



अखिल भारतीय विद्युत सांख्यिकी All India Electricity Statistics

सामान्य पुनर्विलोकन 2017
(2015-16 के आंकड़े समाविष्ट)

General Review 2017
(Containing Data for the Year 2015-16)

भारत सरकार
विद्युत मंत्रालय
केन्द्रीय विद्युत प्राधिकरण
नई दिल्ली
अप्रैल 2017

Government of India
Ministry of Power
Central Electricity Authority
New Delhi
April 2017

(अधिनियम 2003 की धारा 73(आई) एवं (जे) के तहत के.वि.प्रा. के दायित्व के पालन हेतु प्रकाशित)
(Published in fulfillment of CEA's obligation under Section 73(i) & (j) of the Electricity Act, 2003)

April, 2017

No. of Copies Printed: 300

Published by:

SECRETARY

Central Electricity Authority

Sewa Bhawan, R.K. Puram

New Delhi - 110 066 Tel.: 011-26732203

For any clarification/query, please, contact Secretary, CEA

Printed at:

Shri Ganesh Associates, Delhi. Tel.: 9810096326



रविन्द्र कुमार वर्मा
अध्यक्ष
केंद्रीय विद्युत प्राधिकरण


प्राक्कथन

विद्युत अधिनियम 2003 के प्रावधानों के अनुसार केंद्रीय विद्युत प्राधिकरण द्वारा समय-समय पर देश के विभिन्न क्षेत्रों द्वारा विद्युत उत्पादन, पारेषण, ट्रेडिंग, वितरण और उपभोग संबंधी आंकड़े सार्वजनिक किए जाते हैं। “अखिल भारतीय विद्युत सांख्यिकी – सामान्य पुनर्विलोकन” प्रकाशन इस दिशा में एक कदम है।

“अखिल भारतीय विद्युत सांख्यिकी – सामान्य पुनर्विलोकन” के लिए आंकड़े भारतीय विद्युत क्षेत्र की यूटिलिटी और गैर-यूटिलिटी, केंद्रीय विद्युत विनियामक आयोग, निति आयोग, नवीन और नवीकरणीय ऊर्जा स्रोत मंत्रालय और अन्य सरकारी संगठन और विद्युत उपभोक्ताओं की विशिष्ट श्रेणियों से संग्रहित/प्राप्त किए जाते हैं। विद्युत् उत्पादन क्षमता पिछले वर्ष की तुलना में 10.60% बढ़ी है। वर्ष 2015-16 में कुल विद्युत् उर्जा उत्पादन, जिसमें कैप्टिव प्लांट भी शामिल हैं, पिछले वर्ष की तुलना में 5.43% बढ़ी है। देश में विद्युत् उत्पादन बढ़ाकर सभी को विश्वसनीय और अच्छी गुणवत्ता प्रदान करने के लिए कई कदम उठाए गए हैं। उन सभी यूटिलिटियों/संगठनों के सहयोग के प्रति आभार प्रकट किया जाता है जिन्होंने समय पर अपेक्षित सूचना प्रस्तुत की। विद्युत क्षेत्र के वे सभी संगठन जिन्होंने समय पर सूचना प्रस्तुत की और विशेषकर वे जिन्होंने समय पर सूचना प्रस्तुत नहीं की, सभी से अनुरोध है कि वे निर्धारित अवधि के भीतर पूर्ण आंकड़े/सूचना उपलब्ध कराकर इस प्रकाशन के अगले अंक को यथासमय प्रकाशित करने के हमारे प्रयास को सुदृढ़ करें।

मुझे आशा है कि “अखिल भारतीय विद्युत सांख्यिकी सामान्य पुनर्विलोकन 2017” भारत के विद्युत क्षेत्र के विकास में शामिल सभी अंशदायकों की अपेक्षाओं को पूरी करेगा।

अप्रैल, 2017


(रविन्द्र कुमार वर्मा)



Ravindra Kumar Verma
Chairperson
Central Electricity Authority

FOREWORD

In fulfilment of its statutory obligations under the Electricity Act, 2003, Central Electricity Authority makes public from time to time, the Statistics concerning generation, transmission, trading, distribution and utilization of electricity by different sectors in the country. The publication “All India Electricity Statistics - General Review” is a step in this direction.

The data for this publication is collected /obtained from Utilities & Non-Utilities of the Indian Electricity Sector, Central Electricity Regulatory Commission, erstwhile Planning Commission (now NITI Aayog), Ministry of New and Renewable Energy Sources and other formations of Government and specific categories of electricity consumers. The installed generation capacity has increased by 10.60% over the previous year. The total electricity produced in the country including that from captive plants during the year 2015-16 has registered a growth of 5.43% over the previous year. A number of initiatives have been taken to increase power generation in the country in order to provide reliable and quality power to all. The cooperation of all utilities/organizations who have timely furnished the requisite information is gratefully acknowledged. All the organizations in the power sector who furnished the information and especially those who did not furnish the information on time are requested to strengthen our endeavour in bringing out next issue of this publication in time by providing complete data/information within the stipulated period.

I hope that “All India Electricity Statistics - General Review 2017” shall fulfill the expectations of all stakeholders who are involved in the development of electricity sector in India.

April, 2017



(RAVINDRA KUMAR VERMA)



सत्यमेव जयते

पंकज बत्रा
सदस्य (योजना)
केंद्रीय विद्युत प्राधिकरण

प्रस्तावना

हाल ही में भारतीय विद्युत क्षेत्र ने काफी सकारात्मक विकास किया है लेकिन अभी इस क्षेत्र को आत्मनिर्भर बनने में कुछ समय लगेगा। विद्युत क्षेत्र में विभिन्न यूटिलिटीयों के विघटित होने, निजी क्षेत्र की भागीदारी, ईंधन मिश्रण में ज्यादा विविधताओं और विभिन्न वर्षों में मौसमानुसार लोड आवश्यकता पर ध्यान देने के साथ विद्युत अधिप्राप्ति योजना के कारण बहुत बदलाव हुए हैं। पिछले तीन वर्षों में यद्यपि विद्युत् कमी काफी हद तक कम हुई है। आजकल हमारे पास अतिरिक्त उत्पादन क्षमता है। यह मुख्य रूप से कुछ राज्यों के उप-पारेषण एवं वितरण प्रणाली में बाध्यताओं तथा उनकी प्रतिकूल वित्तीय स्थिति के कारण है। इसको ध्यान में रखते हुए भारत सरकार ने राज्य विद्युत वितरण यूटिलिटी के वित्तीय टर्नअराउंड के लिए उज्ज्वल डिस्कॉम एश्योरेंस योजना (उदय) का शुभारम्भ किया है, जहाँ वित्तीय घाटे को कम करने के लिए राज्य सरकारें जिम्मेवार होंगी। कुछ लक्ष्य निर्धारित किए गए हैं जिनके पूर्ण होने पर राज्य सरकारें भविष्य में केंद्र सरकार से लाभ के लिए हकदार होंगी।

सामान्य पुनर्विलोकन में विद्युत उपभोग की भिन्न श्रेणियों जैसे घरेलू, कृषि, औद्योगिक विद्युत, स्ट्रीट लाइट, जल पंपिंग की योजनाएं, ट्रेक्शन इत्यादि संबंधी आंकड़े और उपभोक्ताओं की संख्या तथा संबद्ध लोड के ब्यौरे भी शामिल हैं। इस प्रकाशन में शामिल सूचना देश में भिन्न विकास दरों और क्षेत्रीय योजना को सुविधाजनक बनाने के लिए उपभोग रूझान और विद्युत के विभिन्न क्षेत्रों की उपलब्धियों के निर्धारण में उपयोगी होंगी।

वार्षिक विद्युत सांख्यिकी का संग्रहण, संवीक्षा और संकलन विद्युत अधिनियम 2003 के तहत अपनी बाध्यताओं को पूरा करने में के.वि.प्रा. द्वारा निष्पादित किया जा रहा एक महत्वपूर्ण कार्य है। यूटिलिटी स्रोतों और उद्योगों में कैप्टिव पावर प्लांट जिनकी मांग 1 मे.वा. या अधिक है, से जुड़े आंकड़े भी रिपोर्ट में शामिल किए गए हैं। कुछ यूटिलिटीयों से संबंधित वर्ष 2015-16 के पूर्ण आंकड़े/सूचना का अभाव होना एक प्रमुख बाधा है और ऐसे मामलों में वर्ष 2014-15 के आंकड़ों की ही पुनरावृत्ति की गई है अथवा इन्हीं से अनुमान लगाया गया है।

'अखिल भारतीय विद्युत सांख्यिकी सामान्य पुनर्विलोकन-2017' में शामिल फरवरी, 2017 तक प्राप्त आंकड़ों/सूचना के आधार पर वर्ष 2015-16 के आंकड़ों का संकलन किया गया है। मुझे विश्वास है कि इस प्रकाशन में निहित सूचना भारत के विद्युत क्षेत्र से जुड़े सभी लोगों को अपनी गतिविधियों को नियोजित करने के लिए काफी महत्वपूर्ण साबित होंगी। इस प्रकाशन में सुधार के लिए टिप्पणियों/प्रेक्षणों/सुझावों का स्वागत है और अखिल भारतीय सांख्यिकी-सामान्य पुनर्विलोकन के अगले अंक में इन सुझावों को ध्यान में रखा जाएगा।

अप्रैल, 2017

प. बत्रा
(पंकज बत्रा)



Pankaj Batra
Member Planning
Central Electricity Authority

PREFACE

The Indian Electricity Sector has registered many positive developments in the recent past but it still has some way to go before the sector becomes self-sustaining. Power sector has changed substantially due to unbundling of various utilities, private sector participation, greater diversification in the fuel mix and forward looking power procurement planning, with emphasis on seasonal load requirement in different years. In the last 3 years, however, the shortages have reduced substantially. At present, we have unutilized generating capacity. This is mainly because of constraints in the sub-transmission and distribution system in some of the States, as well as adverse financial position of many of the States. Taking this into account, the Government of India has launched the Ujwal Discoms Assurance Yojna (UDAY) Scheme for financial turn around of the State Distribution utilities, where the State Government has been made responsible for reduction of financial losses. Certain targets have been set, which, if achieved, would entitle the State Government to further benefits from the Central Government.

The General Review contains data on various categories of electricity consumption like domestic, agriculture, industrial power, street lighting, water pumping schemes, traction etc., and also details about the number of consumers and the connected load. The information contained in this publication would be useful in working out the various growth rates and consumption trends to facilitate sectoral planning and for assessment of the achievement of various sectors of electricity in the country.

Collection, scrutiny, compilation of annual electricity statistics has been an important task being accomplished by CEA in fulfillment of its obligation under the Electricity Act, 2003. Data pertaining to utility sources and Captive Power Plants in Industries having demand of 1 MW and above have also been included in the Report. The non-availability of complete data/information in respect of certain utilities for the year 2015-16 is a major constraint and in such cases the data for the year 2014-15 has either been repeated or estimated. I strongly urge the Utilities to provide the requisite input data on priority so that General Review could be finalized in time.

“The All India Electricity Statistics- General Review 2017” containing data for 2015-16 has been compiled based on the data/information received till February, 2017. I am sure that the information contained in the publication shall be of immense importance to all those associated with Power Sector of India for the planning of their activities. The comments/observations/suggestions for improvement of this publication would be welcome and the same would be taken care of in our next issue of All India Electricity Statistics-General Review.

April, 2017


(PANKAJ BATRA)



सत्यमेव जयते

प्रहलाद
मुख्य अभियंता (पी.डी.एम.)
केंद्रीय विद्युत प्राधिकरण

आभार


इस प्रकाशन 'सामान्य पुनर्विलोकन-2017 में विभिन्न क्षेत्रों/श्रेणियों द्वारा विद्युत के उत्पादन, पारेषण, संवितरण और खपत से संबंधित देशव्यापी आंकड़े अंतर्निहित हैं। इस प्रकाशन के लिए आंकड़े सरकारी और निजी दोनों क्षेत्रों में विद्युत क्षेत्र की यूटिलिटियों, विद्युत विभाग और भारत की गैर-यूटिलिटियों और विशिष्ट श्रेणी के उपभोक्ताओं से एकत्रित किए गए हैं। विश्वसनीय आंकड़ों की उपलब्धता विद्युत के विभिन्न क्षेत्रों में निर्णय करने को सुगम बनाने के लिए विभिन्न संकेतकों को तैयार करने के लिए एक महत्वपूर्ण इनपुट है। संगठनों की बड़ी संख्या के कारण आंकड़ा संग्रहण का कार्य निश्चय ही बहुत जटिल हो गया है। योजनाओं और नीति निर्माण में पारस्परिक लाभ के लिए सभी प्रकार के आंकड़ों के प्रबंधन के कार्य राज्यों में एक केंद्रीय आंकड़ा पूलिंग और प्रकाशन संगठन के होने से यह संकलन भली-भांति किया जा सकेगा।

आंकड़ों का यह संकलन सभी यूटिलिटियों, संगठनों के सक्रिय सहयोग का ही परिणाम है जिन्होंने अपेक्षित जानकारी को उपलब्ध कराया और उनके इस योगदान के लिए हम हार्दिक आभार प्रकट करते हैं।

पी.डी.एम. प्रभाग के अधिकारियों ने इस प्रकाशन के आंकड़ों के संकलन के लिए अपनी निरंतर निगरानी के माध्यम से असाधारण प्रयास किया है। श्री अंजुम परवेज, उप निदेशक; श्रीमती किरन मीना, उप निदेशक; श्री अक्षय कुमार, सहायक निदेशक; श्री पवन कुमार गुप्ता, सहायक निदेशक एवं श्री डी.सी. डबराल, सांख्यिकी सहायक द्वारा दिए गए योगदान के लिए मैं उनका आभार प्रकट करता हूं। इस प्रकाशन को जारी किए जाने में श्री यू.के. गुप्ता, सहायक निदेशक एवं श्री आर.आर. शर्मा, वरिष्ठ सांख्यिकी अधिकारी ने प्रशासनिक सहयोग एवं श्री दीपक कुमार शर्मा, निजी सचिव ने सचिवालयी सहायता प्रदान की। इस पुनर्विलोकन को तैयार करने में क्षेत्रीय विद्युत सर्वेक्षण कार्यालयों (आर.पी.एस.ओ.), के.वि.प्रा. द्वारा महत्वपूर्ण इनपुट प्रदान किए गए।

इस पुनर्विलोकन में विद्युत क्षेत्र के आंकड़ों को समाविष्ट करने और इनकी विशुद्धता को बनाए रखने के लिए हर संभव प्रयास किए गए हैं। इस पुनर्विलोकन में यदि कोई विसंगति पाई जाती है तो इसे कृपया हमारे ध्यान में लाया जाए जिसके लिए हम आपके आभारी रहेंगे।

अप्रैल, 2017


(प्रहलाद)



Prahlad
Chief Engineer (PDM)
Central Electricity Authority

ACKNOWLEDGEMENT

This publication “General Review 2017” contains countrywide statistics relating to generation, transmission, distribution and consumption of electricity by different sectors/categories. The data for this publication are collected from Utilities of Electricity Sector in public and private sectors, Electricity Departments and Non-Utilities of India and specific category consumers. The availability of reliable data is an important input to work out various indicators for facilitation of decision making in various sectors of electricity. With large number of organizations, the work of data collection has indeed become very complex. States would be well served in having a central data pooling and publishing organization for management of all the data for the mutual benefit in planning and policy making.

This compilation is a result of active co-operation of all utilities/organizations, who have furnished the requisite information and their contribution is sincerely acknowledged.

The Officers of PDM Division had to put extraordinary efforts in compilation of this publication through constant follow-up for data collection. The contribution made by Shri Anzum Parwej, Deputy Director; Ms. Kiran Meena, Deputy Director; Shri Akshay Kumar, Assistant Director, Shri Pawan Kumar Gupta, Assistant Director and Shri D.C. Dabral, Statistical Assistant is gratefully acknowledged. Shri U.K. Gupta, Assistant Director and Shri R.R. Sharma, Sr. Statistical Officer provided administrative support and Shri Deepak Kumar Sharma, PS rendered secretarial assistance in bringing out this publication. The vital inputs provided by Regional Power Survey Offices (RPSOs) of CEA for preparation of this Review are acknowledged with thanks.

All efforts have been made to incorporate the data on electricity sector and maintain accuracy. Any discrepancy, if noticed in this review, may be brought to our notice which will be gratefully acknowledged.

April, 2017


(PRAHLAD)

GLOSSARY

Containing Definitions, Expansion of Abbreviations

A & W	As & When
APPGCL	Andhra Pradesh Power Generation Corporation Limited
APTRANSCO	Power Transmission Corporation of Andhra Pradesh
BBMB	Bhakra Beas Management Board
CCGT	Combine Cycle Gas Turbine
Ckt.Kms.	Circuit kilometers
CSP	Central Sector Project
Deptt.	Department
DVC	Damodar Valley Corporation
E	Estimated
ER	Eastern Region
GRIDCO	Grid Corporation of Orissa Limited
GWh	Giga Watt Hour (equivalent to 1 Million unit of Electrical Energy)
HPGCL	Haryana Power Generation Corporation Limited
HV	High Voltage
HVPL	Haryana Vidyut Prasaran Nigam Limited
IPGCL	Indra Prastha Generation Corporation Limited
KL	Kilo Litre
KPTCL	Karnataka Power Transmission Corporation Limited
kV	Kilo Volt
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWh	Kilo Watt Hour
LSHS	Low Sulphur Heavy Stock
LV	Low Voltage
MMSM	Million Metric Standard Cubic Metre
MPPGCL	Madhya Pradesh Power Generation Corporation Limited
MPPTCL	Madhya Pradesh Power Transmission Corporation Limited
MT	Metric Tonne
MV	Medium Voltage
MVA	Mega Volt Ampere
MW	Mega Watt (equivalent to 1000 Kilo Watt)
NA	Not Available
NEEPCO	North Eastern Electric Power Corporation Limited
NER	North- Eastern Region
NHDC	Narmada Hydro Development Corporation Limited
NHPC	National Hydro Electric Power Corporation Limited
NON-UTILITIES	Non-Utilities shall mean captive generating plant which means a power plant set up by any person to generate electricity primarily for own use and includes power plant set up by any Co-Operative society or association of persons for generating electricity primarily for use of members of such Co-Operative society or association.

NPCIL	Nuclear Power Corporation of India Limited
NR	Northern Region
NTPC	National Thermal Power Corporation
OH	Over Head
OHPCCL	Orissa Hydro Power Corporation Limited
OP	Off Peak
OPGCL	Orissa Power Generation Corporation Limited
OPTCL	Orissa Power Transmission Corporation Limited
P	Peak
PDC	Power Development Corporation
PPCL	Pragati Power Corporation Limited
PTCUL	Power Transmission Corporation of Uttarakhand Limited
R	Repeated
RES	Renewable Energy Sources (Includes Electric Generation due to (a) Wind (b) Bio-Mass Power (c) Solar Power (d) Urban & Industrial Wastes & (e) Small Hydro Power Projects of capacity less than or equal to 25 MW.
RRVUNL	Rajasthan Rajya Vidyut Utpadam Nigam Limited
RTC	Round the Clock
RVPNL	Rajasthan Rajya Vidyut Prasaran Nigam Limited
SEB	State Electricity Board
SJVNL	SatluJ Jal Vidyut Nigam Limited
SR	Southern Region
SSNNL	Sardar Sarovar Narmada Nigam Limited
STPS	Super Thermal Power Station
THDCIL	Tehri Hydro Development Corporation of India Ltd.
UG	Under Ground
Utg.	Undertaking
UJVNL	Uttaranchal Jal Vidyut Nigam Limited
UN	United Nations
UPCL	Uttarakhand Power Corporation Limited
UPJVUNL	Uttar Pradesh Jal Vidyut Utpadam Nigam Limited
UPPCL	Uttar Pradesh Power Corporation Limited
UPRVUNL	Uttar Pradesh Rajya Vidyut Utpadam Nigam Limited
UT	Union Territory
UTILITIES	Utility means the electric lines or electrical plant, and includes all lands, buildings, works & materials attached thereto belonging to any person acting as a generating company or licensee under the provisions of the Electricity Act,2003.
VVNL	Vishwesharaiah Vidyut Nigam Limited
WBPDCCL	West Bengal Power Development Corporation Limited
WR	Western Region

The expansion of other abbreviations are given at the various tables of the publication wherever required.

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