection Renovation & Upgradation of S/S and Reactive Power Control) be funded through PSDF since they were in the overall interest of the Region.
- ❖ The Committee approved the items discussed and agreed in the 35th Meeting of Standing Committee on Power System Planning & 15th Meeting regarding Long Term Access and Connectivity Applications held on 4th January 2013.
- ❖ The Committee approved that prevailing Lending Rate of SBI could be adopted towards the rate of interest payable, wherever due.
- ❖ The Committee concurred for deemed transmission availability, for insulator replacement, in the stretches identified by PGCIL.

6.1.2 Important decisions taken in the 23rd Meeting of SRPC held at Kochi on 26th October 2013 (22nd Meeting of TCC held the previous day) :

- ❖ The Committee approved inclusion of NLDC as well as CTU as Members to the NPC. It had been agreed that Agenda Items for the NPC Meetings, if any, would be routed through Member Secretary, SRPC. It was also decided that Chairperson, SRPC would take up with Chairperson, CEA recommending inclusion of NLDC and CTU to the NPC forum.
- ❖ It was agreed that Chairperson, SRPC would address a letter to Secretary (Power), MoP requesting support from PSDF for protection up gradation works planned by

the Utilities with provision for retroactive funding. It was also felt that a mechanism should be in place for disbursement based on the hierarchy of needs and prioritization. Utilities would carry out implementation of recommendations relating to Third Party Protection Audit as per prioritization in a phased manner. The Schedule of activities would be furnished within one month and would be discussed in the Meeting of Protection Sub Committee.

- ❖ It was agreed that Chairperson, SRPC would take up with CEA with regard to the proposed HVDC link from Gujarat to SR.
- ❖ The Committee approved that the Reactors at GMR & LANCO be used for voltage regulation. The energy consumption on this account would be accounted as Regional Loss.
- ❖ It was agreed that various infrastructure issues that were affecting coal supply to Thermal Power Stations in Southern Region, would be taken up with Railway Board / Ministry of Railways through MoP, highlighting the constraints in coal supply being faced by SR on account of track congestion etc.
- ❖ The Committee approved the schemes finalized in the 36th Meeting of Standing Committee.
- ❖ The Committee noted that all undisputed payments needed to be cleared without linking to other payments. Disputed issues could be discussed / reconciled amicably among the States.
- ❖ The Committee approved OPGW on the following transmission lines to provide Fiber Connectivity to 765/400 kV Maheswaram and 765/400 kV Nizamabad substations with SRLDC :
 - ✓ 400 kV Nizamabad – Dichpalli Line
 - ✓ 765 kV Hyderabad (Maheswaram) – Nizamabad Line
 - ✓ 400 kV Hyderabad – Maheswaram – Kurnool Line
- ❖ As a special case, the Committee approved the shutdown of the HVDC Talcher – Kolar Link from 10th January 2014.

6.1.3 Important decisions taken in the 24th Meeting of SRPC held at Chennai on 15th March 2014 (23rd Meeting of TCC held the previous day) :

- ❖ The Committee agreed to include NTPC Tamilnadu Energy Company Ltd. (NTECL) as a Member of SRPC with effect from the financial year 2014-15.

- ❖ The Committee concurred for commissioning of Somanahalli – Dharmapuri (New Salem), Dharmapuri 765/400 kV S/S, and Dharmapuri (New Salem) – Salem elements.
- ❖ The Committee agreed for continuous shutdown of 400 kV Somanahalli - Hosur S/C Line from 21st May 2014 for a period of 45 days.
- ❖ The Committee approved the proposal of establishment of redundant reliable auxiliary power supply through tertiary winding of ICT-1 at Madurai S/S, as proposed by POWERGRID.
- ❖ The Committee approved the revised total cost of replacement of existing C&R panels with IEC 61850 compatible panels (8 Nos.) at Hoody and Nelamangala Stations of KPTCL including spares etc. of Rs.3,61,16,458/- inclusive of taxes and duties. Payment of the replacement cost of C&R panels would be made directly to KPTCL by other constituents of SR.
- ❖ The Committee approved implementation of the AMR scheme by POWERGRID. POWERGRID could firm up appropriate technology for implementation, based on the experience in other regions / utilities.
- ❖ It was agreed that after finalization of the procedure, trial operation of 220 kV Upper Sileru – Balimela Line, carried out for about three months with a caveat that the generation, would not be backed down. Line could be operated (switched on / off) as per the requirements of APSLDC. Trial operation of 220 kV Chikkodi – Kolhapur Line would be carried out during the month of June / July 2014, in radial mode. Subsequently, parallel mode of operation could be contemplated.
- ❖ It was agreed to put up the proposal for utilization of RoW issue of Lower Sileru - Barasur for high capacity link to the Standing Committee on Power System Planning.
- ❖ The Committee approved the CoD of 765 kV Raichur – Sholapur S/c Line and 765/400 kV Raichur S/S from 1st January 2014.
- ❖ The Committee agreed that UPCL could be asked to initiate necessary action for termination of the PPA and identification of new beneficiary by 30th April 2014, in case PSPCL did not revert back favorably. The following had also been noted :
 - CTU/ NLDC had not communicated LTA details in respect of UPCL / KPTCL / PSPCL to be accounted in Regional Transmission Account / Regional Energy Account.

- Since the issue (LTA quantum to Karnataka) was not apparently getting resolved, the affected utility may need to approach Hon'ble CERC.
- ❖ It was recommended that CEA be kindly requested to form a Committee to explore space for additional Bays at UPCL.
- ❖ The Committee approved the revised communication network as intimated by POWERGRID vide letter dated 10th March, 2014.
- ❖ The Committee approved LILO of one circuit of Neyveli– Trichy D/C line at Nagapattanam PS for the purpose of drawal of startup power only.

6.3 MEETINGS OF THE COMMERCIAL COMMITTEE :

Based on CERC notification, meetings were conducted on quarterly basis to audit UI and Reactive Energy Accounts and commercial related issues were also discussed. The details of meetings held have been listed in **Annexure No. XXIV**.

CHAPTER VII

REPORTS & CERTIFICATION

7.1 SRPC has been issuing various reports regarding system operational data, Load Generation Balance Data, System Studies Data, etc. The details of the various reports / certificates issued by SRPC during the year 2013-14 are given below.

- a) Daily System Performance Report
- b) Weekly System Performance Reports
- c) Monthly Progress Reports
- d) Load Generation Balance Reports (L.G.B.R)
- e) Annual Report for the previous year
- f) Monthwise Certification of Availability for Southern Region Transmission System of Power Grid including that for RGCCP (Kayamkulam) associated Transmission Scheme, for the year 2013-14.
- g) Periodical Review of Annual Outage Plan for 2013-14
- h) Annual Outage Plan for 2014-15
- i) Prolonged outages.

CHAPTER VIII

OFFICIAL LANGUAGE IMPLEMENTATION

8.1 Training :

All the officers and staff of this office possess working knowledge in Hindi as on 31st March 2014.

8.2 Correspondence & Translation :

Out of the total number of 3880 letters issued to Central Government Offices by this office during the year, 3336 letters were in Hindi / bilingual, which is 86.0 % and is higher than the target fixed i.e 55% for region “C”

All the documents issued under section 3(3) of Official Language Act were issued in bilingual form during the year. 483 documents were issued under this section.

8.3 Meetings of Official Language Implementation Committee :

Official Language Implementation Committee has been constituted in the office and it is headed by the Member Secretary. Regular meetings of the committee were held on quarterly basis in which the progress of official language and measures to improve the use of official language were discussed.

8.4 Incentive Scheme :

An Incentive Scheme specified by Department of Official Language has been introduced for the officers and staff of this office in view of improving the usage of Official language Hindi. 10 officials were honoured with cash awards during the reporting year 2013-14, for the year 2012-13.

8.5 Observing Hindi Fortnight & Conducting Hindi Diwas :

Hindi day was celebrated on 16.09.2013 and Hindi fortnight from 16.09.2013 to 30.09.2013 in the office. Various competitions and programmes in this connection were organized. Winners in the competitions were honoured with cash prizes and certificates.

8.6 Hindi Workshops :

Four Hindi workshops were organized for the officials of this office during the period of reporting. Officials participated very actively in the workshops.

संलग्नक

Annexures

31.03.2014 के अनुसार द.क्षे.वि.स. के अधिकारी गण
Officers of SRPC Secretariat as on 31.03.2014

Sl.No	DESIGNATION	Sl	NAME
1	Member Secretary I/c	1	Shri. S. R. Bhat
2	Superintending Engineer	1	Shri. A. Balan
		2	Shri. Asit Singh
3	Assistant Secretary	1	Shri. V.P.Gangarevanna
4	Executive Engineer	1	Shri. D. G. Vernekar
		2	Shri R.M.Rangarajan
		3	Shri Meka Ramakrishna
		4	Shri Thomas K. Chacko
		5	Shri. Anil Thomas
		6	Shri. NRLK Prasad
		7	Shri K.P Madhu
5	Assistant Executive Engineer	1	Shri. A. Kesavan
		2	Smt. N.S Malini
		3	Smt. Anusha Das J
6	Assistant Engineer (Civil) / DDO	1	Shri. M.L. Raghavan

वर्ष 2013-14 के दौरान राज्यवार मासिक वास्तविक अधिकतम मांग (मे.वा. में)

Statewise Monthly Actual Peak Demand in MW during 2013-14

(Gross Figures in MW)

महीना / Month ↓	States ↓ Actual UR	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	Puduchery	Southern Region			Margin available	Date of Simultaneous Maximum Demand	Regional Minimum Demand	Date of Regional Minimum Demand
							Aggregate	Simulta- neous Maximum Demand	Diversity				
		1	2	3	4	5	6=1+2+3+4+5	7	8=6/7	9=6-7	10	11	12
अप्रैल / Apr-13	Actual	11867	8299	3065	11641	321	35193	33377	1.054	1816	16.04.2013	25589	21.04.2013
	UR	14529	10130	3522	13632	321		39885					
मई / May-13	Actual	11823	8072	3093	12035	332	35355	32927	1.074	2428	03.05.2013	23095	21.05.2013
	UR	13748	9620	3547	13570	342		38266					
जून / June-13	Actual	11101	7605	2927	11854	323	33810	32181	1.051	1629	21.06.2013	23453	02.06.2013
	UR	12708	8642	3202	12460	344		35552					
जुलाई / July-13	Actual	11341	7474	3024	11794	324	33957	31620	1.074	2337	30.07.2013	22390	23.07.2013
	UR	12399	8479	3162	12333	340		35174					
अगस्त / Aug-13	Actual	12048	8409	3130	12092	319	35998	34869	1.032	1129	28.08.2013	22730	16.08.2013
	UR	12110	9145	3303	12371	351		35963					
सितंबर / Sep-13	Actual	12272	7925	3212	12106	322	35837	33960	1.055	1877	27.09.2013	22597	09.09.2013
	UR	12492	8732	3373	12353	343		34880					
अक्टूबर / Oct-13	Actual	12298	8089	3251	12118	319	36075	33692	1.071	2383	01.10.2013	21582	26.10.2013
	UR	12704	8935	3450	12629	350		36171					
नवम्बर / Nov-13	Actual	10988	8376	3296	11017	312	33989	32687	1.040	1302	30.11.2013	21431	04.11.2013
	UR	11066	9358	3599	12363	313		36123					
दिसम्बर / Dec-13	Actual	11810	8880	3333	11863	307	36193	34436	1.051	1757	30.12.2013	23721	02.12.2013
	UR	12087	9741	3525	12864	313		36028					
जनवरी / Jan-14	Actual	12575	9290	3342	12764	317	38288	35024	1.093	3264	29.01.2014	25701	02.01.2014
	UR	12743	10019	3504	13520	318		37991					
फरवरी / Feb-14	Actual	13131	9467	3467	12037	322	38424	35466	1.083	2958	22.02.2014	27222	03.02.2014
	UR	13830	10184	3572	13014	322		37980					
मार्च / March-14	Actual	13621	9401	3588	12650	333	39593	36985	1.071	2608	24.03.2014	27346	09.03.2014
	UR	14203	10127	3686	13817	334		39401					
M.D (Year)	Actual	13621	9467	3588	12764	333		36985	1.032 (Min)		24.03.2014	21431	04.11.2013
M.D Date	Actual	23.03.2014	13.02.2014	18.03.2014	29.01.2014	21.03.2014		24.03.2014	1.093 (Max)				

वर्ष 2013-14 के दौरान राज्यवार मासिक निम्नतम मांग मे.वा. में
Statewise Monthly Minimum Demand in MW during 2013-14

(Gross Figures)

MONTH	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	Puduchery	Southern Region (Simultaneous)
अप्रैल / Apr-13	7101	4826	1802	8380	210	25589
मई / May-13	7239	4383	1718	7705	202	23095
जून / June-13	6731	3856	1259	8625	199	23453
जुलाई / July-13	7064	4359	1445	8829	200	22390
अगस्त / Aug-13	7859	4517	1389	7676	152	22730
सितंबर / Sep-13	8291	3856	1375	7641	130	22597
अक्तूबर / Oct-13	5945	4211	1566	7260	179	21582
नवम्बर / Nov-13	7420	4698	1690	6612	148	21431
दिसम्बर / Dec-13	7772	5163	1652	7449	163	23721
जनवरी / Jan-14	8828	5637	1719	6927	143	25701
फरवरी / Feb-14	9132	6578	1909	8221	172	27222
मार्च / March-14	8034	5309	2017	8976	172	27346
Min. Demand	5945	3856	1259	6612	130	21431
Date	09.10.2013	01.06.13 & 09.09.13	16.06.2013	03.11.2013	12.09.2013	04.11.2013

वर्ष 2013-14 के दौरान राज्यवार मासिक वास्तविक अधिकतम मांग (मे.वा. में)
Statewise Monthly Actual Peak Demand in MW during 2013-14

(Ex-Bus Figs from PSP)

Month	States Actual / UR	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	Puducherry	Southern Region (Simultaneous Max. Demand)
		1	2	3	4	5	6
अप्रैल / Apr-13	Actual	11410	8103	3053	11388	321	32507
	Unrestricted	14072	9934	3510	13380	321	39015
मई / May-13	Actual	11369	7908	3085	11763	332	32090
	Unrestricted	13294	9456	3538	13297	342	37429
जून / June-13	Actual	10723	7438	2913	11652	323	31456
	Unrestricted	12330	8475	3188	12258	344	34828
जुलाई / July-13	Actual	10932	7314	3007	11591	324	30885
	Unrestricted	11989	8318	3145	12131	340	34440
अगस्त / Aug-13	Actual	11717	8256	3116	11851	319	34151
	Unrestricted	11779	8991	3289	12129	351	35245
सितंबर / Sep-13	Actual	11887	7743	3195	11845	322	33161
	Unrestricted	12107	8550	3357	12092	343	34081
अक्तूबर / Oct-13	Actual	11914	7957	3233	11877	319	32968
	Unrestricted	12320	8803	3432	12388	350	35447
नवम्बर / Nov-13	Actual	10591	8167	3286	10697	312	31786
	Unrestricted	10669	9149	3589	12043	313	35222
दिसम्बर / Dec-13	Actual	11365	8680	3324	11577	307	33541
	Unrestricted	11642	9540	3517	12577	313	35133
जनवरी / Jan-14	Actual	12112	9055	3333	12492	317	34129
	Unrestricted	12280	9785	3495	13248	318	37096
फरवरी / Feb-14	Actual	12671	9223	3452	11757	322	34544
	Unrestricted	13370	9940	3557	12734	322	37058
मार्च / March-14	Actual	13162	9168	3573	12355	333	36048
	Unrestricted	13744	9894	3671	13522	334	38464

वर्ष 2013-14 के दौरान मासिक राज्यवार अधिकतम मांग में कमियाँ

Statewise Monthly Peak Demand Shortages during 2013-14

(PSP Figures)

States →	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Puducherry		Southern Region	
Month ↓	SHORTAGE		SHORTAGE		SHORTAGE		SHORTAGE		SHORTAGE		SHORTAGE	
	MW	%	MW	%	MW	%	MW	%	MW	%	MW	%
	1	2	3	4	5	6	7	8	9	10	11	12
अप्रैल / Apr-13	2662	18.92	1831	18.43	457	13.02	1992	14.89	0	0.00	6508	16.68
मई / May-13	1925	14.48	1548	16.37	453	12.80	1534	11.54	10	2.92	5339	14.26
जून / June-13	1607	13.03	1037	12.24	275	8.63	606	4.94	21	6.10	3372	9.68
जुलाई / July-13	1057	8.82	1004	12.07	138	4.39	540	4.45	16	4.71	3555	10.32
अगस्त / Aug-13	62	0.53	735	8.17	173	5.26	278	2.29	32	9.12	1094	3.10
सितंबर / Sep-13	220	1.82	807	9.44	162	4.83	247	2.04	21	6.12	920	2.70
अक्तूबर / Oct-13	406	3.30	846	9.61	199	5.80	511	4.12	31	8.86	2479	6.99
नवम्बर / Nov-13	78	0.73	982	10.73	303	8.44	1346	11.18	1	0.32	3436	9.76
दिसम्बर / Dec-13	277	2.38	860	9.01	193	5.49	1000	7.95	6	1.92	1592	4.53
जनवरी / Jan-14	168	1.37	730	7.46	162	4.64	756	5.71	1	0.31	2967	8.00
फरवरी / Feb-14	699	5.23	717	7.21	105	2.95	977	7.67	0	0.00	2514	6.78
मार्च / March-14	582	4.23	726	7.34	98	2.67	1167	8.63	1	0.30	2416	6.28

वर्ष 2013-14 में विद्युत की राज्यवार मासिक आवश्यकता एवं उपभोग (मि.यू. में)

Statewise Monthly Energy Requirement and Consumption in MU during 2013-14

(Gross Figures in MU)

States →	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Puducherry		Southern Region	
Month ↓	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement
	1	2	3	4	5	6	7	8	9	10	11=1+3+5+7+9	12=2+4+6+8+10
अप्रैल / Apr-13	7701	9223	5071	6319	1772	1925	6891	8322	206	208	21641	25997
मई / May-13	7713	9075	4946	5623	1769	1903	7958	8843	213	215	22599	25659
जून / June-13	6916	7776	4272	4737	1470	1525	7630	7921	204	206	20492	22165
जुलाई / July-13	7102	7835	4442	4893	1594	1606	7912	8120	203	204	21253	22658
अगस्त / Aug-13	7862	7892	4752	5204	1679	1695	7541	7775	193	197	22027	22763
सितंबर / Sep-13	7723	7773	4222	4627	1657	1673	7350	7457	191	193	21143	21723
अक्तूबर / Oct-13	7268	7550	4788	5221	1761	1791	7594	7816	193	204	21604	22582
नवम्बर / Nov-13	7042	7063	5009	5445	1735	1767	6427	7180	177	177	20390	21632
दिसम्बर / Dec-13	7625	7746	5393	5809	1757	1782	7222	7627	182	182	22179	23146
जनवरी / Jan-14	8321	8643	5766	6129	1824	1849	7582	7767	184	184	23677	24572
फरवरी / Feb-14	7770	8379	5420	5778	1718	1736	7048	7398	172	172	22128	23463
मार्च / March-14	8640	9353	5908	6304	2021	2031	8115	8566	202	202	24886	26456
Total	91683	98308	59989	66089	20757	21283	89270	94792	2320	2344	264019	282816

वर्ष 2012-13 एवं 2013-14 में राज्यवार मासिक विद्युत औसत उपभोग
Monthwise Average Daily Energy Consumption in MU during 2012-13 and 2013-14

(आंकड़े / Actuals)

राज्य / States →	आंध्र प्रदेश		कर्नाटक		केरल		तमिल नाडु		पुदुचेरी		दक्षिण क्षेत्र	
मास	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Puducherry		SOUTHERN REGION	
Month ↓	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
अप्रैल / Apr-13	255	257	164	169	56	59	197	230	6	7	678	721
मई / May-13	250	249	163	160	58	57	191	257	7	7	668	729
जून / June-13	229	231	164	142	55	49	232	254	7	7	686	683
जुलाई / July-13	217	229	154	143	54	51	240	255	6	7	671	686
अगस्त / Aug-13	218	254	149	153	53	54	221	243	6	6	647	711
सितंबर / Sep-13	225	257	147	141	55	55	222	245	6	6	655	705
अक्तूबर / Oct-13	233	234	152	154	54	57	215	245	6	6	659	697
नवम्बर / Nov-13	217	235	151	167	54	58	179	214	6	6	607	680
दिसम्बर / Dec-13	230	246	164	174	54	57	192	233	6	6	647	715
जनवरी / Jan-14	244	268	171	186	54	59	218	245	6	6	693	764
फरवरी / Feb-14	245	278	175	194	54	61	218	252	7	6	698	790
मार्च / March-14	258	279	174	191	59	65	219	262	7	7	716	803
औसत / Average	235	251	161	165	55	57	212	245	6	6	669	724
अधिकतम / Max.	258	279	175	194	59	65	240	262	7	7	716	803
न्यूनतम / Min.	217	229	147	141	53	49	179	214	6	6	607	680

वर्ष 2013-14 में विद्युत की राज्यवार मासिक आवश्यकता एवं उपभोग (मि.यू. में)

Statewise Monthly Energy Requirement and Consumption in MU during 2013-14

(EX-Bus Figs from PSP)

राज्य / States →	आंध्र प्रदेश Andhra Pradesh		कर्नाटक Karnataka		केरल Kerala		तमिल नाडु Tamil Nadu		पुदुचेरी Puducherry		दक्षिण क्षेत्र Southern Region	
मास / Month ↓	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement	Actual Consumption	Unrestricted Requirement
	1	2	3	4	5	6	7	8	9	10	11=1+3+5+7+9	12=2+4+6+8+10
अप्रैल / Apr-13	7336	8858	4903	6150	1803	1956	6769	8199	206	208	21017	25371
मई / May-13	7460	8821	4783	5459	1814	1948	7832	8717	213	215	22103	25160
जून / June-13	6688	7547	4123	4588	1491	1546	7568	7858	204	206	20074	21745
जुलाई / July-13	6885	7618	4291	4742	1608	1620	7796	8004	203	204	20783	22187
अगस्त / Aug-13	7658	7689	4624	5076	1679	1695	7446	7681	193	197	21601	22337
सितंबर / Sep-13	7531	7582	4091	4496	1662	1678	7269	7376	191	193	20744	21325
अक्तूबर / Oct-13	7055	7337	4658	5091	1768	1798	7507	7729	193	204	21181	22159
नवम्बर / Nov-13	6874	6896	4850	5286	1769	1801	6310	7062	177	177	19980	21221
दिसम्बर / Dec-13	7519	7640	5190	5606	1803	1827	7104	7509	182	182	21799	22764
जनवरी / Jan-14	8183	8505	5548	5911	1860	1885	7411	7597	184	184	23186	24082
फरवरी / Feb-14	7472	8081	5245	5603	1745	1763	6958	7308	172	172	21591	22928
मार्च / March-14	8375	9089	5746	6142	2050	2060	8016	8468	202	202	24390	25961
Total	89037	95663	58052	64150	21052	21577	87987	93509	2321	2343	258448	277242

Note : Drawl from Central Sector is at ISGS periphery.

वर्ष 2013-14 में राज्यवार मासिक विद्युत कमी Statewise Monthly Shortages in Energy during 2013-14

(PSP Figures)

राज्य / States →	आंध्र प्रदेश Andhra Pradesh		कर्नाटक Karnataka		केरल Kerala		तमिल नाडु Tamil Nadu		पुदुचेरी Puducherry		दक्षिण क्षेत्र Southern Region	
मास / Month ↓	SHORTAGE		SHORTAGE		SHORTAGE		SHORTAGE		SHORTAGE		SHORTAGE	
	MU	%	MU	%	MU	%	MU	%	MU	%	MU	%
	1	2	3	4	5	6	7	8	9	10	11	12
अप्रैल / Apr-13	1522	17.18	1247	20.28	153	7.83	1431	17.45	1.28	0.62	4354	17.16
मई / May-13	1362	15.44	676	12.39	134	6.86	885	10.15	1.58	0.73	3058	12.15
जून / June-13	859	11.39	465	10.13	55	3.54	291	3.70	2.24	1.09	1672	7.69
जुलाई / July-13	733	9.62	451	9.51	12	0.75	208	2.60	0.61	0.30	1404	6.33
अगस्त / Aug-13	31	0.40	452	8.90	16	0.93	234	3.05	3.67	1.87	737	3.30
सितंबर / Sep-13	51	0.67	405	9.01	16	0.96	107	1.45	2.04	1.06	581	2.73
अक्तूबर / Oct-13	282	3.84	434	8.52	30	1.65	222	2.88	10.75	5.28	978	4.41
नवम्बर / Nov-13	22	0.31	436	8.25	32	1.77	752	10.65	-0.03	-0.02	1242	5.85
दिसम्बर / Dec-13	121	1.58	415	7.41	24	1.33	405	5.39	0.00	0.00	965	4.24
जनवरी / Jan-14	322	3.79	363	6.14	25	1.33	186	2.44	0.02	0.01	895	3.72
फरवरी / Feb-14	609	7.54	359	6.40	18	1.04	350	4.79	-0.16	-0.09	1336	5.83
मार्च / March-14	714	7.85	396	6.44	10	0.50	451	5.33	0.16	0.08	1571	6.05

वर्ष 2013-14 के दौरान लोड फैक्टर

System Load Factor in (%) during 2013-14

Sl.No	Particulars	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	Puducherry	Southern Region
1	2	3	4	5	6	7	8
1	Energy Consumption in MU (Ex-Bus Actuals)	89037	58052	21052	87987	2321	258448
2	Maximum Demand in MW (Ex-Bus Actuals)	13162	9223	3573	12492	333	36048
3	Annual Load Factor 2013-14	77.22	71.85	67.26	80.40	79.56	81.84

Details of Power Cuts in Southern Region during 2013-14

A) ANDHRA PRADESH :

1. Maximum Load Shedding during the year 2013-14 : **4,178 MW**
(Apr, 2013)

Total Load Shedding in the State during the year 2013-14 : **6,552 MU**
(includes Industrial load relief of 3419 MU)

2. Power Cuts and Restrictions & Control on Power Supply to Domestic Sector and Power Holidays to Industries :

Load Shedding and Load Restrictions were implemented as shown below in the table. The Power Cuts and Restrictions & Controls on Power Supply were imposed in the state for domestic, Industries and agriculture as shown below :

(a). Power Cuts and Restrictions & Controls imposed in Major cities, Municipalities, Mandals & Villages (28.03.2013 to 30.07.2013) :

Area Imposed →	Hyderabad	Tirupati, Vizag and Warangal	Corporations and District Headquarters	Mandal HQ
Period ↓				
From 28.03.2013	3 Hours (1½ + 1½)		4 Hours (in two spells)	8 Hours (in two spells)
From 16.04.2013	1 Hour	1 Hour	3 Hours (in two spells)	8 Hours (in two spells)
From 04.05.2013	1 Hour	1 Hour	2 Hours (in two spells)	6 Hours (in two spells)
From 23.05.2013	1 Hour	2 Hour	4 Hours (in two spells)	6 Hours (in two spells)
From 05.06.2013	Nil	Nil	Nil	4 Hours (in two spells)
From 06.06.2013	Nil	Nil	Nil	2 Hours (in two spells)
From 15.06.2013	Nil	Nil	Nil	2 Hours (in two spells)
From 02.07.2013	Nil	Nil	Nil	2 Hours (in two spells)

(b). **Power Cuts and Restrictions & Controls imposed in Major cities, Municipalities, Mandals & Villages (31.07.2013 to 31.03.2014) :**

Area Imposed →	Hyderabad	Tirupati, Vizag and Warangal	Corporations and District Headquarters	Mandal HQ
Period ↓				
From 31.07.2013	Nil	Nil	Nil	2 Hours (in two spells)
From 01.08.2013	Nil	Nil	Nil	2 Hours (in two spells)
From 01.09.2013	Nil	Nil	2 Hours (in two spells)	3 Hours in two spells (1½ + 1½) Hours
From 10.02.2014	2 Hours in two spells		3 Hours (in two spells)	6 Hours (in two spells)
From 03.03.2014	3 Hours in two spells		3 Hours (in two spells)	6 Hours (in two spells)

(c). **Power Cuts and Restrictions & Controls imposed for Rural Area & Industries (28.03.2013 to 03.05.2013) :**

Area Imposed →	Rural	Industries
Period ↓		
From 28.03.2013	Lighting Supply during 06:00 PM to 06:00 AM and Day Supply along with Agriculture Supply	As per Hon'ble APERC's Revised Orders on Restriction and Control Measures dated 01.11.2012, Restrictions on Contract Demand and Energy Consumption on various industries is being implemented w.e.f 7 th November 2012 to 30 th April 2013.
From 16.04.2013	Lighting Supply during 06:00 PM to 06:00 AM and Day Supply along with Agriculture Supply	As per Hon'ble APERC's Revised Orders on Restriction and Control Measures dated 17.04.2013, Restrictions on Contract Demand and Energy Consumption on various industries is being implemented w.e.f Meter Reading Date of April 2013 to Meter Reading Date of June 2013

(d). **Power Cuts and Restrictions & Controls imposed for Rural Area & Industries**
(04.05.2013 to 01.07.2013) :

Area Imposed →		
Period ↓	Rural	Industries
From 04.05.2013	Lighting Supply during 06:00 PM to 06:00 AM and Day Supply along with Agriculture Supply	As per Hon'ble APERC's Revised Orders on Restriction and Control Measures dated 17.04.2013, Restrictions on Contract Demand and Energy Consumption on various industries is being implemented w.e.f Meter Reading Date of April 2013 to Meter Reading Date of June 2013
From 23.05.2013	7 Hours	As per Hon'ble APERC's Revised Orders on Restriction and Control Measures dated 17.04.2013, Restrictions on Contract Demand and Energy Consumption on various industries is being implemented w.e.f Meter Reading Date of April 2013 to Meter Reading Date of June 2013
From 05.06.2013	7 Hours	As per Hon'ble APERC's Revised Orders on Restriction and Control Measures dated 17.04.2013, Restrictions on Contract Demand and Energy Consumption on various industries is being implemented w.e.f Meter Reading Date of April 2013 to Meter Reading Date of June 2013
From 06.06.2013	6 Hours	As per Hon'ble APERC's Revised Orders on Restriction and Control Measures dated 17.04.2013, Restrictions on Contract Demand and Energy Consumption on various industries is being implemented w.e.f Meter Reading Date of April 2013 to Meter Reading Date of June 2013
From 15.06.2013	6 Hours	As per Hon'ble APERC's Amendment Orders on Restriction and Control Measures dated 15.06.2013, Supply enhanced from 66% to 80% from 15.6.2013 and will be in force till the Meter Reading Date of September, 2013

(e). Power Cuts and Restrictions & Controls imposed for Rural Area & Industries
(02.07.2013 to 31.03.2014) :

Area Imposed →	Rural	Industries
Period ↓		
From 02.07.2013	6 Hours	As per Hon'ble APERC's Amendment Orders on Restriction and Control Measures dated 02.07.2013, Supply enhanced from 80% to 100% during off peak hours and 40% to 50% during peak hours and will be in force from the Meter Reading Date of July, 2013 to Meter Reading Date of September, 2013
From 31.07.2013	6 Hours	As per Hon'ble APERC's Amendment Orders on Restriction and Control Measures dated 02.07.2013, Supply enhanced from 80% to 100% during off peak hours and 40% to 50% during peak hours and will be in force from the Meter Reading Date of July, 2013 to Meter Reading Date of September, 2013. As per Hon'ble APERC's orders dated 31.07.2013, Restriction and Control Measures completely lifted from 01.08.2013
From 01.08.2013	6 Hours	Nil
From 01.09.2013	6 Hours	Nil
From 10.02.2014	Lighting Supply during 06:00 PM to 06:00 AM and Day Supply along with Agriculture Supply	Nil
From 03.03.2014	Lighting Supply during 06:00 PM to 06:00 AM and Day Supply along with Agriculture Supply	One Day Power Holiday in a week

3. Power supply to Agriculture Sector

i) Three phase supply : 7 hours supply in one or two spells.

B) KARNATAKA :

There was no Energy and Power Cut to any of the category of consumers during the year 2013-14. However there was scheduled and unscheduled Load Shedding, made as and when required to keep the frequency with in IEGC limits.

Maximum Load Shedding during the year 2013-14 = **2,800 MW**
(Apr, 2013)

Total Load Shedding during the year 2013-14 = **6,044 MU**

All ESCOMs had made arrangement for supply of power as follows :

Agricultural Consumers : 6 hours continuous 'Three Phase Power Supply' and 6 - 12 hours single phase power supply and for the rest of hours no supply.

Unscheduled Load Shedding : Unscheduled Load Shedding was made as and when required to keep the frequency with in IEGC limits

C) KERALA :

Maximum Load Shedding during the year 2013-14 : **900 MW**
(Nov, 2013)

Total Load Shedding in the State during the year 2013-14 : **506 MU**

No Power Cut was imposed during the year 2013-14. Load Shedding and Load Restrictions were implemented as and when necessitated.

The month wise Load Restriction details are as follows :

Kerala : Month wise Load Restriction Details		
Month	Load restriction in MU	Remarks
Apr-13	141.00	Imposed One hour cyclic load shedding in all feeders during day time from 9:00 AM to 5:00 PM and lifted half hour load shedding in the morning peak with effect from 18.04.2013
May-13	126.17	
Jun-13	52.20	One hour day time cyclic load shedding in all feeders from 9:00 AM to 5:00 PM was lifted with effect from 12.06.2013 and half hour cyclic load shedding during evening peak hours was also lifted with effect from 16.06.2013
Jul-13	12.04	
Aug-13	17.83	
Sep-13	16.30	
Oct-13	27.49	
Nov-13	33.00	
Dec-13	26.81	
Jan-14	24.79	
Feb-14	19.86	
Mar-14	8.75	
Total	506.21	

D) TAMIL NADU :

Maximum Load Shedding during the year 2013-14 : **3,901 MW**
(Apr, 2013)

Total Load Shedding in the State during the year 2013-14 : **5,455 MU**

a) Power Cut :

1. From 01.04.2013 to 13.08.2013, 40% Power Cut on Base Demand and Energy for all HT Industrial and Commercial Services.
2. From 14.08.2013 to 30.09.2013, 40% Power Cut to HT Industrial & Commercial Services was totally relaxed other than peak hours ie. 18:00 to 22:00 Hours.
3. From 01.10.2013 to 31.03.2014, 20% Power Cut on Base Demand and Energy for all HT Industrial and Commercial Services.

b) Other Restrictions and Controls :

1. Agricultural Loads were given 9 hours supply (6 hours during day time and 3 hrs during night time).
2. Lighting peak restrictions on HT and LT Industrial Consumers.
From 01.04.2013 to 13.08.2013 : 90%
From 14.08.2013 to 30.09.2013 : 40%
From 01.10.2013 to 31.03.2014 : 90%
3. 3 Hrs load shedding for Urban and Rural areas in rotation from 06:00 AM to 06:00 PM and 2 Hr Load Shedding for Chennai from 08:00 AM to 06:00 PM in rotation.

Category-wise Energy Sold and T & D Loss of States in Southern Region

Andhra Pradesh T & D Loss → (inclusive of SR Losses)	T&D Loss		T&D Loss	
	16.37%		15.92%	
Category	2012-13		2013-14	
	Energy sold in MU	%	Energy sold in MU *	%
L.T				
Domestic Supply Cat.I	15833.70	23.13	16627.00	23.46
Non Domestic Supply Cat.II	4167.42	6.09	4271.00	6.03
Industrial Supply Cat.III	3065.68	4.48	2810.00	3.96
Cottage Industries Supply Cat.IV	48.04	0.07		0.00
Irrigation & Agri. Cat.V	18836.75	27.51	18849.00	26.59
Public Lighting Cat.VI	1749.16	2.55		0.00
General Purpose Cat.VII	186.80	0.27	1853.00	2.61
Temporary Supply Cat.VIII	3.21	0.00		0.00
Total L.T	43890.76	64.10	44410.00	62.65
H.T				
Industrial Segregate Cat.I	18072.39	26.39		0.00
Industrial Non- Segregate Cat.II	2674.58	3.91		0.00
Aviation Activity at Airports Cat - III	51.40	0.08		0.00
Irrigation & Agr. Cat.IV	728.83	1.06		0.00
Railway Traction Cat.V	1774.06	2.59	26474.00	37.35
Colony Lighting	279.52	0.41		0.00
Electric Co-Operative Societies	446.83	0.65		0.00
Temporary Supply	40.14	0.06		0.00
RWS-CAT-VII	510.79	0.75		0.00
Total H.T	24578.54	35.90	26474.00	37.35
GRAND TOTAL (L.T + H.T)	68469.30	100.00	70884.00	100.00

Karnataka T & D Loss →	T&D Loss		T&D Loss	
Category	2012-13		2013-14	
	Energy sold in MU	%	Energy sold in MU *	%
L.T				
LT-1 : BJ/KJ	515.16	1.13	549.77	1.15
LT-2 (a & b) : Lighting & AEH	8637.22	18.96	9136.03	19.11
LT-3 : Coml.Lighting	2536.93	5.57	2575.58	5.39
LT-4(a) : IP Sets(10 HP & Below)	16717.19	36.70	17381.27	36.35
LT-4(b) : IP Sets(Above 10 HP)	37.35	0.08	75.44	0.16
LT-4(c) : Pvt. Horticulture	25.99	0.06		
LT-5 a to d : LT Industrial	1796.63	3.94	1831.03	3.83
LT-6 : Water supply	982.59	2.16	1423.08	2.98
LT-6(i) : Street Lights	795.17	1.75	820.19	1.72
LT-7 : Temporary Supply	209.27	0.46	209.17	0.44
Total L.T	32253.50	70.80	34001.57	71.11
H.T				
HT-1 : Water Supply	1191.31	2.61	1335.88	2.79
HT-2(a) : HT Industrial	8112.75	17.81	8495.23	17.77
HT-2(b) : Commercial	3417.65	7.50	3068.31	6.42
HT-3(a) : Lift Irrigation	324.27	0.71	347.45	0.73
HT-3(b) : Horticultural Farms / Hospitals	27.20	0.06	221.80	0.46
HT-4 : Residential Apartments	180.94	0.40	225.20	0.47
Hukeri Ele Co-op. Society	43.21	0.09		0.00
HT-KPC Installations / Temp. Supply	5.94	0.01	117.34	0.25
Total H.T	13303.28	29.20	13811.21	28.89
GRAND TOTAL (L.T + H.T)	45556.78	100.00	47812.77	100.00

* CESCO, Mysore data only shown in 2013-14. Other DISCOM data awaited.

Category-wise Energy Sold and T & D Loss of States in Southern Region

KERALA T & D Losses →	T&D Loss		T&D Loss	
	15.28%			
Category	2012-13		2013-14	
	Energy sold in MU	%	Energy sold in MU	%
Domestic	8313.36	49.37		
Commercial	2224.08	13.21		
Industrial	1101.96	6.54		
Irrigation & De-watering	306.08	1.82		
Public Lighting	313.20	1.86		
LT Total	12258.68	72.80		
HT I Industrial	1682.95	9.99		
HT II Non Industrial Non Commercial	125.45	0.75		
HT - Irrigation & De-watering	8.35	0.05		
EHT - I & II	1217.58	7.23		
HT IV -Commercial	870.81	5.17		
Railway Traction	173.67	1.03		
Bulk Supply	500.76	2.97		
Total H.T	4579.57	27.20		
Grand Total	16838.24	100.00		

TAMIL NADU T&D Loss →	16.40%		18.00%	
Category-Wise	2012-13		2013-14	
	Energy sold in MU	%	Energy sold in MU	%
Domestic	17540	33.79	20201	33.19
Commercial	6153	11.85	7123	11.70
Public Lighting & Water Works	1652	3.18	1917	3.15
Industries	12104	23.32	15641	25.70
Agriculture	11052	21.29	12301	20.21
Others	3005	5.79	3445	5.66
Sales to others state (Incl.Puduchery)	408	0.78	237	0.39
Total	51914	100.00	60865	100.00

Puducherry T&D Loss →	12.50%		12.50%	
Category-Wise	2012-13		2013-14	
	Energy sold in MU	%	Energy sold in MU *	%
Domestic	519.31	22.11	570.92	23.93
Commercial	170.89	7.28	170.46	7.14
Street Light	24.67	1.05	26.88	1.13
Agriculture	56.64	2.41	56.60	2.37
LT Industrial	197.47	8.41	251.63	10.54
HT Category - I	977.75	41.63	929.28	38.94
HT Category - II	53.49	2.28	51.49	2.16
HT Category - III	337.38	14.37	309.00	12.95
Temp. Supply	10.89	0.46	20.00	0.84
Total	2348.49	100.00	2386.26	100.00
UI Sales to Outside State	516.47		92.53	
Grand Total	2864.96		2478.79	

31 मार्च 2014 के अनुसार, के.वि.प्रा. के प्रकार, दक्षिण क्षेत्र की स्थापित क्षमता (मे.वा. में)

Southern Region Installed Capacity in MW as on 31st March 2014 (as per CEA)

राज्य State	जल Hydro	तापीय Thermal (Coal)	गैस Gas	डीजल Diesel	नाभिकीय Nuclear	विंड+आर.ई.एस Wind + R.E.S	कुल Total
आंध्र प्रदेश / Andhra Pradesh	3734.53	5842.5	3370.40	36.80	0.00	1294.49	14278.72
कर्नाटक / Karnataka	3599.80	4780.00	0.00	234.42	0.00	3693.19	12307.41
केरल / Kerala	1881.50	0.00	174.00	256.44	0.00	193.52	2505.46
तमिल नाडु / Tamil Nadu	2182.20	5320.00	1026.30	411.66	0.00	7946.13	16886.29
पुदुचेरी / Puducherry	0.00	0.00	32.50	0.00	0.00	0.00	32.50
केन्द्रीय क्षेत्र / Central Sector	0.00	10640.00	359.58	0.00	1320.00	0.00	12319.58
दक्षिण क्षेत्र / Southern Region	11398.03	26582.50	4962.78	939.32	1320.00	13127.33	58329.96

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र की उत्पादन
Generation for the year 2013-14 in the Southern Region

Sl. No.	Name of the Power Station	Installed Capacity at the beginning of the Year	Effective Capacity	Additions during the Year	Total at the end of the Year	Generation during the Year	Auxiliary consumption during the year
		MW	MW	MW	MW	MU	MU
1	2	3	4	5	6=4+5	7	8
आंध्र प्रदेश / Andhra Pradesh :							
जल / Hydro :							
1	Machkund	3x23 + 3x17 (70% share)	84.00		84.00	310.72	1.41
2	Tungabhadra Dam & Hampi	8 x 9 (80%share)	57.60		57.60	155.19	1.55
3	Upper Sileru	4 x 60	240.00		240.00	458.16	2.14
4	Donkarayi	1 x 25	25.00		25.00	116.21	1.66
5	Lower Sileru	4 x115	460.00		460.00	1268.49	5.38
6	Srisaillam RBPH	7x110	770.00		770.00	1477.60	3.43
7	Srisaillam LBPH	6x150	900.00		900.00	1330.61	7.35
8	Nagarjunasagar	1x110+7x100 .80	815.60		815.60	1350.53	6.77
9	Nagarjunasagar RCPH	3 x 30	90.00		90.00	211.60	3.41
10	Nagarjunasagar LCPH	2 x 30	60.00		60.00	97.76	0.95
11	Nizamsagar	2 x 5	10.00		10.00	13.10	0.13
12	Pochampad	4 x 9	36.00		36.00	85.05	0.45
13	Penna Ahobilam	2 x 10	20.00		20.00	5.18	0.36
14	Mini Hydel + APTRIPCO (1.2 MW)	4+1+2+1+4.16+1.2	13.36		13.36	9.53	0.00
15	Singur	2 x 7.5	15.00		15.00	4.85	0.92
16	Priyadarshini Jurala	6x39	234.00		234.00	270.84	5.07
कुल / Total Hydro					3830.56	7165.43	40.99
तापीय / Thermal :							
1	Kothagudem A	4 x 60	240.00		240.00	1548.95	150.16
2	Kothagudem B	2x120	240.00		240.00	1517.81	165.54
3	Kothagudem C	2x120	240.00		240.00	1219.21	134.07
4	Kothagudem D (Stg - V)	2 x 250	500.00		500.00	3619.68	349.28
5	Kothagudem Stg - VI (U - 11)	1 x 500	500.00		500.00	3398.59	172.37
5	Ramagundam B	1 x 62.5	62.50		62.50	445.77	41.77
6	Vijayawada 1	2 x 210	420.00		420.00	2745.68	258.88
7	Vijayawada 2	2 x 210	420.00		420.00	3165.98	301.56
8	Vijayawada 3	2 x 210	420.00		420.00	3140.74	297.14
9	Vijayawada 4	1x500	500.00		500.00	3781.02	185.07
10	Rayalaseema-I	2 x 210	420.00		420.00	2624.35	285.76
11	Rayalaseema-II	2 x 210	420.00		420.00	3009.59	268.21
12	Rayalaseema-III	1x210	210.00		210.00	1422.75	146.72
13	Kakatiya	1x500	500.00		500.00	3155.09	200.71
कुल / Total Thermal					5092.50	34795.21	2957.24

संलग्नक / ANNEXURE - VI (CONTD)

1	2	3	4	5	6	7	8
	गैस / Gas (Joint Sector) :						
	Vijeswaram Stage I	2x33 + 1x34	100.00		100.00	135.02	3.60
	Vijeswaram Stage II	172	172.00		172.00	914.89	29.85
	कुल / Total Gas				272.00	1049.91	33.45
	सोलार / Solar (State) →		1.00		1.00	0.00	0.00
	विंड मिल (राज्य) / Wind Mill (State) →		2.00		2.00	0.00	0.00
	निजी क्षेत्र / Private Sector :						
	A. IPPs :						
1	GVK	46+46+49+75.5	216.82		216.82	984.340	29.530
2	GVK - II	220	220.00		220.00	2.57	0.08
3	Spectrum	46.8 + 46.1 + 46.1 + 68.88	208.31		208.31	1089.86	32.70
4	LANCO	2x115 + 1x121.49	351.49		351.49	1440.65	43.22
5	Reliance (BSES)	140 + 80	220.00		220.00	483.73	14.51
6	GMR Vemagiri	1x137 + 1x233	370.00		370.00	178.59	5.36
7	Gouthami	2x145 + 1x174	464.00		464.00	0.00	0.00
8	Konaseema	2x145 + 1x174	444.08		444.08	1.59	0.05
	Sub Total (IPPs)				2494.70	4181.32	125.44
	B. Non Conventional Sources :						
1	विंड मिल / Wind Mill IPP	431.29	431.29	232.60	663.89	805.39	
2	Mini Hydro	105.64	105.64	9.60	115.24	369.85	
3	Waste Heat Rec.Co.Gen(RCL)	41	41.00		41.00	286.51	
4	Isolated Gas Wells	27.04	27.04		27.04	0.00	
5	Mini Power Plants	78.79	78.79		78.79	39.98	
6	Co.Gen + Bio Mass + Others	562.26	562.26	71.04	633.30	3009.48	
7	Captive Power Plants (CPPs)					2192.52	
8	सोलार / Solar (Private) #	Cuddapah, Ananthpur, Mehboobnagar & Others	23.75	53.88	77.63	100.59	
	Sub Total (NCE)				1636.89	6804.32	
	C. MPP : GMR (BMPP)				0.00	0.00	
	कुल / Total Private Sector				4131.59	10985.64	
	# Includes Solar Power of 2.56 MU from NTPC, Ramagundam and APGenco						
	केन्द्रीय क्षेत्र / Central Sector :						
	NTPC/Simhadri Stg - I (U 1&2)	2 x 500	1000.00		1000.00	7558.83	396.84
	एन.टी.पी.सी सोलार पवर / Solar bundled NVVN Power from NTPC, Ramagundam :			10.00	10.00		
	कुल / Total (State)				14339.65	61555.02	3428.52
	<u>कर्नाटक / Karnataka :</u>						
	जल / Hydro :						
1	Sharavathi	10 x 103.5	1035.00		1035.00	5537.12	11.10
2	Linganamakki Dam PH	2 x 27.5	55.00		55.00	265.90	0.44
3	Nagjhari (NPH)	5x150 + 1x135	885.00		885.00	2616.74	33.57
4	Supa	2 x 50	100.00		100.00	465.77	2.74
5	Varahi	4 x 115	460.00		460.00	1312.08	11.11
6	Bhadra	1x7 + 2x12 + 1x2+1x6	39.20		39.20	63.10	0.39
7	Sivasamudram	6x3 + 4x6	42.00		42.00	216.60	2.88
8	Shimsha	2 x 8.6	17.20		17.20	67.83	0.14
9	Jog (MGHES)		139.20		139.20	264.70	1.23
10	Munirabad		28.00		28.00		
11	T.B.Dam & Hampi	8 x 9 (20% share)	14.40		14.40		
12	Ghataprabha (GDPH)	2 x 16	32.00		32.00	81.82	1.47
13	Mani Dam	2 x 4.5	9.00		9.00	32.87	0.20
14	Mini Hydro (Sirwar+Ganekal+Kalamala)	1+0.40 + 0.35	1.75		1.75		
15	Small Hydro				0.00		
16	Mallapur	2 x 4.5	9.00		9.00		
17	Kadra	3x50	150.00		150.00	360.81	9.02
18	Kodasalli	3 x 40	120.00		120.00	324.60	8.65
19	Gerusoppa (Sharavathi Tail Race)	4x60	240.00		240.00	613.06	0.85
20	Almatti	1x15+5x55	290.00		290.00	503.15	2.27
	कुल / Total Hydro				3666.75	12726.14	86.08

संलग्नक / ANNEXURE - VI (CONTD)

1	2	3	4	5	6	7	8
	तापीय / Thermal :						
1	Raichur TPS	(7 x 210) + (1 x 250)	1720.00		1720.00	9799.28	997.88
2	Bellary TPS (Unit 1&2)	2 x 500	1000.00		1000.00	6029.67	380.32
	कुल / Total Thermal				2720.00	15828.95	1378.20
	डीजल / Diesel :						
1	Yelahanka	6 X 21.32	127.80		127.80	0.00	0.00
	विंड मिल (राज्य) / Wind Mill (State) :						
1	Kappatagudda		4.55		4.55	12.70	
	सोलार / Solar :						
1	Yalesandra (Kolar) + Itnal (Belgaum) + Yapaldinni (Raichur) + Belakawadi (Mandya)	3 + 3 + 3 + 5 = 14	14.00		14.00	17.97	0.136
	निजी क्षेत्र / Private Sector :						
	Major IPPs :						
	1. Rayalaseema Alkalies		27.80		27.80	0.00	0.00
	2. Tata Electric		81.30		81.30	0.00	0.00
	3. UPCL, Uduppi (U - 1 & 2)	2 x 600	1200.00		1200.00	6806.03	429.52
	4. ITPL (Diesel)	9	9.00		9.00	0.00	
	Minor IPPs (#) :						
	आई.पी.पी / IPP (Cogeneration)		1054.00		1054.00	3608.33	
	Bio Mass	#	106.00	23.00	129.00	2011.32	
	आई.पी.पी / IPP (Mini Hydel)	#	673.00	20.00	693.00		
	सोलार (आई.पी.पी) / Solar			31.00	31.00	19.55	
	विंड मिल / Wind Mill IPP		2099.50	116.50	2216.00	4540.99	
	CPPs :						
	Jindal (Core Gas) + Other CPPs \$	(2 x 130) + (4 x 300)	1460.00		1460.00	7539.16	576.87
	RES CPPs + Others #		508.00	125.00	633.00	888.07	
	कुल (Total IPPs / CPPs)				7534.10	25413.45	1006.39
	कुल / Total (State)				14067.20	53999.20	2470.80
	# Total Generation by Co-gen, Bio Mass, IPP Mini Hydel, & CPPs is 2011.324 MU						
	\$ JINDAL's total Injection into Grid = 3031.04 MU and 888.07 MU exported from Karnataka by other IPPS						
	केरल / Kerala :						
	जल / Hydro :						
1	Kuttiadi + Extension Scheme	(3x25) + (1x50) + (2x50)	225.00	0.00	225.00	842.10	3.01
2	Poringalkuthu	4x8	32.00	0.00	32.00	122.83	0.26
3	PLBE	1x16	16.00	0.00	16.00	114.03	0.22
4	Sholayar	3x18	54.00	0.00	54.00	233.63	0.99
5	Idamalayar	2x37.5	75.00	0.00	75.00	385.99	0.31
6	Pallivasal	(3x5) + (3x7.5)	37.50	0.00	37.50	215.53	8.77
7	Sengulam	4x12	48.00	0.00	48.00	141.90	0.13
8	Panniar	2x16	32.00	0.00	32.00	168.67	0.76
9	Neriamangalam+NES	(3x17.5) + 25	77.50	0.00	77.50	365.76	0.70
10	Lower Periyar	3x60	180.00	0.00	180.00	600.75	1.77
11	Idukki	6x130	780.00	0.00	780.00	2741.88	10.96
12	Sabarigiri *	4x55+1x60	280.00	0.00	280.00	1635.44	4.42
13	Kakkad	2x25	50.00	0.00	50.00	247.65	1.05
14	Kallada	2x7.5	15.00	0.00	15.00	67.77	0.21
15	Peppara	3	3.00	0.00	3.00	7.64	0.04
16	Madupetty	2	2.00	0.00	2.00	6.06	0.04
17	Malampuzha	2.5	2.50	0.00	2.50	4.39	0.03
18	Chembukadavu Stage I & II	(3x0.9) + (3x1.25)	6.45	0.00	6.45	12.32	0.04
19	Urumi I & II	(3x1.25) + (3x0.8)	6.15	0.00	6.15	13.79	0.05
20	Malankara	3 x 3.5	10.50	0.00	10.50	30.39	0.29
21	Lower Meenmutty	(2x1.5) + (1x0.5)	3.50	0.00	3.50	5.48	0.06
22	Kuttiady Tail race	3 x 1.25	3.75	0.00	3.75	8.00	0.13
23	Poozhithode	3 x 1.6	4.80	0.00	4.80	12.02	0.06
24	Ranni - Perunadu	2 x 2	4.00	0.00	4.00	9.15	0.05
25	Peechi	1 x 1.25		1.25	1.25	3.34	0.06
	कुल / Total Hydro			1.25	1949.90	7996.49	34.43

* 50 MW Unit of Sabarigiri dismantled. Hence not included in Installed Capacity.

संलग्नक / ANNEXURE - VI (CONTD)

1	2	3	4	5	6	7	8
	डीजल / Diesel :						
1	BDPP	5x21.32	106.60	0.00	106.60	28.98	1.60
2	KDPP	8x16	128.00	0.00	128.00	191.84	5.07
	कुल / Total Diesel		234.60		234.60	220.83	6.67
	विंड मिल/ Wind Mill (State) →	2.025	2.03	0.00	2.03	1.80	0.00
	RGCCPP-NTPC-Kayamkulam	(2x116.6) + (1x126.38)	359.58	0.00	359.58	968.34	22.14
	निजी क्षेत्र / Private Sector :						
1	Maniyar HEP (Captive)*	3 x 4	12.00	0.00	12.00	39.82	0.11
2	Kuthungal HEP (Captive)*	3 x 7	21.00	0.00	21.00	42.64	0.16
3	BSES (Thermal-IPP)	(3x40.5) + (1x35.5)	157.00	0.00	157.00	338.15	1.46
4	KPCL,Kasargode (Thermal-IPP)	3 x 7.31	21.93	0.00	21.93	0.08	0.08
5	Ramakkelmed (Wind IPP)	19 x 0.75	14.25	0.00	14.25	33.29	0.03
6	Agali (Wind IPP)	31 x 0.6	18.60	0.00	18.60	32.98	0.14
7	Ullumkal (IPP Hydro)	2 x 3.5	7.00	0.00	7.00	24.19	0.19
8	MPS Steel (IPP-Co gen.)	1 x 10	10.00	0.00	10.00	26.18	0.21
9	Iruttukanam (IPP Hydro)	3 x 1.5	4.50	0.00	4.50	25.31	1.28
10	Karikkayam (IPP Hydro)			3 x 5.0	15.00	17.21	0.01
11	Philips Carbon Black (Co-Gen)	1 x 10	10.00	0.00	10.00	23.17	1.28
	कुल / Total Private Sector		276.28	0.00	291.28	603.03	4.94
	कुल / Total (State)				2837.39	9790.49	68.18
	* Wheeling through KSEB system						
	तमिल नाडु / Tamil Nadu :						
	I. जल / Hydro :						
1	Pykara	3X6.65+1X11+2X14 = 58.95	58.95		58.95	62.53	0.42
2	Pykara Micro Hydel	1 X 2 = 2	2.00		2.00	9.27	0.09
3	PUSHEP	3 X 50 = 150	150.00		150.00	399.31	2.83
4	Moyar	3X12 = 36	36.00		36.00	148.42	0.52
5	Maravakandi Micro Hydel	1X0.75 = 0.75	0.75		0.75	0.86	0.02
6	Parsonsvally	1X30 = 30	30.00		30.00	42.70	0.19
7	Kundah - 1	3X20 = 60	60.00		60.00	270.03	0.72
8	Kundah - 2	5X35 = 175	175.00		175.00	661.28	1.43
9	Kundah - 3	3X60 = 180	180.00		180.00	380.62	1.97
10	Kundah - 4	2X50 = 100	100.00		100.00	142.59	0.25
11	Kundah - 5	2X20 = 40	40.00		40.00	73.71	0.34
12	Mettur Dam	4X12.5 = 50	50.00		50.00	104.72	0.31
13	Mettur Tunnel	4X50 = 200	200.00		200.00	356.64	0.58
14	LMHEP-Barrage-1	2X15 = 30	30.00		30.00	74.17	0.96
15	LMHEP-Barrage-2	2X15 = 30	30.00		30.00	66.52	0.68
16	LMHEP-Barrage-3	2X15 = 30	30.00		30.00	64.75	0.75
17	LMHEP-Barrage-4	2X15 = 30	30.00		30.00	52.72	0.58
18	Bhavani Kattalai PH - 1	2X15 = 30	30.00		30.00	133.05	1.15
19	Bhavani Kattalai PH - 2	2X15 = 30	30.00		30.00		
20	Bhavani Kattalai PH - 3				30.00		
20	Bhavanisagar RBC	2X4 = 8	8.00	30.00	8.00	13.75	0.05
21	Bhavani Sagar Micro Hydel	4X2 = 8	8.00		8.00	24.91	0.10
22	Poonachi Micro	1X2 = 2	2.00		2.00	5.00	0.03
23	Sathanur Micro	1X7.5 = 7.5	7.50		7.50	1.88	0.04
24	Mukurthy Micro	2X0.35 = 0.7	0.70		0.70	1.94	0.03
25	Thirumoorthy Micro	3X0.65 = 1.95	1.95		1.95	0.53	0.02
26	Lower Aliyar	2X1.25 = 2.5	2.50		2.50	4.95	0.05
27	Amaravathy	2x2 = 4	4.00		4.00	4.70	0.08
28	Perunchani	2X0.65 = 1.30	1.30		1.30	0.98	0.01
29	Periyar	(2 x 35) + (2 x 42) = 154	154.00	7.00	161.00	454.37	1.79
30	Vaigai Micro Hydel	2X3 = 6	6.00		6.00	15.18	0.10
31	Periyar Vaigai Micro - 1	2 x 2 = 4	4.00		4.00	12.21	0.17
32	Periyar Vaigai Micro - 2	2 x 1.25 = 2.5	2.50		2.50		
33	Suruliyar	1X35 = 35	35.00		35.00	100.46	0.36
34	Papanasam	4X8 = 32	32.00		32.00	137.67	0.82
35	Servalar	1X20 = 20	20.00		20.00	50.14	0.10
36	Sarkarpathy	1X30 = 30	30.00		30.00	137.98	0.11
37	Aliyar	1X60 = 60	60.00		60.00	144.17	0.46
38	Kadamparai	4X100 = 400	400.00		400.00	504.50	3.57
39	Sholayar-1	2X35 = 70	70.00		70.00	195.28	0.44
40	Sholayar-2	1X25 = 25	25.00		25.00	71.81	0.22
41	Kodayar-1	1X60 = 60	60.00		60.00	112.66	0.34
42	Kodayar-2	1X40 = 40	40.00		40.00	46.25	0.29
	कुल / Total Hydro				2274.15	5085.19	22.97

संलग्नक / ANNEXURE - VI (CONTD)

1	2	3	4	5	6	7	8
	II. तापीय / Thermal :						
1	Ennore TPS	(2X60) + (3X110) = 450	450.00		450.00	1206.52	195.22
2	North Chennai TPS	3 X 210 = 630	630.00		630.00	4102.24	382.17
3	Tuticorin TPS	5 X 210 = 1050	1050.00		1050.00	7891.09	638.47
4	Mettur TPS	4 X 210 = 840	840.00		840.00	6478.55	550.45
5	NCTPS, Stage-II, U - 1, Chennai	1 x 600 = 600	600.00		600.00	2126.12	180.72
6	MTPS, Stg-III, Mettur	1 x 600 = 600	600.00		600.00	1978.30	168.16
	कुल / Total Thermal				4170.00	23782.82	2115.19
	III. गैस / Gas :						
1	Basin Bridge	4X30 = 120	120.00		120.00	0.85	1.01
2	Kovil Kalappal	(1X70) + (1X37.88) = 107.88	107.88		107.88	497.92	41.30
3	Vazhuthur	(1X61) + (1X34) = 95	95.00		95.00	729.33	43.55
4	Vazhuthur Phase II	(1X60) + (1X32) = 92	92.00		92.00	526.33	33.40
5	Kuttalam	(1X64) + (1X37) = 101	101.00		101.00	641.37	47.22
	कुल / Total Gas				515.88	2395.80	166.47
	IV. विंड मिल / Wind Mill (State) + V. सोलार / Solar (State)	17.555	17.55		17.55	12.58 0.000	
	VI. निजी क्षेत्र / Private Sector :						
1	GMR	4 X 49 = 196	196.00		196.00	804.29	
2	Samalpatti	15.094 X 7 = 105.66	105.66		105.66	299.99	
3	Madurai Power Corp.Ltd	15.143 X 7 = 106	106.00		106.00	345.81	
4	Pillai Perumal Nallur	330.5	330.50		330.50	1426.82	
5	STCMS	250	250.00		250.00	1721.14	
6	Aban (Lanco Tanjore P.C.L)	74.4 + 38.81 = 113.2	113.21		113.21	699.38	
7	Penna (Pioneer)	38+14.8 = 52.8	52.80		52.80	363.44	
8	TCPL						
9	Hi-tec						
10	CPCL (Manali)	67.90	67.90		67.90		
11	Other CPPS					507.74	
12	CPP purchase thro traders					6384.99	
13	Co-Generation**	637.40	637.40	22.00	659.40	839.91	
14	VII. विंड मिल/ Wind Mill IPP	6970.63	6970.63	174.60	7145.23	10917.65	
15	Bio-mass**	169	169.00	8.40	177.40	5.47	
16	Solar Private	15	15.00	2.00	17.00	18.59	
	कुल / Total Private Sector				9221.10	24335.22	
	कुल / Total (State)				16198.68	55611.61	
	VIII. एन.टी.पी.सी सोलार पवर / NTPC, Ramagundam Solar : *						
	IX. नैवेली लिग्नाइट कारपोरेशन / Neyveli Lignite Corporation :						
	Neyveli TS I	6x50 + 3x100	600.00		600.00	4058.60	463.63
	Total (State) + NLC TS I + Solar NTPC				16798.68	59670.212	
	<u>पुदुचेरी / Puducherry :</u>						
	Karaikal						
	Gas + Steam	22.9 + 9.6 = 32.5	32.50		32.50	256.97	15.72
	<u>अंतर राजीय उत्पादन केंद्र / I.S.G.S :</u>						
1	Ramagundam STPS	3x200 + 4x500	2600.00		2600.00	19746.23	1281.00
2	Talcher Stage-II (NTPC)	4x500	2000.00		2000.00	14476.67	832.41
3	Simhadri Stage II (U-3&4) 2x500 MW	2x500	1000.00		1000.00	7125.66	374.10
4	Vallur, NTECL	1x500	500.00	500.00	1000.00	3809.59	294.77
5	Neyveli TS II	7 x 210	1470.00		1470.00	11179.12	1074.79
6	Neyveli TS I (Expansion)	2x210	420.00		420.00	3292.08	278.53
7	MAPS (Kalpakkam)	1 x 220 +1 x 220	440.00		440.00	2115.00	223.00
8	Kaiga- Stage I	2 x 220	440.00		440.00	3326.86	299.68
9	Kaiga- Stage II	2 x 220	440.00		440.00	3212.22	301.43
10	KKNPP, Kudankulam	CoD not declared during 2013-14			0.00	1105.62	213.40
	कुल / Total Central Sector				9810.00	69389.05	5173.11

संलग्नक / ANNEXURE - VI (CONTD)

1	2	3	4	5	6	7	8
	आई.एस.टी.एस से जुड़े व्यापारी विद्युत संयंत्र / Merchant Power Plants directly connected to ISTS :						
1	LANCO	(1x233) + (1x133)	366.00		366.00	0.00	0.00
2	SEPL, Simhapuri	2x150	300.00	150.00	450.00	2203.58	202.84
3	MEPL, Thamminapatnam (Meenakshi)	1x150	150.00	150.00	300.00	1445.06	118.02
					1116.00	3648.64	320.86
	<u>दक्षिण क्षेत्र / Southern Region :</u>						
1	Hydro					32973.25	
2	Thermal + Gas + Diesel					154194.25	
3	Nuclear					9759.70	
4	Wind Mill + Solar (State/Central)					45.05	
5	IPPs/CPPs					61337.34	
	कुल / Grand Total for the Region				59001.41	258309.59	

* TN purchase of 35,369 MU from NVVN Solar bundled Energy is included in Bilateral
Note : Installed Capacity includes CPPs

** Captive Plant not included in installed capacity.

दक्षिण क्षेत्र के कुछ केन्द्रों में वर्ष 2013-14 के दौरान महीनावार विद्युत उत्पादन
Monthwise Generation for the year 2013-14 in Southern Region for certain stations

Sl. No	Name of the Power Station	Unit No.	GENERATION (MU)												
			Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Total
I	KARNATAKA														
1	Raichur Thermal Power Station	1	115.08	118.97	61.65	0.00	0.00	14.22	111.82	120.19	133.85	139.03	117.62	147.39	1079.83
		2	119.27	131.89	68.26	85.21	83.64	70.21	60.08	123.75	126.87	131.52	109.63	133.83	1244.14
		3	130.81	72.69	127.34	113.43	121.43	111.69	117.33	116.40	0.00	113.07	131.36	133.17	1288.73
		4	127.45	137.62	135.27	80.48	35.11	131.21	131.88	136.21	144.37	145.10	115.63	135.35	1455.67
		5	123.09	118.22	90.58	107.38	117.37	118.18	121.85	132.32	112.90	130.98	113.73	119.95	1406.55
		6	126.11	137.15	118.02	125.39	126.85	25.38	131.80	133.38	125.67	121.80	123.51	126.59	1421.66
		7	126.27	114.96	40.62	66.42	88.74	113.87	14.03	8.71	133.80	139.61	125.12	124.77	1096.93
		8	86.22	92.82	75.39	10.56	35.31	35.48	7.78	89.85	92.88	96.14	89.09	94.27	805.78
		Total	954.32	924.32	717.13	588.86	608.44	620.25	696.57	860.81	870.34	1017.25	925.68	1015.31	9799.28
2	BTPS	1	231.72	292.93	256.81	252.79	46.37	218.07	313.53	315.55	204.73	324.17	283.66	308.40	3048.73
		2	233.71	245.81	205.12	139.96	171.85	279.32	173.48	313.20	290.46	308.60	292.91	326.50	2980.94
		Total	465.43	538.74	461.93	392.75	218.22	497.39	487.01	628.75	495.19	632.77	576.57	634.90	6029.67
II	केंद्रीय उत्पादन केंद्र / CENTRAL GENERATING STATIONS														
			Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Total
1	Ramagundam Thermal Power Station	1	140.66	143.75	127.31	125.42	51.55	116.76	124.59	133.94	131.89	0.00	102.16	146.81	1344.84
		2	141.41	143.96	118.95	125.68	86.15	29.71	118.95	133.90	142.88	148.39	133.89	147.81	1471.66
		3	119.53	144.37	136.47	135.24	58.66	127.87	119.77	135.88	127.23	131.79	129.41	143.04	1509.25
		4	365.42	366.60	44.61	181.06	284.25	281.96	278.10	330.40	354.76	373.98	339.30	372.82	3573.27
		5	362.60	372.26	358.21	290.01	254.60	282.38	230.12	305.06	358.77	343.89	336.27	349.32	3843.50
		6	367.21	367.66	312.60	332.38	244.19	278.90	252.85	329.91	351.15	362.15	339.63	373.93	3912.56
		7	372.98	361.81	327.06	333.31	311.13	314.60	328.49	347.26	333.24	368.29	345.75	347.24	4091.16
		Total	1869.80	1900.41	1425.21	1523.09	1290.53	1432.18	1452.86	1716.37	1799.93	1728.48	1726.41	1880.97	19746.23

Sl. No	Name of the Power Station	Unit No.	GENERATION (MU)													
			Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Total	
2	TSTPS Stage-II	3	251.82	177.21	338.63	172.16	221.23	312.77	316.09	344.70	369.35	329.88	311.66	376.10	3521.60	
		4	282.85	245.66	0.00	250.81	304.43	321.16	336.11	336.15	343.88	371.67	341.06	380.65	3514.43	
		5	123.27	114.31	353.24	355.57	312.55	314.16	252.14	343.16	344.41	370.23	311.66	378.93	3573.62	
		6	285.63	337.22	350.28	353.96	335.27	268.20	231.40	335.97	329.52	369.09	311.54	358.94	3867.01	
		Total	943.56	874.40	1042.14	1132.50	1173.48	1216.30	1135.73	1359.98	1387.17	1440.87	1275.92	1494.63	14476.67	
3	RGCCP Kayamkulam	GT 1	69.02	29.33	0.04	0.00	0.00	0.00	0.00	0.03	12.68	59.37	61.94	64.84	297.26	
		GT 2	68.96	39.19	0.00	0.00	0.69	0.00	0.00	0.00	10.92	65.37	62.77	65.62	313.51	
		ST	78.41	39.72	0.00	0.00	0.13	0.00	0.00	0.00	0.00	13.12	72.05	74.26	79.88	357.57
		Total	216.39	108.24	0.04	0.00	0.82	0.00	0.00	0.00	0.03	36.71	196.80	198.97	210.34	968.34
4	Simhadri Stage-I	1	343.34	317.44	336.25	311.72	349.31	309.99	285.25	344.00	338.05	292.47	307.32	356.14	3891.28	
		2	343.40	317.08	333.50	299.00	345.61	341.40	308.22	47.27	265.20	359.20	341.88	365.80	3667.56	
		Total	686.74	634.53	669.75	610.72	694.92	651.40	593.46	391.27	603.25	651.67	649.20	721.94	7558.83	
	Simhadri Stage-II	3	328.29	292.80	324.16	309.93	8.79	152.35	306.89	337.28	347.12	367.03	339.60	362.20	3476.45	
		4	325.86	293.05	323.85	200.38	334.56	327.52	142.61	296.18	346.54	362.47	334.89	361.32	3649.21	
		Total	654.15	585.84	648.01	510.32	343.36	479.87	449.50	633.46	693.66	729.49	674.49	723.52	7125.66	
Total (Stg-I + Stg-II)		1340.88	1220.37	1317.75	1121.04	1038.27	1131.26	1042.96	1024.73	1296.91	1381.17	1323.69	1445.46	14684.49		
5	Neyveli TS II	1	148.24	147.24	131.43	143.68	146.37	139.87	150.90	75.87	6.90	151.40	130.17	152.05	1524.12	
		2	150.53	148.15	121.69	143.23	146.10	100.12	84.93	144.95	146.86	142.30	141.87	151.04	1621.77	
		3	145.77	148.59	141.15	143.42	133.41	140.24	51.42	128.42	152.73	155.86	142.42	157.09	1640.51	
		4	150.34	137.38	144.29	144.04	89.73	55.46	151.03	143.00	150.72	152.64	139.85	155.98	1614.47	
		5	139.29	152.25	133.19	144.62	31.84	72.71	151.25	142.41	151.06	155.22	133.85	156.27	1563.96	
		6	149.55	137.09	143.61	143.98	141.44	138.37	141.94	72.39	139.63	155.68	133.60	155.65	1652.92	
		7	151.07	144.64	144.41	84.43	109.11	140.18	81.01	104.92	151.42	156.21	138.14	155.85	1561.38	
		Total	1034.79	1015.34	959.76	947.40	797.99	786.95	812.49	811.95	899.33	1069.30	959.88	1083.92	11179.12	
6	Neyveli TS I (Expansion)	1	153.17	157.72	148.28	151.44	145.25	144.76	155.92	40.21	120.59	153.90	125.07	128.63	1624.94	
		2	153.15	157.58	151.02	150.80	148.42	144.86	5.54	141.88	155.01	157.78	143.62	157.48	1667.14	
		Total	306.32	315.29	299.30	302.24	293.66	289.62	161.46	182.09	275.60	311.68	268.70	286.11	3292.08	
7	KGS, Kaiga	1	136.94	147.27	148.38	160.85	161.79	157.75	166.46	95.75	46.44	114.49	115.83	134.91	1586.87	
		2	132.49	145.90	144.33	156.36	157.91	152.93	137.03	150.57	154.17	144.38	128.45	135.47	1739.99	
		Total	269.43	293.17	292.71	317.21	319.70	310.68	303.49	246.33	200.61	258.87	244.28	270.38	3326.86	
		3	143.11	153.19	148.33	160.02	161.76	156.05	161.03	95.45	160.35	144.87	130.79	143.65	1758.60	
		4	99.84	146.93	141.72	152.70	158.87	73.31	72.78	73.52	169.19	163.96	146.75	54.04	1453.62	
		Total	242.95	300.12	290.04	312.72	320.63	229.36	233.82	168.97	329.54	308.84	277.54	197.69	3212.22	
Total (Stg-I + Stg-II)		512.38	593.29	582.76	629.93	640.33	540.04	537.31	415.30	530.15	567.70	521.82	468.07	6539.08		
8	KKNPP, Kudankulam	1							22.47	157.78	184.10	177.44	156.33	407.51	1105.62	
		2													0.00	
		Total	0.00	0.00	0.00	0.00	0.00	0.00	22.47	157.78	184.10	177.44	156.33	407.51	1105.62	
9	Vallur, NTECL	1	257.42	178.63	127.51	304.48	70.46	112.78	189.52	123.21	105.87	271.05	209.34	234.54	2184.81	
		2					30.07	198.06	183.39	237.39	237.27	299.45	250.39	188.76	1624.78	
		Total	257.42	178.63	127.51	304.48	100.53	310.84	372.91	360.60	343.14	570.50	459.73	423.30	3809.59	

Note : KKNPP, Kudankulam Unit 1 was synchronised on 22.10.2013, CoD not declared during 2013-14

वर्ष 2009-10 से 2013-14 तक दक्षिण क्षेत्र की स्थापित क्षमता
Installed Capacity in Southern Region from 2009-10 to 2013-14
(MW)

(As per CEA)

Name of State	2009-10	2010-11	2011-12	2012-13	2013-14
<u>Andhra Pradesh :</u>					
Hydro	3617.53	3695.53	3734.53	3734.53	3734.53
Thermal (Coal+Diesel+Gas)	6499.70	7727.70	8377.7	8949.70	9249.70
Nuclear	0.00	0.00	0.00	0.00	0.00
Wind + R.E.S	700.51	766.99	885.34	1107.74	1294.49
Total	10817.74	12190.22	12997.57	13791.97	14278.72
<u>Karnataka :</u>					
Hydro	3599.80	3599.80	3599.80	3599.80	3599.80
Thermal (Coal+Diesel+Gas)	3284.42	3914.42	5014.42	5014.42	5014.42
Nuclear	0.00	0.00	0.00	0.00	0.00
Wind + R.E.S	2233.69	2616.19	3183.23	3511.78	3693.19
Total	9117.91	10130.41	11797.45	12126.00	12307.41
<u>Kerala :</u>					
Hydro	1781.50	1881.50	1881.50	1881.50	1881.50
Thermal (Coal+Diesel+Gas)	430.44	430.44	430.44	430.44	430.44
Nuclear	0.00	0.00	0.00	0.00	0.00
Wind + R.E.S	138.78	145.86	162.69	174.76	193.52
Total	2350.72	2457.80	2474.63	2486.70	2505.46
<u>Tamil Nadu :</u>					
Hydro	2108.20	2122.20	2122.20	2137.20	2182.20
Thermal (Coal+Diesel+Gas)	4657.96	4657.96	4657.96	6007.96	6757.96
Nuclear	0.00	0.00	0.00	0.00	0.00
Wind + R.E.S	4865.51	5812.61	7338.01	7457.54	7946.13
Total	11631.67	12592.77	14118.17	15602.70	16886.29
<u>Puducherry :</u>					
Hydro	0.00	0.00	0.00	0.00	0.00
Thermal (Coal+Diesel+Gas)	32.50	32.50	32.50	32.50	32.50
Nuclear	0.00	0.00	0.00	0.00	0.00
Wind + R.E.S	0.02	0.02	0.03	0.03	0.00
Total	32.52	32.52	32.53	32.53	32.50
<u>CGS :</u>					
Hydro	0.00	0.00	0.00	0.00	0.00
Thermal (Coal+Diesel+Gas)	8249.58	8749.58	9999.58	10499.58	10999.58
Nuclear	1100.00	1320.00	1320.00	1320	1320.00
Wind + R.E.S	0.00	0.00	0.00	0.00	0.00
Total	9349.58	10069.58	11319.58	11819.58	12319.58
<u>Southern Region :</u>					
Hydro	11107.03	11299.03	11338.03	11353.03	11398.03
Thermal (Coal+Diesel+Gas)	23154.60	25512.60	28512.60	30934.60	32484.60
Nuclear	1100.00	1320.00	1320.00	1320.00	1320.00
Wind + R.E.S	7938.51	9341.67	11569.30	12251.85	13127.33
Total	43300.14	47473.30	52739.93	55859.48	58329.96

वर्ष 2013-14 में तापीय एवं नाभिकीय प्लेन्टों का निष्पादन

Station-wise Performance of Thermal / Nuclear Plants during 2013-14

केन्द्रों का नाम Name of Station	स्थापित क्षमता Installed Capacity (MW)	Maximum Demand (MW)	पी.एल.एफ़ / PLF %		पी.ए.एफ़ / PAF %	
			2012-13	2013-14	2012-13	2013-14
<u>आंध्र प्रदेश / Andhra Pradesh :</u>						
Kothagudem 'A' to 'C'	720.00	643.00	73.05	67.95	92.62	93.34
Kothagudem D (Stg-V)	500.00	NA	84.97	82.64	90.84	92.12
K'gudem Stg - VI (U-11)	500.00	526.00	93.09	77.59	96.93	85.48
Vijayawada (Dr.NTTPS)	1760.00	1797.00	86.98	83.24	91.98	91.37
Rayalaseema (Unit 1-4)	840.00	NA	84.26	76.56	91.50	86.69
Rayalaseema U-5	210.00	220.00	81.13	77.34	88.02	88.97
Ramagundam 'B'	62.50	62.00	79.60	81.42	85.13	92.26
Kakatiya - I	500.00	533.00	91.07	72.03	94.66	82.00
Simhadri Stg-I (U 1 & 2)	1000.00	NA	87.98	86.29	92.52	92.39
<u>कर्नाटक / Karnataka :</u>						
Raichur (Unit 1-7)	1470.00	NA	73.37	69.84	85.71	85.28
Raichur (Unit 8)	250.00	151.50	28.79	36.79	39.26	76.20
Bellary (Unit - 1 & 2)	1000.00	NA	44.56	68.83	56.34	85.29
Yelahanka (Diesel)	127.92	NA	19.55	0.00	96.95	0.00
<u>केरल / Kerala :</u>						
Brahmapuram (Diesel)	106.60	80.00	8.59	3.10	40.88	48.15
Kozhikode (Diesel)	128.00	100.00	39.13	17.11	73.67	64.31
RGCCP (Kayamkulam)	359.58	NA	49.16	30.74	98.36	98.67
<u>तमिल नाडु / Tamil Nadu :</u>						
Ennore	340.00	226.00	18.67	40.51	36.15	73.23
Tuticorin	1050.00	1060.00	90.04	85.79	92.21	89.60
Mettur (Stage - I & II)	840.00	842.00	84.26	88.04	85.92	92.09
Mettur (Stage - III)	600.00	NA				
North Chennai (Stg - I)	630.00	630.00	91.68	74.33	93.52	84.91
North Chennai (Stg - II)	600.00	NA				
Neyveli TS - I	600.00	598.00	76.77	77.22	88.35	87.13
<u>पुदुचेरी / Puducherry :</u>						
Karaikal	32.50	33.60	81.05	90.26	88.92	97.34

केन्द्रों का नाम Name of Station	स्थापित क्षमता	Maximum	पी.एल.एफ / PLF %		पी.ए.एफ / PAF %	
	Installed Capacity (MW)	Demand (MW)				
			2012-13	2013-14	2012-13	2013-14
केन्द्रीय उत्पादन केंद्र / Central Generating Stations :						
Ramagundam STPS	2600.00	NA	91.26	86.70	91.85	93.71
Talcher Stage II (NTPC)	2000.00	NA	81.77	82.63	90.52	87.74
Simhadri Stage - II	1000.00	NA	75.38	81.35	83.18	89.56
Neyveli TS - II	1470.00	1492.00	87.27	86.81	89.07	90.08
Neyveli TS-I (Expn.)	420.00	431.00	90.23	89.48	91.22	90.48
KGS Stage - I	440.00	NA	70.92	86.31	94.55	95.38
KGS Stage - II	440.00	NA	70.21	83.34	94.03	88.08
MAPS (Kalpakkam)	440.00	NA	71.14	54.87	92.46	71.59
KKNPP, Kudankulam	* 1000	680.00	- -	28.63	- -	63.11
Vallur, NTECL	1000.00	NA	48.78	54.36	69.91	71.90
आई.एस.टी.एस से जुड़े व्यापारी विद्युत संयंत्र / Merchant Power Plants directly connected to ISTS :						
SEPL, Simhapuri	450.00	447.25	66.04	80.12	73.53	84.85
MEPL, Thimmanapuram	300.00	288.34	36.85	54.99	46.57	71.95
राज्यों की ग्रिड से जुड़े प्रमुख आई.पी.पी. / Major IPPs connected to State Grid :						
JSWEL, Bellary (SBU - 1&2)	860	902.00	101.00	100.07	97.96	95.85
UPCL (Unit - 1&2)	1200	NA	75.78	64.75		78.63

* KKNPP, Kudankulam Unit 1 was synchronised on 22.10.2013, CoD not declared during 2013-14

वर्ष 2013-14 में तापीय / नाभिकीय / गैस विद्युत केन्द्रों के 'यूनिट'वार निष्पादन

Unitwise Performance of Thermal / Nuclear / Gas Power Stations during the year 2013-14

Sl. No.	Name of the Power Station	Unit No.	Installed Capacity MW	Units Generated MU	KWH/KW of Installed Capacity	Maximum Station Demand MW	PLF		
							2012-13	2013-14	
1	<u>आंध्र प्रदेश / ANDHRA PRADESH :</u>								
	Kothagudem 'A'	1	60	397.9	6632	59	77.32	75.70	
		2	60	393.44	6557	58	77.27	74.86	
		3	60	374.48	6241	56	79.38	71.25	
		4	60	383.13	6386	56	77.50	72.89	
			240	1548.95	6454		77.87	73.68	
	Kothagudem 'B'	1	120	756.76	6306	118	72.22	71.99	
		2	120	761.05	6342	120	68.39	72.40	
			240	1517.81	6324		70.31	72.19	
	Kothagudem 'C'	1	120	710.27	5919	112	75.80	67.57	
		2	120	508.94	4241	94	66.15	48.42	
			240	1219.21	5080		70.98	57.99	
	K'gudemStation (A,B & C)			720	4285.97	5953	643	73.05	67.95
	4	Kothagudem 'D' (Stg-V)	1	250	1790.98	7164	256	83.41	81.78
			2	250	1828.70	7315	255	86.53	83.50
				500	3619.68	7239	NA	84.97	82.64
	5	Kothagudem Stage - VI (U-11)		500	3398.59	6797	526	93.09	77.59
	6	Ramagundam 'B'		62.5	445.77	7132	62	79.60	81.42
	7	Dr. NTPS, Vijayawada	1	210	1177.89	5609	212	73.66	64.03
			2	210	1567.79	7466	218	87.50	85.22
			3	210	1583.86	7542	220	95.34	86.10
			4	210	1582.12	7534	217	90.99	86.00
			5	210	1578.29	7516	218	93.60	85.80
			6	210	1562.45	7440	218	84.37	84.93
			7	500	3781.02	7562	528	85.48	86.32
			Station		1760	12833.42	7292	1797	86.98
	8	Rayalaseema Stage - 1	1	210	1217.35	5797	218	85.61	66.17
			2	210	1407.00	6700	218	73.07	76.48
		Rayalaseema Stage - 2	3	210	1488.08	7086	220	89.44	80.89
			4	210	1521.51	7245	220	88.92	82.71
				840	5633.94	6707	NA	84.26	76.56
		Rayalaseema Stage - 3	5	210	1422.75	6775	220	81.13	77.34
Station				1050	7056.69	6721	1083	83.63	76.72
9	Vijjeswaram GTS St-I	GT I	33	45.30	1373	33	3.57	15.67	
		GT II	33	45.29	1372	36	4.00	15.67	
		ST I	34	44.43	1307	34	3.07	14.92	
			100	135.02	1350	NA	3.54	15.41	
10	Vijjeswaram GTS St-II	GT III	112	596.01	5322	113	77.06	60.75	
		ST 2	60	318.88	5315	57	72.50	60.67	
			172	914.89	5319	NA	75.47	60.72	

Sl. No.	Name of the Power Station	Unit No.	Installed Capacity MW	Units Generated MU	KWH/KW of Installed Capacity	Maximum Station Demand MW	PLF	
							2012-13	2013-14
11	Kakatiya I	1	500	3155.09	6310	533	91.07	72.03
12	Simhadri Stage - I	1	500	3891.28	7783		81.95	88.84
		2	500	3667.56	7335		94.00	83.73
			1000	7558.83	7559	NA	87.98	86.29
<u>कर्नाटक / KARNATAKA :</u>								
1	Raichur TPS	1	210	1079.83	5142	214.25	63.68	58.70
		2	210	1244.14	5924	202.75	53.63	67.63
		3	210	1288.73	6137	213.25	79.05	70.05
		4	210	1455.67	6932	222.00	82.90	79.13
		5	210	1406.55	6698	211.92	79.24	76.46
		6	210	1421.66	6770	213.08	76.77	77.28
		7	210	1096.93	5223	213.33	78.31	59.63
			1470	8993.50	6118	NA	73.37	69.84
		8	250	805.78	3223	151.50	28.79	36.79
			1720	9799.28	5697	NA	66.89	65.04
2	Bellary TPS	1	500	3048.73	6097	518.00	68.28	69.61
		2	500	2980.94	5962	527.00	20.84	68.06
	Station (Unit 1 &2)		1000	6029.67	6030	NA	44.56	68.83
3	Yelahanka (Diesel)	1	21.32		0		0.00	0.00
		2	21.32		0		52.12	0.00
		3	21.32		0		0.00	0.00
		4	21.32		0		7.14	0.00
		5	21.32		0		7.81	0.00
		6	21.32		0		50.21	0.00
	Station		127.92	0.00	0	NA	19.55	0.00
<u>केरल / KERALA :</u>								
1	RGCCP(NTPC),Kayamkulam	1	116.6	297.26	2549		44.52	29.10
		2	116.6	313.51	2689		52.06	30.69
		3	126.38	357.57	2829		50.77	32.30
	Station		359.58	968.34	2693	NA	49.16	30.74
<u>तमिल नाडु / TAMIL NADU :</u>								
1	Ennore	1	60	215.74	3596	45.00	42.13	41.05
		2	60	215.91	3598	45.00	44.50	41.08
		3	110	406.64	3697	80.00	0.00	42.20
	Unit - 5 Installed Capacity derated	4	110	368.24	3348	72.00	29.11	38.22
		5	110	0.00	0	0.00	0.00	0.00
	Station		340	1206.52	3549	226.00	18.67	40.51
2	Tuticorin	1	210	1663.86	7923	215.00	84.05	90.45
		2	210	1648.90	7852	215.00	90.06	89.63
		3	210	1257.39	5988	215.00	88.28	68.35
		4	210	1687.86	8037	200.00	93.81	91.75
		5	210	1633.08	7777	215.00	94.02	88.77
	Station		1050	7891.09	7515	1060.00	90.04	85.79

Sl. No.	Name of the Power Station	Unit No.	Installed Capacity MW	Units Generated MU	KWH/KW of Installed Capacity	Maximum Station Demand MW	PLF			
							2012-13	2013-14		
3	Mettur TPS : Stage - I Stage - II Station (Stage 1 & 2) Stage - III COD on 12.10.2013. Infirm Power only ↑	1	210	1651.90	7866	210.00	92.32	89.80		
		2	210	1670.22	7953	212.00	90.42	90.79		
		3	210	1533.76	7304	210.00	86.74	83.37		
		4	210	1622.67	7727	210.00	67.57	88.21		
			840	6478.55	7713	842.00	84.26	88.04		
		1	600	1978.30	3297					
		4	North Chennai TPS : Stg - I Station (Stage - 1) Stg - II COD on 20.03.2014. Infirm Power only ↑	1	210	1299.88	6190	210.00	95.43	70.66
				2	210	1444.10	6877	210.00	88.74	78.50
				3	210	1358.26	6468	210.00	90.86	73.83
	630			4102.24	6511	630.00	91.68	74.33		
1	600			2126.12	3544					
2										
	600			2126.12	3544					
5	Neyveli TS I Station			1	50	354.28	7086	50	79.31	80.89
				2	50	376.53	7531	50	78.43	85.96
				3	50	284.85	5697	50	79.36	65.03
		4	50	382.68	7654	50	73.73	87.37		
		5	50	355.66	7113	50	79.04	81.20		
		6	50	372.31	7446	50	63.25	85.00		
		7	100	541.58	5416	100	77.40	61.82		
		8	100	696.21	6962	100	81.57	79.48		
		9	100	694.50	6945	100	75.10	79.28		
			600	4058.60	6764	598	76.77	77.22		
	<u>புதுச்சேரி / PUDUCHERRY :</u> Karaikal	1	32.5	256.97	7907	33.60	81.05	90.26		
		<u>केन्द्रीय उत्पादन केंद्र / CENTRAL GENERATING STATIONS :</u>								
	1	Ramagundam STPS	1	200	1344.84	6724		96.04	76.76	
			2	200	1471.66	7358		97.70	84.00	
			3	200	1509.25	7546		83.62	86.14	
			4	500	3573.27	7147		98.11	81.58	
			5	500	3843.50	7687		86.76	87.75	
			6	500	3912.56	7825		91.92	89.33	
			7	500	4091.16	8182		86.82	93.41	
			Station	2600	19746.23	7595	NA	91.26	86.70	
	2	Neyveli TS-II	1	210	1524.12	7258	216.00	89.53	82.85	
			2	210	1621.77	7723	216.00	86.55	88.16	
			3	210	1640.51	7812	220.00	83.53	89.18	
			4	210	1614.47	7688	219.00	91.22	87.76	
			5	210	1563.96	7447	221.00	86.15	85.02	
			6	210	1652.92	7871	220.00	89.74	89.85	
			7	210	1561.38	7435	219.00	84.18	84.88	
			Station	1470	11179.12	7605	1492.00	87.27	86.81	
	3	Neyveli TS-I (Expn.)	1	210	1624.94	7738	218.00	87.43	88.33	
			2	210	1667.14	7939	218.00	93.02	90.63	
			Station	420	3292.08	7838	431.00	90.23	89.48	

Sl. No.	Name of the Power Station	Unit No.	Installed Capacity MW	Units Generated MU	KWH/KW of Installed Capacity	Maximum Station Demand MW	PLF		
							2012-13	2013-14	
4	Kaiga Generating Station Stage - I Station (Stg - I)	1	220	1586.87	7213		75.93	82.34	
		2	220	1739.99	7909		65.90	90.29	
			440	3326.86	7561	NA	70.92	86.31	
	Stage - II Station (Stg - II)	3	220	1758.60	7994		75.06	91.25	
		4	220	1453.62	6607		65.35	75.43	
			440	3212.22	7300	NA	70.21	83.34	
	5	MAPS (Kalpakkam)	1	220	1354.00	6155	179.00	77.05	70.26
			2	220	761.00	3459	182.00	65.22	39.49
				440	2115.00	4807	NA	71.14	54.87
	6	KKNPP, Kudankulam	1	1000	1105.62	1106	680.00	--	28.63
2									
7	Talcher Stage II (NTPC)	3	500	3521.60	7043		87.38	80.40	
		4	500	3514.43	7029		83.69	80.24	
		5	500	3573.62	7147		79.75	81.59	
		6	500	3867.01	7734		76.26	88.29	
			2000	14476.67	7238	NA	81.77	82.63	
8	Simhadri Stage-II Station	3	500	3476.45	6953		75.87	79.37	
		4	500	3649.21	7298		74.39	83.32	
			1000	7125.66	7126	NA	75.38	81.35	
9	Vallur, NTECL Station	1	500	2184.81	4370		48.78	49.88	
		2	500	1624.78	3250		0.00	61.83	
			1000	3809.59	3810	NA	48.78	54.36	
आई.एस.टी.एस से जुड़े व्यापारी विद्युत संयंत्र / Merchant Power Plants directly connected to ISTS :									
1	SEPL, Simhapuri, Phase - I Phase - II Station	1	150	1007.07	6714	151.58	70.78	76.64	
		2	150	1091.77	7278	151.63	60.45	83.09	
		3	150	104.74	698	148.13		85.57	
			450	2203.58	4897	447.25	66.04	80.12	
	2	MEPL, Thimmanapuram (Meenakshi Energy) Station	1	150	708.93	4726	150.00	36.85	53.95
			2	150	736.13	4908	150.00		56.02
				300	1445.06	4817	288.34	36.85	54.99
राज्यों की ग्रिड से जुड़े प्रमुख आई.पी.पी. / Major IPPs connected to State Grid :									
1	JSWEL (Jindal), Torangallu, Bellary (Dist), Karnataka SBU - II Station (SBU - 1&2)	1	130	1146.27	8817	131.00	97.38	100.66	
		2	130	1034.88	7961	131.00	100.28	90.87	
		3	300	2736.62	9122	320.00	104.13	104.13	
		4	300	2621.39	8738	320.00	99.75	99.75	
			860	7539.16	8766	902.00	101.00	100.07	
2	UPCL Karnataka Station (SBU - 1&2)	1	600	3652.58	6088	626.00		69.49	
		2	600	3153.45	5256	633.00		60.00	
			1200	6806.03	5672	NA	75.78	64.75	

वर्ष 2013-14 के दौरान तापीय एवं नाभिकीय विद्युत केंद्रों का आऊटेज

Outages of Thermal / Nuclear Power Stations
during 2013-14

Sl. No	Power Station	Unit No.	No. of Hours Unit was available	Plant Availability Factor (%)	Planned Outage in Hours	Forced Outages in Hours	Total Duration of Outage in Hours
आंध्र प्रदेश / ANDHRA PRADESH :							
1	Kothagudem 'A'	1	8367.75	95.52	351.62	40.63	392.25
		2	8253.48	94.22	343.35	163.17	506.52
		3	8267.78	94.38	360.67	131.55	492.22
		4	8243.78	94.11	338.88	177.34	516.22
2	Kothagudam 'B'	5	8223.43	93.87	384.75	151.82	536.57
		6	8193.23	93.53	391.45	175.32	566.77
3	Kothagudem 'C'	7	8012.30	91.46	385.67	362.03	747.70
		8	8063.95	92.05	361.05	335.00	696.05
Station (Stage ABC)		8176.55	93.34	370.03	213.42	583.45	
4	K'gudem 'D' (Stg-V)	9	7839.48	89.49	520.17	400.35	920.52
		10	8300.37	94.75	284.53	175.10	459.63
	Kothagudem Stg-VI	11	7487.72	85.48	899.17	373.11	1272.28
		Station (Stage - V & VI)		7778.82	88.80	650.76	330.42
5	Ramagundam 'B'	1	8081.68	92.26	0.00	678.32	678.32
6	Dr.NTTPS, Vijayawada	1	6532.92	74.58	1794.85	432.23	2227.08
		2	8107.77	92.55	393.85	258.38	652.23
		3	8108.07	92.56	398.35	253.58	651.93
		4	8060.75	92.02	392.33	306.92	699.25
		5	8118.67	92.68	369.48	271.85	641.33
		6	8101.63	92.48	454.12	204.25	658.37
		7	8422.45	96.15	0.00	337.55	337.55
	Station	8004.25	91.37	453.76	301.98	755.75	

Sl. No	Power Station	Unit No.	No. of Hours Unit was available	Plant Availability Factor (%)	Planned Outage in Hours	Forced Outages in Hours	Total Duration of Outage in Hours
7	Simhadri (NTPC) Stage-I (U - 1 & 2) Dedicated to AP	1	8345.62	95.27	7.90	406.48	414.38
		2	7841.25	89.51	726.50	192.25	918.75
		Station	8093.44	92.39	367.20	299.37	666.57
8	Rayalaseema	1	6550.03	74.77	1986.97	223.00	2209.97
		2	7839.37	89.49	475.33	445.30	920.63
		3	7903.87	90.23	533.90	322.23	856.13
		4	8081.55	92.26	372.38	306.07	678.45
		Unit (1 - 4)	7593.71	86.69	842.15	324.15	1166.30
		5	7793.78	88.97	390.93	575.29	966.22
		Station	7633.72	87.14	751.90	374.38	1126.28
9	Kakatiya	1	7182.77	82.00	773.15	804.08	1577.23
कर्नाटक / KARNATAKA :							
1	Raichur	1	6064.32	69.23	2221.00	474.68	2695.68
		2	7772.00	88.72	541.00	447.00	988.00
		3	7413.42	84.63	855.00	491.58	1346.58
		4	7782.00	88.84	725.00	253.00	978.00
		5	8401.00	95.90	0.00	359.00	359.00
		6	7958.00	90.84	533.00	269.00	802.00
		7	6903.00	78.80	594.00	1263.00	1857.00
		Unit (1 to 7)	7470.53	85.28	781.29	508.18	1289.47
		8	6675.00	76.20	0.00	2085.00	2085.00
2	Bellary	1	7540.40	86.08	611.40	608.20	1219.60
		2	7402.80	84.51	642.95	714.25	1357.20
		Station	7471.60	85.29	627.18	661.23	1288.40
3	Yelehanka(Diesel) Note : (This Plant is under conversion into Gas Based Power Plant and there is no generation)	1		0.00	0.00		0.00
		2		0.00	0.00		0.00
		3		0.00	0.00		0.00
		4		0.00	0.00		0.00
		5		0.00	0.00		0.00
		6		0.00	0.00		0.00
		Station	0.00	0.00	0.00	0.00	0.00

Sl. No	Power Station	Unit No.	No. of Hours Unit was available	Plant Availability Factor (%)	Planned Outage in Hours	Forced Outages in Hours			Total Duration of Outage in Hours
केरल / KERALA :									
1	Brahampuram DPP	1	6947.85	79.31	1389.48	422.67			1812.15
		2	0.00	0.00	0.00	8760.00			8760.00
		3	0.00	0.00	0.00	8760.00			8760.00
		4	6902.03	78.79	1633.03	224.94			1857.97
		5	7240.93	82.66	1049.82	469.25			1519.07
	Station		4218.16	48.15	814.47	3727.37			4541.84
2	Kozhikode DPP (idle hour included in availability)	1	0.00	0.00	0.00	Forced Out. (Grid)	Forced Outage	Total F. Outage	PI + Force Outage
		2	7396.00	84.43	910.00	0.00	8760.00	8760.00	8760.00
		3	7526.00	85.91	767.00	2.00	452.00	454.00	1364.00
		4	7526.00	85.91	767.00	7.00	460.00	467.00	1234.00
		5	1966.00	22.44	2248.00	8.00	4538.00	4546.00	6794.00
		6	7922.00	90.43	396.00	4.00	438.00	442.00	838.00
		7	5056.00	57.72	695.00	5.00	3004.00	3009.00	3704.00
		8	7602.00	86.78	896.00	4.00	258.00	262.00	1158.00
		8	7603.00	86.79	227.00	4.00	926.00	930.00	1157.00
	Station		5633.88	64.31	767.38	4.25	2354.50	2358.75	3126.13
3	RGCCP (NTPC)	GT-1	3168.78	97.74	149.65	Forced Out. (Grid)	Forced Outage Others		5591.22
						5392.85	48.72		
		GT-2	3294.45	99.85	13.00	5452.55	0.00		
		ST	3289.45	98.45	136.00	5334.55	0.00		
	Station		3251.94	98.67	100.54	5391.72	15.80		5508.06
तमिल नाडु / TAMIL NADU :									
1	Ennore	1	6666.23	76.10	417.47	1676.30	0.00		2093.77
		2	6744.07	76.99	529.03	1486.90	0.00		2015.93
		3	6013.37	68.65	0.00	2746.63	0.00		2746.63
		4	6499.38	74.19	448.68	1811.93	0.00		2260.62
		5	0.00	0.00	0.00	0.00	0.00		0.00
	Unit - 5 Installed Capacity derated		6414.77	73.23	312.19	2033.04	0.00		2345.23
Station									

Sl. No	Power Station	Unit No.	No. of Hours Unit was available	Plant Availability Factor (%)	Planned Outage in Hours	Forced Outages in Hours		Total Duration of Outage in Hours
2	Tuticorin	1	8126.90	92.77	239.30	357.28	36.52	633.10
		2	8262.88	94.33	254.48	242.63	0.00	497.12
		3	6237.10	71.20	1250.97	1271.93	0.00	2522.90
		4	8639.42	98.62	0.00	120.58	0.00	120.58
		5	7976.40	91.05	600.30	183.30	0.00	783.60
	Station		7848.54	89.60	469.01	435.15	7.30	911.46
3	Mettur	1	8320.00	94.98	325.58	114.42	0.00	440.00
		2	8282.35	94.55	342.32	135.33	0.00	477.65
		3	7572.25	86.44	1077.18	110.57	0.00	1187.75
		4	8094.13	92.40	343.95	321.92	0.00	665.87
	Station		8067.18	92.09	522.26	170.56	0.00	692.82
4	North Chennai	1	7176.85	81.93	360.00	1223.15	0.00	1583.15
		2	7878.95	89.94	0.00	840.72	40.33	881.05
		3	7259.75	82.87	539.65	923.52	37.08	1500.25
	Station		7438.52	84.91	299.88	995.79	25.81	1321.48
5	Neyveli TS-I	1	7852.55	89.64	682.25	225.20		907.45
		2	8172.12	93.29	470.32	117.57		587.88
		3	6369.90	72.72	1579.92	810.18		2390.10
		4	8190.53	93.50	457.00	112.47		569.47
		5	7489.73	85.50	1010.27	260.00		1270.27
		6	8053.52	91.94	487.95	218.53		706.48
		7	6371.02	72.73	638.92	1750.07		2388.98
		8	8196.00	93.56	460.92	103.08		564.00
		9	8166.05	93.22	402.62	191.33		593.95
	Station		7632.87	87.13	641.05	486.08		1127.13

Sl. No	Power Station	Unit No.	No. of Hours Unit was available	Plant Availability Factor (%)	Planned Outage in Hours	Forced Outages in Hours			Total Duration of Outage in Hours	
केन्द्रीय उत्पादन केंद्र / CENTRAL GENERATING STATIONS :										
1	Ramagundam STPS	1	7467.64	85.25	876.05	44.56	371.75	416.31	1292.36	
		2	8057.31	91.98	514.08	52.36	136.25	188.61	702.69	
		3	8097.47	92.44	0.00	269.13	393.40	662.53	662.53	
		4	7814.19	89.20	905.13	40.68	0.00	40.68	945.81	
		5	8198.14	93.59	0.00	238.49	323.37	561.86	561.86	
		6	8530.92	97.38	0.00	69.75	159.33	229.08	229.08	
		7	8695.19	99.26	0.00	64.81	0.00	64.81	64.81	
	Station			8209.12	93.71	281.00	107.72	162.17	269.89	550.88
2	Simhadri Stage-II	3	7665.28	87.50	1091.72	3.00			1094.72	
		4	8025.28	91.61	268.10	466.62			734.72	
	Station (Stg - II)			7845.28	89.56	679.91	234.81			914.72
	Station (Stg - I & II)			7969.36	90.97	523.56	267.09			790.65
3	Neyveli TS-II	1	7577.77	86.50	1043.63	138.60			1182.23	
		2	8007.53	91.41	539.78	212.69			752.47	
		3	8096.00	92.42	538.80	125.20			664.00	
		4	7980.28	91.10	690.73	88.99			779.72	
		5	7701.43	87.92	908.03	150.54			1058.57	
		6	8208.85	93.71	352.83	198.32			551.15	
		7	7663.35	87.48	507.47	589.18			1096.65	
	Station			7890.74	90.08	654.47	214.79			869.26
4	Neyveli TS-I Expansion	1	7839.87	89.50	670.33	249.80			920.13	
		2	8012.72	91.47	736.00	11.28			747.28	
	Station			7926.30	90.48	703.17	130.54			833.71
5	Vallur, NTECL (PAF from CoD 25.08.13)	1	5852.48	66.81	342.98	4.00	2560.54	2564.54	2907.52	
		2	4224.90	80.38	239.50	4.40	787.20	791.60	1031.10	
	Station			5038.69	71.90	291.24	4.20	1673.87	1678.07	1969.31

Sl. No	Power Station	Unit No.	No. of Hours Unit was available	Plant Availability Factor (%)	Planned Outage in Hours	Forced Outages in Hours			Total Duration of Outage in Hours
6	Talcher (Stage II)	3	7501.04	85.63	631.43	0.00	627.53	627.53	1258.96
		4	7442.53	84.96	1031.32	0.00	286.15	286.15	1317.47
		5	7569.90	86.41	0.00	9.55	1180.55	1190.10	1190.10
		6	8229.05	93.94	0.00	22.60	508.35	530.95	530.95
	Station		7685.63	87.74	415.69	8.04	650.65	658.68	1074.37
नाभिकीय विद्युत केंद्र / NUCLEAR POWER STATION :					Planned Outage	Grid	Nuclear side	Others	Grand Total
1	MAPS, Kalpakkam	1	8106.90	92.54	526.75	0.00	124.35	2.00	653.10
		2	4435.22	50.63	290.20	0.00	22.28	4012.30	4324.78
2	KGS , Kaiga	1	8048.65	91.88	711.35	0.00	0.00	0.00	711.35
		2	8662.22	98.88	0.00	0.00	0.00	97.78	97.78
		3	8477.37	96.77	1.40	0.00	0.00	281.23	282.63
		4	6953.65	79.38	148.15	0.00	0.00	1658.20	1806.35
3	KKNPP, Kudankulam	1	2436.85	63.11	616.18	0.00	808.22	0.00	1424.40
आई.एस.टी.एस से जुड़े व्यापारी विद्युत सयंत्र / Merchant Power Plants directly connected to ISTS :									
1	SEPL, Simhapuri, Ph-I	1	7126.98	81.36	Planned Outage	Forced			Total Outage Plan+Forced
						Due to Grid	Others	Total	
		2	7667.32	87.53	637.40	15.67	979.95	995.62	1633.02
		3	762.90	93.49	491.73	8.98	591.97	600.95	1092.68
	Station		7432.43	84.85	0.00	0.00	53.08	53.08	53.08
2	MEPL, Thimmana-Puram (Meenakshi)	1	6350.86	72.50	539.44	11.78	776.34	788.12	1327.56
		2	6254.91	71.40	0.00	7.14	2402.00	2409.14	2409.14
	Station		6302.89	71.95	0.00	12.09	2493.00	2505.09	2505.09
					0.00	9.62	2447.50	2457.12	2457.12
राज्यों की ग्रिड से जुड़े प्रमुख आई.पी.पी. / Major IPPs connected to State Grid :									
1	JSWEL, Torangallu Karnataka	1	8745.90	99.84	Planned Outage	Forced			Total Outage Plan+Forced
						Due to Grid	Others	Total	
		2	7929.43	90.52	0.00	0.00	14.10	14.10	14.10
		3	8288.57	94.62	437.40	0.00	393.17	393.17	830.57
	Station		8396.63	95.85	324.14	0.00	147.29	147.29	471.43
2	UPCL, Padubidri Udupi (Dt), Karnataka	1	7456.38	85.12	0.00	463.00	840.62	1303.62	1303.62
		2	6318.92	72.13	0.00	208.08	2233.00	2441.08	2441.08
	Station		6887.65	78.63	0.00	335.54	1536.81	1872.35	1872.35

वर्ष 2013-14 के दौरान दक्षिण क्षेत्र के महीनावार फ्रीक्वेन्सी प्रोफाईल

Monthwise Frequency Profile of Southern Region during 2013-14

Month	Percentage of time when frequency was between									Frequency			
	< 49.0 Hz	49.0 &< 49.2 Hz	49.2 &< 49.5 Hz	49.5 &< 49.7 Hz	49.7 &< 49.9 Hz	49.9 &< 50.0 Hz	50.0 &< 50.05 Hz	50.05 &< 50.2 Hz	> 50.2 Hz	Average Hz	IEGC Range * 49.9 to 50.05	Max. Hz	Min. Hz
अप्रैल / Apr-13	0.00	0.00	0.19	11.81	76.37		9.72		1.91	49.84	86.09	50.81	49.27
मई / May-13	0.00	0.06	0.32	7.76	65.43		21.49		4.94	49.90	86.92	50.79	49.01
जून / June-13	0.01	0.00	0.08	3.51	55.50		32.64		8.26	49.97	88.14	50.71	48.84
जुलाई / July-13	0.00	0.00	0.01	2.07	47.94		40.40		9.58	50.00	88.34	50.72	49.43
अगस्त / Aug-13	0.00	0.01	0.07	2.52	38.51		45.85		13.04	50.03	84.36	50.62	49.01
सितंबर / Sep-13	0.00	0.00	0.15	2.99	45.17		41.25		10.44	50.00	86.41	50.61	49.21
अक्तूबर / Oct-13	0.00	0.00	0.06	3.44	52.82		37.49		6.19	49.97	90.31	50.53	49.20
नवम्बर / Nov-13	0.00	0.00	0.05	1.51	41.51		48.85		8.07	50.02	90.36	50.61	49.24
दिसम्बर / Dec-13	0.00	0.00	0.03	1.31	39.32		47.39		11.95	50.03	86.71	50.73	49.44
जनवरी / Jan-14	0.00	0.00	0.02	1.52	48.78		43.31		6.36	50.00	92.09	50.65	49.27
फरवरी-14 (1-16)	0.00	0.00	0.00	0.57	48.37		40.89		10.17	50.02	89.26	50.68	49.36
फरवरी-14 (17-28)	0.00	0.00	0.08	0.49	12.93	27.05	16.26	34.18	9.01		43.31		
मार्च / Mar-14	0.00	0.00	0.01	0.48	19.80	35.36	18.48	23.46	2.41	49.98	53.84	50.44	49.29
Average (2013-14)	0.00	0.01	0.09	3.29	50.95		37.94		7.73	49.98	83.67	50.81	48.84

Maximum frequency during the year = 50.81 Hz on 4/21/2013

Minimum frequency during the year = 48.84 Hz on 6/7/2013

Average frequency for the year = 49.98 Hz

* Note : IEGC Frequency Range was changed with effect from 17.02.2014 as 49.9 Hz to 50.05 Hz. Figures shown from 1st April to 16th February are 49.7 Hz to 50.2 Hz

अंतर क्षेत्रीय / राजीय टाई लाइनों की प्रचालन

Operation of the Inter State / Inter Regional Tie Lines

Duration for which Major Tie Lines were open during the year 2013-14 due to system disturbances, planned maintenance etc

INTER STATE LINES

(a). 400 KV LINES :

S. No.	LINE		HRS	MTS
1	Gooty – Hoody (Bangalore)	(AP - KAR)	12	10
2	Gooty - Nelamangala	(AP - KAR)	17	18
3	Gooty - Raichur I *	(AP - KAR)	13	22
4	Gooty - Raichur II *	(AP - KAR)	15	26
5	Chittoor – Chennai	(AP - TN)	89	37
6	Salem – Somanahalli (Bangalore) **	(TN - KAR)	74	33
7	Mehaboobnagar – Raichur	(AP - KAR)	102	12
8	Cuddapah – Kolar	(AP - KAR)	7	52
9	Kolar - Chennai #	(KAR - TN)	157	07
10	Nellore – Chennai I	(AP - TN)	22	58
11	Nellore – Almatti II	(AP - TN)	36	51
12	Kolar - Hosur I	(KAR - TN)	17	00
13	Kolar - Hosur II	(KAR - TN)	7	30
14	Thirunelveli -Thiruvananthapuram I	(TN - KER)	32	06
15	Thirunelveli -Thiruvananthapuram II	(TN - KER)	12	15
16	Thirunelveli - Edamon I	(TN - KER)	80	32
17	Thirunelveli - Edamon II	(TN - KER)	79	37
18	Neyveli - Puducherry	(TN - PUDU)	85	17
19	Puducherry - Sunguvarchatram	(PUDU - TN)	79	42
20	Udumalpet - Palakkad I	(TN - KER)	9	02
21	Udumalpet - Palakkad II	(TN - KER)	38	14
22	Neyveli - Bahoor (220 kV)	(TN - PUDU)	28	19
23	Neyveli - Villianur (220 kV)	(TN - PUDU)	16	43

* Gooty - Raichur Line liloed at Raichur New PGCIL 765/400 kV S/S

** Bangalore - Salem Line (S/C) LILO at Hosur w.e.f. January, 2014

Kolar - Chennai liloed at Thiruvalam

(b). 220 KV LINES :

S. No.	LINE		HRS	MTS
1	Alipur – Gooty	(KAR – AP)	13	16
2	Sedam – Tandur	(KAR - AP)	70	29
3	Chittoor – Tiruvalam	(AP - TN)	277	16
4	Sulurpet – Gummidipoondi	(AP - TN)	580	57
5	Yerrandanahalli - Hosur	(KAR - TN)	79	38
6	Idukki – Udumalpet	(KER - TN)	322	12
7	Moozhayar – Theni	(KER - TN)	242	20
8	Mysore – Kaniampetta (Kadakola)	(KAR - KER)	49	59

INTER REGIONAL LINES :**(a). 765 KV LINES :**

S. No.	LINE	HRS	MTS
1	Sholapur - Raichur Line II (PGCIL)	203	18

(b). 500 KV HVDC POLE :

S. No.	LINE	HRS	MTS
1	Kolar +/- 500 KV HVDC Pole I	97	24
2	Kolar +/- 500 KV HVDC Pole II	73	06
3	VSP HVDC (B to B) Pole I	4	58
4	VSP HVDC (B to B) Pole II	1	52

(c). 400 KV LINES :

S. No.	LINE	HRS	MTS
1	Chandrapur – Ramagundam Ckt-I	0	00
2	Chandrapur – Ramagundam Ckt-II	0	00
3	Jeypore – Gazuwaka Ckt-I	27	56
4	Jeypore – Gazuwaka Ckt-II	47	54

(d) 220 KV LINES :

S. No.	LINE	HRS	MTS
1	Upper Sileru - Balimela	8760	00
2	Chikkodi – Kolhapur	8760	00
3	Chikkodi – Kolhapur	8760	00

अप्रैल 2013 से मार्च 2014 तक, द.क्षे.वि.स. के संगठनों की कुल पात्रता/ शेड्यूल/ द्विपक्षीय भी मिलाकर वास्तविक आहरण

Total Entitlements / Schedule / Actual Drawal including Bilateral in MU by Constituents of SRPC
From April 2013 to March 2014

Month & Year	ANDHRA PRADESH				KARNATAKA				KERALA			
	Entitlement from Grid	TotalSchedule from Grid	Net Schedule from Grid	Actual Drawal	Entitlement from Grid	TotalSchedule from Grid	Net Schedule from Grid	Actual Drawal	Entitlement from Grid	TotalSchedule from Grid	Net Schedule from Grid	Actual Drawal
अप्रैल / Apr-13	1601.325	1595.293	2255.457	2244.226	1064.499	1063.849	791.074	754.778	716.911	716.927	1010.266	1082.134
मई / May-13	1525.943	1525.701	2606.379	2629.430	1041.365	1020.348	827.518	789.995	693.500	698.648	1260.664	1333.150
जून / June-13	1451.119	1394.102	2343.090	2349.683	988.971	903.618	619.212	587.247	695.865	688.868	937.624	994.757
जुलाई / July-13	1573.045	1503.267	2616.767	2648.788	1046.959	925.687	417.547	376.002	738.495	719.208	826.555	860.389
अगस्त / Aug-13	1374.460	1271.711	2244.427	2251.283	977.774	896.616	663.772	616.863	665.880	624.999	613.305	604.724
सितंबर / Sep-13	1536.368	1360.779	2346.210	2357.187	1040.797	849.956	563.816	519.987	738.298	692.867	605.025	591.448
अक्टूबर / Oct-13	1437.835	1349.061	2507.033	2527.061	957.180	931.295	560.430	530.596	723.600	721.132	709.940	739.277
नवम्बर / Nov-13	1604.482	1560.532	2593.010	2599.626	1094.640	1066.556	744.220	722.472	800.630	800.563	1003.070	1046.164
दिसम्बर / Dec-13	1736.353	1701.075	2815.694	2862.997	1241.090	1234.000	800.070	752.202	861.200	861.182	1113.860	1167.350
जनवरी / Jan-14	1943.666	1932.811	2892.420	3026.589	1212.650	1188.650	705.780	643.802	948.390	943.274	908.850	966.482
फरवरी / Feb-14	1728.085	1727.295	2606.460	2707.760	1152.590	1151.687	604.560	595.977	820.850	820.854	878.400	924.628
मार्च / Mar-14	1821.291	1786.309	2991.280	3055.578	1333.040	1315.153	724.118	744.446	946.470	946.312	1011.810	1063.011
Total	19333.97	18707.94	30818.23	31260.21	13151.56	12547.42	8022.12	7634.37	9350.09	9234.83	10879.37	11373.51

Month & Year	TAMIL NADU				PUDUCHERRY				SOUTHERN REGION			
	Entitlement from Grid	TotalSchedule from Grid	Net Schedule from grid	Actual Drawal	Entitlement from Grid	TotalSchedule from Grid	Net Schedule from grid	Actual Drawal	Entitlement from Grid	TotalSchedule from Grid	Net Schedule from grid	Actual Drawal
अप्रैल / Apr-13	1672.942	1672.520	2317.514	2372.607	234.246	234.113	234.116	206.355	5289.923	5282.702	6608.427	6660.100
मई / May-13	1625.354	1623.142	1945.492	1951.443	233.423	231.916	231.912	213.481	5119.585	5099.756	6871.965	6917.499
जून / June-13	1554.846	1554.466	2025.561	2025.101	215.611	212.138	212.138	204.039	4906.412	4753.193	6137.625	6160.827
जुलाई / July-13	1711.604	1711.077	2464.717	2458.663	228.572	220.045	220.045	203.128	5298.675	5079.284	6545.631	6546.970
अगस्त / Aug-13	1436.557	1433.368	2055.837	2044.583	205.771	198.180	198.200	193.042	4660.442	4424.874	5775.541	5710.495
सितंबर / Sep-13	1673.711	1671.941	2215.015	2238.505	215.881	199.394	199.394	190.787	5205.055	4774.937	5929.460	5897.914
अक्टूबर / Oct-13	1635.310	1619.771	2304.970	2260.508	194.475	190.489	190.223	192.949	4948.400	4811.747	6272.596	6250.391
नवम्बर / Nov-13	1784.860	1767.666	2223.970	2154.205	205.050	194.550	194.550	176.692	5489.662	5389.868	6758.820	6699.159
दिसम्बर / Dec-13	1985.980	1957.988	2440.560	2315.622	218.660	200.966	200.970	182.406	6043.283	5955.211	7371.154	7280.577
जनवरी / Jan-14	2162.440	2119.979	2732.560	2581.880	210.760	202.409	202.430	183.858	6477.906	6387.122	7442.040	7402.611
फरवरी / Feb-14	1948.190	1946.135	2557.810	2526.832	183.990	182.182	182.180	172.106	5833.705	5828.152	6829.410	6927.303
मार्च / Mar-14	2248.580	2246.063	2914.416	2900.710	205.971	199.213	199.213	201.840	6555.352	6493.049	7840.837	7965.585
Total	21440.37	21324.12	28198.42	27830.66	2552.41	2465.59	2465.37	2320.68	65828.40	64279.90	80383.51	80419.43

Note :- Entitlement, Schedule & Actuals are at Generator Ex-Bus Periphery.

Entitlement : includes entitlements from RSTPS-NTPC, Vallur-NTECL, Neyveli II Stage I & II, Neyveli TS I Expansion, Talcher Stage II, Simhadri Stage - II, ER, NR Power and actuals of MAPS, KKNPP & KGS. This does not include bilateral exchanges.

Schedule : includes schedules from RSTPS-NTPC, Vallur-NTECL, Neyveli II Stage I & II, Neyveli TS I Expansion, Talcher Stage II, Simhadri Stage - II, ER, NR Power and actuals of MAPS, KKNPP & KGS.

Total Schedule does not include bilateral exchanges.

Net Schedule includes schedule of bilateral exchanges.

वर्ष 2013-14 में दक्षिण क्षेत्र के अंतर राज्य उत्पादन केन्द्रों की शेड्यूल उत्पादन, वास्तविक उत्पादन एवं यू.आई. की शुल्क
Month wise Schedule Generation, Actual Generation and U I Charges of ISGS (Southern Region)
for the year 2013-14

Month	RSTPS STAGE I & II					RSTPS STAGE III				
	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	1404.117520	1410.462215	6.344695	26,049,354	-11,835	347.011278	348.706530	1.695252	7,391,489	-4,554
मई / May-13	1444.250563	1448.116545	3.865982	26,332,897	-4,704	336.468715	336.952968	0.484253	7,934,298	-5,662
जून / June-13	1039.952070	1028.764309	-11.187761	-11,651,578	-6,275	310.539493	303.846551	-6.692941	-6,052,833	-1,222
जुलाई / July-13	1125.339258	1114.689112	-10.650145	-9,236,053	-8,194	315.357710	309.112206	-6.245504	-4,840,605	-268
अगस्त / Aug-13	930.841893	912.273878	-18.568014	-14,014,316	-2,774	300.898740	288.668661	-12.230079	-8,681,651	-1,755
सितंबर / Sep-13	1051.712953	1045.252930	-6.460023	-2,982,944	-751	297.181712	292.266261	-4.915452	-1,388,417	0
अक्टूबर / Oct-13	1057.479055	1052.742287	-4.736768	-738,430	-39,675	306.270622	305.064496	-1.206127	1,695,308	-253
नवम्बर / Nov-13	1315.779848	1294.005878	-21.773969	-23,089,146	-843	331.152260	324.125550	-7.026710	-5,020,595	0
दिसम्बर / Dec-13	1437.743363	1391.059129	-46.684234	-41,301,094	-4,797	317.269745	309.053677	-8.216068	-8,224,272	-31
जनवरी / Jan-14	1301.196645	1293.978730	-7.217915	-4,363,373	-1,023	345.209623	342.980784	-2.228838	-950,116	-138
फरवरी / Feb-14	1316.294338	1310.227673	-6.066665	-2,108,383	417,561	325.688460	322.569930	-3.118530	-955,702	-796,194
मार्च / Mar-14	1456.113060	1451.813031	-4.300029	-1,014,346	-961,308	325.386238	323.062952	-2.323286	-181,706	323,569
Total	14880.820563	14753.385717	-127.434846	-58117412	-624618	3858.434595	3806.410565	-52.024030	-19274802.16	-486508.6755

Month	TALCHER STPS STAGE-II (at ER Freq.)					NLC TPS- II STAGE-I				
	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	876.768880	877.112178	0.343298	9,802,016	-934	368.204850	371.733486	3.528636	15,762,769	-19,650
मई / May-13	820.115370	815.516276	-4.599094	2,526,264	-2,159	365.610163	369.247143	3.636981	17,346,115	-31,148
जून / June-13	994.111600	977.639288	-16.472312	-8,032,196	-10,820	324.241800	327.237629	2.995829	13,485,093	-12,325
जुलाई / July-13	1071.857945	1062.508224	-9.349721	-5,741,544	-1,838	355.802073	360.008321	4.206249	15,802,642	-1,146
अगस्त / Aug-13	854.858540	842.577467	-12.281073	-7,170,848	-32,456	348.873345	347.995470	-0.877875	6,393,558	-11,631
सितंबर / Sep-13	1142.991978	1142.778277	-0.213700	5,128,889	-24,329	309.925345	312.638766	2.713421	10,755,975	-895
अक्टूबर / Oct-13	1072.145358	1064.757389	-7.387968	-2,255,853	-2,638	234.783955	235.618223	0.834268	7,325,309	-1,504
नवम्बर / Nov-13	1288.515320	1285.360669	-3.154651	-507	-1,573	289.636268	288.094014	-1.542253	3,855,654	0
दिसम्बर / Dec-13	1317.077230	1264.996691	-52.080539	-42,137,338	-9,968	253.682650	254.046897	0.364247	4,998,207	0
जनवरी / Jan-14	1387.380453	1362.523461	-24.856992	-18,602,044	-1,730	375.517995	377.414152	1.896157	6,113,017	-521
फरवरी / Feb-14	1229.278000	1204.640545	-24.637455	-13,955,049	-3,488,248	347.055260	347.274004	0.218744	2,860,257	812,941
मार्च / Mar-14	1419.712500	1411.574756	-8.137744	-712,435	-10,420,943	384.634968	385.416876	0.781909	-303,268	3,038,920
Total	13474.813173	13311.985222	-162.827951	-81150646	-13997636	3957.968670	3976.724982	18.756312	104,395,329	3,773,043

Month	NLC TPS- II STAGE- II					NLC TPS-I EXPANSION				
	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	499.787718	504.400461	4.612744	21,347,834	-3,448	278.481500	280.265558	1.784058	7,841,214	-1,246
मई / May-13	482.344435	486.678331	4.333896	23,220,095	-21,069	286.359305	288.106333	1.747028	7,481,603	-31
जून / June-13	473.201993	480.568865	7.366872	29,153,824	-290	271.462008	273.361630	1.899623	6,062,180	-12,186
जुलाई / July-13	436.740053	442.533956	5.793904	22,269,554	-14,615	273.954513	276.236746	2.282233	5,562,586	0
अगस्त / Aug-13	314.376388	311.913464	-2.462923	3,243,675	-14,420	267.311568	269.119979	1.808412	2,258,542	-20,113
सितंबर / Sep-13	338.942398	340.173075	1.230678	9,771,664	-475	262.195990	265.761896	3.565906	6,825,448	0
अक्टूबर / Oct-13	437.901975	439.065681	1.163706	13,358,039	-40,911	144.936750	146.271521	1.334771	3,359,758	-1,097
नवम्बर / Nov-13	392.087263	388.529450	-3.557812	2,612,454	0	165.663445	166.843508	1.180063	2,280,921	-2,928
दिसम्बर / Dec-13	506.919245	501.783684	-5.135561	4,500,336	0	251.625623	252.956843	1.331221	3,827,675	0
जनवरी / Jan-14	526.402340	529.654164	3.251824	10,172,709	-797	283.081015	286.046866	2.965851	7,121,166	0
फरवरी / Feb-14	466.098103	465.095930	-1.002172	3,173,652	99,197	245.637000	246.458886	0.821886	2,290,982	1,162,832
मार्च / Mar-14	532.447855	532.335422	-0.112433	-114,654	3,146,215	261.901070	262.124582	0.223512	-496,951	1,166,659
Total	5407.249763	5422.732485	15.482723	142709182	3149388	2992.609785	3013.554347	20.944562	54415126.03	2,291,891

वर्ष 2013-14 में दक्षिण क्षेत्र के अंतर राज्य उत्पादन केन्द्रों की शेड्यूल उत्पादन, वास्तविक उत्पादन एवं यू.आई. की शुल्क
Month wise Schedule Generation, Actual Generation and U I Charges of ISGS (Southern Region)
for the year 2013-14

Month	SIMHADRI STAGE - II					NTECL, VALLUR				
	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT	SCHEDULE	ACTUAL	UI	UI AMOUNT	ADDITIONAL UI AMOUNT
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	615.101033	620.883757	5.782724	24,853,712	-14,935	237.796280	239.231955	1.435675	7,198,910	-109,490
मई / May-13	548.829580	553.261363	4.431783	24,171,435	0	163.808528	164.022413	0.213885	3,326,350	-205,075
जून / June-13	615.848998	614.053284	-1.795714	9,597,025	0	118.895058	119.264504	0.369446	1,271,160	-504
जुलाई / July-13	484.915228	479.986381	-4.928847	929,315	0	287.228232	284.549990	-2.678243	-2,306,990	-70,766
अगस्त / Aug-13	329.149002	322.663478	-6.485524	-4,845,949	-1,295	98.741260	87.929833	-10.811427	-8,340,906	-36,726
सितंबर / Sep-13	458.454070	453.330164	-5.123906	-1,506,239	0	288.902152	281.523118	-7.379035	-6,541,177	-82,434
अक्टूबर / Oct-13	422.683385	420.637293	-2.046092	1,826,414	0	342.730215	341.057516	-1.672699	-677,994	-71,448
नवम्बर / Nov-13	613.577363	600.736195	-12.841168	-14,428,688	-37,054	332.240348	330.563621	-1.676726	-721,916	-58,634
दिसम्बर / Dec-13	680.928352	659.612486	-21.315866	-19,615,958	0	313.930623	312.130462	-1.800161	-623,801	0
जनवरी / Jan-14	712.395093	694.355904	-18.039188	-22,262,332	0	537.397283	531.664487	-5.732795	-8,042,712	-1,678
फरवरी / Feb-14	651.675420	642.136848	-9.538572	-5,772,350	-1,232,416	427.783365	426.166798	-1.616567	931,087	2,337,204
मार्च / Mar-14	695.860832	688.713211	-7.147621	-273,364	-4,721,964	393.587453	392.082456	-1.504997	-1,257,273	1,167,531
Total	6829.418355	6750.370364	-79.047991	-7326980	-6007663	3543.040795	3510.187153	-32.853642	-15785262	2867978

01.04.2013 से 31.03.2014 तक, दक्षिण क्षेत्र के लाभार्थियों की
आहरण शेड्यूल, वास्तविक आहरण एवं यू.आई.ऊर्जा के विवरण
Statement of Drawal vis-a-vis schedule, Actual and UI Energy of
Beneficiaries of SR (Period from 01.04.2013 to 31.03.2014)

Month	ANDHRA PRADESH					KARNATAKA				
	Schedule	Actual	UI Energy	UI Amount	Additional UI Amount	Schedule	Actual	UI Energy	UI Amount	Additional UI Amount
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	2169.890275	2144.692262	27.291669	102,388,888	-434,121	722.634343	721.302928	3.289110	32,963,548	-43,218
मई / May-13	2512.805414	2516.507270	-0.594011	2,263,821	-160,174	759.544000	756.068343	6.280610	35,504,184	-37,765
जून / June-13	2266.031459	2275.923623	-5.789514	3,409,043	-156,738	572.266942	568.812341	7.139157	11,816,595	-103,745
जुलाई / July-13	2543.740054	2568.523110	-19.606827	-40,518,018	-4,555	382.171063	364.608186	22.212206	34,366,884	0
अगस्त / Aug-13	2180.696308	2201.964856	-19.578313	890,703	-52,942	634.521605	603.349718	32.704493	60,796,200	-93,109
सितंबर / Sep-13	2274.917867	2277.513448	-1.853137	7,896,242	-137,027	532.517548	502.410911	30.798056	69,635,479	0
अक्टूबर / Oct-13	2439.224834	2439.386757	11.514741	-345,097	-436,513	530.911080	512.187573	24.503864	87,357,461	0
नवम्बर / Nov-13	2495.589503	2485.524223	59.180821	86,638,496	-10,542	676.086660	690.761890	7.444063	23,307,486	0
दिसम्बर / Dec-13	2705.555162	2730.401149	-24.333095	-95,736	-27,783,011	714.667505	717.364638	37.715221	0	78,471,854
जनवरी / Jan-14	2770.862927	2866.952445	-96.998629	0	-161,728,175	648.293503	609.845343	53.126690	0	119,337,314
फरवरी / Feb-14	2467.440616	2590.527944	-123.319130	-5,344,365	-171,525,509	555.440585	570.174096	-16.791264	-969,312	-16,745,370
मार्च / Mar-14	2903.799158	2932.357033	-28.557875	-12,713,960	-56,186,150	698.469105	714.424646	-15.955541	-10,804,934	-37,053,778
Total	29730.553575	30030.274119	-222.643302	144470017	-418615458	7427.523938	7331.310611	192.466665	343973590	143732182

Month	KERALA					TAMIL NADU				
	Schedule	Actual	UI Energy	UI Amount	Additional UI Amount	Schedule	Actual	UI Energy	UI Amount	Additional UI Amount
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	968.287540	1034.139618	-65.352039	-245,013,181	-1,190,253	2239.823385	2267.379291	-28.358875	-146,549,276	-3,660
मई / May-13	1214.688375	1275.897408	-60.316932	-171,936,411	-1,069,391	1874.612735	1867.637657	10.043184	-45,557,809	-2,399
जून / June-13	901.120270	963.530569	-61.204692	-140,036,354	-197,536	1952.912508	1961.530885	-4.124574	-54,035,142	-709
जुलाई / July-13	798.065700	834.317021	-34.732237	-70,307,610	-6,122	2390.022448	2384.159691	11.432423	18,155,720	-538
अगस्त / Aug-13	590.812017	591.476854	-0.206073	2,950,249	-43,277	1996.459645	1999.792784	-2.238898	-14,789,184	-196
सितंबर / Sep-13	577.853308	571.456595	6.573214	-6,755,597	-42,112	2147.125155	2162.842838	-16.152669	-22,862,059	-1,185
अक्टूबर / Oct-13	678.853785	713.628613	-32.324557	-65,854,104	-76,842	2231.060115	2182.081358	54.862185	94,309,499	-204
नवम्बर / Nov-13	944.802210	1000.245724	-45.407515	-77,904,264	-270,781	2078.850740	2059.653768	43.851915	47,376,623	-100
दिसम्बर / Dec-13	1041.692878	1113.285861	-50.718907	-98,486	-83,741,444	2262.723295	2208.376868	130.681138	-77,848	126,356,771
जनवरी / Jan-14	848.137145	915.505276	-61.601022	0	-116,027,096	2594.407677	2445.699843	172.461165	-245,931	299,272,387
फरवरी / Feb-14	817.598827	884.596484	-69.663226	-998,434	-107,194,134	2435.814226	2417.432922	11.385150	-2,651,742	18,211,748
मार्च / Mar-14	971.604003	1020.143743	-48.539740	-964,026	-99,791,032	2841.992365	2783.734334	58.258031	-16,264,520	74,558,559
Total	10353.516058	10918.223764	-523.493726	-776918218	-409650018	27045.804292	26740.322240	442.100173	-143191669	518390473

**01.04.2013 से 31.03.2014 तक, दक्षिण क्षेत्र के लाभार्थियों की
आहरण शेड्यूल, वास्तविक आहरण एवं यू.आई.ऊर्जा के विवरण**
**Statement of Drawal vis-a-vis schedule, Actual and UI Energy of
Beneficiaries of SR (Period from 01.04.2013 to 31.03.2014)**

Month	PUDUCHERRY					GOA				
	Schedule	Actual	UI Energy	UI Amount	Additional UI	Schedule	Actual	UI Energy	UI Amount	Additional UI
	MU	MU	MU	Rs.	Rs.	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	224.608590	197.202702	27.680985	109,188,539	-15,665	63.441865	60.768498	2.673367	10,303,117	-86,423
मई / May-13	222.541010	204.313327	18.655417	58,275,165	-41,923	66.458620	64.031307	2.427313	6,485,584	-37,382
जून / June-13	204.116523	197.634039	7.051312	17,023,711	-33,143	48.267980	41.291544	6.976436	16,145,504	-14,401
जुलाई / July-13	212.892053	196.972656	16.637963	38,432,156	-13,820	50.327922	42.076200	8.251722	16,534,367	-111
अगस्त / Aug-13	192.154518	188.813436	3.565905	4,961,452	-57,476	44.192000	40.353320	3.838680	5,681,762	-27,833
सितंबर / Sep-13	193.052513	184.338398	8.811849	16,199,435	-20,488	50.715027	47.424944	3.290084	5,961,995	-48,553
अक्टूबर / Oct-13	183.961822	186.254872	-1.734196	-8,274,821	-62,464	49.775520	43.490416	6.285104	13,545,719	-6,237
नवम्बर / Nov-13	181.959503	168.936735	14.958883	27,856,514	-15,690	60.561960	52.986576	7.575384	12,851,657	-2,678
दिसम्बर / Dec-13	186.380945	173.958310	17.716708	0	26,166,789	65.761658	60.999360	2.018674	-8,274	2,840,833
जनवरी / Jan-14	191.505405	174.160071	18.741994	-4,006	38,275,174	59.690278	59.767064	-2.563846	-7,989	-4,450,564
फरवरी / Feb-14	172.558313	164.654746	7.215771	-65,802	13,506,541	58.967167	55.534144	2.041868	-28,497	1,590,991
मार्च / Mar-14	193.877423	193.700431	0.176991	-1,124,077	-3,558,133	65.416132	59.339560	6.076572	-2,080,266	5,328,334
Total	2359.608615	2230.939724	139.479583	262468267	74129701	683.576130	628.062932	48.891359	85384679	5085977

Month	HVDC				
	Schedule	Actual	UI Energy	UI Amount	Additional UI
	MU	MU	MU	Rs.	Rs.
अप्रैल / Apr-13	3.151667	1.888794	1.262873	5,010,874	0
मई / May-13	3.099695	2.114910	0.984785	3,058,218	0
जून / June-13	3.051360	1.887426	1.163934	2,833,721	0
जुलाई / July-13	3.357502	1.921534	1.435968	2,987,301	0
अगस्त / Aug-13	3.257315	1.912515	1.344800	2,474,520	0
सितंबर / Sep-13	3.607678	1.846494	1.761184	3,335,746	0
अक्टूबर / Oct-13	3.281637	1.882203	1.399434	3,237,854	-237
नवम्बर / Nov-13	3.896798	1.829248	2.067550	3,822,071	0
दिसम्बर / Dec-13	4.023683	1.788765	2.234917	0	3,591,886
जनवरी / Jan-14	4.023067	1.677411	2.345657	0	4,733,094
फरवरी / Feb-14	3.681337	1.604169	2.077169	0	3,338,342
मार्च / Mar-14	4.302343	1.905066	2.397277	-427,472	4,902,020
Total	42.734083	22.258535	20.475548	26332834	16565104

Schedule & actual for SEB's are at State Periphery.

UI Amount Payable by State is shown as (-) and UI amount receivable by State is shown as (+).

Under Drawal is shown as (-) and Overdrawal is shown as (+)

वर्ष 2013-14 के दौरान अंतर क्षेत्रीय वास्तविक विद्युत विनिमय
Inter Regional Actual Energy Exchanges in MU for the year 2013-14

Region ↓	April	May	June	July	August	September	October	November	December	January	February	March	TOTAL
ER TO SR													
At Gazuwaka East Bus and Talcher Interconnecting Bus	661.19	934.99	614.95	671.01	556.23	389.85	613.08	562.50	552.07	306.77	300.40	460.34	6623.39
SR TO ER													
At Gazuwaka East Bus and Talcher Interconnecting Bus	0.07	0.00	0.00	0.00	0.47	23.96	0.14	0.00	0.10	38.35	1.74	0.00	64.82
WR TO SR													
At Chandrapur West Bus	694.03	699.82	547.47	671.06	633.48	588.94	700.00	662.46	681.19	594.67	621.94	757.72	7852.79
SR TO WR													
At Chandrapur West Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11

वर्ष 2013-14 के दौरान क्षेत्रीय / अंतर क्षेत्रीय अनुसूचित विद्युत विनिमय के विवरण

Details of Intra / Inter Regional Scheduled Bilateral Exchanges during 2013-14

INTRA REGIONAL BILATERAL EXCHANGES ON SHORT TERM OPEN ACCESS

Injectee		Drawee		Trader	TRANSACTION STOA / MTOA	Periphery	अप्रै / Apr-13	मई / May-13	जून / June-13	जुलाई / July-13	अगस्त / Aug-13	सितंबर / Sep-13	अक्टूबर / Oct-13	नवंबर / Nov-13	दिसंबर / Dec-13	जनवरी / Jan-14	फरवरी / Feb-14	मार्च / Mar-14	कुल / Total
State Utility	Embedded System	State Utility	Embedded System																
APTRANSCO	NBPALONCHA	KSEB	KSEB	PTC	STOA	SR											7205988	7741912.5	14947900
APTRANSCO	NBVLAP	KSEB	KSEB	TATA	STOA	SR											7263000	6566250	13829250
KPTCL	GMSUGAR	APTRANSCO	APPCC	GMSUGARLTD	STOA	SR												2880000	2880000
KPTCL	GODBIOREF	APTRANSCO	APCPDCL	GODBIOREF	STOA	SR											6535200		6535200
KPTCL	GODBIOREF	APTRANSCO	APPCC	GODBIOREF	STOA	SR											1622400	18580800	20203200
KPTCL	INDIASUGAR	APTRANSCO	APPCC	INDIASUGAR	STOA	SR											2028000	3348000	5376000
KPTCL	JKCEMENT	APTRANSCO	APPCC	JKCEMENT	STOA	SR											4032000	8928000	12960000
KPTCL	JSWEL	APTRANSCO	APCPDCL	JSWPTC	STOA	SR	201212575	204616830	201712500	293372060	175477510	272592310	309721320						1658705105
KPTCL	JSWEL	APTRANSCO	APPCC	JSWPTC	STOA	SR					87876530	344240	5206000	249349500	238401105	187836250	198671040	221950000	1189634665
KPTCL	JSWEL	APTRANSCO	JSWCEMENT	JSWPTC	STOA	SR	5482000	5143650	1154000	250600									12030250
KPTCL	HKMETALIC	APTRANSCO	APPCC	MITTAL	STOA	SR											739200	2083200	2822400
KPTCL	SIVASAKTI	APTRANSCO	APPCC	MITTAL	STOA	SR												6696000	6696000
KPTCL	BMMISPAT	APTRANSCO	APPCC	NVVN	STOA	SR											14400000	18600000	33000000
KPTCL	GEMSUGAR	APTRANSCO	APCPDCL	PTC	STOA	SR											624000	1392000	2016000
KPTCL	ILCIRON	APTRANSCO	APCPDCL	PTC	STOA	SR											1008000	2088000	3096000
KPTCL	KPRSUGAR	APTRANSCO	APCPDCL	PTC	STOA	SR												1392000	1392000
KPTCL	RENUSUGATH	APTRANSCO	APCPDCL	PTC	STOA	SR											1092000		1092000
KPTCL	SIL	APTRANSCO	APCPDCL	PTC	STOA	SR	20400000	22320000	20261250	20754000		19454250	21165000	17302500	16758000	19800000	19836000	20736000	218787000
KPTCL	SHAMNSUGAR	APTRANSCO	APPCC	RETL	STOA	SR												3780000	3780000
KPTCL	DKSSKN	APTRANSCO	APPCC	SDKCHIKODI	STOA	SR												7440000	7440000
KPTCL	HIMATSINGKA	APTRANSCO	APPCC	TATA	STOA	SR											864000	1056000	1920000
KPTCL	SADASIVSUG	APTRANSCO	APPCC	TATA	STOA	SR											2755200	6100800	8856000
KPTCL	UGARBELGAM	APTRANSCO	APPCC	TATA	STOA	SR											6840000	11160000	18000000
KPTCL	GLOBAL	KSEB	KSEB	GEL	STOA	SR	1800000	660000											2460000
KPTCL	GMSUGAR	KSEB	KSEB	GMSUGARLTD	STOA	SR	6000000												6000000
KPTCL	JSWEL	KSEB	KSEB	JSWPTC	STOA	SR	107460975	111881895	81000000		506000	74500		8512500	34621753	82468750	75656250	95932275	598114898
KPTCL	RENUSUGHAV	KSEB	KSEB	JSWPTC	STOA	SR									4236385	1960000	6052500	6394905	18643790
KPTCL	SRSL(MUNOLI)	KSEB	KSEB	JSWPTC	STOA	SR									4084285	1960000	6052500	6394905	18491690
KPTCL	SRSL-M	KSEB	KSEB	JSWPTC	STOA	SR									152100				152100
KPTCL	KOGANPOWER	KSEB	KSEB	KOGANPOWER	STOA	SR										1203300	3813075	2325727.5	7342103
KPTCL	CHAMSUGAR	KSEB	KSEB	MITTAL	STOA	SR									2393143		3231710	3024940	8649793
KPTCL	JSWEL	KSEB	KSEB	MITTAL	STOA	SR												4568750	4568750
KPTCL	NANDI	KSEB	KSEB	NSSKN	STOA	SR									3677043	1617310	5442463	3285855	14022670
KPTCL	BMMISPAT	KSEB	KSEB	NVVN	STOA	SR	14400000								1320000		15177235	12084340	42981575
KPTCL	BANNARISUG	KSEB	KSEB	PTC	STOA	SR									5262250	2674000	4977500	8238870	21152620
KPTCL	HKMETALIC	KSEB	KSEB	PTC	STOA	SR	6840000												6840000
KPTCL	ILCIRON	KSEB	KSEB	PTC	STOA	SR									1284375	785000	2530530	2681820	7281725
KPTCL	SHIRASUGAR	KSEB	KSEB	SHIRASUGAR	STOA	SR									4236385	1910000	6052500	5444987.5	17643873
KPTCL	EIDPARRY	KSEB	KSEB	TATA	STOA	SR									4659175	792000	6547750	7029120	19028045
KPTCL	STARMETAL	KSEB	KSEB	TATA	STOA	SR									7201553	1224000	10119250	9688025	28232828

[illegible]

Injectee		Drawee		Trader	TRANSACTION STOA / MTOA	Periphery	अप्रै / Apr-23	मई / May-23	जून / June-23	जुलाई / July-23	अगस्त / Aug-23	सितंबर / Sep-23	अक्टूबर / Oct-23	नवंबर / Nov-23	दिसंबर / Dec-23	जनवरी / Jan-24	फरवरी / Feb-24	मार्च / Mar-24	कुल / Total
State Utility	Embedded System	State Utility	Embedded System																
INTER REGIONAL IMPORT ON SHORT TERM OPEN ACCESS : TO : ANDHRA PRADESH																			
CSEB	JSPLDCPP	APTRANSCO	APCPDCL	KISPL	STOA	ER							1125940						1125940
CSEB	SALASARSTL	APTRANSCO	APCPDCL	KISPL	STOA	ER				5704882.5									5704883
CSEB	CSPDCL	APTRANSCO	APPCC	MITTAL	STOA	ER							14970690	14312155	16500345	0		8636160	54419350
CSEB	KSKMAHANADI	APTRANSCO	APCPDCL	KSKMAHANAD	MTOA	WR			0	0	104246750	129997250	160686400	258622250	252493750	275371540	206877525	244632500	1632927965
CSEB	CSPDCL	APTRANSCO	APPCC	MITTAL	STOA	WR							10000000						1000000
CSEB	VANDANVIDT	APTRANSCO	APPCC	MITTAL	STOA	WR					2400000								2400000
DELHI	BSESRPL	APTRANSCO	APCPDCL	PTC	STOA	ER			181850	132980	80727.5	341888							737445
DELHI	TATADELHI	APTRANSCO	APCPDCL	PTC	STOA	ER							6956337.5	2225013	7861780	0		8652720	25695850
GUJARATH	APLMUNDRA3	APTRANSCO	APPCC	ADANI	STOA	ER	6065690	28855397.5											34921088
GUJARATH	GUVNL	APTRANSCO	APCPDCL	PXIL	STOA	WR				7125150									7125150
HARYANA	HPPC	APTRANSCO	APPCC	MITTAL	STOA	ER										0		17298000	17298000
JHARKHAND	CORPORATE	APTRANSCO	APCPDCL	CORPORATE	MTOA	ER			0	0	0	0	0	0	0	0	0	0	0
JHARKHAND	ADHUNIK	APTRANSCO	APPCC	MITTAL	STOA	ER									1657833	0	1152000		2809833
JHARKHAND	JSEB	APTRANSCO	APPCC	MITTAL	STOA	ER	8846460			21708000	524045		18759260	12307893	16876260				79021918
MEGSEB	MEGSEB	APTRANSCO	APPCC	MITTAL	STOA	ER							1725500						1725500
MSETCL	EMCO	APTRANSCO	APPCC	EMCO	STOA	ER						5332240	9823397.5	21506450	23637370	0	1152000	10798080	72249538
MSETCL	JSWRGIRI	APTRANSCO	APCPDCL	JSWPTC	STOA	ER	991420	181366490		17550875		10670293							210579078
MSETCL	JSWRGIRI	APTRANSCO	APPCC	JSWPTC	STOA	ER							26787425						26787425
MSETCL	SURYACOT	APTRANSCO	SURYACOTAP	SLCM	STOA	ER		138000											138000
MSETCL	EMCO	APTRANSCO	APPCC	EMCO	STOA	WR					15111000								15111000
MSETCL	JSWRGIRI	APTRANSCO	APCPDCL	JSWPTC	STOA	WR				22106340									22106340
MSETCL	EMCO	APTRANSCO	APPCC	MITTAL	STOA	WR				8835937.5									8835938
MSETCL	SURYACOT	APTRANSCO	SURYACOTAP	SLCM	STOA	WR					720000								720000
ORISSA	GMRKAMALA	APTRANSCO	APPCC	GMRKAMALA	STOA	ER						136843			1303435				1440278
ORISSA	AARTISTEEL	APTRANSCO	APPCC	INSTINCT	STOA	ER		4192860											4192860
ORISSA	JSSL(OR)	APTRANSCO	JINDSTAIN	JINDALST	STOA	ER		1635410											1635410
ORISSA	STERENERGY	APTRANSCO	APCPDCL	KISPL	STOA	ER				994735	5604112.5	2590900							9

[illegible]

Injectee		Drawee		Trader	TRANSACTION STOA / MTOA	Periphery	अप्रै / Apr-23	मई / May-23	जून / June-23	जुलाई / July-23	अगस्त / Aug-23	सितंबर / Sep-23	अक्टूबर / Oct-23	नवंबर / Nov-23	दिसंबर / Dec-23	जनवरी / Jan-24	फरवरी / Feb-24	मार्च / Mar-24	कुल / Total	
State Utility	Embedded System	State Utility	Embedded System																	
TO : KERALA																				
CSEB	CSPDCL	KSEB	KSEB	PTC	STOA	ER		11614360						5433610	10547672.5	0				27595643
CSEB	CSPTRADING	KSEB	KSEB	PTC	STOA	ER			10110330											10110330
CSEB	CSPTRADING	KSEB	KSEB	PTC	MTOA	WR			27000000	47825000	20556000	45175000	72794630	71000000	73435000	67150915	65422500	74400000		564759045
DELHI	TATADELHI	KSEB	KSEB	SCL	STOA	ER			5271750	4364808	8477725									18114283
DELHI	TATADELHI	KSEB	KSEB	SCL	STOA	WR			10543500											10543500
DVC	DVC	KSEB	KSEB	IEX	STOA	ER									175000					175000
HPSEB	KARCHWANG	KSEB	KSEB	JKPARCHAM	STOA	ER	7010805	63563925												70574730
JHARKHAND	JSEB	KSEB	KSEB	MITTAL	STOA	ER				1300000	200000	675000	732500							2907500
ORISSA	GRIDCO	KSEB	KSEB	IEX	STOA	ER							1400000							1400000
ORISSA	STERENERGY	KSEB	KSEB	IEX	STOA	ER						8000								8000
ORISSA	ADHUNIK	KSEB	KSEB	MITTAL	STOA	ER				0			175000							175000
ORISSA	GRIDCO	KSEB	KSEB	NVVN	STOA	ER	29502700	128040370												157543070
ORISSA	NBVLORI	KSEB	KSEB	NVVN	STOA	ER		68520												68520
ORISSA	STERENERGY	KSEB	KSEB	NVVN	STOA	ER		17333252.5												17333253
ORISSA	ADHUNIK	KSEB	KSEB	PTC	STOA	ER	47067093		3232540	500000										50799633
ORISSA	GRIDCO	KSEB	KSEB	PTC	STOA	ER	3557100		10295675	53996618		9415532.5	13566435	4377167.5	9045692.5	0				104254220
ORISSA	STERENERGY	KSEB	KSEB	PTC	MTOA	ER				15293000	16281000	32075000	69244130	71000000	73435000	67150915	65422500	73795000		483696545
ORISSA	STERENERGY	KSEB	KSEB	PTC	STOA	ER		106535305	33145075											139680380
ORISSA	STERENERGY	KSEB	KSEB	STERLITE	STOA	ER								4348262.5	899740	0				5248003
RAJASTHAN	SHRECEMTPS	KSEB	KSEB	SCL	STOA	ER			11152893	13729000	10211210	4459902.5	13095285	5884365	4371445	0				62904100
RAJASTHAN	SHRECEMTPS	KSEB	KSEB	SHREECEM	STOA	ER							584220							584220
WBSETCL	WBSEDCL	KSEB	KSEB	NVVN	STOA	ER	17835923													17835923
WBSETCL	WBSEDCL	KSEB	KSEB	PTC	STOA	ER	685440													685440
WR	JINDALPOW	KSEB	KSEB	JPL	STOA	ER								3262912.5						3262913
WR	JINDALPOW	KSEB	KSEB	NVVN	STOA	ER		18510930												18510930
WR	JINDALPOW	KSEB	KSEB	PTC	STOA	ER	215500	11619685												11835185
TOTAL IMPORT BY : KERALA							105874560	357286348	110751763	137008425	55725935	91808435	171592200	165306318	171909550	134301830	130845000	148195000		1780605363

Injectee		Drawee		Trader	TRANSACTION STOA / MTOA	Periphery	अप्रै / Apr-23	मई / May-23	जून / June-23	जुलाई / July-23	अगस्त / Aug-23	सितंबर / Sep-23	अक्टूबर / Oct-23	नवंबर / Nov-23	दिसंबर / Dec-23	जनवरी / Jan-24	फरवरी / Feb-24	मार्च / Mar-24	कुल / Total
State Utility	Embedded System	State Utility	Embedded System																
TO : TAMIL NADU																			
CSEB	PRAKASHIND	TNEB	TANGEDCO	INSTINCT	STOA	ER			6745485		6911445	3225858	1948420	1313457.5	270642.5				20415308
CSEB	CSPDCL	TNEB	TANGEDCO	PTC	STOA	ER						110170							110170
CSEB	VANDANGLOB	TNEB	TANGEDCO	NVVN	STOA	WR					3120000								3120000
DELHI	BSESRPL	TNEB	TANGEDCO	RETL	STOA	ER							1935040	2615660	638702.5				5189403
DELHI	TATADELHI	TNEB	TANGEDCO	SCL	STOA	ER					3579125								3579125
GUJARATH	APLMUNDRA3	TNEB	TANGEDCO	ADANI(E)	MTOA	WR			71600000	148800000	148512000	137669575	142086355	131038750	142701500	132007795	130845000	144544250	1329805225
HPSEB	KARCHWANG	TNEB	TANGEDCO	NVVN	STOA	ER					471410		4703730						5175140
HPSEB	KARCHWANG	TNEB	TANGEDCO	NVVN	STOA	WR					4815000								4815000
ORISSA	AARTISTEEL	TNEB	TANGEDCO	INSTINCT	STOA	ER			3675408	1559753	3145352.5				712735				9093248
ORISSA	ASLCGP	TNEB	TANGEDCO	INSTINCT	STOA	ER							1054837.5						1054838
ORISSA	STERENERGY	TNEB	TANGEDCO	INSTINCT	STOA	ER			4612075	4183435					1369885	0			10165395
ORISSA	GRIDCO	TNEB	TANGEDCO	NVVN	STOA	ER	85383355			146796223	8649072.5	67738130	20826652.5	2134117.5	8740182.5	0			340267733
ORISSA	STERENERGY	TNEB	TANGEDCO	NVVN	STOA	ER	221476375	69311958	20061575	9958550	11875925	17015675	10100760	11348805	11708817.5	0			382858440
ORISSA	STERENERGY	TNEB	TNEB	NVVN	STOA	ER							2345340						2345340
ORISSA	STERENERGY	TNEB	TANGEDCO	SCL	STOA	ER		18056135											18056135
ORISSA	STERENERGY	TNEB	TANGEDCO	STERLITE	STOA	ER			26769295	20121645	21942462.5	9879650	6456877.5	4389765	911405	0			90471100
RAJASTHAN	SHRECEMCPP	TNEB	TANGEDCO	SCL	STOA	ER				10177773	9103705		6987385	1633065	2297095	0			30199023
RAJASTHAN	SHRECEMCPP	TNEB	TANGEDCO	SCL	STOA	ER													0
RAJASTHAN	SHRECEMTPS	TNEB	TANGEDCO	SCL	STOA	ER	43716985	35909140	52246808	22574748	20938122.5	6666678	18245617.5	7387620	5460540	0			213146258
RAJASTHAN	SHRECEMCPP	TNEB	TANGEDCO	SHREECEM	STOA	ER							319680						319680
RAJASTHAN	SHRECEMTPS	TNEB	TANGEDCO	SHREECEM	STOA	ER							730260						730260
RAJASTHAN	SHRECEMCPP	TNEB	TANGEDCO	SCL	STOA	WR				1217000									1217000
TRIPURA	TRIPURA	TNEB	TANGEDCO	NVVN	STOA	ER				6785185	5710737.5	2664608	1614957.5	1086395	230932.5	0			18092815
UP	LANCOANPAR	TNEB	TNEB	NETS	STOA	ER		10929345	9573380										20502725
UP	LANCOANPAR	TNEB	TANGEDCO	NETS	MTOA	NR			29934275	73444173	74256000	72000000	74129630	71000000	73435000	64020915	65422500	74400000	672042493
WBSETCL	WSEDCL	TNEB	TANGEDCO	NVVN	STOA	ER			21746900	30530593	15143675	10400883	6445372.5	8698105	929915	0			93895443
WBSETCL	WSEDCL	TNEB	TNEB	NVVN	STOA	ER			4860703										4860703
WBSETCL	WSEDCL	TNEB	TANGEDCO	PTC	STOA	ER							3288132.5	2221237.5	474027.5	0			5983398
WR	JINDALPOW	TNEB	TANGEDCO	INSTINCT	STOA	ER					4723685	3956960	1352290	912510	1763732.5	0			12709178
WR	JINDALPOW	TNEB	TANGEDCO	JPL	STOA	ER	134228245	25837705	44604535	54150333	45015535	21026648	12882940	8689622.5	16877265	0			363312828
WR	JINDALPOW	TNEB	TANGEDCO	NVVN	STOA	ER							1613995	2066980	423627.5	0			4104603
WR	JINDALPOW	TNEB	TANGEDCO	JPL	MTOA	WR			72000000	148800000	148512000	143767000	148259355	142000000	146870000	134306795	130845000	148800000	1364160150
TOTAL IMPORT BY : TAMIL NADU							484804960	160044283	368430438	679099408	536425253	496121833	467327628	399248825	415103270	330335505	327112500	367744250	5031798150
TOTAL IMPORT BY SR FROM OTHER REGION							1187378105	1479694985	859735933	1024485260	923290728	846551438	973345115	941847725	947048063	741034900	683156585	895205028	11502773863

वर्ष 2013-14 के दौरान अंतर क्षेत्रीय अनुसूचित विद्युत विनिमय के विवरण

Details of Inter Regional Scheduled Bilateral Exchanges during 2013-14

INTER REGIONAL EXPORT ON SHORT TERM OPEN ACCESS																					
FROM : ANDHRA PRADESH																					
Injectee		Drawee		Trader	Transaction	Periphery	अप्रैल / Apr-13	मई / May-13	जून / June-13	जुलाई / July-13	अगस्त / Aug-13	सितंबर / Sep-13	अक्टूबर / Oct-13	नवम्बर / Nov-13	दिसम्बर / Dec-13	जनवरी / Jan-14	फरवरी / Feb-14	मार्च / Mar-14	कुल / Total		
State Utility	Embedded System	State Utility	Embedded System		STOA/MTOA																
		NIL																		0	
TOTAL EXPORT BY : ANDHRA PRADESH							0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FROM : KARNATAKA																					
KPTCL	KPTCL	PSEB	PSEB	JSWPTC	STOA	ER	0	0	500000	0	0	0	0	0	0	0	0	0	0	500000	
TOTAL EXPORT BY : KARNATAKA							0	0	500000	0	0	0	0	0	0	0	0	0	0	500000	
FROM : KERALA																					
		NIL																		0	
TOTAL EXPORT BY : KERALA							0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FROM : TAMIL NADU																					
		NIL																		0	
																				0	
TOTAL EXPORT BY : TAMIL NADU							0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FROM : NTPC (URS Power)																					
		NIL																		0	
																				0	
TOTAL							0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FROM : GOA																					
GOASR	GOASR	GOAWR	GOAWR	GOA	STOA	WR	0	0	489720	0	0	4962150	1086097.5	1394955	0	0	462950	2499493	10895365		
GOASR	GOASR	GOAWR	GOAWR	GOASR	STOA	WR	745760	0		3211505	539275	0	0	0	0	0	0	0	4496540		
TOTAL EXPORT BY : GOA							745760	0	489720	3211505	539275	4962150	1086098	1394955	0	0	462950	2499493	15391905		
TOTAL EXPORT FROM SR							745760	0	989720	3211505	539275	4962150	1086098	1394955	0	0	462950	2499493	15891905		

वर्ष 2013-14 के दौरान क्षेत्रीय / अंतर क्षेत्रीय अनुसूचित विद्युत विनिमय के विवरण

Details of Intra / Inter Regional Scheduled Bilateral Exchanges during 2013-14

INTRA REGIONAL BILATERAL EXCHANGES ON SHORT TERM OPEN ACCESS

मास / Month →	अप्रैल / Apr-13	मई / May-13	जून / June-13	जुलाई / July-13	अगस्त / Aug-13	सितंबर / Sep-13	अक्टूबर / Oct-13	नवंबर / Nov-13	दिसंबर / Dec-13	जनवरी / Jan-14	फरवरी / Feb-14	मार्च / Mar-14	कुल / Total
UTILITY ↓													
BILATERAL PURCHASE BY ANDHRA PRADESH	373468545	471138355	443612875	529006160	494505540	556145925	620265050	490331990	482317210	471596543	521702665	672299180	6126390038
BILATERAL PURCHASE BY KARNATAKA	0	0	0	0	0	0	0	0	0	0	0	0	0
BILATERAL PURCHASE BY KERALA	145044975	121469895	81000000	0	599000	924500	185000	8512500	95123298	108247785	196038535	207020728	964166215
BILATERAL PURCHASE BY TAMIL NADU	10050000	5238300	1020600	1865520	6339600	0	170221200	7492750	45322310	275167835	276858493	296638960	1096215568
TOTAL INTRA REGIONAL BILATERAL EXCHANGES	528563520	597846550	525633475	530871680	501444140	557070425	790671250	506337240	622762818	855012163	994599693	1175958868	8186771820

INTER REGIONAL IMPORT ON SHORT TERM OPEN ACCESS :

TO ANDHRA PRADESH	54333985	373910105	158590108	206702678	242338763	202477165	303973823	355689243	353403833	275371540	221613525	371311648	3119716413
TO KARNATAKA	542364600	588454250	221963625	1674750	88800778	56144005	30451465	21603340	6631410	1026025	3585560	7954130	1570653938
TO KERALA	105874560	357286348	110751763	137008425	55725935	91808435	171592200	165306318	171909550	134301830	130845000	148195000	1780605363
TO TAMIL NADU	484804960	160044283	368430438	679099408	536425253	496121833	467327628	399248825	415103270	330335505	327112500	367744250	5031798150
TOTAL IMPORT BY SR FROM OTHER REGION	1187378105	1479694985	859735933	1024485260	923290728	846551438	973345115	941847725	947048063	741034900	683156585	895205028	11502773863

INTER REGIONAL EXPORT ON SHORT TERM OPEN ACCESS :

FROM ANDHRA PRADESH	0	0	0	0	0	0	0	0	0	0	0	0	0
FROM KARNATAKA	0	0	500000	0	0	0	0	0	0	0	0	0	500000
FROM KERALA	0	0	0	0	0	0	0	0	0	0	0	0	0
FROM TAMIL NADU	0	0	0	0	0	0	0	0	0	0	0	0	0
FROM GOA	745760	0	489720	3211505	539275	4962150	1086098	1394955	0	0	462950	2499493	15391905
TOTAL IMPORT BY SR FROM OTHER REGION	745760	0	989720	3211505	539275	4962150	1086098	1394955	0	0	462950	2499493	15891905

आई.ई.एक्स. & पी.एक्स.आई. द्वारा की गई ऊर्जा की विनिमय

Energy Exchanges through IEX & PXI

Export in Kwh to IEX & PXI :

From	अप्रैल / Apr-13		मई / May-13		जून / June-13		जुलाई / July-13		अगस्त / Aug-13		सितंबर / Sep-13		अक्तूबर / Oct-13	
	Periphery		Periphery		Periphery		Periphery		Periphery		Periphery		Periphery	
	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR
ANDHRA PRADESH	83061	80996	89666	87472	75346	73629	39910	39113	46321	45385	53624	52462	28304	27737
KARNATAKA	425865	416542	417427	408424	210320	206164	202159	198736	73336	72083	69850	68633	85589	84467
KERALA	0	0	0	0	0	0	35956	35440	90204	88978	190165	187300	15737	15544
TAMIL NADU	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IPPs/CPPs (LKPL, SEPL, MEPL)	8111	7932	12775	12510	75269	73785	39074	38418	31250	30723	18546	18203	21003	20667
TOTAL S R	517037	505470	519868	508406	360935	353578	317099	311707	241111	237169	332185	326598	150633	148415

Import in Kwh from IEX & PXI :

To	अप्रैल / Apr-13		मई / May-13		जून / June-13		जुलाई / July-13		अगस्त / Aug-13		सितंबर / Sep-13		अक्तूबर / Oct-13	
	Periphery		Periphery		Periphery		Periphery		Periphery		Periphery		Periphery	
	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State
ANDHRA PRADESH	317949	310991	327615	320583	422854	414578	417428	410412	279745	275046	276931	272090	258029	253976
KARNATAKA	222	217	1727	1692	15094	14802	13163	12936	25973	25536	24853	24401	25628	25271
KERALA	40621	39612	83030	80972	56925	55618	6406	6296	22527	22142	9741	9576	4538	4451
TAMIL NADU	152900	149554	160454	156953	103651	101627	73902	72647	80498	79136	47810	46951	46247	45415
IPPs/CPPs (LKPL, SEPL, MEPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL S R	511692	500374	572826	560200	598524	586625	510899	502291	408743	401860	359335	353018	334442	329113

Note: Energy Exchanges includes the Exports/Imports by IPPs/CPPs and State Sector.

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Energy Exchanges through IEX & PXI

Export in Kwh to || Export in Kwh to IEX & PXI :

From	नवम्बर / Nov-13		दिसम्बर / Dec-13		जनवरी / Jan-14		फरवरी / Feb-14		मार्च / Mar-14		2013-14	
	Periphery		Periphery		Periphery		Periphery		Periphery		Periphery	
	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR	Injecting State/Entity	Regional/SR
ANDHRA PRADESH	41202	40197	21648	21103	39698	38717	11386	11034	29925	29361	560091	547206
KARNATAKA	95357	93580	130866	128339	178781	175437	112581	109695	88040	86890	2090171	2048990
KERALA	0	0	0	0	0	0	0	0	0	0	332062	327262
TAMIL NADU	0	0	0	0	0	0	0	0	0	0	0	0
IPPs/CPPs (LKPPL, SEPL, MEPL)	18327	17947	49488	48390	42724	41791	3883	3787	7127	7012	327577	321165
TOTAL S R	154886	151724	202002	197832	261203	255945	127850	124516	125092	123263	3309901	3244623

Import in Kwh from || Import in Kwh from IEX & PXI :

To	नवम्बर / Nov-13		दिसम्बर / Dec-13		जनवरी / Jan-14		फरवरी / Feb-14		मार्च / Mar-14		2013-14	
	Periphery		Periphery		Periphery		Periphery		Periphery		Periphery	
	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State	Regional/SR	Drawyee State
ANDHRA PRADESH	223346	218614	297668	291027	242523	237264	148794	144585	196756	193593	3409638	3342759
KARNATAKA	40045	39316	41173	40386	10468	10266	4790	4670	19878	19620	223014	219113
KERALA	29233	28528	22404	21837	0	0	0	0	0	0	275425	269032
TAMIL NADU	50645	49431	21765	21213	747	730	591	580	0	0	739210	724237
IPPs/CPPs (LKPPL, SEPL, MEPL)	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL S R	343269	335889	383010	374463	253738	248260	154175	149835	216634	213213	4647287	4555141

Note: Energy Exchanges includes the E

वर्ष 2013-14 के दौरान, केन्द्रीय उत्पादन केन्द्रों के साथ लाभार्थियों के एक्स-बस शेड्यूल
Ex-Bus Schedules of Beneficiaries from ISGS during the year 2013-14

(Energy Figures in Kwh)

Benif. → Month ↓	ANDHRA PRADESH				KARNATAKA			KERALA			
	SR-ISGS	ER-NTPC	NR - IGSTPP	TOTAL	SR-ISGS	NVVN - SOLAR *	TOTAL	SR-ISGS	ER-NTPC	NR - IGSTPP	TOTAL
अप्रैल / Apr-13	1,421,291,993	42,750,583	131,250,140	1,595,292,716	1,063,848,959	0	1,063,848,959	660,751,333	14,982,314	41,193,153	716,926,800
मई / May-13	1,418,981,624	0	106,719,605	1,525,701,229	1,020,347,964	0	1,020,347,964	654,442,179	0	44,205,890	698,648,069
जून / June-13	1,319,189,365	0	74,913,098	1,394,102,463	903,618,075	0	903,618,075	652,597,559	0	36,270,575	688,868,134
जुलाई / July-13	1,360,962,884	0	142,304,083	1,503,266,967	925,687,183	0	925,687,183	664,397,425	0	54,810,260	719,207,685
अगस्त / Aug-13	1,142,332,192	0	129,379,028	1,271,711,220	896,616,493	0	896,616,493	571,446,823	0	53,551,910	624,998,733
सितंबर / Sep-13	1,225,599,478	0	135,179,033	1,360,778,511	842,336,567	7,619,893	849,956,460	638,405,364	0	54,461,855	692,867,219
अक्टूबर / Oct-13	1,199,232,973	0	149,827,855	1,349,060,828	923,707,010	7,587,960	931,294,970	644,084,894	0	77,046,610	721,131,504
नवम्बर / Nov-13	1,422,560,713	0	137,971,708	1,560,532,421	1,059,925,654	6,630,435	1,066,556,089	732,496,452	0	68,066,810	800,563,262
दिसम्बर / Dec-13	1,547,668,860	0	153,406,403	1,701,075,263	1,227,265,756	6,734,108	1,233,999,864	795,214,009	0	65,967,743	861,181,752
जनवरी / Jan-14	1,768,105,739	0	164,705,410	1,932,811,149	1,179,345,462	9,304,077	1,188,649,539	876,363,608	0	66,909,900	943,273,508
फरवरी / Feb-14	1,575,762,505	0	151,532,463	1,727,294,968	1,141,832,087	9,855,128	1,151,687,215	759,760,921	0	61,093,200	820,854,121
मार्च / Mar-14	1,630,203,980	0	156,105,175	1,786,309,155	1,303,977,289	11,175,605	1,315,152,894	879,220,270	0	67,091,825	946,312,095
TOTAL	17,031,892,306	42,750,583	1,633,294,001	18,707,936,890	12,488,508,499	58,907,206	12,547,415,705	8,529,180,837	14,982,314	690,669,731	9,234,832,882

Benif. → Month ↓	TAMIL NADU				PUDUCHERRY			PG-HVDC	GOA	ODISHA	URS POWER - STOA
	SR-ISGS	ER-NTPC	NR - IGSTPP	TOTAL	SR-ISGS	ER-NTPC	TOTAL	Schedule from RSTPS I,II & TSTPS II	Schedule from RSTPS Stage-I&II	Schedule from Talcher Stage-II	
अप्रैल / Apr-13	1,647,358,221	25,161,699	0	1,672,519,920	234,113,275	0	234,113,275	3,300,222	66,868,569	87,714,000	0
मई / May-13	1,602,963,295	20,179,056	0	1,623,142,351	231,916,294	0	231,916,294	3,242,342	69,199,168	82,596,075	0
जून / June-13	1,534,300,637	20,165,428	0	1,554,466,065	212,137,816	0	212,137,816	3,181,842	50,577,788	100,638,875	0
जुलाई / July-13	1,689,682,548	21,394,836	0	1,711,077,384	220,044,799	0	220,044,799	3,480,622	55,156,548	110,262,250	0
अगस्त / Aug-13	1,413,209,053	20,158,698	0	1,433,367,751	198,179,982	0	198,179,982	3,376,025	46,129,199	115,482,625	0
सितंबर / Sep-13	1,652,589,155	19,351,898	0	1,671,941,053	199,394,029	0	199,394,029	3,749,040	57,472,208	121,032,975	0
अक्टूबर / Oct-13	1,599,282,103	20,488,708	0	1,619,770,811	190,488,918	0	190,488,918	3,394,136	52,331,420	103,545,715	0
नवम्बर / Nov-13	1,739,787,326	27,878,556	0	1,767,665,882	194,550,189	0	194,550,189	4,073,737	64,439,829	129,222,500	0
दिसम्बर / Dec-13	1,934,395,805	23,592,679	0	1,957,988,484	200,966,087	0	200,966,087	4,219,766	68,590,687	131,810,375	0
जनवरी / Jan-14	2,097,733,523	22,245,454	0	2,119,978,977	202,408,772	0	202,408,772	4,210,207	62,176,538	140,883,000	0
फरवरी / Feb-14	1,924,231,684	21,902,836	0	1,946,134,520	182,181,518	0	182,181,518	3,906,975	62,712,477	122,927,800	0
मार्च / Mar-14	2,221,611,789	24,450,828	0	2,246,062,617	199,212,518	0	199,212,518	4,454,662	69,922,667	141,971,250	0
TOTAL	21,057,145,139	266,970,676	0	21,324,115,815	2,465,594,197	0	2,465,594,197	44,589,576	725,577,098	1,388,087,440	0

NOTE: (a). MAPS & KGS are not under ABT and the Energy from these Stations have been computed by taking Actual Energy based on SEM Readings.

(b). Schedules of ISGS of SR includes schedules of NVVN Stations.

* NVVN is shown separately, which is not ISGS

31, मार्च 2014 के अनुसार केंद्रीय उत्पादन केन्द्रों से राज्यों के हिस्सों (सुदृढ) का आबंटन

ALLOCATIONS OF SHARES (FIRM) FROM INTER STATE GENERATING STATIONS (ISGS) as on 31st March 2014

ISGS →	NTPC				NLC			NTECL	NPCIL			TOTAL
	Ramagundam STPS		Talcher	Simhadri	TPS-II	TPS-II	TPS- I	Vallur				
	Stage- I&II	Stage-III	Stage- II	Stage- II	Stage - I	Stage -II	Expansion	STPS Unit-1&2 \$	MAPS Units 1 & 2	KAIGA GS Units 1 & 2	KAIGA GS Unit 3&4	
Installed Capacity (MW) →	2100	500	2000	1000	630	840	420	1000	440	440	440	9810
Beneficiaries ↓												
Andhra Pradesh	580	146	375	384.40	97	180	0	119.2	38	115	123	2157.60
	27.62%	29.20%	18.75%	38.44%	15.40%	21.43%	0.00%	11.92%	8.64%	26.14%	27.95%	21.99%
Karnataka	345	87	350	176.40	84	115	92.4	74.34	29	108	119	1580.14
	16.43%	17.35%	17.50%	17.64%	13.33%	13.69%	22.00%	7.43%	6.59%	24.55%	27.05%	16.11%
Kerala	245	61	247	80.90	63	90	58.8	33.26	23	38	35	974.96
	11.67%	12.20%	12.35%	8.09%	10.00%	10.71%	14.00%	3.33%	5.23%	8.64%	7.95%	9.94%
Tamil Nadu	470	118	477	197.70	176	265	193.2	693.74	327	105	91	3113.64
	22.38%	23.60%	23.85%	19.77%	27.94%	31.55%	46.00%	69.37%	74.32%	23.86%	20.68%	31.74%
Puducherry	50	13	51	10.60	65	15	12.6	4.46	5	8	6	240.66
	2.38%	2.60%	2.55%	1.06%	10.32%	1.79%	3.00%	0.45%	1.14%	1.82%	1.36%	2.45%
Goa	100 4.76%											100 1.02%
NLC- Mines					50 7.94%	50 5.95%						100 1.02%
Orissa			200 10.00%									200 2.04%
TOTAL UNALLOCATED	310 14.76%	75 15.00%	300 15.00%	150 15.00%	95 15.08%	125 14.88%	63 15.00%	75 7.50%	18 4.09%	66 15.00%	66 15.00%	1343 13.69%

मुख्य जलाशयों से संबन्धित ब्यौरा

Particulars of Major Hydel Rerservoirs

Sl	Reservoir	FRL in Mtrs	Energy in MU at FRL	MDDL in Mtrs	Inflows during 2013-14 in MU
<u>आंध्र प्रदेश / ANDHRA PRADESH</u>					
1	Jalaput	838.20	552.00	818.39	50
2	Srisaillam	269.75	1392.00	243.84	829
<u>कर्नाटक / KARNATAKA</u>					
1	Linganamakki	554.43	4557.00	522.73	6391
2	Supa+Bommanahalli+Tattihalli	564.00	3159.00	495.00	3469
<u>केरल / KERALA</u>					
1	Idukki	732.43	2190.00	694.94	3360
2	Kakki	981.46	856.47	908.30	1974
	Kerala Total	-	4131.00	-	8833
<u>तमिल नाडु / TAMIL NADU</u>					
1	Nilgiris	-	1504.00	-	3411
2	T.N. Total Hydro excluding Mettur	-	2182.90	-	5344
3	Mettur	240.79	476.57	211.23	1113

आंध्र प्रदेश / Andhra Pradesh

महीने के अंतिम दिन के अनुसार मुख्य जलाशयों में महीनावार एवं जलाशयवार
स्तर (मीटर में), बहाव एवं जमा ऊर्जा (मि.यू. में)

Monthwise and Reservoir wise Inflows in MU, Level and Stored Energy in MU
as on last day of the month for important Reservoirs

मास MONTH	श्रीसैलम / Srisailam			जलपुत / Jalaput		
	Reservoir Levels Mtr	Stored Energy MU	Inflows MU	Reservoir Levels Mtr	Stored Energy MU	Inflows MU
अप्रैल / April-13	252.16	98	0	829.88	209	1
मई / May-13	247.77	39	0	826.25	117	1
जून / June-13	247.16	32	2	826.01	112	4
जुलाई / July-13	268.96	946	236	831.68	266	11
अगस्त / Aug-13	268.83	934	308	836.37	461	12
सितंबर / Sep-13	269.38	990	202	837.29	506	4
अक्तूबर / Oct-13	269.75	1392	46	837.74	529	9
नवम्बर / Nov-13	269.08	958	12	837.71	528	4
दिसम्बर / Dec-13	268.59	910	15	837.13	499	1
जनवरी / Jan-14	267.31	792	7	836.23	454	1
फरवरी / Feb-14	264.41	565	0	835.38	412	1
मार्च / March-14	259.32	290	0	834.10	360	1
Total Inflow In MU			829			49.50
Full Reservoir Level in Mtrs	269.75			838.20		
Energy in MU at FRL		1392			552	
MDDL in Mtrs	243.84			818.39		

कर्नाटक / KARNATAKA

महीने के अंतिम दिन के अनुसार मुख्य जलाशयों में महीनावार एवं जलाशयवा:
स्तर (मीटर में), बहाव एवं जमा ऊर्जा (मि.यू. में)

**Monthwise and Reservoir wise Inflows in MU, Level and Stored Energy in MU
as on last day of the month for important Reservoirs**

मास MONTH	लिंगनमक्की / Linganamakki			सूपा / Supa			माणी / Maani		
	Reservoir Levels Mtr	Stored Energy MU	Inflows MU	Reservoir Levels Mtr	Stored Energy MU	Inflows MU	Reservoir Levels Mtr	Stored Energy MU	Inflows MU
अप्रैल / April-13	537.90	990	22	529.29	808	26	575.41	180	0
मई / May-13	535.03	690	10	526.41	686	15	573.22	130	4
जून / June-13	538.58	1,075	578	528.11	756	163	576.86	217	114
जुलाई / July-13	552.75	4,020	3,232	552.30	2,161	1,720	590.00	725	523
अगस्त / Aug-13	554.43	4,557	1,481	560.43	2,834	839	593.26	905	226
सितंबर / Sep-13	554.37	4,537	477	561.84	2,960	253	593.81	938	71
अक्तूबर / Oct-13	553.67	4,307	311	561.87	2,963	138	593.31	908	36
नवम्बर / Nov-13	552.45	3,928	140	560.25	2,819	42	591.70	816	12
दिसम्बर / Dec-13	550.29	3,305	47	557.58	2,589	49	589.38	693	0
जनवरी / Jan-14	547.96	2,705	47	555.07	2,381	25	587.61	607	0
फरवरी / Feb-14	545.06	2,095	26	551.15	2,074	49	584.64	477	2
मार्च / March-14	541.40	1,460	21	546.48	1,744	150	580.98	341	0
Total inflow in MU			6,390.78			3,469			989.53
Full Reservoir Level in Mtrs	554.43				564.00				594.36
Energy in MU at FRL		4557				3159		973	
MDDL in Mtrs	522.73				495.00				565.10

केरल / Kerala

महीने के अंतिम दिन के अनुसार मुख्य जलाशयों में महीनावार एवं जलाशयवार स्तर(मीटर में), बहाव एवं जमा ऊर्जा (मि.यू. में)

**Monthwise and Reservoir wise Inflows in MU, Level and Stored Energy in MU
as on last day of the month for important Reservoirs**

मास MONTH	माडुपट्टी / Madupatty			कक्की / Kakki			इडमलयार / Edamalayar			इडुक्की / Idukki		
	Reservoir Levels Mtrs	Stored Energy MU	Inflows incl. Kundala MU	Reservoir Levels Mtrs	Stored Energy MU	Inflows MU	Reservoir Levels Mtrs	Stored Energy MU	Inflows MU	Reservoir Levels Mtrs	Stored Energy MU	Inflows MU
अप्रैल / April-13	1585.40	67	13	945.04	164	24	132.13	44	2	703.20	324	18
मई / May-13	1578.60	39	13	934.17	84	18	129.82	36	1	701.77	260	13
जून / June-13	1584.30	62	69	961.25	371	371	148.28	119	90	713.10	814	638
जुलाई / July-13	1593.40	114	105	976.11	689	474	164.13	219	136	725.61	1630	940
अगस्त / Aug-13	1599.59	161	111	980.22	813	344	169.00	254	97	730.19	2004	752
सितंबर / Sep-13	1599.25	158	43	981.25	849	262	169.00	254	64	731.32	2096	491
अक्तूबर / Oct-13	1596.00	133	21	979.34	784	157	166.08	233	33	729.50	1948	259
नवम्बर / Nov-13	1597.10	141	49	977.71	734	137	162.32	206	15	728.03	1828	134
दिसम्बर / Dec-13	1597.10	141	32	974.10	636	79	159.88	189	6	726.14	1674	46
जनवरी / Jan-14	1594.65	123	19	970.55	549	41	156.50	167	4	722.57	1416	30
फरवरी / Feb-14	1590.70	97	13	966.73	465	25	152.18	141	4	719.39	1194	11
मार्च / March-14	1585.60	68	11	957.89	316	41	146.26	108	3	715.74	975	28
Total Inflow In MU			500.17			1973.90			454.59			3359.71
Full Reservoir Level in Mtrs	1599.59			981.46			169.00			732.43		
Energy In MU at FRL		161			856			254			2190	
MDDL in Mtrs	1554.48			908.30			115.00			694.94		

तमिल नाडु / Tamil Nadu

महीने के अंतिम दिन के अनुसार मुख्य जलाशयों में महीनावार एवं जलाशयवार

स्तर (मीटर में), बहाव एवं जमा ऊर्जा (मि.यू. में)

Monthwise and Reservoir wise Inflows in MU, Level and Stored Energy in MU
as on last day of the month for important Reservoirs

मास MONTH	मुकुर्ती / Mukurthy			पैकरा / Pykara			अपपर भवानी Upper Bhavani			अवलांचे एवं एमराल्ड Avalanche & Emerald				
	Level Mtr	Stored Energy MU	Inflows MU	Level Mtr	Stored Energy MU	Inflows MU	Level Mtr	Stored Energy MU	Inflows MU	Avalanche Level Mtr	Emerald Level Mtr	Stored Energy		Inflows MU
												Avalanche MU	Emerald MU	
अप्रैल / April-13	2087.32	59	3	2057.26	7	10	2263.29	138	2	1965.24	1965.55	51	90	20
मई / May-13	2080.79	20	2	2057.01	2	13	2257.62	78	7	1962.20	1962.50	40	70	16
जून / June-13	2073.17	0	84	2056.10	4	65	2252.44	32	142	1963.72	1964.02	41	79	75
जुलाई / July-13	2090.24	1	102	2065.55	29	61	2265.12	160	193	1968.60	1968.60	67	113	182
अगस्त / Aug-13	2098.78	152	80	2071.95	58	51	2273.66	290	104	1982.62	1982.62	180	275	121
सितंबर / Sep-13	2097.87	1	25	2071.65	121	43	2275.30	321	42	1985.91	1985.98	211	324	43
अक्तूबर / Oct-13	2098.17	152	14	2072.56	150	23	2276.13	333	18	1985.67	1985.98	202	322	22
नवम्बर / Nov-13	2096.95	150	7	2071.34	121	13	2275.30	320	8	1986.89	1985.37	210	318	17
दिसम्बर / Dec-13	2095.43	131	3	2068.90	94	9	2273.63	290	6	1985.37	1983.54	208	290	28
जनवरी / Jan-14	2094.05	117	3	2065.85	88	8	2272.87	278	5	1983.54	1981.71	189	166	10
फरवरी / Feb-14	2091.46	94	2	2064.33	61	8	2272.53	270	1	1978.96	1979.27	144	226	5
मार्च / March-14	2089.48	75	1	2063.11	56	12	2271.04	213	4	1975.61	1975.91	116	182	3
Total Inflow In MU			325.40			314.44			533.11					544.23
Full Reservoir Level in Mtrs	2098.27			2072.36			2276.88			1985.80	1985.80			
Energy In MU at FRL		152			164			338		215.11	+	332.41	=	547.52
MDDL in Mtrs	2074.50			2045.20			2249.45			1943.12	1943.12			

तमिल नाडु / Tamil Nadu

महीने के अंतिम दिन के अनुसार मुख्य जलाशयों में महीनावार एवं जलाशयवार

स्तर (मीटर में), बहाव एवं जमा ऊर्जा (मि.यू. में)

Monthwise and Reservoir wise Inflows in MU, Level and Stored Energy in MU
as on last day of the month for important Reservoirs

MONTH	पेरियार / PERIYAR			पोर्टिमुंड / PORTHIMUND		पार्सन वाडली / Parsons Valley		Inflows	अप्पर कोडयार / UPPER KODAYAR			मेट्टूर / METTUR		
	Level	Stored Energy	Inflows	Level	Stored Energy	Level	Stored Energy	P.Mund+	Level	Stored Energy	Inflows	Level	Stored Energy	Inflows
	Mtrs.	MU	MU	Mtrs.	MU	Mtrs.	MU	P.Valley Combined MU	Mtrs.	MU	MU	Mtrs.	MU	MU
अप्रैल / April-13	34.30	16	6	2201.98	38	2204.57	19	12	1325.88	15	9	211.38	1	1
मई / May-13	34.24	15	6	2199.70	24	2204.27	18	6	1310.34	15	30	209.92	0	0
जून / June-13	38.08	67	101	2176.83	0	2204.18	17	35	1310.34	55	40	215.37	20	24
जुलाई / July-13	40.09	99	117	2203.02	45	2206.40	28	44	1317.16	81	27	236.82	354	335
अगस्त / Aug-13	38.81	78	83	2216.46	163	2207.01	32	86	1320.15	90	15	238.56	404	409
सितंबर / Sep-13	37.99	65	65	2219.21	190	2203.66	14	66	1320.82	110	16	235.05	305	141
अक्तूबर / Oct-13	35.91	36	34	2217.68	174	2209.60	48	35	1322.51	106	11	229.62	186	86
नवम्बर / Nov-13	36.34	42	41	2213.41	129	2209.45	47	39	1322.56	110	26	230.20	197	78
दिसम्बर / Dec-13	35.12	26	16	2211.28	109	2204.27	17	24	1322.56	120	8	224.81	110	22
जनवरी / Jan-14	33.84	12	5	2209.45	91	2206.71	30	19	1323.26	122	8	218.97	46	5
फरवरी / Feb-14	33.69	9	6	2208.23	82	2207.62	31	21	1323.32	103	3	219.31	49	3
मार्च / March-14	33.63	8	6	2205.79	64	2206.92	31	4	1321.86	83	3	219.94	55	8
Total Inflow In MU			486.56					392.19			197.34			1113.11
Full Reservoir Level in Mtrs	41.45			2220.50			2209.83		1325.88			240.79		
Energy In MU at FRL		126			209		54			193			477	
MDDL in Mtrs	32.92			2194.59			2199.46		1275.00			211.23		

वर्ष 2013-14 के दौरान प्रारंभित उत्पादन एकक

Generating Units Commissioned during the year 2013-14

Andhra Pradesh :

Sl. No.	Name of the Units	Capacity in MW	Date of commissioning / Synchronisation
A	<u>State Sector :</u>		
	Hydro :		
1	Lower Jurala HEP Unit-1, Mahaboobnagar (Dist) *	40	29.12.2013
2	Lower Jurala HEP Unit-2, Mahaboobnagar (Dist) *	40	10.01.2014
	Thermal :		
1	Sri Damodaram Sanjeevaiah TPP (Krishnapatnam JV) - Unit 1, Nellore (Dist) *	800	31.03.2014 (Synchronised)
	Solar Nil		
B	<u>Private Sector :</u>		
1	SEPL, Simhapuri TPP Phase -II Unit - 3, Chillakur (M), Nellore (Dt)	150.00	26.02.2014
2	Thamminapatnam TPP (Ph-I : Unit-2) [MEPL/Meenakshi], Krishnapatnam, Nellore (Dist)	150.00	17.04.2013 30.04.2013 (CoD)
3	Mini Hydro (Pvt)	9.60	2013-14
4	Co-Generation + Biomass + Others	71.04	2013-14
5	Wind (Pvt)	232.60	2013-14
6	Solar (Pvt) including NTPC, Ramagundam Solar Plant Phase - I (10 MW)	63.88	2013-14
	Total (State+Private)	677.12	

Karnataka :

A	<u>State Sector :</u>		
	Hydro :		
	Nil		
	Thermal :		
	Nil		
	Solar :		
	Nil		
B	<u>Private Sector :</u>		
1	Wind Mill (Joint Venture)	116.50	2013-14
2	IPP Bio-mass	23.00	2013-14
3	IPP Mini-Hydel	20.00	2013-14
4	IPP Solar	31.00	2013-14
5	Captive & Others	125.00	2013-14
	Total (State+Private)	315.50	

Kerala :

A	<u>State Sector :</u>		
	Hydro :		
	Nil		
B	<u>Private Sector :</u>		
1	Karikkayam (3 x 5.00 = 15.00 MW)	15.00	28.09.2013
	Total (State+Private)	15.00	

Sl. No.	Name of the Units	Capacity in MW	Date of commissioning / Synchronisation
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Tamil Nadu :

A	State Sector :		
	Hydro :		
1	RMU of Periyar Power House Unit - III	7.00 (Upgraded 35 to 42 MW)	20.11.2013
2	Bhavani Kattalai Barrage II, Unit - 1	15.00	27.08.2013
3	Bhavani Kattalai Barrage II, Unit - 2	15.00	06.09.2013
4	Bhavani Kattalai Barrage III / Solasiramani, Unit - 1	15.00	25.09.2013
5	Bhavani Kattalai Barrage III / Solasiramani, Unit - 2	15.00	16.10.2013
	Thermal :		
1	North Chennai TPS Stage -II, Unit - 1	600.00	20.03.2014 (CoD)
2	Mettur TPS Stage - III	600.00	12.10.2013 (CoD)
3	NTECL, Vallur : Stage - 1, Unit - 2 (JV of NTPC)	500.00	25.08.2013
4	NTECL, Vallur : Stage - 2, Unit - 1 (JV of NTPC) **	500.00	28.02.2014
B	Private Sector :		
1	Tuticorin Thermal Power Project by Ind Bharath at Swaminathan & Ottaipidaram Village (Stg - I, U-2)	150.00	30.12.2013
2	Wind (Private)	129.59	2013-14
	Total (State+Private)	2046.59	

Central Sector :

1	NPCIL, Kudankulam (Synchronised to Grid. CoD not yet declared)	1000.00	22.10.2013
2	NTPC, Ramagundam Solar Plant Phase - I ***	10.00	29.01.2014
	Total	1000.00	
	Total commissioned in S.R. during the year	4054.21	

* Synchronised to Grid during 2013-14. However, CoD not yet declared. These Units Capacity not considered for Installed Capacity of the State

** Synchronised to Grid and achieved full load during 2013-14. However, CoD not yet declared. This Unit's Capacity not considered for Installed Capacity of State and Station PLF

*** Installed Capacity of NTPC, Ramagundam Solar Plant Phase - I (10 MW) is included by AP with AP's Sloor (Pvt)

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Review of Progress of Works on Ongoing / New Generation Schemes in Southern Region
Name of the State : Andhra Pradesh

Sl. No	Station	Capacity (MW)	Progress / Status
A	<u>Hydro (State) :</u>		
1	Nagarjunasagar Tail Pond HEP, Guntur (Dist)	2 x 25 = 50	Unit 1 → July 2014 Unit 2 → September 2014
2	Lower Jurala HEP, Mahaboobnagar (Dist)	6 x 40 = 240	Unit 1 : Sync. On 29.12.13, Unit 2 : Sync. On 10.01.14 Balance 4 Units during 2014-15 CoDs for Unit 1&2 yet to be declared.
3	Pulichintala HEP, Guntur (Dist)	4 x 30 = 120	
4	Polavaram HEP	12x80 = 960	Unit 1 : March 2015, Unit 2 : June 2015, Unit 3 : September 2015, Unit 4 : December 2015
5	Dummugudem	320	2017-18 onwards
6	Kamthanapally	450	2013-15. 150 MW → 2014-15, 300 MW → 2014-15
B (a)	<u>Thermal (State) :</u>		
1	Kakatiya TPP Stage-II	1 x 600 = 600	By March, 2015
2	Kakatiya TPP Stage-III	1 x 800 = 800	2017-18 onwards
3	Rayalaseema TPP Stage- IV, Unit 6 Muddanuru, Kadapa (Dist)	1 x 600 = 600	Unit-VI (600MW) → December, 2014
4	Ramagunderm TPS	2 x 660 = 1320	2017-18 onwards
5	Sattupalli TPS	1 x 600 = 600	to be tied up
6	Singareddipalli	5 x 40 = 200	
7	Kothagudem TPS (Stg - VII)	1 x 800 = 800	2016-17
8	Dr. NTTPS, Vijayawada (Stg - V)	1 x 800 = 800	2016-17
9	Vadarevu Ultra Mega Power Project Stage I (U-1,2) & Stage II (U-3,4,5)	5 x 800 = 4000	U - 1 : 2016-17 ; U - 2 : 2017-18 ; U - 3 : 2018-19 Unit - 4 : 2019-20 ; Unit - 5 : 2020-21
B (b)	<u>Thermal (Joint Venture) :</u>		
1	Sri Damodaram Sanjeevaiah TPP (Krishnapatnam JV) - Unit 1 & 2 Nellore (Dist)	2 x 800 = 1600	Unit-1 : Synchronized on 31.03.14, CoD by August 2014 Unit-2 : September 2014
2	Krishnapattanam TPP Stage - II (U-3)	1 x 800 = 800	2016-17
3	Srikakulam TPS (JV)	4 x 600 = 2400	To be tied up
B (c)	<u>Thermal (Private) :</u>		
1	Bhavanapadu TPP (East Coast Energy Ltd), Kakarapalli, Srikakulam (Dist)	(2x660) + (2x660)	Phase I → U 1 : Nov 2014, U 2 : Feb 2015 Phase II → September 2014
2	Paloncha (Nava Bharat), Khammam	150	
3	Painampuram TPP (Unit - 1&2) by Thermal Powertech (TPCL), Nellore (Dt)	3x660 = 1980	Unit 1 → July 2014, Unit 2 → Oct 2014 Unit 3 → Mar 2017
4	Krishnapattanam UMPP	6x660 = 3960	Project may be delayed. Case at Delhi High Court
5	Hinduja TPP by HNPCL, Pavalavasa, Vizag	2x520 = 1040	Unit 1 → Sep 2014, Unit 2 → Mar 2015
6	Gunupudi (Surya Chakra TEPL)	660 + 660	
7	SEPL, Simhapuri TPP Phase -II Unit - 4, Chillakur (M), Nellore (Dt)	150	Unit 4 → Aug 2014
8	Thamminapatnam TPP(Ph-II : Unit-1&2) [MEPL - Coastal Thermal Project]	2 x 350 = 700	Unit 1 → Sep 2016, Unit 2 → Dec 2016
9	Thamminapatnam TPP(Ph-III : Unit-2) [MEPL - Coastal Thermal Project]	2x660 = 1320	End of 12 th Plan
10	NCCL Phase I, Unit 1&2, by Nagarjuna Construction Company Ltd	2x660 = 1320	Unit 1 → March 2015, Unit 2 → June 2015

Sl. No	Station	Capacity (MW)	Progress / Status
C	<u>Nuclear (State JV) :</u> Kadappa Nuclear Power Plant	2x1000=2000	To be tied up
D (a)	<u>Gas Based (State) :</u>		
1	Integrated gassification combined cycle (IGCC) plant at Dr. NTTPS (JV)	1 x 182 = 182	Unit 8 by , 2017-18
2	Shankarpally Gas Power Plant	1x1000=1000	2016-17
3	Combined cycle gas based project near Karimnagar	1x700 = 700 2x700 = 1400	Unit - 1 : 2016-17 ; Unit - 2 : 2017-18 Unit - 3 : 2018-19
D (b)	<u>Gas Based (Private) :</u>		
1	Patancheru (Astha PCPL), Medak (Dt)	28.00	
2	Peddapuram (SPP Ltd), EG (Dist)	2262.00	
3	Chigurukota (Sriba Industries), Krishna (Dt)	13.60	
4	Gautami CCGP Stage-II, Peddapuram	2 x 400 = 800	
5	GVK Phase-III, Jegurupadu	2 x 400 = 800	
6	Mathya Giri (Vasavi), Nalgonda (Dist)	210.00	
7	Guggilla, Karimnagar (Dist) - Elgen	350 + 350	
8	Konaseema Phase-II, Ravulapalem	820.00	
9	Lanco Phase - III, Kondapalli	2 x 371 = 742	Held up for want of gas
10	Chandaparu, WG (Dist) - RVR	20.00	
11	Vetlapalem, EG Dist (Greenco)	60 + 60 = 120	
12	Vemagiri, EG Dist (GMR) Unit - 2	384.00	Held up for want of gas
13	Gurrampalem, Vizag Dist (LVS)	2x16.735 + 2x9.73 = 52.93 76+120 + (2x120) + 50	Depends on permission of APEPDCL
14	RVK, Jegurupadu, EG Dist		
15	Thamminapatnam (K.Patnam PCL), Nellore	1320 + 660	March - 2015
16	Reliance Samalkot Power	2400.00	Held up for want of gas
E	<u>Renewable Energy Sources (RES) :</u>		
1	Municipal Waste based	37.33	
2	Bio - mass based co-generation	37.00	
3	Industrial waste based power plants	31.82	
4	Mini Hydel Projects (H)	36.06	
5	Bagasse based Co-generation	150.00	
6	Bio - mass based power plant	34.00	
F	<u>Wind (Private) :</u>		
1	Wind Energy (W)	1228.90	
G	<u>Mini Power Plants :</u>		
1	Mini Power Plants	516.51	
H (a)	<u>Solar (State) :</u>		
1	Nil		
H (b)	<u>Solar Power Project (Private) :</u>	752.68	

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Review of Progress of Works on Ongoing / New Generation Schemes in Southern Region

Name of the State : Karnataka

Sl. No	Station	Capacity (MW)	Progress / Status
A	<u>Hydro (State) :</u>		
1	Gundia Hydro Electric Project (Phase - I) Hassan, Dakshina Kannada District	200	Environmental Clearance awaited
2	Gundia Hydro Electric Proj. (Phase - II) Hassan, Dakshina Kannada District	200	After getting Environmental Clearance from MoEF for Phase-I, Survey, Investigation works & EIA Studies will be made for Phase-II
3	Shivasamudram Run-of-the River Project	345	DPR has been submitted to CEA vide letter dt 30.3.2012 Observations of CEA are being attended.
4	Gangavali Stage - II Scheme (Bedthi)	400	Pre Feasibility Report (PFR) submitted to CEA
5	Kali - Stage III (KHEP) Hydro Electric Project	300	DPR could not be taken up, as this project is within wild life sanctuary
6	Aghanashini (Tadri) Hydro Electric Project	600	KPCL submitted DPR to CEA vide their letter dated 29.10.2007
7	Mahadayi Hydro Electric Project	320	Field surveys taken up for the revised proposal of this project, outside the proposed Bhimghad Wild Life Sanctuary. DPR under preparation
8	Additional Unit at Munirabad PH	10	LoA has been issued on 04-02-2012 to M/s. Allonward-SSIPL-KR & Co. Site Clearance received.
9	Additional units at Ghataprabha Dam (Right Bank)	2 x 10 = 20	GoK has been addressed for allotment of this Project at Right Bank of Ghataprabha Dam
10	RM&U of Nagjhari PH Unit - 4,5 & 6	3 x 15 = 45	Unit 4 : Completed & Commissioned on 28.02.2008 Unit 5 : Synchronised to Grid on 19.03.2011. Unit 6 : Work taken up from 20-12-2012 and in progress. Programmed in 12 th Plan.
B (a)	<u>Thermal (State) :</u>		
1	Bellary TPS, Stage I, Unit - 3 (Super Critical) - Kudatini	700	GoK has approved to take up the project. Works are in progress. Commissioning by 2014
2	RTPS Stg - II : a) Yermarus TPS b) Edlapur TPS	2 x 800 = 1600 800	Work under progress. Unit 1 Commissioning by January, 2015. Thereafter, Unit 2 MoEF clearance awaited. Proposed to be set up in the available land at RTPS mill reject area Clearance from MoEF is awaited. (By 2014-15)
3	Mangalore TPS	1600	12th Plan
4	Chattisgarh Super Critical T.P.P, Godhna, Janjgir-Champa Dist, Chattisgarh	2 x 800 = 1600	Work is in progress. Commissioning by 2015-16
B (b)	<u>Thermal (Private) :</u>		
1	Annechakanahalli Phase I	1000	12th Plan
2	Kalgurki Phase I	1000	12th Plan
3	Yadagiri Phase I	1000	12th Plan
C	<u>Gas Based (State) :</u>		
1	Bidadi Combined Cycle Power Plant	700 ± 20 %	Land required for the project has been acquired. M/s GAIL has commenced the work of establishing gas terminal.
2	Tadadi Combined Cycle Power Plant	2100	Pre Feasibility Report (PFR) prepared & action has been taken for obtaining statutory clearances. KIADB allotted 400 acres of land.
D	<u>Solar (State) :</u> Nil		
E	<u>Wind (Joint Venture) :</u>		
1	500 MW Wind Energy Projects by KPTCL in JV with NTPC (NTPC 400 MW + KPCL 100 MW)	500	GoK approved for the development of 500 MW Wind Energy Projects. Sites identified for Kappatagudda (39.5 MW), Guledagudda (100 MW). Requested for allotment of Forest Land. Expected in XII plan. 116.5 MW commissioned during 2013-14

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Review of Progress of Works on Ongoing / New Generation Schemes in Southern Region

Name of the State : Kerala

Sl. No	Station	Capacity (MW)	Progress / Status
A	<u>State (Hydro) :</u>		
1	Chimmony, Trichur	2.5	Proposed date of commissioning : March, 2015
2	Chattankottunada Stg-II , Kozhikode	3 x 2 = 6	Prposed date of commissioning : December, 2014
3	Pallivasal Extension	2 x 30 = 60	Expected by December, 2015
4	Thottiyar	30 + 10 = 40	Expected by November, 2015
5	Anakkayam H.E. Project	7.50	Expected by 2016-17
6	Barapole SHEP, Kannur	15.00	Prposed date of commissioning : Oct '14
7	Vilangad SHEP, Kozhikode	3 x 2.5 = 7.5	Expected by 2014-15
8	Perumthenaruvi Project	6.00	Expected by June, 2015
9	Vellathooval SHEP	3.60	Prposed date of commissioning : February, 2015
10	Adiyanpara	3.50	Prposed date of commissioning : January, 2015
11	Poringalkuthu SHEP	24.00	Expected by 2016-17
12	Kakkayam SHEP, Kozhikode	3.00	Prposed date of commissioning : Nov' 14
B	<u>Augmentation :</u> Nil		
C	<u>IPP (Hydro) :</u>		
1	Meenvallam	3.00	Expected by 2014-15

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Review of Progress of Works on Ongoing / New Generation Schemes in Southern Region

Name of the State : Tamil Nadu

Sl. No	Station	Capacity (MW)	Progress / Status
A	<u>Hydro (State) :</u>		
1	RMU of Periyar Power House Unit - IV	7.0 (35 to 42)	Work under progress
2	Periyar Vaigai SHEP - III	2 x 2 = 4.0	
3	Periyar Vaigai SHEP - IV	2 x 1.25 = 2.5	
4	Bhavani Barrage I, Mettupalayam (Nellithoral Lower Bhavani)	2 x 5 = 10	Expected by 31.12.2014
5	Bhavani Barrage II, Mettupalayam (Nellithoral Lower Bhavani)	2 x 5 = 10	From 17.07.2013, mechanical run started and both the units are running under the control of Project wing. The taken over of Power House by Generation wing is programmed with in two months
6	Kundah Pumped Storage HEP Phase I (4x125 MW)	1x125 = 125	Expected by 2016
7	Kundah Pumped Storage HEP Phase II (3x125 MW)	3x125 = 375	Expected by 2016
8	Mettur Pumped Storage HEP	500	Preliminary Stage
9	Vellimalai Pumped Storage HEP	200	Preliminary Stage
10	Small HEP proposed to be developed by Private Promoters	118	Preliminary Stage
11	Moyar Ultimate Stage HEP	25	Preliminary Stage
12	Kollimalai HEP	520	Preliminary Stage
B (a)	<u>Thermal (State) :</u>		
1	North Chennai TPS Stage -II, Unit - 2	600	CoD : 08.05.2014 Already synchronised on 09.03.2013 (2012-13)
2	North Chennai TPS Stage -III	1x800=800	Expected by 2017
3	North Chennai TPS Stage -IV	2x800=1600	Expected by 2017
4	Tuticorin Thermal Power Project	1x800 = 800	Expected by 2015-16
5	Ennore TPS Annexe	1x660=660	Expected by 2016
6	Replacement of existing 40 year old ETPS	1x660=660	Expected by 2017-18
7	Ennore (SEZ) TPS at Kattupalli	2x 600=1200	Expected by 2015 - 16
B (b)	<u>Thermal (Private) :</u>		
1	Cheyur UMPP (Coastal Tamil Nadu Power Ltd) Subsidiary of Govt of India, PFC	5x800 = 4000	Expected by 2017-18. Draft of rapid EIA Report completed
2	Cuddalore IPP	2 x 660 MW	PPA signed
3	Tuticorin Thermal Power Project by Ind Bharath at Swaminathan & Ottaipidaram Village	1x150=150	Stg - II, Unit under progress
4	Melamaruthur (Mutlara), Tuticorin (Coastal Energen Pvt Limited)	2 x 600 MW	Court Case on Section 11 of IE Act, 2003
B (c)	<u>Thermal (Joint Venture) :</u>		
1	TNEB-BHEL JV at Udangudi	2x800 =1600	Expected by 2017
2	Udangudi Expansion - Stg II	1x800 = 800	Expected by 2017
3	Vallur TPP (JV with NTPC) Stg - II → 1 x 500 MW (Unit - 3)	1x500 = 1500	Unit III - 28.02.2014 (Synchronised and achieved full load) CoD by August, 2014
4	NLC-TNEB at Tuticorin JV (NTPL)	2x500=1000	Unit I - CoD by 2014-15 Unit II - CoD by 2014-15

Sl. No	Station	Capacity (MW)	Progress / Status
C	<u>Gas Based (State) :</u>		
1	Basin Bridge Closed loop conversion (120 MW to 220 MW)	100	Subject to availability of gas
D	<u>Non Conventional Energy Sources (NCES) :</u>		
1	Establishment of Co-generation plants in 10 Nos. Co-operative and 2 Nos Public Sector Sugar Mills in Tamil Nadu along with Sugar Mill Modernization.	$6 \times 15.5 = 93$ $5 \times 15.0 = 75$ $1 \times 15.0 = 15$ = 183	2014-15
2	Wind	300	129.59 MW commissioned during 2013-14. Balance work under progress
3	Bio-Mass	10	2014-15
4	Solar	1000	2014-15
E	<u>Tariff Based Competitive Bidding Route :</u>		
1	Uppur TPP, Tiruvadanai at Ramanathapuram District	$2 \times 800 = 1600$	Expected by 2016-17
2	Utharakosamangai TPP at Ramanathapuram District	$2 \times 800 = 1600$	2016-17

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Review of Progress of Works on Ongoing / New Generation Schemes in Southern Region

Name of the Entity : Central Sector

Sl. No	Station	Capacity (MW)	Progress / Status
I	<u>Central Sector (Thermal) :</u>		
1	Kudgi Super Thermal Power Project, Bijapur (Stage - I), NTPC	3x800 =2400	Unit I by Sep 2015, Unit 2 by March 2016
2	Kudgi Super Thermal Power Project, Bijapur (Stage - II), NTPC	2x800 =1600	Expected during 13th Plan (2017-22)
3	Neyveli TS-II (Expansion) (NLC)	2x250 = 500	Unit I : Synchronised with Grid on 13-02-2014 CoD Expected by 2014-15 Unit II : By 2014-15
4	NLC - New Thermal Power Project, Neyveli	2x500 =1000	Unit 1 : CoD by October 2017 Unit 2 : CoD by April 2018
5	Sirkali TPP, NLC	3x660=1980	From GoI approval Unit 1 :52 months Unit 2 : 58 months Unit 3: 64 months (PPA has been signed)
II	<u>Central Sector (Nuclear) :</u>		
1	Kalpakkam (PFBR)	500	By March, 2015
2	Kudankulam (NPCIL)	2x1000=2000	Unit I : Synchronised on 22.10.2013 Achieved Full Load on 07.06.2014 COD by July, 2014 Unit II: CoD by December, 2014
III	<u>Central Sector (Gas Based) :</u>		
1	Kayamkulam CCPP Module : 1 to 3 (NTPC)	1050/1950	12th Plan. Gas supply by 2014

वर्ष 2013-14 के दौरान स्थापित 400 के.वि. के उपकेंद्र
400 KV & 220 KV/230 KV Substations commissioned
during 2013-14

Sl No	Name of the Sub-Station	MVA Rating	KV Level	Date of Commissioning
<u>ANDHRA PRADESH</u>				
400 KV : 1 400 KV Quad Bay Extention at Chittoor S/S 2 Narsaraopet (Sattenapally)		315	400/220 400/220	23.01.2014 26.02.2014 31.03.2014 (CoD)
220 KV : 1 Rachagunneri 2 Gunrock 3 Yellanur 4 Sadasivapett, Medak Dist		1 x 100 1 x 160 2 x 25 1 x 100	220/132 220/132 220/11 220/132	03.01.2014 24.02.2014 27.03.2014 29.03.2014
Substation Augmentation : 1 400/220 KV Kalpaka S/S (Scheme-III) with 2 Nos. of Bay Extensions 2 220 kV Nellore Sub-Station		<u>Added Capacity</u> 315 60	400/220 220/132	18.11.2013 19.12.2013
<u>KARNATAKA</u> 400KV : Substation addition : Nil 220 KV : 1 EPIP GIS SWG station at EPIP in Bangalore East Taluk		2 x 150	220/66	10.01.2014
<u>KERALA</u> 400 KV : Nil 220 KV : Nil				
<u>TAMIL NADU :</u> 400 KV : Nil 230 KV : 1 Aliyar 2 Koyembedu (CMRL) - GIS 3 Nallamanaickenpatty 4 Mylapore (GIS) : Transformer 1 Transformer 2 <u>Additional Capacity :</u> 1 Manali 2 Kayathar 3 Theni 4 Muthaiyapuram <u>Enhancement of Capacity :</u> 1 Renganathapuram 2 Thudiyalur 3 Thiruvavarur 4 Kids Park 5 Thiruvavarur (2 nd Auto)		3 x 33.3 2 x 100 1 x 80 100 100 100 100 100 100 50→100 MVA 80→100 MVA 80→100 MVA 80→100 MVA 80→100 MVA	230/110 230/110 230/110 230/33 230/33 230/110 230/110 230/110 230/110 230/110 230/110 230/110 230/110 230/110	20.05.2013 11.07.2013 29.01.2014 26.02.2014 10.03.2014 31.05.2013 21.08.2013 25.09.2013 19.02.2014 08.04.2013 13.06.2013 28.10.2013 30.11.2013 03.02.2014

SI No	Name of the Sub-Station	MVA Rating	KV Level	Date of Commissioning
Power Grid :				
765/400 KV - Inter Regional Systems				
1	Sholapur Sub-station	2 x 1500	765/400	December, 2013
2	Raichur Sub Station ICT - I	1500	765/400	31.12.2013
3	Raichur Sub Station ICT - II	1500	765/400	01.02.2014 (CoD) January, 2014 01.02.2014 (CoD)
System Strengthening Scheme of WR for transfer of Power to SR :				
1	Extn. of 400 KV Raigarh Sub-Station			April, 2013
2	765/400 KV Raigarh Pooling Station (NearKotra) :			
	400 kV Yard		765/400	April, 2013
	ICT 1,2,3	3 x 1500	765/400	October, 2013
	ICT 4	1 x 1500	765/400	February, 2014
3	765/400 KV Raigarh Pooling Station (Near Tamnar) :			
	ICT 1	1500	765/400	October, 2013
	ICT 2	1500	765/400	November, 2013
	ICT 3	1500	765/400	February, 2014
4	400/220 KV Aurangabad S/S & Extn. at 400 KV Wardha & Aurangabad (MSETCL) S/S	2 x 315	400/220	January, 2014
5	765/400 KV Raipur Pooling Station	1 x 1500	765/400	January, 2014
6	765/400 KV Aurangabad Sub-Station	2 x 1500	765/400	February, 2014
Southern Regional System :				
SR - I				
1	Extn. at 400 KV Nellore Pooling Station		400	August, 2013
2	765/400 KV D/C Nellore Sub-Station (2 nd Transformer)	1 x 1500	765/400	01.02.2014 01.03.2014 (CoD)
3	765/400 KV Kurnool Sub-Station :			
	400 KV Yard			March, 2014
	ICT - 1 & 2	2 x 1500	765/400	March, 2014 01.04.2014 (CoD)
SR - II				
1	Extn. of 400/220 KV Hosur S/S		400/230	January, 2014
2	Augmentation of Hosur Sub-Station	1 x 315	400/230	28.02.2014
3	765/ 400 KV Tiruvalam Switching Station : 400 KV Yard		765/400	March, 2014
Bus Reactors & Line Reactors :				
1	Raigarh Pooling Station (NearKotra) BR (WR)	240	765/400	May, 2013
2	Raipur Pooling Station (WR)	240	765/400	November, 2013
3	Kurnool New Bus Reactor	3 x 80 = 240	765/400	March, 2014
4	Nellore Pooling Station Bus Reactor	240	765/400	01.02.2014 01.03.2014 (CoD)
5	Raichur Bus Reactor	240	765/400	01.02.2014
6	Raichur Line Reactor	240	765/400	01.02.2014
PUDUCHERRY :				
220 KV :				
1				

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. नये उप केन्द्रों के निर्माण कार्य की प्रगति की समीक्षा

Review of Progress of Works on new 400 KV & 220 KV Sub-Stations

Name of the State : Andhra Pradesh

Sl. No	Name of Sub-Station	Voltage Ratio (KV)	Capacity (MVA)	Original Target Date	Target date for completion	Remarks
A	400 KV Sub-Stations :					
	Short Gestation Power Transmission Scheme -II :					
1	Narsaraopet (Sattenapally)	400/220	2x315		Mar-14	1st Transformer commissioned already on 26.02.2014 (2013-14) & 2nd Transformer commissioned on 23.04.2014
2	Bay Extentions : 400 KV Bays at Narsaraopet, pertaining to VTS-Srisailem Line			Mar-14		
3	Evacuation of Wind Power in Kadapa, Anantapur and Kurnool Districts :					
3.1	Uravakonda Substation (with 2 Quad Bays at 400/220 Vellore S/S)	400/220	2x315	Jun-15		Work awarded to M/s. TEEECCL & work under progress
3.2	Kondapuram Substation [Jammalamadugu]	400/220/132	950	Feb-15		Work awarded to M/s. Techno Electrical and Engg. Comp. Ltd. and to commence
4	Evacuation of Power from HNPCL (1040 MW) Power Plant :					
4.1	Kamavarapukota Substation	400/220	2x315			LOI issued on 26.03.2013
4.2	Suryapet Substation	400/220/132				Work awarded on 29.07.2013 and under progress
4.3	2 Nos. of 400 KV Bay Extentions at 400 KV Shankarapalli SS	400				Work under progress
4.4	2 Nos. of 400 KV Bay Extentions at existing 400/220 KV Kalpaka S/S of HNPCL	400				All works completed for 1 No. of 400 KV Bay on 07.02.2014
5	Jaipur Power Transmission Scheme :					
5.1	2 Nos. of Feeder Bays at Gajwel S/S	400/220				P.O issued on 04.07.2013& Work under progress
6	Indira Sagar Rudramakota Lift Irrigation Scheme :					
6.1	400 KV Asupaka S/S	400/220	630	Sep-15		Purchase Order issued on 25.03.2014
7	Royalaseema Power Transmission Scheme :					
7.1	2 Nos. of 400 KV Bays at Chittoor					Tenders opened and evaluation is under process
8	Transmission System Improvement Scheme at Vizianagaram & Srikakulam Districts :					
8.1	400/220 KV S/S at Maradam (Garividi) along with 2 Nos. 400 KV Quad Bays at the existing 400/220 KV Kalpaka S/S	400/220				Tenders will be called for shortly
B	220 KV Sub-Stations :					
(a)	Sub-Stations covered under various Lift Irrigation Schemes :					
1	Gaddamvaripalli	220/11	2x25			Work under progress.
2	Goddummarri	220/11	2 x 50			Work under progress.
3	Nansuralla	220/11	3x25			2x25 MVA charged on 03.12.2011
(b)	Sub-Stations covered under other Schemes :					
1	Singotham Cross Roads, Mahaboobnagar Dist	220/33	2 x 20	Feb-13	Sep-14	Date of award : 25.01.2012 Work under progress.
2	Fabcity, Rangareddy Dist	220/132	(2x100) +(2x50)	Jul-12	Jul-14	Date of award : 12.01.2011. Work under progress.
3	Manikonda	220/132/33	2x100+2x50	Jul-12		Stay Order issued by Court and works stopped
4	Hayathanagar, Rangareddy Dist	220/33	2x50	May-12	Mar-15	Date of award : 08.02.2013. Work under progress.
5	Erragadda - GIS, Hyderabad	220/132	3 x 160	May-11	Aug-14	Date of award : 05.10.2009. Work under progress.
6	Imlibun - GIS, Hyderabad	220/132	2 x 160	Feb-12	Jul-14	Date of award : 10.05.2013. Work under progress.
7	Chilakalaguda -GIS (Osmania University), Hyderabad	220/132	(2x160) + (2x80)	May-11	Sep-14	Date of award : 05.10.2009. Work under progress.

Sl. No	Name of Sub-Station	Voltage Ratio (KV)	Capacity (MVA)	Original Target Date	Target date for completion	Remarks
8	Rachagunneri	220/132	2x100	Aug-11		1st Transformer commissioned on 03.01.2014 (2013-14). 2nd Transformer work under progress
9	APIIC Growth Centre, Bobbili, Vizianagaram	220/132	3 x 100	Dec-12	Mar-15	Works under progress
10	Switching Station at Appannadorapalem	220	- - -	Dec-12	Mar-15	Work under progress.
11	Nagole, Rangareddy Dist	220/132/33	(2x100) + (2x31.5)	Sep-13	Mar-15	Date of award : 25.05.2012. Ready for commission
12	Miyapur, Rangareddy Dist	220/132/33	(2x160) + (2x80)	Jul-14	Sep-14	Date of award : 24.07.2013. Works commenced.
13	Bonguluru, Rangareddy Dist	220/132/33	(2x100) + (2x50)	Sep-14	Sep-14	Date of award : 06.09.2013. Works under progress
14	Switching Station at Thimmajipet, Mahaboobnagar Dist	220			Dec-14	Date of award : 30.09.2013
15	Parigi	220/132	2x100	Dec-14	Mar-15	
16	Manthani	220/132	2x100	Dec-14	Nov-14	
17	Chakrayapeta	220/132	2x100	Mar-15	Mar-15	
18	Porumamilla	220/132	2x100	Mar-15	Mar-15	
19	Vajrarakur	220/132	2x100	Mar-15	Mar-15	
20	Tirumalayapally	220/132	2x100	Mar-15	Mar-15	
21	Gollapuram	220/132/33	(2x100) + (2x50)	Mar-15	Mar-15	
C	<u>New 220 kV Sub-Stations Planned :</u>					
1	220/132 kV substation at Ayyagaripally (Comprehensive scheme)	220/132	2 x 100	2015-16	2015-16	Investment Approval (IA) to be received from APERC
2	220/132 kV substation at Jangaon (Comprehensive scheme)	220/132	2 x 100	2015-16	2015-16	Investment Approval (IA) to be received from APERC
3	220/132 kV substation at Sircilla (Comprehensive scheme)	220/132	3 x 100	2015-16	2015-16	Investment Approval (IA) to be received from APERC
4	220/132/33 kV substation at Huzurnagar (Revised)	220/132/33	(2 x 100) + (2 x 31.5)	2015-16	2015-16	Tenders called and under process
5	132/33kV features at 220kV Switching Station, Dindi (Revised)	220/132/33	(2 x 100) + (2 x 31.5)	2015-16	2015-16	Tenders to be called
6	220 kV features at proposed 132/33 kV Kosigi SS in Mahaboobnagar district.	220/132/33	2 x 100	2015-16	2015-16	Tenders called and under process
7	220/132 kV substation at Jadcherla	220/132	2 x 100	2015-16	2015-16	Tenders to be called
8	220/132 kV substation at Kothur (Comprehensive scheme)	220/132	3 x 100	2015-16	2015-16	Investment Approval (IA) to be received from APERC
9	220/132 kV substation at Thimmajipet Switching Station (Comprehensive scheme)	220/132	2 x 100	2015-16	2015-16	Investment Approval (IA) to be received from APERC
10	220/132/33 kV Substation at Raidurg	220/132/33	(2 x 100) + (2 x 50)	2015-16	2015-16	Tenders to be called
D	<u>Augumenatation :</u>					
1	400 KV Mamidipally S/S (Scheme-II) (4 th 315 MVA PTR)	400/220	1x315			Works awarded on 15.02.2013 and under progress.
2	400/220/132 KV Gajwel S/S (Scheme-II) with 2 Nos. of Quad moose Feeder Bays and 2 Nos. of Twin moose Feeder Bays (3 rd 315 MVA)	400/220/132	1x315			P.O issued on 04.07.2013 and work under progress.
3	400/220 KV Chittoor & Nellore S/S : Augmentation of 3 rd 315 MVA PTR	400/220	1x315			Fresh Tender Analysis under progress
4	220/132 kV S/S at Renzal with 2x100 MVA Transformer (up gradation from 132/33 kV)	220/132	2x100	2015-16	2015-16	Tenders to be called

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. नये उप केन्द्रों के निर्माण कार्य की प्रगति की समीक्षा
Review of Progress of Works on new 400 KV & 220 KV Sub-Stations

Name of the State : Karnataka

Sl. No	Name of Sub-Station	Voltage Ratio (KV)	Capacity (MVA)	Original Target Date	Target date for completion	Remarks
A	<u>400 KV Sub-Stations :</u>					
1	Nelamangala : Additional transformer (3rd)	400/220	1 x 500	Aug-12	Apr-14	Commissioned on 09.04.14
2	Hoody, Bangalore Rural : 3rd 500 MVA Transformer	400/220	1 x 500	Aug-12	Jul-14	Work under progress
3	Electronics City	400/220	2 x 500	Sep-14	2015-16	Court Case
B	<u>220 KV Sub-Stations :</u>					
1	DG Plant Yelahanka	220/66	2x150	Oct-11	Mar-15	Main drain of BBMP to be deviated. Under persuasion with BBMP. Line work re-tendered on 17.08.2013 & dropped. Again re-tendered on 22.01.2014
2	Jigani: At Anekal Taluk	220/66	2x150	Oct-08	Mar-15	PC Tests to be completed. Source Line awaited
3	MSEZ near Bajpe in Mangalore Taluk, D.K. District.	220/110	2x100	Nov-12	Sep-14	Work under progress
4	Ramnagar (Kothipura):East	220/66	2x100	Dec-07	Dec-14	Source Line awaited.
5	Vikas Tech Park	220/66	2x150	Oct-11	Mar-15	PC Tests on Power Transformers and Batteries will be done during commissioning. Source Line awaited.
6	<u>Koppal 220 KV (Halavarthi) :</u> 2 x 100 MVA ; 220 / 110 KV & 1 x 10 MVA ; 110 / 11 KV S/S	220/110	2x100	Feb-14	Dec-14	Work under progress
7	<u>Arsikere :</u> 2 x 100 MVA ; 220 / 110 / 11 KV & 1 x 10 MVA ; 110 / 33 / 11 KV S/S	220/110	2x100	May-14	May-14	Work awarded on 24-11-12. Work under progress.
8	<u>Kudigi (Bedeladaku) :</u> Est 2x100 MVA, 220/66 KV Station	220/66	2x100	May-14	Jan-15	LOI issued on 20.11.12 & DWA on 02.01.13. Work under progress.
9	<u>Pavagada :</u> Est of 1x100 MVA ; 220 / 66 KV Station	220/66	1x100	Jul-14	Nov-14	LOI issued on 16.01.2013. Work under progress.
10	<u>Mallat (Manvi) :</u> Est of 2x100 MVA ; 220 / 110 KV Station and 1x10 MVA, 110 / 11 KV Sub-station	220/66	2x100	Aug-14	Aug-14	LOI issued on 12.02.2013. Work under progress.
11	<u>Khoday's Glass Factory :</u> Establishing 2x150 MVA and 2x31.5 MVA 220/66/11 kV Sub-Station	220/66	2x150	Mar-15	Mar-15	Work under progress

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. नये उप केन्द्रों के निर्माण कार्य की प्रगति की समीक्षा

Review of Progress of Works on new 400 KV & 220 KV Sub-Stations

Name of the State : Kerala

Sl. No	Name of Sub-Station	Voltage Ratio (KV)	Capacity (MVA)	Target date for completion	Remarks
A	<u>220 KV Sub-Stations :</u>				
	Upgradation :				
1	3rd Transformer at Madakathara (MDKA)	400/220	1 x 315		
2	Upgradation of Punnapra S/S from 110 kV to 220 kV S/S	220/110	2 x 200	2014-15	By June, 2014
3	Upgradation of Kattakkada S/S from 110 kV to 220 kV S/S	220/110	2 x 200	2014-15	52 % work completed
4	220 KV S/S at Kothamangalam			2015-16	
5	Upgradation of Kaloore S/S to 220 kV			2016-17	
6	220 KV S/S at Chalakudy			2016-17	
7	220 KV S/S at Aluva			2016-17	

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. नये उप केन्द्रों के निर्माण कार्य की प्रगति की समीक्षा
Review of Progress of Works on new 400 KV & 220 KV Sub-Stations

Name of the State : Tamil Nadu

Sl. No	Name of Sub-Station	Voltage Ratio (KV)	Capacity (MVA)	Original Target Date	Target date for completion	Remarks
A	<u>400 KV Sub-Stations :</u>					
1	Kayathar	400/230-110	(2x315)+(1x200)	29.05.2014	30.09.2014	Work awarded on 20.11.2012. Transformer Testing under progress
2	Thoppan Kundu	400/110	3x200	04.12.2014	2015-16	Work awarded and under progress
3	Anaikadavu	400/230-110	(2x315)+(2x200)	04.12.2014	2015-16	Work awarded and under progress
4	Rasipalayam	400/230-110	(2x315)+(2x200)	2014-15	2015-16	Work awarded on 16.05.2014 and under progress
5	Thiruvalam	400/230	2x315	10.10.2014	31.12.2014	Works under progress
6	Sholinganallur (JICA)	400/230-110	(2x315)+(1x100)	18.06.2015	31.03.2016	Work awarded on 19.03.2014 and under progress
7	Kanarapatty	400/230-110	(2x500)+(4x200)	10.06.2015	31.03.2016	Work awarded and to being commenced
8	Karamadai (JICA)	400/230	3x315	2014-15	2015-16	Tender finalised and LOA to be issued
9	Pulianthope	400/230	3x315	2015-16	2015-16	Tender opened and under process
10	Dharmapuri	400/230-110	(2x315)+(2x200)			Tender opened and under process
11	Thervaignandigai	400/230-110	(2x315) + (1x200)	03.03.2014	28.02.2015	Transformers under erection
B	<u>230 KV Sub-Stations :</u>					
1	Ulundurpet	230/110	2x100	30.06.2012	31.03.2015	Termination notice issued to the Contractor on 29.01.2014. New Estimate is under process for balance works.
2	Karamadai	230/110	2x100	31.12.2011	19.04.2014	Commissioned on 19.04.2014 with 1x100 MVAR PTR
3	Pallakkapalayam	230/110	2x100	19.12.2012	30.06.2014	Works under progress
4	Anthiyur	230/110	2x100	2013-14	30.06.2014	Work under progress
5	Thingalur	230/110	2x100	2013-14	30.09.2014	Work under progress
6	Coimbatore	230/110	2x100	2012-13	31.07.2014	All equipments erected
7	Singapuram	230/110	2x100	14.09.2013	31.12.2014	Work under progress
8	Vyasarpadi	230/110	2x100	30.03.2014	31.03.2015	Contract cancelled and new tender for the balance work awarded & under progress
9	Guindy (GIS)	230/110	2x100	29.11.2013	31.12.2014	Control Room & Compound Wall Work under progress.
10	TNEB HQ (GIS)	230/110	2x100	2012-13	2014-15	Civil Work under progress
11	Kanchipuram (JICA)	230/110/11	(2x100) + (1x16)	2014-15	2015-16	Retender floated with due on 27.06.2014
12	Savasapuram (JICA)	230/110	2x100	2014-15	2015-16	Retender floated with due on 27.06.2014

Sl. No	Name of Sub-Station	Voltage Ratio (KV)	Capacity (MVA)	Original Target Date	Target date for completion	Remarks
13	Tiruppur (JICA)	230/110	2x100	2014-15	2015-16	Retender floated with due on 27.06.2014
14	Shenpagapudur (JICA)	230/110	2x100	2014-15	2015-16	Retender floated with due on 27.06.2014
15	Alandur (CMRL) GIS	230/110	2x100	28.11.2014	31.03.2015	Work under progress
16	OMEGA	230/110	3x100	2014-15	2015-16	Tender finalised and perusal letter issued to the company
17	Kumbakonam (JICA)	230/110	2x100	2014-15	2015-16	Tender finalised and perusal letter issued to the company
18	Kinnimangalam (JICA)	230/110	3x100	2014-15	2015-16	Tender finalised and perusal letter issued to the company
19	Ambattur 3rd Main Road (JICA)	230/110	2x100	2014-15	2015-16	Work awarded on 03.03.2014 and being commenced
20	RA Puram (GIS) UG - JICA	230/33 - 11	2x100	2014-15	2015-16	Tender finalised and perusal letter issued to the company
21	Central CMRL (GIS) - JICA	230/110	2x100	2014-15	2015-16	Tender finalised and perusal letter issued to the company
22	Poyyur (JICA)	230/110	2x100	2014-15	2015-16	Tender is under finalisation
23	Karuvalur (JICA)	230/110	2x100	2014-15	2015-16	Tender is under finalisation
24	Purisai (JICA)	230/110	2x100	2015-16	2015-16	Tender opened and under process
25	Thiruverkkadu	230/110	2x100	2015-16	2015-16	Tender opened and under process
26	Kurukathi	230/110	2x100	2015-16	2015-16	Tender opened and under process
27	Muthuramalingapuram	230/110-33	(3x100) + (2x50)	2015-16	2015-16	Work awarded. Site to be handed
28	Jambunathapuram	230/110	2x100	2015-16	2015-16	----- Tender opened and under process
C	<u>Additional Capacity :</u> Nil					
D	<u>Enhancement of Capacity :</u> Nil					

दक्षिण क्षेत्र में पावर ग्रिड की उप केंद्रों के निर्माण कार्य की समीक्षा
Review of Progress of Works of Power Grid Executed Sub-Stations under SR

Sl. No	Name of the Transmission Line	Voltage Ratio (KV)	Capacity (MVA)	Date of Completion		Remarks in respect of target dates as per OCC
				Target	Anticipated	

Inter Regional Systems :

1	System Strengthening - XVII in Southern Regional Grid			Apl-15	Dec-15	Completion Schedule : 33 months from IA
1.1	765/400 KV Narendra (New Kudgi) S/s (GIS) {charged at 400 KV}	765 / 400			Dec - 15	Award placed in March, 2014 Land acquired in Feb-14

Other Regional Systems :

I	System Strengthening Scheme of IR for transfer of Power to SR :					
1	Transmission System Associated with Krishnapatnam UMPP Part-B			Oct - 14	Oct - 14	Completion Schedule : 32 months from IA
1.1	765/400 KV Pune (GIS) Sub-station	765 / 400	2 x 1500	Oct - 14	Oct - 14	Full-fledged works started from December, 2013 & work under progress
2	System Strengthening - XVII in Southern Regional Grid			Apl-15	Dec-15	Completion Schedule : 33 months from IA
2.1	765/400 KV Narendra (New Kudgi) S/s (GIS) {charged at 400 KV}	765 / 400		Apl-15	Dec - 15	Award placed in February, 2014
2.2	Extn. of 400/220 KV Narendra Sub-Station	400 / 220		Apl-15	Dec-15	Award under progress
3	Commom System Associated with East Coast Energy Ltd. & NCC Projects Ltd LTOA Gen Proj. in Srikakulam Area Part-B			Dec-15	Dec-15	Completion Schedule : 33 months from IA
3.1	Extn. of 765/400 KV Angul Sub-Station	765 / 400	1 x 1500	Dec-15	Dec-15	Award placed in August, 2013. Engg. & Civil Works under progress
3.2	Extn. of 765/400 KV Jharsuguda Sub-Station	765 / 400		Dec-15	Dec-15	Award placed in August, 2013. Engg. & Civil Works under progress
3.3	Extn. of 765/400 KV Dharamjaygarh Sub-Station	765 / 400		Dec-15	Dec-15	Award placed in August, 2013. Engg. & Civil Works under progress
4	Commom System Associated with East Coast Energy Ltd. & NCC Projects Ltd LTOA Gen Proj. in Srikakulam Area Part-C			Jun-15	Jun - 15	Completion Schedule : 27 months from IA
4.1	Srikakulam Pooling Station with 2 Nos. of 765 KV Bays. (400 KV S/S : AIS, 765 KV S/S : GIS)	765 / 400	2 x 1500	Jun-15	Jun - 15	Award placed
4.2	Extn. of 765/400 KV Angul Sub-Station	765 / 400		Jun-15	Jun - 15	Award placed in August, 2013
II	System Strengthening Scheme of WR for transfer of Power to SR :					
1	Part B : Regional System Strengthening in WR for Mundra UMPP			Oct-12	Mar-15	Completion Schedule : 48 months from IA
1.1	40 % Fixed Series Compensation on Wardha - Aurangabad 400 KV D/C Line			Oct-12	Jun-14	Award placed in Sep-12. Engg. & Civil works under progress

Sl. No	Name of the Transmission Line	Voltage Ratio (KV)	Capacity (MVA)	Date of Completion		Remarks in respect of target dates as per OCC
				Target	Anticipated	
2	Split Bus Arrangement & Reconfiguration / Shifting of Terminating Lines at 400 KV Raipur Sub-Station			Nov-11	Sep-14	Completion Schedule : 15 months from IA
2.1	Splitting of 400 KV Raipur Bus through Bus Sectionalizer into 2 section (Raipur A & Raipur B) at a point between existing line bays of Chandrapur 1 & Chandrapur 2			Nov-11	Sep-14	Award placed in September, 2013. Engg. & Civil Works under progress
3	Establishment of Pooling Station at Champa and Raigarh (Near Tamnar) for IPP Generation Projects in Chattisgarh - B			May-14	Mar-15	Revised BPTA Schedule : Nov-2013
3.1	765/400 KV Champa Pooling Station	765 / 400	6 x 1500	May-14	Mar-15	Works under progress. Work delayed due to land acquisition
3.2	Extn. of 765/400 KV Raigarh Pooling Station (Near Kotra)	765 / 400		May-14	May-14	Award placed in Nonember, 2011 Works under progress
3.3	Extn. of 765 KV Raipur Pooling Station	765 / 400		May-14	May-14	Commissioned in May, 2014
3.4	Extn. of 765 KV Dharamjaygarh Pooling Station	765 / 400		May-14	May-14	Commissioned in May, 2014
4	Integration of Pooling Station in Chattisgarh with Central Part of WR for IPP Generation Projects in Chattisgarh - C			May-14	Jul-14	Revised BPTA Schedule : May-2014
4.1	Extn. at 765 KV Raipur Pooling Sub-Station	765 / 400		May-14	Jul-14	Award placed in August, 2011 Works under progress
4.2	Extn. at 765 KV Wardha Sub-Station	765 / 400		May-14	Jul-14	Award placed in August, 2011 Works under progress
5	Transmission System Strengthening in Western part of WR for IPP Generation Projects in Chattisgarh - Part D			Jul-14	Dec-14	Revised BPTA Schedule : May-2014
5.1	Extn. at 765/400 KV Wardha Sub-Station	765 / 400		Jul-14	Jul-14	Award placed in March, 2012 Works under progress
6	Transmission System Strengthening in North/West part of WR for IPP Projects in Chattisgarh - Part E			May-15	May-15	Revised BPTA Schedule : May-2015
6.1	765/400 KV Padghe Sub-Station (GIS)	765 / 400	2 x 1500	May-15	May-15	Award placed in May, 2012 Works under progress
6.2	Extn. at 765/400 KV Aurangabad Sub-Station	765 / 400		May-15	May-15	Award placed in Feb, 2012 Works under progress
6.3	Extn. at 400 KV Padghe Sub-Station (MSETCL)			May-15	Aug-14	Award placed in Feb, 2012 Works under progress
7	Transmission System Strengthening in Raipur - Wardha Corridor for IPP Generation Projects in Chattisgarh - Part 6			Dec-15	Jan-15	Revised BPTA Schedule : Dec-2015
7.1	Extn. at 765 KV Raipur Pooling Station	765 / 400		Dec-15	Jan-15	Award placed in June, 2013 Works under progress
7.2	Extn. at 765 KV Wardha Sub-Station	765 / 400		Dec-15	Jan-15	Award placed in June, 2013 Works under progress

Sl. No	Name of the Transmission Line	Voltage Ratio (KV)	Capacity (MVA)	Date of Completion		Remarks in respect of target dates as per OCC
				Target	Anticipated	
8	Transmission System Strengthening in Wardha - Aurangabad Corridor for IPP Generation Projects in Chattisgarh - Part 7			Dec-15	Feb-15	Revised BPTA Schedule : Dec-2015
8.1	Extn. at 765 KV Wardha Sub-Station	765 / 400		Dec-15	Feb-15	Award placed in June, 2013 Works under progress
8.2	Extn. at 765 KV Aurangabad Sub-Station	765 / 400		Dec-15	Feb-15	Award placed in June, 2013 Works under progress
9	Installation of Transformer and Procurement of Spare Converter Transformer at Bhadravati HVDC B/B			Aug-15	Aug-15	Completion Schedule : 24 months from IA
9.1	Extn. at 400/220 KV Bhadravati HVDC B/B Station (1 x 315) & (Procurement of Spare converter Transformers 234 MVA, 1 Three Phase Winding)	400 / 220	1 x 315	Aug-15	Aug-15	Award for Transformer Pkg (315 MVA) placed in September, 2013
10	Transmission System Associated for Sholapur STPP (2 x 660 MW) Generation Projects			Oct-15	Oct-15	Completion Schedule : 24 months from IA
10.1	Extn. at 400/220 KV Sholapur Sub-Station	400 / 220	1 x 315	Oct-15	Oct-15	Award under progress
11	Inter-Regional System strengthening Scheme in WR and NR (Part - A)			Mar-16	Mar-16	Completion schedule : 29 months from Investment Approval (IA)
11.1	Extn. at 765/400 KV Sholapur Sub-Station	765 / 400		Mar-16	Mar-16	Award under progress
11.2	Extn. at 765/400 KV Aurangabad Sub-Station	765 / 400		Mar-16	Mar-16	Award under progress
III	<u>System Strengthening Scheme of ER for transfer of Power to SR :</u>					
1	Transmission System for Phase-I Generation Projects in Odisha (Part-A)			May-14	2014-15	Revised BPTA Schedule : May-2014
1.1	765/400 KV Pooling Station at Jharsuguda	765 / 400	2 x 1500	May-14	Nov-14	2 Nos. 400 KV Bays charged in Mar-13 Works under progress
1.2	765/400 KV Pooling Station at Angul	765 / 400	4 x 1500	May-14	Nov-14	2 Nos. 400 KV Bays charged in Mar-13 Works under progress
<u>Southern Regional Systems :</u>						
1	Kaiga III & IV Transmission System	Mar-05		Dec' 07	2014-15	Mysore - Kozhikode line and associated S/s held up due to ROW issues in line
1.1	400/220 KV, 2x315 MVA Sub-Stations at Kozhikode	400/220	2x315	Dec'07		Civil works completed and erection under progress. Completion matching with line.
1.2	Bay Extn.Of Mysore S/S (400 /220 KV)	400/220		Dec'07	2014-15	Civil works completed and erection under progress. Completion matching with line.
2	System Strengthening Scheme XII of SR	Feb-10		Jun-12	Sep-14	Completion scheduled 28 months from IA
2.1	400/ 220 KV Yelahanka Sub-station (GIS)	400/220	2 x 500		Sep-14	Erection completed. Completion matching with line.

Sl. No	Name of the Transmission Line	Voltage Ratio (KV)	Capacity (MVA)	Date of Completion		Remarks in respect of target dates as per OCC
				Target	Anticipated	
3	Common system associated with ISGS projects in Krishnapatnam area of Andhra Pradesh	Aug-11		Aug-14	Aug-14	Revised BPTA Schedule : September, 2014
3.1	765/400 KV D/C Nellore Sub-Station	765/400	2 x 1500		Aug-14	2nd Transformer was declared CoD on 01.03.2014 during 2013-14. Other works under progress
3.2	Extn. of 765/400 KV Kurnool Sub-Station	765/400			Aug-14	Award placed in September 2011. Engg. in progress
3.3	Extn. of 765/400 KV Raichur Sub-Station	765/400			Aug-14	Award placed in September 2011. Engg. in progress
4	Common system associated with Costal Energen Private Ltd & Ind-Barath Power Ltd. (LTOA) Gen. Proj. in Tuticorin Area Part B	Sep-11		Sep-14	Dec-14	Revised BPTA Schedule Dec-14
4.1	765/400 KV Salem Pooling Station (initially charged @ 400 kV)	765/400			Dec-14	Award placed in October 2011. Engg & Civil works in progress
4.2	Extn. of 765/400 KV Tuticorin pooling Stn	765/400			Mar-15	Award placed in October 2011. Engg & Civil works in progress
4.3	Extn. of 765/400 KV Madhugiri pooling Stn	765/400			Dec-14	Award placed in October 2011. Engg & Civil works in progress
4.4	Extn. of 765/400 kV Salem Sub-Station	765/400			Mar-15	Award placed in October 2011. Engg & Civil works in progress
5	System Strengthening XIII of SR Grid	Oct-11		Jun-14	Sep-14	Compln sch : 32 months from Investment approval
5.1	400/220 KV Madhugiri S/S	400/220	2 x 500		Sep-14	Award placed in October 2011. Engg & Civil works in progress
5.2	Extn. At 400/220 KV Gooty S/S	400/220			Sep-14	Award placed in October 2011. Engg & Civil works in progress
5.3	Extn. At 400/220 kV Yelahanka GIS	400/220			Sep-14	Award placed in October 2011. Engg & Civil works in progress
6	System Strengthening XIV of SR Grid	Dec-11		Aug-14	Aug-14	Compln sch : 32 months from IA
6.1	Extn. At 400/220 KV Somanahalli Sub Station.	400/220			Aug-14	Engg & civil works in progress
6.2	Extn. At 400/220 KV Dharmapuri (Salem New) Sub Station	400/220			Aug-14	Engg & civil works in progress
7	Common system associated with Costal Energen Private Ltd & Ind-Barath Power Ltd. (LTOA) Gen. Proj. in Tuticorin Area part A	Dec-11		Apr-14	Jul-14	Revised BPTA Schedule July-2014
7.1	765 KV Pooling Station in Tuticorin (initially charged at 400 KV)				Jul-14	Award placed in March, 2013. Work under progress
8	Transmission System Associated with Krishnapatnam UMPP Part - C1	Feb-12		Aug-14	Aug-14	Completion Sched : 30 months from IA
8.1	Extn. At 400 KV Kurnool S/S (APTRANSCO)				Aug-14	Engg & civil works in progress
9	Common Transmission Scheme Associated with ISGS Project in Vemagiri Area of Andhra Pradesh - Part A1	Mar-12		Jun-14		Scheme under review as per CERC's direction
9.1	Vemagiri Pooling Station (GIS) - Initially chaged at 400 KV	765/400	2 x 1500			Land under acqusition. Scheme under review as per CERC's direction

Sl. No	Name of the Transmission Line	Voltage Ratio (KV)	Capacity (MVA)	Date of Completion		Remarks in respect of target dates as per OCC
				Target	Anticipated	
10	System Strengthening in SR - XVIII	Mar-12		Nov-14	Nov-14	Completion Sched : 27 months from IA
10.1	Extn. 400/220 KV Vijayawada S/S	400/220			Nov-14	Work under progress
10.2	Extn. 400/220 KV Nellore S/S (APTRANSCO)	400/220			Nov-14	Work under progress
10.3	Extn. 400/220 KV Nellore S/S	400/220			Nov-14	Work under progress
10.4	Extn. 400/220 KV Thiruvalem S/S	400/220			Nov-14	Work under progress
10.5	Extn. 400/220 KV Melakottaiyur S/S	400/220			Nov-14	Award placed in Aug-13. Engg., Civil & Erection works are under progress
11	System strengthening in SR - XIX	Aug-12		Nov-14	Feb-15	Completion Sched : 27 months from IA
11.1	Extention at 765/400 KV Kurnool	765/400			Nov-14	Engg & civil works in progress
11.2	Upgradation of 400 KV to 765/400 KV Thiruvalem S/S (765 KV GIS & 400 KV AIS)	765/400	2 x 1500		Feb-15	Engg & civil works in progress
12	Common Transmission System associated with ISGS Projects in Nagapattinam/Cuddalore Area of Tamil Nadu - Part A(a)	Jan-13		Oct-14	Oct-14	Completion Sched : 21 months from IA
12.1	400 KV Nagapattinam Pooling Station (GIS) : Provision of 765/400 KV in future in the same Switch Yard	765/400			Oct-14	Award placed in Aug-13. Engg & civil works in progress
13	Transmission System associated with Contingency Plan for evacuation of Power from IL & FS (2 x 600 MW)	765/400		Jul-15	Jul-15	Completion Schedule : 18 months from IA
13.1	Extn. of 765/400 KV Pooling Station @ Nagapattinam by 2 Nos. of Bays for termination of 2nd ckt LILO Line	765/400			Jul-15	Award under progress
14	System Strengthening in SR-XXII			Aug-16	Aug-16	Completion Schedule : 30 months from IA
14.1	Extn. of 765/400 KV Kurnool Sub Station	765/400			Aug-16	Award under progress
14.2	Extn. of 765/400 KV Raichur Sub Station	765/400			Aug-16	Award under progress
15	Sub Station Works associated with Transmission System required for evacuation of Power from Kudgi TPS Phase - I (3 x 800 MW) of NTPC			Dec-15	Dec-15	Completion Schedule : 22 months from Investment Approval (IA)
15.1	Extn. of 765/400 KV Narendra (New) Sub Station at Kudgi GIS	765/400			Dec-15	Award placed in March, 2014 Land acquired in Feb-14
15.2	Extn. of 400/220 KV Madhugiri Sub Station	400/220			Dec-15	Award under progress
15.3	Extn. of 400/220 KV Bidadi Sub Station (GIS)	400/220			Dec-15	Award under progress

वर्ष 2013-14 के दौरान स्थापित 400 एवं 220/230 के.वि. पारेषण लाईन
400KV & 220 KV/230 KV Transmission Lines Commissioned during 2013-14

Sl. No.	Name of the line and No. of circuits	Ckt Km of Lines during 2013-14	Date of commissioning
<u>ANDHRA PRADESH</u>			
<u>400 kV</u>			
1	VTPS - Malkaram DC Line [Circuit 2]	260.913	01.04.2013
2	Bhoopalapally - Gajwal DC line	263.320	30.08.2013 26.09.2013 (CoD)
3	Startup Power Line from M/s. HNPCL TPP to 400/220 kV Kalpaka SS (Supervised by APTRANSCO)	7.000	07.02.2014
4	LILO of VTS - Srisailam Line	28.000	12.02.2014
<u>220 kV</u>			
1	DC line from 400/220 KV S/S Oglapur (PGCIL) to 220 KV S/S at Durshed : (60 + 82 = 142 ckm) Ogalapur - Jammikunta = 60 ckm Jammikunta- Darshed = 82 ckm	142.000	21.10.2013
2	220 KV LILO to Lower Jurala Hydro Electric Project from existing 220 KV Veltoor - Priyadarshini Jurala	8.900	11.12.2013
3	LILO Line to Rachagunneri S/S from Manbolu - Renigunta 220 KV Line	2.020	03.01.2014
4	(a). 220 KV DC line from existing 220 KV SS Podili to Medarmetla - Addanki 'X' Roads (Lot-I) (Two Circuits) & (b). 220 KV DC line from Medarmetla - Addanki 'X' roads to LILO point of Tadikonda - Ongole 220 kV SC line (Lot-II) (Two Circuits)	142.680	09.01.2014
5	220 KV LILO to 400 KV Yeddumailaram from 220 KV Shadnagar - Yeddumailaram Line multi ckt towres	24.000	07.03.2014
6	220 kV Gachibowli - Tandur LILO line to 400 KV Yeddumailaram	20.000	14.03.2014
7	DC line from Thimmapuram - Yellanur (Lift Irrigation Scheme)	32.032	27.03.2014
8	220 KV D/C Line from 400 KV Yeddumailaram S/S to 220 KV Sadasivapet S/S	74.000	29.03.2014
9	220 KV Sattenapalli (Narsaraopet) - Narsaraopet D/C	40.000	31.03.2014
<u>KARNATAKA</u>			
<u>400 kV</u>			
	Nil		
<u>220 kV</u>			
1	Ghataprabha - Chikkodi : Construction of 220 KV D/c line from proposed 220 KV Ghataprabha station to 220 KV Chikkodi station	72.634	07.09.2013
2	Bidadi - PGCIL Line : Construction of 220 KV Evacuation Lines from Bidadi PGCIL Station for 3.358 Km	6.716	16.10.2013
<u>KERALA</u>			
<u>220 kV</u>			
	Nil		

Sl. No.	Name of the line and No. of circuits	Ckt Km of Lines during 2013-14	Date of commissioning
	<u>TAMIL NADU</u>		
	<u>400 KV</u>		
1	Erection of 400KV MC Line from NCTPS Stage II to Alamathy 400 KV SS 2nd circuit (Tied up with the grid on 02.12.13)	34.000	01.07.2013
2	Erection of 230 kV SC Line on DC Tower by tapping off NCTPS Gummudipoondi Ideal Feeder to extend the supply to M/S Michelin Tyres	9.500	22.09.2013
3	Erection of 400 KV DC line from NCTPS Stage-II to Sunguvarchatram 400 KV SS (48.8+32.75)	163.100	31.01.2014
4	Erection of 400 KV DC line from Alamathy 400 KV SS to Sunguvarchatram 400 KV SS	102.400	17.03.2014
	<u>230 kV</u>		
1	Conversion of existing 230 KV S/C Line on S/C Towers with Kundha Conductor into 230 KV D/C Line with Zebra Conductor from Loc. 12-89 of 230 KV Thudiyalur - Othakalmandapam Line for Coimbatore SS	52.940	20.04.2013
2	Replacement of Kunda Conductor with Zebra conductor in the existing Udumalpet-Kadamparai 230 KV S/C Line in Loc. 1-148 at proposed Aliyar SS (41.42 ckm) (15.39 km & 24.00 km already commissioned on 08.09.2011 & 02.06.2012 respectively)	2.030	10.06.2013
3	LILO of 230 KV MTPS - Gobi Line at the proposed Anthiyur 230 KV S/S	2.230	14.06.2013
4	LILO of Korattur - Koyampedu Feeder by laying UG 230 KV 1x1200 Sqmm cable at Koyambedu (CMRL) 230 kV S/S	0.300	28.06.2013
5	Conversion of the 230 KV DC OH Line, existing along the 100 ft road (J.N. Road) from Coovam crossing location to Koyambedu 230 KV SS from location 136 to 145 into 230 KV DC UG Cable feeder	7.120	07.07.2013
6	Erection of 230 KV S/C Line on D/C Towers from Arasur 400 KV S/S to Palladam 230 kV S/S with Zebra Conductor	55.220	25.07.2013
7	230 KV Line between Tondiarpet 230 KV S/S - Elephant Gate (Existing Line) : (a). Replacement of Kundah conductor with Zebra conductor with insulator in the 230 kV in the existing Manali - Tondiarpet - Mylapore SC Line upto Elephant Gate Feeder - I (b). 230 KV UG Cable Elephantgate -Mylapore 230 KV SS	7.300	19.10.2013
8	230 KV S/C Line on D/C Tower from 400 KV Kalivanthapattu (Melakkottiyur) S/S - Veerapuram 230 KV SS (SC on DC)	11.935	19.10.2013
9	230 KV S/C Line on D/C Tower from 400 KV Kalivanthapattu (Melakkottiyur) S/S - Veerapuram 230 KV SS (SC on DC)	16.100	20.10.2013
9	LILO of 230 KV KR Thoppur - Gobi Feeder at Pallakkapalayam 230 KV S/S with Zebra Conductor	9.722	22.11.2013
10	Laying of 230 KV 1x1200 sq.mm. UG Cable within the Mylapore 230 KV S/S premises for interconnection	0.135	26.02.2014
	<u>POWERGRID</u>		
	<u>765 /400 kV - Inter Regional Lines</u>		
1	LILO of 400 KV D/C Raichur - Gooty Line at Raichur (New) S/S	21.000	December, 2013
2	765 KV S/C Raichur - Sholapur Line	208.000	31.12.2013
	<u>765 / 400 kV WR Lines to transfer Power to SR :</u>		
1	400 KV D/C Raipur Pooling Station - Raipur Line	43.000	March, 2013
2	400 KV D/C Raigarh Pooling Station (Near Kotra) - Raigar Line	13.000	April, 2013
3	765 KV D/C Raigarh Pooling Station (NearKotra) - Raigarh Pooling Station (Near Tamnar) Line	98.000	October, 2013
4	Shifting of 400 KV Ankola - Aurangabad (MSETCL) to Aurangabad (PGCIL) Twin Line (51 km)	102.000	January, 2014
5	765 KV D/C Raigarh Pooling Station (Near Kotra) - Raipur Pooling Station Line	480.000	January, 2014
6	400 KV D/C Vadodara - Pirana (Quad) Line (Commissioned through contingency arrangement)	274.000	March, 2014

Sl. No.	Name of the line and No. of circuits	Ckt Km of Lines during 2013-14	Date of commissioning
	<u>765 / 400 kV ER Lines to transfer Power to SR :</u>		
1	LILO of 400 KV S/C Meramunali - Jeypore at Angul Pooling Station	9.000	March, 2013
2	LILO of 400 KV D/C Rourkela - Raigarh at Jharsuguda Pooling Station (Circuit - I)	44.000	March, 2013
3	LILO of 400 KV D/C Rourkela - Raigarh at Jharsuguda Pooling Station (Circuit - II)	44.000	May, 2013
4	LILO of one circuit 400 KV D/C Talcher - Meramunali at Angul Pooling Station	34.000	March, 2014
	<u>400 kV - SR 1</u>		
1	400 KV D/C Thermal Powertech Corp. (I) Limited - Nellore Pooling Station Line (Q)	65.000	August, 2013
2	LILO of Bangalore - Salem 400 KV S/C Line at Hosur	25.000	01.02.2014
3	400 KV D/C Tiruvallam TPS - Chittoor Line (Charged on 30.12.2013, commissioned in March, 2014 and CoD from 01.04.2014)	42.000	March, 2014
4	400 KV D/C Kurnool (New) - Kurnool (APTRANSCO) Line (Q)	20.000	March, 2014 CoD on 01.04.2014
5	LILO of 400 KV D/C Nagarjunasagar - Gooty Line at Kurnool	70.000	March, 2014 CoD on 01.04.2014
	<u>400 kV - SR 2</u>		
1	LILO of existing Kolar - Sriperumpudur 400 KV S/C Line at Thiruvallam (Clubbed with 400 KV Nellore - Thiruvallam Line)	42.000	March, 2014

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. की नई परीक्षण लाइनों के निर्माण कार्य की प्रगति की समीक्षा

Review of Progress of Works on new 400 KV and 220/230 KV Transmission Lines under State Sector in SR

Name of the State : Andhra Pradesh

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
A	400 KV LINES :					
1	Short Gestation Power Transmission Scheme -II					
	400 KV Narsaraopet connected lines					
1.1	Purushottapatnam (Nunna) to Jujuru DC Line	112			Oct-14	Contract cancelled and Purchase Order issued on 29.04.2013 as per new tender.
1.2	Jujuru to Sattenapalli	134.166	120.332		2014-15	Work awarded on 09.03.2011. VTS-SSLM LILO already charged on 12.02.2014. Balance Works under progress
2	For LILO of Srisaillam - Mamidipalli 400 KV line to the proposed 400 KV Yedumalaram S/s					
2.1	Yeddumailaram (Shankarapally) - Edulapally (DC)	82.344		Dec-13		New Tenders called for and PO issued on 04.02.2014
2.2	Idulapally to LILO point of Srisaillam - Hyderabad line	74.438	7.00	Dec-13		New Tenders called for and PO issued on 04.02.2014
2.3	Yeddumailaram (Shakarapally) to LILO point of Srisaillam - Hyderabad Line	158		Oct-14	Oct-14	New Tenders called for and PO issued on 04.02.2014
3	Evacuation of Power from HNPCL (1040 MW) Power Plant :					
3.1	400 KV Quad DC Line from Suryapet SS - Nandiwanaparathi SS	240		Mar-15	Mar-15	Awarded in Sep-13 and under progress
3.2	400 KV Quad DC Line from Nandiwanaparathi SS - Shankarapally SS	222		Mar-15	Mar-15	Awarded in Sep-13 and under progress
3.3	400 KV Twinmoose DC Line from M/s. HNPCL Switchyard - Proposed Kamavarapukota SS (Lot-I, II & III)	Lot - III 200 km (100 x 2)				Lot I&II : Tenders due for opening on 12.03.2014 Lot III : Work awarded on 31.10.2013
4	400 KV Quad Moose DC Line from Proposed Kamavarapukota SS - Proposed Suryapet SS :					
4.1	400 KV Twinmoose DC Line from Proposed Kamavarapukota SS - Proposed 400 KV Chinna Korukondi SS	212				New Line proposed LOI issued on 15.07.2013 Survey is under progress
4.2	400 KV Twinmoose DC Line from Proposed Chinna Korukondi - Proposed 400 KV Suryapet SS	212				LOI issued on 15.07.2013 Survey is under progress
4.3	400 KV Twinmoose DC Line from Proposed Kamavarapukota SS - 400 KV Vemagiri SS					NIT will be issued shortly
5	Royalaseema Power Transmission Scheme :					
5.1	RTPP (Stage - IV) - Chittoor Twin Moose DC Line					LOI issued on 05.03.2014
6	Jaipur Power Transmission Scheme :					
6.1	Jaipur TPP - Rangampet Quad DC Line	150.274		May-15	Feb-15	Work awarded to M/s. Best & Crompton GVPR (JV), Hyderabad on 06.03.2013 and under progress
6.2	Rangampet - Gajwel Quad DC Line	174.644		May-15	Feb-15	Work awarded to M/s. KEC International Ltd on 06.03.2013 and under progress
7	Krishnapatnam Power Transmission Scheme :					
7.1	Krishnapatnam TPS - Bonapally D/C Line	179.842	80.136		Jul-14	Stringing Works under progress
7.2	Boopalapally - Chittoor Quad D/C Line	195.616	154.522		Jul-14	Stringing Works nearing completion
8	Evacuation of Wind Power in Kadappa, Anantpur & Kurnool Districts of AP :					
8.1	400 KV Quad DC Line Velloor - Yemmignoor - Uravakonda Line	395.68		Jul-15	Jul-15	Velloor - Yemmignoor : Awarded on 13.12.13 Yemmignoor - Uravakonda : Awarded on 16.12.13
8.2	Jammalamadugu - Naranoor (Kurnool) Quad DC Line	210		Jul-15	Jul-15	Work awarded on 28.12.2013 & under progress
8.3	Jammalamadugu - Uravakonda Quad DC Line	264		Jul-15	Jul-15	Work awarded on 23.01.2014 & under progress
9	Indira Sagar Rudramakota Lift Irrigation Scheme :					
9.1	400 KV DC Line from LILO Point of Vizag-Khammam to 400 KV Asupaka SS (OPGW Cable)	34	17	Jan-14	Aug-14	Work awarded on 18.05.2013 and under progress
10	Transmission System Improvement Scheme at Vizianagaram & Srikakulam Districts :					
10.1	400 KV Quad DC Line from 400/220 KV Kalpaka S/Sto 400/220 KV Maradam (Garividi) S/S	240				LOI is yet to be issued, subject to APERC Clearance

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
B	220 KV LINES :					
(a)	Transmission Lines covered under various Lift Irrigation Schemes :					
1	D/C line from Yellanur - Gaddamvaripalli	9.334	9.214	Dec-10		Works under progress.
2	D/C line from Gaddamvaripalli - Goddumarai	18.23		Sep-11		Works under progress.
(b)	Transmission Lines covered under other Schemes :					
1	Laying of 220 kV XLPE UG Cable from Marripally (Common Point) near Nagole to proposed 220/132/33 kV Hayathnagar S/S	14.44	10.6	May-13	Mar-15	Works under progress.
2	220kV Multi Circuit Line from 220 kV Ghanapur SS to proposed 220/33 kV SS at Hayathnagar upto terminal tower at Marripally (18 km) : 59 Nos of Multi Circuit and 4 Nos of Normal Towers	36	4	Jun-13	Mar-15	Works under progress
3	220 KV DC line from 400/220 KV Mamidipally S/s to M/s K.S.K. Photovoltaic Ltd.(Near Fabcity Ravirala)	11.32	11.32	Jan-11	Jul-14	OPGW Works to be taken up
4	220 kV DC line from 400/220 KV S/s Moulali to 220 /132 KV GIS S/s Chilakalaguda (Osmania Univ.)	17.8	17.2	Aug-11	Sep-14	Work under progress
5	220 kV LILO to Moulali S/S from kV Ghanapur - Malkaram D/C Line (One Circuit)	18	7	Sep-14	Mar-15	Work under progress
6	220 KV DC line from 220KV SS at Upper Jurala to Lower Jurala Hydro Electric project	22	3.2	Sep-12	Sep-14	Works under Progress
7	220 KV D/C XLPE UG cable from 220 KV GIS S/s at Chandrayanagutta to proposed 220 KV GIS S/s Imlibun	18.6	18.6	Jun-11	Mar-15	All works completed. Connected SS works are under progress
8	220 KV D/C UG cable from LILO of 220 KV Shapurnagar - Gachibowli feeder to 220/132 KV GIS S/S Erragadda	19.2	19.2	Aug-11	Jul-14	All works completed Connected S/S Works are under progress
9	220kV LILO from 220kV Gachiboli - Shapurnagar line to the proposed 220kV Miyapur S/S with XLPE UG Cable	6		Jun-14	Oct-14	Works commenced
10	220 KV LILO Line with XLPE UG cable from 220 kV Dindi - Chandrayanagutta (Both Circuits) to the proposed Bonguluru S/S	2		Jul-14	Oct-14	Works under progress
11	220 KV LILO from 220 KV Wanaparthi - Ramanagadda Line to proposed 220/33 KV Sub-Station at Singotham Cross Road	10.62	0	Jul-12	Jul-14	Works under Progress
12	220 KV LILO to Manikonda from Mamidipally - Gachibowli Line	0.6	0	Jul-12		Court Case. Work stopped.
13	220 kV LILO Line from 220 kV Budidampadu - Bhongiri 2 nd Circuit to 220 kV Waddekothapally S/S (7.0 km)	8	8	Dec-13	May-14	Works under progress
14	220 kV DC line from Pullivendula to Hindupur Lot I,II & III (82.9+83+87)	252.9	84.9	Jun-11	Sep-14	Works terminated for Lot I & III. Lot II works completed.
15	220 kV LILO Line (Both Circuits) from 220 kV Hindupur to Pulivendula D/C Line to the proposed 220 kV Gallapuram S/S	86		Mar-15	Mar-15	Preliminary Works under progress
16	220 kV DC Line from Pulichintala HES to the proposed 220 kV Huzurnaga S/S	72		Mar-15	Mar-15	Works to be commenced
17	220 kV DC Line for LILO of one of the circuits Chilakallu - Narketpally DC line to the proposed Huzurnagar S/S	24		Mar-15	Mar-15	Works to be commenced
18	220 kV DC Line from 400 kV Suryapet S/S to 220 kV Narketpally S/S	100		2015-16	2015-16	Tenders to be called
19	(a). 220 KV DC line from Pendurthy 220KV SS to proposed ADR Palem (Appannadorepalem) Switching Station (Two Circuits)	56.46	0	Jul-12	Mar-15	Works under progress
	(b). 220 KV DC line from ADR Palem Switching Station to Bheem Singh Village (Reach-I) for the proposed 220 KV SS Bobbili (Two circuits)	49.42	0	Jul-12	Mar-15	Works under progress
	(c). Erection of 220 kV DC line from Bheemsing (V) to Champa River (Reach-2) for the proposed 220/132 kV SS at Bobbili (Two circuits)	57.2	0	Jul-12	Mar-15	Works under progress
	(d). Erection of 220 kV DC line from Chamba River to Bobbili Growth Centre (Reach-3) for the proposed 220/132 kV SS at Bobbili	56.48	0		Mar-15	Works under progress
20	Erection of 220kV DC line from 220kV Garividi SS to proposed 220/132 kV SS at Bobbili (2 circuits)	75.28	0	Jul-12	Mar-15	Works under progress

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
21	220 KV DC Line from proposed 400kV SS Sattenapalli (Narsaraopet) to 220kV SS Parchur. (Two Circuits)	106.56	106.56	Nov-13	May-14	Works Completed. OPGW to be laid
22	220kV DC Line with single Moose conductor from 400/220kV Yeddumailaram S/S to the proposed 220/132 kV Pargi S/S (55KM - in 2 lots)	88	0	Dec-14	Mar-15	Works commenced
23	220 kV D/C Line from the proposed 220 kV Parigi S/S to the proposed 220/132 KV Kosigi S/S	74	0	2015-16	2015-16	Tenders called and under process
24	(a). 220 KV DC Line from 400 KV Velloor S/S to the proposed 220 KV Switching Station at Thimmajipet.	84	0	Sep-14	Mar-15	P.O issued on 25.08.2011. Works commenced.
	(b). 220 KV LILO Line from 220 KV Boothpur - Kalwakurthy Circuit 1 to the proposed 220 KV Switching Station at Thimmajipet.	2	0	Jan-14	Mar-15	P.O issued on 25.08.2011. Works commenced.
	(c). 220 KV LILO Line from 220 KV Boothpur - Kalwakurthy Circuit 2 to the proposed 220 KV Switching Station at Thimmajipet.	2	0	Jan-14	Mar-15	P.O issued on 25.08.2011. Works commenced.
25	220 kV LILO to the proposed 220 kV Manthani S/S from 220 kV RSS - Warangal DC Line	60	0	Dec-14	Dec-14	Works under progress
26	220 KV DC Line from 400KV SS Sullurpeta. (Loc.No.AP 23) – Lot-I (Two Circuits)	41.26	96.474	Nov-13	Dec-14	Works under progress
27	220 KV DC Line from 400KV Manubolu SS to 220KV SS Sullurpeta. (Loc.No.AP 23 to AP 39 – Lot-II) (Two Circuits)	58.84		Nov-13	Dec-14	Works under progress
28	220 KV DC Line from 400KV Manubolu SS to 220KV SS Sullurpeta. (Loc.No.AP 39 – Lot-III) (Two Circuits)	36.138		Nov-13	Dec-14	Works under progress
29	220 kV D/C Line from proposed 400 kV Talamanchipatnam S/S near Jammalamadugu to 220 kV Chakrayapeta S/S	240	0	Mar-15	Mar-15	Preliminary Works under progress
30	220 kV D/C Line from proposed 400 kV Talamanchipatnam S/S near Jammalamadugu to 220 kV Porumamilla S/S	200	0	Mar-15	Mar-15	Preliminary Works under progress
31	Evacuation of Wind Power in Kadappa, Anantpur & Kurnool Districts of AP :	32.5		Mar-15	Mar-15	Preliminary Works under progress
	(a). 220 kV DC Twin Moose Line from 400 kV Uravakonda S/S to 220 kV Vajra Karur S/S					
	(b). 220 kV D/C Line from 400 kV Uravakonda S/S to 220 kV Kalyandurg S/S	86		Mar-15	Mar-15	Preliminary Works under progress
	(c). 220 kV DC Moose Line from 400 kV Jammalamadugu S/S to 220 kV Thirumalaipally S/S	34		Mar-15	Mar-15	Preliminary Works under progress
	(d). 220 kV twin moose D/C Line from proposed 400 kV Uravakonda S/S to proposed 220 kV Borampalli S/S	152		Mar-15	Mar-15	Preliminary Works under progress
32	220 KV Overhead Line from last multi circuit tower to cable termination tower for Uppal (Nagole) S/S	3.2	3.2	Dec-13	Mar-15	Works Completed. Multi Circuit Line Works are under progress.
(c) Transmission Lines planned beyond 2014-15 :						
1	220 kV Line with 4 Circuits on Multi Circuit Towers for LILO of both the Circuits of 220 kV Warangal - Boodidampadu DC Line at proposed 220 kV SS, Ayyagaripally	40		2015-16	2015-16	Investment Approval (IA) to be received from APERC
2	220 kV DC line with Moose ACSR on Galvanised Towers from 400/220 kV SS, Oglapur to the proposed 220 kV SS, Jangaon	124		2015-16	2015-16	Investment Approval (IA) to be received from APERC
3	220 kV DC line with Moose ACSR on Galvanised Towers from 220 kV SS, Durshed to the proposed 220 kV SS, Sircilla	80		2015-16	2015-16	Investment Approval (IA) to be received from APERC
4	220 kV LILO to the proposed 220 kV SS at Suryapet from 220kV Budidampadu - Miryalaguda DC line (Both circuits)	120		2015-16	2015-16	Tenders to be called
5	Erection of 220 kV DC line from the proposed 400/220 kV Nirmal S/S to the existing 220kV Jagityal S/S	120		2015-16	2015-16	Tenders to be called
6	Erection of 220 kV DC line from the proposed 400/220 kV Nirmal S/S to the existing 220 kV Nirmal S/S	20		2015-16	2015-16	Tenders to be called
7	Erection of 220 kV DC Line from the proposed 400/220 kV Nirmal S/S to the proposed upgraded 220/132 kV Renzal S/S (100 km)	200		2015-16	2015-16	Tenders to be called

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
8	220 kV DC Line radially from proposed 220 kV Thimmajipet Switching Station to the proposed 220/132 kV Jadcherla substation	40		2015-16	2015-16	Tenders to be called
9	220 kV DC Line with Moose ACSR on Galvanised towers from the proposed 400/220 kV SS, Maheswaram to the proposed 220 kV SS, Kothur	40		2015-16	2015-16	Investment Approval (IA) to be received from APERC
10	Erection of 2 nd circuit from 220 kV SS Shivarampally to Asifnagar S/S by laying 220 kV XLPE UG Cable	3		2015-16	2015-16	Investment Approval (IA) to be received from APERC
11	220 kV LILO UG XPLE cable to the proposed 220 kV Raidurg SS from 220 kV Gachibowli - Shapurnagar Line	8		2015-16	2015-16	Tenders to be called
12	Erection of 220 kV Line with 4 Circuits on Multi Circuit Towers for LILO of both the Circuits of 220 kV Gachibowli - Sivarampally SS at proposed 400/220 kV Manikonda SS	40		2015-16	2015-16	Investment Approval (IA) to be received from APERC
13	Erection of 220 kV DC Line With Moose ACSR on Galvanised Towers from the proposed 400/220 kV Maheswaram SS to the proposed 220/132kV Bonguluru SS	40		2015-16	2015-16	Investment Approval (IA) to be received from APERC
14	220 kV DC Line from the proposed 132/33 kV Mamidipally substation up to Loc.No.12 of 220 kV Line to the proposed 220/132 kV Fab city from 400/220 kV Mamidipally substation with narrow based towers.(6 KM)	12		2015-16	2015-16	Tenders to be called
15	220 kV 2 nd circuits (3 rd & 4 th circuit) stringing from Loc. No. 12 on the existing narrow based M/C towers up to 220/132 kV Fab city on the 220 kV DC line from 400/220 kV Mamidipally SS to 220/132 kV Fab city (circuit 1 & 2 are already covered under Fab city line) - 4 km	8		2015-16	2015-16	Tenders to be called

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. की नई पारेषण लाइनों के निर्माण कार्य की प्रगति की समीक्षा
Review of Progress of Works on new 400 KV and 220/230 KV Transmission Lines under State Sector in SR
Name of the State : Karnataka

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
A	400 KV LINES : Nil					
B	220 KV LINES :					
1	220 kV DC line from Chikkodi to Kudachi Lot I for a distance of 35 km	70	39.5	Jan-13	2015-16	DWA issued on 18.04.2012. Work under progress
2	Nimhans 220 KV Cable: For running of S/C of 220 kV 1000 Sq mm copper u/g cable for a route length of 10.68 km. from the 220 kV HSR layout station to the proposed 220 kV Nimhans station.	10.68	9	May-10	Jul-14	Work under progress. BBMP orally informed to carry out the work
3	DC line from Hiriyur 400 kV s/s to Gowribidanur 220 kV s/s	242	214.2	Aug-08	Sep-14	Bay 2 Work under progress. Bay 1 commissioned on 09.11.2011. Line charged for a length of 93 km to avoid theft
4	220 kV DC line to Hoskote (Pillaguppa) by constructing LILO of Hoody-Kolar SC line	26.24	0.35	Apr-08	2015-16	Work under progress. Court case being pursued
5	Shifting of 220 kV DC line passing through proposed Airport land near Boovanahally limits by constructing new 220 kV LILO line from Shimoga - Mysore LILO line from Dandiganahally limits in Hassan Taluk, Hassan District for a distance of 17.67 kms	35.34	21.95	Feb-08	Sep-14	Court Case. Forest clearance required Stage-II clearance approval awaited
6	Vikas Tech Park: Construction of 220 kV LILO linr from one of the circuits of the proposed 220 kV D/C Somanahalli-Malur line to the proposed S/s	9.2		Jul-11	2015-16	Work under progress. Forest approval awaited.
7	D/C line from 400/ 220 KV PGCIL station, Shantigram to the existing B-4 line near Hedanahalli limits, Hassan Taluk	15.52	8.916	Sep-09	Sep-14	Work under progress. RoW problem at Loc. 15 & 16
8	DC line from Somanahalli to Kolar via Malur	180	104	Mar-08	2015-16	Kolar - Malur line charged. Malur - Somanahalli partly charged. RoW problem being pursued in court
9	Jigani 220 kV Line: Construction of 220 kV and 220-66 kV multi circuit lines from the proposed 220 kV Somanahalli Malur I& II lines to the proposed 220 kV Jigani S/s	23.4		Oct-08	2015-16	Work stopped due to ROW problem. Celebrity Housing Property being pursued locally.
10	HSR Layout Station 220 kV Cable Work: Running of D/C of 220 kV UG cable for a route length of 1.35 km from cable terminating tower point to the 220 kV to the HSR Layout Station	2.92	2.92	Dec-09	Jun-14	Commissioned on 30.04.2014
11	Ramnagar/ Channapatna (Kothipura) a) DC line from 220kV Tubinkere S/s 68.82 km b) 220-66kV MC line from 220kV Bidadi S/s 18.117 km	173.86	(a). 76.32 (b). - - - -	Feb-08	2015-16	Work under progress. Delay due to RoW problem.
12	Construction of 220 kV D/C link line from 220/66/11 kV Vajmangala S/s to the existing Kadakola S/s	39.28		Mar-11	2014-15	Court Case. Excavation work under progress
13	220 kV DC Dc line from Varahi to Kavoov via Khemar in the existing corridor of 110kV SC. SK line (113 km D/C, 4.5 km M/C)	DC = 226 + MC = 4.5	245.34	Feb-08	Sep-14	Varahi - Khemar (150 ckm) charged on 22.07.2010. Balance Work under progress
14	Koppal 220 KV Line (Halavarthi) : Construction of 220 KV DC Line (0.03 km) from existing 220 KV Munirabad Station to proposed Halvarthi Stattion	0.244		Feb-14	Mar-15	Work completed

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
15	<u>Arsikere 220 KV Line :</u> Construction of 220 / 110 KV LILO Multi Voltage Multi Towers & D/C Towers from the proposed Arsikere Station to Kanthenahalli Village	8.44		May-14	May-14	Work under progress. Case filed in Hassan Court, being pursued
16	<u>Kudigi (Badeladaku) Line :</u> 220 KV DC Line from existing 220 KV Station Ittagi to the proposed Station at Kudigi for a distance of 32.636 Km with 2 TBs at Kudigi Station	65.272		May-14	Mar-15	Work under progress
17	<u>Pavagada 220 KV Line :</u> Construction of 220 KV DC Line from existing 220 KV Madhugiri R/S to proposed Pavagada Station along with one circuit LILO of the existing 220 KV DC Line from 400/220/66 KV PGCIL Hiriyur - Gowribidanur Line to the existing 220 KV Madugiri R/S for a distance of 60.49 km	120.988		Jul-14	Nov-14	LOI issued on 16.01.2013. Work under progress.
18	<u>Mallat (Manvi) 220 KV Line :</u> Construction of 220 KV LILO from 220 KV RTPS -Lingasugur SC Line to the proposed 220 KV Station at Mallat for a distance of 2.8 Kms with TBs at Kavital and Byagwat existing stations and 110 KV SC/DC Evacuation Lines	5.6		Aug-14	Mar-15	LOI issued on 12.02.2013. Work under progress
19	<u>Thallak Balance Work :</u> Construction of 220 KV DC Line for a distance of 60.481 km from 400/220 KV Beerenahalli SS to proposed 220/66 KV Thallak Sub-Station (Chitra Durga Dist). Erection of Balance portion of line for 20.48 km (69 Towers)	40.96		Aug-07	2014-15	Station commissioned on 30.01.2009 by M/s. Areva T&D. Line partially commissioned upto 40 km Work restarted from 30.11.2013. Slow Progress. Proposed for short closure
20	<u>Khoday's Glass Factory Line :</u> 220 KV DC Line on NVBTs to LILO the existing 220 KV Peenya - subramanyapura SC Line near Avalahalli limits to the proposed 220 kV Khoday's Glass Factory	0.32		Mar-15	Mar-15	Check Survey approved on 18.01.2014. Work to be commenced.

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. की नई पारेषण लाइनों के निर्माण कार्य की प्रगति की समीक्षा

**Review of Progress of Works on new 400 KV and 220/230 KV Transmission Lines under
State Sector in SR**

Name of the State : Kerala

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Target date of completion	Remarks
A	220 KV LINES :				
1	LILO of one circuit of the 220 KV Kayamkulam - New Pallom DC feeder	62.06		2014-15	85 % work completed
2	220 kV Pothencode - Kattakada (DC) Line	57.00		2014-15	52 % work completed
3	Pallivasal Extension HEP Scheme : LILO of 220 KV Udumalpet - Iduki S/C Line	1.00		Dec-15	Work in progress.
4	Evacuating Power from Thottiyar HEP : LILO of one of the 220 kV Lower Periyar - Madakkathara D/C Line	1.00		Nov-15	Work in progress.
5	220 kV Brahmapuram - Kaloore (DC) Line (OH + UG)			2016-17	
6	LILO to 220 kV Kuyilmala from 220 KV Udumalpet - Idukki feeder			2016-17	
7	220 kV Kattakada - Balaramapuram Line	11.00		2014-15	Expected by 29.07.2014
8	220 kV Balaramapuram - Vizhinjam Multi Circuit Multi Voltage Line	13.00		2014-15	Expected by 15.08.2014
9	LILO of 220 kV Madakkathara - Elappully at 220 KV Shornur S/S			2016-17	
10	Upgradation of 66 kV Kalamassery - Aluva Line to 220/110 kV using multicircuit, multi voltage towers			2016-17	
11	220 kV Areakode - Kanhirode D/C Line			2017-18	
12	220 kV Veeyapuram - Punnappra LILO Line from Kayamkulam - Pallom Line	37.20	15.36	2014-15	Expected by 31.05.2014

दक्षिण क्षेत्र में 400 एवं 220/230 कि.वो. की नई पारेषण लाइनों के निर्माण कार्य की प्रगति की समीक्षा
Review of Progress of Works on new 400 KV and 220/230 KV Transmission Lines under State Sector in SR
Name of the State : Tamil Nadu

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
A	400 KV LINES :					
1	400 KV D/C Line with Quadraple Moose ACSR from Karaikudi 400 KV PGCIL SS to 400 KV Kayathar SS : (a). Erection of 400 KV DC Line from Karaikudi to a common point near Vijayapuri Village (b). Erection of 400 KV DC Line from a common point near Vijayapuri to Kayathar	314 70	382.47	08.10.2013 31.12.2013	30.09.2014 30.09.2014	Works completed except gantry connections Works completed except gantry connections
2	400 KV D/C Line with Quadraple Moose ACSR from Karaikudi 400 KV PGCIL SS to Pugalur 400 KV PGCIL SS	326	106	25.03.2014	30.09.2014	Work under Progress
3	400 KV DC Line from Pugalur with one circuit to Ottiyambakkam and another circuit to Kalivanthapattu					
4	(a). Pugalur - Pandiyankuppam Reach (b). Pandiyankuppam - Veeramanur Reach (c). Veeramanur - Kalivanthapattu Reach DC (d). 400 KV Kalivanthapattu SS - 400 KV Sholinganalur (Ottiyampakkam) SS DC	296 228 200 52	296 228 200	11.10.2013 10.12.2013 28.02.2014 28.02.2014	2014-15 2014-15 2014-15 2015-16	Work completed. PGCIL Work under progress at Pugalur All work completed Work completed. PGCIL Work under progress at Pugalur Work under progress; RoW issues involved
5	400 KV D/C Line from MTPS - Singarapet 400 KV S/S	200		2016-17	2016-17	Tender will be floated on acquiring the land for the S/S
6	(a). 400 KV D/C Line on multi circuit towers with twin moose conductor from the proposed Thervakandikai 400 KV SS to the proposed Korattur 400 KV SS and Manali 400 KV SS upto the common point (b). Erection of 400 KV SC Line on multi circuit tower with twin moose conductor from the common point to the proposed Korattur 400 KV SS (c). Erection of 400 KV DC Line with twin moose conductor from the common point to the proposed Manali 400 KV SS	70 30 68		2014-15 2014-15 2014-15	2015-16 2015-16 2015-16	Tender opened and under process Tender opened and perusal letter being issued Tender opened and perusal letter being issued
7	400 KV Line (4 Nos. circuits on multi circuit towers) with twin moose conductor from proposed Karamadai 400 KV SS to LILO the "400 KV MTPS Stage III - PGCIL Arasur Line"	160		2014-15	2015-16	Tender opened on 12.02.2014 and under process
8	400 KV D/C Line on Towers with Quad Moose from Tirunelveli SS (Ahishekapatty) to the proposed Kanarpatty 400 KV SS	30		2015-16	2015-16	Tender under finalisation
9	Erection of 400 KV Line on DC Tower with twin moose conductor from the proposed Thappakundu SS to 400 KV Anaikadavu SS	358	15.766	10.03.2015	2015-16	Work awarded and under progress

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
10	Erection of 400 KV Line on DC Tower with twin moose conductor from the proposed Rasipalayam SS to 400 KV Anaikadavu SS	86	12.004	13.08.2014	2015-16	Work under progress
11	Erection of 400 KV Line on DC Tower with quadruple moose conductor from the proposed Rasipalayam SS to 765 KV Salem SS	344		03.04.2015	2015-16	Work under progress
12	(a). Erection of 400 KV DC Line on DC towers with quad moose conductor from 400 kV Rasipalayam SS to 400 kV Dharmapuri SS by superceeding already sanctioned 400 kV DC Line from 400 kV Rasipalayam SS to 765/400 kV Salem SS	390				Estimate is under preparation
	(b). Erection of 400 KV DC Line on Dc towers with quad moose conductor by making LILO in first circuit of the ongoing 400 KV MTPS Stage -III to Thiruvalem DC Line	30				Estimate is under preparation
	(c). Erection of 400 kV DC Line on Dc towers with quad moose conductor by making LILO in second circuit of the ongoing 400 kV MTPS Stage -III to Thiruvalem DC Line	40				Estimate is under preparation
	(d). Erection of 400 kV DC Line on DC towers with quad moose conductor from Rasipalayam - Dharmapuri DC Line at 765/400 Dharmapuri SS	1				Estimate is under preparation
13	(a). Erection of 400 KV DC quad Line from MTPS Stage - III to the proposed 400 KV Thiruvalem SS Reach - I	204	1	10.01.2015	30.09.2014	Work under progress
	(b). Erection of 400 KV DC quad Line from MTPS Stage - III to the proposed 400 KV Thiruvalem SS Reach - II	337	12.796	19.05.2015	30.09.2014	Work under progress
14	Erection of 400 KV DC Twin Line from the proposed 400 KV Thiruvalem SS to Alamathy 400 KV SS upto the common point near Kanagammachatram (LILO of point of 400 KV Nellore - Sriperumbudur DC Line to Alamathy 400 KV SS)	150		30.12.2014	30.09.2014	Work under progress
15	(a). Erection of 400 KV DC Line on the DC Tower with twin moose conductor from the proposed 400 kV Manali SS and NCTPS Stage - II to Tondaiyarpur point	9				Estimate is under scrutiny
	(b). Erection of 400 KV SC Line on the DC Tower with twin moose conductor from the proposed 400 kV Manali SS and NCTPS Stage - II to Tondaiyarpur point	40				Estimate is under scrutiny
	(c). Laying of 400 kV, 1x2500 sq.mm DC UG Cable Feeder from Tondaiyarpur point tot the proposed 400 kV Pulianthope SS (Manali and NCTPS Stage - II)	10.8				Estimate is under scrutiny
16	400 kV DC Line from Kalivanthapattu 400 KV S/S to Sholingallur 400 KV S/S	48		2013-14		Work is delayed

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
B	<u>230 KV LINES :</u>					
1	LILO of Korattur - Koyampedu 230 KV Line at Alamathy 400kV S/S					Tirnkey by M/s BHEL
	a) Alamathy - Avadi	18	18			Work completed
	b) 230 KV UG Cable from Avadi limit to Ayapakkam	3.2		31.10.2011	30.06.2014	Railway Crossing work under progress
	c) D/C Line from Ayappakkam to Koladi (common point) for Alamathy	5.22	5.22			Work completed
2	230 KV Line between Tondiarpet 230 KV S/S - Elephant Gate (Existing Line): 230 KV UG Cable Mylapore - Tharamani 230 KV S/S	25			2014-15	Work under progress
3	Changing of conductor in Sriperumbudur - Korattur S/C Line (Improvement)	20.27	12	2012-13	2014-15	Line work is under modification & Admn approval under process
4	230 KV S/C Line on DC tower from 400 KV Kalivanthapattu S/S - Kadapperi 230 KV SS (SC on DC) Zebra Conductor			2013-14	31.08.2014	
	(a). Conversion of existing 110 KV D/C SP Koil - Kadapperi Line into M/C Line including proposed corridor for 230 KV S/C Line on D/C Tower from Kadapperi 230 KV SS	15.93	5.9	2013-14	31.08.2014	Work under Progress
	(b). Erection of 230 KV S/C Line on D/C Towers from Keezhpadaipai to Orattur Village	5	3.9	2013-14	31.08.2014	Work under Progress
	(c). Stringing of 230 KV S/C Line in the free arm of 230 KV SPR - Tharamani Line from Orattur - SRM Institute	6.115	5.32	2013-14	31.08.2014	Free arm stringing under progress
	(d). Conversion of existing 230 KV Sripeumpudur - Tharamani S/C Line on S/C Towers into D/C Line D/C Towers in Reserved Forest Area	1.27	1.27	2013-14	31.08.2014	Work completed
	(e). Conversion of the existing 230 KV Sripeumpudur - Tharamani S/C Line on S/C Towers into D/C Line D/C Towers in Reserved Forest Area upto the point at which the 110 KV SP Koil - Taramani Velachery D/C Line is crossing for a distance of 5.581 Kms	5.581	2.4	2013-14	31.08.2014	Work awarded for erection and stringing & under progress
	(f). Conversion of Existing 110 KV SP Koil - Tharamani D/C Line into MC for a distance of 3.6 km	3.6	1.7	2013-14	31.08.2014	Work under Progress. LC requested on existing Line
5	LILO of Kalivanthapattu (Melakkottiyur) S/S - Veerapuram 230 KV DC Line at OMEGA 230/110 kV SS	39.4	4.5	2014-15	30.09.2014	Work awarded on 25.09.2013 and under progress
6	230 kV UG Cable Line from Basin bridge 230 KV S/S (GMR Vasavi) to TNEB HQ 230 KV S/S	23.1		2013-14		Tender to be floated.
7	Laying of 230 KV 1x1200 sq.mm. UG Cable feeder from Kadapperi 230 KV S/S to the proposed Guindy 230 KV S/S	13.6		2013-14	31.12.2014	Work under progress
8	LILO of 230 KV S/C Sriperumbudur - Koyampedu Feeder at Guindy by laying 230 KV 1x1200 sq.mm UG Cable Feeder.	18.2		30.09.2012	31.03.2015	Work awarded and Road Cut permission awaited
9	LILO of 230 KV Sriperumpudur - Arni Line at Sunguvarchatram 400 KV S/S with Zebra Conductor	12		31.12.2011	31.03.2015	Court Case pending
10	LILO of 230 KV Siruseri - Taramani Line at Sholinganallur 400 KV S/S	2			2014-15	GO issued for alienation of land
11	230 KV D/C Line from Sholingapur to KITS 230 KV S/S	1			2014-15	GO issued for alienation of land
12	Additional Source from Alamathy (400 KV) - Koyambedu (230 KV) Line :					
	a) Construction of 230 KV DC line from Koladi point to PH Road	23		2012-13	31.03.2015	Work under progress
	b) Laying of 230 KV 1 x 1200 sq mm UG cable from PH Road to Koyambedu 230 KV S/S	9.6		2012-13	31.03.2015	Estimate under scrutiny

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
13	LILO of 230 KV Manali - Basin Bridge 230 KV S/S (GMR Vasavi) Feeder at Vyasarpadi 230 KV S/S with Zebra Conductor	1	1	30.06.2012	2014-15	All work completed
14	Erection of 230 KV S/C Line on D/C Towers from Arasur 400 KV S/S - Karamadai 230 KV S/S with Zebra Conductor	39.08	39.58	30.06.2012	31.12.2014	Work under progress
15	LILO of 230 KV Kunda Phase III - PUSHEP Line at Karamadai 230 KV S/S with Zebra Conductor	2	0.8	31.08.2011	10.04.2014	Work completed
16	LILO of 230 KV Arasur - Ingur Line at proposed Karamadai 230 KV S/S	6	6	31.08.2011	19.04.2014	Line energised on 19.04.2014
17	230 KV S/C Line on D/C Towers from Karaikudi 400 KV S/S to Sembatty 230 KV S/S with Zebra conductor	137	82.6	31.12.2011	31.12.2014	Re-tendering floated with due date 07.06.2014
18	(a). Erection of 230 KV D/C Line upto Location A to LILO the existing 230 kV Neyveli Zero Unit (STCMS) to the Neyveli TS-II Line at the proposed Ulundurpet 230 kV S/S	52		31.08.2012	31.03.2015	Work awarded and under progress
	(b). Erection of 230 kV D/C Line upto Location B from Cuddalore Auto Auto S/S to make LILO of the proposed Ulundurpet - STCMS Line at Ulundurpet 230 kV S/S	64.16				Stub setting work under progress
19	Erection of 230 KV S/C Line from Villupuram 230 KV S/S to the proposed Ulundurpet 230 KV S/S with Zebra Conductor	55		31.03.2012	31.03.2015	Contreactor is slow. Termination notice is being issued.
20	230 KV D/C Line on D/C Towers with Zebra Conductor making LILO of 230 KV K.R. Thoppur -Ingur line at the proposed Thingalur 230/110 KV S/S	32	7.362	17.04.2013	30.09.2014	Work awarded and under progress
21	230 KV D/C Line on D/C Tower with Zebra Conductor from MTPS - Malco S/S to Thingalur upto a common point	100	100	2012-13	2014-15	Work Completed
22	Erection of 230 KV S/C Line on D/C Tower with Zebra Conductor from Gobi 230 KV S/S towards Thingalur upto common point of 230 KV D/C Line	40	40	2012-13	31.03.2014	Work Completed
23	Stringing of 230 KV S/C Line on already erected 230 KV D/C Tower with Zebra Conductor from 50th Km Tower to the new common point towards Thingalur S/S	28.57	28.57	2012-13	30.09.2014	Work under Progress
24	230 KV S/C Line on D/C Tower with Zebra Conductor from Thingalur S/S to the common point of 230 KV D/C Line from MTPS and MALCO 230 KV S/S	9	8.7	2012-13	30.09.2014	Work under progress
25	Conversion of existing 110 KV S/C Line on S/C Towers with Leopard Conductor from loc 1 (CBE SS) - 18 of 110 kV CBE O.K. Mandapam Feeder into 230 KV D/C Line on DC Tower with Zebra Conductor	14	1.1	31.03.2014		Work under progress
26	LILLO of 230 KV K.R. Thoppur - Deviakurichi Line at the proposed Singapuram 230 KV S/S	16	16	14.09.2013	2014-15	Line Work completed & will be commissioned with S/S
27	Erection of 230 KV S/C Line on D/C Towers with Zebra Conductor between Palladam - Ingur 230 KV SS	62		2013-14	2014-15	Stub setting work under progress

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
28	(a). Erection of D/C Line on D/C Towers with Zrbra Conductor for making LILO of existing 230 KV SP Koil - Thiruvallam Line at the proposed Kanchipuram 230 KV SS	4		2014-15	2014-15	Perusal Letter issued to Contractor on 04.03.2014
	(b). Erection of D/C Line on D/C Towers with Zrbra Conductor for making LILO of existing 230 KV Sunguvarchatram - Arni Line at proposed 230 KV Kanchipuram SS	2		2014-15	2014-15	Perusal Letter issued to Contractor on 04.03.2014
29	LILO of 230 kV Thatchankurichi - Eachangadu Line at proposed 230 kV Poiyur SS	20		2014-15	2014-15	Fresh Tender is to be called for
30	LILO of 230 KV Kayathar - Anuppankulam and 230 KV Kayathar - Pasumali Line on M/C Towers at the proposed Kayathar 400 KV SS	12		30.09.2014	30.09.2014	Work under progress
31	Erection of D/C Line on D/C Towers with Zebra Conductor for making LILO of existing 230 KV Tuticorin SIPCOT - Checkanurani Line at the proposed Savasapuram 230 KV SS	12		2014-15	2014-15	Perusal Letter issued to Contractor on 04.03.2014
32	(a). Erection of 230 KV D/C Line on D/C Towers with Zebra Conductor for making LILO of existing 230 KV Checkanurani - TTPS I Feeder at the proposed Kinnimangalam 230 KV SS	8		2014-15	2014-15	Tender under process
	(b). Erection of 230 KV D/C Line on D/C Towers with Zebra Conductor for making LILO of existing 230 KV Checkanurani - Kayathar Feeder at the proposed Kinnimangalam 230 KV SS	12		2014-15	2014-15	Tender under process
33	LILO of 230 KV Arasur - Palladam Line at proposed Tiruppur 230 KV S/S	24		2014-15	2014-15	Tender under process
34	LILO of 230 KV Arasur - Karamadai Line at proposed Shenbagapudur 230 KV S/S	90		2014-15	2014-15	Tender under process
35	230 KV S/C Line on D/C Towers from Shenbagapudur 230 KV S/S to the proposed Karuvalur 230 KV SS	40		2014-15	2014-15	Fresh Tender is to be called for
36	LILO of Korattur - Koyampedu Feeder by laying UG 230 KV 1x1200 Sqmm cable at Koyambedu (CMRL) 230 kV S/S	0.5	0.5	30.06.2013		Cable laying works completed.
37	Erection of 230 KV DC Line on DC Towers with Zebra Conductor for making LILO in the 230 KV Thiruvallam - Kanchipuram S.P. Koil Feeder	20	1.5	30.09.2014	30.09.2014	Work under progress
38	Replacement of Kunda Conductor with Zebra conductor in the existing Neyveli-Eachengadu 230 KV S/C Line on DC Tower	39.9		2014-15	2014-15	Work under progress. Approval awaited from Forest Department
39	Erection of 230 KV DC Line on DC Towers with Zebra Conductor for making LILO in the 230 KV Thiruvallam - Singarapet Feeder	20	2	30.09.2014	30.09.2014	Work under Progress
40	(a). Erection of DC Line on DC tower with Zebra Conductor for making LILO of existing 230 kV Ingur - Palladam Line at the proposed 230 kV Kurukathi SS	46		2015-16	2015-16	Fresh Tender is to be called for
	(b). Erection of DC Line on DC tower with Zebra conductor for making LILO of existing 230 kV Myvady - Pugalur Line at the proposed 230 kV Kurukathi SS	80		2015-16	2015-16	Tender floated for stub setting with due on 05.06.2014
41	Erection of 230 kV DC Line on DC tower with Zebra conductor for making LILO of 230 kV Alamathy - CMRL Koyembadu at the proposed 230 kV Thiruverkkadu SS	2		2015-16	2015-16	Work will be taken up nearer to the commissioning of the SS
42	Laying of 230 kV 1X1200 Sq.mm, XLPE UG Cable from the proposed 230 kV Thiruverkkadu SS to the Sanctioned 230 kV Ambattur 3 rd Main Road SS	10		2015-16	2015-16	Work will be taken up nearer to the commissioning of the SS

Sl. No	Name of the Transmission Line	Length in Circuit Kms.	Stringing completed in Ckt.Kms	Original Target Date	Target date of completion	Remarks
43	Erection of DC Line on DC tower with Zebra conductor for making LILO of existing 230 KV Trichy - Perambalur Line at the proposed 230 kV Jambunathapuram SS	40		2015-16	2015-16	Tender to be floated
44	Erection of 230 kV DC Line on DC towers with Zebra conductor by making LILO in 230 KV Korattur - CMRL Koyembedu feeder to the proposed 230 kV Ambattur 3 rd Main Road SS	4		2015-16	2015-16	Tender to be floated
45	Laying of SC 230 kV, 1x1200 sq.mm, XLPE UG Cable feeder from 230 kV Kilpauk SS 7 and TNEB HQ 230 kV SS 3 to the proposed CMRL Central jail Complex Substation	10		2015-16	2015-16	Tender finalised and LOA is to be issued
46	(a). Laying of DC 230 kV 1 x 1200 sq.mm, XLPE UG Cable Feeder by making LILO in 230 KV Mylapore - Taramani Feeder at proposed RA puram Substation	7		2015-16	2015-16	Tender under process
	(b). Laying of SC 230 KV, 1 x 1200 sq.mm XLPE UG cable Feeder from the sanctioned Guindy 400 KV Substation to the proposed 230 kV R.A.Puram Substation	8.1		2015-16	2015-16	Tender under process
47	Erection of 230 kV DC Line on DC tower with Zebra conductor for making LILO of existing 230 kV Kalpakkam - Arani Line at the proposed 230 kV Purisai SS	20		2015-16	2015-16	Tender under process
48	Erection of 230 kV SC Line on DC towers with Zebra conductor from 400/230/110 kV Dharmapuri SS to the proposed 230 kV Gurubarapally SS	85		2016-17	2016-17	Tender to be floated

दक्षिण क्षेत्र में पावर ग्रिड की केंद्रीय पारेषण लाईनों के निर्माण कार्य की समीक्षा

Review of Progress of Works of Power Grid Executed Central Transmission Lines under SR

Sl. No	Name of the Transmission Line	Date of investment decision by Planning Commission	Length in Circuit Kms.	Stringing completed in circuit Kms.	Date of completion		Remarks
					Sch	Anticipated	
Inter Regional Systems :							
1	Commom System Associated with East Coast Energy Ltd. & NCC Projects Ltd LTOA Gen Proj. in Srikakulam Area Part-A	Jun-12	1909.24		Jun- 15	Jun- 15	BPTA Schedule revised to June, 2015
1.1	765 KV D/C Srikakulam Pooling Station - Angul Line	Jun-12	550		Jun- 15	Jun- 15	
2	System Strengthening - XVII in Southern Regional Grid	Jul-12	354	0	Apr-15	Dec-15	
2.1	400 KV Narendra (New Kudgi) - Narendra (Existing) Line {Quad}	Jul-12	354		Apr-15	Dec-15	Completion matching with SS
Other Regional Systems :							
I	System Strengthening Scheme of IR for transfer of Power to SR :						
1	Transmission System Associated with Krishnapatnam UMPP Part-B	Feb-12	365	62	Oct- 14	Oct- 14	
1.1	765 KV S/C Sholapur - Pune Line	Feb-12	268	62	Oct - 14	Oct- 14	Pune S/S critical. Line is planned to commission earlier
1.2	LILO of 400 KV D/C Parli - Pune & Pune - Aurangabad Line at Pune GIS (Including Multi Circuit)	Feb-12	97		Oct- 14	Oct- 14	Pune S/S critical. Line is planned to commission earlier
2	System Strengthening - XVII in Southern Regional Grid	Jul-12	568	33	Apr-15	Dec-15	
2.1	765 KV D/C Narendra (New Kudgi) - Kolhapur Line (Initially charged at 400 KV)	Jul-12	396	33	Apr-15	Dec- 15	Completion matching with
2.2	LILO of both circuit at 400 KV D/C Kolhapur - Mapusa Line at Kolhaour	Jul-12	172		Apr-15	Dec-15	readiness of Kudgi S/S
3	Commom System Associated with East Coast Energy Ltd. & NCC Projects Ltd LTOA Gen Proj. in Srikakulam Area Part-B	Mar-13			Dec-15	Dec-15	
3.1	765 KV D/C Angul - Jharsauguda Line	Mar-13	570		Dec-15	Dec-15	
3.2	765 KV D/C Jharsauguda - Dharamjaygarh Line	Mar-13	312		Dec-15	Dec-15	Award placed in May, 2014
II	System Strengthening Scheme of WR for transfer of Power to SR :						
1	Part B : Regional System Strengthening in WR for Mundra UMPP		815	153			
1.1	400 KV D/C Wardha - Aurangabad Line (Upgradation 1200 KV S/C)		697	35	Oct-12	2015-16	Fresh tender being taken up
1.2	400 KV Aurangabad (PGCIL) - Aurangabad (MSETCL) Line (Q, 59 km)		118	118	Oct-12	Apr-14	Commissioned in April, 2014
2	Establishment of Pooling Station at Champa and Raigarh (Near Tamnar) for IPP Generation Projects in Chattisgarh - B	May-11			May-14	May-14	Revised BPTA Schedule : Nov-2013
2.1	765 KV D/C Champa Pooling Station - Raipur Pooling Station Line	May-11	298	298	May-14	May-14	Commissioned in May, 2014 through contingency
2.2	765 KV S/C Champa Pooling Station - Dharamjaygarh (Near Korba) Switching Station Line	May-11	62	62	May-14	May-14	Commissioned in May, 2014 through contingency arrangement
2.3	765 KV S/C Raigarh Pooling Station (NearKotra) - Champa Pooling Station Line	May-11	96	28	May-14	Jul-14	To be charged through contingency by passing Champa, due to delay in Land acquisition of Champa

Sl. No	Name of the Transmission Line	Date of investment decision by Planning Commission	Length in Circuit Kms.	Stringing completed in circuit Kms.	Date of completion		Remarks
					Sch	! Anticipated	
3	Integration of Pooling Station in Chattisgarh with Central Part of WR for IPP Generation Projects in Chattisgarh - C	Aug-11	736	540	May-14	Jul-14	Revised BPTA Schedule : May-2014
3.1	765 KV D/C Raipur Pooling Station - Wardha Line I	Aug-11	736	540	May-14	Jul-14	Forest clearance received in Jan-14 (Stg-1) & Apr-14 (Stg-2)
4	Transmission System for IPP Generation Projects in Madhya Pradesh and Chattisgarh	Sep-11			Dec-13	Jun- 14	Revised BPTA Schedule : Nov-2013
4.1	765 KV S/C Indore - Vadodra Line	Sep-11	320	320	Dec-13	May-14	Commissioned in May, 2014 through contingency arrangement
5	Transmission System Strengthening in Western part of WR for IPP Generation Projects in Chattisgarh - Part D	Nov-11	1395	584	May-15	Dec-14	Revised BPTA Schedule : May-2015
5.1	765 KV D/C Wardha - Aurangabad Line I	Nov-11	695	526	May-15	Jul-14	
5.2	400 KV D/C Aurangabad - Boisar Quad. Line	Nov-11	700	58	May-15	Dec-14	Forest Clearance awaited. Critical
6	Transmission System Strengthening in North/West part of WR for IPP Projects in Chattisgarh - Part E	Dec-11	560	0	May-15	May-15	Revised BPTA Schedule : May-2015
6.1	765 KV D/C Aurangabad (PGCIL) - Padghe (PGCIL) Line	Dec-11	560		May-15	May-15	
7	Transmission System Strengthening in Raipur - Wardha Corridor for IPP Generation Projects in Chattisgarh - Part 6	Jan-12	713	1	Dec-15	Jan-15	Revised BPTA Schedule : Dec-2015
7.1	765 KV D/C Raipur Pooling Station - Wardha Line II	Jan-12	713	1	Dec-15	Jan-15	Forest Clearance awaited Stringing commenced in May, 2014
8	Transmission System Strengthening in Wardha - Aurangabad Corridor for IPP Generation Projects in Chattisgarh - Part 7	Feb-12	696	180	Dec-15	Feb-15	Revised BPTA Schedule : Dec-2015
8.1	765 KV D/C Wardha - Aurangabad Line II	Feb-12	696	180	Dec-15	Feb-15	
9	Inter-Regional System strengthening Scheme in WR and NR (Part - A)	Oct-13			Mar-16	Mar-16	Completion schedule : 29 months from Investment Approval (IA)
9.1	765 KV D/C Aurangabad - Sholapur Line	Oct-13	560		Mar-16	Mar-16	
III	System Strengthening Scheme of ER for transfer of Power to SR :						
1	Transmission System for Phase-I Generation Projects in Odisha (Part-A)	Sep-10			May-14	May-14	Revised BPTA Schedule : May-2014
1.1	765 KV S/C Angul Pooling Station - Jharsuguda Pooling Station Line - I	Sep-10	270	68	May-14	Nov-14	Stage-II Forest Clearance awaited.
1.2	765 KV S/C Angul Pooling Station - Jharsuguda Pooling Station Line - II	Sep-10	274	140	May-14	Aug-14	Stage-II Forest Clearance awaited.
Southern Regional Systems :							
1	Kaiga III & IV Transmission System (Balance Line)	Mar-05	418	304	Dec-07	2014-15	All elements completed progressively from Jan-08 to May-08 except 400 kV Kozhikode-Mysore D/C Line
1.1	Mysore - Kozhikode (D/C)		418	307	Dec-07		Works restarted in December, 2013. Severe RoW problem.
2	Kudankulam APP (2000 MW) Transmission System : (Balance Lines)	May-05	297	29	Nov-08	2014-15	
2.1	Edamon (KSEB) - Moovattupuzha (PG) : Quad DC Line		297	29	Nov-08		Serious ROW problem continues

Sl. No	Name of the Transmission Line	Date of investment decision by Planning Commission	Length in Circuit Kms.	Stringing completed in circuit Kms.	Date of completion Sch ! Anticipated		Remarks
3	System Strengthening Scheme XII of SR	Feb-10	34	25	Jun-12	Sep-14	
3.1	LILO of ckts of Nelamangala- Hoodi 400kV S/C line at Yelahanka		34	25	Jun-12	Sep-14	ROW issue resolved by Karnataka High Court on 31.07.2013.Work stopped due to agitation.
4	Supplementary Transmission System Associated with Vallur TPS	Aug'10	113	113	Apr-13	Mar-14	Completion schedule 32 months from investment approval
4.1	400 KV D/C Tiruvallam TPS - Chitoor line		42	42		Mar-14	Charged on 30.12.2013, commissioned in March, 2014 and CoD from 01.04.2014
5	Common system associated with ISGS projects in Krishnapatnam area of Andhra Pradesh	Aug ' 11	735	170	Aug-14	Aug-14	Completion Sch: 36 months from investment approval.
5.1	765 kV D/C Nellore pooling station - Kurnool Line		602	120		Aug-14	Work is under progress. Stringing commenced from Jun-13
5.2	765 kV D/C Kurnool - Raichur (2nd ckt) Line		118	110		Aug-14	RoW issue due to local Political Leader. Realignment explored.
6	Common system associated with Costal Energen Private Ltd & Ind-Barath Power Ltd. (LTOA) Gen. Proj. in Tuticorin area Part-B	Sep ' 11	1099	134	Sep-14	Mar-15	Revised BPTA Schedule Dec-14
6.1	765 kV D/C Tuticorin Pooling Station - Salem Pooling Station line (initially charged @ 400 kV)		735	30		Mar-15	Work under progress
6.2	400 kV D/C Salem Pooling Station - Salem line (Quad)		120	108		Sep-14	Stringing commenced from Mar - 2013
6.3	765 kV S/C Salem Pooling Station (Dharmapuri) - Madhugiri Pooling Station line (initially charged @ 400 kV)		244	27		Dec-14	Stringing commenced from Mar '13 Severe RoW being faced
7	System Strengthening-XIII of SR grid	Oct-11	550	118	Jun-14	Sep-14	Completion schedule: 32 months from investment approval.
7.1	400 kV D/C Gooty- Madhugiri line.		418	186		Sep-14	Stringing commenced from Mar - 2013. RoW being faced.
7.2	400 kV D/C Madhugiri - Yelahanka Line.		132			Sep-14	Tower erection commenced from March 2013. RoW being faced.
8	System Strengthening-XIV of SR grid	Dec-11	240	15	Aug-14	Aug-14	Compln sch : 32 months from Investment approval
8.1	400 kV Dharmapuri (Salem New) - Somanahalli Line		240	16		Aug-14	Stringing commenced from November 2013
9	Common system associated with Coastal Energen Private Ltd. and Ind-Bharath Power(Madras) Ltd.(LTOA) Gen. Proj. in Tuticorin area Part A	Dec-11	9		Apr-14	Jul-14	Compln sch : 28 months from Investment approval
9.1	LILO of both ckts of Tuticorin JV - Madurai 400 KV D/C Line at Tuticorin Pooling Station (Quad)		9			Jul-14	Award placed in March 2013
10	Transmission System associated with Krishnapatnam UMPP - Part C1	Feb-12	90	90	Aug-14	Aug-14	Compln sch : 30 months from Investment approval
10.1	400 KV D/C Kurnool (New) - Kurnool (APTRANSCO) Line (Q)		20	20		Aug-14	CoD : 01.04.2014 Commissioned in March, 2014
10.2	LILO of 400 KV D/C Nagarjunasagar - Gooty Line at Kurnool		70	70		Aug-14	CoD : 01.04.2014 Commissioned in March, 2014
11	Common Transmission System associated with ISGS Project in Vemagiri Area of Andhra - Part A1	Mar-12	38		Jun-14		Scheme under review in view of CERC direction
11.1	LILO of Gazuwaka - Vijayawada 400 KV S/C Line at Vemagiri Pooling Station		38				Scheme under review in view of CERC direction
12	System Strengthening in SR - XVIII	June - 2012	1266	718	Nov-14	Nov-14	Completion schedule : 29 months from Investment Approval (IA)
12.1	400 KV D/C Vijayawada - Nellore Line		686	290		Nov-14	Stringing commenced from Jun-13
12.2	400 KV D/C Nellore - Thiruvalam Line(Q)		352	352		Nov-14	Both Circuit 1 & 2 commissioned on 14.04.2014
12.3	400 KV D/C Thiruvalam - Sholingallur Line		228	76		Nov-14	Tower erection commenced from May 2013

Sl. No	Name of the Transmission Line	Date of investment decision by Planning Commission	Length in Circuit Kms.	Stringing completed in circuit Kms.	Date of completion		Remarks
					Sch	! Anticipated	
13	System strengthening in SR - XIX	Aug '12	752	130	Nov-14	Feb-15	Completion schedule : 27 months from Investment Approval (IA)
13.1	765 KV D/C Kurnool - Thiruvalam Line		710	130		Nov-14	Work is under progress.
14	Common Transmission System associated with ISGS Projects in Nagapattinam/Cuddalore Area of Tamil Nadu - Part A(a)	Jan '13	46	Jan-13	Oct-14	Oct-14	Completion schedule : 21 months from Investment Approval (IA)
14.1	LILO of Neyveli - Trichy 400 KV S/C Line at Nagapattinam Pooling Station		46	46		Oct-14	Planned to commission through contingency
15	Transmission System associated with Contingency Plan for evacuation of Power from IL & FS (2 x 600 MW)	Jan '14	72		Jul-15	Jul-15	Completion schedule : 18 months from Investment Approval (IA)
15.1	LILO of 2nd Ckt of 400 kV Neyveli - Trichy D/C Line @ Nagapattinam Pooling Station		44			Jul-15	Award under progress
15.2	Strengthening of NLC TS-II to NLC TS-I Exp Link with higher capacity conductor		28			Jul-15	Award under progress
16	System Strengthening in SR-XXII	Feb-14	119		Aug-16	Aug-16	Completion schedule : 30 months from Investment Approval (IA)
16.1	765 KV S/C Kurnool (New) - Raichur Line		119			Aug-16	Award placed in March, 2014

संलग्नक /ANNEXURE - XXI

दक्षिण क्षेत्र में शंट कैपासिटरों की स्थापना
Installation of H.T. Shunt Capacitors in MVAR
in Southern Region

Constituents	Capacitors installed upto 31st March 2013	Capacitors installed from 01.04.2013 to 31.03.2014	Total capacitors installed upto 31.03.2014
	1	2	3=1+2
आ.प्रदेश / A.P	6593.40	28.80	6622.20
कर्नाटक / KAR	4459.20	25.13	4484.32
केरल / Kerala	995.00	0.00	995.00
त.नाडु / T.Nadu	3505.01	85.40	3590.41
पुदुचेरी / Pondy	77.02	0.00	77.02
कुल / TOTAL	15629.62	139.33	15768.95

वर्ष 2013-14 में दक्षिण ग्रिड के 400 के.वो. के मुख्य केन्द्रों में वोल्टेज की रूपरेखा
Voltage Profile at selected nodes of 400 KV Regional Grid during 2013-14

अधिकतम वोल्टेज की औसत / Average of Maximum Voltage in KV

Month	Hyderabad	Ramagundam	N'sagar	Cuddapah	Vijayawada	Gooty	Gazuwaka	Bangalore	Kolar	Narendra	Trivandrum	Thrissur	Chennai	Hosur	Neyveli-II
अप्रैल / April-13	427	414	420	417	429	423	421	409	414	426	420	408	408	406	411
मई / May-13	429	416	423	420	429	427	419	412	416	427	422	410	409	408	412
जून / June-13	434	421	428	424	432	432	421	416	419	429	425	417	412	410	412
जुलाई / July-13	427	421	429	428	433	432	422	414	420	427	423	415	417	409	411
अगस्त / Aug-13	430	419	428	429	434	431	423	417	423	425	428	418	418	413	415
सितंबर / Sep-13	425	414	424	426	430	431	419	418	424	426	426	414	416	414	413
अक्तूबर / Oct-13	427	417	425	425	429	427	422	414	419	426	423	410	413	410	412
नवम्बर / Nov-13	429	418	423	424	430	425	426	412	419	426	425	406	415	408	413
दिसम्बर / Dec-13	427	417	421	422	431	423	423	411	417	425	420	407	418	406	412
जनवरी / Jan-14	422	416	418	419	429	418	421	408	415	421	418	405	419	406	408
फरवरी / Feb-14	421	414	415	416	427	414	419	403	413	416	417	403	416	403	408
मार्च / March-14	417	411	412	413	425	414	415	403	413	415	416	403	413	403	408

निम्नतम वोल्टेज की औसत / Average of Minimum Voltage in KV

Month	Hyderabad	Ramagundam	N'sagar	Cuddapah	Vijayawada	Gooty	Gazuwaka	Bangalore	Kolar	Narendra	Trivandrum	Thrissur	Chennai	Hosur	Neyveli-II
अप्रैल / April-13	417	408	410	402	421	411	416	388	398	416	403	388	397	390	401
मई / May-13	416	409	409	403	419	413	413	390	398	415	396	384	394	389	397
जून / June-13	419	413	413	403	419	415	413	389	398	416	393	389	390	388	395
जुलाई / July-13	415	416	415	409	421	416	415	388	397	413	394	388	397	387	395
अगस्त / Aug-13	414	410	414	408	422	414	414	386	398	411	394	388	394	389	396
सितंबर / Sep-13	409	405	411	406	419	413	412	389	398	412	396	389	393	390	398
अक्तूबर / Oct-13	413	409	412	406	418	410	415	388	397	411	398	388	397	389	400
नवम्बर / Nov-13	414	410	410	406	418	409	416	387	397	410	409	390	401	389	404
दिसम्बर / Dec-13	411	408	406	403	418	406	414	385	397	410	403	388	404	388	402
जनवरी / Jan-14	409	406	404	402	419	404	414	383	397	406	403	389	404	389	400
फरवरी / Feb-14	410	406	403	401	417	402	412	380	396	404	401	386	405	387	399
मार्च / March-14	407	403	401	399	416	402	409	381	397	405	402	387	403	389	400

वर्ष 2013-14 में सम्पन्न बैठकें / Meetings held during 2013- 14

SL NO	NO. OF THE MEETING	स्थान / VENUE	दिनांक / DATE
I द.क्षे.वि.स. की बैठकें / Southern Regional Power Committee Meetings			
1	22 nd Meeting of SRPC	SRPC, Bengaluru	18.05.2013
2	23 rd Meeting of SRPC	Kochi	26.10.2013
3	24 th Meeting of SRPC	Chennai	15.03.2014
II तकनीकी समन्वय समिति की बैठकें/Technical Coordination Committee Meetings			
1	21 st Meeting of TCC	SRPC, Bengaluru	17.05.2013
2	Special TCC Meeting on the Issues discussed in NPC First Meeting held on 15.04.2013	SRPC, Bengaluru	24.06.2013
3	Special TCC Meeting on implementation of measures finalised in the Second Meeting of NPC held on 16.07.2013	SRPC, Bengaluru	21.08.2013
4	22 nd Meeting of TCC	Kochi	25.10.2013
5	Special TCC Meeting on LTA quantum of UPCL & implementation GSES related issues	SRPC, Bengaluru	05.12.2013
6	Special TCC Meeting on issues related to LTA quantum of UPCL, implementation GSES, ATS for Mettur etc	SRPC, Bengaluru	16.12.2013
7	Special TCC Meeting on NEW-S Grid Synchronisation of 765 kV Sholapur - Raichur Line	SRPC, Bengaluru	11.01.2014
8	23 rd Meeting of TCC	Chennai	14.03.2014
III प्रचालन समन्वय समिति की बैठकें/Operation Coordination Committee Meetings			
1	82 nd OCC Meeting	SRPC, Bengaluru	10.04.2013
2	83 rd OCC Meeting	SRPC, Bengaluru	13.05.2013
3	84 th OCC Meeting	SRPC, Bengaluru	12.06.2013
4	85 th OCC Meeting	SRPC, Bengaluru	11.07.2013
5	86 th OCC Meeting	NTPC, Ramagundam	13.08.2013
6	87 th OCC Meeting	SRPC, Bengaluru	11.09.2013
7	88 th OCC Meeting	SRPC, Bengaluru	09.10.2013
8	89 th OCC Meeting	SRPC, Bengaluru	12.11.2013
9	90 th OCC Meeting	Hyderabad	13.12.2013
10	91 st OCC Meeting	Raichur, Karnataka	21.01.2014
11	92 nd OCC Meeting	SRPC, Bengaluru	13.02.2014
12	93 rd OCC Meeting	SRPC, Bengaluru	06.03.2014
IV वाणिज्य समिति की बैठकें / Commercial Committee/Sub-Committee Meetings			
1	21 st Meeting of Commercial Sub Committee	SRPC, Bengaluru	17.04.2013
2	22 nd Meeting of Commercial Sub Committee	SRPC, Bengaluru	31.07.2013
3	23 rd Meeting of Commercial Sub Committee	SRPC, Bengaluru	04.12.2013
4	Special Meeting of Commercial Sub Committee on "Inclusion of KKNPP in RTA, Revision of UI Account etc"	SRPC, Bengaluru	19.02.2014
V संरक्षण समिति की बैठकें / Protection Coordination Sub-Committee Meetings			
1	19 th Meeting of PCSC	SRPC, Bengaluru	25.04.2013
2	20 th Meeting of PCSC	SRPC, Bengaluru	29 & 30 May, 2013
3	21 st Meeting of PCSC	SRPC, Bengaluru	25.06.2013
4	22 nd Meeting of PCSC	SRPC, Bengaluru	31.07.2013
5	23 rd Meeting of PCSC	SRPC, Bengaluru	27.08.2013
6	24 th Meeting of PCSC	SRPC, Bengaluru	26.09.2013
7	25 th Meeting of PCSC	SRPC, Bengaluru	22.10.2013
8	26 th Meeting of PCSC	SRPC, Bengaluru	20 & 21 November, 2013
9	27 th Meeting of PCSC	SRPC, Bengaluru	19.12.2013

SL NO	NO. OF THE MEETING	स्थान / VENUE	दिनांक / DATE
10	28 th Meeting of PCSC	SRPC, Bengaluru	24.01.2014
11	29 th Meeting of PCSC	SRPC, Bengaluru	20.02.2014
12	30 th Meeting of PCSC	SRPC, Bengaluru	20.03.2014

vi **अन्य बैठकें / Other Meetings**

1	Special Meeting to discuss Coal Related Issues	NTPC, Secunderabad	12.04.2013
2	Special Meeting on Frequency Linked Penalty / Incentive Schemes & Implementation of RRF	SRPC, Bengaluru	09.05.2013
3	Special Meeting on Outstanding Payment between WR - SR	WRPC, Mumbai	29.05.2013
4	Special PCSC Meeting on "Over Voltage Tripping Grading"	SRPC, Bengaluru	05.06.2013
5	Special Meeting to discuss Wind Despatch Issues of Tamil Nadu	SRPC, Bengaluru	07.06.2013
6	Special Meeting to discuss MEPL & SEPL Related Issues	SRPC, Bengaluru	18.06.2013
7	Special Meeting to discuss RGMO / MVAR Related Issues	SRPC, Bengaluru	29.06.2013
8	Special Meeting I - to discuss CMP in respect of Indian Railways	SRPC, Bengaluru	23.07.2013
9	Protection Expert Meeting - I : Special Meeting on "NPS Outage occurred on 15.07.2013"	NPS, Nellore, AP	24.07.2013
10	Special Meeting to discuss RGMO / MVAR Related Issues	SRPC, Bengaluru	25.07.2013
11	Protection Expert Meeting - II : Special Meeting on "Multiple trippings at 220 kV Somanahalli S/S occurred on 18.07.2013"	Somanahalli, Bengaluru	26.07.2013
12	Special Meeting on Accounting Methodology of Kudankulam NPP	SRPC, Bengaluru	05.08.2013
13	Special Meeting to discuss Metering Issues Related to SEPL	SRPC, Bengaluru	22.08.2013
14	Protection Expert Meeting - III : Special Meeting on "SGS Tripping occurred on 18.08.2013"	Sharavathy GS, Karnataka	04.09.2013
15	Special Meeting to discuss MEPL Related Issues	SRPC, Bengaluru	16.09.2013
16	Protection Expert Meeting - IV : Special Meeting on "Guttur Tripping occurred on 02.09.2013"	Guttur, Karnataka	18.09.2013
17	Special Meeting II - to discuss CMP in respect of Indian Railways	SRPC, Bengaluru	23.09.2013
18	Special Meeting on Issues related to RRF Mechanism	SRPC, Bengaluru	25.09.2013
19	Special Meeting to discuss RGMO / MVAR Related Issues	SRPC, Bengaluru	30.09.2013
20	Special Meeting to discuss Coal Related Issues	NTPC, Secunderabad	01.10.2013
21	Special Meeting on Pollution Mapping	SRPC, Bengaluru	30.10.2013
22	Special Meeting III - to discuss CMP in respect of Indian Railways	SRPC, Bengaluru	22.11.2013
23	Special Meeting on Outstanding Payment between WR - SR	SRPC, Bengaluru	04.12.2013
24	Special Meeting - I, with NPCIL, KKNPP on issues related to Voltage Control Measures, SPS, Auto Re-closure Schemes etc	SRPC, Bengaluru	02.01.2014
25	Special Meeting on NEW-S Grid Synchronisation	APTRANSCO, Hyderabad	18.01.2014
26	Protection Expert Meeting - V : Special Meeting on "Guttur Tripping occurred on 24.12.2013 & 12.01.2014"	Guttur, Karnataka	29.01.2014

SL NO	NO. OF THE MEETING	स्थान / VENUE	दिनांक / DATE
27	Special Meeting to discuss RGMO / MVAR Related Issues	SRPC, Bengaluru	29.01.2014
28	Protection Expert Meeting - V : Special Meeting on "RTPS Tripping occurred on 26.01.2014 & 30.01.2014"	RTPS, Raichur, Karnataka	05.02.2014
29	Special Meeting IV - to discuss CMP in respect of Indian Railways	SRPC, Bengaluru	12.02.2014
30	Special Meeting with MCL regarding Coal Supply Issues	Secunderabad	28.02.2014
31	Special Meeting with KPCL & KPTCL on protection related issues over the trippings of RTPS, SGS and Guttur S/S	SRPC, Bengaluru	04.03.2014
32	Special Meeting - II, with NPCIL, KKNPP on issues related to Voltage Control Measures, SPS, Auto Re-closure Schemes etc	SRPC, Bengaluru	12.03.2014

2013-14 के दौरान हुई ग्रिड व्यवधान / Grid Disturbances during the year 2013 - 14

क्र.सं S.No	व्यवधान की तारीख Date of Grid Disturbance	प्रभावित ग्रिड Grids Affected	प्रभावित क्षेत्र एवं कारण Area Affected and Reason	बहाली की अवधि Time Taken for Restoration	श्रेणी Category	उदपादन का नुकसान Loss of Load (MW)
1	5-Apr-13	SR	220kV Srisaillam Right Bank Substation Both buses Tripped and Station become dead	--	GD1	Generation loss : 450 MW
2	1-May-13	SR	Outage of 220kV Ghanapur SS due to failure of Bus-II Y-phase PT & Bus-1 R-phase CT leading to completes outage of station.	1 hr & 24 minutes	GD1	LOAD LOSS : 200 MW
3	11-May-13	SR	Kothagudem TPS Unit-2, 5, 6,7, 8,9 and 10 tripped	-	GD1	Generation loss : 750 MW
4	28-May-13	SR	Raichur TPS Unit-5,6&8 tripped	-	GD1	Generation loss : 500 MW
5	7-Jun-13	SR	110 KV Bus fault occurred at 230/110 KV Kayathar SS	-	GD1	Generation loss : 1500 MW (approx)
6	13-Jun-13	SR	All running units at Sharavathy tripped. Units 1,2,6,7,8&9 were on bars	42 min	GD1	Generation Loss : 130 MW
7	15-Jul-13	SR	Blackout at Nellore pooling station, generation loss at SEL & MEPL generating station. Protection mis-operation and overvoltage had caused the tripping.	1 hr and 10 min	GD1	Gen loss : 400MW
8	3-Aug-13	SR	Complete outage of 400/220kV Mamidapalli substation of APTRANSCO. CT failure in R-Phase of 400kV Khammam-Mamidapalli line-1 led to the multiple tripping. All the lines and ICT's tripped on backup protection.	1 hr & 45 minutes	GD1	Load loss : Nil

2013-14 के दौरान हुई ग्रिड व्यवधान / Grid Disturbances during the year 2013 - 14

क्र.सं S.No	व्यवधान की तारीख Date of Grid Disturbance	प्रभावित ग्रिड Grids Affected	प्रभावित क्षेत्र एवं कारण Area Affected and Reason	बहाली की अवधि Time Taken for Restoration	श्रेणी Category	उदपादन का नुकसान Loss of Load (MW)
9	14-Aug-13	SR	Complete outage of Srisaillam Hydro power station. All connected lines at Srisaillam Hydro power station tripped. unit#2 and Unit#3 were de-synchronized from grid. After de-synchronization of Units, lines connected to Srisaillam tripped on over voltage. Running Unit#1 tripped on over-speeding due to tripping of evacuating lines from Srisaillam.	3hr & 30 min	GD1	
10	18-Aug-13	SR	Complete outage of Sharavati hydro power station. All connected 220kV lines and running units tripped.	2 hrs	GD1	GEN loss : 940 MW
11	18-Sep-13	SR	Multiple tripping and generation loss at Udupi Power Station. Tripping of 400kV Hassan-UPCL line-1&2, 220kV UPCL-Kemar line-1&2. The triggering incident was fault in 220kV Kemar-Varahi line-3	23 minutes	GD1	GEN loss : 350 MW
12	25-Sep-13	SR	Generation loss & tripping of 220kV lines at Kothagudam TPS. Triggering incident was a fault in 220kV KTPS-Manuguru line-1. Running Units # 1,2,3,4,5,6,8,9 & 10 tripped. 220kV lines connected to KTPS tripped on Zone-2 from remote ends.	30 minutes	GD1	GEN loss : 1100MW
13	4-Oct-13	SR	Generation loss and Multiple tripping at Vijayawada TPS. Triggering incident was B Phase CT failure in 220kV VTPS-Narsaraopeta line. Running Units # 2,3,4,5 & 6 and all 220kV feeders connected to Vijayawada TPS tripped on operation of Bus bar protection.	30 minutes	GD1	GEN loss : 900 MW
14	3-Nov-13	SR	Multiple tripping & generation loss at Iduki power station. CB blast of unit 5 of idukki resulted in tripping of 4 Nos Idukki units along with 220kV lines from iduki power station	1 hr	GD1	GEN loss : 400 MW

2013-14 के दौरान हुई ग्रिड व्यवधान / Grid Disturbances during the year 2013 - 14

क्र.सं S.No	व्यवधान की तारीख Date of Grid Disturbance	प्रभावित ग्रिड Grids Affected	प्रभावित क्षेत्र एवं कारण Area Affected and Reason	बहाली की अवधि Time Taken for Restoration	श्रेणी Category	उदपादन का नुकसान Loss of Load (MW)
15	7-Nov-13	SR	Multiple tripping & generation loss at Iduki power station. All running units /available lines at 220kV Idukki Station (KSEB) tripped due to Bus PT flashover	1 hr & 10 min	GD1	GEN loss : 590 MW
16	24-Dec-13	SR	Complete outage of 400/220kV Guttur substation of KPTCL	30 minutes	GD-1	Load Loss : Nil
17	12.01.2014 12:25 Hrs	SR	Complete outage of 400kV Guttur station of KPTCL	36 minutes	GD-1	GEN loss :755 MW

2013-14 के दौरान हुई मुख्य ग्रिड घटनाएँ / Major Grid Incidents during the year 2013 - 14

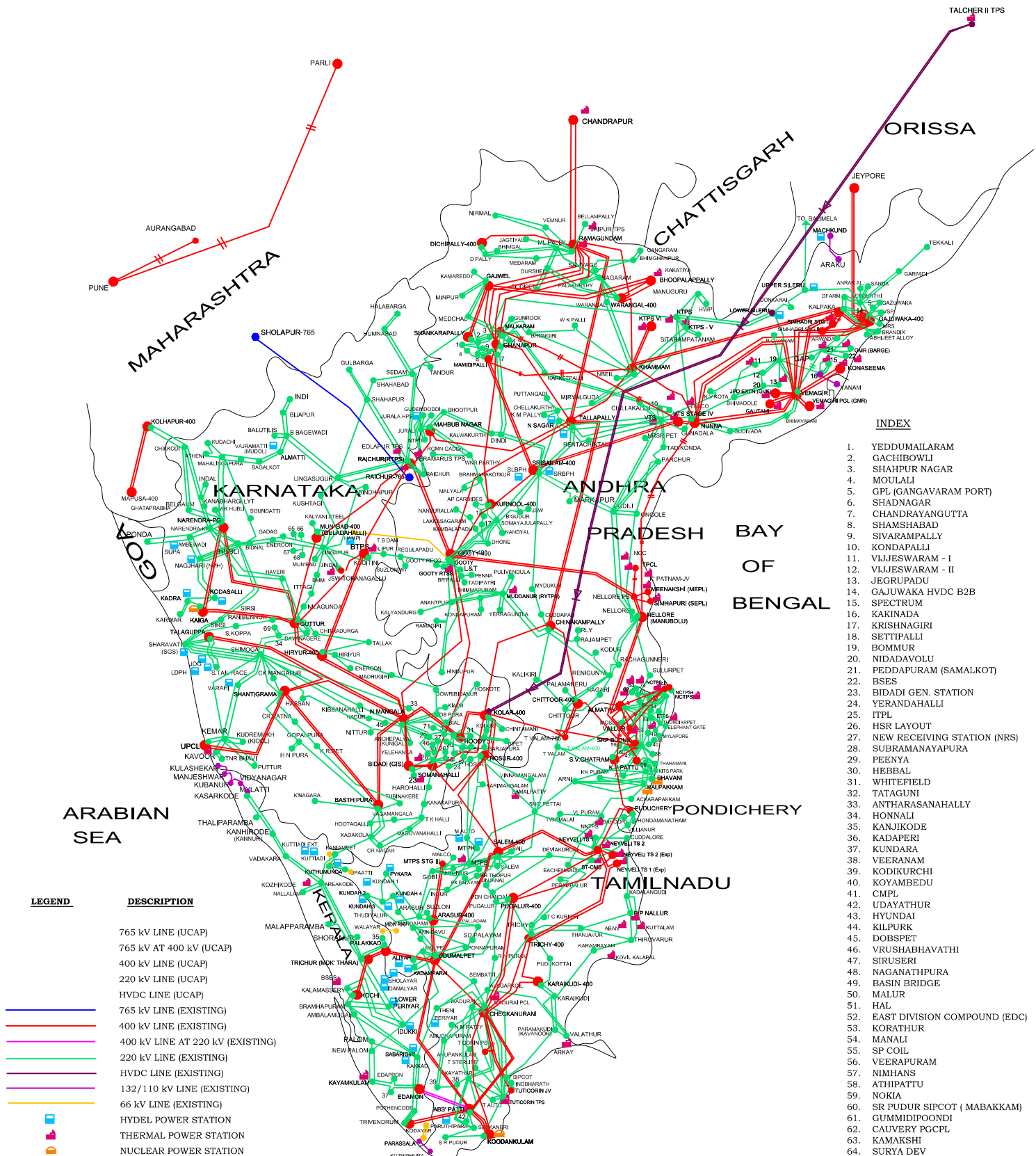
क्र.सं Sl. No	तत्व का नाम Name of Element	ट्रिपिंग का समय Tripping Time		पुनरुद्धार समय Revival Time		बहाली की अवधि Time Taken for Restoration	ट्रिपिंग का कारण Reason for Tripping	श्रेणी Category
		Date	Time	Date	Time			
1	220 kV IDUKKI - UDUMALPET	03/11/2013	18:17	03/11/2013	19:49	1:32	Bus Fault at Idukki	GI - 1
2	400/220 kV ICT-3 AT HYDERABAD	02/01/2014	17:15	02/01/2014	17:42	0:27	220 kV Side CB tripped due to LBB operation	GI - 1
3	400/220 kV ICT-2 AT HYDERABAD	02/01/2014	17:15	02/01/2014	17:58	0:43	220 kV Side CB tripped due to LBB operation	GI - 1
4	400 kV NEYVELI TS 2 - TRICHY	21/08/2013	0:05	21/08/2013	1:42	1:37	Bus Bar protection operated	GI - 2
5	400 kV NEYVELI TS 2- PUDUCHERRY	21/08/2013	0:05	21/08/2013	1:20	1:15	Bus Bar protection operated	GI - 2
6	400 kV NEYVELI TS 2- SALEM 1	21/08/2013	0:05	21/08/2013	1:12	1:07	Bus Bar protection operated	GI - 2
7	400 kV NEYVELI TS2- NEYVELI TS-2	21/08/2013	0:05	21/08/2013	1:35	1:30	Bus Bar protection operated	GI - 2
8	400/230 kV ICT-2 AT NEYVELI	21/08/2013	0:05	21/08/2013	1:33	1:28	Bus Bar protection operated	GI - 2
9	400 kV JEYPORE - GAZUWAKA 2	25/08/2013	10:53	25/08/2013	11:25	0:32	Tripped due to Bus Bar Protection at Jepore	GI - 2
10	400/220 kV ICT-2 AT CUDDAPAH	16/09/2013	4:14	16/09/2013	5:27	1:13	220 kV Bus Bar Protection acted due to LV Side B-Ph CT failure	GI - 2
11	HVDC TALCHER - KOLAR POLE 2 AT TALCHER	12/10/2013	23:59	13/10/2013	1:09	1:10	Line Fault in Cyclone Area	GI - 2
12	HVDC TALCHER - KOLAR POLE 1 AT TALCHER	13/10/2013	0:42	13/10/2013	1:16	0:34	Line Fault in Cyclone Area	GI - 2
13	HVDC TALCHER - KOLAR POLE 1 AT TALCHER	13/10/2013	1:19	13/10/2013	4:12	2:53	Line Fault in Cyclone Area	GI - 2
14	400/220 kV ICT-2 AT VIJAYAWADA	25/10/2013	10:32	25/10/2013	11:53	1:21	Tripped on Bus Bar Protection at 220 kV Side of Nunna	GI - 2
15	400/220 kV ICT-1 AT VIJAYAWADA	25/10/2013	10:32	25/10/2013	12:08	1:36	Tripped on Bus Bar Protection at 220 kV Side of Nunna	GI - 2
16	400 kV ALAMATHI - NCTPS ST2 -1	05/12/2013	14:16				Bus Fault at NCTPS - II	GI - 2
17	400 kV NCTPS - VALLUR 1	05/12/2013	14:16				Bus Fault at NCTPS - II	GI - 2
18	400 kV NEYVELI TS2- NEYVELI TS-2	12/12/2013	15:16	12/12/2013	16:15	0:59	LBB Protection operated	GI - 2
19	400 kV NEYVELI TS 2- SALEM 2	12/12/2013	15:16	12/12/2013	16:15	0:59	LBB Protection operated	GI - 2
20	400 kV NEYVELI TS 2- PUDUCHERRY	12/12/2013	15:16	12/12/2013	16:07	0:51	LBB Protection operated	GI - 2
21	400 kV NEYVELI TS2- NEYVELI TS-I	12/12/2013	15:16	12/12/2013	16:12	0:56	LBB Protection operated	GI - 2
22	400/220 kV ICT-1 AT GUTTUR	24/12/2013	21:14	24/12/2013	21:42	0:28	Bus Fault at Guttur end	GI - 2
23	400 kV GUTTUR - HIRIYUR 1	24/12/2013	21:14	24/12/2013	22:03	0:49	Bus Fault at Guttur end	GI - 2
24	400 kV KAIGA - GUTTUR 2	24/12/2013	21:14	24/12/2013	22:26	1:12	Bus Fault at Guttur end	GI - 2
25	400 kV GUTTUR - NARENDRA 2	24/12/2013	21:14	24/12/2013	23:00	1:46	Bus Fault at Guttur end	GI - 2
26	400 kV GUTTUR - NARENDRA 1	24/12/2013	21:14	24/12/2013	22:14	1:00	Bus Fault at Guttur end	GI - 2
27	400 kV MUNIRABAD - GUTTUR	24/12/2013	21:14	24/12/2013	22:54	1:40	Bus Fault at Guttur end	GI - 2

क्र.सं Sl. No	तत्व का नाम Name of Element	ट्रिपिंग का समय Tripping Time		पुनरुद्धार समय Revival Time		बहाली की अवधि Time Taken for Restoration	ट्रिपिंग का कारण Reason for Tripping	श्रेणी Category
		Date	Time	Date	Time			
28	400 kV KAIGA - GUTTUR 1	24/12/2013	21:14				Bus Fault at Guttur end	GI - 2
29	400/220 kV ICT-2 AT GUTTUR	24/12/2013	21:14	24/12/2013	22:49	1:35	Bus Fault at Guttur end	GI - 2
30	400 kV JSW TORANAGALLU - GUTTUR	24/12/2013	21:14	24/12/2013	22:10	0:56	Bus Fault at Guttur end	GI - 2
31	400/220 kV ICT-2 AT VIJAYAWADA	21/01/2014	10:52	21/01/2014	12:05	1:13	Tripped on Bus Bar Protection Scheme Testing by AP	GI - 2
32	400 kV SVCTRM - NCTPS ST2 -1	26/02/2014	16:25				Bus Fault at NCTPP Bus 3	GI - 2
33	400 kV ALAMATHI - NCTPS ST2 -1	26/02/2014	16:25				Bus Fault at NCTPP Bus 4	GI - 2

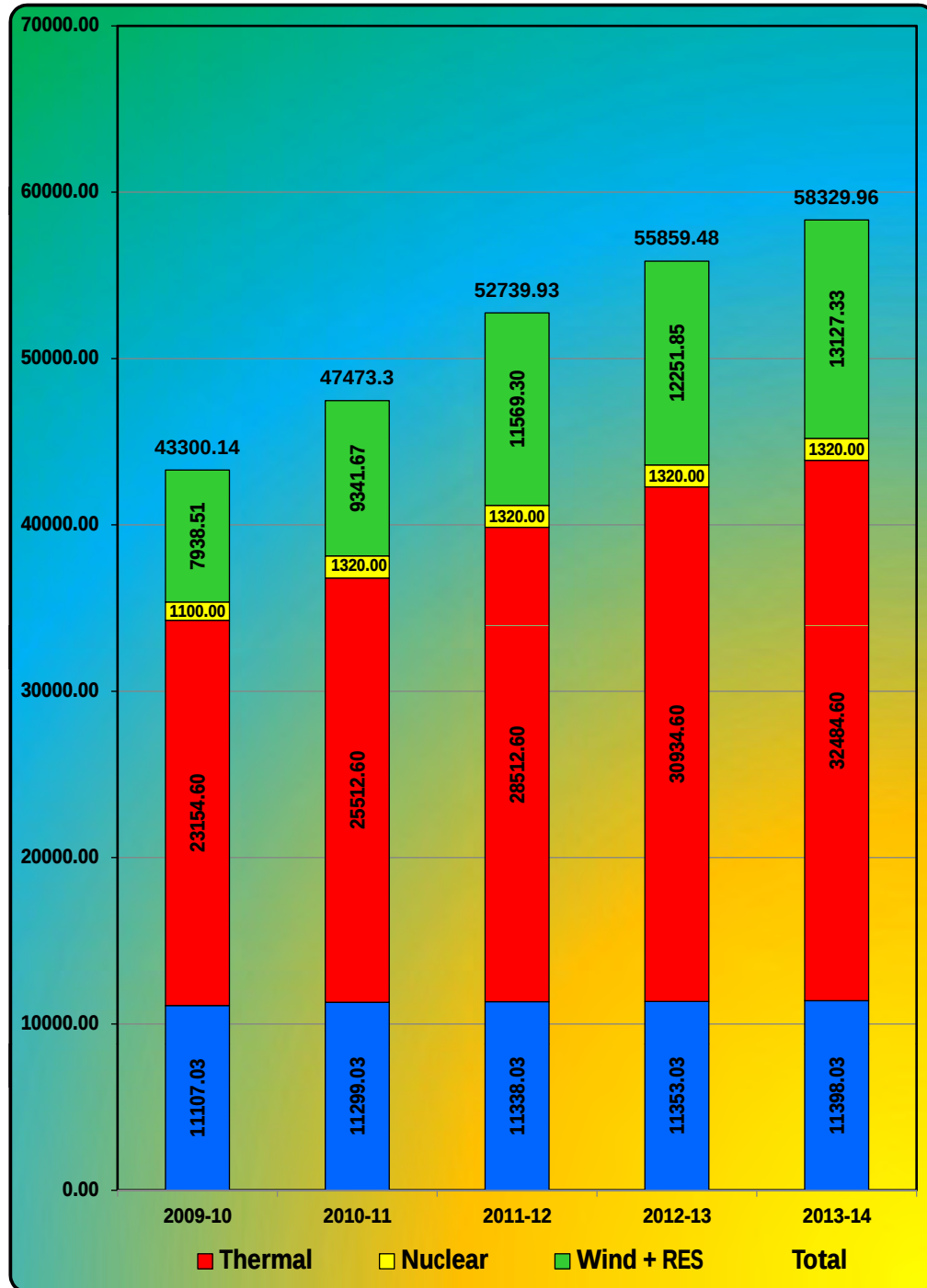
प्रदर्श

Exhibits

POWER MAP OF SOUTHERN REGION

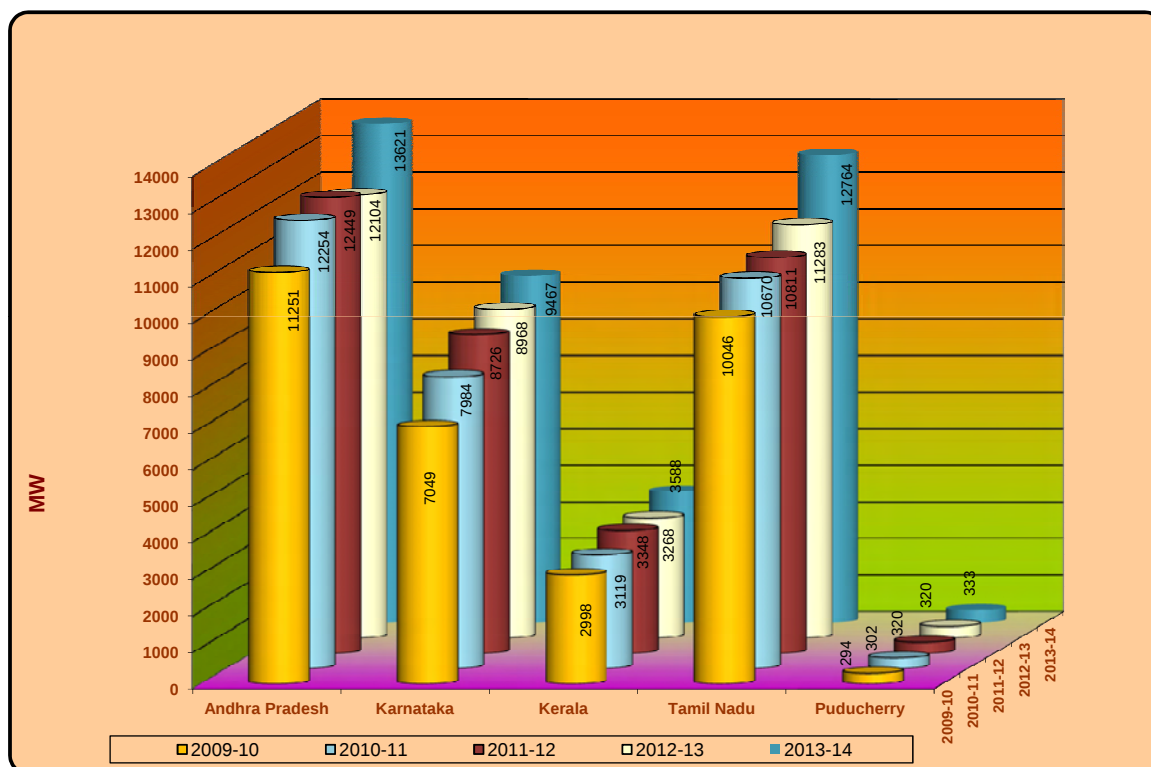


वर्ष 2009-10 से 2013-14 तक दक्षिण क्षेत्र में स्थापित क्षमता में वृद्धि
Growth in Installed Capacity (MW) in Southern Region
from 2009-10 to 2013-14
(As per CEA)



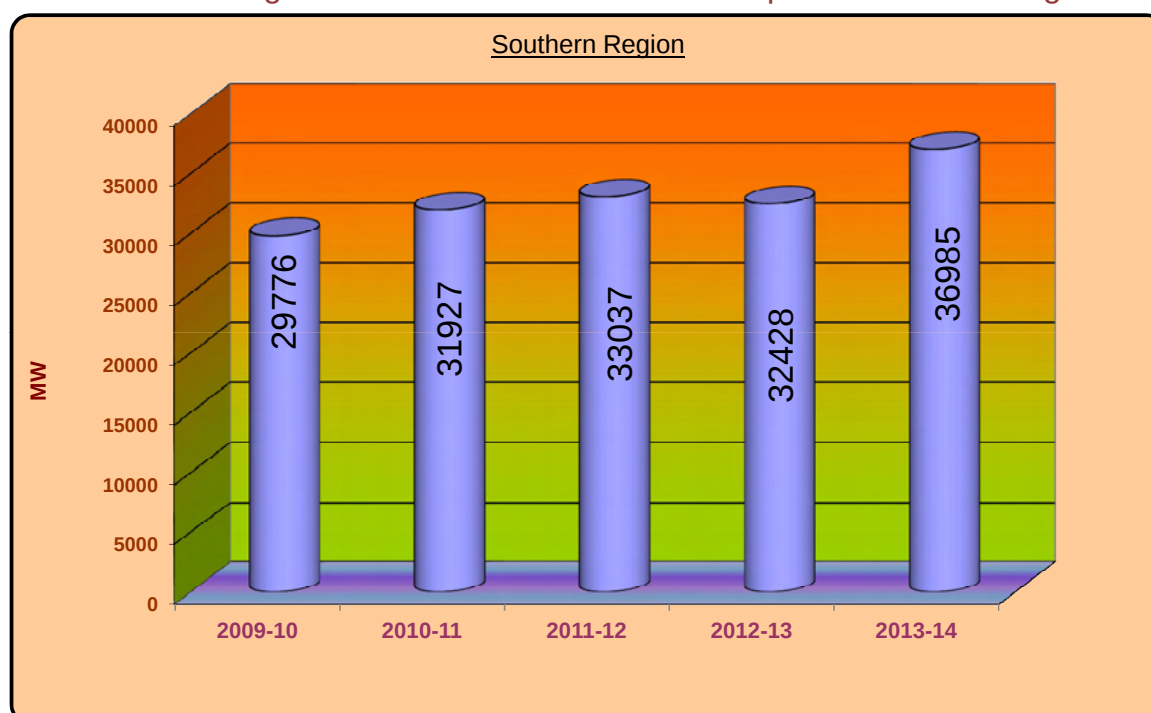
राज्यों की रजिस्टर्ड कुल पीक लोड की वृद्धि

Growth of Registered Gross Demand met in respect of States

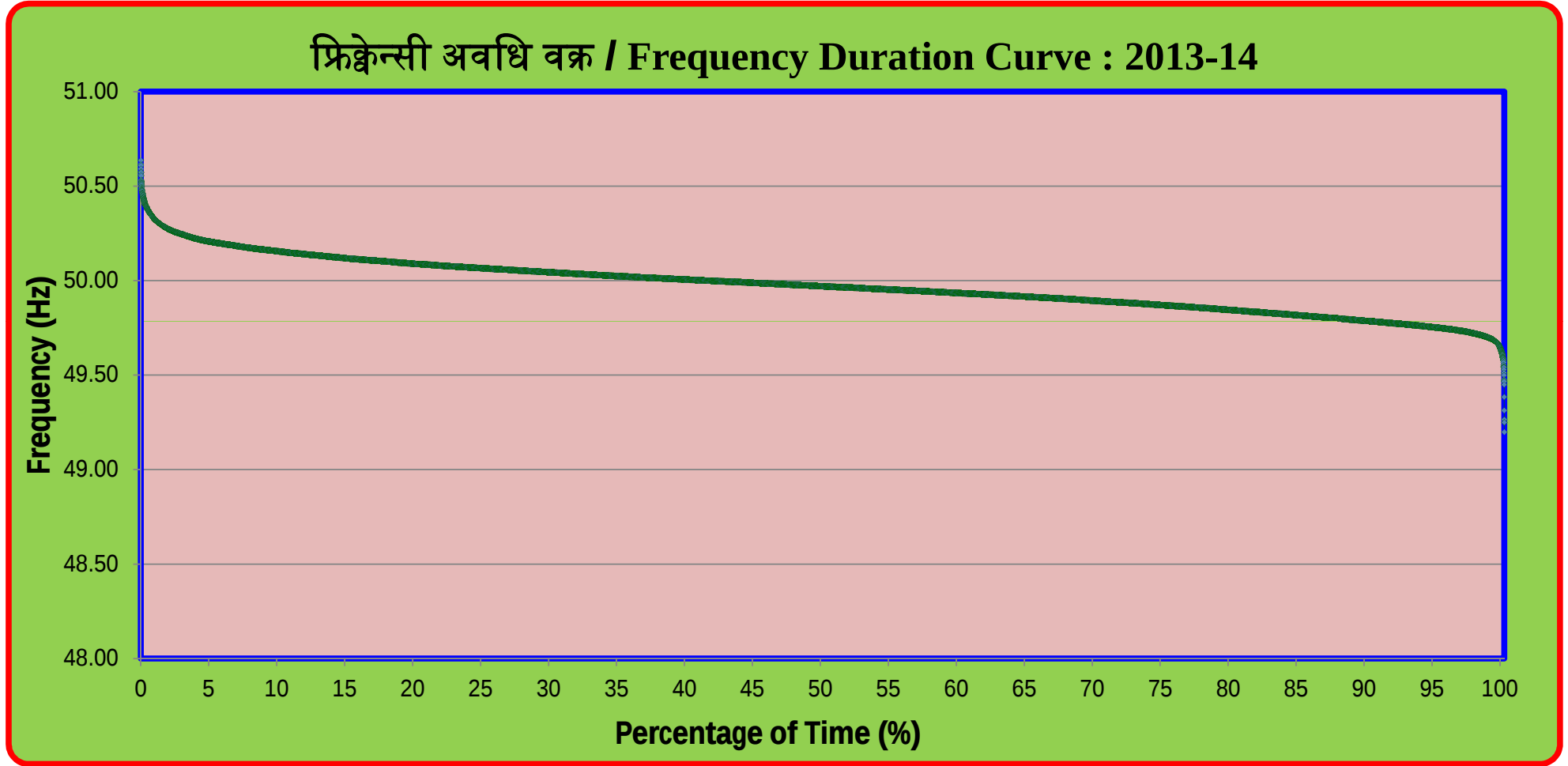


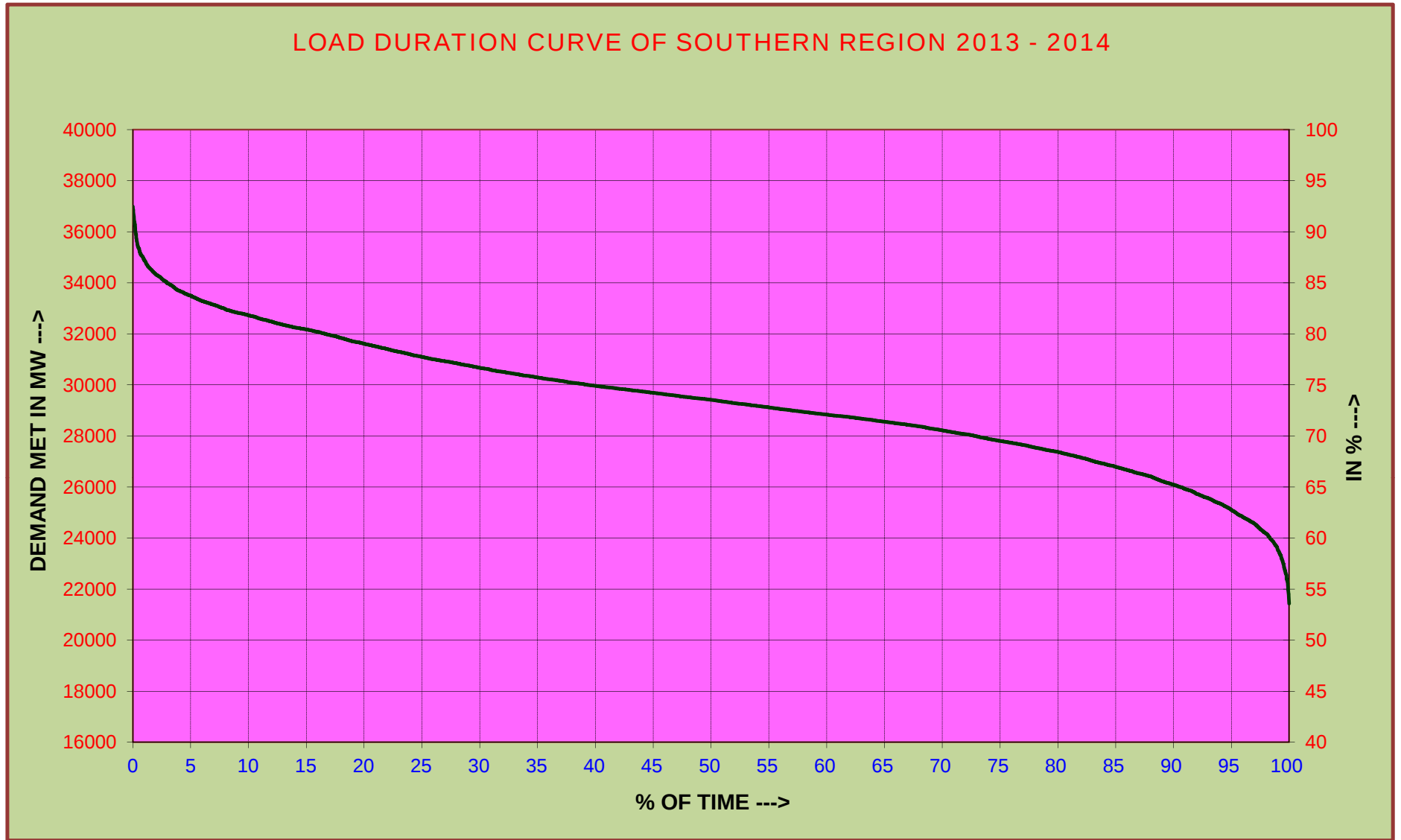
दक्षिण क्षेत्र की रजिस्टर्ड कुल पीक लोड की वृद्धि

Growth of Registered Gross Demand met in respect of Sothern Region



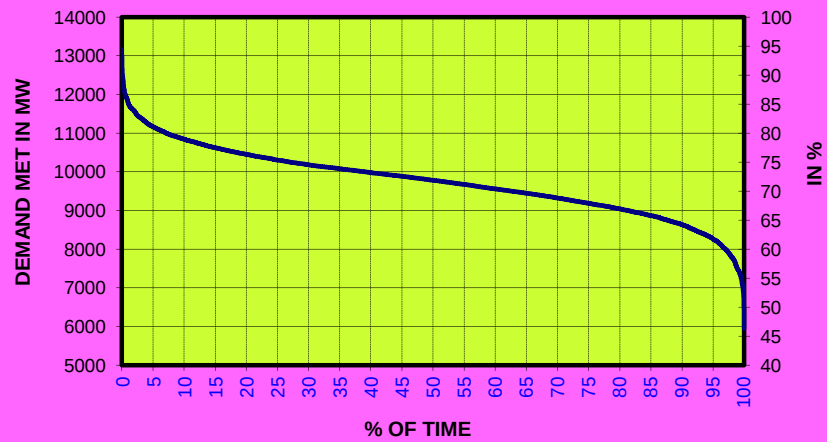
फ्रिक्वेन्सी अवधि वक्र / Frequency Duration Curve



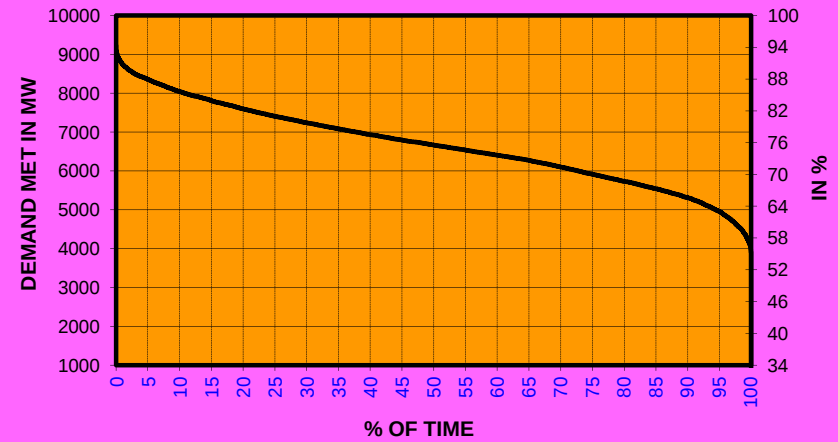


लोड अवधि वक्र / LOAD DURATION CURVE 2013 - 2014

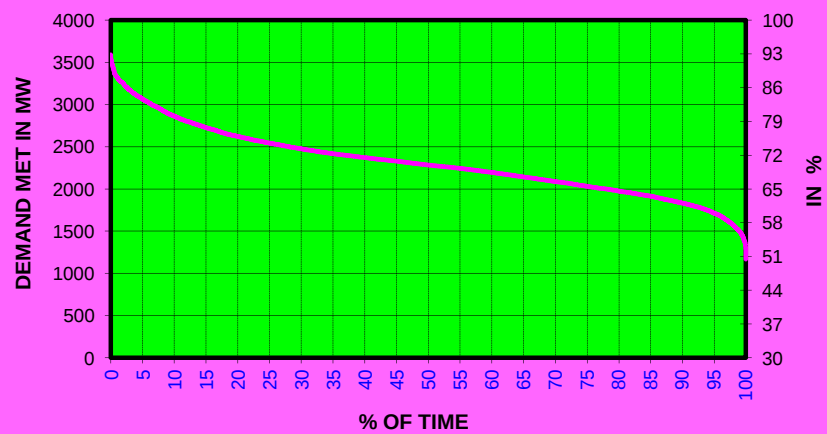
ANDHRA PRADESH



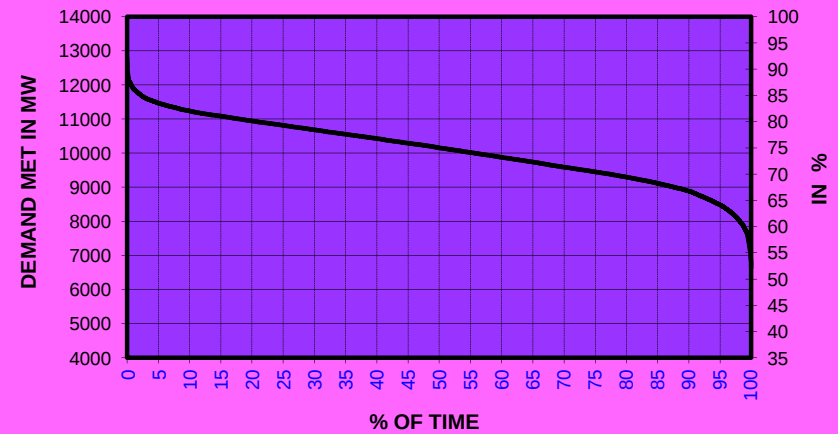
KARNATAKA



KERALA

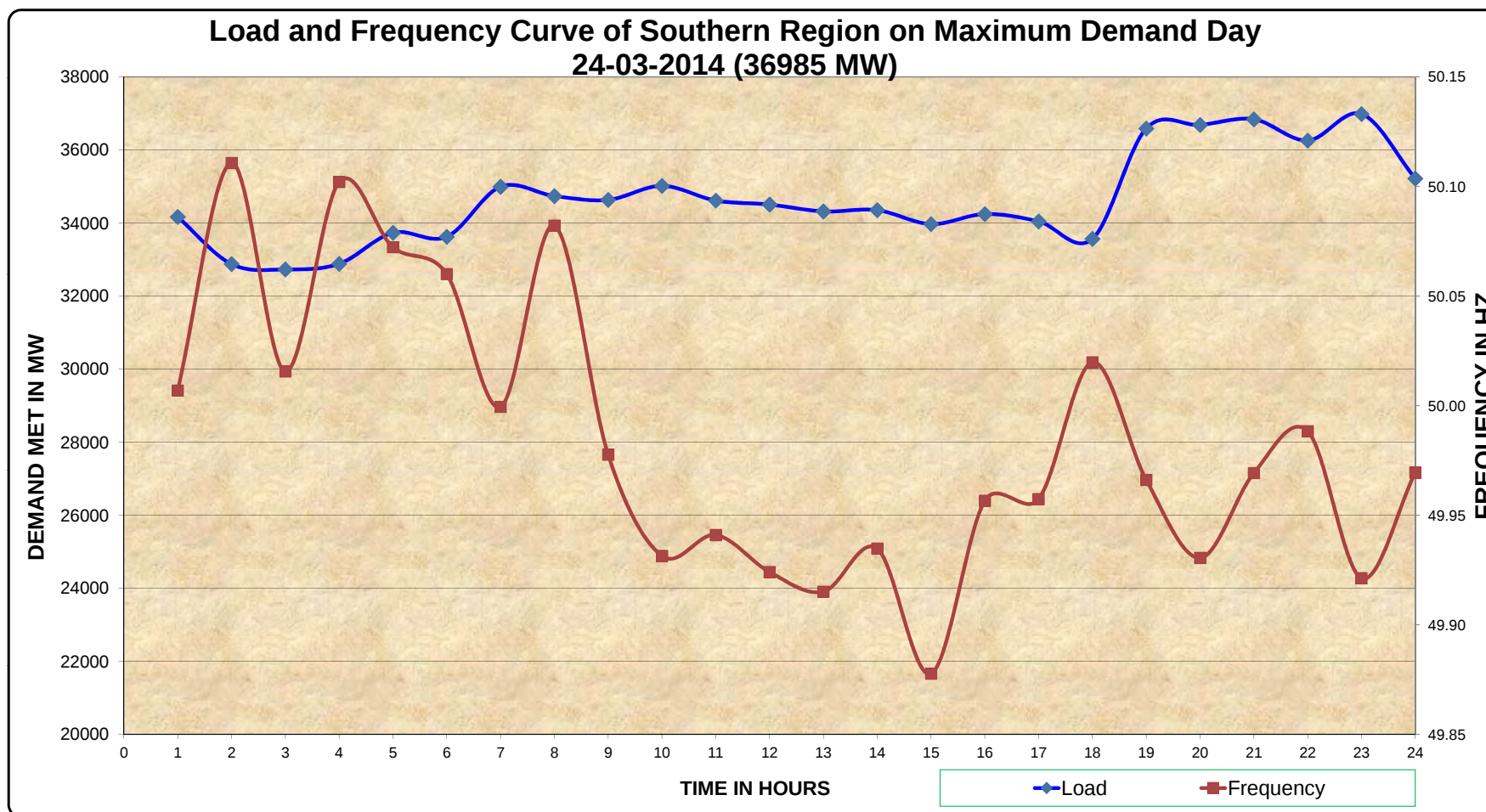


TAMIL NADU



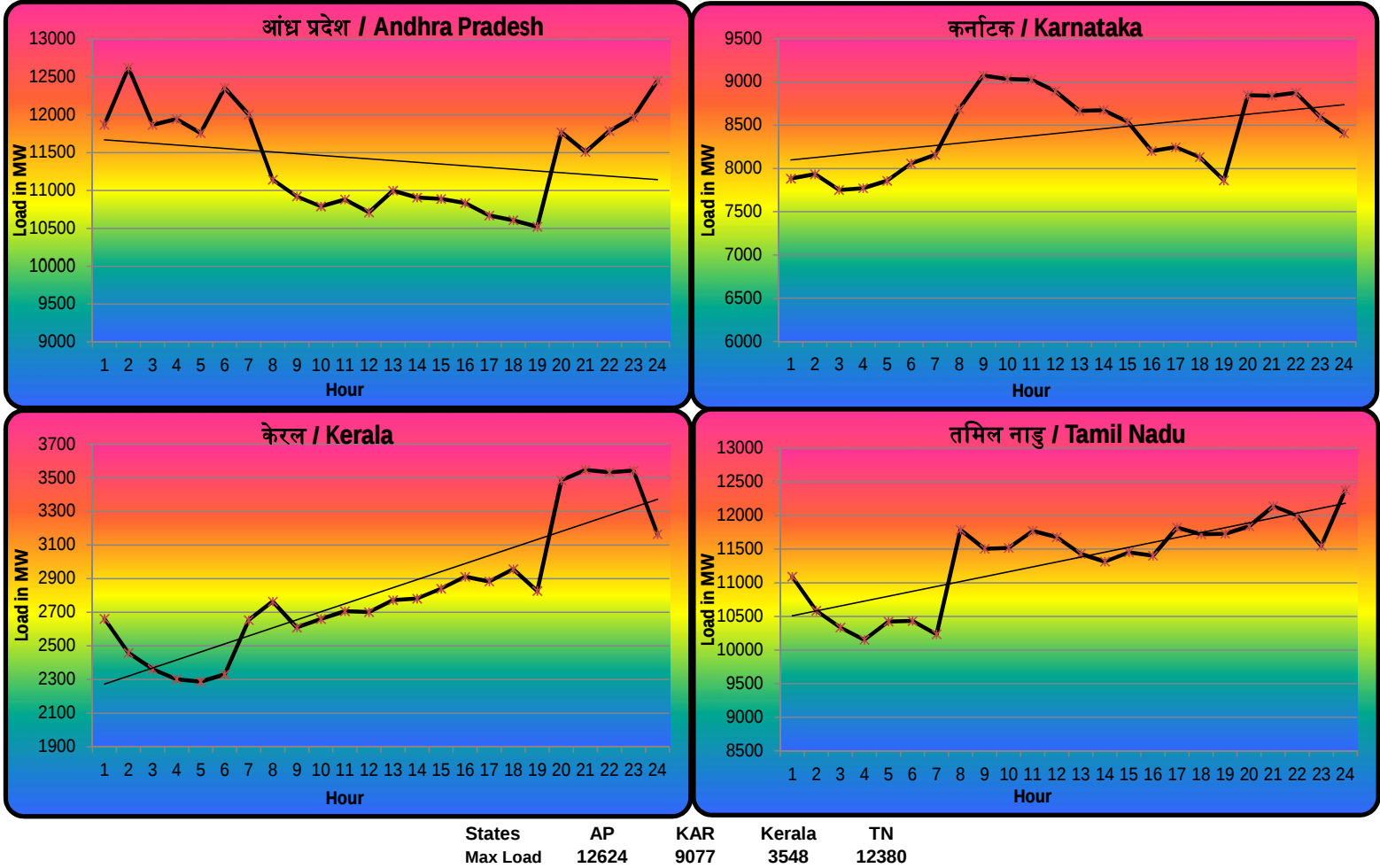
अधिकतम मांग के दिन पर दक्षिण क्षेत्र का लोड एवं फ्रीक्वेन्सी रेखा वक्र

Load Curve and Frequency Curve of Southern Region on Maximum Demand Day



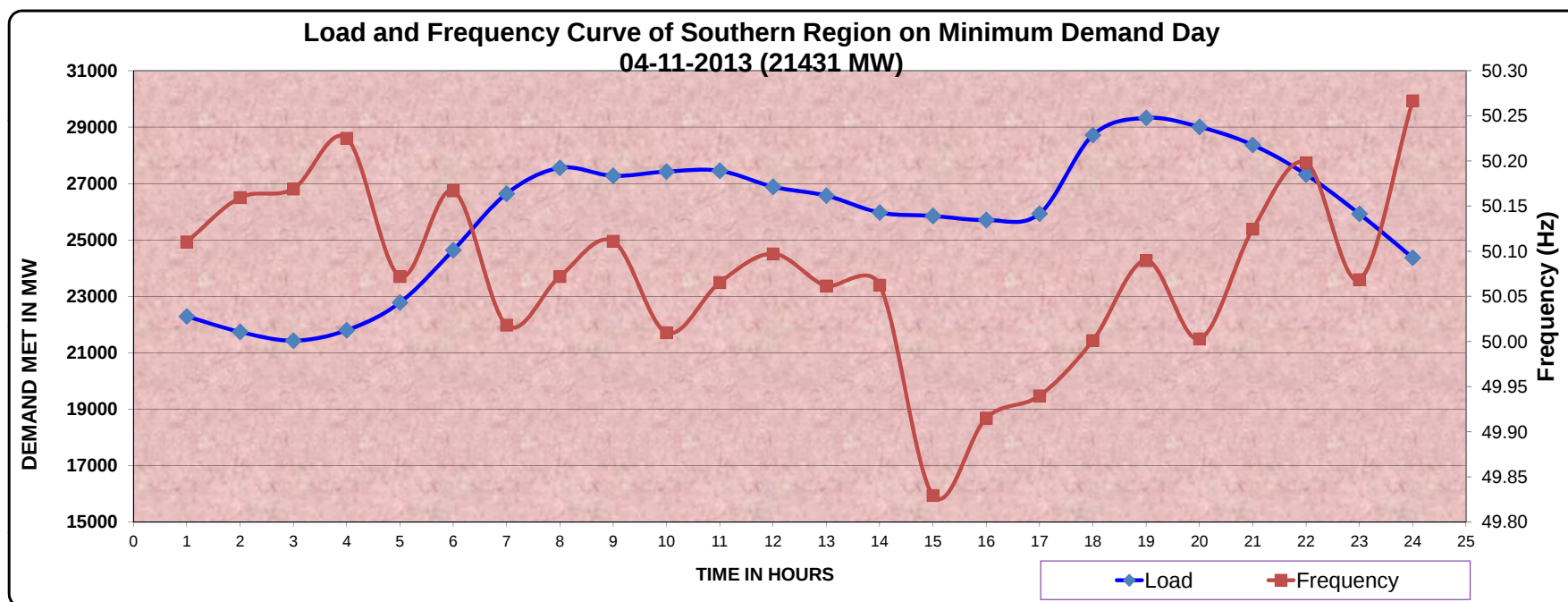
Maximum Frequency 50.11 Hz at 2:00 Hours
Minimum Frequency 49.88 Hz at 15:00 Hours

अधिकतम मांग के दिन पर दक्षिण क्षेत्र के राज्यों का घंटेवार लोड रेखा वक्र (24.03.2014)
Hourly Load Curve of States in Southern Region on Maximum Demand Day (24.03.2014)



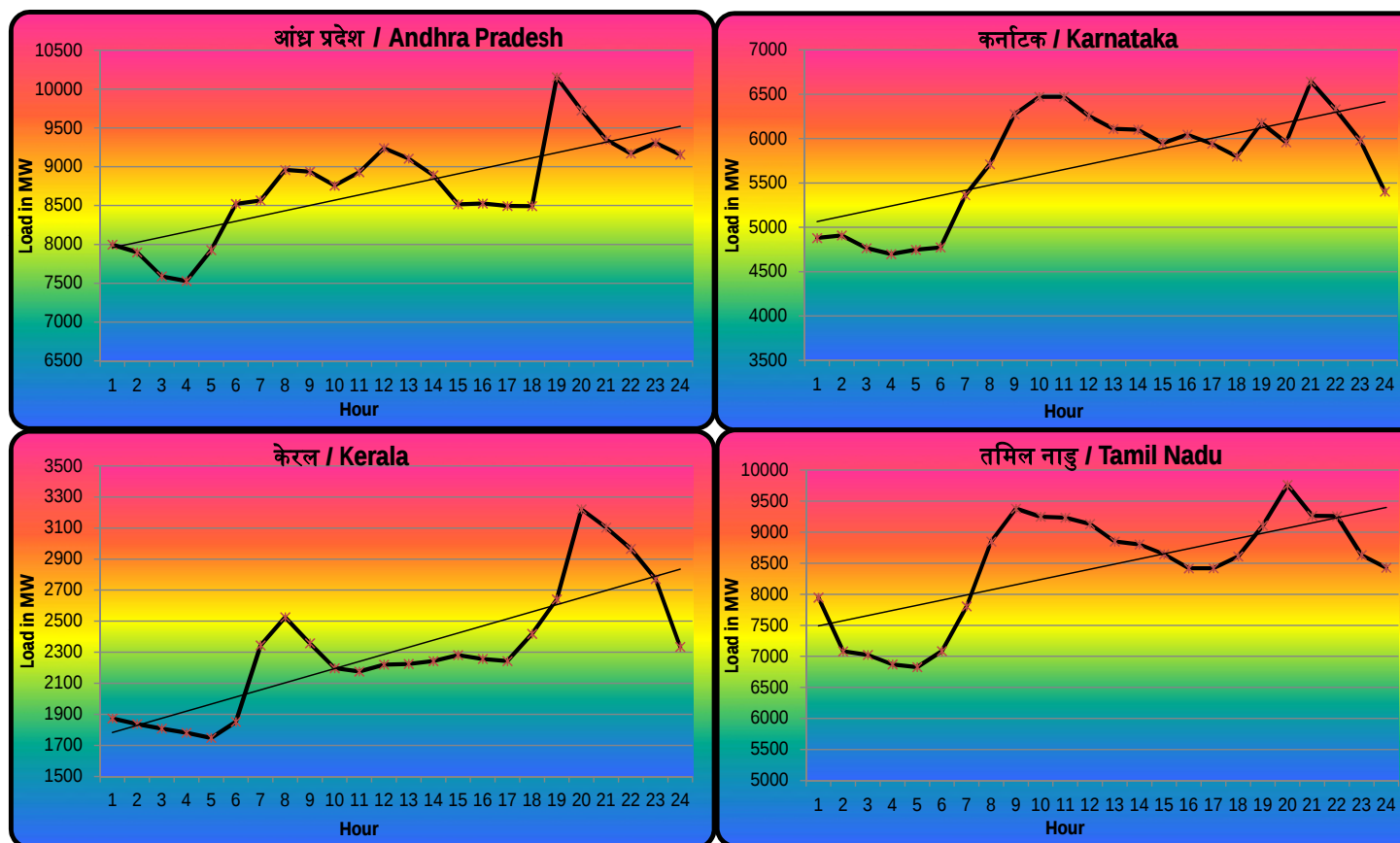
न्यूनतम मांग के दिन पर दक्षिण क्षेत्र का लोड एवं फ्रीक्वेन्सी रेखा वक्र

Load Curve and Frequency Curve of Southern Region on Minimum Demand Day



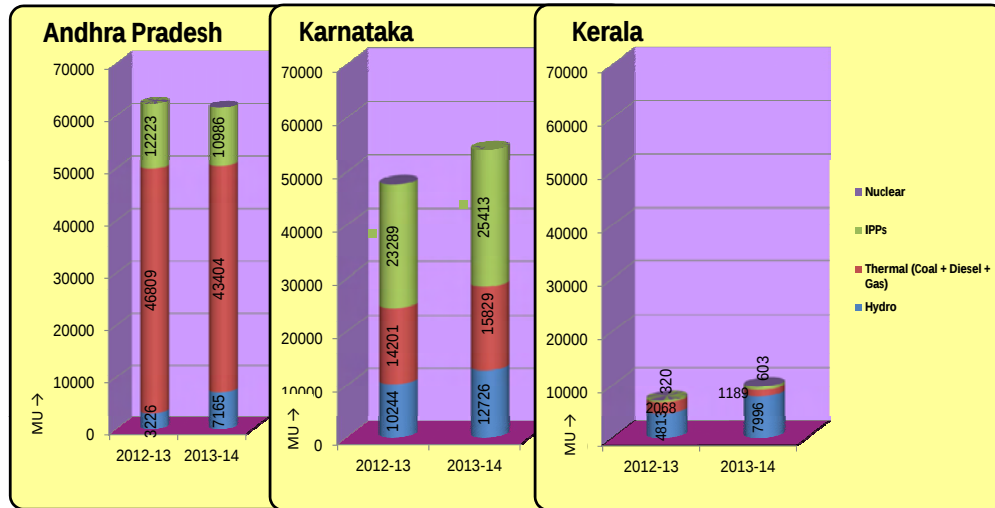
Maximum Frequency	50.27 Hz	at 024:00 Hours
Minimum Frequency	49.83 Hz	at 15:00 Hours

न्यूनतम मांग के दिन पर दक्षिण क्षेत्र के राज्यों का घंटेवार लोड रेखा वक्र (04.11.2013)
Hourly Load Curve of States in Southern Region on Minimum Demand Day (04.11.2013)

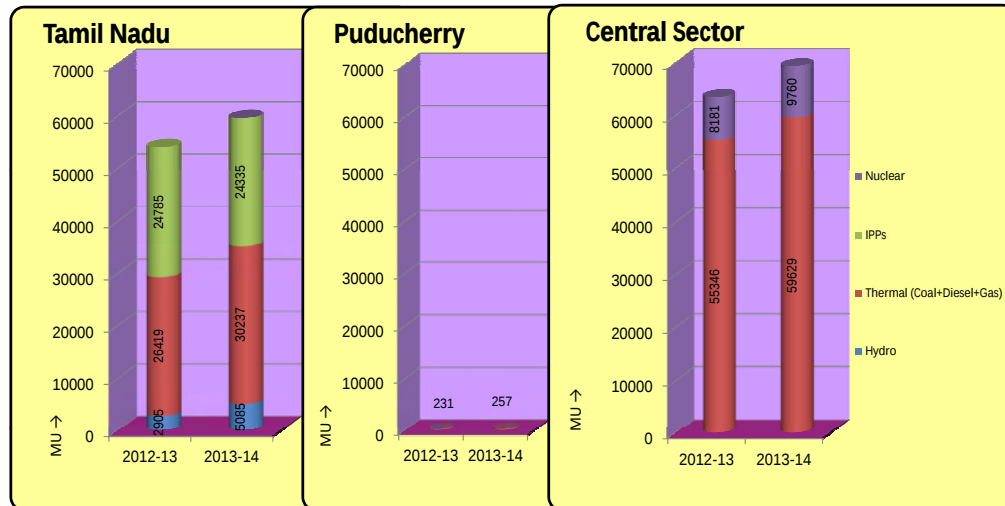


States	AP	KAR	Kerala	TN
Min Load	7528	4698	1749	6827

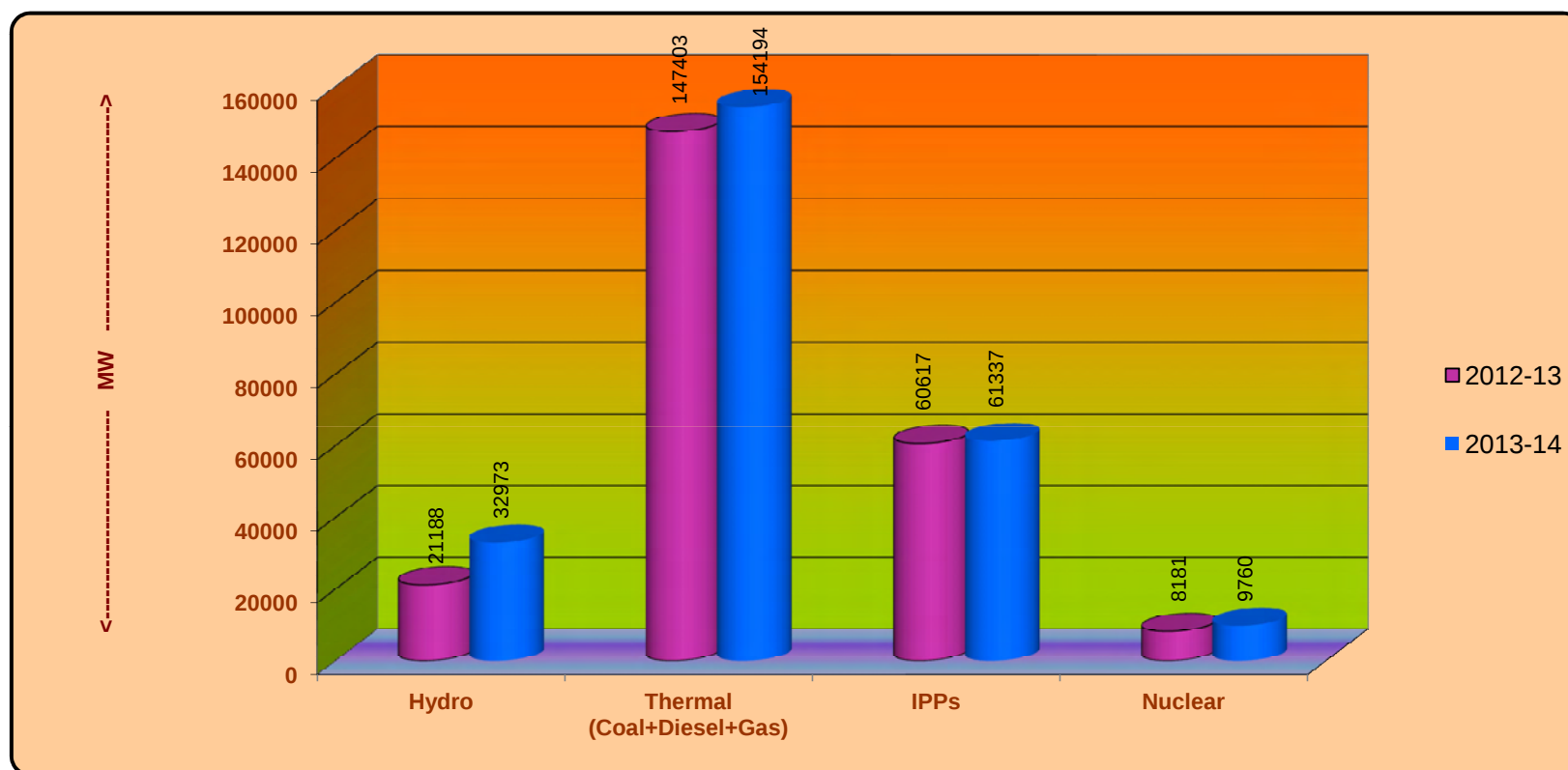
वर्ष 2012-13 एवं 2013-14 में दक्षिण क्षेत्र में विद्युत उत्पादन
Generation in Southern Region during 2012-13 & 2013-14



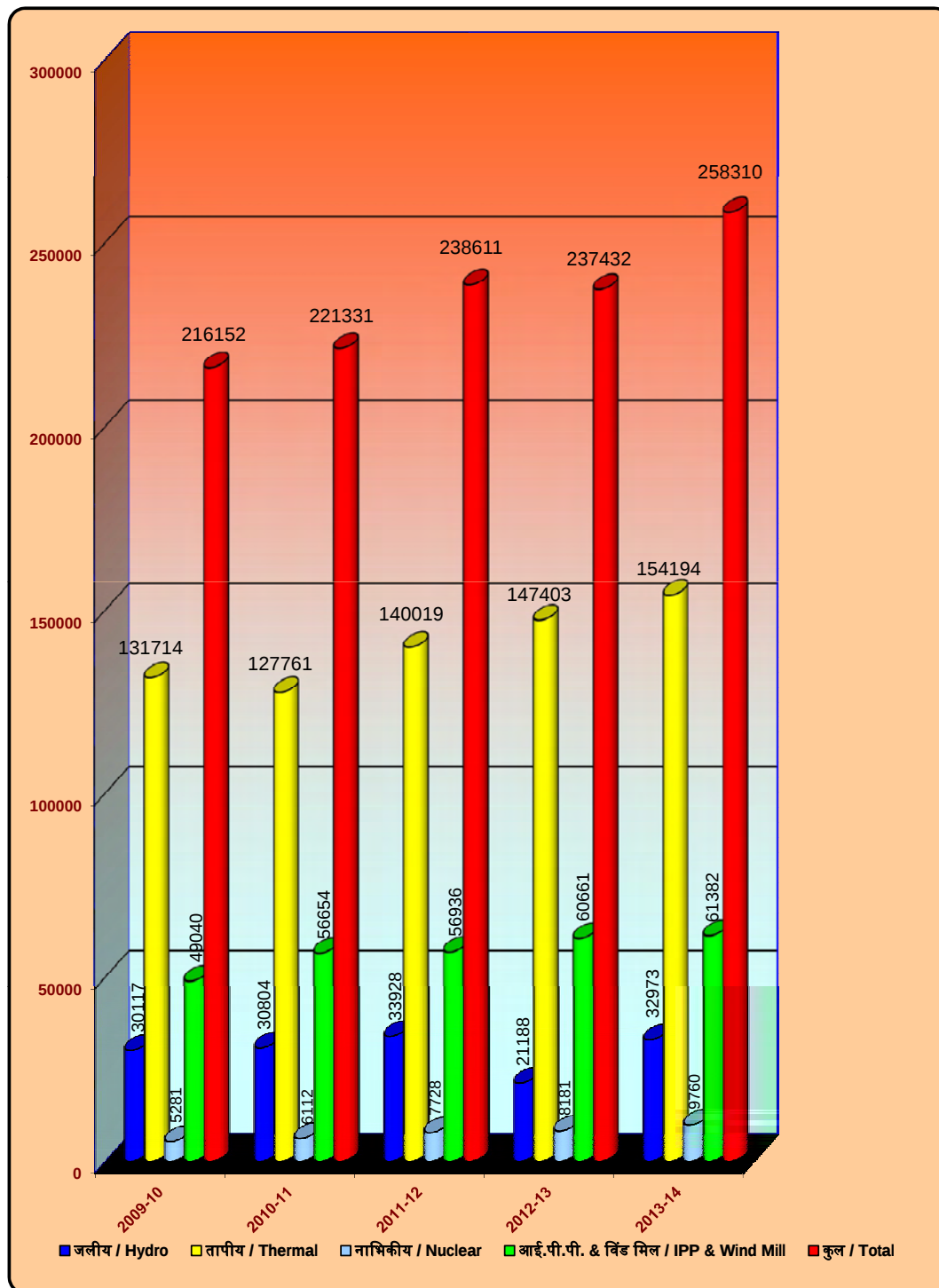
वर्ष 2012-13 एवं 2013-14 में दक्षिण क्षेत्र में विद्युत उत्पादन
Generation in Southern Region during 2012-13 & 2013-14



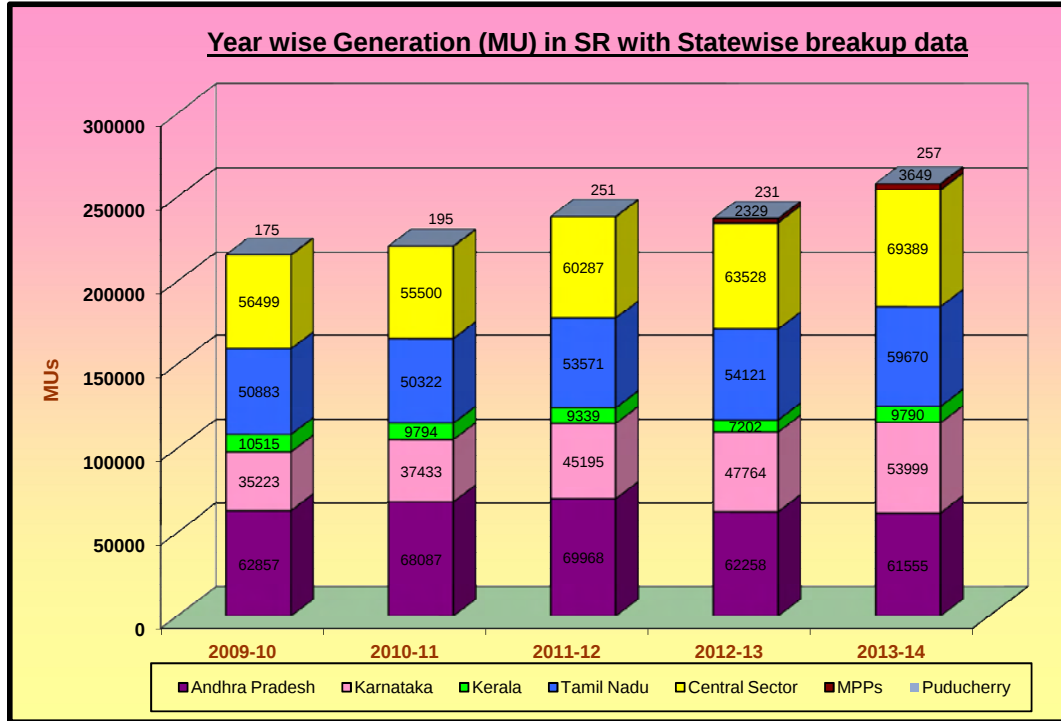
वर्ष 2012-13 एवं 2013-14 में दक्षिण क्षेत्र में विद्युत उत्पादन
Generation in Southern Region during 2012-13 & 2013-14



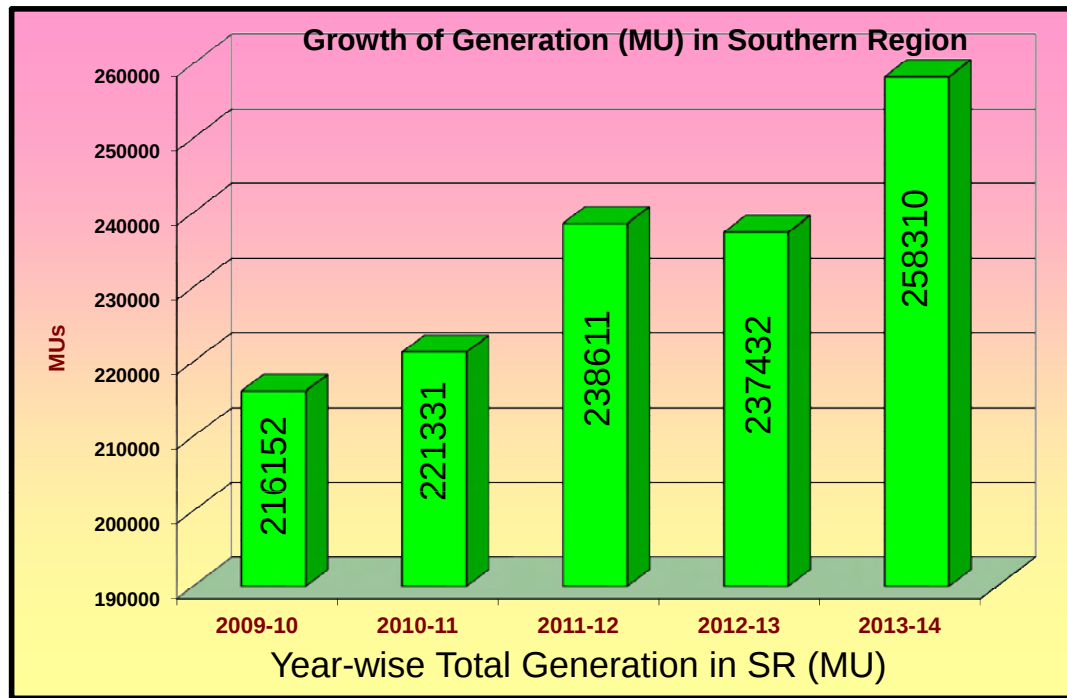
वर्ष 2009-10 से 2013-14 तक दक्षिण क्षेत्र में विद्युत उत्पादन में वृद्धि
Growth of Generation in Southern Region from 2009-10 to 2013-14



वर्ष 2009-10 से 2013-14 तक दक्षिण क्षेत्र में राज्य/सेक्टर वार विद्युत उत्पादन में वृद्धि
SEB's / Central Sector : Growth of Gross Generation
 for the period 2009-10 to 2013-14

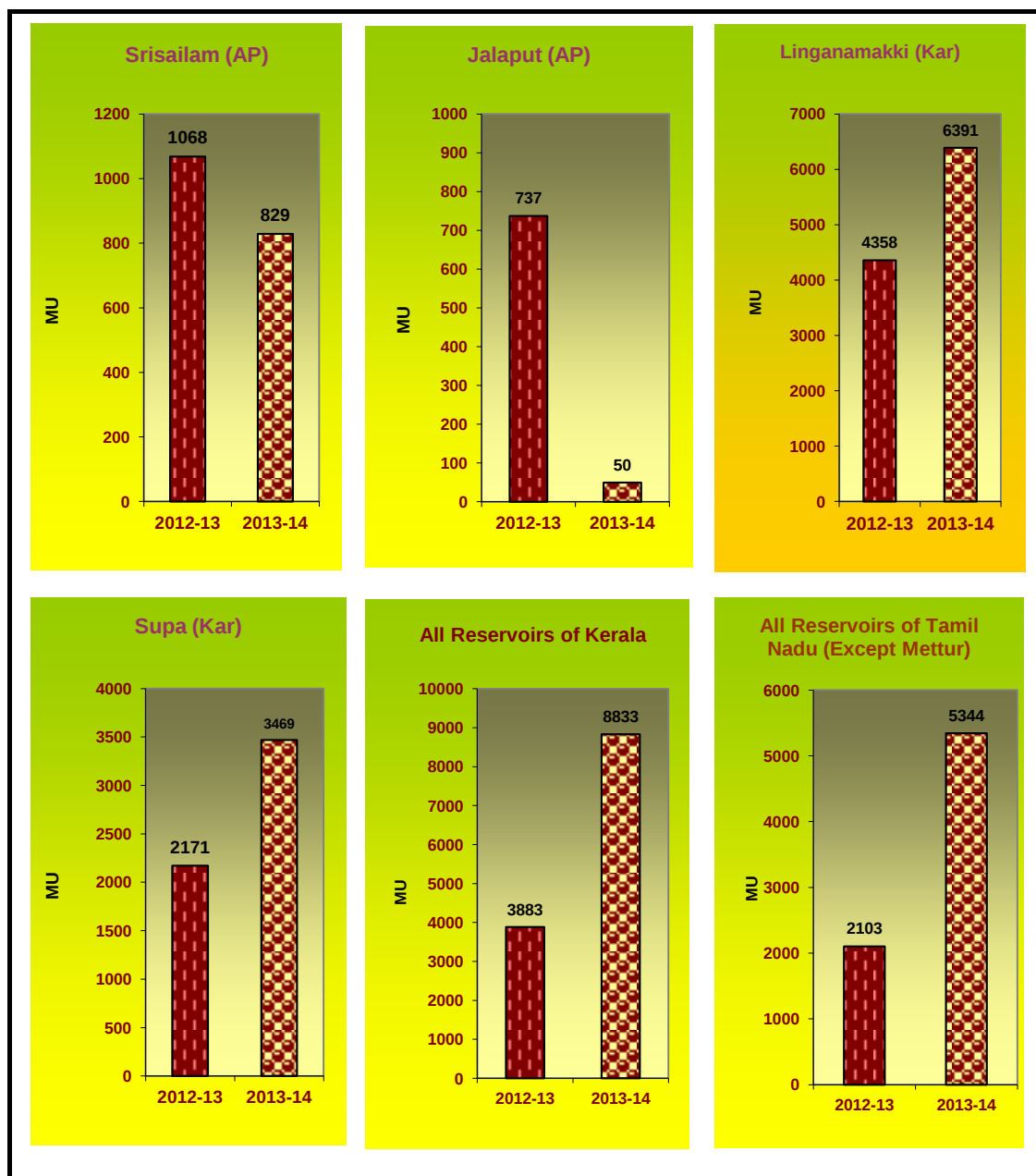


दक्षिण क्षेत्र / Southern Region



वर्ष 2012-13 एवं 2013-14 में दक्षिण क्षेत्र के जलाशयों के लिए पानी का बहाव (मि.यू. में)

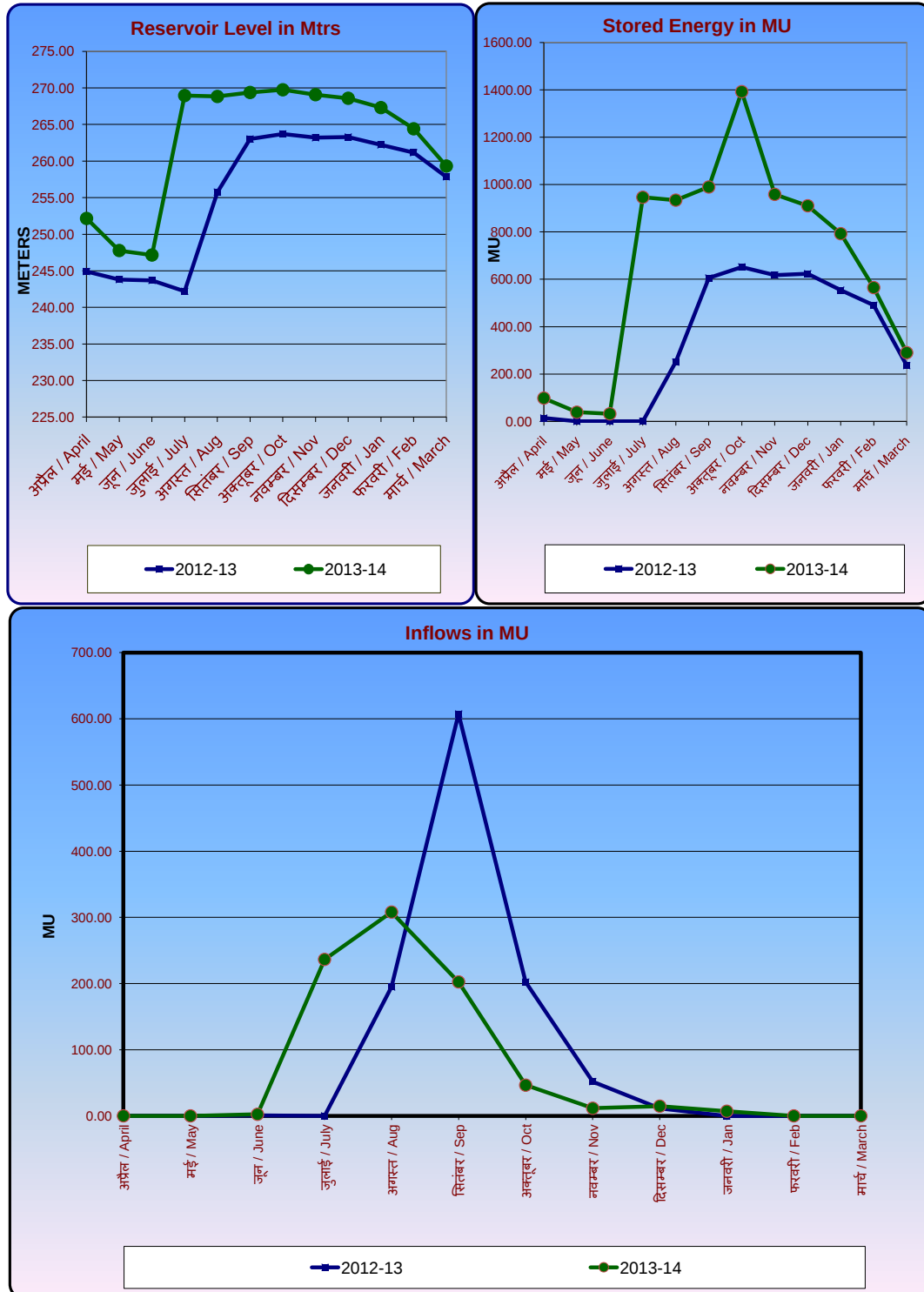
**Total Inflows into Reservoirs in MU in the Southern Region
during 2012-13 & 2013-14**



आंध्र प्रदेश / Andhra Pradesh

श्रीशैलम जलाशय का ब्यौरा / Srisaillam Reservoir Particulars

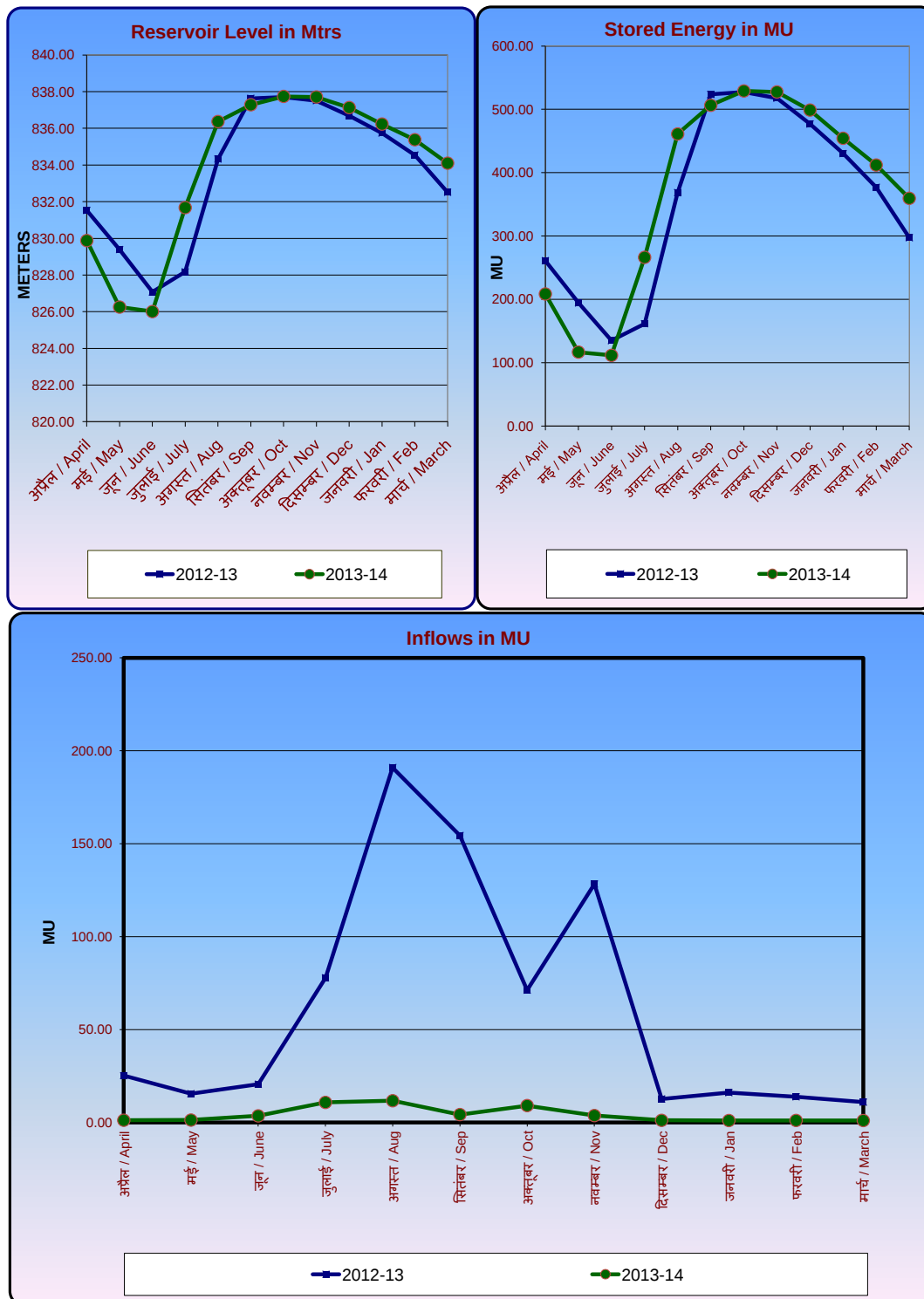
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



आंध्र प्रदेश / Andhra Pradesh

जलपुत जलाशय का ब्यौरा / Jalaput Reservoir Particulars

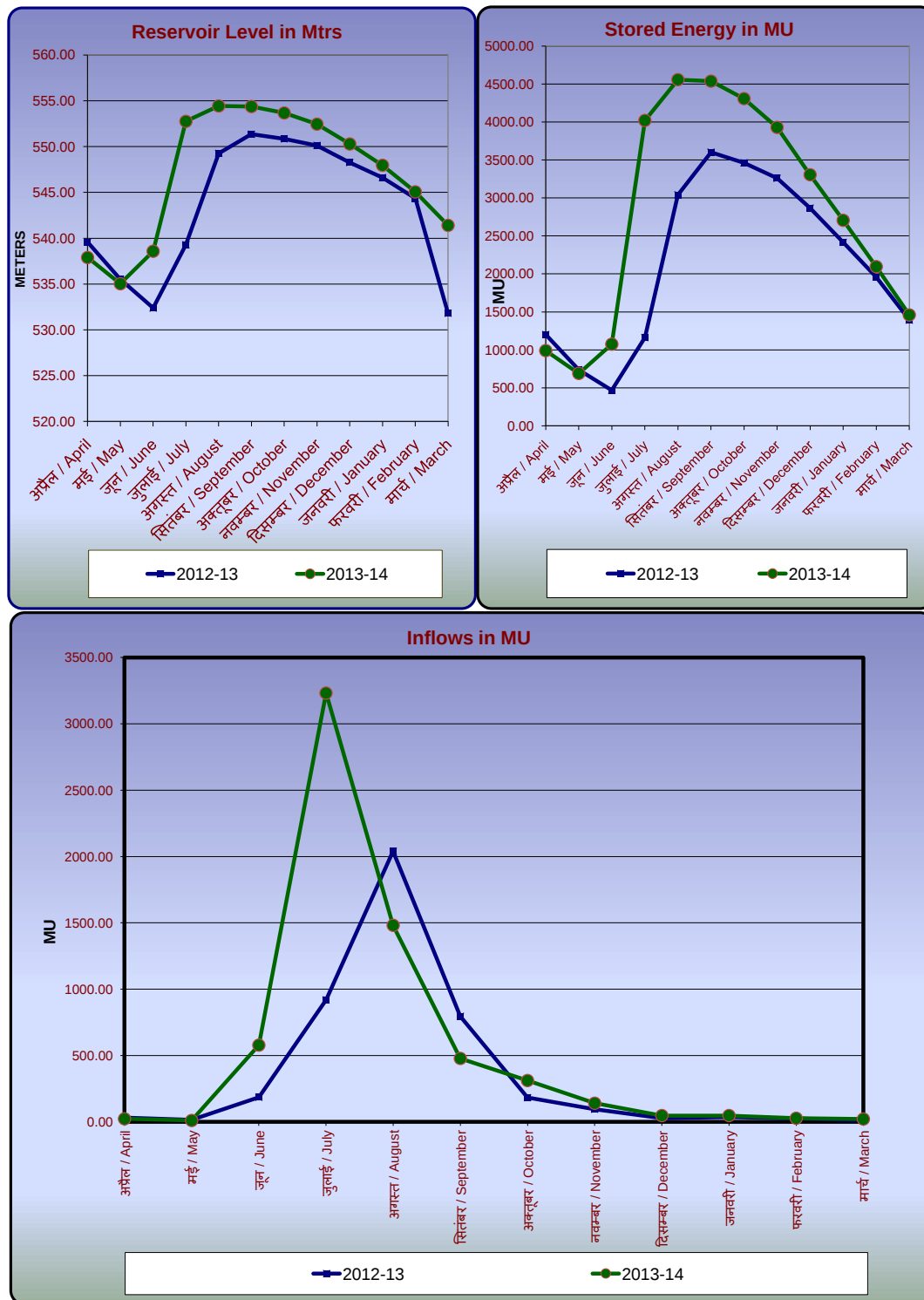
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



कर्नाटक / Karnataka

लिंगनमक्की जलाशय का ब्यौरा / Linganamakki Reservoir Particulars

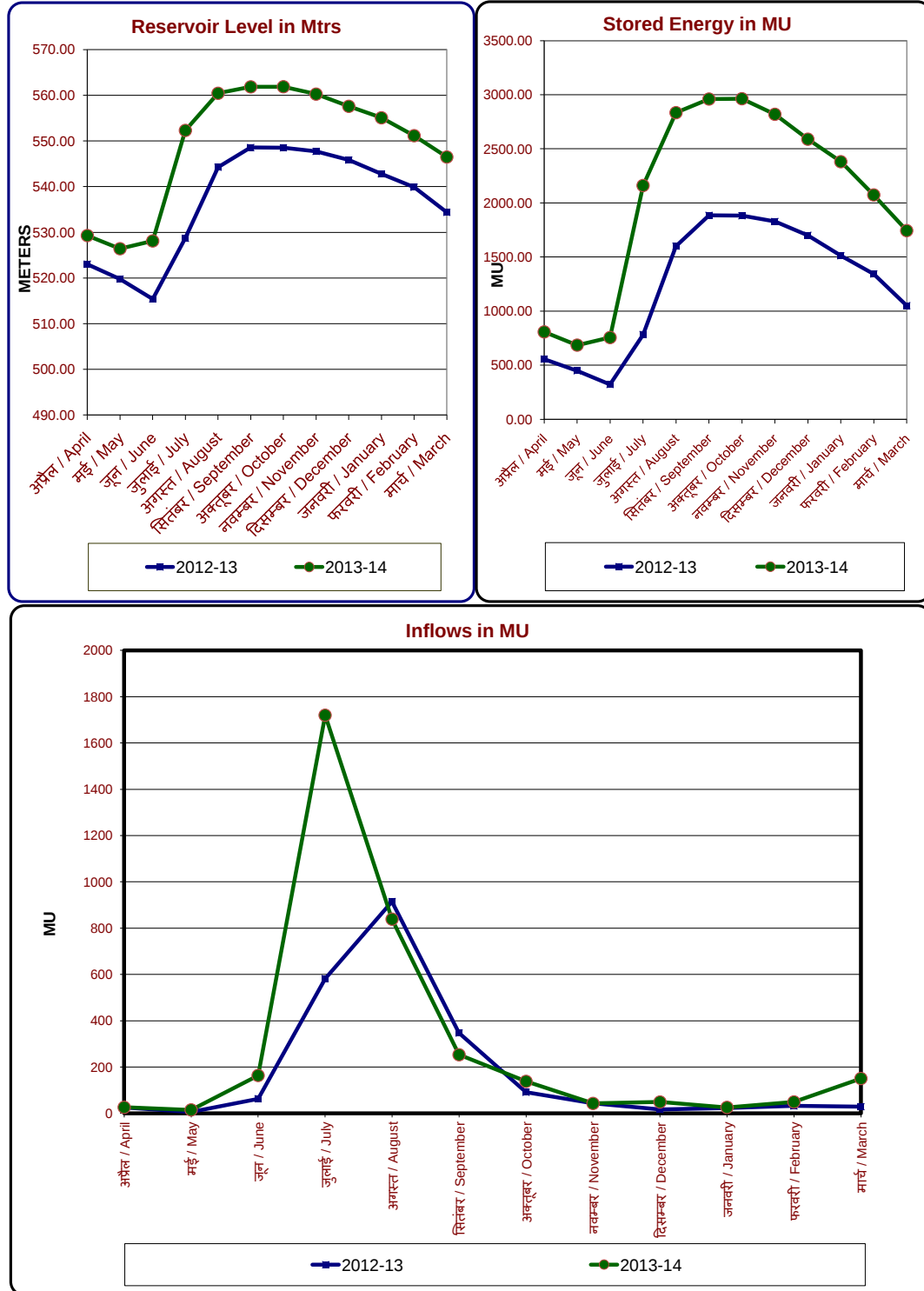
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



कर्नाटक / Karnataka

सूपा जलाशय का ब्यौरा / Supa Reservoir Particulars

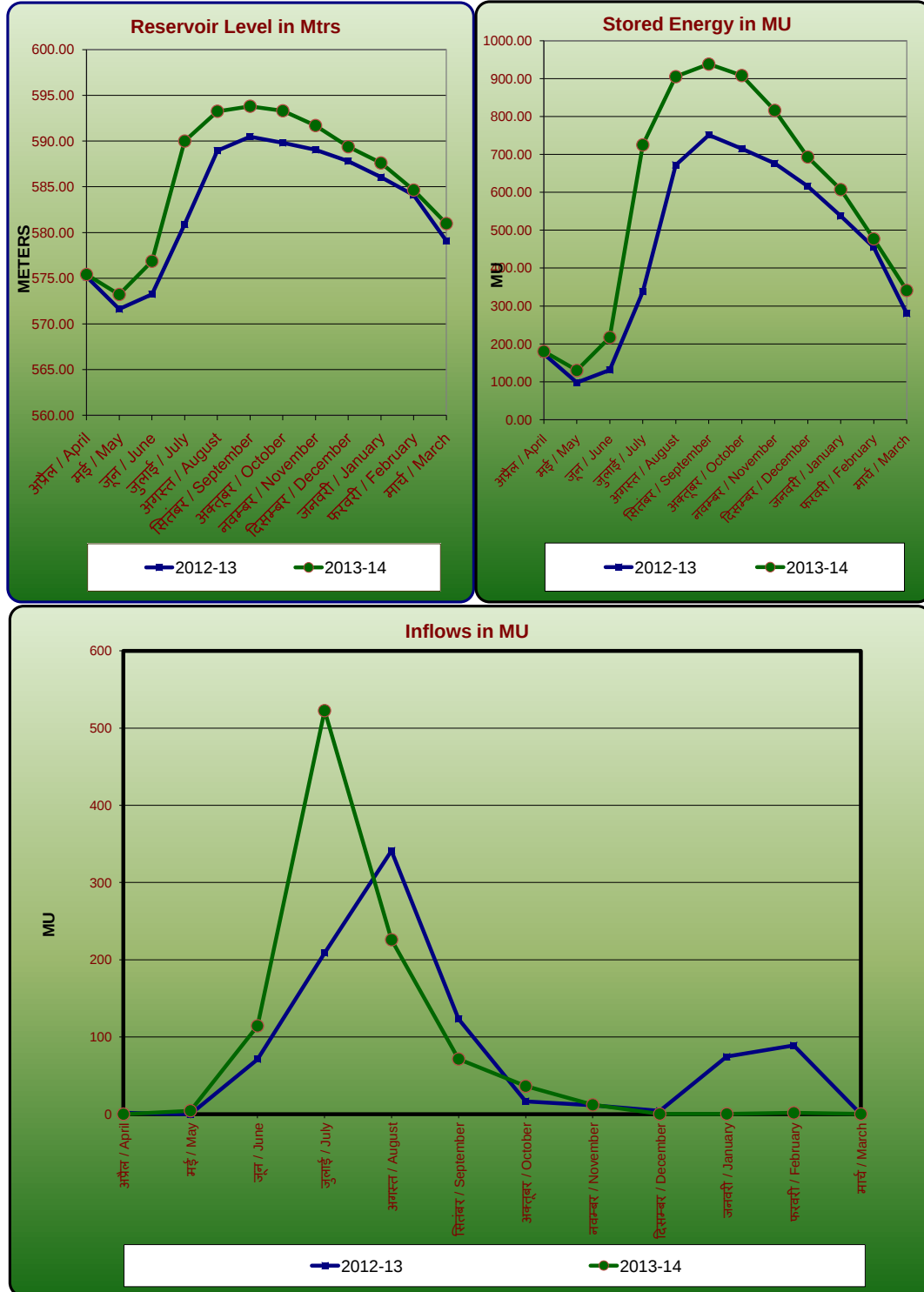
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



कर्नाटक / Karnataka

माणी जलाशय का ब्यौरा / Maani Reservoir Particulars

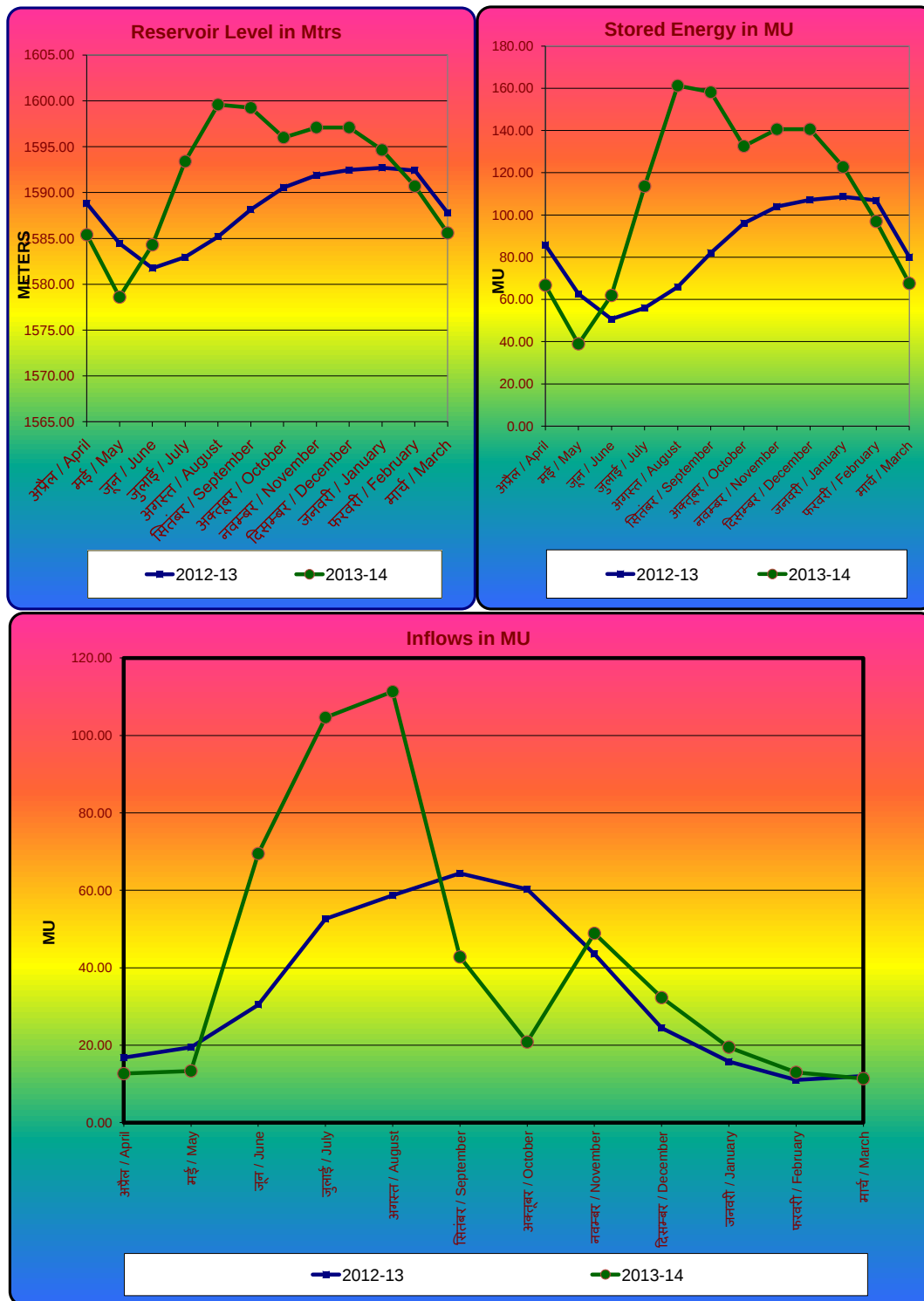
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



केरल / Kerala

माडुपट्टी जलाशय का ब्यौरा / Madupatty Reservoir Particulars

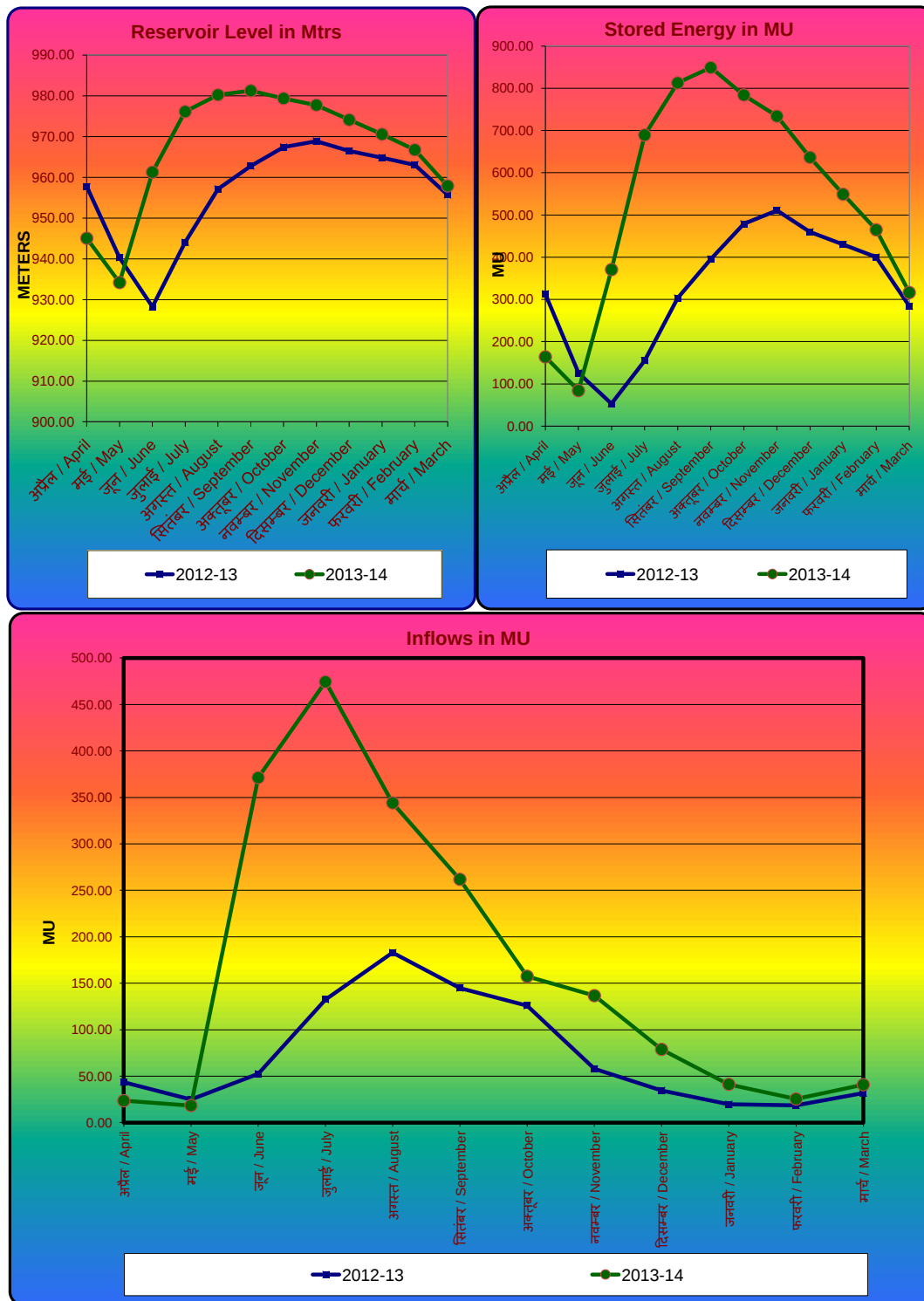
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



केरल / Kerala

कक्की जलाशय का ब्यौरा / Kakki Reservoir Particulars

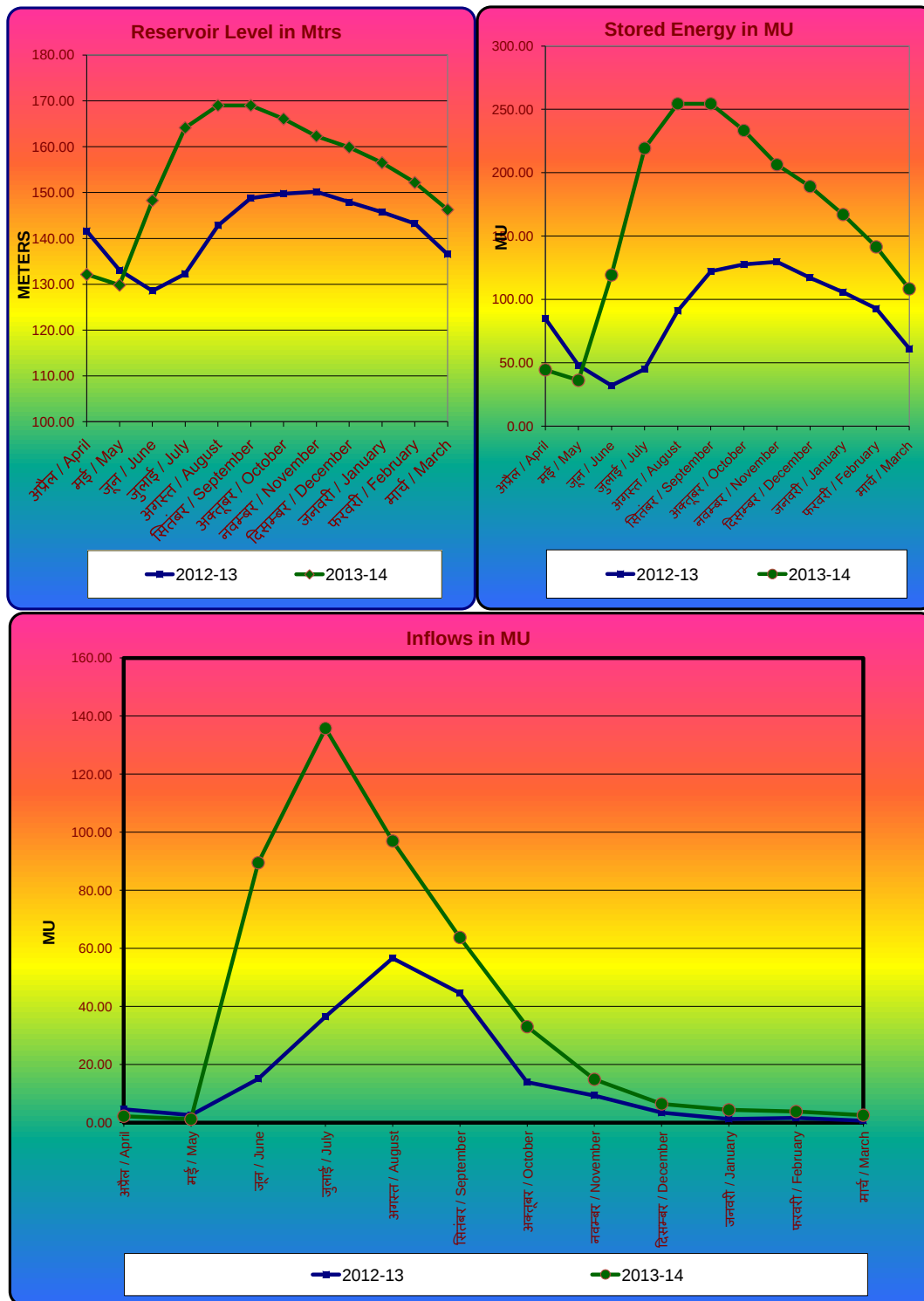
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



केरल / Kerala

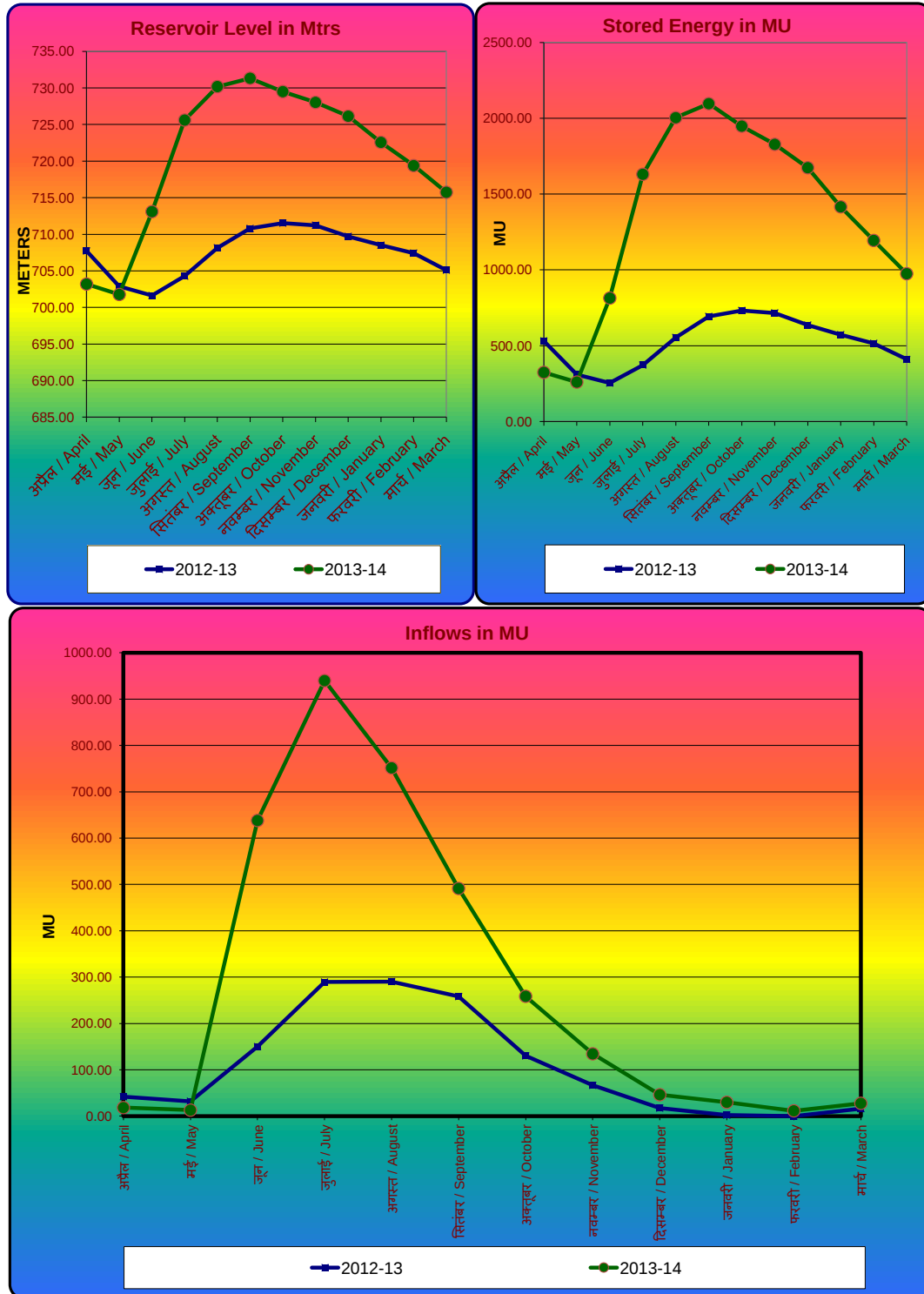
इडमलयार जलाशय का ब्यौरा / Edamalayar Reservoir Particulars

वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



केरल / Kerala

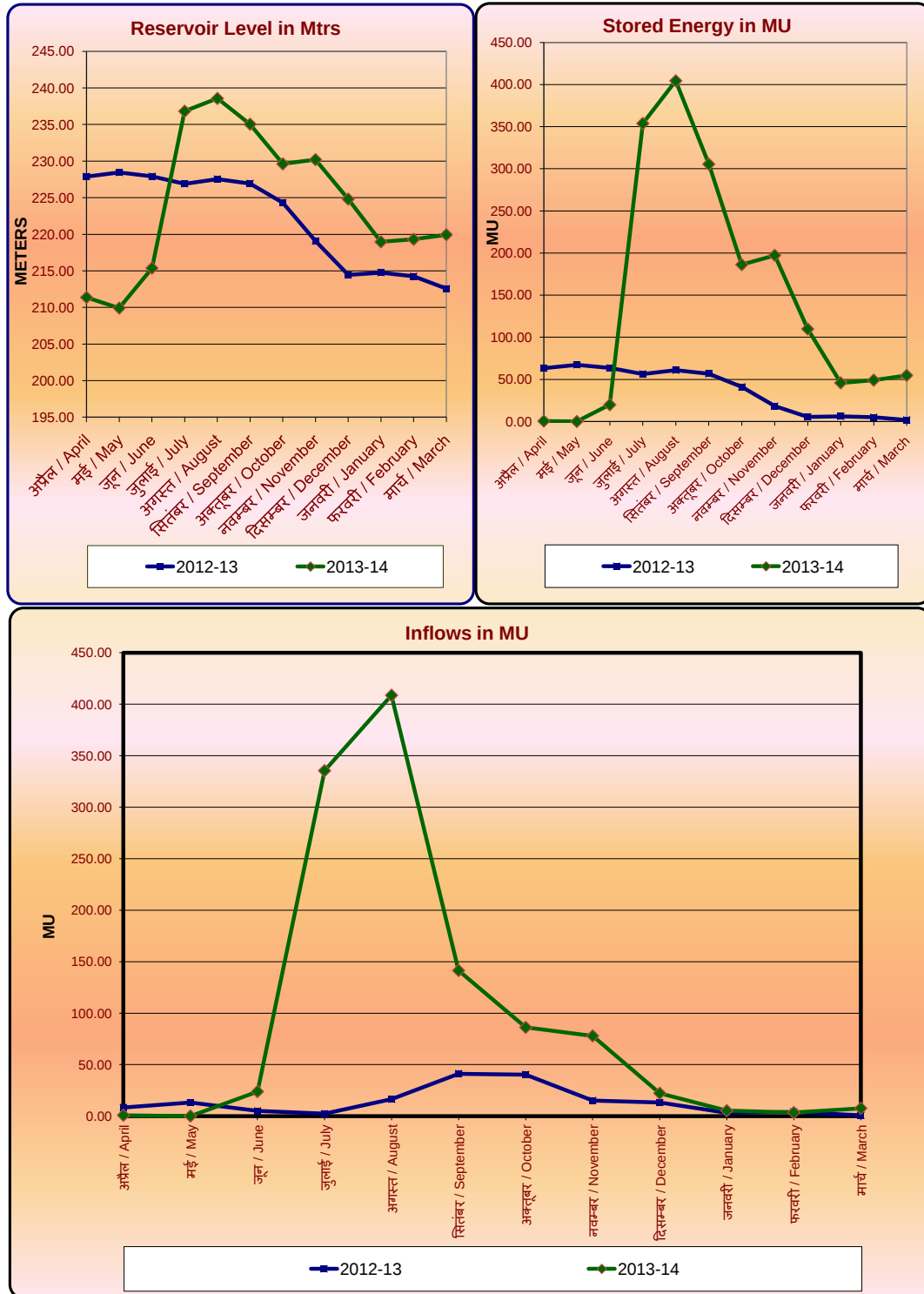
इडुक्की जलाशय का ब्यौरा / Idukki Reservoir Particulars
वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



तमिल नाडु / Tamil Nadu

मेट्टूर जलाशय का ब्यौरा / Mettur Reservoir Particulars

वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14



तमिल नाडु / Tamil Nadu

नीलगिरीस जलाशय का ब्यौरा / Nilgiris Reservoir Particulars

वर्ष 2012-13 & 2013-14 / for the year 2012-13 & 2013-14

