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STATE ATOMIC ENERGY CORPORATION "ROSATOM"

Rosatom Financial Solution in NPP Construction Projects

Rosatom Seminar on Russian Nuclear Energy Technologies and Solutions

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Key Parameters of NPP Project



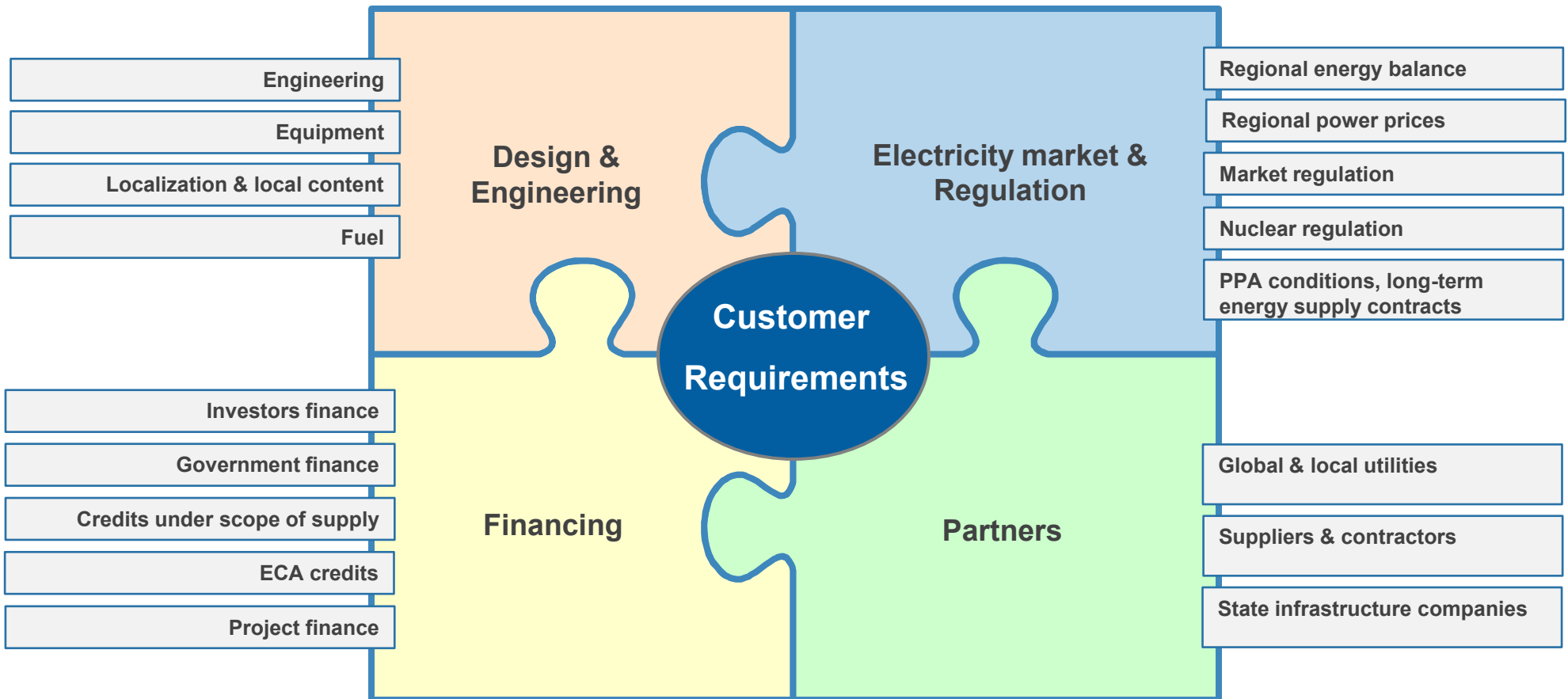
Novovoronezh NPP In Russia

- Construction period – about 7-8 years
- Operating period – 60 years
- Installed capacity – about 2 000 MW
- Annual electricity output – ~15 TWh
- CAPEX – more than \$7 bln
- Annual electricity sales – about \$1,5 bln
- Payback period – 15-25 years

NPP Project Life Cycle

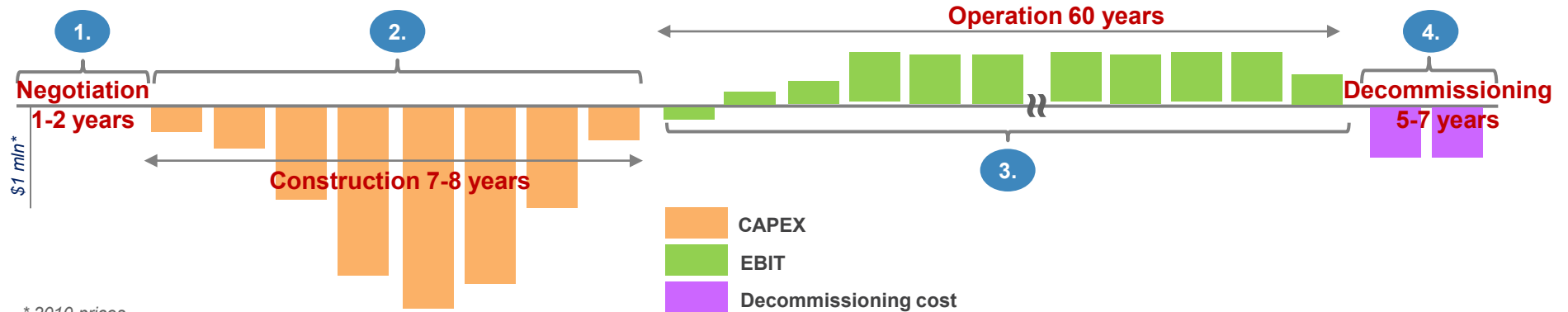


Key Elements of NPP Project Implementation



NPP Project Financing Structuring

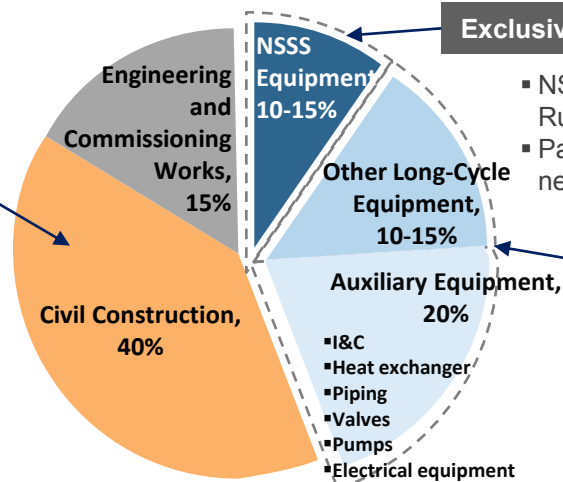
NPP Project Investment Schedule



NPP CAPEX Structure

Potential for Partial Localization and/or Outsourcing

- Part of outsourced works may be supported by local financing of the country (for example, to achieve experience in foreign NPP projects China is ready to offer low-cost progressive size credit resources for the part of the project)



Exclusively Russian Delivery

- NSSS equipment is a supply of unique Russian technology
- Partial credit loan arrangement may be negotiated with Russia (up to 85%)

Potential for Localization and Global Sourcing and/or Equipment Supply from Europe

- Equipment supply could be partially credited by International or European Country Export Agencies

NPP Project: Financial Resources Mix

- Equity financing
- Loan guarantees
- Competences in NPP construction and operation

- Project financing of up to 85% of Russian supply
- State guarantees
- Interest rate subsidies

- Significant project share credit upon availability of state guarantees or suppliers guarantee



- Equity financing
- Low-risk equity financing after NPP launch
- Dividend oriented portfolio investors

- 10-15% of the project debt financing
- Financial credit instruments, securities
- Project surety bonds, risk sharing mechanisms

- Large debt financing related to the delivery amount
- Guarantees for commercial credits for equipment supply

Sources, Conditions and Limitations for Financing Arranged by Rosatom

Financing options	Rosatom equity financing	Russian state export financing *	Russian state financial loan*	Financing from Russian state banks
Volumes / Limits	Pro rata value of the Russian supply / Majority stake	Maximum 85% of Russian supply	Up to 40-50% of the project	Up to 3xEBITDA of the borrower
Rate	Equity value	~6%	~6%	6-10%
Terms	NPP lifecycle	Up to 20 years, grace-period for the construction time	Up to 20 years, grace-period for the construction time	Up to 10 years, grace-period for 2-3y for interests, 5y on main debt
Special conditions	<ul style="list-style-type: none"> Based upon decision of Russian Federation 	<ul style="list-style-type: none"> Should be specified in intergovernmental agreement Local state or large bank guarantee is required 	<ul style="list-style-type: none"> Should be regulated by intergovernmental agreement Guarantee of borrower's state is required 	<ul style="list-style-type: none"> Should be regulated by intergovernmental agreement Guarantee of borrower's state and/or additional securing of the borrower

* Subject to article 122 of the Russian Budget Code

Scenarios for NPP Construction Project Implementation

Scenario 1: NPP equity financing (BOO model)

- 25%+1 share of NPP equity financing (less than 51%)
- Providing of equity share financing, extra credit is possible in proportion to the equity share
- Up to 85% of the project financing (Russian supply) is provided by Russian Federation, favorable interest rate
- Together with the customer searching for partners from third countries to participate in the project as investor and/or
- Working with international credit and financial institutions

Scenario 2: Participation in project as EPC-contractor

- Up to 85% of the project financing (Russian supply) is provided by Russian Federation, favorable interest rate
- Russian state loan to customer country
- Provision of credit to the Russian State Bank within the framework of promoting programs of the Russian exports
- Increase of the Russian debt financing of the in case of the simultaneous implementation of other projects for the country-customer
- Additional support for project financing of the Russian side on the infrastructure development, training, etc.
- Possible support in searching for project investors

Financing scope and parameters which may be granted by the Russian Federation depends on the involvement in the project: equity share, volume of Russian supply, presence of co-operation on other projects etc.

Flexible NPP construction financing options via Intergovernmental agreements (IGAs)

	Turkey	Vietnam
Project configuration	4 units x 1200 MWe = 4800 MWe	2 units x 1000 MWe = 2000 MWe
CAPEX	\$ 20 bn.	< \$ 10 bn. (estimate)
Project scheme	<ul style="list-style-type: none">➤ BOO (Build-Own-Operate)➤ Power Purchase Agreement<ul style="list-style-type: none">• \$ 12,35 c/MWh• 15 years	<ul style="list-style-type: none">➤ EPC (Engineering-Procurement-Construction)➤ “Turn-key” contract
Legal basis	IGA on NPP construction (May, 2010)	2 IGAs: <ul style="list-style-type: none">➤ on NPP construction (October, 2010)➤ on credit for NPP construction (November, 2011)

Significant Factors in Decision on the Project Structure

1. Local policy/regulation

- Political context of the project implementation
- Specific requirements to the financial structuring of the energy and nuclear projects
- Specific requirements to the foreign investors in nuclear space
- Possibility of introducing a preferential customs and tax regime for the project implementation
- Specific rules of regulatory environment of the local electricity market, possibility of concluding PPA

2. Project participants

- Availability of financial support for the project by the customer Government
- Financial status of the project participants in terms of their credibility
- Roles and responsibilities for the project implementation, depending on the project model (EPC, BOO)

3. Technology

- Requirements of the localization and technology transfer
- Possibility of sub-contractors to provide financing for its scope of supply
- Additional obligations of the contractor for the project implementation and related costs (infrastructure development, personnel training, etc.)

Thank You for Attention!

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