ACPDM: Advanced Certificate in Power Distribution Management(ODL)Apply Now

INTRODUCTION

The Advanced Certificate in Power Distribution Management , developed by the School of Engineering and Technology, IGNOU in collaboration with the Ministry of Power for professionals employed in electrical power utilities / electricity sector to upgrade their skills, enhance systemic efficiency and demonstrate commercially viable electricity distribution system that deliver quality power to the satisfaction of the beneficiaries. Currently, the programme continues to be offered by IGNOU.

As a part of the national strategy evolved to address and concern of human resource development, this specially designed programme provides opportunity of capacity building in power sector; it is targeted to provide training to the participants of power distribution utilities /companies, engineers and learners of electricity sector.

This programme addresses the general concerns and issues in the electricity distribution sector, including awareness and exchanges good practices amongst the stakeholders in the power industry. You are a stakeholder in the power industry, both as a consumer and as an employee or you may be aspiring to take up a job in the electrical industry. Therefore, you would surely welcome this opportunity of capacity building through a specially designed training programme.

OBJECTIVES

The main **objectives** of this programme are to:

- **Disseminate information about the current developments and reforms in the power distribution sector;**
- **Generate awareness about the applications of emerging technologies and trends in the sector;**
- **Educate about various aspects of management to the personnel employed in the sector and also to the candidates aspiring to make their carrier in the power industry or allied sector;**
- **Exchange good practices amongst the workforce in power industry specifically the engineers and officers. Provide better industrial educational linkage by matching learner educational needs with real work need of industry.**

ELIGIBILITY:

Engineering graduate/Engineering Diploma Holders

OR

Science/Commerce/ Arts Graduates or equivalent with 2 years experience in power utilities or the electricity sector

MEDIUM: ENGLISH

DURATION : Minimum- 6 Months , Maximum- 2 Years

FEESTRUCTURE- Rs.5,500 /- for full programme Plus Registration fee of Rs. 300/-

LEARNER TARGET GROUP AND JOB/FUTURE PROSPECTS

This specially designed programme provides opportunity of capacity building in power sector; it is targeted to provide training to the participants of power distribution utilities /companies, engineers and learners of electricity sector.

By certifications, you can enhance your employability in electricity sector , upgrade your skills and this certification is also useful in various Job role such as

Engineer – Work in power distribution companies/electricity sector, designing and maintaining power systems etc.

Power System Operator – Manage operations in control rooms, ensuring power is efficiently distributed.

Power Distribution Manager – Oversee the functioning of electrical grids, transformers, and substations.

Maintenance Technician – Ensure proper maintenance of transformers, switchgear, and other electrical infrastructure.

Project Manager – Lead projects in the installation, maintenance, or upgrading of power distribution systems.

Energy Efficiency Consultant – Advise industries on energy conservation, optimization, and sustainable practices.

PROGRAMME COORDINATOR
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Courses Structure

BEE-001: POWER DISTRIBUTION SECTOR

BEE-001: Power Distribution Sector

Credits: 6
Semester 1

Mode: Open Distance Learning

Course Introduction

Course deals with the various aspects of:

- SECTORAL OVERVIEW AND ENABLING FRAMEWORK
- OPERATION AND MAINTENANCE

- QUALITY OF SUPPLY AND SERVICES
- DISTRIBUTION LOSS REDUCTION AND EFFICIENCY IMPROVEMENT

Read more……..

BEE-001 POWER DISTRIBUTION SECTOR

Adequate electrical power with a high degree of reliability and quality is the key to our economic growth. An economic growth rate of 8-9 percent on a sustained basis is necessary for India to meet the aspirations of its people for reasonably good quality of life. Development of basic infrastructure is an essential prerequisite to sustain this growth. Keeping in view the central position of the power sector in the domain of infrastructure, the Government of India has set the objective of providing access to uninterrupted quality power supply at affordable costs to all**.** The responsibility for translating this vision into reality vests with the power sector, and particularly the power distribution sector.

The Indian power sector has witnessed tremendous growth in size and capacity. There has been tremendous improvement and augmentation in capacity addition and transmission and distribution network since independence. We have significant generation capacity in our country. All of us do face some power cuts, or no power supply. What measures are needed to cater to this demand for electricity?

The power distribution sector of India is plagued with many ills. Its financial health is still a matter of concern considering that its losses have reached alarming level and unsustainable levels at some states. Power generation companies find it difficult to recover their dues from their biggest buyers, the State Electricity Boards. The malaise stems from many reasons such as huge T&D (transmission and distribution) losses largely due to outright theft and un-metered supply, low productivity, lack of accountability, etc. There are many other deficiencies in the power distribution sector such as unreliable power supply, poor quality of power supply, lack of concern for consumers and a skewed tariff structure etc. Customer dissatisfaction, mounting financial losses and overall liberalisation of the economy has spurred the government to introduce sweeping reforms in an otherwise monopolistic service sector. The overarching aim of these reforms is to help the power sector overcome its ill areas.

You will agree that distribution is the cutting-edge of the power industry and it needs to get back on the right track. It is our belief that significant improvement can be brought about just by toning up the operational and maintenance practices, better inventory management, sharpening of work culture and training. As a stakeholder in the power industry, (as a consumer and as an employee or as someone aspiring to take up a job in the electrical industry), you would surely welcome this opportunity of capacity building through a specially designed training programme that addresses these very issues.

This course is the first one in the programme and attempts to provide you an insight into the power distribution sector. In particular, we acquaint you with the power distribution reforms, the current scenario and the future requirements and implications. No doubt, the power distribution scenario in different states is different in terms of load profiles, tariff structures, income levels of the people, internal capabilities of the power utilities, and so on. The intention is to share the experiences, the lessons learnt, the innovations tried and also some of the failures so that the ideas may be adapted to the local conditions for best possible results.

The course contents are divided into four blocks covering various aspects of the power distribution sector. We begin by presenting an overview of the power sector, its structure, the Acts and Policies that have helped in restructuring the power distribution sector and their implications for the power distribution sector in **Block 1** entitled **Sectoral Overview and Enabling Framework**.

In **Block 2** entitled **Operation and Maintenance**, we introduce the technical dimension of the power distribution system and discuss the operation and maintenance aspects of the equipment, e.g., the substation equipment, distribution lines and distribution transformer. An appraisal of the quality of power supply and the service provided by the power distribution sector is essential to identify its weaknesses and potential strengths. This is the subject matter of **Block 3** entitled **Quality of Supply and Services**. We begin by introducing the concept of performance benchmarking, which is now perceived as an essential component of power utility management. We outline the key performance indicators and discuss issues involved in their implementation and monitoring for improvement in the performance of utilities.

The technical and commercial losses being faced by the electricity industry are a major hurdle in putting them back on their feet. We address this issue in **Block 4** entitled **Distribution Loss Reduction and Efficiency Improvement**, we present the concepts and principles related to distribution losses and discuss various ways of reducing technical and commercial losses in a power distribution utility.

Our endeavour throughout the course is to present examples, and set forth the **best practices** in all these areas. We hope that studying this course will enable you to acquire an in-depth understanding of the critical issues related to the functioning of the power distribution sector. We also expect that the knowledge, information and experiences given in the course will equip you with capabilities that help you in evolving your own methods of resolving the issues, solving the problems confronting the power distribution sector and contributing positively to your work.

Remember, the ultimate success of this sector depends on how well you carry out your responsibilities. And the success of this course depends on how well it enthuses and empowers you in this respect! Our best wishes are with you!

BEE-002: ENERGY MANAGEMENT AND IT APPLICATIONS

BEE-002: Energy Management and IT Applications

Credits: 4
Semester 1

Mode: Open Distance Learning

Course Introduction

Course deals with the various aspects of:

- ENERGY CONSERVATION, AUDIT AND ACCOUNTING
- ELECTRICITY SAFETY AND DISASTER MANAGEMENT
- IT APPLICATIONS IN DISTRIBUTION BUSINESS MANAGEMENT
- IT INTERFACE IN CUSTOMER SERVICES

BEE002 :ENERGY MANAGEMENT AND ITS APPLICATIONS

- Access to energy is fundamental to the modern way of life. Without energy, nothing moves in an industrial society. A rapidly growing economy like ours is characterised by a growing demand for reliable, affordable and clean energy, which is a prerequisite for societal development as well. Energy, however, comes at a price that is more than simply its monetary cost and includes environmental costs.
- In spite of low per capita energy consumption compared with that of highly industrialized developed countries, India continues to experience shortfall in its energy supply. The ever increasing energy needs require huge capital investments, which are simply not available. Energy management thus assumes a critical importance in our economy. The basic aim of any energy management strategy is to provide energy security to all at affordable costs by reducing the nation's dependence on imported energy resources and by promoting more efficient ways of energy use. This line of thinking applies to the use of electricity as well.
- The course on **Energy Management and IT Applications** in this programme has been developed with a special focus on the power sector. It contains four blocks. We begin by introducing the concepts of energy conservation, energy accounting and energy auditing in the **first Block** entitled **Energy Conservation, Audit and Accounting.** We also discuss demand side management through increased energy efficiency, structural changes in the economy and less energy-intensive mode of development. We elaborate on the role of power distribution utilities in implementing strategies for energy conservation. The role of consumers in saving energy is also highlighted.
- In the **second block** entitled **Electricity Safety and Disaster Management,** we acquaint you with various aspects of promoting safe work with electricity and electrical systems. These include earthing practices, safety procedures, accident and fire prevention and protection of equipment. We also discuss issues related to disaster management, e.g., institutional set up needed for disaster management, different types of disasters and their impact on power management, disaster management plans, etc.
- The third and fourth blocks relate to applications of Information Technology in the power distribution sector. **Block 3** on **IT Applications** in **Distribution Business Management** contains information about the IT based interventions and applications in organizational change management, project management and financial management. We also familiarize you with the potential of IT Systems applications in the power distribution network, which include indexing of all feeders and transformers, IT based surveillance for detecting pilferage of power, asset management and GIS applications in distribution system management.
- **Block 4** pertains to IT **Interface** in **Customer Services. T**he themes covered in this block include IT applications for customer information and satisfaction, e.g., interactive web-sites, interactive voice response systems, online billing and payments, customer care and Call Centres and other IT tools of Customer Analysis. We also introduce you to some current developments in the use of IT for metering, billing and collection, e.g., Automatic Meter Reading systems, spot billing/hand held metering and online payment. The idea is to generate awareness about these technologies and their effectiveness in serving the consumers and promoting energy efficiency and conservation measures. You might not become proficient

in using these technologies but having realized their power, you might certainly feel motivated to undergo such training!

- We hope that the knowledge, information and experiences will help you appreciate the importance of energy conservation and motivate you to adopt effective energy management strategies both at your Work place and your home.

  Our best wishes are with you!

BEE-003: MANAGEMENT OF POWER DISTRIBUTION

BEE-003: Management of Power Distribution

Credits: 6
Semester 1

Mode: Open Distance Learning

Course Introduction

Course deals with the various aspects of:

- PRINCIPLES OF MANAGEMENT
- CHANGE MANAGEMENT IN POWER DISTRIBUTION
- PROJECT DEVELOPMENT AND IMPLEMENTATION
- COMMUNICATION SKILLS AND MOTIVATION
- FINANCIAL MANAGEMENT

MANAGEMENT OF POWER DISTRIBUTION

Power Distribution utilities in India are faced with many challenges today. Improving the quality and reliability of supply, providing it at affordable cost to the consumer and at the same time ensuring the profitability of the enterprise are some of their major concerns. Although power generation and transmission systems have seen considerable technical development and capital investment since independence, the distribution systems have suffered from many maladies such as unbalanced load flow, poor voltage regulation, high level of technical and commercial losses, etc. They are characterized by poor operating of efficiencies leading to cynical customer perception. This state affairs has been compounded by the lack of investment stemming from investors' apprehensions about the mismanagement of the sector.

As the power distribution reforms have got under way, power utilities are realizing the necessity of increasing revenues, improving their performance as well as customer service. An acute need is being felt for managing the sector in a manner so that a consistent and long lasting solution can be provided for the power woes. The overarching goal of the management strategies has to be to improve and strengthen the power distribution network with minimum losses in the long run.

Improving the performance of power distribution systems to meet the required targets is not only a matter of selecting the most cost-effective technologies and operating practices. It is also a matter of managing the workforce, finances, materials and the projects on a turnkey basis. Distribution systems tend to be very extensive with a long life span for conductors and plant. It is not sufficient to analyze how a particular portion of the network may be to improve its performance today: it is a matter of determining the optimal solutions and at the same time making allowances for the future uncertainties in the prediction of customer demand.

There is now a growing awareness that the reforms in the power distribution sector would be aided by modern management approaches and will not be mere continuation of the earlier approaches. No doubt, the vast experience, of the people working in power utilities will also provide the required inputs in the managerial process,.

This course on Management of Power Sector has been designed sensitise you to the modern management methods and approaches relevant to the power distribution sector. It presents various

aspects of management essential for a manager to understand the working of the sector and function effectively in a power distribution utility. This 6-credit course has been divided into 5 blocks.

Block 1 entitled Principles of Management presents different aspects of management. It focuses on the functions of a manager, the importance of customer relationship management, promoting costumer involvement and participation in meeting the challenges before the power distribution sector and the management of conflict.

Block 2 is about Change Management in Power Distribution wherein we discuss the concepts and process of change, the importance of people in change management, certain emerging developments and the conditions required for effecting the change smoothly. **Block 3** entitled Project Development and Implementation discusses how to develop and implement projects on a trunkey basis.

In **Block 4** on Communication Skills and Motivation, we discuss the importance of communication, the skills required for communication and certain issues and aspects related to motivation. Finally, in **Block 5** entitled Financial Management, we present the basic accounting principles, preparation of financial statements, elements of financial analysis and cost management.

While studying the course, you should constantly try to apply the principles enunciated here to your own context. We hope that studying this course will empower you as a manager and you will be able to perform your job better!

We hope that the knowledge, information and experiences given in the course will equip you with managerial capabilities that enable you to carry out your responsibilities better! This is what the ultimate success of this sector depends on. Our best wishes are with you!