

# 行政院原子能委員會 ATOMIC ENERGY COUNCIL

#### 行政院原子能委員會

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### 壹、主要任務及展望

原能會為我國原子能業務主管機關,負責國內核能電廠、核子設施及輻射作業場所的安全監督。除嚴格執行核能安全管制、緊急應變、輻射防護及環境偵測,妥善規劃放射性廢棄物管理外,亦積極推動科技研究與創新。原能會秉持「專業、積極、創新、服務」的精神,目前以落實政府「非核家園」政策,致力於核能及輻射安全的管制與監督,強化緊急事故之應變能力,並積極面對核電廠除役及核廢料安全管理的問題為重點。

#### 1. Main Task and Outlook

The Atomic Energy Council (AEC) is the safety authority over the atomic energy-related affairs in our country. In addition to strictly enforcing nuclear safety regulation, nuclear emergency preparedness and response, radiation protection, environmental radiation monitoring, and properly planning the management of radioactive waste, AEC also actively promotes scientific and technological research and innovation in the field of energy. AEC supports the spirit of "profession, activeness, innovation, and service" and currently is devoted to the "nuclear-free homeland" policy, and committed to the regulation and supervision of nuclear energy and radiation safety, enhancing the capability of handling nuclear emergency response, as well as positively facing the issues of nuclear power plant decommissioning and radioactive waste safety management.





## 貳、處室業務

# 綜效整合與國際合作-綜合計畫處

綜合計畫處負責施政計畫研擬、業務管制考核、國際合作、核子保防作業、原子能資訊公開、訓練推動與宣傳等業務。對於會內業務、國際原子能總署及國內公部門、民間相關團體之協調與溝通,綜計處均擔任主要的窗口。

# 2. Authority and Responsibility of Various Functions Integrated effectiveness and international cooperation: Department of Planning

The Department of Planning is in charge of duties such as governance planning, effectiveness assessment, international cooperation, nuclear safeguards operation, as well as atomic energy information disclosure, training, and advocacy. The Department also serves as the main window of coordination and communication for the administrative work within AEC, domestic public sectors, non-governmental organizations, and with international organizations such as the International Atomic Energy Agency.





#### 核子設施安全管制-核能管制處

核能管制處主要負責國內核子反應器設施安全及除役之管制作業,並依據核子反應器設施管制法及相關法規,以現場視察、安全審查、執照核發、管制與諮詢會議之方式,監督核能電廠及研究用反應器之運作安全,並定期與其他國家管制機關交流,強化安全管制效能。

#### **Nuclear safety oversight: Department of Nuclear Regulation**

The Department of Nuclear Regulation is mainly in charge of safety regulation for the domestic nuclear reactor facilities, including licensing, decommissioning and oversight for commercial nuclear power reactors and research reactors. In compliance with the "Nuclear Reactor Facilities Regulation Act", and other regulations, the Department supervises the safety of nuclear reactor facilities through inspection, safety review, licensing, advisory committees and regulation meetings, as well as communicating with the nuclear regulatory authorities of other countries, to effectively enforce safety regulations.



#### 安全審查

- 1.暫態與事故分析審查
- 2.燃料設計暨換填審查
- 3.設計暨設計變更審查
- 4.檢測計畫與報告審查
- 5.異常事件(故)報告審查
- 6.運轉規範修改審查



#### 現場視察

- 1.每日駐廠視察
- 2.機組大修視察
- 3.定期團隊視察
- 4.特殊專案視察
- 5.訓練實務視察
- 6.包商檢定視察

#### 管制方式

- 1.機組建廠執照核發
- 2.機組運轉執照核(換)發
- 3.執照文件變更許可
- 4.大修後機組再起動
- 5.異常事件(故)後機組再起動
- 6.運轉人員執照核(換)發
- 7.違規或注意改進事項



核能電廠

#### Safety Evaluation

- Transient and accident event evaluation
- 2. Fuel design, discharge and reload evaluation
- 3. Design and design change evaluation
- 4. Testing program and report evaluation
- 5. Abnormal event and accident report evaluation
- 6. Technical specification modification evaluation



#### **On-Site Inspection**

- 1. Daily inspection
- 2. Unit outage inspection
- 3. Regular team inspection
- 4. Special task-group inspection
- 5. Training practice inspection
- Contractor verification inspection

#### **Regulatory Measures**

- 1. Unit construction licensing
- 2. Unit operation licensing (renewal)
- 3. Licensing document change permit
- 4. Restart of an outage unit
- 5. Restarting a unit after abnormal events or accidents
- Issuance (renewal) of reactor operator license
- 7. Improvements in matters related to violation or requiring attention



Nuclear Power Plants



#### 輻射應用安全-輻射防護處

輻射防護處肩負我國民生應用游離輻射作業的安全管制,包括核能電廠、醫療院所、學術機構、工廠等各單位使用放射性物質或可發生游離輻射設備、相關從業人員之證照核發與作業檢查、人員與環境的劑量管制,以及輻射意外事件的處理與防範,並推動醫療曝露品質保證制度,以確保放射診斷或治療設備劑量之準確性。

#### Radiation application safety: Department of Radiation Protection

The Department of Radiation Protection is mainly in charge of the safety regulation of ionizing radiation operations of livelihood applications, including nuclear power plants, hospitals, academic institutions, factories, etc., that utilize radioactive materials or equipment capable of producing ionizing radiation. The Department issues certificates to relevant professional operators, conducts operation inspections, formulates personnel and environmental radiation dose regulations, as well as handles and prevents radiation accidents. The Department has also been promoting a quality assurance program for medical exposure to ensure the precision of radiation dosage.



## 核子保安與應變-核能技術處

核能技術處為我國輻災應變樞紐,統合協調相關之機關(構),規劃緊急應變機制,確保整備作業完備,以減低輻災的影響。核心業務為核子反應器設施緊急應變與保安作業之管制與監督、核子事故應變及整備作業規劃與監督、全國輻射災害預防與整備等。

### Nuclear security and emergency response: Department of Nuclear Technology

The Department of Nuclear Technology is our nation's center for radiological emergency response. In order to minimize the accident consequences, the Department integrates and coordinates relevant authorities, designs emergency response mechanisms, and ensures the completeness of emergency preparedness. The mission of the Department is to regulate the emergency preparedness and nuclear security of nuclear reactor facilities and to provide consultancy and response for radiological emergency in Taiwan.



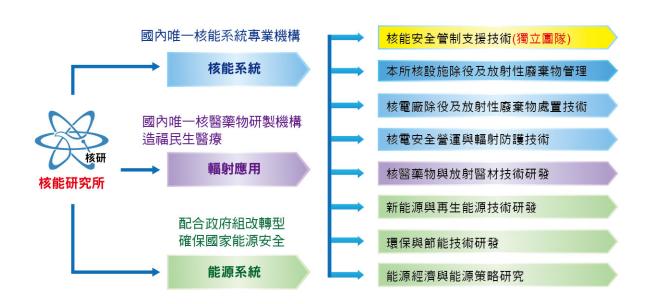
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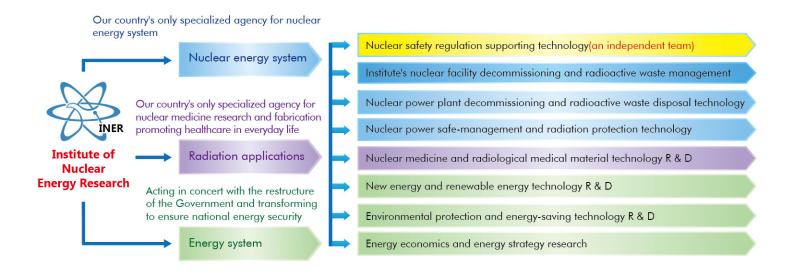
#### 能源科技研發與創新-核能研究所

核能研究所為我國從事原子能科技研發之專責機構,研發重點為核能安全與管制技術精進、輻射生物醫學及藥物研發與推 廣應用、放射性廢棄物處理與處置技術研究、電漿技術之發展與應用等技術。近年來,除持續在原子能領域從事研究與應 用外,也擴大到再生能源與新能源領域,舉凡太陽光電、風力發電、纖維酒精、燃料電池及智慧電網等。

# Affiliated organizations The Institute of Nuclear Energy Research (INER)

INER is our country's specialized agency for the research and development of atomic energy science and technology. Its R&D focus is on the advancement of nuclear safety and regulatory technology, R&D and application promotion of radiation bio-medicine and drugs, radioactive waste treatment and disposal technology research, as well as R&D and application promotion of plasma technology. Recently, in addition to continuing R&D and applications in the field of atomic energy, INER has been expanding its R&D focus to the fields of renewable energy and new energy, such as solar photovoltaic, wind power farm, cellulose alcohol, smart power grid, etc.





#### 放射性物料管理局

放射性物料管理局負責核子原料、核子燃料及放射性廢棄物之安全管制作業,全國放射性物料處理、貯存與處置設施之建 造、運轉與除役之審核與發照,放射性物料輸入、輸出、處理、貯存、運送與處置等相關作業之安全管制與檢查等事項。

#### Fuel Cycle and Materials Administration (FCMA)

FCMA is in charge of the regulatory control of facilities of nuclear materials, nuclear fuel or radioactive wastes by implementing the safety review, licensing, and inspection work for every treatment, storage and disposal facility in its licensing, construction, pre-operational, operation and decommissioning stages. FCMA also enforces the inspection and safety control for the nuclear materials in the process of import, export, handling, storage, transport, disposal, etc.





#### 輻射偵測中心

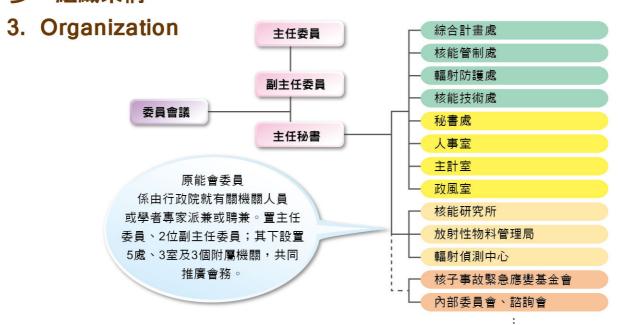
輻射偵測中心主要業務為執行全國環境背景輻射偵測、核設施周圍環境輻射偵測、民生食品放射性含量檢測及大港倡議 輻射異常物檢查,確保國民的輻射安全。近年來,持續精進環境輻射偵測與分析技術,強化環境輻射自動監測系統,即 時掌握及公布全國環境輻射監測資訊,並與國內災害防救單位合作,提升核子事故緊急應變能量。

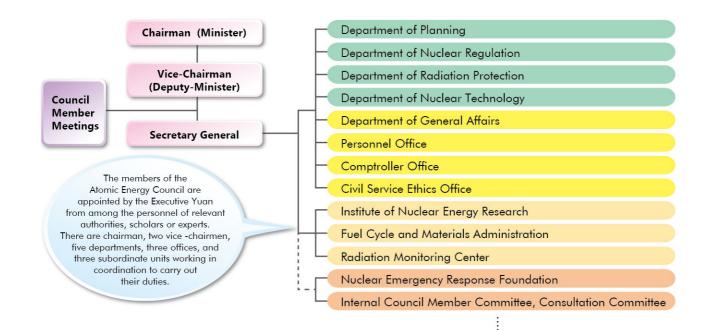
#### Radiation Monitoring Center (RMC)

The main duty of RMC is to ensure the national radiation safety by carrying out national environmental radiation monitoring, environmental radiation monitoring around nuclear facilities, measuring the amount of radioactivity in common foods, as well as the "Megaports Initiative" for monitoring radioactive materials at cargo ports. Recently, RMC has been continuing the advancement of environmental radiation monitoring and analysis technologies, enhancing the environmental radiation monitoring system, immediately mastering and announcing the national environmental monitoring information, as well as cooperating with the national disaster prevention and relief organizations for enhancing the capability of nuclear emergency responses.



# 參、組織架構







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