

LEGAL BASES FOR THE INSTALLATION OF NUCLEAR POWER PLANTS

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The legal points on which this work is based derive from one and the same source, the Union, which is the exclusive legislator for electrical and nuclear energy, according to Artigo 8º, XVII, pp.1, of the determinations regarding the social and economic order (Title III of the Constitution of the Federal Republic of Brazil).

At the legal level, there are two basic points which support this work:

- 1) The Water Code, which dates from 1934, and the subsequent legislation:
- 2) Law nº 4.118 of August 27, 1962, modified by Law nº 6.189 of December 16, 1974.

Legislation concerning the subject of environment and third part liability will be dealt with in another papers.

The Water Code and subsequent legislation treat with the part relative to industrial production and commercialization of electrical energy in all its phases, while nuclear legislation is coordinated with it only in what concerns the nature of the energy - generating source.

From the aspect of administrative policy, both electrical and nuclear energy (the subjects treated in this paper), are predominantly under the Ministry of Mines and Energy (shown as "ex vi" in the determinations of the Legislation regarding the Administrative Reform Act), except for what is determined under the National Energy, as well as the National Nuclear Energy, Policies.

Seen graphically , then:

Law nº 6.189/74, which altered the determinations of Law nº 4.118/62, establishes, among other things, the competence of CNEN to:

- 1) expedite standards, licences and authorizations relative to nuclear installations.
- 2) expedite regulations and standards of safety and protection relative to:

- a) the use of nuclear installations and material;
 - b) the transport of nuclear material;
 - c) the handling of nuclear material;
 - d) the treatment and elimination of radioactive waste;
 - e) the construction and operation of installations destined to produce nuclear material and to utilise nuclear energy.
- 3) the construction and operation of nuclear installations will be subject to licensing, authorization and inspection by the CNEN.

Nuclear power plants, a species of nuclear installation by reason of their purpose, which is the generation of energy at industrial level, merit particular treatment, consubstantiated in Article 10 of Law nº 6.189/74, which can be summed up as follows:

- I - It is incumbent on the CNEN to verify the legal requisites relative to nuclear energy, to attend to standards expedited by the CNEN itself, and to satisfy the exigencies formulated by the National Nuclear Energy Policy, as well as to provide the subsequent inspections.
- II - The National Department of Waters and Electrical Energy verifies the fulfillment of legal requisites and regulations relative to the franchise of electrical energy services, as well as the subsequent inspection.
- III - Centrais Elétricas Brasileiras S.A. ELETROBRÁS (a holding company) verifies the technical, economic and financial adequacy of the project to the electrical system, as well as its compatibility with the level of installation necessary for the electrical energy market.

Legally the instrument authorizing construction and operation of a nuclear power plant is a Decree, based on the findings of the above mentioned organs.

THE ROLE OF THE NATIONAL NUCLEAR ENERGY COMMISSION

In its sphere of competence, the CNEN performs administrative acts of various types (Law 4.118/62, amended by Law 6.189 of 1974 in Decree nº 75.569 of April 8, 1975, and modified by decree nº 84.411 of January 22 1980 and ordinance MME 419, April 8, 1975.

With regard to power reactors, the type of nuclear installation which is under study, the CNEN performs, or may perform, basically, the following administrative Acts:

I - NORMATIVE ACTS

- a) Resolutions
- b) Deliberations - (normative acts, but not primarily decisive).

II - MANDATORY ACTS

- Instructions
- Directives
- Orders of Service
- Official Communications (oficios)
- Executive rulings (despachos)

III - NEGOTIATIONAL ACTS

(rechtsgeschaefentliche Verwaltungsakete)

- Licensing
- Homologation
- Approval
- Authorization
- Permission
- Exemption

IV - ENUNCIATORY ACTS

Provision of:

- Certificates
- Attestations
- Opinions

V - PUNITIVE ACTS

- Interdiction
- Revocation

We now see the administrative acts of the CNEN in relation to the installation of power reactors.

NORMATIVE ACTS

- 1 - Resolution 9/69 - Standards for selection of sites for nuclear power plant reactor installations.
- 2 - Resolution 6/72 - Standards for licensing of nuclear power plants.
- 3 - Resolution 6/73 - Basic standards for radiological protection.
- 4 - Resolution 2/76 - Standards for licensing Angra II.
- 5 - Resolution 2/74 - Implanting basic protection standards. Radiological.
- 6 - Resolution 3/74 - Standards for licensing personnel or legal entities to apply and supervise radiological protective measures.
- 7 - Resolution 1/79 - Complementary instructions regarding the licensing of nuclear power reactors.
- 8 - Resolution 1/74 - Complementary instructions regarding nuclear power licensing.
- 9 - Resolution 3/79 - Classification of the Auxiliary Building of Unit II in the "Central Nuclear Almirante Alvaro Alberto" as a Class II structure (for effects of radiological protection).
- 10 - Resolution 15/79 - Revocation of Resolutions 3/77 which calls for adoption, for standardization purposes in the elaboration and implementation of quality assurance programs for nuclear power plants, of the terms of the Code of Practice "Quality Assurance for Safety in Nuclear Power Plants" - Safety Series nº 50-C-9A- established by the International Atomic Energy Agency.

- 11 - Resolution 9/77 - Adopts, when corresponding standards still have not been imposed by the National Nuclear Energy Commission, the international Atomic Energy Agency recommendations contained in the document "Safety Series nº 6, 1973 edition, entitled "Regulations for the Safe Transport of Radioactive Materials".
- 12 - Resolution 6/77 - Approves standards regarding physical protection of nuclear installations and materials.
- 13 - Resolution 12/79 - Approves standards for licensing of nuclear reactor operators.
- 14 - Resolution 3/80 - Approves the Health Requisites for Nuclear Reactor Operators".

MANDATORY ACTS

These acts, the most important from the aspect of this work, are the Official Communications through which the CNEN addresses the Operator of the installation, approving or disapproving requests or applications, or soliciting clarification respecting the installation during its construction or operating process.

Executive rulings are those through which, for example, CNEN approves or disapproves some intended action on the part of the operator, or gives its sanction to some act practiced by said operator.

NEGOTIATORY ACTS

These administrative Acts serve for implementation along with legal standards and regulations relative to power reactor installation.

APPROVAL

- 1) Selection of site - Resolution 9/69 - Construction license.
Law nº 6.189 (art. 7) Resolution CNEN 6/72.
- 2) Test approval - Resolution 6/72 - 15.12, line 1.

LICENSING

For aquisition, importation , modification, take-over and transference of the operator .

Resolution CNEN 6/77, licensing - physical protection.

Resolution 6/72, reactor operators.

radiological protection.

AUTHORIZATION

Provisory authorization of the operation.

Definitive authorization, start up.

Authorization to interrupt, or suspend, the operation.

EXEMPTION - of financial assurance - Law 6.453, art. 13 § 5 of
Law 6.453 of october 17, 1977 (third party liability).

ENUNCIATORY ACTS

All such acts are permitted to CNEN; however , the most important of these acts is the Opinion (parecer) which is part the licensing process for authorization of the operation from the nuclear aspect, is sent on to the National Department of Water and Electrical Energy, which, in turn , informs the authorization process for the Commercial operation (start-up).

V - PUNITIVE ACTS

Interdiction or suspension of construction and operation Art. 7, item IV § 2º of Law 6.189/74 and Art. 13 § 4 of Law 6.453 of october 17, 1977 annulment.

The synthesis of the aforesaid is as follows:

In the process of nuclear reactor installation, CNEN performs administrative acts regarding that which concerns nuclear material and performs discretionary acts in respect to nuclear safety, following the general rule of codified legislation as to the production and commercialization of electrical energy.

THE ROLE OF PUBLIC UTILITIES

Under the Brazilian Constitution, the right to direct exploitation of electric power services and facilities of any nature rests with the Federal Power (Union).

The legal characteristics of nuclear power plants are the same as the other power plants in Brazil. It does not matter which are their sources. However only public utilities can build and operate power plants, including nuclear plants.

Since the State frequently would rather not carry out certain services directly, it delegates execution of these through the appropriate legal concepts foreseen in our Brazilian Administrative Law.

As far as the production of and commerce in electricity services of public nature at the Federal, State and Local Government levels, are concerned, their exploitation is made through delegation by the Public Power in a Federal Authorization or Franchise to the company rendering public utility services.

It is very important to point out the effects of our legal system on the public utilities and the charges involved.

To be able to exercise these activities, the public utilities are subject to all present and future laws and regulations in force relating to the rights and obligations inherent in such a license or authorization and must comply with the conditions for performing and exploiting the services, not only concerning nuclear law, and rules as principally the suitable energy law.

Being the franchise "intuitu personae", it results in delegation of exclusive powers. The grantee assumes a serious burden: on its accepting the franchise or authorization, the utilities not only undertake to perform the public service, but assume the obligation as well, as in the case under discussion, to set the service up, with its own financial resources not only for the initial installations but also for successive material renewals in order that the continuity of the services may not be interrupted.

Since the utility holds the powers for and on behalf of the Public Power, the latter imposes upon it heavy obligations and makes the utilities subject to surveillance of technical, economic and financial types besides various punitive measures in the shape of fines, production control, taking over its management, and so on.

As the public utilities contributes with its own funds to investments the Granting Power assumes the obligation to establish reasonable tariffs according to the legal principle of rendering service by the cost in order to assure financial stability of the Public Utility by the remuneration of the invested capital.

BUILDING OF NUCLEAR POWER PLANTS

Even at the time of authorization for the installation of the first nuclear power plant in Brazil there already long existed codified legislation concerning the electricity production based on harnessing of water or thermal energy; as since 1956 there already existed the Nuclear Energy Commission.

Those holding a franchise to build and operate nuclear power plants are subject to supervision by the Water Power and Electricity Department (DNAEE) a high administration organ of the Ministry of Mines and Energy (MME) charged with electric power services supervision, and by CNEN, as superior organ charged with the guidance, planning, supervision and general surveillance over the non-conventional part of the Power Plant, in other words the nuclear part, specifically.

However, since up to then there did not yet exist the particular technology, there could neither exist the Positive Statutes applying to it. It was then that the Government, conscious of the need for such a legislation promulgated a specific act aimed at harmonizing the supervisory action of DNAEE/CNEN, regiment "the process for application for authorization of construction and the granting of concession to operate a nuclear power plant".

The following competent entities thereupon entered upon their activities, harmoniously: ELETROBRÁS, for the planning of the power producing plant installation requirements; its subsidiary FURNAS-CENTRAIS ELÉTRICAS S.A., as the constructor and operator of the first Brazilian nuclear power plant facilities, DNAEE and CNEN, as the regimenting and supervisory organs. This go to show that Brazilian Public Administration is perfectly capable of rising to the occasion to adequate the actions of its agencies so as to simplify and speed up solutions intended to discipline, by promulgating regulations, the growth of technological development.

Under the present legal system, the franchise to produce electricity by harnessing thermo-nuclear power, set forth in Law nº 6.189/74 in the shape of an authorization to build and operate nuclear power plants, is granted by Presidential Decree, after hearing the opinions of the competent organs of the Ministry of Mines and Energy.

The legal action that must take place from the authorization to install a nuclear power plant until its entering in operation, is made up of several steps, but the most important are:

1. By the President of the Republic:

- Decree, authorizing its construction and operation;
- Decree declaring the sites to install the power plants.

2. By Water Power and Electricity Department - DNAEE

- Approval of the technical feasibility study (site, resources, time limits, construction and operating and economic - financial aspects; the civil construction part and the electrical and mechanical part common to all conventional power plants, and the Preliminary Report on Safety Analysis)
- Approval of the final project;
- Authorization to start the commercial use of the services

3. By the Nuclear Energy National Commission - CNEN

- Approval of the site;
- Approval of the reactor design, including the revision of the preliminary report on safety analysis;
- Licence to build;
- Licence to modify the project, by means of individual authorization corresponding to each alteration or modification;
- Approval of the safety analysis report;
- Interim operation permission (for running tests);
- Approval of the results of tests and inspections carried out by CNEN during the interim operation;
- Final authorization to operate the plant, given after the final tests and inspections of the reactor's functioning;
- The establishment of the nature and amount of financial coverage meant for third-party protection.

4. By the State Environment Protection Agency

- Install licence;
- Building licence;
- Licence to operate

FOOTNOTE:

Various legal acts modifying the installation procedure for nuclear power plants were expedited after the termination of the Seminar in which this work was presented. They are , in chronological order:

Decree nº 84.973 of July 29, 1980 which is relative to the colocalization of ecological stations and nuclear power plants.

Law nº 1809 of October 7, 1980 creates the Nuclear Protection System.

Law nº 1910 of October 23, 1980, establishes the exclusive right of NUCLEBRÁS S/A to realize studies, projects and construction of nucleoelectric power plants.

Decree nº 85290 of October 23, 1980 authorizes NUCLEBRÁS S/A to create the subsidiary NUCLEBRÁS CONSTRUÇÕES DE CENTRAIS NUCLEARES S/A - (NUCON) , for construction of nuclear power plants.

I - LAW Nº 4.118, OF 27.08.1962

TREATS WITH THE NATIONAL NUCLEAR ENERGY POLICY
CREATION OF NATIONAL ENERGY COMMISSION-CNEN
AND OTHER MEASURES.

II - LAW Nº 6.189, OF 12.12.1974

MODIFIES LAW Nº 4.118 OF 27.08.62 AND LAW Nº
5.740 OF 1.12.74, WHICH CREATE RESPECTIVELY ,
AMONG OTHER MEASURES , THE NATIONAL NUCLEAR
ENERGY COMMISSION-CNEN, AND THE BRAZILIAN
NUCLEAR TECHNOLOGY COMPANY - CBTN, WHICH LATER
BECAME THE BRAZILIAN NUCLEAR ENERGY
CORPORATION - NUCLEBRÁS.

III- DECREE Nº 75.569, OF 07.04.1975

TREATS WITH THE BASIC STRUCTURE OF THE NATIONAL
NUCLEAR ENERGY COMMISSION - CNEN AND OTHER
MEASURES.

IV - DECREE Nº 84.411, OF 22.1.1980

MODIFIES DECREE Nº 75.569 OF 07.04.75 WHICH
TREATS WITH THE BASIC STRUCTURE OF BRAZILIAN
NUCLEAR ENERGY COMMISSION - CNEN.

V - ORDER MME Nº 419, OF 08.04.1975

APPROVES THE INTERNAL ARRANGEMENT OF THE NATIONAL
NUCLEAR ENERGY COMMISSION - CNEN.

PROJECTION
NORMATIVE ACTS

RESOLUTIONS CNEN	SUBJECT
9/69-	NORM FOR SITE SELECTION FOR INSTALLATION OF POWER REACTORS.
6/72-	NORMS FOR LICENSING OF NUCLEAR POWER.
6/73-	BASIC NORMS FOR RADIOLOGICAL PROTECTION.
2/74-	ESTABLISHES COMMISSION FOR LICENSING PERSONNEL AND JUDICIAL ENTITIES FOR SUPERVISION AND APPLICATION OF RADIOLOGICAL PROTECTIVE MEASURES.
2/76-	NORMS FOR LICENSING OF ANGRA II.
6/77-	NORMS FOR PHISICAL PROTECTION OF NUCLEAR. INSTALLATIONS AND MATERIAL.
9/77-	ADOPTS, WHILE THE NATIONAL NUCLEAR ENERGY COMMISSION'S NORMS ARE NOT YET IN FORCE, THE RECOMMENDATIONS OF THE AIEA, CONTAINED IN SAFETY SERIES Nº 6 OF 1973, ENTITLED "REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIALS".
1/79-	COMPLEMENTARY INSTRUCTIONS REGARDING NUCLEAR POWER REACTOR LICENSING.
3/79-	CONSIDERS THE ANNEX TO UNIT II OF THE CENTRAL NUCLEAR ALMIRANTE ALVARO ALBERTO TO BE A CLASS II STRUCTURE (FOR EFFECTS OF RADIOLOGICAL PROTECTION).
12/79-	NORMS REGARDING LICENSING OF NUCLEAR REACTOR OPERATORS.
15/79-	REVOKES RESOLUTIONS 3/79 NAD ADOPTS, FOR NORMATIVE PURPOSES, THE TERMS OF CODE OF PRACTICE "QUALIT: ASSURANCE FOR SAFETY IN NUCLEAR POWER PLANTS" - SAFETY SERIES Nº 50 - C- QA, ELABORATED BY THE IAEA, FOR THE ESTABLISHMENT AND IMPLEMENTATION OF QUALITY ASSURANCE PROGRAMS FOR NUCLEAR POWER PLANTS.
3/80-	APPROVES THE "HEALTH REQUISITES FOR NUCLEAR REACTOR OPERATORS".

ADMINISTRATIVE ACTS

NORMATIVE ACTS

- RESOLUTIONS
- DELIBERATIONS - NORMATIVE AND DECISIVE

MANDATORY ACTS

- INSTRUCTIONS
- DIRECTIVES
- ORDERS OF SERVICE
- OFFICIAL COMMUNICATIONS
- EXECUTIVE RULINGS

NEGOTIATIONAL ACTS

- LICENSING
- HOMOLOGATION
- APPROVAL
- AUTHORIZATION
- PERMISSION
- EXEMPTION

ENUNCIATORY ACTS

- ATTESTATIONS
- CERTIFICATES
- OPINIONS

PUNITIVE ACTS

- INTERDICTION
- REVOCATION

I - THE WATER CODE, THAT DATES FROM 1934, AND THE
SUBSEQUENT LEGISLATION:

II - LAW Nº 4.118 OF AUGUST 27, 1962, MODIFIED BY LAW
Nº 6.189 OF DECEMBER 16, 1974.

III - LEGISLATIONS CONCERNING THE SUBJECT OF ENVIRONMENT
AND THIRD PARTY LIABILITY WILL BE DEALT WITH IN
ANOTHER PAPER.

LAW Nº 6.189/74 , WHICH ALTERED THE DETERMINATIONS OF LAW Nº 4.118/62, ESTABLISHES, AMONG OTHER THINGS, THE COMPETENCE OF CNEN TOO.

1) EXPEDITE STANDARDS, LICENCES AND AUTHORIZATIONS
RELATIVE TO NUCLEAR INSTALLATIONS.

2) EXPEDITE REGULATIONS AND STANDARDS, OF SAFETY AND
PROTECTION RELATIVE TO:

- a) THE USE OF NUCLEAR INSTALLATIONS AND MATERIAL;
- b) THE TRANSPORT OF NUCLEAR MATERIAL;
- c) THE HANDLING OF NUCLEAR MATERIAL;
- d) THE TREATMENT AND ELIMINATION OF RADIOACTIVE
WASTE;

and

- e) THE CONSTRUCTION AND OPERATION OF ESTABLISHMENTS
DESTINED TO PRODUCE NUCLEAR MATERIAL AND TO
UTILISE NUCLEAR ENERGY.

3) THE CONSTRUCTION AND OPERATION OF NUCLEAR INSTALLATIONS
WILL BE SUBJECT TO LICENSING, AUTHORIZATION AND
INSPECTION BY CNEN.

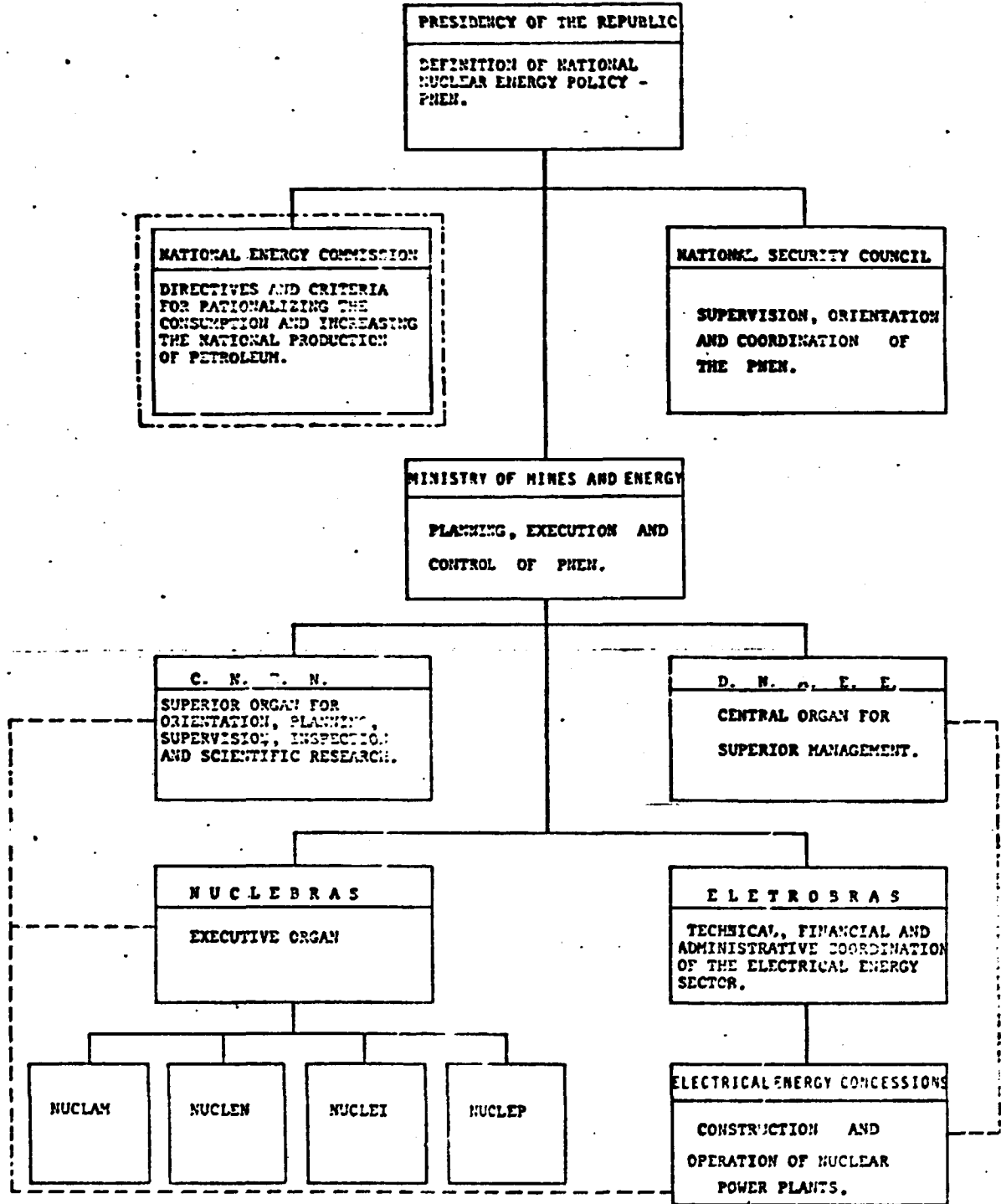
LAW Nº 6.189/74 - ARTICLE 10

WHICH CAN BE SUMMED UP AS FOLLOWS:

- I - IT IS ENCUMBENT ON THE CNEN TO VERIFY THE LEGAL REQUISITES RELATIVE TO NUCLEAR ENERGY, TO ATTEND TO STANDARDS EXPEDITED BY THE CNEN ITSELF. AND TO SATISFY THE EXIGENCIES FORMULATED BY THE NATIONAL NUCLEAR ENERGY POLICY , AS WELL AS TO PROVIDE THE SUBSEQUENT INSPECTIONS.

- II - THE NATIONAL DEPARTMENT OF WATERS AND ELECTRICAL ENERGY VERIFIES THE FULFILLMENT OF LEGAL REQUISITES AND REGULATIONS RELATIVE TO THE FRANCHISE OF ELECTRICAL ENERGY SERVICES, AS WELL AS THE SUBSEQUENT INSPECTION.

- III - CENTRAIS ELÉTRICAS BRASILEIRAS S.A. - ELECTROBRÁS (A HOLDING COMPANY) VERIFIES THE TECHNICAL ECONOMIC AND FINANCIAL ADEQUACY OF THE PROJECT TO THE ELECTRICAL SYSTEM , AS WELL AS ITS COMPATIBILITY WITH THE LEVEL OF INSTALLATION NECESSARY FOR THE ELECTRICAL ENERGY MARKET.
THE ACT OF LEGAL AUTHORIZATION FOR THE CONSTRUCTION AND OPERATION OF NUCLEAR POWER PLANTS IS A DECREE BASED ON THE FINDINGS OF THE ABOVE MENTIONED ORGANS.



----- ORGAN OF A TRANSITORY NATURE
 -.-.-.- ORGAN OF A SUPERVISORY NATURE
 _____ ORGANIC DIRECTLY SUBORDINATE