AKKUYU NUCLEAR
ROSATOM

Sustainable Development of Akkuyu

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General Information and Project Parameters

Akkuyu NPP Project

Rosatom State Corporation is constructing the first nuclear power plant in the Republic of Türkiye

Project is implemented based on the Inter-Governmental Agreement signed between Türkiye and Russia May 12, 2010

General Information About Akkuyu NPP Project

Location: Mersin Province, Türkiye
Reactor: VVER-1200
Capacity: 4 x 1,200 MW

Design features:
World's first NPP implemented
on BOO (build-own-operate) basis
First NPP in Türkiye

Grounds:
IGA with the Republic of Türkiye (2010)

Life cycle:
60 years (with extension option for another 20 years)

Key agreements and licenses:
Power Purchase Agreement (2017)
Construction Permit of the power units 1-4
Generation License (2019)

General Information and Project Parameters

State-of-the-art Nuclear Technology Generation III+

VVER-1200 *(in commercial operation since 2017)*

1,200 MW	*installed capacity*
60+ years	*life cycle*
> 90% ICUF	*(installed capacity utilization factor)*
1,500	*reactor-years of safe operation*

active and passive safety systems

Akkuyu NPP Construction in Figures

~30,000	people participate in the construction of the Akkuyu NPP
2,500	units of equipment and motor transport engaged at the site
>400	Russian and Turkish companies take part in the project implementation
200	load lifting mechanisms operate simultaneously
24/7	works in progress at the Akkuyu NPP Site

More than 2,000 Turkish supplier companies are involved in the project

Stakeholder Engagement

Strengths

Proactive collaboration with Turkish regulators/local communities on safety and transparency.

Lessons & Application

Key Lesson: Flexibility in regulatory navigation + open communication to preempt challenges.

Applied: Adaptive planning for Akkuyu continuity and future projects (Sinop).

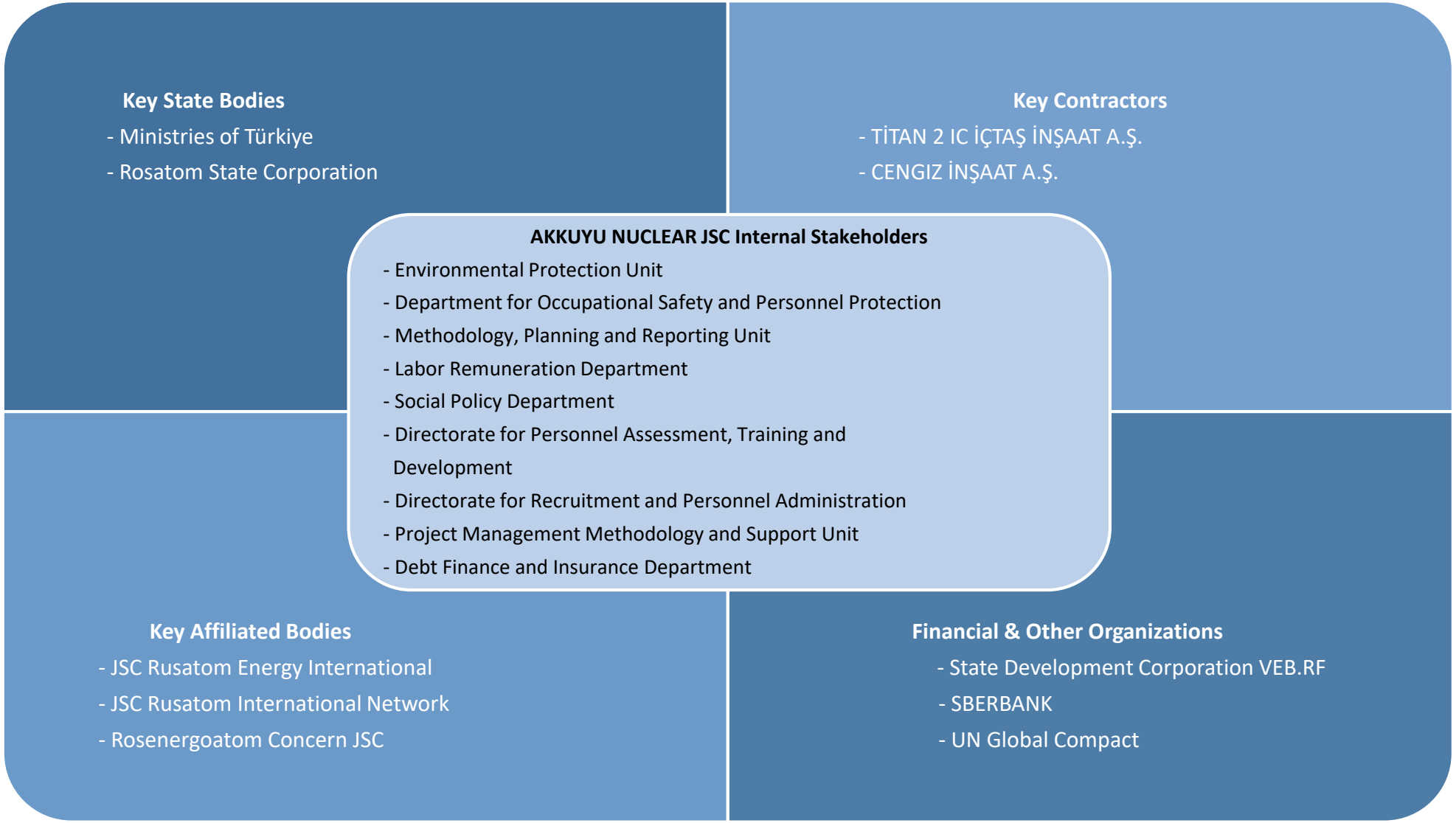
BOO Model Impact & Challenges

Supply Chain: Coherent integration under one entity, but required local supplier coordination.

Future Projects: Prioritize early local partnerships, align regulations, and enhance supply chain localization.

#1 Lesson: Early stakeholder engagement (regulators, communities, suppliers) to mitigate risks and ensure timelines/budgets.

Key Stakeholders of SDD



What is Sustainable Development and ESG

What is Sustainable Development?

Official Definition (UN):

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
— Brundtland Report (1987), United Nations

Key Pillars:

Economic Growth: Balanced, inclusive prosperity.
Social Inclusion: Equity, health, education, and justice.
Environmental Protection: Climate action, resource conservation, biodiversity.

Global Framework:

17 Sustainable Development Goals (SDGs): Adopted in 2015 under the *2030 Agenda for Sustainable Development*

What is Sustainable Development and ESG

What is ESG?

Official Definition:

> *"ESG (Environmental, Social, Governance) criteria are a set of standards for a company's operations that socially conscious investors use to screen potential investments."*
> *— UN Principles for Responsible Investment (PRI)*

Components:

Environmental: Climate action, pollution control, resource efficiency.
Social: Human rights, labor standards, community impact.
Governance: Ethics, transparency, anti-corruption.

Rosatom ESG-portrait

Member of UN Global Compact.
Member of National ESG Alliance.
Public SD reporting.

“Green” products range. Clean atom, waste management, digitization.

Assistance in attainment of SDG and contribution to climate change agenda as part of Strategy-2030.

Independent ESG-assessment.
ESG-ratings in the “green” zone.
ESG-financing.

Monitoring ESG-indicators. Assessment of the effects of SDGs on key projects.

Human centricity and human capital development.

Priority UN Sustainable Development Goals for Russia

Rosatom directly supports attainment of 6 UN SDG:

Specifics of nuclear industry also directly exerts influence on SDG:

Rosatom lays special emphasis on exclusion of the risk of negative impact on SDG:

Sustainable Development in Türkiye

Energy Dependency and Nuclear Focus

Türkiye relies heavily on energy imports and is turning to nuclear energy to reduce dependency, aiming for 20 GW nuclear capacity by 2050.

Sustainable Development Goals (SDGs)

Coordinated by the Presidency of Strategy and Budget, Türkiye aligns ministries and institutions with specific SDGs, supported by TÜİK for data management.

International Climate Commitments

Türkiye is part of the Paris Agreement and Kyoto Protocol, targeting a 41% reduction in GHG emissions by 2030 and carbon neutrality by 2053.

Green Transformation

The 2024-2026 Economic Program emphasizes green transformation, aiming to reduce emissions and enhance climate adaptation.

Nuclear Energy Projects

Akkuyu NPP Project is under construction, two more NPP projects are underway, with plans to significantly increase nuclear energy capacity by 2035 and 2050.

NPP contribution to sustainable development

- Stable supplies of low-carbon energy for 60+ years
- NPP of capacity 2X1200 MW is able to provide electricity for >5 mln people
- Orders for local industry for ~$7 bln during construction
- Creation of around 4,000 jobs during operation
- Low tariff dependency on fuel price
- Demand for qualified work force stimulates development of science and education

NPP construction contributes to minimum 7 UN SDG

NPP contribution to sustainable development

It is impossible to achieve global climate action objectives without nuclear power

Nuclear energy is established “green” in the Taxonomies of Russia, China and EU, and the Taxonomies of EAEU

It is expected that Turkish Taxonomy will consider nuclear energy as “green”

CO2 emissions
(<100 gCO2-equiv / kWh)

Do no significant harm principle (DNSH)

Unconditional prioritization of safety

Nuclear Fuel Cycle closure technologies

Contribution of the Akkuyu NPP construction project to sustainable development of Türkiye

GDP growth

Approximately $45bln calculated project contribution to GDP of Türkiye during NPP's life cycle.

Tax effect

More than $2 bln constitute additional tax receipts to the country's budget for the construction period

Share of women employees

Women represent 28% of the Company's employees, surpassing the global average gender distribution in the nuclear industry.

Energy supply

35 billion kWh targeted average annual generation which covers up to **10% of Türkiye's electricity demand**, 24/7 power generation over a period of 60 years

Growth of low-carbon sources of generation

Akkuyu NPP to boost Türkiye's **low-carbon energy share by 27%**, reducing emissions significantly.

Contribution of the Akkuyu NPP construction project to sustainable development of Türkiye

Improvement of infrastructure

Akkuyu NGS improves local life quality, boosts SMEs, tourism, education, and infrastructure development in the region including regional road network expansion; it also spurs skilled workforce training

Develop sustainable infrastructure

Akkuyu NGS employs direct-flow cooling, desalination, and dual-circuit steam systems, managing over **155,000 tons of waste** in 2023 with Zero Waste compliance.

Partnerships in SDG

This landmark Russia-Türkiye Project complies with IAEA regulations, national laws, and global nuclear safety and operational standards, joining **WANO**.

Adult education

322 Turkish citizens have completed their studies at Russian universities specializing in nuclear field, with **320 of them now employed** at AKKUYU NUCLEAR JSC.

REDUCTION OF GREENHOUSE GAS EMISSIONS

Approximately 18 mln ton shall be the reduction of CO_2 - emissions equiv. annually (~3,4% of the current level)****,[10] **from substitution of generation volumes from other sources thanks to NPP operation**

ESG-projects at the Akkuyu NPP site

Ecological monitoring

- Condition of land and aquatic life, marine hydrobionts is monitored
- Annual environmental monitoring report is under preparation and transfer to the industry regulatory authority viz, Nuclear Regulatory Authority (NDK) of the Republic of Turkiye

Ecological infrastructure

- Separate collection of industrial and domestic wastes and transfer them for processing is organized
- Water intake structures are equipped with elements that prevent entry of fish into them

Other

- AKKUYU NUCLEAR is a partner of the project for monitoring and protection of sea turtles inhabiting =the NPP construction region

Project to develop and support social infrastructure

Education

- A school is open for children of AKKUYU NUCLEAR JSC employees and other school children in the region
- Support is rendered to the schools and pre-school institutions in the region of presence

Residential infrastructure

- Construction of a residential township is planned for the personnel, which includes apartment buildings, school, kindergarten, public catering facilities, health care facilities with pharmacy, shopping facilities, sports complex, children's play areas and playgrounds, laundry rooms, hairdressers, community centers

Medicine

- Support is provided to health care facilities of the region of presence
- A first-aid station functions at the site
- Voluntary medical insurance for the employees

Road infrastructure

- Thanks to the Akkuyu NPP project the road and transport infrastructure in Mersin province is being developed, including the road from the Gulnar regional center to the NPP site has been reconstructed, narrow areas have been expanded, restriped, guards have been installed on the steep slopes and dangerous turns, speed enforcement has been tightened – road has become considerably safer

Marine infrastructure

- A terminal has been constructed at the NPP construction site territory for the project purposes directly at the site without creating additional load on the transport infrastructure of the NPP construction region,

Sustainable Development Across the Company

Thank you!