



# TRAINING CALENDAR 2020

CATEGORY	S/N	COURSE TITLE	CATEGORY CODE	URATIO	VENUE	MONTH												PRICE
						FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC		
DISTRIBUTION	1	DISTRIBUTION NETWORK PROTECTION COURSE	D01	5 days	IJORA, KAINJI, KANO,		16-20		18-22				14-18		23-27		N70,000	
	2	ADVANCED TECHNICIANS MULTI-SKILL TRAINING FOR PRACTITIONERS (LINESWORK, CABLE JOINTING & ELECTRICAL FITTERS)	D02	10 days	IJORA, KAINJI, AFAM, KADUNA, JOS, KANO,		2-13				20-31				9-20		N100,000	
	3	BASIC TECHNICIANS MULTI-SKILL TRAINING FOR NEW ENTRY LEVEL (LINESWORK, CABLE JOINTING & ELECTRICAL FITTERS)	D03	15 days	IJORA, KAINJI, AFAM, KADUNA, JOS, KANO,			6-24				3-21		5-23			N150,000	
	4	DISTRIBUTION SUBSTATION OPERATIONS	D04	5 days	OJI, JOS, IJORA, KAINJI, KADUNA, KANO, ABUJA		23-27		11-15				7-11		2-6		N70,000	
	5	DISTRIBUTION NETWORK OPERATIONS & MAINTENANCE	D05	5 days	JOS, IJORA, KAINJI, KADUNA KANO, AFAM, ABUJA	17-21			18-22				14-18				N70,000	
	6	REFRESHER COURSE ON 33KV & 11KV CABLE JOINTING & TERMINATION	D06	5 days	JOS, IJORA	3-7				1-5			21-25				N70,000	
	7	BASIC METER INSTALLATION COURSE (C2)	D07	10 days	ABUJA, OJI, JOS, IJORA, KAINJI, KADUNA, KANO, AFAM			6-17			6-17			26-6			N100,000	
	8	METER INSTALLER SUPERVISOR COURSE (B2)	D08	10 days	ABUJA, OJI, JOS, IJORA, KAINJI, KADUNA, KANO, AFAM			6-17			6-17			26-6			N100,000	
	9	ELECTRICAL HOUSE WIRING	D09			PLEASE VISIT <a href="http://WWW.NAPTIN.GOV.NG">WWW.NAPTIN.GOV.NG</a> FOR THE SCHNEIDER ADVERTISEMENT												
	10	ELECTRICITY BUSINESS MANAGEMENT	D10	5 days	AKANGBA	24-28				15-19				5-9			N70,000	
	11	PLANNING AND CONSTRUCTION OF DISTRIBUTION NETWORK	D11	10 days	ABUJA, KAINJI, IJORA		24-6				22-3				23-4		N100,000	
	12	DISTRIBUTION NETWORK POWER LOSS REDUCTION TECHNIQUES	D12	10 days	ABUJA, KAINJI, IJORA				4-15				14-25				N100,000	
	13	DISTRIBUTION NETWORK DISPATCH AND EMERGENCY RESPONSE	D13	10 days	KAINJI, IJORA, AFAM					15-26			21-2				N100,000	
GENERATION	14	WORKSHOP ON BOILER OPERATIONS & MAINTENANCE	G01	3 days	AFAM, IJORA			1-3			8-10				11-13		N50,000	
	15	WORKSHOP ON HYDRO TURBINE OPERATIONS & MAINTENANCE	G02	3 days	KAINJI, JOS, KANO		4-6			3-5	22-24						N50,000	
	16	GAS TURBINE OPERATIONS & MAINTENANCE	G03	5 days	AFAM, IJORA		9-13			8-12			5-9				N70,000	
	17	WORKSHOP ON STEAM TURBINE O & M	G04	3 days	AFAM, IJORA				6-8		15-17				18-20		N50,000	
	18	WORKSHOP ON PLANT LUBRICATION	G05	2 days	AFAM, IJORA, JOS, KANO		19-20			17-18			16-17				N40,000	
	19	POWER PLANT AUTOMATION	G06	10 days	AFAM, IJORA	3-14				1-12			21-2				N100,000	
	20	BASIC MAINTENANCE OF COMBINED CYCLE GAS TURBINE (CCGT)	G07	10 days	AFAM			13-24									N100,000	
	21	GAS TURBINE COMBUSTION INSPECTION (CI)	G08	3 days	AFAM, IJORA	25-27			20-22						25-27		N50,000	
	22	GAS TURBINE HOT GAS PATH INSPECTION (HGPI)	G09	3 days	AFAM, IJORA		4th -6th					5th - 7th					N50,000	
	23	GAS TURBINE MAJOR INSPECTION (MI)	G10	5 days	AFAM					22-26				26-30			N70,000	
	24	PUMPS & VALVES: SELECTION, OPERATION AND MAINTENANCE	G11	3 days	AFAM, IJORA, KAINJI	11th -13th							2nd - 4th			2 - 4	50,000	
	25	CORROSION ANALYSIS AND CONTROL IN POWER PLANT	G12	2 days	AFAM				25-26					5-6			N40,000	
	26	BALANCING AND ALIGNMENT TECHNIQUES	G13	3 days	AFAM, IJORA, KAINJI	17th -19th					1st -3rd					9th -11th	N50,000	
	27	HYDRAULIC OIL/TRIP OIL SYSTEMS	G14	2 days	AFAM, IJORA		27-28					27-28					N40,000	
	28	POWER SYSTEM SCADA & EMS	G15	10 days	KAINJI			13-24				3-14					N100,000	
	29	INSPECTION OF ELECTRICAL INSTALLATIONS	G16	5 days	ABUJA, IJORA, KAINJI, AFAM, KADUNA, KANO				11-15				7-12				N70,000	
	30	POWER SYSTEMS OPERATION & AUTOMATION	G17	10 days	KAINJI, AFAM			6-17			6-17			26-6			N100,000	
	31	GENERATOR PROTECTION COURSE	G18	3 days	IJORA, KAINJI	26th - 28TH				10-12			21-23				N50,000	



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						FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC		
TRANSMISSION	32	POWER /DISTRIBUTION TRANSFORMER COMMISSIONING	T01	2 days	IJORA, KAINJI, AFAM, OJI, KADUNA, JOS, KANO, ABUJA	18-19			27-28							14-15	N40,000	
	33	TRANSFORMER OIL TEST & FILTRATION TECHNIQUES	T02	2 days	IJORA	4-5										25-26	N40,000	
	34	NUMERICAL RELAYS CONFIGURATION	T03	3 days	IJORA, KAINJI			8-10				5-7						N50,000
	35	SAFETY & STANDARD PROTECTION CODE	T04	3 days	IJORA, KAINJI, AFAM, OJI, KADUNA, JOS, KANO, ABUJA		4-6		4-6				2-4					N50,000.
	36	WORKSHOP ON TRANSFORMERS OPERATIONS & MAINTENANCE	T05	3 days	OJI, JOS, IJORA, KAINJI, KADUNA, KANO, AFAM		18-20			17-19				21-23				N50,000
	37	REFRESHER COURSE ON SYSTEM OPERATIONS	T06	5 days	KAINJI, OJI			6-10			13-17					16-20		N70,000
	38	POWER SYSTEM PROTECTION COURSE	T07	15 days	KAINJI, IJORA						20-7					9-27		N150,000
	39	WORKSHOP ON SYSTEM EARTHING	T08	2 days	KAINJI, IJORA, AFAM, KANO, OJI, JOS, KADUNA, ABUJA		12-13			18-19				22-23				N40,000
	40	TRANSFORMER & SWITCHGEAR MAINTENANCE	T09	10 days	KAINJI, IJORA, KADUNA	17-28			25-5				14-25					N150,000
	41	POWER SYSTEMS COMMUNICATIONS & SCADA	T10	10 days	KAINJI, IJORA			6-17			6-17			12-23				N100,000
	42	ENERGY EFFICIENCY IN ELECTRICAL UTILITIES	T11	10 days	KAINJI, IJORA, ABUJA	10-22				8-20			14-25					N100,000
	43	SUBSTATION PLANNING DESIGN & OPERATIONS	T12	10 days	KAINJI, IJORA, AFAM				11-22				7-18					N100,000
	44	PROJECT MANAGEMENT FOR POWER SYSTEM ENGINEERS	T13	5 days	KAINJI, IJORA, AFAM, OJI, KADUNA, KANO, JOS			6-17			6-17			5-16				N70,000
	45	CONSTRUCTION AND MAINTENANCE OF TRANSMISSION LINES	T14	10 days	KAINJI, IJORA	3-14			11-22			10-21						N100,000
	46	POWER GRID DISPATCHING & AUTOMATION SYSTEM	T15	10 days	KAINJI, IJORA, AFAM					15-27			14-25					N100,000
	47	SUBSTATION MAINTENANCE & ELECTRICAL TESTING	T16	5 days	KAINJI, IJORA, AFAM, OJI, KADUNA, KANO, JOS			13-24			20-31		28-9					N70,000
	48	RELAY PROTECTION AND AUTOMATION DEVICES MAINTENANCE	T17	5 days	KAINJI, IJORA	24-28				22-26								N70,000
	49	TRANSMISSION, LIVE LINE WORKING TECHNIQUES	T18	5 days	KAINJI, IJORA,							26-30			26-30			N70,000
	50	HV EQUIPMENT CONDITION BASED MAINTENANCE TECHNIQUES	T19	5 days	KAINJI, IJORA								21-25		2-6			N70,000
	51	TRANSMISSION LINES DESIGN, CONSTRUCTION, OPERATIONS & MTCE	T20	10 days	IJORA, KAINJI	3-14						13-24				30-11		N100,000



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						FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC		
GENERATION TRANSMISSION & DISTRIBUTION	52	POWER /DISTRIBUTION TRANSFORMER COMMISSIONING	GTD01	2 days	IORA, KAINJI, AFAM, OJI, KADUNA, JOS, KANO,	18-19			27-28							14-15	N40,000	
	53	TRANSFORMER OIL TEST & FILTRATION TECHNIQUES	GTD02	2 days	IORA	4-5										25-26	N40,000	
	54	NUMERICAL RELAYS CONFIGURATION	GTD03	3 days	IORA, KAINJI			8-10				5-7						N50,000
	55	SAFETY & STANDARD PROTECTION CODE	GTD04	3 days	IORA, KAINJI, AFAM, OJI, KADUNA, JOS		4-6		4-6				2-4					N50,000
	56	WORKSHOP ON TRANSFORMERS OPERATIONS & MAINTENANCE	GTD05	3 days	OJI, JOS, IORA, KAINJI, KADUNA, KANO, AFAM		18-20			17-19				21-23				N50,000
	57	REFRESHER COURSE ON SYSTEM OPERATIONS	GTD06	5 days	KAINJI, OJI			6-10				13-17				16-20		N70,000
	58	POWER SYSTEM PROTECTION COURSE	GTD07	15 days	KAINJI, IORA							20-7				9-27		N150,000
	59	WORKSHOP ON SYSTEM EARTHING	GTD08	2 days	KAINJI, IORA, AFAM, KANO, OJI, JOS, KADUNA, ABUJA			12-13		18-19				22-23				N40,000
	60	TRANSFORMER & SWITCHGEAR MAINTENANCE	GTD09	10 days	KAINJI, IORA, KADUNA	17-28			25-5				14-25					N100,000
	61	POWER SYSTEMS COMMUNICATIONS & SCADA	GTD10	10 days	KAINJI, IORA, AFAM			6-17			6-17			12-23				N100,000
	62	ENERGY EFFICIENCY IN ELECTRICAL UTILITIES	GTD11	10 days	KAINJI, IORA		10-22+GG64:R64			8-20			14-25					N100,000
	63	SUBSTATION PLANNING DESIGN & OPERATIONS	GTD12	10 days	KAINJI, IORA				11-22				7-18					N100,000
	64	PROJECT MANAGEMENT FOR POWER SYSTEM ENGINEERS	GTD13	5 days	KAINJI, IORA, AFAM, OJI, KADUNA, KANO, JOS			6-17			6-17			5-16				N70,000
	65	CONSTRUCTION AND MAINTENANCE OF TRANSMISSION LINES	GTD14	10 days	KAINJI, IORA, KADUNA	3-14			11-22			10-21						N100,000
	66	POWER GRID DISPATCHING & AUTOMATION SYSTEM O&M	GTD15	10 days	KAINJI, IORA, AFAM					15-27			14-25					N100,000
	67	SUBSTATION MAINTENANCE & ELECTRICAL TESTING	GTD16	5 days	KAINJI, IORA, AFAM, OJI, KADUNA, KANO, JOS			13-24			20-31		28-9					N70,000
	68	RELAY PROTECTION AND AUTOMATION DEVICES MAINTENANCE	GTD17	5 days	KAINJI, IORA	24-28				22-26								N70,000
	69	TRANSMISSION, LIVE LINE WORKING TECHNIQUES	GTD18	5 days	KAINJI, IORA,							26-30			26-30			N70,000
	70	HV EQUIPMENT CONDITION BASED MAINTENANCE TECHNIQUES	GTD19	5 days	KAINJI, IORA								21-25		2-6			N70,000
	71	TRANSMISSION LINES DESIGN CONSTRUCTION, OPERATIONS & MTCE	GTD20	10 days	AFAM, IORA, KAINJI	3-14						13-24				30-11		N100,000



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RENEWABLE ENERGY & ENERGY EFFICIENCY	72	SOLAR PV INSTALLATION	REEE01	20 days	KAINJI, UORA, ABUJA		30-24					3-28			2-22		N200,000	
	73	SOLAR PV INSTALLATION SUPERVISION	REEE02	20 days	KAINJI, UORA, ABUJA				6-31		8-2			7-1			N200,000	
	74	ENERGY AUDIT & MANAGEMENT	REEE03	5 days	KAINJI, ABUJA					10-14		26-30			14-18		N70,000	
	75	MINIGRID DESIGN MODULE I	REEE04	20 days	KAINJI, UORA		17-13			1-26		14-9					N200,000	
	76	MINIGRID DESIGN MODULE II	REEE05	20 days	KAINJI, UORA		16-10			29-24			12-6				N200,000	
	77	ENERGY EFFICIENCY IN BUILDING DESIGN	RE & EE	10 days	ABUJA, KANO		10-22				8-20		14-25				N100,000	
TRANSMISSION DISTRIBUTION	78	WORKSHOP ON CIRCUIT BREAKER MAINTENANCE	TD01	2 days	UORA, KAINJI, AFAM, OJI, KADUNA, JOS, KANO, ABUJA			15-16		24-25			23-24				N40,000	
	79	SFG CIRCUIT BREAKER TROUBLESHOOTING/MAINTENANCE	TD02	2 days	UORA, KAINJI, AFAM, OJI, KADUNA, JOS, KANO, ABUJA			25-26			22-23						N40,000	
	80	HV SUBSTATION CABLE TERMINATIONS	TD03	3 days	JOS, UORA		11-13	15-17		10-12			28-30				50,000	
	81	WORKSHOP ON SWITCHGEARS OPERATIONS AND MAINTENANCE	TD04	3 days	OJI, JOS, UORA, KAINJI, KADUNA, KANO, AFAM			25-27			1-3				4-6		50,000	
	82	SCADA	TD05	5 days	UORA, KAINJI, KADUNA		24-28			18-22					26-30		N70,000	
	83	CIVIL LINES DESIGN & PROJECT MANAGEMENT	TD06	5 days	UORA, KAINJI, KADUNA			30-3			6-10			21-25			N100,000	
84	POWER SYSTEM COMMUNICATION	TD07	5 days	UORA, KAINJI, KADUNA		3-7				1-5		5-9				N70,000		
NON - TECHNICAL	85	ELECTRICAL POWER SYSTEM SIMPLIFIED FOR NON-TECHNICAL PROFESSIONALS (TECHNICAL FOR NON-TECHNICAL)	NT01	5 days	UORA, KAINJI, AFAM, OJI, KADUNA, JOS, KANO, ABUJA, AKANGBA		3rd feb-7th feb			15-19					16-20		N70,000	
	86	PROJECT MANAGEMENT FUNDAMENTALS	NT02	5 days	KADUNA, OJI, AFAM, ABUJA			13-17			22-26		26-30				N70,000	
	87	IT SKILLS FOR MANAGERS (MDAS & OTHERS)	NT03	5 days	ABUJA, AKANGBA		17-21								2-6		N70,000	
	88	PERFORMANCE MANAGEMENT	NT04	5 days	AKANGBA		24-28			4-8		3-7					N70,000	
	89	ELECTRICITY MARKET & REGULATION	NT05	5 days	ABUJA, AKANGBA		9-13					27-31			9-13		N70,000	
	90	TRAINING OF TRAINERS (ToT) ON PEDAGOGY	NT06	5 days	ABUJA, KAINJI, AFAM, OJI, KANO		23-27				8-12	21-28					N70,000	
	91	CORPORATE STRATEGY, GOVERNANCE & HUMAN RESOURCE MANAGEMENT	NT07	5 days	AKANGBA			6-10					10-14			2-6	N70,000	
	92	STRATEGY FOR IMPLEMENTING OPERATIONAL POLICY	NT08	5 days	AKANGBA			16-20			22-26			21-25				N70,000
	93	CUSTOMER RELATIONSHIP EXCELLENCE	NT09	3 days	AKANGBA		4-6	22-24					23-25			2-4	N50,000	
	94	ADVANCED MANAGEMENT PROGRAM FOR THE NIGERIAN ELECTRICITY SUPPLY INDUSTRY	NT10	5 days	AKANGBA		10-14				15-19		19-23				N70,000	
	95	ICT FOR HR PROFESSIONALS (DIGITAL HR)	NT11	5 days	AKANGBA, ABUJA		3-7			4-8		3-7			2-6		N70,000	
	96	ICT FOR FINANCE & ACCOUNT PROFESSIONALS	NT12	5 days	AKANGBA, ABUJA		3-7			4-8		3-7			2-6		N70,000	
	97	ICT FOR IMPROVED WORK DELIVERY	NT13	5 days	AKANGBA, ABUJA		3-7			4-8		3-7			2-6		N70,000	
	98	ENVIRONMENTAL ASSESSMENT AND OCCUPATIONAL HEALTH & SAFETY MANAGEMENT	NT14	5 days	AKANGBA, ABUJA						1-5		7-11			7-11	N70,000	
	99	FINANCIAL & BUSINESS MANAGEMENT	NT15	5 days	AKANGBA, KADUNA		17-21				15-19		14-18				N70,000	
	100	METERING, ENERGY GENERATION & PROTECTION	NT16	5 days	AKANGBA, KADUNA		17-21				15-19		14-18				N70,000	
101	LEADERSHIP AND MANAGEMENT	NT17	10 days	AKANGBA, KADUNA, ABUJA		17-28				15-26						N100,000		
102	EMOTIONAL INTELLIGENCE & EFFECTIVE COMMUNICATION	NT18	5 days	AKANGBA					4-15					2-13		N70,000		
103	DIGITAL MARKETING FOR BUSINESS IMPROVEMENT	NT19	5 days	AKANGBA, ABUJA			23-27				20-31			19-30		N70,000		
104	WORK PLACE ETHICS AND ATTITUDE	NT20	5 days	AKANGBA, ABUJA			23-27				20-31			19-30		N70,000		
105	PROCUREMENT AND SUPPLY CHAIN MANAGEMENT	NT21	5 days	AKANGBA, ABUJA			23-27				20-31			19-30		N70,000		
106	NETWORK ADMINISTRATION & SECURITY	NT22	5 days	AKANGBA, ABUJA					11-15			10-14			16-20	N70,000		

**NATIONAL POWER TRAINING INSTITUTE OF NIGERIA**  
**NAPTIN TECHNICAL AND NON-TECHNICAL TRAINING CALENDAR - 2020**  
**2020 CATALOG OF TRAININGS - NAPTIN**

N°	Course Name	General objective	Specific objectives	Duration	Target audience
				Days	
1	WORKSHOP ON BOILER OPERATIONS & MAINTENANCE	delegates acquire insightful knowledge on the operations, maintenance, troubleshooting, and commissioning practices of boiler systems.	Gain insight into procedures for boiler commissioning Schedule maintenance based on maintenance checklist Implement maintenance strategies for boiler systems	5	Operator technicians engineers
2	WORKSHOP ON HYDRO TURBINE OPERATIONS & MAINTENANCE	Implement maintenance strategies for Hydro PP	Gain insight into application of relevant maintenance strategies Schedule maintenance based on maintenance checklist Implement maintenance strategies for Hydro plant	10	Hydro turbine mechanical engineers Hydro turbine technicians Those interested in power turbine maintenance with mechanical or electrical background
3	WORKSHOP ON GAS TURBINE MAINTENANCE	delegates will acquire insightful knowledge and skill needed for the operations, maintenance, troubleshooting, and commissioning practices of Gas turbine Power Plants	Gain Insight into Procedures for Gas Turbine commissioning Schedule maintenance based on maintenance checklist Implement maintenance strategies for Hydro plant	5	Operators technicians engineers
4	WORKSHOP ON STEAM TURBINE O & M	delegates will acquire insightful knowledge needed for the operations, maintenance, troubleshooting, and commissioning practices of Steam Turbine Systems	Gain insight into application of relevant maintenance strategies Schedule maintenance based on maintenance checklist Implement maintenance strategies for steam plant	3	Steam power plant Mechanical engr Steam power plant senior technicians Those interested in steam turbine maintenance
5	WORKSHOP ON PLANT LUBRICATION	Delegates will acquire knowledge needed to maintain power plant lubrication systems	Schedule maintenance based on maintenance checklist Implement maintenance strategies for plant lubrication systems	3	Power plant operators Mechanical maintenance technicians operators/maintenance supervisors
6	POWER PLANT AUTOMATION	Delegates for this course will acquire fundamental knowledge crucial to understanding process control in an automated power plant	integrate basic I&C know-how into power plant operation. Ability to wire S7-1200 devices using wiring diagrams Program according to IEC 61131-3 using TIA Portal	10	Power system operators Power system engineers/senior technicians Instrumentation/protection engr
7	BASIC MAINTENANCE OF COMBINED CYCLE GAS TURBINE (CCGT)	delegates will acquire insightful knowledge and skill needed for the operations, maintenance, troubleshooting, and commissioning practices of Combined Cycle Gas turbine Power Plants	Gain insight into HRSG systems Schedule maintenance based on maintenance checklist Implement maintenance strategies for CCGT systems	10	Gas turbine mechanical engineers Gas turbine technicians personnel interested in power turbine maintenance with mechanical or electrical background
8	GAS TURBINE COMBUSTION INSPECTION (CI)	delegates implement operational, inspection, and maintenance practices that ensure gas turbine systems perform reliably	apply basic health and safety practices apply methodologies and utilize tools defined by the gas turbine inspection schedule	3	Mechanical technicians/engrs
9	GAS TURBINE HOT GAS PATH INSPECTION (HGPI)	delegates to this course gain insight into the methodology required to measure and record component clearances performed during gas turbine maintenance	apply techniques for analyzing component clearances apply tools for troubleshooting HGP faults.	3	Mechanical technicians/engrs
10	GAS TURBINE MAJOR INSPECTION (MI)	delegates to this course are introduced to the tools and techniques required for performing major inspections of Gas turbines	apply basic health and safety practices familiarize delegates with the assembly and reassembly procedures required for Gas turbine inspection	5	Mechanical technicians/engrs
11	PUMPS & VALVES: SELECTION, OPERATION AND MAINTENANCE	UNDERSTAND THE PROCESS BEHIND SELECTION OF VALVES, PUMPS AND THE RELATIONSHIP WITH DIFFERENT SERVICE CONDITIONS	ability to apply purchasing and engineering practices behind selection of valves and pumps implement maintenance strategies for different valves and pumps	3	Mechanical technicians/engrs

**NATIONAL POWER TRAINING INSTITUTE OF NIGERIA**  
**NAPTIN TECHNICAL AND NON-TECHNICAL TRAINING CALENDAR - 2020**  
**2020 CATALOG OF TRAININGS - NAPTIN**

N°	Course Name	General objective	Specific objectives	Duration	Target audience
				Days	
12	CORROSION ANALYSIS AND CONTROL IN POWER PLANT	Apply methodologies and analytical tools for corrosion prevention and control in power plants	Ability to analyze symptoms of corrosion and prescribe prevention methods understand the best selection of materials and tools to reduce corrosion	3	Mechanical technicians/engrs
13	BALANCING AND ALIGNMENT TECHNIQUES	This program is aimed at training delegates to be competent in Alignment & Balancing of power industry rotating machine parts	apply basic health and safety practices interpret measurement data assoc. with balancing and alignment carry out maintenance according to specified checklist	3	Mechanical technicians/engrs
14	HYDRAULIC OIL/TRIP OIL SYSTEMS	To equip the participants with the necessary skill to maintain and operate hydraulic trip systems found in the power generating industry	Conduct routine maintenance on hydraulic oil systems apply troubleshooting techniques to hydraulic trip oil systems	3	Mechanical technicians/engrs
15	POWER SYSTEM SCADA & EMS	delegates will acquire practical knowledge of relevant topics involving Power Systems SCADA and the functional role of Energy Management Systems in Power Systems Automation	Gain insight into the components of SCADA systems gain the ability to correctly Calibrate field devices and intepret measured data and alarms	5	powwr system engrs/snr technicians in operations
16	INSPECTION OF ELECTRICAL INSTALLATIONS	delegates will acquire practical skills necessary for carrying out successful inspection of electrical installations	Apply Standardized Safety practices necessary for inspection of electrical installion Correctly carry out Inspections with proper reporting and documentation	5	Inspection engrs/technicians
17	POWER SYSTEMS OPERATION & AUTOMATION	Operate thermal or hydro plants effectively	Gain insight into power system automation and the operations of relevant component subsystems Consider all safety procedures in operations	10	Power system operators Hydro/Thermal power plant operators Operations supervisors
18	GENERATOR PROTECTION COURSE	delegates will acquire practical knowledge of relevant topics involving generator protection.	gain the ability to correctly parameterize protection relays gain the ability to interpret Generator faults and necessary next steps in clearing generator faults	10	Operators Technicians Engineers
19	Generator protection and control	To understand the principles of Generator, design generator protection schemes	explain, design, operate and maintain generator protection control circuits	10	New graduate engrs/technologists
20	NAPTIN Graduate Skills Development Programme (NGSDP)	To gain fundamental skills to operate and maintain power system (Generation, Transmission and Distribution)	Explain, analyse critically and operate/maintain power system under supervision	a year	
21	NAPTIN Technical Skills Acaquisition Programme (NTSAP)	To gain skills on a particular power system related trade (Cable jointing, Lines maintenance, Distribution substation operations, Electrical fitting & power system protection for technicians)	operate and maintain Distribution network under supervision	6 months	
25	ELECTRICAL SAFETY AND SPC	to familiarize all sections of people involved in electrical trade from generation transmission, distribution of electricity and industrial consumers about the statutory electricity rules relating to safe errection testing and commissioning of all	Explain safety in electriccity work environment, conduct hazard/risks analysis and operate power system safely.	3	Practicing Engineers from Generators transformers distributor industries an other consumers of electricity, electrical inspectors and consultants

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				Days	
26	POWER /DISTRIBUTION TRANSFORMER COMMISSIONING	Be able to commission transformer safely in accordance with laid down procedures	Explain transformer operations and constructional features, conduct all pre-commissioning tests and commission the transformer in accordance with standards and procedures.	3	For engineers, technologists and senior technicians
27	TRANSFORMER OIL TEST & FILTRATION TECHNIQUES	To be able to test and or filter oil appropriately	Explain procedure of oil test and filtration. Identify the oil test kit and filtering machine. Test oil to confirm BDV and filter it when required.	3	Engrs, Technologists and senior technicians
28	NUMERICAL RELAYS CONFIGURATION	Configure relay in accordance with determined settings	Explain relays and relay protection schemes. Differentiate various types of relays and their functions. Set and configure overcurrent relays.	3	Protection engineers and technologists
29	WORKSHOP ON TRANSFORMERS OPERATIONS & MAINTENANCE	Understand operations and maintenance of transformers	Explain transformer operations and constructional features. Maintain transformer appropriately.	3	Power engineers, technologists/senior technicians
	REFRESHER COURSE ON SYSTEM OPERATIONS	Refresh operators on operational procedures and protection guarantee practice	Identify power components and functions, Discuss switchgears and operations, operate the switchgears and attend to PG	5	For senior operators and supervisors
30	Basic Power system protection	Design protection scheme for utilities	Understand the basics of protection scheme	15	Protection and control engineers
			Set and coordinate relays		Protection senior technicians
			Calculate fault level and determine appropriate switchgears		Power system engineers interested in protection
31	WORKSHOP ON SYSTEM EARTHING	Understand and comply with earthing system requirements in a circuit	Explain earthing and its methods, identify and select various accessories for earthing, design and implement earthing of substation	3	Engrs, technologists/senior technicians
32	TRANSFORMER & SWITCHGEAR MAINTENANCE	Maintain and operate power equipment	Operate and maintain a transformer safely	10	Power system maintenance engrs
			Operate and maintain switchgears safely		Maintenance senior technicians
			Design maintenance checklist and maintenance schedules		Power system maintenance supervisors
		Familiarise participants with different modes of power system	Explain modes of communication like PAX, fibre optics, Power line		



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33	POWER SYSTEMS COMMUNICATIONS & SCADA	communication and understand their operations and usage including SCADA	carrier, etc and use same to communicate in power system management as well ooperate SCADA	10	For operations engineers, technologists and senior technicians
34	ENERGY EFFICENCY IN ELECTRICAL UTILITIES	Promote energy efficiency for better energy management	Explain energy efficiency and different methods of energy efficieny for enery management in the supply side (utilities) and employ the methods for efficient utiization of energy	5	for energy managers, energy auditors and supervisors.
35	DISTRIBUTION SUBSTATION PLANNING, DESIGN & OPERATIONS	Design a ssubstation	Explain and identify substation components and their functions, explain design considerations and criteria, plan and design a substation and develope its operational pattern.	10	Power system design engineers
36	System operations for Transmission substations	Operate transmission substations effectively	Understand basic power system and how it operates Operate power system substations efficiently maintaining stability Operate safely at all times	10	Grid system operations engineers System operations senior technicians System operations supervisors
37	Construction and maintenance of Transmission lines	Design and construct transmission lines	Design Transmission lines considering relevant parameters Construct Transmission lines based on the design Maintain Transmission lines	10	Transmission lines maintenance engrs Transmission lines maintenance senoir technicians Transmission line maintenance supervisors
38	Power system communication	Understand and operate communication facilities	Understand communications channels, eg PLCC Use communication channels effectively Maintain communication facilities	10	Power communication engrs Power communication senior technicians Communication maintenance/supervision
39	Basic system operations	To opérate hydro power plant and transmission substations	Identify major components power system and their basic functions.	10	Electrical system operators
40	Advance system operations for engrs	To enable engineers opérate power system and manage load adequately	Identify operating forms, their designations and uses.	10	System operations supervisors
41	Introduction to Transmission network system	To maintain install/existing transmission line	Explain and identify components in the transmission power value chain	10	For new engineers/technologists/senior technicians in transmission industry
42	Advanced protection (Distance protection course)	To understand the distance protection principles and calibrate distance relays	Explain, calibrate and maintain distrance protection scheme	10	Transmission protection engineers
43	Distribution network protection	Design protection scheme for Distribution	Understand protection and control Calculate fault level and design switchgears Design protection scheme for Distribution network	5	Distribution protection engrs Distribution senior protection technicians Protection design engrs
44	ADVANCED TECHNICIANS MULTI-SKILL TRAINING FOR PRACTITIONERS (LINESWORK, CABLE JOINTING & ELECTRICAL FITTER)	Supervisor operations and maintenance practitioners in distribution	Explain transformer paralleling noperations, cooling nomenclatures, maintain power transformer as well as switchgears associated with distribution network	10	Distribution engrs and technoligits/senior technicians
45	BASIC TECHNICIANS MULTI-SKILL TRAINING FOR PRACTITIONERS (LINESWORK, CABLE JOINTING & ELECTRICAL FITTER)	Enable distribution technicuans to operate and	Identify major components of power system, their operation and basic functions. Operate and maintain power	15	Distribution technicians



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46	ELECTRICAL FITTER)	maintain the network with multiple skills		10	Distribution substation operators Distribution operation supervisors Power engineers/senior technicians for Distr.				
	Distribution substation operations	Operate Distribution substation safely	Understand Distribution network and its operation						
			Operate Distribution substation and maintain stability						
47	DISTRIBUTION NETWORK OPERATIONS & MAINTENANCE	Operate and maintain Distribution network	Operate the system safely at all times	10	Distribution operations/maintenance personnel Distribution supervisors Power engineers/senior technicians for Distr.				
			Operate Distribution network system						
			Maintain Distribution network system						
49	REFRESHER COURSE ON 33KV & 11KV CABLE JOINTING & TERMINATION	Refresh cable jointers on HV cane termination and jointing techniques	Different between LV and HV votage levels, determine HV (11&33KV) cable jointing and termination materials, terminate and join cables in HV systems.	5	Cable jointing senior technicians				
			BASIC METER INSTALLATION COURSE (C2)			To handle customer metering gap	Understand the basic principles and concepts in customer revenue metering and its importance to utility	10	Meter Installer Meter Technician
							Basic metering mathematics, power and energy calculation and vector computations		
50	METER INSTALLER SUPERVISOR COURSE (B2)	Understanding of the working principles and application of revenue metering, the technology support, metering standards and best practices to ensure an accurate and reliable customer revenue metering	Metering wiring connections, types of connection and metering code	10	Meter installation and inspection supervisor.				
			Electrical House wiring & Installation			To conduct electrical domestic wiring	Explain and design surface, conduit,trunking and ducting wiring for domestic and industrial installation.	Domestic and Industrial wiring instaallers	
51	Planning and construction of Distribution network	Plan and construct Distribution projects	Plan Distribution projects	10	Distribution planning engrs Distribution construction technicians Distribution maintenance supervisors				
			Construct Distribution projects						
			Maintain safety at all times						
52	Distribution network power loss reduction techniques	To adopt methods on How to reduce technical & non-technical losses							

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53	Distribution lines/cable jointing	Construct and maintain overhead and underground lines	Design and construct Distribution lines Maintain Distribution lines Join and terminate high voltage cables	3	Distribution lines maintenance personnel Distribution lines construction technicians Cable jointers for HV and MV
54	Introduction to Distribution network system	To understand the concept of power distribution system and different distribution topology and levels	Discuss distribution network configurations and functions. Select better option for distribution configuration	3	Distribution training for beginners
55	Distribution network design and operations	To design and operate distribution network system	Explain the concept of design, enumerate the procedures for designing a project design power projects	10	Distribution design engineers
56	Distribution substation operations Module I & II	To operate distribution substation and inspect substation equipment	Identify power components, explain their functions, operational procedure and operate the equipment effectively	10 each	Distribution substation operators
57	DISTRIBUTION NETWORK DISPATCH AND EMERGENCY RESPONSE	Dispatch allocated power and provide to emergency response	•master the skills of distribution network o&m •be familiar with the skills of equipment maintenance and monitoring	5	Distribution operation engineers and supervisors
58	PROJECT MANAGEMENT FOR POWER SYSTEM ENGINEERS	to prepare the power system engineers for efficient implementation of electrical projects		5	Engineers working in power utilities and licensed contractors responsible for
59	Electrical fitters course Module I & II	To install and maintain electrical equipment in power system network	Explain transformer and switchgears functions, install and maintain distribution transformer and switchgears	10each	Distribution maintenance technicians
60	Energy metering	Implement metering strategies	Determine energy demand of a customer Determine the appropriate meter for the customer Install the meter and determine the tariff for billing	10	Energy metering engineers Energy metering technicians Power systems personnel interested
61	Billing and customer care/customer relation	Understand and apply billing and customer relationship techniques	Understand ways to relate with a customer Use the ways to relate with customer for better output Attend to customer complaints promptly	10	Marketing officers for utilities Customer care representatives Customer complaints attendants
62	Revenue generation	Generate more revenue to utilities	Perform energy audit to identify its utilization and commercial losses Strategize ways to improve revenue Implement ways for revenue improvement and better service delivery	5	Marketing officers for utilities Marketing supervisors Revenue generation accountants/auditors
63	Meter installation	Determine and Install meters for different customers	Determine appropriate meter for customer based on demand Install the meter Test, calibrate and maintain the meter	10	Meter installation technicians Meter installation supervisors Personnel interested in meter installation
64	Effective marketing strategies for power utilities	Employ strategies to market power products	Understand best marketing practices Employ best marketing strategies Improve productivity for power utilities	5	Marketing and customer care personnel Those interested in energy marketing Managers/supervisors of utilities
65	Leadership and management course	Understand and adapt leadership/management principles	Manage resources effectively Lead by example Develop leadership skills	10	Managers of power utilities Supervisors of power utilities Those interested in leadership and management

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66	Project planning and management	Plan and manage projects effectively	Plan projects	10	Planning engineers
			Manage projects effectively		Project engineers
67	Planning and environmental safeguard management	Conduct environmental impact assessment	Comply with environmental policies and regulations	10	Project supervisors/managers/coordinators
68	IT skills for power professionals	Use IT skills for utilities operations	Use computer for daily utilities operations	5	All category of staff
			Use Microsoft office efficiency, esp word aand excel		-
			Appreciate IT skills in your duties		-

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