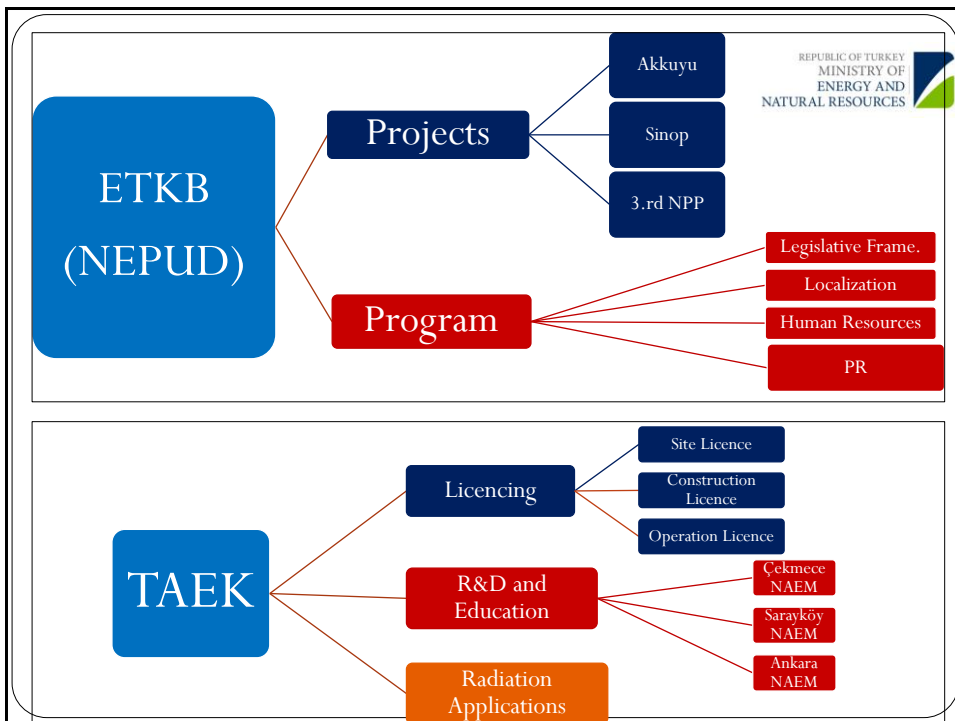
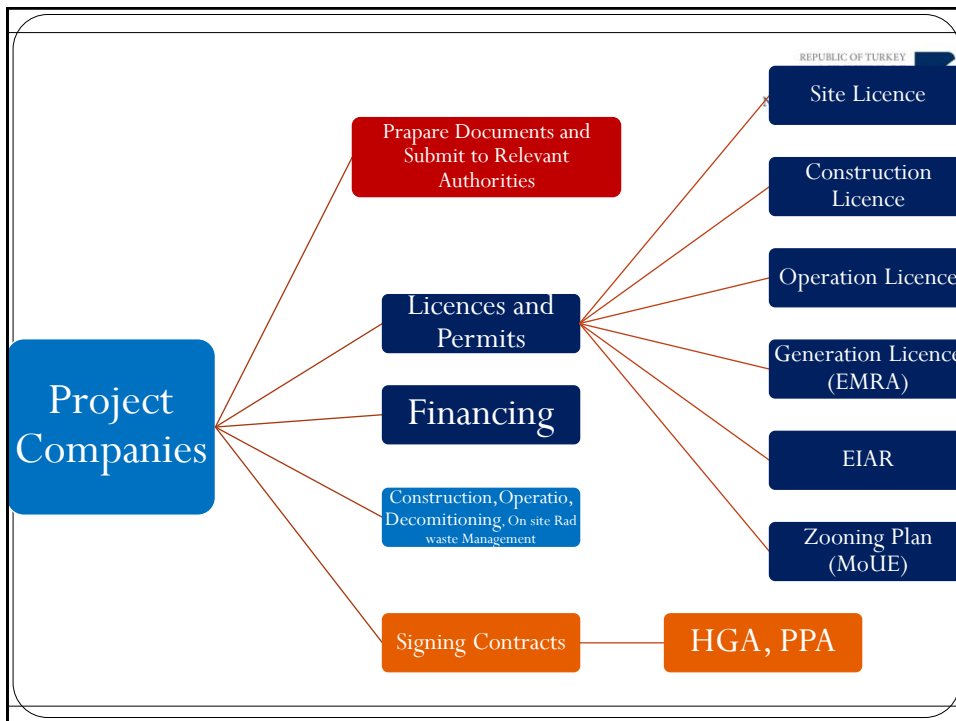


# Turkish NPP Projects

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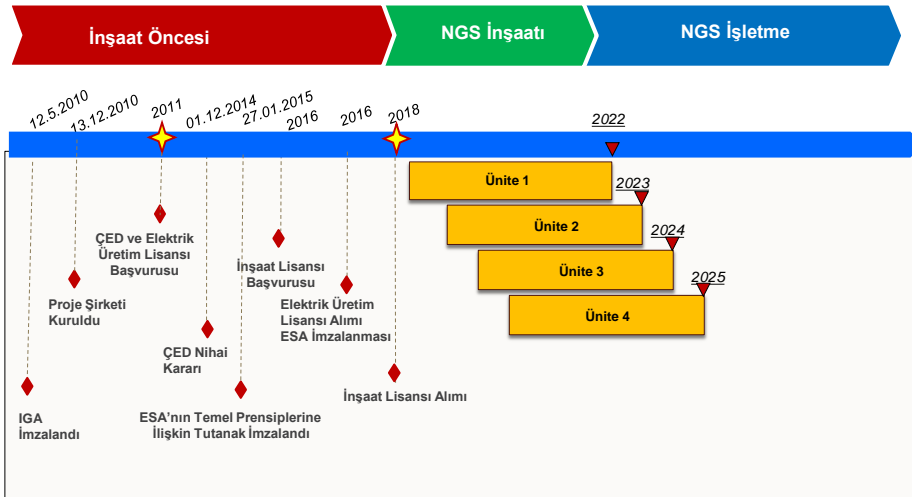
## Status of Turkish Nuclear Power Program

- **Akkuyu NPP project:**
- Intergovernmental Agreement (IGA) between Turkey and Russian Federation signed in May 2010.
- Project is implemented under Build-Own-Operate scheme.
- Akkuyu Project Company (APC) established in Turkey currently having Russian shareholders.
- Environmental Impact Assessment (EIA) report submitted to Ministry of Environment in March 2013 and EIA positive decision received in December 2014.

## Akkuyu Milestones

- ❑ 1976: Site Licence.
- ❑ 2010: Signing of IGA.
- ❑ 2010: Establishment of Akkuyu Project Company.
- ❑ 2011: site Allocation.
- ❑ 01.12.2014: Pozitive EIAR .
- ❑ December 2014: Submit Site Parameters Report and Aply for Construction Licence to TAEK.
- ❑ 14.04.2015: The foundation stone was laid at the future construction site of offshore hydraulic engineering facilities2015
- ❑ The Energy Market Regulatory Authority (EPDK) issued a preliminary license for power generation for 36 months

## Akkuyu Schedule



## Number of Students in Russia

	# of Students
4. Sınıf (Obninsk) (2011)	38
3. Sınıf (Moskova) (2012)	62
2. Sınıf (Moskova) (2013)	64
1. Sınıf (Moskova) (2014)	68
Hazırlık (2015'te seçilenler)	78
<b>Toplam</b>	<b>310</b>

In 2015, 78 students sent to Russia  
30 Peter the Great St. Petersburg Polytechnical University  
48 to Obninsk MEPhI University.

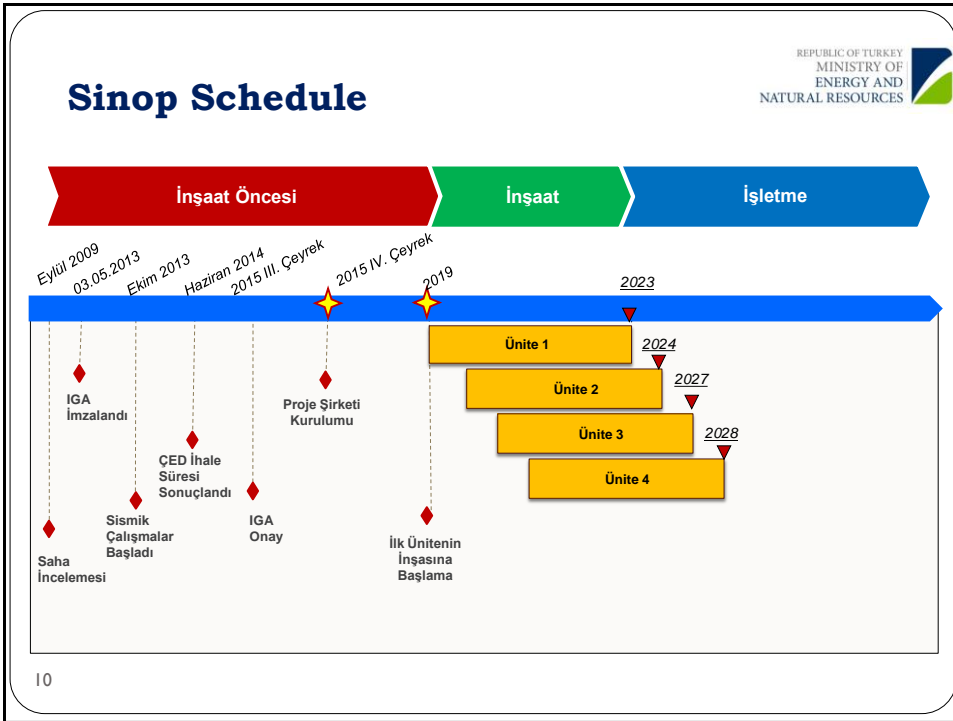
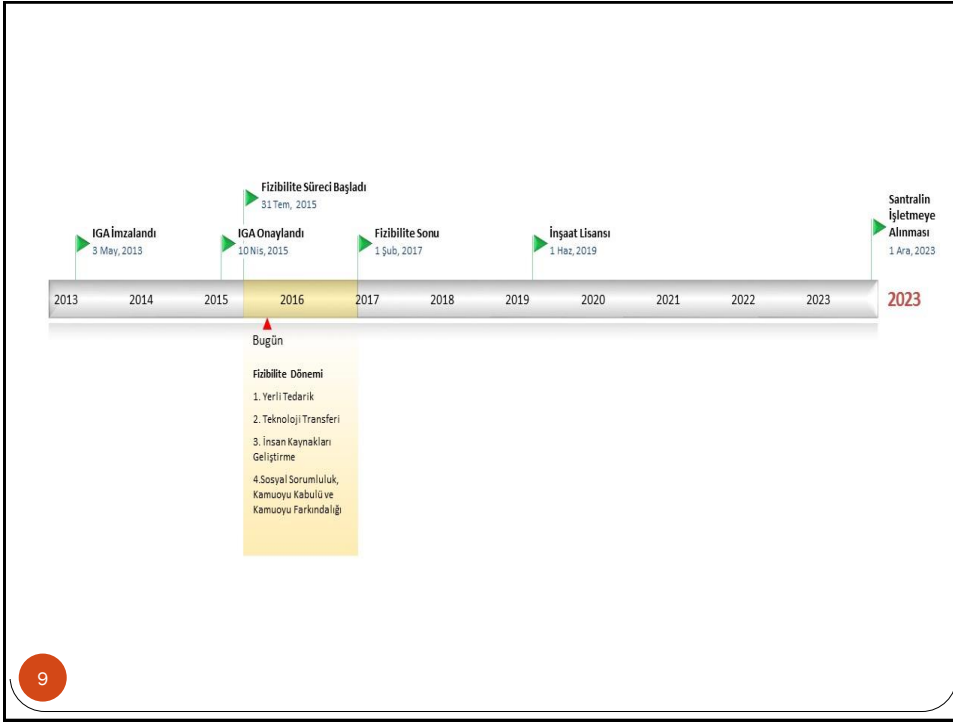
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## Status of Turkish Nuclear Power Program

- **Sinop NPP project:**
- IGA signed between Turkey and Japan for development of NPP at Sinop site in May 2013.
- MHI, Itochu, Engie (GDF Suez) and EÜAŞ will act as investors.
- IGA was ratified in April 2015 and published in Official Gazette in May 2015.
- Negotiations for shareholders agreement to incorporate Sinop Project Company continue between investors.
- Technical and economic feasibility studies continue for final decision on the project.

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## Status of Turkish Nuclear Power Program

- **Future NPP projects:**
- MoU signed between EÜAŞ, Westinghouse and SNPTC for development of NPP project including 2 units of AP1000 and 2 units of CAP1400 at a potential site.
- The development report was provided by Westinghouse and SNPTC in June 2015 which is currently under review.

## Akkuyu and Sinop NPP Projects

- ❑ **70 billion kWh** electricity generation each year
- ❑ If both NPP were online today; they would be %14 of installed capacity and **% 28 share in the market.**
- ❑ **16 billion dollar worth opportunity for Turkish companies**
- ❑ 20000 jobs for Turkish citizens during construction.
- ❑ 600 Turkish Engineers in Akkuyu.
- ❑ Works for establishment of Turkish Japan University is ongoing.

## Legislative Framework

- NEPIO responsible to coordinate government's role in nuclear infrastructure development.
- The main laws in force related to nuclear energy:

Law	No	Enactment
Law on Turkish Atomic Energy Authority	2690	1982
Environmental Law	2872	1983
Law on Construction and Operation of NPPs and Sale of Energy	5710	2007
Law on Electricity Market	6446	2013

## Legislative Framework

- The NPP projects are implemented under IGAs.
- A comprehensive law on nuclear energy is necessary which addresses the following issues:
  1. Establishment of an independent nuclear regulator.
  2. Provisions on licences and permits.
  3. Spent nuclear fuel and radioactive waste management.
  4. Decommissioning of nuclear facilities.
  5. Inspection, offences and punishment.

## Legislative Framework

- A draft whitepaper on peaceful use of nuclear energy was prepared which formed the basis of the draft nuclear energy law.
- A draft law on nuclear liability was prepared based on the Paris Convention on Third Party Liability together with amendments and supplements including the 2004 Protocol.
- Expert mission from IAEA reviewed both draft laws and submitted their recommendations.

## IGAs - Economic

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Russia:</li><li>• No financial burden on Turkish party</li><li>• Russian party provide financing of project</li><li>• ROI in 15 years</li><li>• Insurance of risks by Russian party</li><li>• Employment of Turkish suppliers on wide extent</li><li>• Tariff fixed for first 15 years at 12,35 USD/kWh</li></ul> | <ul style="list-style-type: none"><li>• Japan:</li><li>• Turkish party provide off-site infrastructure and facilitate the issuance of approvals, permits and licences</li><li>• Japanese party support and promote Japanese institutes to finance the project</li><li>• EÜAŞ contribute as shareholder to project company</li><li>• Tariff target 10,80 USD/kWh (final tariff determined after feasibility)</li></ul> |
|---|---|



## IGAs - Social & Environmental

- Russia:
  - Russian party responsible for waste management and decommissioning
  - Project company pay 0,15 USD/kWh each to waste management and decommissioning funds
  - Spent fuel could be reprocessed in Russia under separate agreement
  - Liability provisions under agreements which Turkey is party and national legislation
- Japan:
  - Turkish party responsible for final disposal of spent fuel and radioactive waste
  - Turkish party take necessary measures to develop legal framework and liability regime
  - Turkish citizens recruited under separate agreement
  - Japanese party provide a localization plan following the feasibility and economic impact study

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## PR WORKS

- Facebook:
- Twitter
- PR Visit To France

From Sinop and Mersin a group of people including teachers, fishermen, doctors, tour operators and farmers arranged to visit French Nuclear installations (Flamanville, ANDRA, Marcoule and ASN) they had the opportunity to speak with experts and their peers.

- Public informative Ad

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## Pending Works

- Finalisation of draft nuclear energy and liability laws and sending to the parliament for ratification.
- Announcement of the white paper on peaceful use of nuclear energy.
- Screening of legislative framework under energy chapter of EU acquis.
- Accession of the Joint Convention and ratification of the 2004 Protocol of Paris Convention.

Tüm kaynaklar değerlendirilerek çevreye duyarlı elektrik üretimi...



*Thank You*