

# MANAGING THE RISKS OF NUCLEAR POWER IN TURKEY: THE ROLE OF REGULATION

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# INTRODUCTION

- Due to the complexity of nuclear technology, safety and security risks cannot be totally eliminated.
- But they can be mitigated and minimized
- Key element is the proper structuring of the regulatory framework

# REGULATORY FRAMEWORK

## KEY CONCEPTS

- The regulatory framework in the field of nuclear energy is actually composed of two key components.
- The first consists of the norms, standards, rules and recommendations established by international agreements and international organizations.
- The second consists of the elements of the regulatory framework prepared individually for each country. The most important of these elements is the establishment of a regulatory authority.
- The degree of independence of this authority, its powers, the extent of transparency in the activities to be conducted; in short the organizational and managerial characteristics of the regulatory authority are among the most important factors determining the quality of the regulatory framework.

# REGULATORY FRAMEWORK

## KEY CONCEPTS

- Nuclear energy generation comprises many financial and safety risks.
- These financial and safety risks are not independent from each other.
- Regulations aiming to maintain the safety risks at a reasonable and acceptable level generally increase, at the same time, the costs of activities such as construction, operation and management of spent fuel and waste.
- Therefore, the priorities of the power plant operator and even of the Ministry responsible for electricity supply may not always be in line with the principles and regulations relating to safety and may even be in conflict with each other in many cases.
- It is highly critical, in ensuring nuclear safety, to adopt the regulatory decisions regarding safety independently from the power plant operator or the relevant ministry, sometimes even in opposition to their interests.
- So, administrative independence is regarded as one of the key prerequisites for ensuring an independent decision making process.

# REGULATORY INSTITUTIONS IN TURKEY

- The subject of independent administrative authorities is not new for Turkey.
- The Capital Markets Board of Turkey was established in 1982, while the Competition Authority was founded in 1997.
- Independent administrative authorities were established in the fields of banking, electronic communication, energy and public procurement at the end of 1990s and during 2000s.
- International regulations and especially those formulated in the European Union played a guiding role in most of these fields have constituted the backbone of the regulations drafted at the national level in many fields.

# REGULATION OF NUCLEAR ENERGY

- The reason that the safety issue stands out with regard to nuclear energy is certainly the potential danger posed for the society by nuclear power plant activities.
- In case of an accident, not only the owners of the power plant, but also the surrounding community would incur a serious damage.
- In other words, a failure in the activities related to the production of nuclear energy has the potential of generating negative externality and serious damages for the society.
- This externality is not something that may be handled with market mechanism

# REGULATION OF NUCLEAR ENERGY

- In many areas where market mechanism does not function properly, state intervention is generally organized through administrative authorities.
- The quality of the regulatory framework within these limits is closely associated with how independently the regulatory authority may take decisions.
- In the decisions it takes, the regulatory authority is expected to be independent from the political authority and the companies or operators it is assigned to inspect.

# REGULATORY INDEPENDENCE

- The regulatory authority in the field of nuclear energy production is TAEK.
- Consensus in Turkey on the view that TAEK does not bear the characteristics of an independent regulatory authority according to international norms.
- However, it appears like this consensus is formed because TAEK performs development activities and operates the reactor in addition to regulating and inspecting. But other factors as well.



# REGULATORY INDEPEDENCE

- One of the internationally accepted prerequisites of enabling the regulatory authority to act independently is the inability of the political authority to remove from office the persons who fulfill the duty of chairman.
- TAEK's Chairman is "selected by the Prime Minister and jointly appointed by decree"
- TAEK's management is directly under the control of the Prime Minister.

# REGULATORY INDEPENDENCE

- Another element of regulatory independence relates to the distribution of the power of regulation and decision making.
- Autonomy requires that the decisions and the regulations of the administrative authority are made in an independent manner, and that especially the political authority should not be directly involved in this process.
- Yet, this is not the case for TAEK.
- For instance, many critical decisions, including the adoption of TAEK's regulations are taken by the Atomic Energy Commission (AEC)

# REGULATORY INDEPEDENCE

- Another dimension of regulatory autonomy relates with the financial resources of the authority.
- The main point here is the presence of mechanisms to prevent the full financial dependence of the agency to the political authority.
- Yet, the budget of TAEK is fully dependent on the budget of the Prime Ministry and its real income is composed of the allowance to be allocated for TAEK in the budget of the Prime Ministry.

# REGULATORY INDEPENDENCE

- Another dimension of the regulatory independence relates with the inspection of the agency.
- It is preferred that the inspection of the agency is not conducted by an institution directly reporting to the political authority.
- Yet, TAEK is under the inspection of the High Inspection Board (HIB) of the Prime Ministry in administrative and financial topics.
- In other words, TAEK is dependent on the political authority also in the field of inspection.

# REGULATORY INDEPENDENCE

- In summary, TAEK is not independent not only because it performs development activities in the field of nuclear energy or because it operates the reactor
- It also does not avail of other key legal and institutional characteristics of independence.
- The new authority to be established should avail of these characteristics of independence.

# ACCOUNTABILITY AND TRANSPARENCY

- Another measure aimed at ensuring the accountability of the regulatory authority, and thus the high regulatory quality, is transparency.
- Transparency may also play a role in ensuring de-facto independence.
- There are no provisions on transparency in the TAEK Law.
- The topic of transparency should be extensively tackled in the establishment law of the regulatory authority and measures should be adopted for ensuring that the agency conducts its regulatory activities in a transparent manner.

# GAPS IN LEGISLATION

- There are still major deficiencies in terms of legislations and regulations in the legal and regulatory framework with regard to nuclear energy in Turkey.
- Spent fuel
- Decommissioning of power plants

# INTEGRATED POLICY

- These deficiencies reflect the presence of a larger and more fundamental problem.
- Turkey does not yet have an integrated policy with regard to nuclear energy !
- The political authority has not yet presented a serious study comprising a critical analysis on whether the country needs nuclear power and discussing the benefits and costs of nuclear energy compared to its alternatives.



# INTEGRATED POLICY

- There is the need for a policy document indicating how the nuclear policy will be developed, how the relevant legal and regulatory infrastructure is to be formed, how the safety culture will be created and what type of steps are to be taken in topics such as spent fuel and decommissioning.
- These documents should be prepared in a participatory manner, the public should be informed, their views should be received and sufficient responses should be provided to these views.

# RECOMMENDATIONS

- In order to achieve independence, at least the decision making process of the regulatory authority should be protected from political impact.
- Those serving in the decision bodies should not be removed from office except for extraordinary cases
- The control of the political authority over the budget of the regulatory authority should be reduced.
- It should be ensured that the work of the regulatory authority is transparent and observable.
- The topic of transparency should be included with detailed provisions in the law on the establishment of the regulatory authority.
- But overall a more concerted government effort to prepare and share an integrated nuclear policy proposal.