

ISO 9001:2008

QUALITY SYSTEM DOCUMENTS
(DIVISIONAL MANUAL)
OF
R&D DIVISION
(Planning wing)




Central Electricity Authority

New Delhi


DISCLAIMER

These procedures have been specifically documented for Quality Management System of CEA. These do not govern service conditions, for which Government of India framed rules, regulations and service conditions shall be applicable. These documents have not been framed from legal point of view and as such will have no legal value in any court of law.

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	Title: Contents		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

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			Page revision No.	Date
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	Title: Contents		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Doc. No. PLG/R&D	Title	No. of Pages	Current status	
			Page revision No.	Date

**Implementation of CEA Chairs at
IIT, Delhi
(b). Ph.D./M. Tech Curses at IITD for
CEA Sponsored candidates**

FC/03 (b)	Flow Chart	2	00	16.03.10
P/03 (b)	Procedure	2	00	16.03.10
QP/03(b)	Quality Plan	2	00	16.03.10
MM/03(b)	Monitoring Matrix	2	00	16.03.10

**Technical Contribution in various
committees**


FC/04	Flow Chart	2	00	16.03.10
P/04	Procedure	2	00	16.03.10
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MM/04	Monitoring Matrix	1	00	16.03.10

**Examination of proposals of
innovative nature in power sector**

FC//05	Flow Chart	2	00	16.03.10
P/05	Procedure	2	00	16.03.10
QP/05	Quality Plan	1	00	16.03.10
MM/05	Monitoring Matrix	1	00	16.03.10

**Examination of proposals for
recognition Of R&D
units/Organizations in power sector**

FC//06	Flow Chart	2	00	16.03.10
P/06	Procedure	2	00	16.03.10
QP/06	Quality Plan	1	00	16.03.10
MM/06	Monitoring Matrix	1	00	16.03.10


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Doc. No. PLG/R&D	Title	No. of Pages	Current status	
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**Management Information System
Reports/Formats**

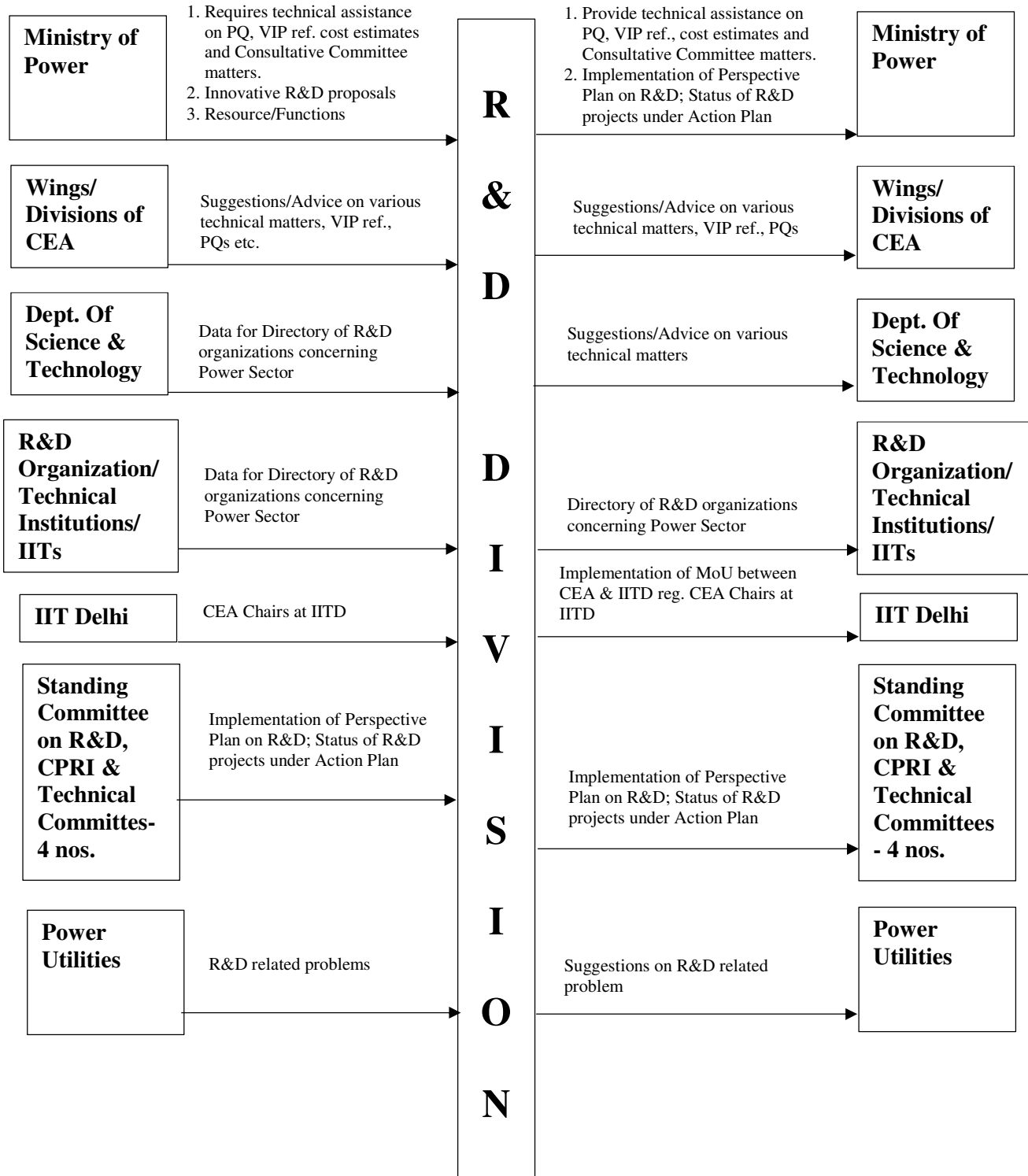
MIS/01	MIS Report	1	00	16.03.10
QO	Quality Objectives Deployment for R&D Division	1	00	16.03.10
AP	Action plan for Quality Objectives of R&D Division	8	00	16.03.10
RD	Revision of Document	1	01	11.5.2016
DL	Distribution list	1	00	16.03.10

INTERACTION MATRIX

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM PROCEDURE (ISO 9001-2008 Clause -4.1)		Doc. No.: PLG/R&D/IM/01 Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Interaction Matrix		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Input/Supplier

Output/Customized



ORGANISATION CHART



Planning Wing, CEA,
New Delhi.

QUALITY SYSTEM
(ISO 9001-2008 Clause -5.5)

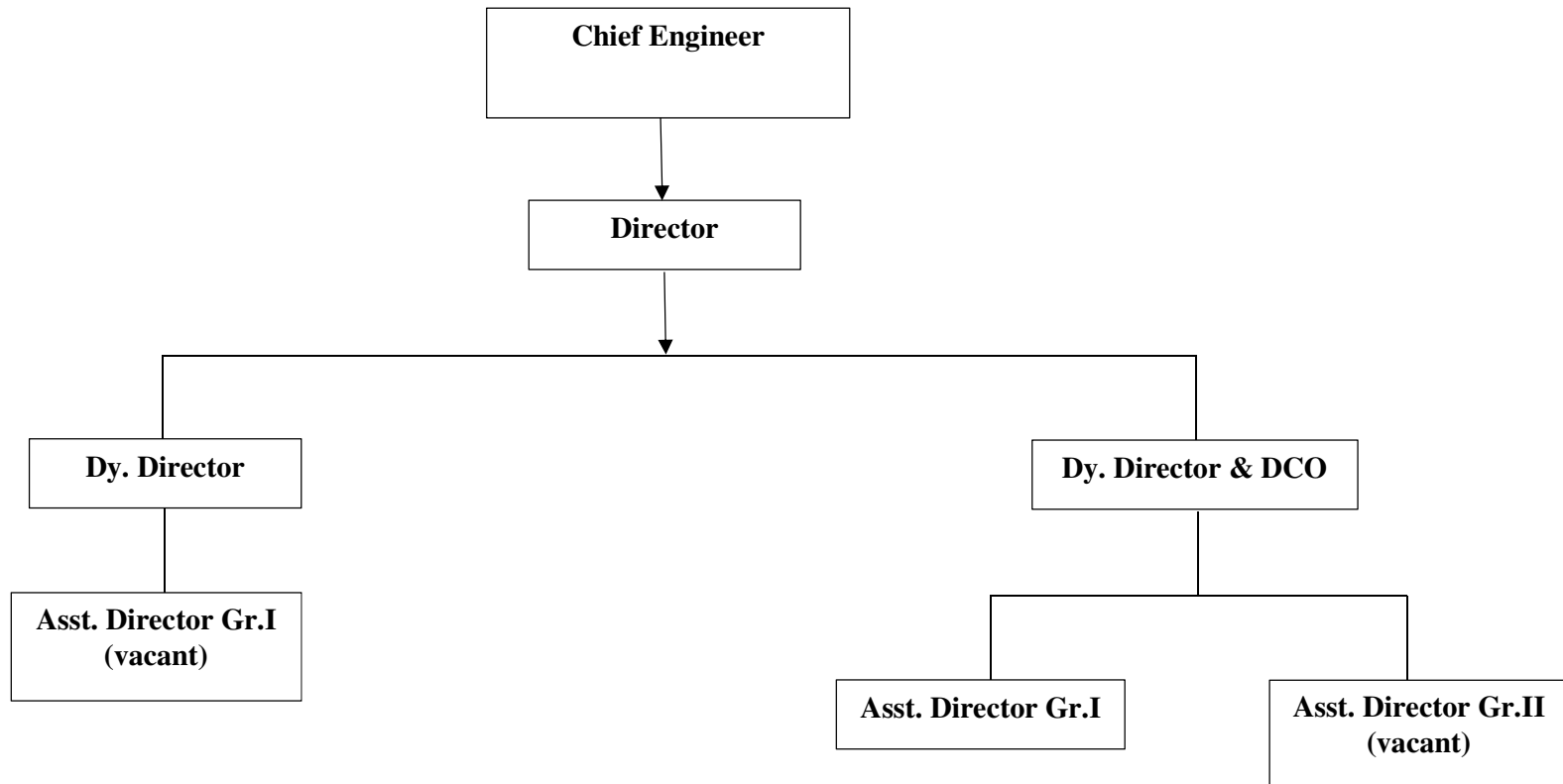
Title: Organization Chart of R&D Division

Doc. No.: PLG/R&D/OC
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Prepared by: CE(R&D)

Approved by: Member (P)

Issued by: Nodal Officer (P)




ROLES & RESPONSIBILITIES OF VARIOUS FUNCTIONARIES

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -5.5)		Doc. No.: PLG/R&D/R&R Issue No.: 02 Page 1 of 3 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Roles & Responsibilities		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Chief Engineer (R&D):-

Activity	Roles and Responsibilities
Preparation of Directory of R&D Organizations in power sector	<ol style="list-style-type: none"> 1. Approval of letters to be sent to listed organizations. 2. Approval of the compiled Directory.
Examination of proposals of innovative nature in power sector	Approval of comments on the proposal of innovative nature in power sector.
Examination of proposals for recommendation of R&D units / organization in power sector.	Approval of the comments / recommendations on the proposal for R&D units / organizations in power sectors.
Implementation of CEA Chairs at IIT Delhi-Research Project	<ol style="list-style-type: none"> 1. Approval of topics for research to be done at IITD, approval of proposals of research to be done at IITD, periodic review of the research being carried out at IITD and implementation of the findings of the research work. 2. Organizing meetings of the Management Committee for implementation of MoU signed between CEA and IITD on CEA chairs at IITD.
Implementation of CEA Chairs at IITD - M.Tech/Ph.D. programs	Approval of the applications for admission to IITD for M.Tech / Ph.D. courses, attending meetings of the selection committee at IITD for short listing / final selection of candidates.
Technical Contribution for various committees	Approval for notes on the agenda, representing CEA in meeting of various committees
Implementation of National Perspective Plan of R&D in Power sector.	<ol style="list-style-type: none"> 1. Implementation of action plans on R&D contained in the national perspective plan on R&D prepared by the standing committee on R&D. 2. Coordinate discussions on the project proposals in the meetings of the standing Committee and technical committees for implementation of action plans on R&D and ensure implementation of the results of research & development under the perspective plan on R&D.


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -5.5)		Doc. No.: PLG/R&D/R&R Issue No.: 02 Page 2 of 3 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Roles & Responsibilities		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Director (R&D)

Activity	Roles and Responsibilities
Preparation of Directory of R&D Organizations in power sector	<ol style="list-style-type: none"> 1. Forwarding letter to the identified R&D organizations 2. Validation of the data compiled for the Directory. 3. Organizing the directory to be hosted on CEA website. 4. Organizing visits to R&D works and Upgradation /Modification of the Directory.
Examination of proposals of innovative nature in power sector	<ol style="list-style-type: none"> 1. Organizing meetings / site visits for finalization of comments 2. Demonstration of the innovative proposal, if required, are also organized. 3. Forwarding comments to the concerned agencies.
Examination of proposals for recommendation of R&D units / organization in power sector.	Preparation of consolidated comments on the proposals for recommendation of R&D unit / organization in power sector and obtaining approval of Chief Engineer (R&D).
Implementation of CEA Chairs at IIT Delhi – Research Project	<ol style="list-style-type: none"> 1. Consolidation of research topics for research at IIT Delhi under the MoU. 2. Carrying our quarterly review of research work 3. Implementation of MoU signed between CEA and IITD.
Implementation of CEA Chairs at IITD-M.Tech /Ph.D programs.	Organizing timely submission of forms for admission to M.Tech/Ph.D. courses at IITD and periodic review of the progress of sponsored candidates admitted to IIT Delhi.
Technical contribution for various committees	Examination of agenda, finalization of notes and organize follow up action on the concerned issues.
Implementation of National Perspective Plan of R&D in Power Sector.	Coordinate activities of the Standing Committee on R&D and coordination of the action plan with technical committees, lead agencies, standing committee on R&D and executive committee.

Dy. Director-I/Assistant Director

Activity	Roles and Responsibilities
Examination of proposals of innovative nature in power sector	Examination of proposal of innovative nature in power sector and preparation of comments


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -5.5)		Doc. No.: PLG/R&D/R&R Issue No.: 02 Page 3 of 3 Page Rev. No.: 00 Effective date: 16.03.2010
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Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Activity	Roles and Responsibilities
Examination of proposal for recommendation of R&D units / organization in power sector	Preliminary examination of the proposals and organizing comments of specialized Divisions on the proposals.
Implementation of National Perspective Plan of R&D Power Sector.	<ol style="list-style-type: none"> 1. Attend meetings of the Technical committees and lead agencies and the meeting of Standing Committee on R&D and Executive Committee. 2. Follow up action with the various technical committees and obtaining the progress of implementation.

Dy. Director-II/ Asst. Director

Activity	Rules and responsibilities
Preparation of Directory of R&D Organizations in power sector	<ol style="list-style-type: none"> 1. Collection, examining and identification of addresses on R&D organization in power sector 2. Examination and compilation of data received from R&D organizations 3. Feeding of the data into computer and publication of Directory. 4. Visit of R&D works to collect firsthand information of upgradation / modification of Directory.
Examination of proposal of innovative nature in power sector	Examination of proposals of innovative nature in power sector and preparation of comments.
Implementation of CEA Chairs at IIT Delhi-research Project	<ol style="list-style-type: none"> 1. Obtaining problem areas in respect of different units for research at IIT Delhi. 2. Review of the research work being done at IITD. 3. Obtaining applications for M.Tech/Ph.D. courses at IITD 4. Examination of the bio data received. 5. Obtaining necessary forms from IITD and distribution to the prospective candidates. 6. Periodic review of progress of the sponsored candidates for M.Tech/Ph.D.
Implementation of National Perspective Plan of R&D in Power Sector.	Coordinate activities of the Standing Committee on R&D and coordination of the action plan with technical committees, lead agencies, standing committee on R&D and executive committee.
Administrative work	Divisional Coordinating Officer

LIST OF PROCESSES

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.1)		Doc. No.: PLG/R&D/LoP/01 Issue No.: 02 Page 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: List of Processes		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

This Division is involved in Research & Development activities in Power Sector as per Electricity Act 2003.

List of Processes: -

1. Publication / updating of Directory of Research Organization in Power Sector
2. Implementation of National Perspective Plan for R&D in Power Sector.
3. Implementation of CEA chairs at IIT Delhi
 - a). Research Projects
 - b). M.Tech /Ph.D. Programs
4. Technical contribution in various committees of
 - a). MNRE
 - b). CPRI
 - c). Others
5. Examination of Proposal of innovative nature in Power Sector
6. Examination of Proposal for recognition of R&D units / Organizations in Power Sector.

**PUBLICATION / UPDATION OF
DIRECTORY OF RESEARCH
ORGANIZATIONS IN POWER SECTOR**



Planning Wing, CEA,
New Delhi.

Prepared by: CE(R&D)

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

Title: Publication and updation of Directory of R&D organizations in power sector

Approved by: Member (P)

Issued by: Nodal Officer (P)

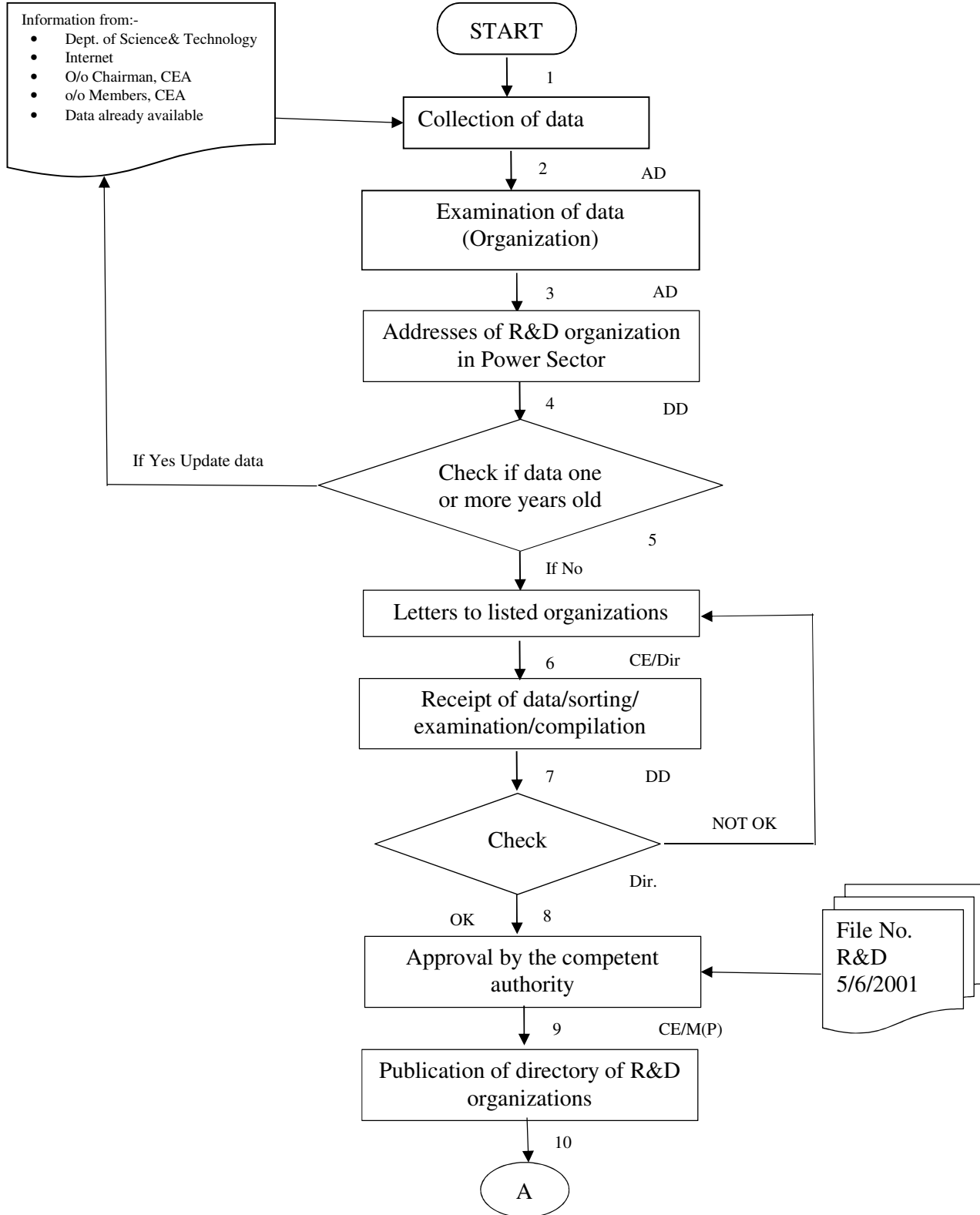
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Issue No.: 02

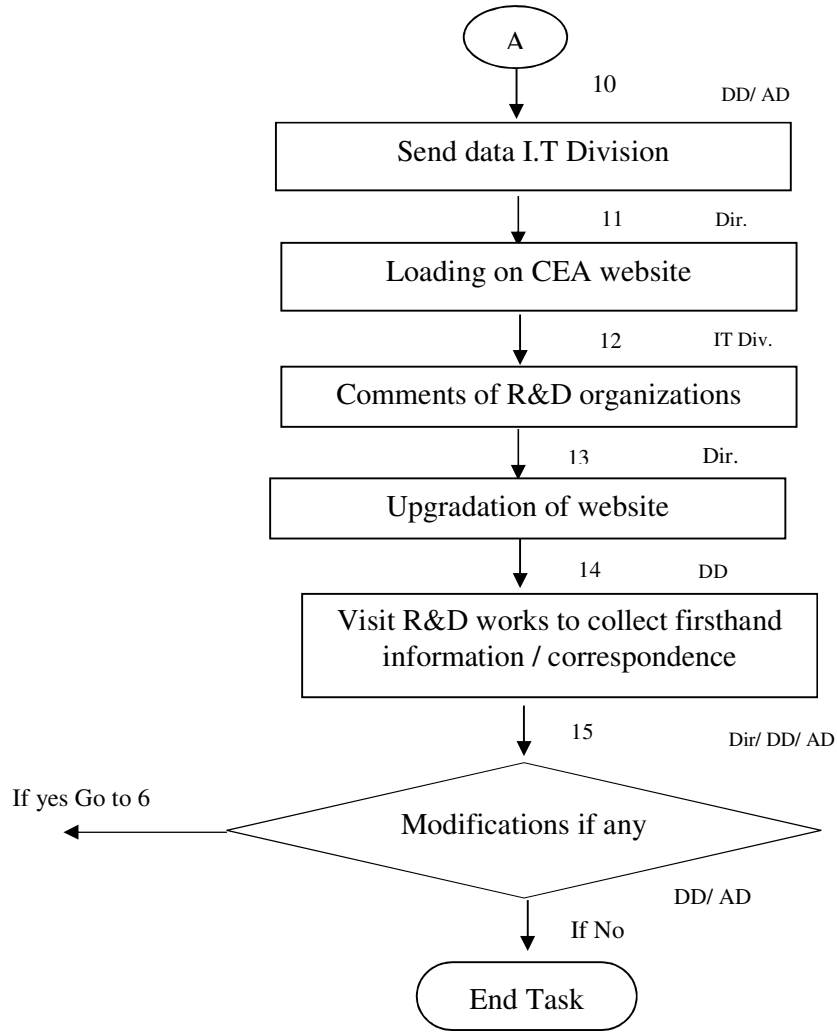
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	Title: Publication and updation of Directory of R&D organization in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	



 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/01 Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Publication and updation of Directory of R&D organization in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

1. **PURPOSE:**
 - i). Promoting research in the matters affecting generation, transmission and supply of electricity.
 - ii) To provide a document to R&D organizations / institutions to interact on the areas of common interest to avoid duplication of R&D efforts and save time and money.
2. **SCOPE:** To provide information about R&D work being carried out and proposed to be taken up in future by all the organizations / institutions concerning power sector in the country.
3. **OVERALL RESPONSIBILITY:** Chief Engineer
4. **PROCEDURE:-**

S. No.	Activity	Description	Responsibility	Document
4.1	Collection of data	Addresses and contact Numbers to be collected from available sources in CEA and from the catalogues available at the Department of Science & Technology interned, science journals/ magazines etc.	Assistant Director	File No. R&D/5/6
4.2	Examination of data	To examine all the available addresses at (1) above and zero in to such addresses a concerning R&D in Power Sector	-Do-	File No. R&D/5/6
4.3	Listing R&D organization / institutions in Power Sector	Ensure completeness and correctness of address	Dy. Director	-do-
4.4				
4.5	Letter to all the listed Organization / Institutions	<ol style="list-style-type: none"> 1. Decision of information to be collected 2. Approval of format by competent authority on which information to be obtained 3. Draft/finalized letters sent to above organizations and dispatch 	Director /CE (R&D)	-do-
4.6	Receipt of data, its examination, sorting and compilation.	<ol style="list-style-type: none"> 1. Information received from the Organizations / Institutions to be examined, to identify Organization / Institute. Carrying out R&D work concerning power sector. 2. Categorization and classification of data in the specific areas of research like generation (hydro / thermal/ nuclear) transmission, distribution etc. 3. All the relevant data to be keyed in the P.C. to formulate a draft directory (MS Access) 	Dy. Director / Assistant Director	F. No. R&D/5/6

 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/01 Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Publication and updation of Directory of R&D organization in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


S. No.	Activity	Description	Responsibility	Document
4.7	Checking the draft directory	The draft directory so prepared to be checked up thoroughly with the original data and correction to be carried out. if any information is found missing same is to be obtained from the concerned agency through letter /fax/internet as the case may be. Moreover, the document to be crosschecked for any mistake to avoid human error.	Dy. Director / Director	F. No. R&D/5/6
4.8	Approval by the competent authority	Draft directory to be approved by the competent authority, carry out correction as suggested.	Member(p) /CE(R&D)	F. No. R&D/5/6
4.9	Publication of Directory	After approval the final printout to be taken and binding etc. to be done	Dy. Director /Asst. Director	Copy of Directory
4.10	Sent Data to IT Division	Data to be sent to IT Div. for loading into CEA Web-site. For this purpose, a soft copy as well as a hard copy to be provided to IT Div. Soft Copy to be formatted in 'HTML' format.	Dy. Director /Director	F. No. R&D/5/6
4.11	Loading into CEA Website	Access of the web site to all Website	IT Div.	--
4.12 4.13	Up gradation of the Directory & Website	R&D agencies to be approached to furnish data regarding any modifications in the status, addresses etc. and to carry our necessary up gradation in the data bank.	Dy. Director /Director	F. No. R&D/5/6
4.14	Visit to R&D works	R&D works to be periodically visited to get the first hand information about the R&D being carried	Director /DD/AD	-DO-
4.15	Modification	Based on the information collected, modification to be carried out in the data in P.C.	AD/DD	-DO-

5. Reference Documents:


- Reference available in other Division of CEA.
- Dept. of Science & Technology.

6. Distribution:

- The Directory is hosted at CEA web site available to all.
- Letters to R&D org. listed in the Directory intimating above


 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/01 Issue No.: 02 Page 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Publication and updation of Directory of R&D organization in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

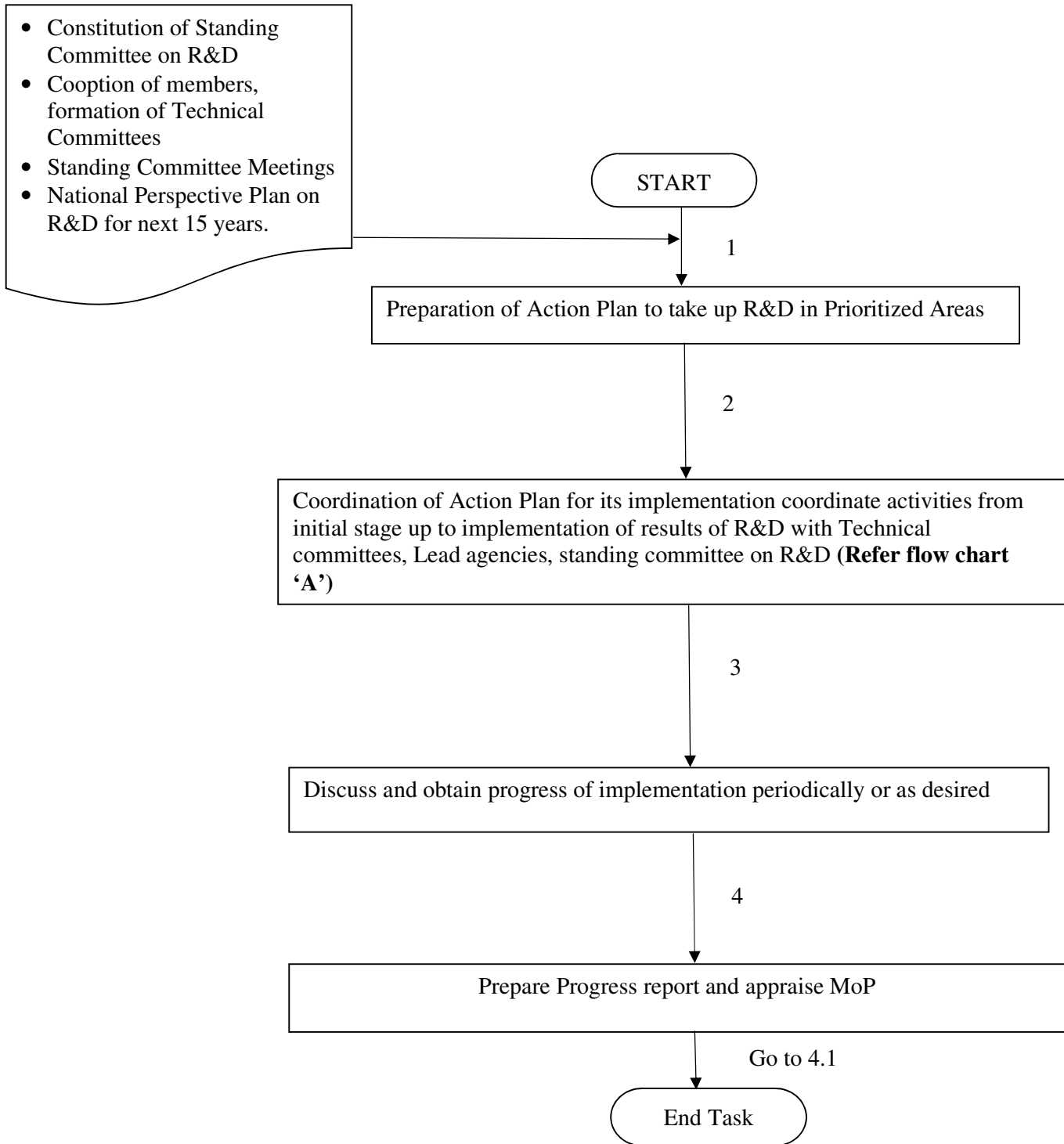
Process/activity stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of check/ Methodology		
Collection of data	<ul style="list-style-type: none"> Preliminary R&D related Power sector related time Period -15 days 	All the parameters should be met	Be Post/Fax by Email DST Publication	AD	File No. R&D/5/6
Examination of data	-do- Time Period -20 days	-do-	-	-do-	File No. R&D/5/6
Power sector Addresses	Completeness of address, Tel. No., Fax No./Name of contact person etc. Time Period-5 days.	Address should be complete in all aspects	--	DD	File No. R&D/5/6
Letter to all listed organizations	Information as per approved format Time Period-20days	--	--	Dir./CE(R&D)	File No. R&D/5/6
Receipt of data Examination, sorting and compilation	<ul style="list-style-type: none"> R&D related Power sector reacted Detailed Time Period-30 days Reminder to be issued every 45 days	<ul style="list-style-type: none"> The organization should be involved in R&D related to Power sector. The details should conform to format 	3 months	AD/DD	File No. R&D/5/6
Check	<ul style="list-style-type: none"> Correctness of data Completeness Time Period-10 days 	Both parameters should be met	---	Dir./DD	File No. R&D/5/6
Approval & Publication	<ul style="list-style-type: none"> Layout Scope of R&D Time Period-15 days 	Approval by Member (Plg.)	Printout on PC and binding	DD/AD	File No. R&D/5/6
Send data to IT Div.	Time Period-15 days	Formatted to html		Dir./DD	File No. R&D/5/6
Loading on CEA Website	--			IT Division	--
Up gradation of the directory & website	--	Any modification report by the R&D Org.	Annually	AD/DD/Dir.	
Visits to R&D works	Changes	--	--	AD/DD	File No. R&D/5/6
Modification if any	Changes	--	--	AD/DD	File No. R&D/5/6


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/01 Issue No.: 02 Page 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Publication and updation of directory of R&D organization in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

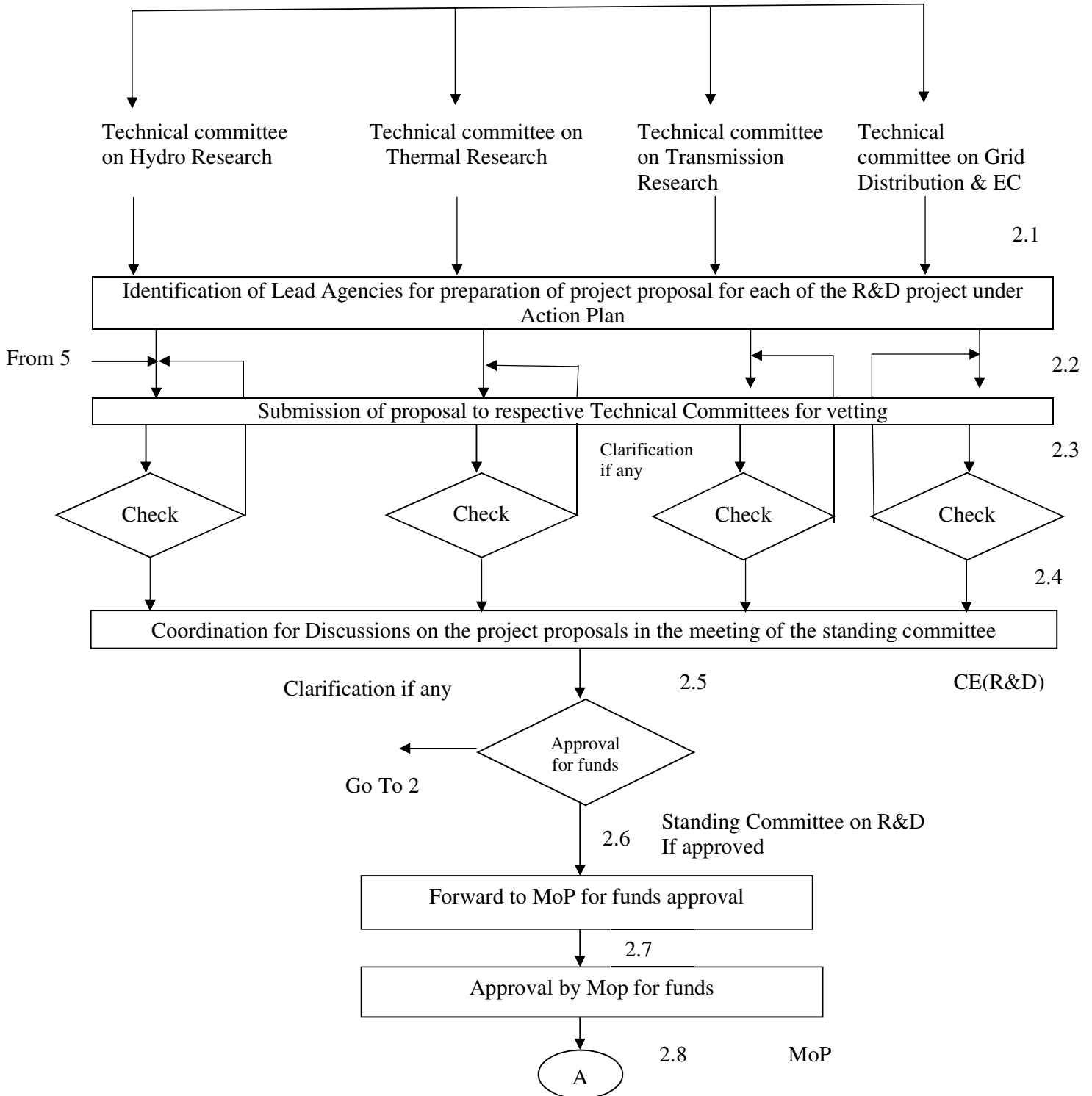
Process / Activity Stage	Measurable Parameters (Critical to quality)			Reasons	Corrective & preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Collection of data	15 days					
Examination of data	20 days					
Power Sector Addresses	5 days					
Letter to all listed Organizations	20 days					
Receipt of data examination, sorting and compilation	30 days					
Check	10 days					
Publication	15 days					
Sent data to IT Div.	15 days					
Loading on CEA website	-					
Updating website	-					
Visit to R&D works	-					
Modification if any	-					
End Task	-					


**IMPLEMENTATION OF NATIONAL
PERSPECTIVE PLAN FOR R&D IN POWER
SECTOR**

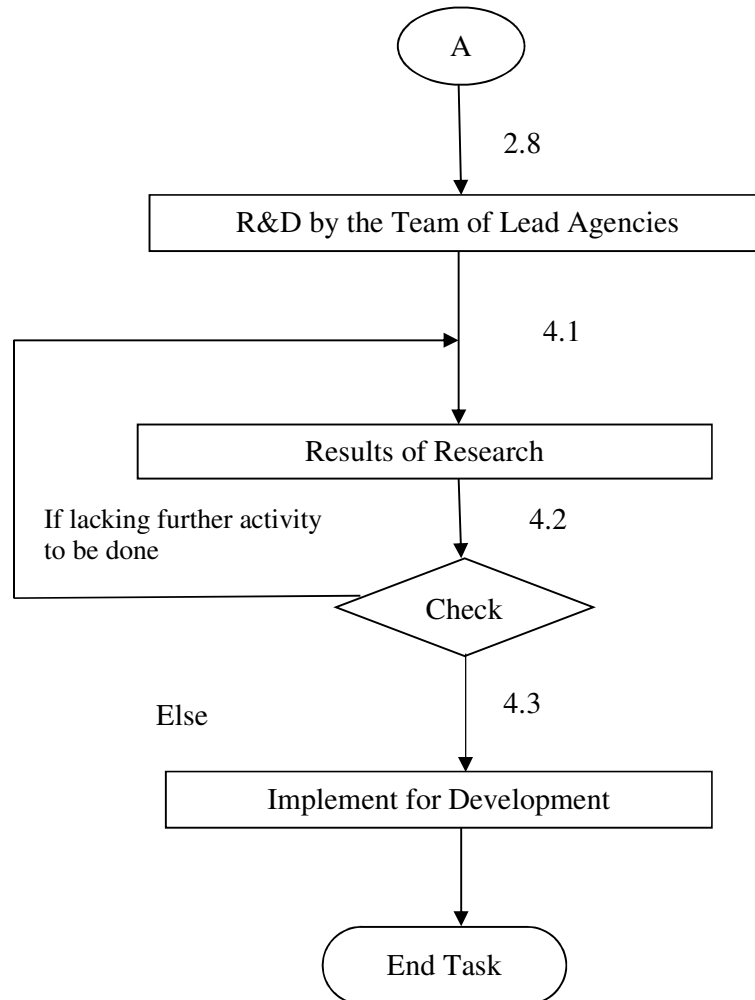
 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/02 Issue No.: 02 Page 1 of 3 Page Rev. No.: 01 Effective date: 11.5.2016
	Title: Implementation of national perspective plan of R&D in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	




	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/02 Issue No.: 02 Page 2 of 3 Page Rev. No.: 01 Effective date: 11.5.2016
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Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	



 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/02 Issue No.: 02 Page 3 of 3 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Implementation of national perspective plan of R&D in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	




Note:- In all the meeting of SC, TF representation from R&D Division would ensure smooth conduction of meeting.

 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/02 Issue No.: 02 Page 1 of 1 Page Rev. No.: 01 Effective date: 11.5.2016
	Title: Implementation of national perspective plan of R&D in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


1. **Purpose** : Promotion of research in the matters affecting the generation, transmission and distribution.
2. **Scope** : Coordination of implementation of National Perspective Plan for R&D In power sector for 15 years
3. **Overall Responsibility** : Standing Committee on R&D
4. **Procedure** :

Sl. No.	Activity	Description	Responsibility	Document
4.1	Preparation of Action Plan to take up R&D in Prioritized Areas	A standing committee on R&D was constituted by MoP in Feb,2001 to accomplish above purpose.	MoP, Chairman, CEA/DG, CPRI	MoP Order No. 3/8(iii) / 2001-T&R Dated: 26/02/2001
4.2	Coordination of Implementation of Action Plan	R&D Division has to coordinate the implementation of Action Plan at each step. The various steps involved for each of the Technical committees (hydro, thermal, transmission and grid distribution & EC) are identification of lead Agencies for preparation of project proposal for each of the R&D project, submission of proposals after vetting by Technical committees to CPRI, the member convener, Discussion of the project proposals in the meetings of standing committee, forwarding the recommendations to MoP for funds Research by the Lead Agencies (periodical feedback), implementation of results of the research for development in power sector.	CE (R&D), Conveners Technical committee, Lead Agencies CPRI	File No. 5/8/2003
4.3	Discuss and obtain progress of implementation	The progress of implementation to be discussed at each of the above steps and information collected periodically or as desired by MoP/senior officers.	Dir.	File No. 5/8/2003
4.4	Preparation of progress reports.	Progress reports to be prepared periodically/quarterly and sent to MoP as per the requirement.	Dir.	File No. 5/8/2003


5. **Reference Documents** :
 - National Perspective Plan of R&D
 - Proposals for R&D by lead agencies
6. **Distribution** :
 - Electric Power Utilities
 - Equipment Manufacturers for Power Sector
 - Ministry of Power

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/02 Issue No.: 02 Page 1 of 2 Page Rev. No.: 01 Effective date: 11.5.2016
	Title: Implementation of national perspective plan of R&D in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Preparation of Action Plan to Take up R&D in Prioritized Areas	Objectivity of R&D topics Completed	As agreed by the Standing Committee	Meeting/ discussion	Chairman, CEA/DG, CPRI	Report Presentation
Coordination of Action Plan: a) Identification plan in consonance with Technical committees	Objectivity of R&D topics Completed	As agreed by the Standing Committee	Meeting/ discussion	Convener Technical committees	Report Presentation
b) Identification of lead Agencies	Format as approval by the Task Completed	Acceptance by the agency to become lead agencies	Discussions/ Communication	Standing Committee/ Technical committee Convener	File No. 5/8/2003
c) Preparation of project proposal for each of the R&D project	- Time - Format as approval by the Technical committees/ Standing Committee Completed	As agreed by the Standing Committee	Meetings/ discussion/ Agency follow up	Lead Agency, Convener Technical committee, CE (R&D)	File No. 5/8/2003
d) Vetting of proposals by the Technical committees	- Time - Objectivity/ Deliverables as identified by the Standing Committee Completed	- One month - Objectivity/ Deliverables met.	Meetings/ discussion follow up	Convener Technical committee	File No. 5/8/2003
e) Approval of the proposal by the Standing Committee on R&D & forwarding the recommendation to MoP	Objectivity	The proposal should meet the objective/ deliverable	Examination & Discussions by Standing Committee Members	Chairman, Standing Committee	File No. 5/8/2003

 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/02 Issue No.: 02 Page 2 of 2 Page Rev. No.: 01 Effective date: 11.5.2016
	Title: Implementation of national perspective plan of R&D in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
f) Release of Funds: I. Perusal with MoP for funds II. Correspondence with CPRI, Technical committees & MoP III. Preparation of brief for Standing Committee IV. Vetting Of minutes of meeting	As & when required 10 days 10 days 15 days	Need based	Follow up	MoP	
g) Monitoring of progress of R&D by Lead Agencies	Time Schedule (Bar Chart) PERT CHART	Timely completion	3 months	Lead Agencies/ Technical committee/ Dir. (R&D)	File No. 5/8/2003
Preparation of Progress Report of Research	Time Period – 15 days	Quarterly for quarts ending March, June, September & December	Discussions/ communication /Site Visits	CPRI/CE (R&D)/ Technical committee Conveners	-do-
Implementation of Results of Research	Suitability to the addressed problem.	Successful implementation of achievements of the objectives	Meeting/ discussion	Technical committees Convener/ CE (R&D)/ Chairman, Standing Committee	-do-

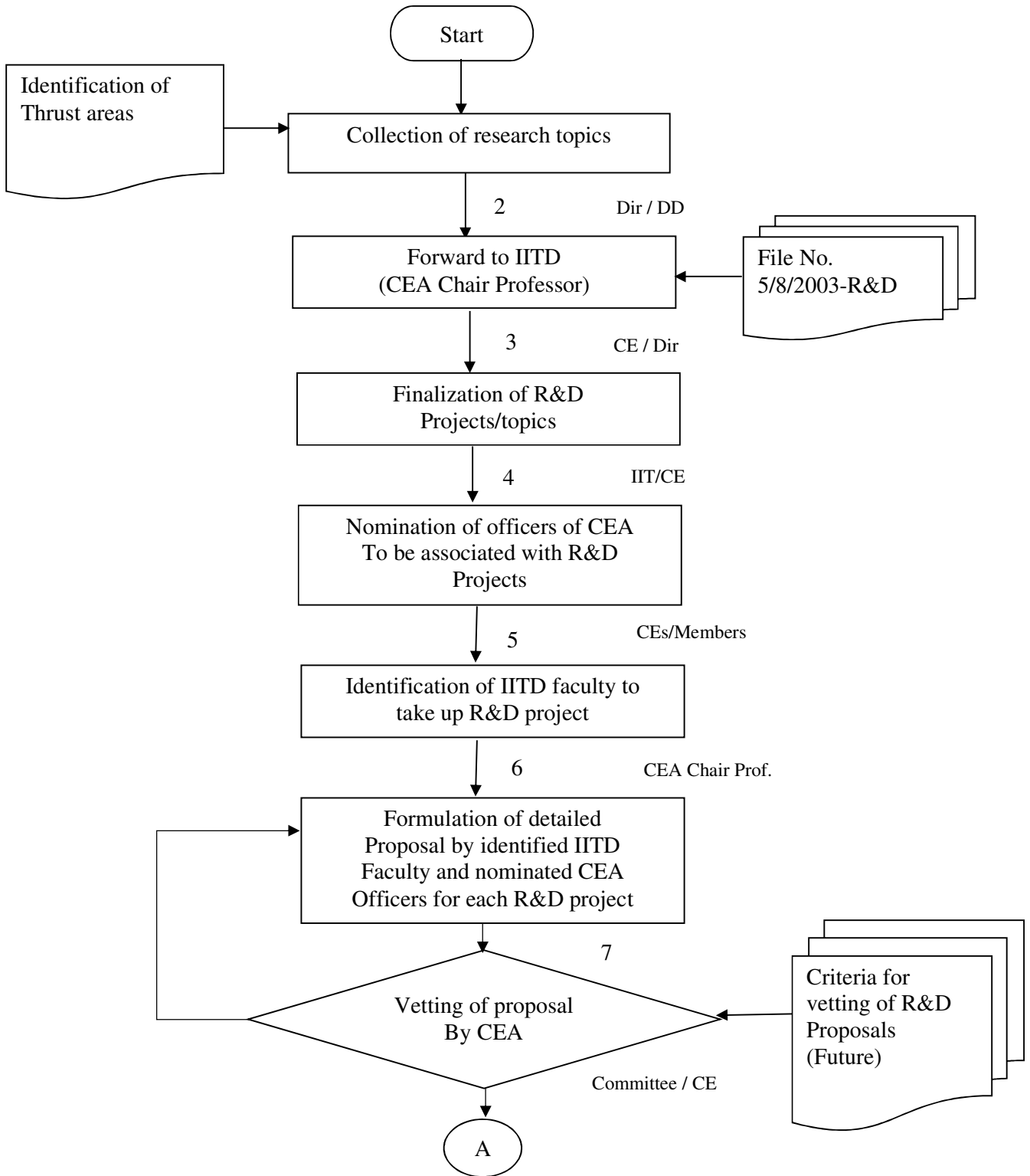
 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/02 Issue No.: 02 Page 1 of 1 Page Rev. No.: 01 Effective date: 11.5.2016
	Title: Implementation of national perspective plan of R&D in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Preparation of Action Plan	-				
Coordination of Action Plan:	-				
a) Identification plan in consonance with Technical committees					
b) Identification of lead Agencies	-				
c) Preparation of project proposal for each of the R&D project	-				
d) Vetting of proposals by the Technical committees	-				
e) Approval of the proposal by the Standing Committee on R&D & forwarding the recommendation to MoP	-				
f) 1. Release of Funds: 2.I. Perusal with MoP For funds II. Correspondence With CPRI, Task Force & MoP III. Preparation of Brief for Standing Committee IV. Vetting Of minutes of meeting	As & when required 10 days 10 days 15 days				
Monitoring of Progress	3 months				
Preparation of Progress Report	15 days				
Implementation of Development					

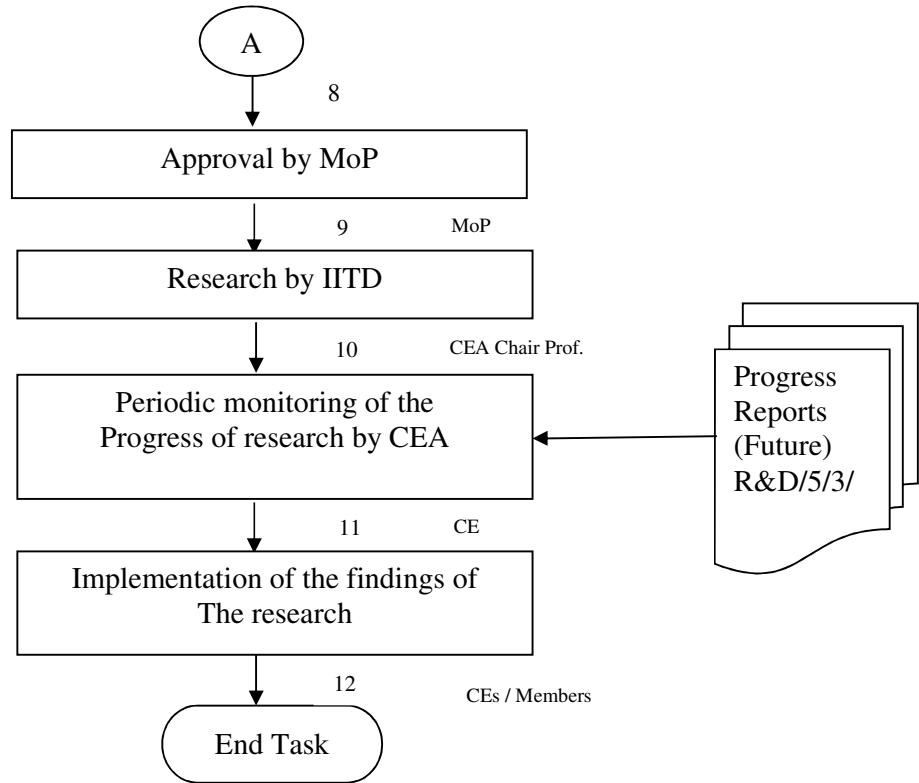
**IMPLEMENTATION OF CEA CHAIRS AT
IIT, DELHI**


(a) RESEARCH PROJECTS

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/03(a) Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	




	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/03(a) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	



 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/03(a) Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

1. **Purpose** : To develop R&D programs relevant to the needs of CEA and in the Areas defined in the appendix to MoU. (Subject to need based revision).
2. **Scope** : Coordination with all the agencies involved at each stage of work.
3. **Overall Responsibility** : Research & Development Division under Planning Wing of CEA.
4. **Procedure** :

Sl. No.	Activity	Description	Responsibility	Document
4.1	Collection of Research Topics	To consult the office of Members of CEA and obtain the problem areas in respect of all the Wings on which R&D with IITD can be carried out	Dir./DD	File No. 5/8/2003
4.2	Forward to IITD (CEA Chair professor)	Selection of relevant topics & forwarding to CEA Chair Professor at IITD with the intimation to all concerned members of CEA	CE(R&D)/Dir.	File No. 5/8/2003
4.3	Finalization of R&D Projects/Topics	Meeting & consultation with IITD, discussion on each topic based on its relevance & infrastructure available at IITD. Preparation of final list of topics to be undertaken for research by IITD.	CEA Chair Prof. at IITD	File No. 5/8/2003
4.4	Nomination of officers of CEA to be associated with R&D projects.	Letters addressed to Member/CE of CEA to select and nominate officers having at least B.E. Degree and relevant experience in the project area to be associated with.	CEs/Members of various Wings of CEA	File No. 5/8/2003
4.5	Identification of IITD faculty to take up R&D projects.	Chair Professors at IITD will Suggest faculty for each selected faculty members in association with nominated CEA officers will carry out R&D work.	IITD (CEA Chair Prof.)	
4.6	Formulation of detailed proposal by identified IITD faculty & nominated CEA officers for each R&D Project.	Identified IITD faculty & nominated CEA officers will formulate a detailed proposal on R&D topics assigned to them. Proposal should include time frame (Bar Charts), Funds, infrastructure, justification, and benefits after its implementation.	CEA Chair Prof./Nominated officers of CEA	
4.7	Vetting of proposal by CEA	A committee constituted for the purpose to review proposal formulated by IITD/CEA. Clarification, if any, to be sought from IITD. Final proposals prepared to be put up to CEA Chairman/Members for final approval. Concerned IITD faculty to make a presentation to CEA authority.	Committee (To be formed)/ CE(R&D)	File No. 5/8/2003

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/03(a) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Sl. No.	Activity	Description	Responsibility	Document
4.8	Approval by MoP	The proposal approved by CHN, CEA to be forwarded to MoP for approval and sanction of funds (if required). If the MoP seeks any clarification, the same is clarified.	Member(Plg.)/ Chairman	File No. 5/8/2003
4.9	Research by IITD	IITD in association with CEA nominated officers will carry out R&D.	IITD	
4.10	Periodic monitoring of the progress of R&D work.	A quarterly review is to be carried out for all the Research Work being done by IITD under MoU.	R&D Div.	File No. 5/8/2003
4.11	Implementation of the results of findings of the research	The findings of research work will be made public and will be used for development of Power Sector.	CE(R&D)/CEs/ Members of various wings of CEA	File No. 5/8/2003

5. Reference Documents:


- References available from other Divisions of CEA

6. Distribution:


- Electric Power Utilities
- Electric Power Manufacturers

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/03(a) Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Collection of Research Topics	Related to Power Sector problem	Parameter should be met	Problem areas identified by various wings of CEA	Dir./DD	File No. 5/8/2003
Forward to IIT, Delhi	-	-	-	CE(R&D)/Dir.	
Finalization of R&D projects/topics	<ul style="list-style-type: none"> • Need based • Infrastructure available • IITD faculty available • Funds within reach 	All the parameter should be met	Discussion	CEA Chair Prof.	File No. 5/8/2003
Nomination of officers of CEA to be associated with R&D Projects	At least 1. B.E. Degree 2. Experience in same field	Both the parameter should be met	Nomination by office of Members, CEA	CE(R&D)/ Members of various Wings of CEA	File No. 5/8/2003
Identification of IITD faculty to take up R&D Projects	- Issue of Reminder Time Period-30 days	-	-	IIT Delhi(CEA Chair Prof.)	-
Formulation of detailed proposal by identified IITD faculty & nominated CEA Officer for such projects	Issue of Reminder Time Period-30 days	Object oriented proposal	Six months	IIT Delhi Faculty/ Nominated CEA Officers	-

 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/03(a) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Vetting of proposal by CEA	1. Funds required 2. Infrastructure available/ required 3. CEA's interest as per MoU Time Period-3 Months	1,2&3 should be reasonably acceptable.	Vetting by a Committee	Committee/ CE(R&D)	File No. 5/8/2003
Approval of MoP	-	-	-	MoP	-
Research by IITD	-			IITD (CEA Chair Prof.)	-
Periodic Monitoring of the progress of R&D by CEA	1. Time frame 2. Fund utilization 3. Stating Problems if any Time Period-6 Months	6 Months	Direction, Bar Chart Discussion/ Demonstration	CE(R&D)	File No. 5/8/2003
Implementation of the findings of the Resources	Usefulness	Usefulness	-	CEs/Members of Various Wings of CEA.	-

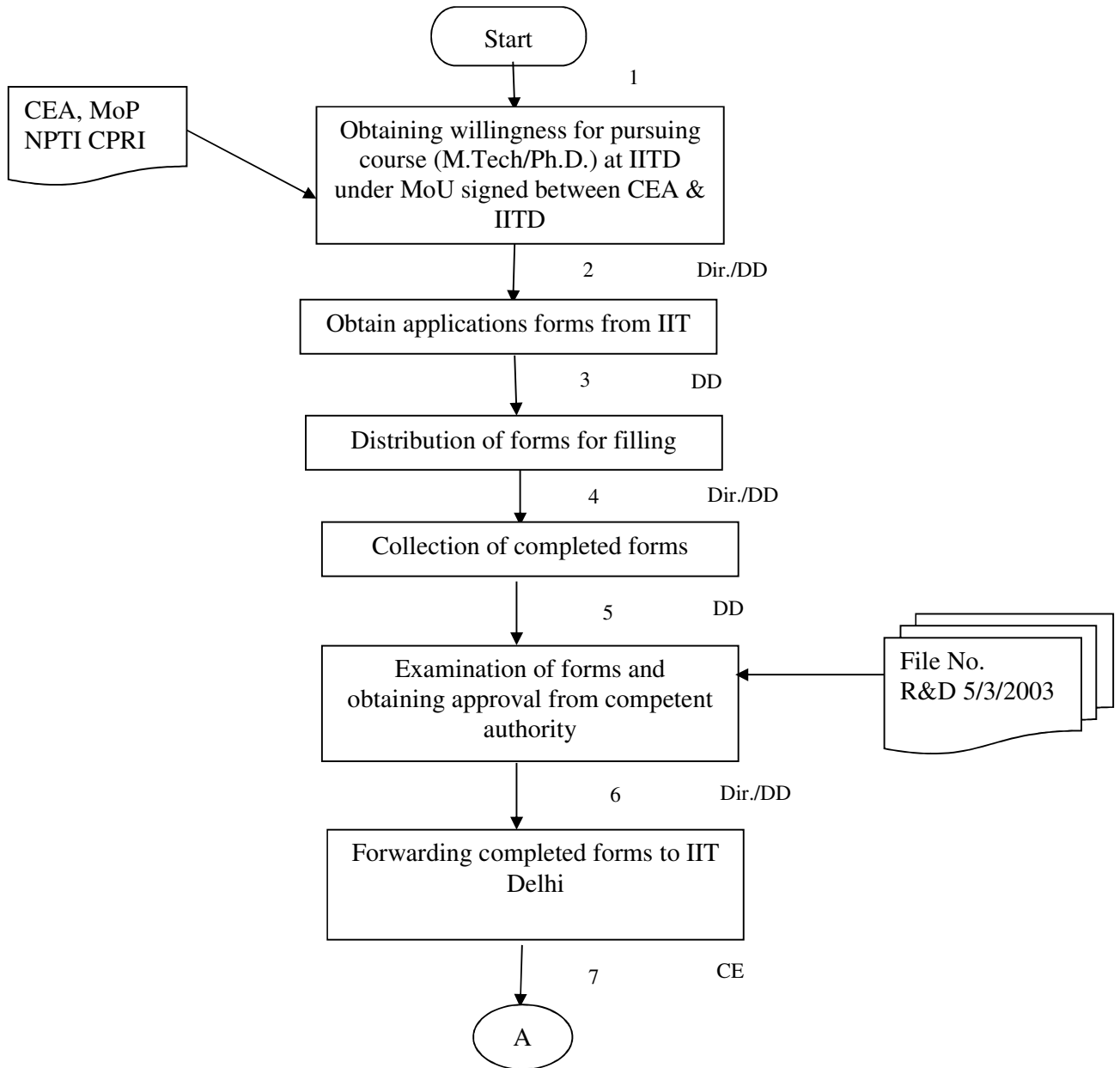
 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/03(a) Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Coordination with IIT Delhi on Research Projects		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Process/Activity Stage	Measurable Parameters(critical to quality)			Reasons	Corrective & Preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Collection of Research Topics	-	Completed	-	-	-	-
Forward to IITD	-	Completed	-	-	-	-
Finalization of R&D projects/topics	-	Completed	-	-	-	-
Nomination of officers of CEA to be associated with R&D Projects	-	Completed	-	-	-	-
Identification of IITD faculty to take up R&D Projects	Issue of Reminder 1 Month		-	-	-	-
Formulation of detailed proposal by identified IITD faculty & nominated CEA Officer for such projects	Issue of Reminder 1 Month	-			Meetings and Reminders	IITD
Vetting of proposal by CEA	3 months	-	-	Proposals not yet received	-do-	CEA
Approval of MoP	-					
Research by IITD	-					
Periodic Monitoring of the progress of R&D by CEA	6 months			R&D not yet started		
Implementation of the findings of the Resources	-					

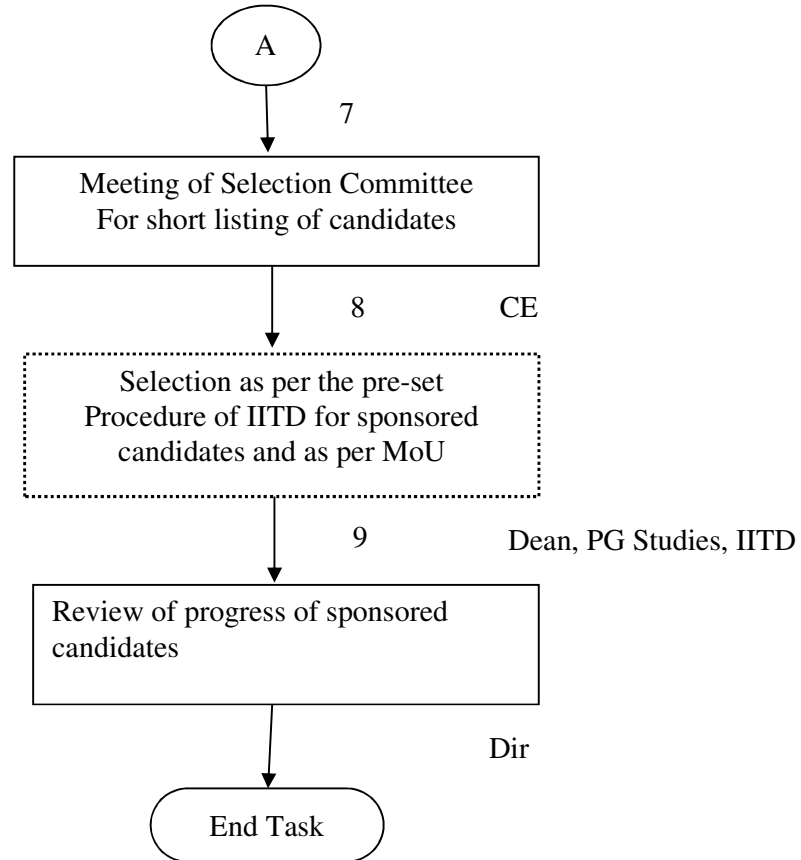
**IMPLEMENTATION OF CEA CHAIRS AT
IIT, DELHI**


(b) Ph.D./M.TECH PROGRAMS

	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/03(b) Issue No.: 02 Page 41 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: M.Tech/Ph.D. course at IIT, Delhi for CEA sponsored candidates		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	




 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/FC/03(b) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: M.Tech/Ph.D course at IIT, Delhi for CEA sponsored candidates		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	



 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/03(b) Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: M.Tech/Ph.D. course at IIT, Delhi.		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

1. **Purpose** : To update technology base of CEA officers for effective/better Contribution in Power Sector Development.
2. **Scope** : To organize admission of CEA sponsored officers at IITD for Pursuing Ph.D./M.Tech courses.
3. **Overall Responsibility** : Chief Engineer (R&D)/IITD/CEA Chair Professor
4. **Procedure** :

Sl. No.	Activity	Description	Responsibility	Document
4.1	Obtaining willingness for pursuing M.Tech/Ph.D. course.	Notice to be circulated to all divisions of CEA, MoP CPRI and NTPI requesting willingness of their officers for pursuing Ph.D./M.Tech courses at IIT Delhi under the MoU after receiving intimation from IITD for submission of application	Dir./DD	File No. 5/3/2003
4.2	Obtaining application forms from IITD	After examination of the bio-data applicants are short listed subject to fulfilment of eligibility criteria set by IITD and CEA. Thereafter application forms are obtained from the office of Registrar, P.G. Studies, IITD for these short listed candidates.	DD	File No. 5/3/2003
4.3 4.4	Filling up of forms	The forms are then distributed to eligible/selected candidates and completed application forms are obtained back.	Dir./DD	File No. 5/3/2003
4.5	Examination of forms & obtaining approval of competent authority	After thoroughly checking the application forms, forms are put up for approval of competent authority.	Dir./DD	-
4.6	Forwarding completed form to IITD	The completed application forms duly approved by the compete, IITD for further action	Dir.	File No. 5/3/2003
4.7	Short-listing of candidates for admission	Meeting of Selection Committee is organized by the Dean, P.G. Studies IITD for discussing /sorting out issues regarding selection of MoU & pre-requisites of Department Research Committee of EE Department of IITD. Two officers of CEA are also members of the Selection Committee.	Dean, P.G. Studies, IITD/ CE(R&D)	-

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/03(b) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: M.Tech/Ph.D course at IIT, Delhi.		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Sl. No.	Activity	Description	Responsibility	Document
4.8	Selection	Depending upon the procedure set by the office of P.G Studies, IITD, the Selection of sponsored candidates is carried out. For M.Tech, this may include a written test followed by interview by the Selection Committee consisting of representatives of IITD and CEA. For Ph.D., the candidates have to approach IIT faculty (ies), discuss their project /topic and obtain written consent of the faculty which is ready to guide him for his Ph.D. course.	Dean, P.G. Studies, IITD	-
4.9	Review of progress	After admission, the progress of sponsored candidates is reviewed periodically for any difficulty and progress. Periodic meetings may also be organized.	Dir	File No. 5/3/2003

5. Reference Documents :


- IIT Delhi Brochure for Admission to M.tech and Ph.D. Programs.
- MoU signed between IIT Delhi and CEA

6. Distribution :


- Ministry of power
- IIT, Delhi
- Various wings of CEA
- CPRI/NTPI

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/03(b) Issue No.: 02 Page 45 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: M.Tech/Ph.D. course at IIT, Delhi.		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Obtaining willingness for pursuing Ph.D./M.Tech Course at IIT Delhi under MoU between CEA & IITD.	1. Applicant should be engineering graduate with at least 60% marks for M.Tech and for Ph.D minimum 60% marks in the qualifying examination. 2. He / She should meet all the criteria enumerated in the brochure of IIT, Delhi. 3. Time Period-30 days	Application should be duly approved by the concerned Chief Engineer	Case basis	Dir./DD	Sample IIT Brochure (Enclosed) File No. 5/3/2003
Obtaining application forms from IITD	Prescribed form of IIT Delhi, bearing issue no. etc. Time Period-7 days	-	-	DD	-do-
Distribution of forms	1. Time frame set by IITD for submission of forms 2. Completeness of forms 3. Subject should be related to power sector 4. Time Period-15 days	1,2&3	By Post	Dir./DD	-do-
Collection of completed forms	As per IITD Schedule	-	By Post	DD	File No. 5/3/2003/

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/03(b) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: M.Tech/Ph.D. course at IIT, Delhi.		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Examination of forms & obtaining approval from competent authority	<ul style="list-style-type: none"> ▪ Completeness ▪ Eligibility criteria ▪ Time period- 15 days 	Both	Examination	Dir./DD	File No. 5/3/2003/
Forwarding completed forms to IITD	Time period 7 days	Approved by competent authority in CEA	By post/special messenger	CE (R&D)	-do-
Meeting of selection committee for shortlisting of candidates	Norms of IITD provisions of MOU	As acceptable to selection committee	Yearly for M.Tech & 6- monthly for Ph.D	CE(R&D)	-do-
Selection as per pre-set norms of IITD for sponsored candidates & as per MoU	-do-	-do-	<ul style="list-style-type: none"> ▪ Selection committee ▪ Written test ▪ Interview 	IITD-Dean, P.G Studies	-do-
Review of progress of sponsored candidate	<ul style="list-style-type: none"> ▪ Progress ▪ Difficulties if any ▪ Time period- six months 	-	Feedback from candidates 6 months	Dir.	-do-

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/03(b) Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Monitoring Matrix for M.Tech/Ph.D course at IIT, Delhi.		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable Parameters(critical to quality)			Reasons	Corrective & preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Obtaining willingness for pursuing Ph.D./M.Tech course at IIT Delhi under MOU between CEA&IITD	30 days					
Obtaining application forms from IITD	7 days					
Distribution of forms & collection of completed forms	15 days					
Examination of forms & obtaining approval from competent authority	15 days					
Forwarding completed forms to IITD	7 days					
Meeting of selection committee for short listing of candidates	As per IITD schedule					
Selection as per pre-set norms of IITD for sponsored candidates & as per MOU	As per IITD schedule					
Review of progress of sponsored candidate	6 months					

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/03(b) Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Monitoring Matrix for M.Tech/Ph.D course at IIT, Delhi.		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable Parameters(critical to quality)			Reasons	Corrective & preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Selection as per pre-set norms of IITD for sponsored candidates & as per MOU	As per IITD schedule					
Review of progress of sponsored candidate	6 months					

**TECHNICAL CONTRIBUTION IN
VARIOUS COMMITTEES**



Planning Wing, CEA,
New Delhi.

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

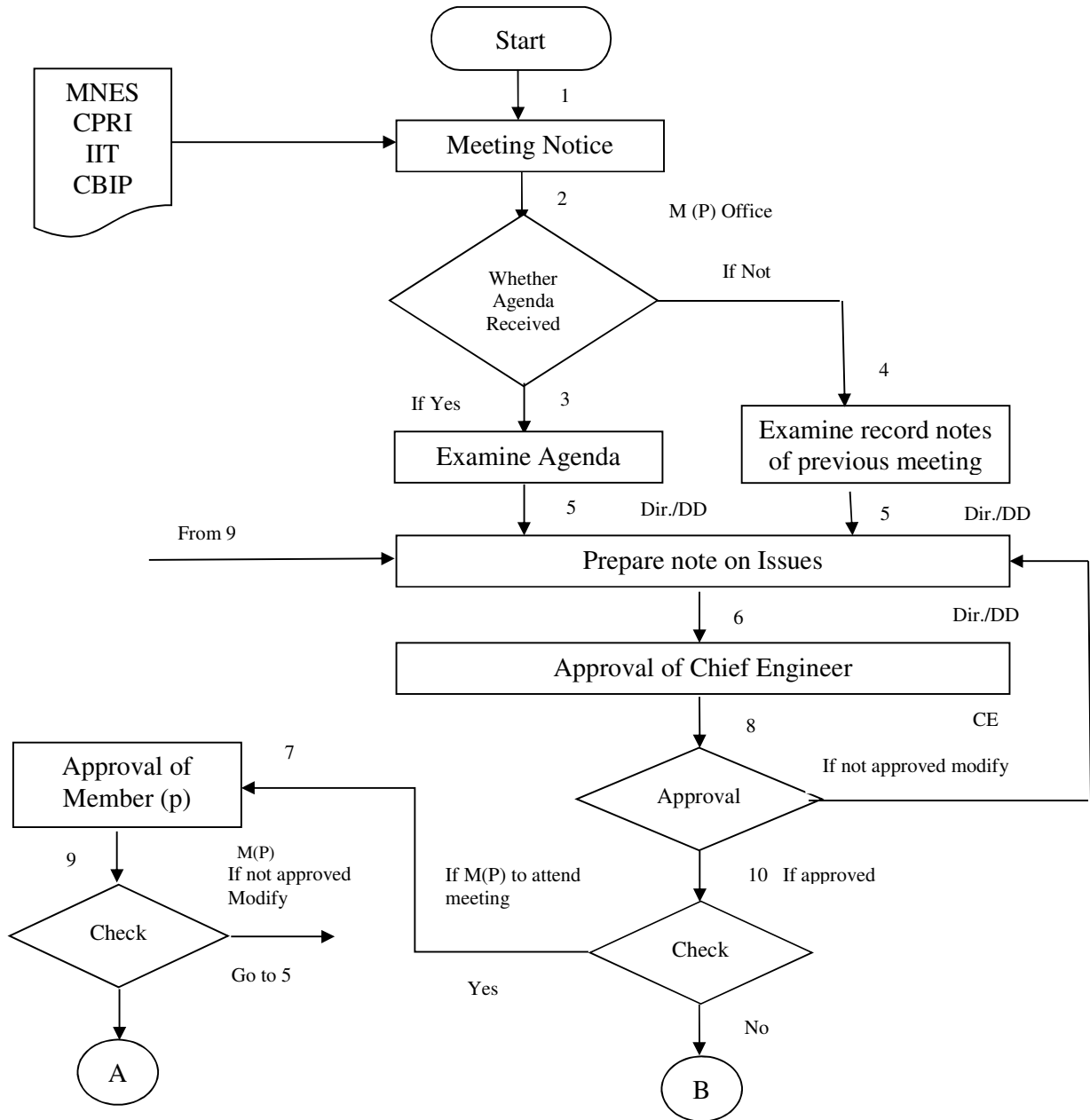
Title: **Technical Contribution In Various Committees**

Doc. No.: PLG/R&D/FC/04
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Effective date: 16.03.2010

Prepared by: R&D Division

Approved by: Member (P)

Issued by: Nodal Officer (P)





Planning Wing, CEA,
New Delhi.

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

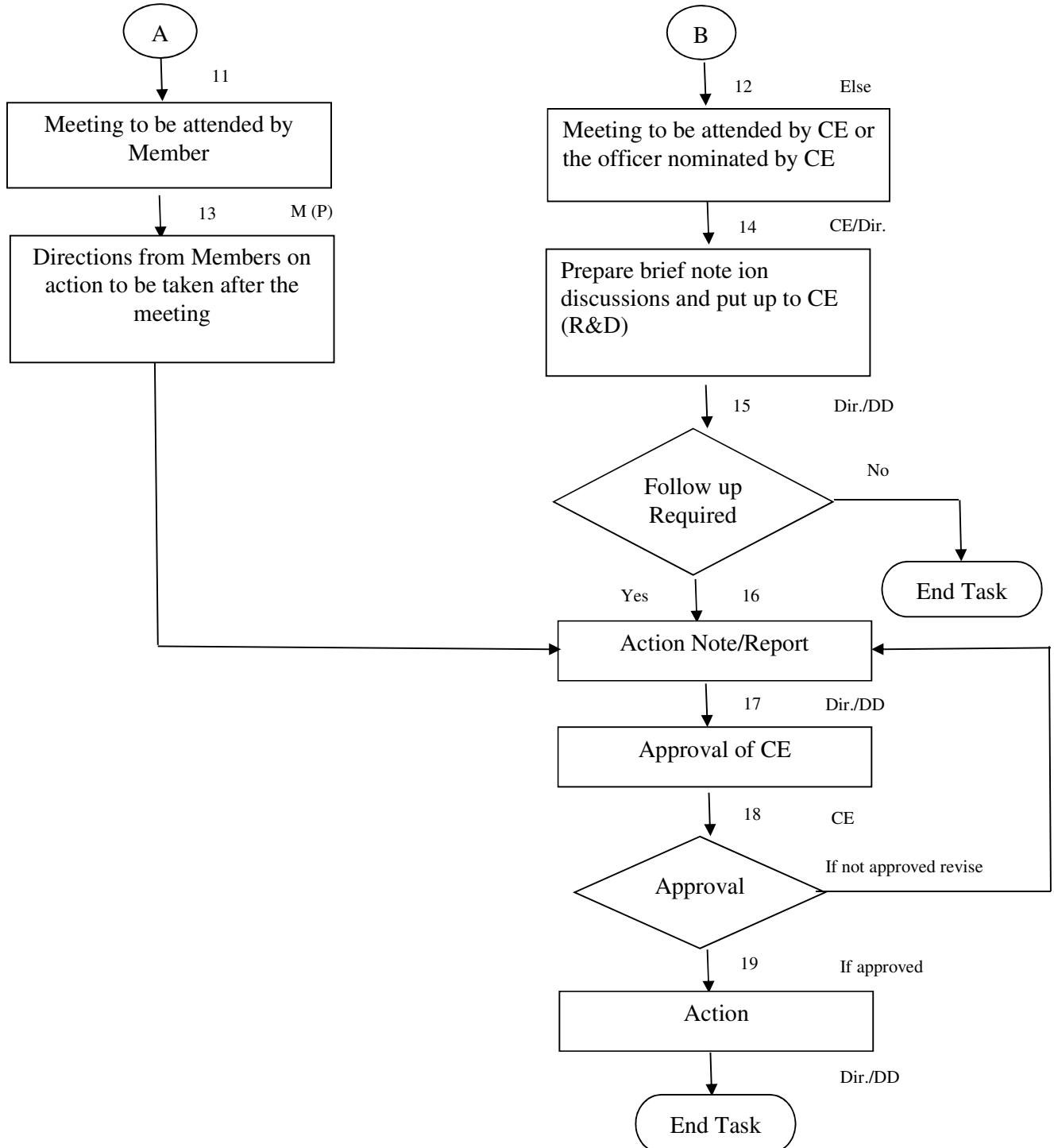
Title: **Technical Contribution In Various Committees**


Doc. No.: PLG/R&D/FC/04
Issue No.: 02
Page 2 of 2
Page Rev. No.: 00
Effective date: 16.03.2010

Prepared by: R&D Division

Approved by: Member (P)


Issued by: Nodal Officer (P)



 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/04 Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Technical Contribution In Various Committees		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

1. **Purpose** : Integrated and sustained development of Power Sector.
2. **Scope** : To present the view point of CEA in the Power Sector Development.
3. **Overall Responsibility** : Member(Planning)/Chief Engineer(R&D)
4. **Procedure** :

Sl. No.	Activity	Description	Responsibility	Document
4.1 4.2	Meeting Notice	Meeting notice received in CHN's/ Member's office and is sent to R&D Division for examination.	M(P) office	Concerned file.
4.3 4.4 4.5	Examination of Agenda	The Agenda for the meeting, if received, to be examined and brief notes on the issues to be discussed in the meeting are prepared. Necessary consultations to be done from concerned file and experts in other formations of CEA and if necessary, other agencies.	Dir./DD	-do-
4.6 4.7 4.8 4.9 4.10	Approval of note on issues	The note is to be put up on file to CE/M for approval and discussed if desired. Any modification, suggested by the CE/M is to be carried out.	CE (R&D)/ Member (P)	-do-
4.11 4.12	Attending Meeting	Meeting to be attended by M/CE/Director or any officer as nominated. Before meeting necessary tour to be approved by the competent authority and arrangement for transport etc. to be made in advance.	CE (R&D)/ Dir.	-do-
4.13 4.14	Preparation of brief note	Brief note on the issues discussed and discussions arrived at in the meeting to be prepared and put up to CE/M for their perusal.	Dir./DD	- do-
4.15 4.16 4.17 4.18	Approval of CE(R&D)/ Member(P)	-	CE (R&D)/ Member (P)	- do-
4.19	Follow up action	Matters/issues on which CEA is to take action are to be initiated/followed up under intimation to CE/M(P).	Dir./DD	-do-


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/04 Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Technical Contribution In Various Committees		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

5. Reference Documents :


- Reports of Various Committees

6. Distribution :

- Ministry of power
- Administrative Ministries of GOI, dealing in infrastructure development.

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/04 Issue No.: 02 Page 54 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Technical Contribution In Various Committees		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Receipt of Meeting notice					Concerned File
Examination of Agenda	Time	3-7 days	Previous reference +Agenda+ consultation	Dir./DD	-do-
Prepare note on issues	Time	3-7 days	-do-	Dir./DD	-do-
Approval of CE/Member (P)	Time	2 days	Put up on file and/or discussion	Member(P)/ CE (R&D)	-do-
Attending the meeting	Time Availability of Transport to meeting place	As per schedule As per norm	-	CE (R&D)/Dir.	-do-
Preparation of brief note on discussions	Time objectivity	5 day Repercussions to Power Sector	-	Dir./DD	-do-
Approval of CE/M (P)	Time	1-2 days	On file	Member(P)/ CE(R&D)	-do-
Follow up action	Time objectivity	1 day – 2 weeks	Writing letters or consultation or further examination of certain issues/computer based studies etc.	Dir./DD	-do-

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/04 Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Technical Contribution to Various Committees		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable Parameters(critical to quality)			Reasons	Corrective & preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Meeting notice meetings of the Project Appraisal Committee of CPRI	-	-	-	-	-	
Examination of Agenda	3-7 days	-	-	-	-	
Prepare note on issues	3-7 days					
Approval of CE/Member (P)	2 days					
Attending the meeting	As per schedule As per norm					
Preparation of brief note on discussions	5 days					
Approval of CE/M (P)	1-2 days					
Follow up action	1-15 days					

**EXAMINATION OF PROPOSALS OF
INNOVATIVE NATURE IN POWER
SECTOR**



Planning Wing, CEA,
New Delhi.

Prepared by: CE(R&D)

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

Title: Flow Chart for Examination of proposals of innovative nature in power sector

Approved by: Member (P)

Issued by: Nodal Officer (P)

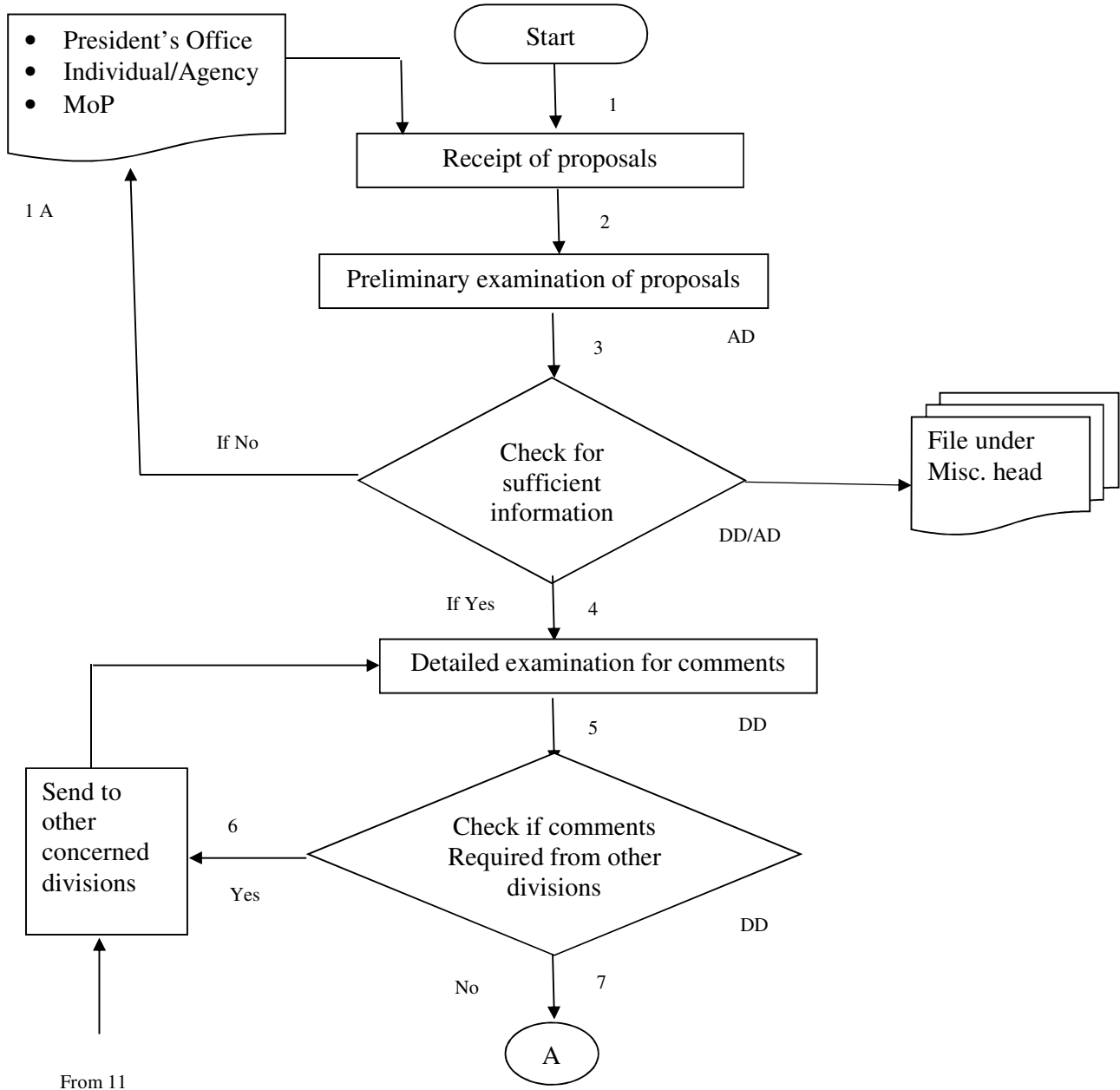
Doc. No.: PLG/R&D/FC/05

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Planning Wing, CEA,
New Delhi.

Prepared by: CE(R&D)

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

Title: Flow Chart for Examination of proposals of innovative nature in power sector

Approved by: Member (P)

Issued by: Nodal Officer (P)

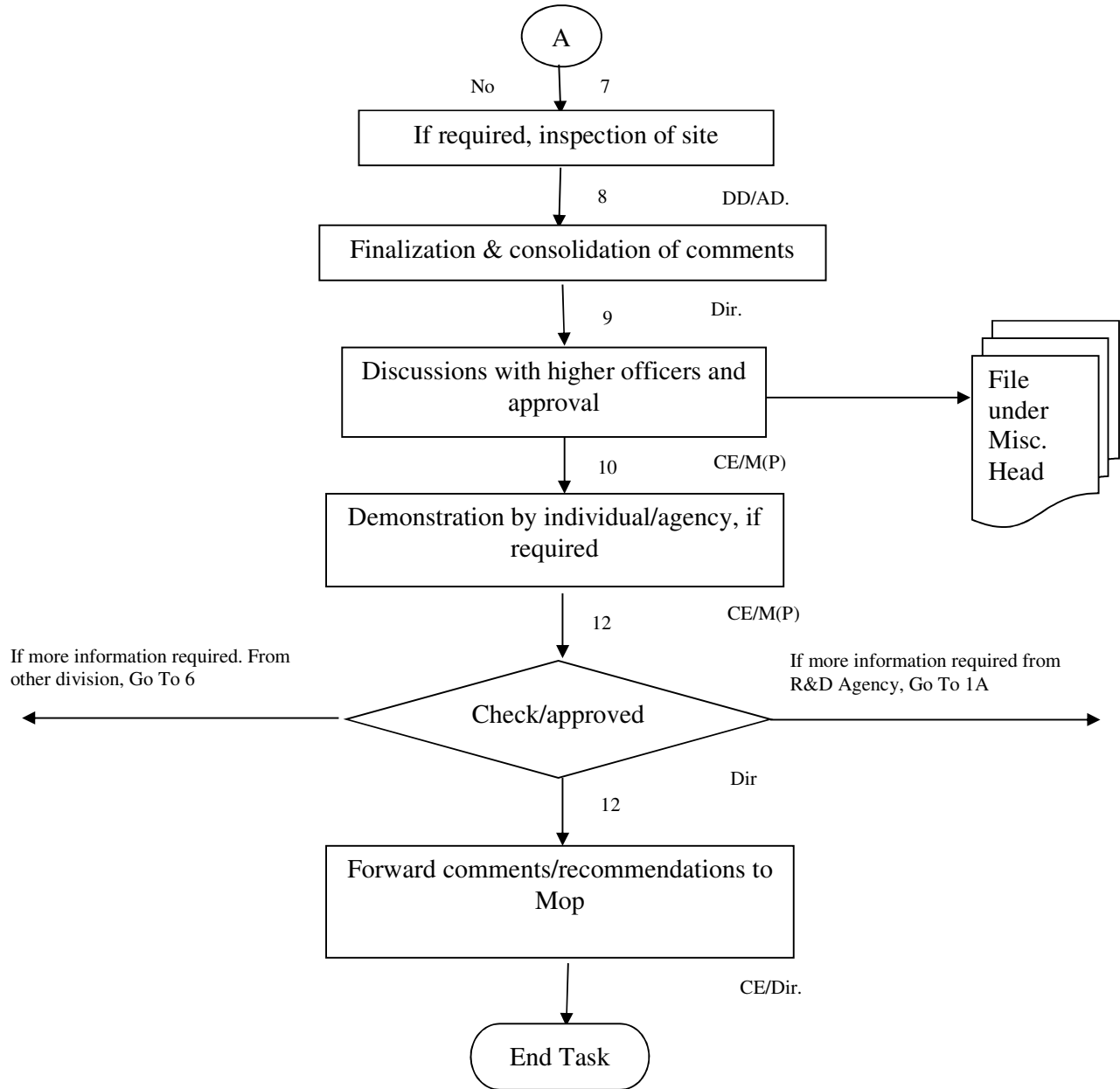
Doc. No.: PLG/R&D/FC/05


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 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/05 Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals of innovative nature in power sector		
Prepared by: R&D Division	Approved by: Member (P)	Issued by: Nodal Officer (P)	

1. **Purpose** : i) To find out the alternative (cheaper) means/devices to generate Electricity.
ii) To examine Innovative Proposals concerning Power Sector
2. **Scope** : To recommend viable & sustainable Innovative proposals for Power Sector.
3. **Overall Responsibility** : Chief Engineer(R&D)
4. **Procedure** :

Sl. No.	Activity	Description	Responsibility	Document
4.1.	Receipt of proposals	Innovative proposals are received from MoP, Individuals/Agency/President's Office.	R&D Division	Concerned file under head – Misc.
4.2 4.3	Preliminary examination of proposal.	Proposals to be suited & examined to see its usefulness to power sector, its viability and feasibility. proposals should be eco-friendly & economical. If the information supplied is insufficient, more information to the sought from the individual/agency for above.	AD	-do-
4.4 4.5 4.6	Detailed examination of proposal	Detailed study of proposals to be made in the light of information received from individual/agency for quality & availability of resources and productivity. If required, proposals to be sent to other divisions of CEA for their comments. If the reply/comments are not received within 15 days, reminder is to be sent.	DD	Check sheet
4.7 4.8	Finalization & consolidation of comments	After the site visit/meeting with other Division's representatives the comments on the proposal to be consolidated & finalized.	Director	Concerned file under head- Misc.
4.9	Discussion with higher officers and Approval	Final comments of R&D division to be put up to CE/M(P) for approval.	CE/M(P)	File as per File list

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -7.5)		Doc. No.: PLG/R&D/P/05 Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals of innovative nature in power sector		
Prepared by: R&D Division	Approved by: Member (P)	Issued by: Nodal Officer (P)	


Sl. No.	Activity	Description	Responsibility	Document
4.10	Demonstration if required	Member/CE if desires, practical demonstration of the innovative proposals could be managed by making correspondence with the individual agency. If required, detailed information on any aspect of the proposal could be sought from Individual/agency. Comments on the proposal would be again put up to CE/M(P)/CHN,CEA for approval	M(P)/CE	
4.11 4.12	Forwarding comments/Recommendations to MOP	Final comments/recommendations as approved by competent authority to be forwarded to MoP for further action.	Director/CE	File under Misc. head.

5. Reference Documents:


- Library
- Internet
- References available in other Divisions of CEA

6. Distribution:

- Ministry of Power
- Concerned Agency
- CPRI, Bangalore

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/05 Issue No.: 02 Page 61 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals of innovative nature in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Method of Check		
Receipt of proposals	Should be Innovative	Concerning to power sector	-		File under 'Misc' head
a) Preliminary examination of proposal b)if more information required	Eco-friendly, cheaper/economical, practical, feasible Time Period- 5 days Time Period- 1 month	Economical & practical Eco-friendliness	Review by expert officer/Group	AD	-do-
Detailed examination for comments	-do- Time period- 7/45 days	Productive & commercially viable.	-do-	Dy. Director	-do-
Site inspection	Technology, Procedure/Method, statistics	Successful operation at large scale	Visit if required	DD/AD	-do-
Finalization & Consolidation of comments	Correctness & completeness of comment Time period-10 days	Comments to reflect views/discussion/decisions of the group	Consolidation	Director	-do-
Discussion with higher officers and approval	Same as above Time period- 3 to 5 days	-do-	-	CE/Member(P)	-do-
Demonstration	Practicality	Can be useful for power sector	If required	-do-	-do-

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/MM/05 Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals of innovative nature in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable Parameters(critical to quality)			Reasons	Corrective & preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Receipt of proposals	-					
a) Preliminary examination of proposal	5 days					
b)if more information required	30 days					
Detailed examination for comments	7-45 days					
Site inspection	-					
Finalization & Consolidation of comments	10 days					
Discussion with higher officers and approval	3-5 days					
Demonstration	-					

**EXAMINATION OF PROPOSALS FOR
RECOGNITION OF R&D UNITS/
ORGANISATIONS IN POWER SECTOR**



Planning Wing, CEA,
New Delhi.

Prepared by: CE(R&D)

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

**Title: Examination of proposals for recognition of
R&D units/organizations in power sector**

Approved by: Member (P)

Issued by: Nodal Officer (P)

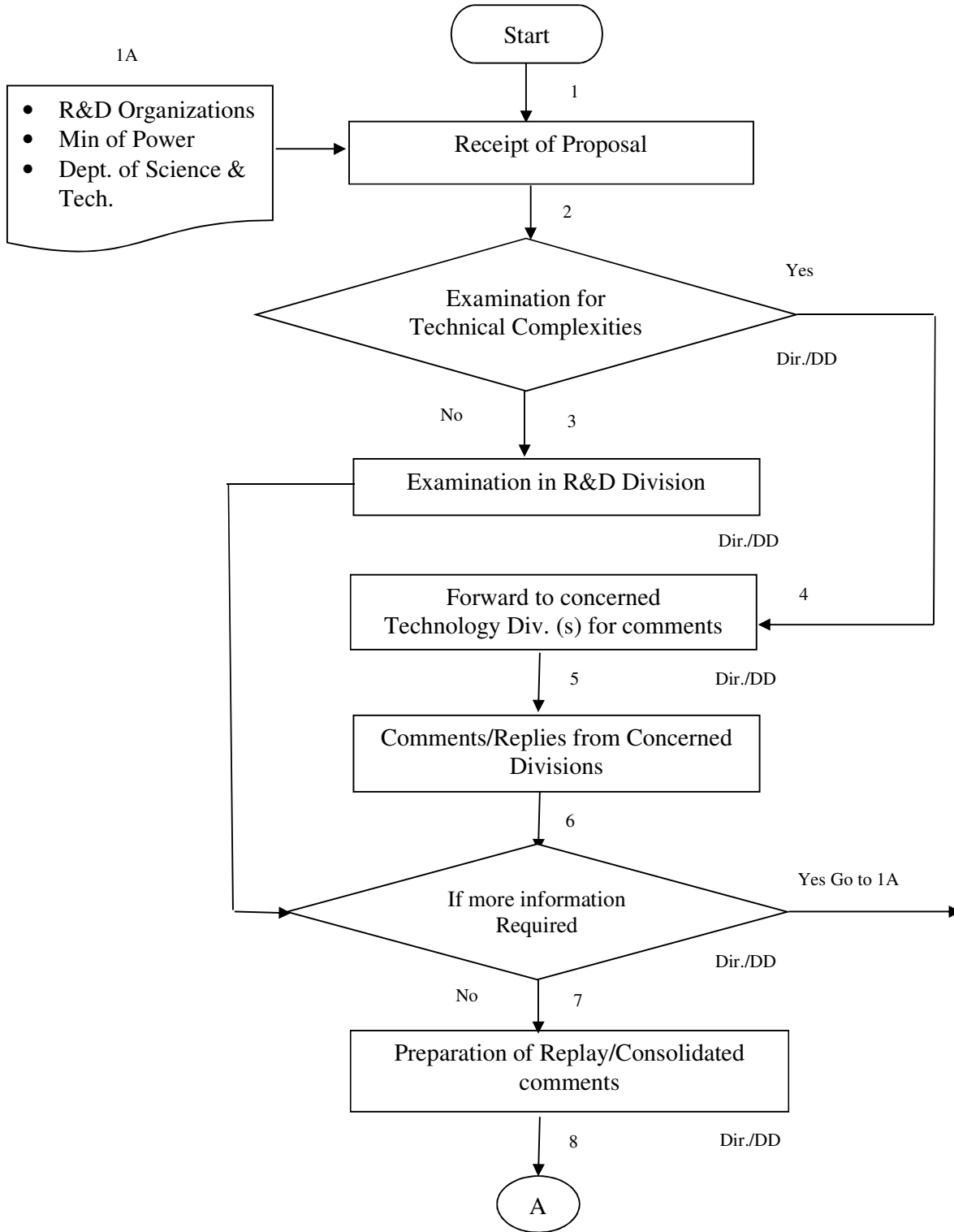
Doc. No.: PLG/R&D/FC/06

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Planning Wing, CEA,
New Delhi.

QUALITY SYSTEM: FLOW CHART (ISO 9001-2008 Clause -7.5)

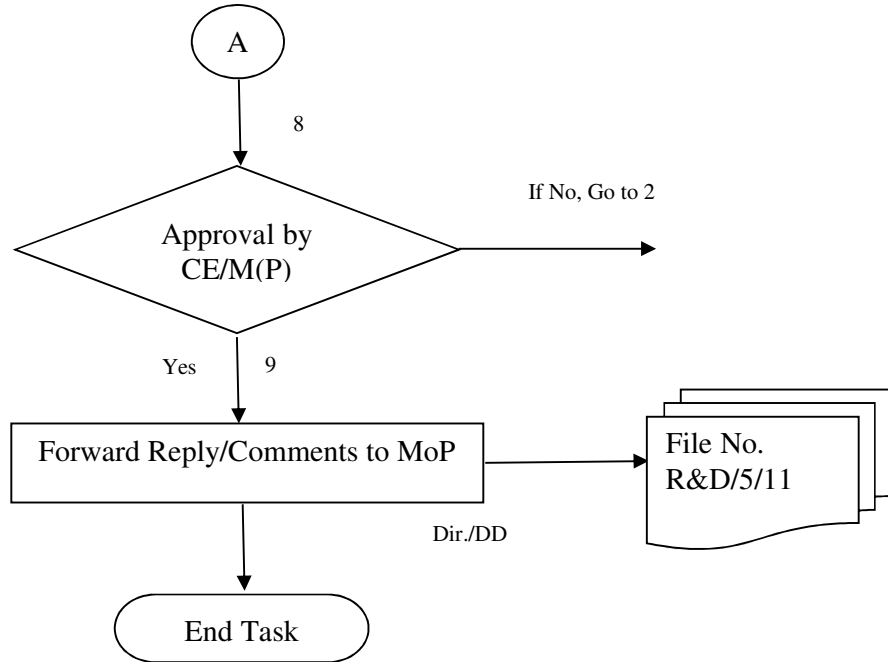
**Title: Examination of proposals for recognition of
R&D units/organizations in power sector**


Doc. No.: PLG/R&D/FC/06
Issue No.: 02
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Page Rev. No.: 00
Effective date: 16.03.2010

Prepared by: CE(R&D)

Approved by: Member (P)


Issued by: Nodal Officer (P)



 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/P/06 Issue No.: 02 Page 1 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals for recognition of R&D units/organizations in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

1. **Purpose** : Recognition of R&D Units/Organization
 2. **Scope** : Scrutiny/Recommendations only
 3. **Overall Responsibility** : Chief Engineer(R&D)
 4. **Procedure** :

Sl. No.	Activity	Description	Responsibility	Document
4.1.	Receipt of proposals	The proposal for Recognition as R&D Unit/Organization is Received in Member (Planning) office	Office of M(P)	Proposal
4.2 4.3	Examination of proposal.	Preliminary examination of proposal to assess whether the comments of other formations are required	DD	F. No. R&D/5/11
4.4	Forwarding the proposal to specialist Division	The proposal is forwarded to specialist division whenever technical complexities are observed	CE(R&D)/ Dir.(R&D)	-do-
4.5 4.6	Receipt of comments from the specialist Division	If the replay/comments are not received within 15 days, reminder is issued.	DD	-do-
4.7	Preparation of consolidated comments	The consolidated comments are prepared based on the comments received. If need arises consultations with books in library/information available on internet. If required, discussions with the applicant R&D Organization,	Director(R&D)/ DD	-do-
4.8	Approval of CE/M(P)	The consolidated comments are put up on file along the relevant information/comments from specialist Division (s), discussed with CE (R&D) if so desired by him. If the consolidated comments are not approved they are revised as per the direction of CE(R&D)/ Member(Planning)	CE(R&D)/M(P)	1. Comments from other Division 2. Prevalent information collected from internet
4.9	Forwarding to MoP/DST	The approved comments to be forward to MoP/DST.	Office of R&D Division	File R&D/5/11


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: PROCEDURE (ISO 9001-2008 Clause -8.2)		Doc. No.: PLG/R&D/P/06 Issue No.: 02 Page 2 of 2 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals for recognition of R&D units/organizations in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

5. Reference Documents :


- Library
- Dept. of Science & Tech.
- References available in other Divisions of CEA
- Relevant Organizations

6. Distribution :

- Ministry of power
- Concerned R&D Organizations/Agencies
- Dept. of Science & Technology


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: QUALITY PLAN (ISO 9001-2008 Clause -7.1)		Doc. No.: PLG/R&D/QP/06 Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 27.03.2010
	Title: Examination of proposals for recognition of R&D units/organizations in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable			Responsibility	Data to be kept
	Parameter	Acceptance criteria	Frequency of Check/ Methodology		
Receipt of proposals	-	-	-	O/o M(P)	
Examination in R&D Division	<ul style="list-style-type: none"> Proposal related to R&D Time Period – 7 days 	-	Examination	Dy. Dir (R&D)	File R&D/5/11
Forward to concerned specialist Division for examination/ comments	<ul style="list-style-type: none"> Time Period – 2 days 	-	By post	Dy. Director/ Director(R&D)	-do-
Receipt of comments	<ul style="list-style-type: none"> Time Period – One month 	One month	Reminders after 15 days	Concerned specialist Division/ Dy. Director	-do-
Preparation of consolidated comments	<ul style="list-style-type: none"> Time Period – 3-5 days 	3-5 days	Based on information available	Dy. Director/ Director	-do-
Approval of CE/M(P)	<ul style="list-style-type: none"> Time Period – 1-2 days 	1-2 days	On file	CE(R&D)	-do-
Forwarding to MoP/Org.	<ul style="list-style-type: none"> Time Period – 2 days 	2 days	Through Dispatch	R&D Div.	-do-


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM: MONITORING MATRIX (ISO 9001-2008 Clause -7.2)		Doc. No.: PLG/R&D/MM/06 Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Examination of proposals for recognition of R&D units/organizations in power sector		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

Process/Activity Stage	Measurable Parameters(critical to quality)			Reasons	Corrective & preventive actions	Responsibility
	Planned	Actual	Deviations if any			
Receipt of proposals	-					
Examination in R&D Division	7 days					
Forward to concerned specialist Division for examination/ comments	2 days					
Receipt of comments	30 days					
Preparation of consolidated comments	3-5 days					
Approval of CE/M(P)	1-2 days					
Forwarding to MoP/Org.	2 days					

**MANAGEMENT INFORMATION SYSTEM
REPORTS/FORMATS**


 <p>Planning Wing, CEA, New Delhi.</p>	QUALITY SYSTEM: MONTHLY REPORT (ISO 9001-2008 Clause -5.6)		Doc. No.: PLG/R&D/MIS/01 Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: MIS Reports		
Prepared by: R&D Div.	Approved by: Member (PLG)	Issued by: CE(R&D)	

S. No.	Items of work	Date of receipt/ start of work	Target of Completion	Present status of work	Remarks
1.	Publication/updating of Directory of Research organization in Power Sector				
2.	Implementation of National Perspective Plan for R&D in Power Sector				
3.	Implementation of CEA chair at IIT Delhi i. Research Projects ii. M.Tech/PhD programs				
4.	Technical contribution in various committees				
5.	Examination of proposals of innovative nature on Power Sector				
6.	Examination of proposals for recognition of R&D units/Organizations in Power Sector				

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/QO Issue No.: 02 Page 1 of 1 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Quality Objectives Deployment for R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

QUALITY OBJECTIVES DEPLOYMENT FOR R&D DIVISION

1. PROMOTE R&D AND STATE-OF-ART TECHNOLOGY IN POWER SECTOR.
2. STISFY ALL OUR STAKE HOLDERS BY PROVIDING TECHNICALLY SOUND, OPTIMAL AND TIMELY SOLUTIONS/ADVISE.
3. ESTABLISH QUALITY MANAGEMENT SYSTEM PROCESSES & QUALITY OBJECTIVES AND CONTINUAL IMPROVEMENT ON THEIR EFFECTIVENESS IN ACCORDANCE WITH ISO 9001:2008
4. COMPLY WITH THE PROVISIONS OF ELECTRICITY ACT, 2003

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/AP Issue No.: 02 Page 1 of 8 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Action Plan for Quality Objectives of R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

CEA'S QUALITY OBJECTIVE # 3 : PROMOTE R&D AND STATE-OF-ART TECHNOLOGY IN POWER SECTOR

TARGET : TO PROMOTE RESEARCH AND INTRODUCE STATE-OF-ART TECHNOLOGY IN THE FIELD OF

- i. HYDRO POWER GENERATION
- ii. THERMAL POWER GENERATION
- iii. DISTRIBUTION OF ELECTRICITY
- iv. TRANSMISSION OF ELECTRICITY
- v. TRADING OF ELECTRICITY

AND UPDATING TECHNOLOGY BASE.


ROLE OF R&D DIVISION IN THE ABOVE TARGET :

- i. COORDINATION OF ACTIVITIES OF THE STANDING COMMITTEE ON R&D.
- ii. IMPLEMENTATION OF MOU SIGNED BETWEEN CEA AND IIT, DELHI REGARDING CEA CHAIRS AT IIT DELHI.
- iii. PREPARATION AND UPDATING OF DIRECTORY OF ORGANISATIONS PURSUING R&D CONCERNING POWER SECTOR.
- iv. MONITORING OF R&D WORK AFTER APPROVAL TILL ACHIEVEMENT OF GOAL.
- v. TO PROMOTE ADOPTION OF RESEARCH RESULTS BY INDIAN INDUSTRY/ POWER UTILITIES.

ACTION PLAN : FOLLOW PLG/R&D/FC/01, PLG/R&D/FC/02, PLG/R&D/FC/03(A), PLG/R&D/FC/03(B) AND PLG/R&D/FC/05 GIVEN IN THE QUALITY MANUAL OF R&D DIVISION.

REFERENCE :

- i. NATIONAL PERSPECTIVE PLAN FOR R&D IN INDIAN POWER SECTOR(JUNE 2002),
- ii. DIRECTORY OF ORGANIZATIONS PURSUING R&D CONCERNING POWER SECTOR,
- iii. MOU SIGNED BETWEEN CEA AND IIT, DELHI REGARDING CEA CHAIRS AT IIT, DELHI

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/AP Issue No.: 02 Page 2 of 8 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Action Plan for Quality Objectives of R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

C. CEA'S QUALITY OBJECTIVE # 4 : SATISFY ALL OUR STAKE HOLDERS BY PROVIDING TECHNICALLY SOUND, OPTIMAL & TIMELY SOLUTIONS/ADVICE.

TARGET : 1) INTERNAL CUSTOMERS (EMPLOYERS)-

MINIMUM : 50% UPTO 2012

60% BY DEC, 2013


75% BY DEC, 2015

80% BY DEC,17

ROLE OF R&D DIVISION IN THE ABOVE TARGET : THE ABOVE OBJECTIVES/TARGETS APPLY FOR THE R&D DIVISION SINCE IT HAS INTERNAL AND EXTERNAL CUSTOMERS IDENTIFIED IN THE INTERACTION MATRIX. HOWEVER, R&D DIVISION IS EXEMPTED FROM GETTING ANY CUSTOMER SATISFACTION REPORT FROM EXTERNAL CUSTOMERS.

ACTION PLAN :

- i) CHIEF ENGINEER(R&D) SHALL FURNISH VIEWS OF R&D DIVISION ABOUT OTHER EMPLOYEES/DIVISIONS IN THE STRUCTURED FORMAT TO THE SECRETARY, CEA ON ANNUAL BASIS.RESULT OF SURVEY SHALL BE COMPILED & DISCUSSED IN THE AUTHORITY MEETING.BASED ON THE DECISIONS/DISCUSSIONS IN THE MEETING, KEY ISSUES CONCERNING EMPLOYEES DISSATISFACTION SHALL BE SELECTED AND DEFINITE ACTION CARRIED OUT AS PER THE DECISION OF THE AUTHORITY.THE PROGRESS SHALL BE REVIEWED BY THE MEMBERS OF EACH WING & SIX MONTHLY REVIEW BY THE CHAIRMAN, CEA.
- ii) **TIME TARGETS FOR VARIOUS ACTIVITIES:** AS A PART OF QUALITY MANAGEMENT SYSTEM, TIME TARGETS FOR VARIOUS ACTIVITIES HAVE BEEN PREPARED (REFER QUALITY PLAN DOCUMENTS OF THE R&D DIVISIONAL MANUAL). CONCERNED DIRECTOR SHALL MONITOR THE WORK AS PER TIME TARGETS DEFINED AND RECORD THE SAME IN MONITORING MATRIX ON MONTHLY BASIS.BASED ON THIS MONITORING MATRIX/MIS REPORT PERFORMANCE V/S TIME TARGETS SHALL BE REPORTED TO THE CHIEF ENGINEER(R&D).


 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/AP Issue No.: 02 Page 3 of 8 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Action Plan for Quality Objectives of R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

(REFER MIS REPORT OF THE DIVISION) WHO SHALL TAKE NECESSARY ACTION FOR ENSURING TIMELY COMPLETION OF THE JOBS.

iii) **FEED BACK FROM EXTERNAL CUSTOMERS (PROJECT AUTHORITIES ETC.):** FOLLOW DOCUMENTS CEA/MR/FC/07 & F/07/01 OF QUALITY MANGEMENT SYSTEM MANUAL.AS PER PROCEDURE, SIX MONTHLY ASSESSMENT IS TO BE DONE FOR ALL THE IMPORTANT CUSTOMERS ON TWO PARAMETERS I.E.(A) TIMELINESS & (B) TECHNICAL EXCELLENCE. MEMBER OF THE WING SHALL MONITOR THE LEVEL OF SATISFACTION OF THE EXTERNAL CUSTOMERS.

REFERENCE:

- i) QUALITY SYSTEM MANUAL OF R&D DIVISION
- ii) QUALITY MANAGEMENT SYSTEM MANUAL (MR/NODAL OFFICER'S MANUAL)

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/AP Issue No.: 02 Page 4 of 8 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Action Plan for Quality Objectives of R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

D. CEA'S OBJECTIVE #5: ESTABLISH QUALITY MANAGEMENT SYSTEM PROCESSES & QUALITY OBJECTIVES AND CONTINUAL IMPROVEMENT ON THEIR EFFECTIVENESS IN ACCORDANCE WITH ISO 9001:2008

TARGET : i) PREPARATION & IMPLEMENTATION OF FOLLOWING MANUALS BY DEC'2003


- a) QUALITY MANAGEMENT SYSTEM PROCESSES AT EACH SECTION /DIVISION LEVEL.
 - b) QUALITY MANAGEMENT SYSTEM PROCESSES AT WING LEVEL (I.E. MR/NODAL OFFICER'S MANUAL)
 - c) QUALITY MANUAL.
- ii) OBTAINING ISO 9001:2008 CERTIFICATION FOR CEA BY MARCH 2010.

ROLE OF R&D DIVISION IN THE ABOVE TARGET:

- i) DEVELOPMENT & IMPLEMENTATION OF R&D DIVISION'S QUALITY MANUAL.

ACTION PLAN:


- i) CE (R&D) HAS EXECUTED /EXECUTING FOLLOWING TASKS RELATING TO ESTABLISHMENT & IMPLEMENTATION OF THE QMS PROCESSES:
 - a) ALL THE EMPLOYEES OF R&D DIVISION ATTENDED DIAGNOSTIC AND AWARENESS TRAINING SESSIONS WITH M/S RITES IN APRIL 2003.
 - b) TWO OFFICERS OF THE RANK OF DIRECTOR/DY.DIRECTOR AS CORE GROUP MEMBERS FROM R&D DIVISION, ATTENDED WORKSHOPS WITH M/S RITES ON WRITING OF DOCUMENTS.
 - c) PREPARED THE R&D DIVISIONAL QUALITY MANUAL IN ASSOCIATION WITH M/S RITES.
 - d) APPROVAL FOR THE REVISED DIVISIONAL QUALITY MANUAL OBTAINED FROM MEMBER(PLANNING) ON 16.03.2010
 - e) TWO OFFICERS OF THE RANK OF DY. DIRECTOR/ASSISTANT DIRECTOR ATTENDED TRAINING WITH RITS FOR DEVELOPING NECESSARY SKILLS FOR CONDUCTING INTERNAL AUDIT OF VARIOUS SECTIONS/DIVISION OF CEA ON REGULAR BASIS.

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/AP Issue No.: 02 Page 5 of 8 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Action Plan for Quality Objectives of R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

- f) CONDUCTING OF REGULAR MONTHLY MEETINGS ON QMS WITH THE STAFF OF R&D DIVISION, QUARTERLY MEETING WITH NODAL OFFICER OF THE (PLANNING WING)
- g) CONINUAL IMPROVEMENT/REVISIONS IN THE R&D DIVISION'S MANUAL WILL BE DONE BASED ON YHE EXPERIENCE GAINED DURING IMPLEMENTATION OF THE SCHEME, SUGGESTIONS RECIVED & INTERACTION WITH INTERNAL & EXTERNAL CUSTOMERS

REFERENCE :


- i. QUALITY SYSTEM MANUAL OF THE R&D DIVISION.
- ii. QUALITY MANAGEMENT SYSTEM MANUAL (MR/NODAL OFFICER'S MANUAL).
- iii. QUALITY MANUAL.

 Planning Wing, CEA, New Delhi.	QUALITY SYSTEM (ISO 9001-2008 Clause -4.2)		Doc. No.: PLG/R&D/AP Issue No.: 02 Page 6 of 8 Page Rev. No.: 00 Effective date: 16.03.2010
	Title: Action Plan for Quality Objectives of R&D Division		
Prepared by: CE(R&D)	Approved by: Member (P)	Issued by: Nodal Officer (P)	

E CEA'S QUALITY OBJECTIVE # 8 : COMPLY WITH PROVISIONS OF THE ELECTRICITY ACT, 2003

TARGET : TO BE SPECIFIED BY THE CHAIRMAN, CEA & MEMBERS OF THE AUTHORITY.


- a) ADVISING THE CENTRAL GOVERNMENT ON THE MATTERS RELATING TO THE NATIONAL ELECTRICITY POLICY, FORMULATE SHORT-TERM AND PERSPECTIVE PLANS FOR DEVELOPMENT OF THE ELECTRICITY SYSTEM AND CO-ORDINATE THE ACTIVITIES OF THE PLANNING AGENCIES FOR THE OPTIMAL UTILIZATION OF RESOURCES TO SUBSERVE THE INTERESTS OF THE NATIONAL ECONOMY AND TO PROVIDE RELIABLE AND AFFORDABLE ELECTRICITY FOR ALL CONSUMERS:
- b) SPECIFYING THE TECHNICAL STANDARDS FOR CONSTRUCTION, ELECTRICAL PLANTS, ELECTRIC LINES AND CONNECTIVITY TO THE GRID;
- c) SPECIFYING THE SAFETY REQUIREMENTS FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF ELECTRICAL PLANTS AND ELECTRIC LINES;
- d) SPECIFYING THE GRID STANDARDS FOR OPERATION AND MAINTENANCE OF TRANSMISSION LINES;
- e) SPECIFYING THE CONDITIONS FOR INSTALLATION OF METERS FOR TRANSMISSION AND SUPPLY OF ELECTRICITY
- f) PROMOTING/ASSISTING IN THE TIMELY COMPLETION OF SCHEMES AND PROJECTS FOR IMPROVING AND AUGMENTING THE ELECTRICITY SYSTEM.
- g) PROMOTING MEASURES FOR ADVANCING THE SKILL OF PERSONS ENGAGED IN THE ELECTRICITY INDUSTRY;
- h) ADVISING THE CENTRAL GOVERNMENT ON ANY MATTER ON WHICH ITS ADVICE IS SOUGHT OR MAKING RECOMMENDATION TO GOVERNMENT ON ANY MATTER IF, IN THE OPINION OF THE AUTHORITY, THE RECOMMENDATION WOULD HELP IN IMPROVING

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THE GENERATION, TRANSMISSION, TRADING, DISTRIBUTION AND UTILIZATION OF ELECTRICITY;

- i) COLLECTING AND RECORDING THE DATA CONCERNING THE GENERATION, TRANSMISSION, TRADING, DISTRIBUTION AND UTILIZATION OF ELECTRICITY AND CARRYING OUT STUDIES RELATING TO COST, EFFICIENCY, COMPETITIVENESS AND SUCH LIKE MATTERS;
- j) MAKING PUBLIC FROM TIME TO TIME THE INFORMATION SECURED UNDER THIS ACT, AND PROVIDING FOR THE PUBLICATION OF REPORTS AND INVESTIGATIONS;
- k) PROMOTING RESEARCH IN MATTERS AFFECTING THE GENERATION, TRANSMISSION, DISTRIBUTION AND TRADING OF ELECTRICITY;
- l) CARRYING OUT, OR CAUSING TO BE CARRIED OUT, ANY INVESTIGATION FOR THE PURPOSES OF GENERATING TRANSMITTING OR DISTRIBUTING ELECTRICITY;
- m) ADVISING ANY STATE GOVERNMENT, LICENSEES OR THE GENERATING COMPANIES ON SUCH MATTERS WHICH SHALL ENABLE THEM TO OPERATE AND MAINTAIN THE ELECTRICITY SYSTEM UNDER THEIR OWNERSHIP OR CONTROL IN AN IMPROVED MANNER AND WHERE NECESSARY, IN CO-ORDINATION WITH ANY OTHER GOVERNMENT, LICENSEE OR THE GENERATING COMPANY OWNING OR HAVING THE CONTROL OF ANOTHER ELECTRICITY SYSTEM;
- n) ADVISING THE APPROPRIATE GOVERNMENT AND THE APPROPRIATE COMMISSION ON ALL TECHNICAL MATTERS RELATING TO GENERATION, TRANSMISSION AND DISTRIBUTION OF ELECTRICITY;
- o) DISCHARGING SUCH OTHER FUNCTIONS AS MAY BE PROVIDED UNDER THE ELECTRICITY ACT-2003.

ROLE OF R&D DIVISION IN THE ABOVE TARGET: THE FOLLOWING QUALITY OBJECTIVES PERTAIN TO THE ROLES/RESPONSIBILITIES ENTRUSTED TO RHE R&D DIVISION.

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1. PROMOTING RESEARCH IN MATTERS AFFECTING THE GENERATION, TRANSMISSION, DISTRIBUTION AND TRADING OF ELECTRICITY;

ACTION PLAN :

- i. ARRANGING LECTURES/PRESENTATIONS ON INNOVATIVE TECHNIQUES IN THE FIELD OF POWER SECTOR SO AS TO KEEP IN TOUCH WITH THE STATE-OF-ART FEATURES/TECHNOLOGY DETAILS
- ii. PARTICIPATION OF ALL CONCERNED TECHNICAL STAFF IN THE MEETINGS, WORKSHOPS, SEMINARS, VISITS TO R&D ORGANIZATIONS ETC. FOR INTERACTION/EXPOSURE & UPDATING OF THEIR TECHNICAL KNOWLEDGE.
- iii. RECOMMENDING TO HRD OF CEA FOR ARRANGING SUITABLE TRAINING TO BE GIVEN TO STAFF OF R&D DIVISION FOR ENHANCING THEIR SKILLS/PRODUCTIVITY.
- iv. TRAINING ON USE OF COMPUTERS TO ALL TECHNICAL STAFF AND MINISTERIAL STAFF.

REVISION OF DOCUMENTS

DISTRIBUTION LIST

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