



**РОСАТОМ**

ГОСУДАРСТВЕННАЯ КОРПОРАЦИЯ ПО АТОМНОЙ ЭНЕРГИИ «РОСАТОМ»

# **Nuclear Contractors Motivation for the Reduction of Nuclear Facility Construction Period and Costs**

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10.06.2014

# Existing and proposed systems of motivation for the construction period and expenses reduction



Existing motivation system	Proposed motivation system	Proposed motivation system
<p>Bonus for saving is not provided for in the project</p>		<p>Project should provide for "Saving bonus"</p>
<p>The only one interested in the construction period and costs reduction</p>	<p>Investor</p>	<p>The one interested in the construction period and costs reduction</p>
<p>The main striving is 100% development, even in case of saving</p>	<p>Project owner/ Customer</p>	<p>Motivation for reaching expenses and time frame reduction</p> <p>(bonus in % of saving or for the commissioning, or commissioning ahead of schedule)</p>
<p>The main striving is 100% development, even in case of saving</p>	<p>Designer</p>	
<p>The main striving is 100% development, even in case of saving</p>	<p>Contractor</p>	

# System of designers' motivation for cost reduction



## Existing system

Design  
work cost

=

%

×

Facility  
cost

Designer  
motivation –  
facility cost  
increase

## Proposed system

Design  
work cost

=

Rated labor effort  
cost

+

Bonus -  
% of  
savings

Designer  
motivation –  
saving in the  
facility cost

# Main components of the industry-wide motivation system

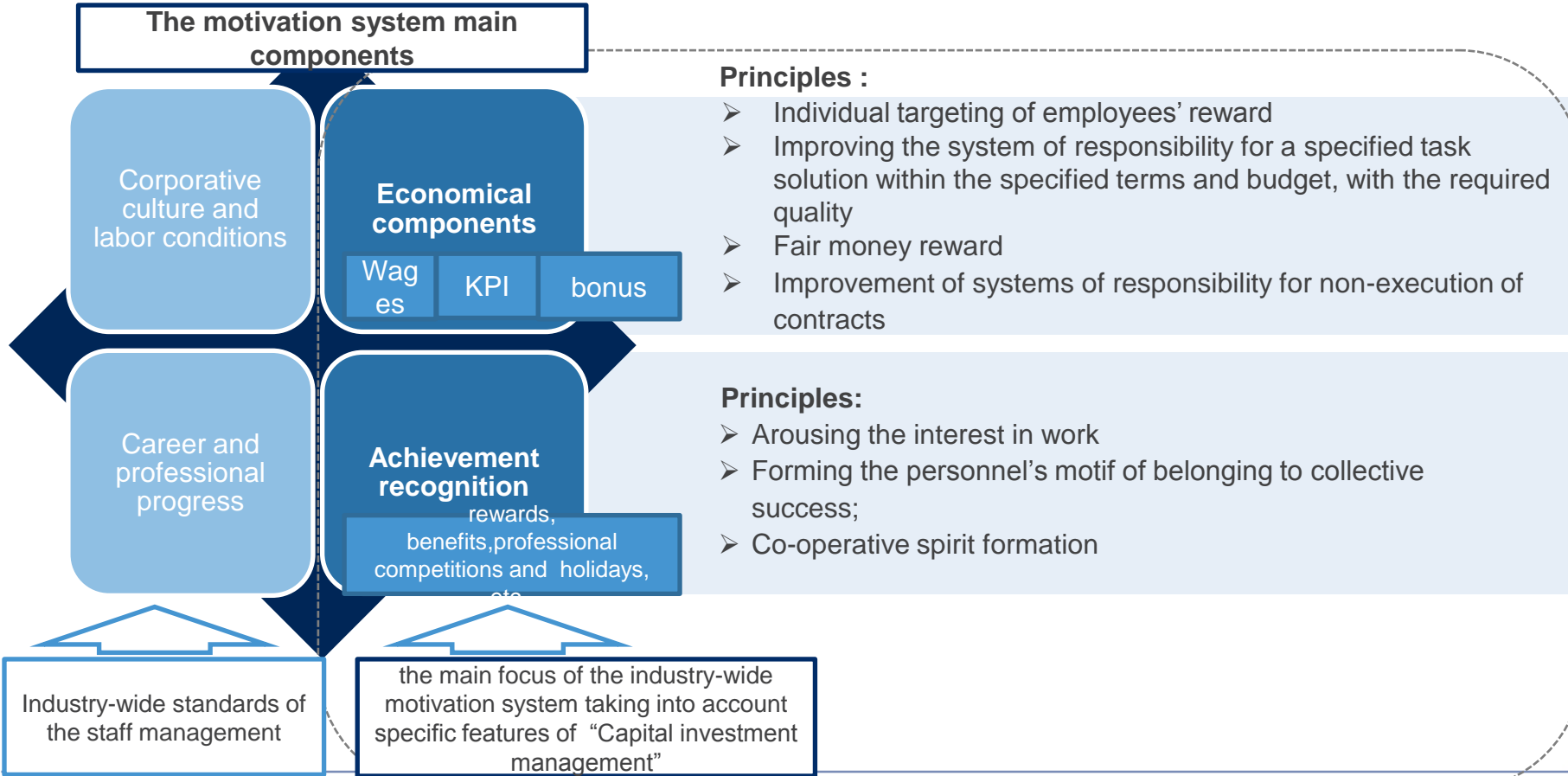


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The main target of motivation is the employees, from top-managers to workers , designers, engineers, installation staff, etc.

The motivation system is differentiated by management levels and project implementation stages

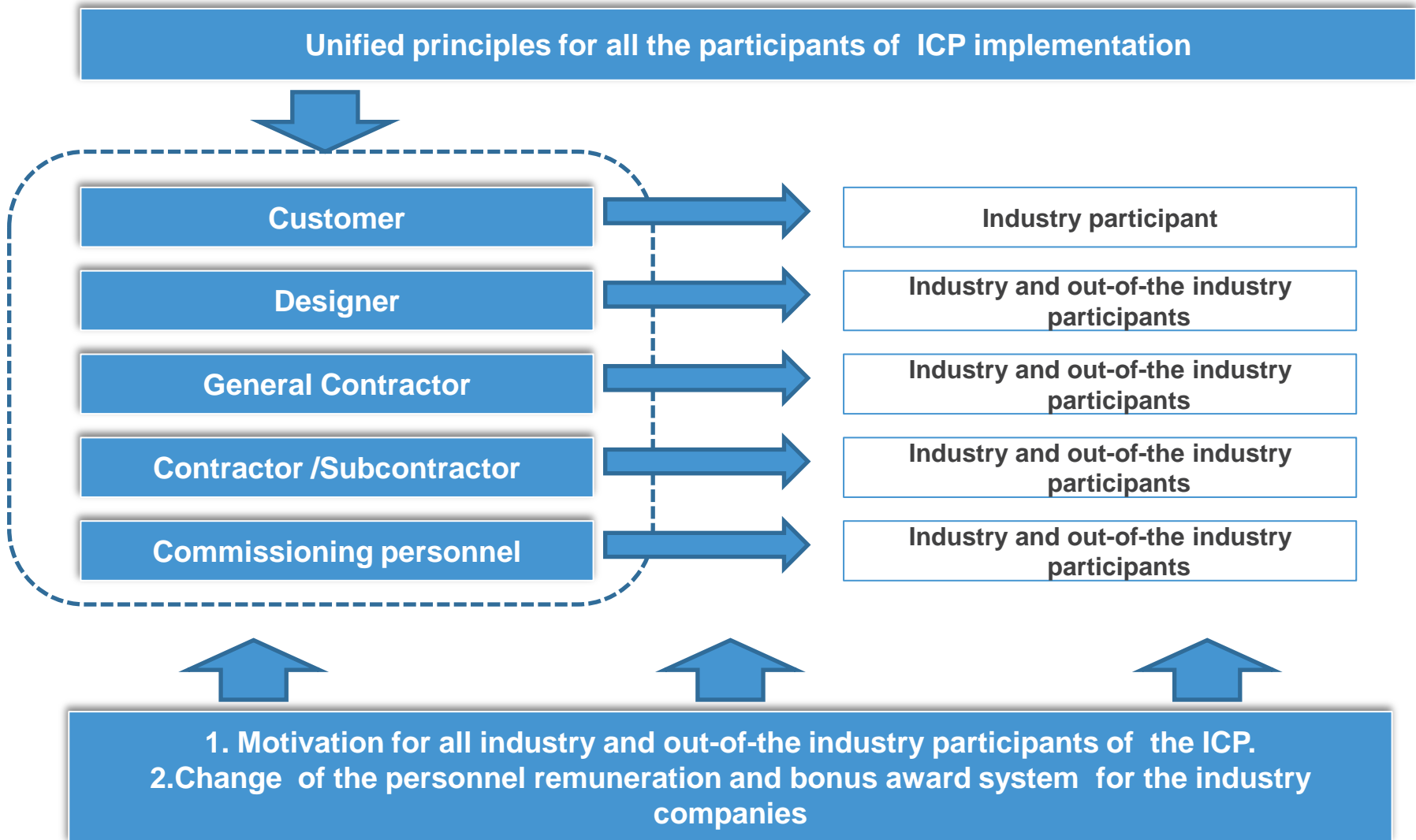
The motivation system should cover all the components of influence



# ICP (investment and construction project) participants and approaches to motivation



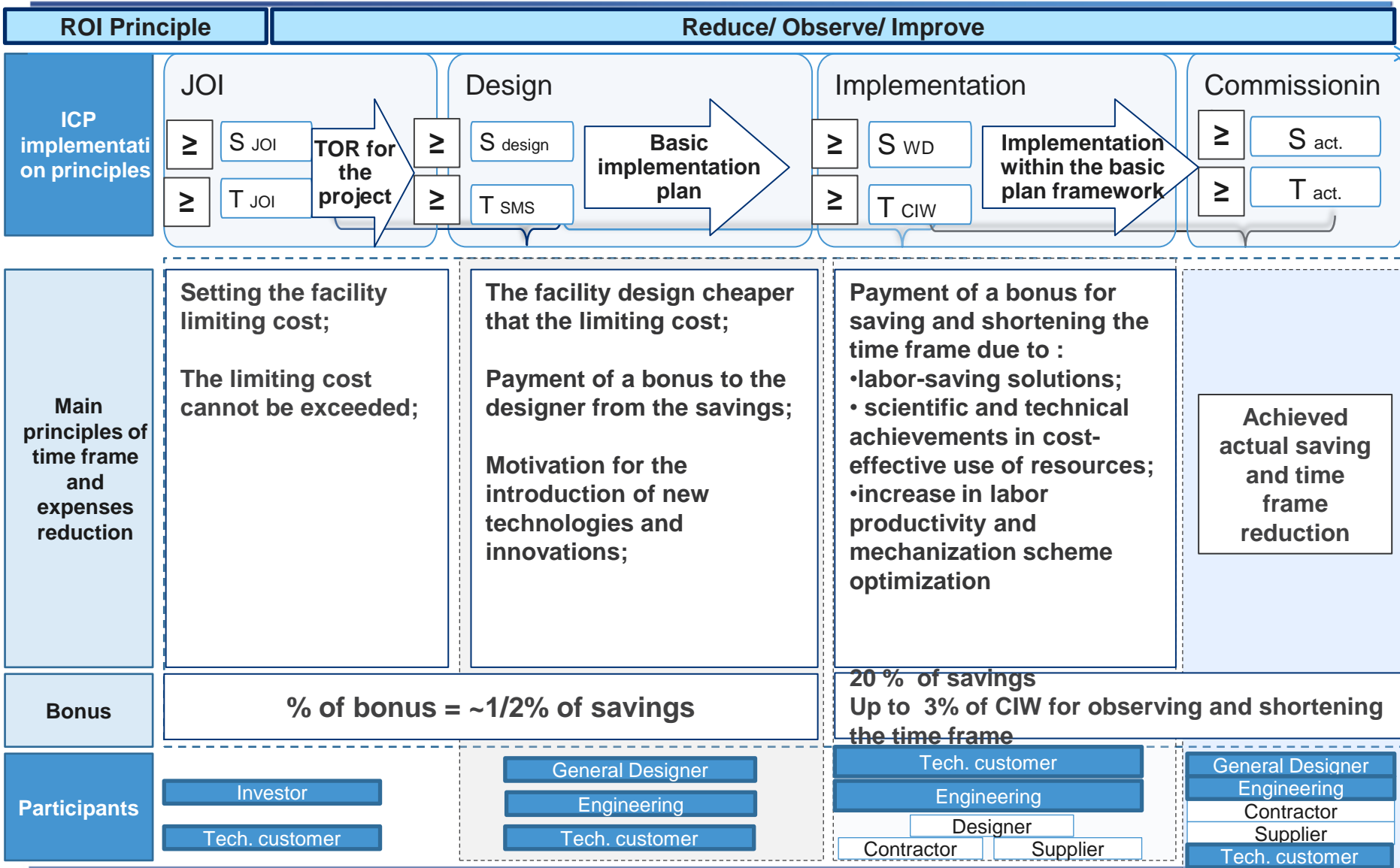
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# Principles of remunerative incentives for reaching the targets of costs and time frame reduction

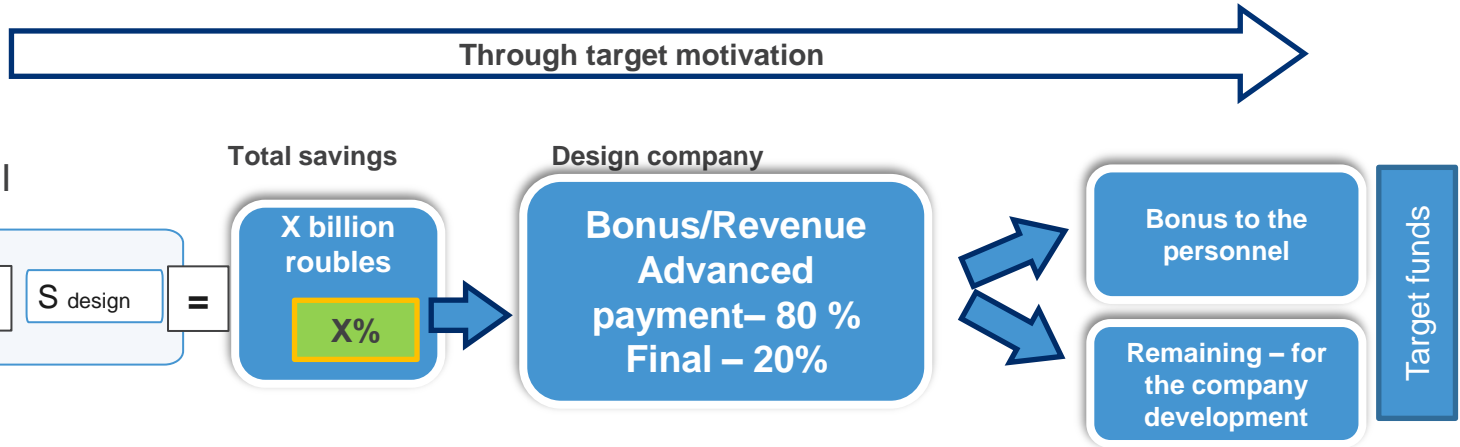


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**Designing is the stage where it is possible to achieve maximum cost reduction in relation to the JOI indicators**



Apply Article 12 of SCE as a source of bonus formation and make a provision on paying a bonus for successful performance of the design work in the contract for design taking into account the cost reduction

The advanced payment of the bonus shall be effected after the internal expertise, and in case of the facility financing from the Federal Budget – state inspection of Project construction cost (SCE) truthfulness and price and technical public audit.

The final payment is effected after the implementation of key events that provided the basis for the cost reduction at the Design stage

# Introduction of the remunerative incentive system for the time frame reduction at the ICP implementation stage (Work Documentation issue – construction)



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## 1. Distribution of the bonus for timely commissioned facility

### The bonus main condition :

For timely commissioning of the facility, under condition that there project cost was not exceeded

### The bonus formation source

Chapter 9 Section “Bonus for timely and early commissioning” ~ 2% of CIW\*

$$\Pi_{\text{comm.}} = X_{\text{cCIW}} * 2\%$$

### Distribution (example)

Participant	%
Contractor	85%
Commissioning personnel	5%
Designer	5%
Customer	5%

Solution on the bonus distribution for the facility commissioning between the participants is taken individually for each project and is reflected in agreements

## 2. Function of the bonus for the early commissioning taking into account the motivating cancellation of bonus for failure to meet time constraints

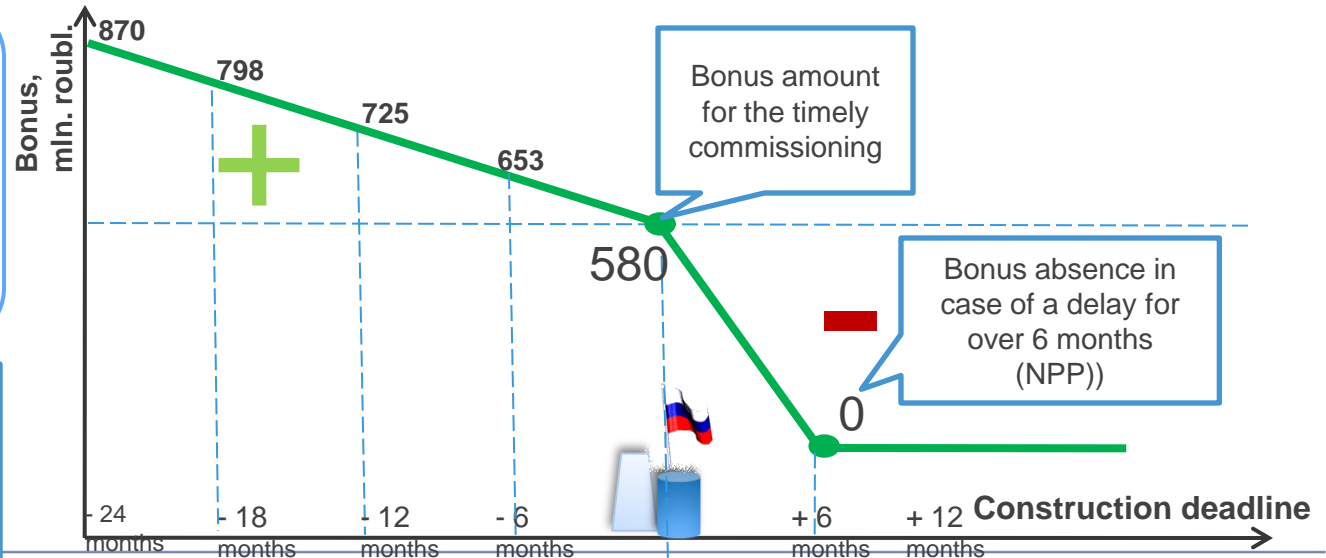
### The bonus main condition :

For reduction of the facility commissioning terms without the project cost exceeding

### The bonus formation source

Chapter 9 Section “Bonus for timely and early commissioning” ~ up to 3% (2%+1%) of the CIW

For the purposes of the bonus amount calculation for NPP power unit early commissioning, the amount of the above-plan profit from the electric power sales should be used.





# Introduction of the remunerative incentive system for the time frame reduction at the ICP implementation stage (WD issue – construction)



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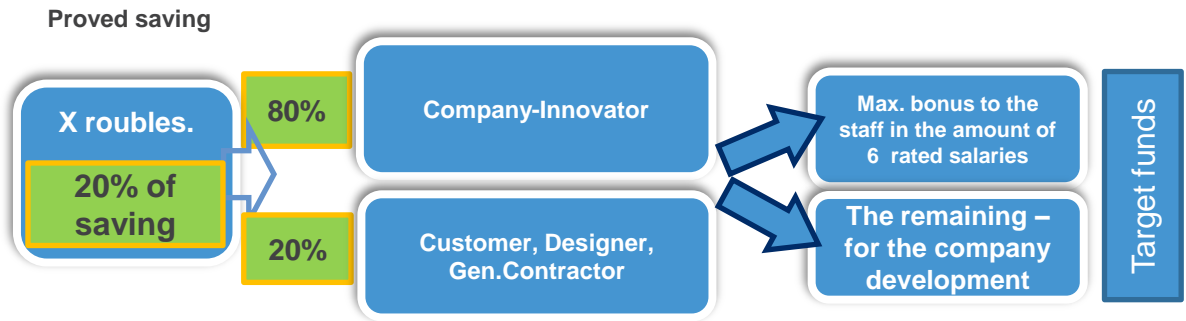
## 3. Bonus for saving during the implementation stage

### The bonus main condition :

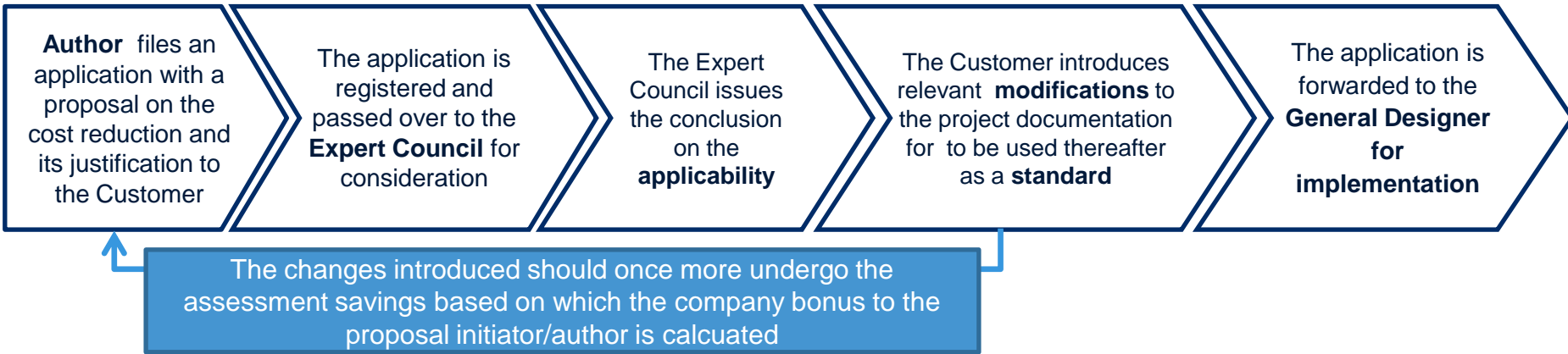
For the reduction of the facility cost due to the cost-effective use of resources, labor-saving proposals and adopted technical solutions (without the design changes)

### The bonus formation source

Actually saved money redistributed to Chapter 9 Section “Bonus for saving”



## Principal diagram of the proposal processing



# Pilot projects of the nuclear contractors industry motivation system



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## Participants

ROSATOM  
RAOS  
Rosenergoatom Concern,  
NIAEP,  
AEP,  
VNIPIET HI,  
AO AKKUYU,  
PO MAYAK,  
NIIAR SC

## Projects



### Investment and construction projects

Hanhikivi-1

Akkuyu

NPP Kursk-2

AMB

NI

MBIR

## Results

Economy to 30%  
of the facility cost



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**Thank you!**

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