



CNEN Fields of Activity

CNEN is the government organization responsible for the Safety, Safeguards and Security of the ionizing radiation and radioactive and nuclear materials. Besides, it is also the country's main research and development organization. In this sense, CNEN interacts with several sectors that relate to the nuclear activity:



CNEN contributes to the Brazilian nuclear sector through:

- Research, development and innovation related to nuclear technologies
- Human Resources development: Academic degree (Master and PhD), besides other courses and on-the-job training
- Nuclear mineral reserves exploration and research on ore beneficiation
- Technical cooperation with national and international institutions in the nuclear sector
- Management of radioactive waste
- Radiation protection of the public
- Incident and Emergency Preparedness and Response to radiological and nuclear emergencies
- Standards, regulation, licensing and control of nuclear energy and ionizing radiation applications
- Licensing the transport of radioactive and nuclear materials
- Nuclear safeguards and security.

RESEARCH INSTITUTES, LABORATORIES, REGIONAL CENTERS, DISTRICTS AND OFFICES



MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA,
INOVAÇÕES E COMUNICAÇÕES



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CNEN
Comissão Nacional
de Energia Nuclear

NUCLEAR TECHNOLOGY FOR BETTER LIFE

NATIONAL NUCLEAR ENERGY COMISSION

The National Nuclear Energy Commission (CNEN) is a federal authority created on October 10, 1956 as the organization for planning, guiding, supervising, licensing and control of nuclear energy applications in Brazil. CNEN establishes standards and regulations in radiation protection and nuclear safety on the peaceful uses. It is under the Ministry of Science, Technology, Innovation and Communications (MCTIC).

CNEN also invests in research, development and specialized training, seeking an increasingly broad and safe use of nuclear technologies. Its objective is to ensure that the benefits of nuclear technology increasingly enlarge Brazilian social and economic development, focusing on the safe operation of radioactive facilities and equipment.

CNEN works in three main areas of activities:

- Regulation, licensing and control on the use of nuclear energy.
- Research, development, innovation and specialized training in nuclear and related fields.
- Production of radiopharmaceuticals and radioisotopes.

CNEN: 14 UNITS IN NINE BRAZILIAN STATES

LICENSING
CONTROL
SPECIALIZED TRAINING
SEARCH
DEVELOPMENT
INNOVATION

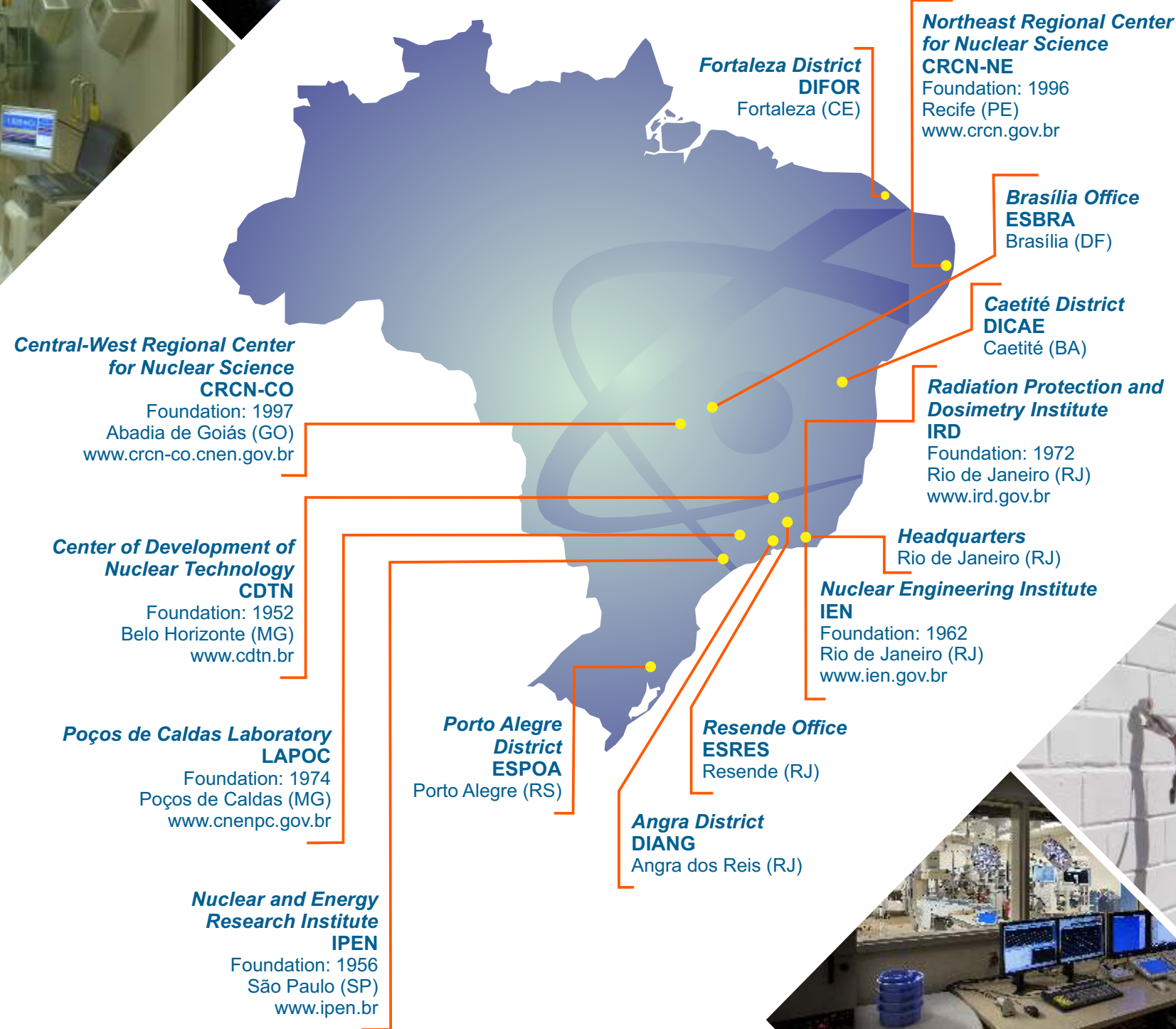
INSTITUTES, CENTERS AND LABORATORIES

The institutes, centers and laboratories are CNEN's technical-scientific units which are primarily aimed at research, development, innovation and specialized training, bringing together advanced skills to the most diverse fields of nuclear energy. These units also act in support to licensing and control of nuclear installations and other applications of ionizing radiation in Brazil.

Among the activities carried out, the following can be highlighted:

- Production of radiopharmaceuticals and radioisotopes
- Operation of nuclear research reactors
- Environmental, chemical and radiometric analyzes
- Dosimetry
- Nuclear Instrumentation
- Nuclear fuel cycle
- Dissemination of good practices and knowledge in radiation protection
- Storage of radioactive waste
- National Secondary Standard laboratory for ionizing radiation
- Ionizing radiation metrology services, monitoring and dose assessment
- Monitoring of nuclear installations and support for the licensing and control of the different areas of application of nuclear energy
- Specialized training: CNEN units train specialized human resources in the nuclear area, offering advanced postgraduate programs (master's and doctoral) and also short term courses and training.

Where CNEN is present



Research, development and innovation in:

- Nuclear reactors technology
- Nuclear fuel
- Neutron Activation Analysis
- Radiochemistry
- New radioisotopes and radiopharmaceuticals
- Irradiation of materials and products
- Regulatory and safety activities
- Processing, transport and final disposal of radioactive waste
- Application of ionizing radiation for the diagnosis and therapy of human diseases and reduction of the health risks of persons exposed to radiation
- Laser
- Materials technology
- Biotechnology
- Clean Energy
- Application of nuclear techniques involving the use of sealed radioactive sources and tracers (radioactive, chemical and isotopic)
- Nuclear and related techniques in the study of industrial processes and environmental phenomena, with emphasis on meteorology, hydrology, hydrogeology and sedimentology
- Mineral technology, structural integrity, nanotechnology and nuclear materials.

DISTRICTS AND OFFICES

They are highly specialized operational branches for the development of CNEN's activities, mainly those related to radioprotection, safety, licensing and control of nuclear energy applications.