



Rosatom SMR solutions for modern challenges

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LEADERSHIP IN THE GLOBAL NUCLEAR MARKET



80+

% of world's NPP exports

13

% **2nd place** in Uranium reserves globally

14

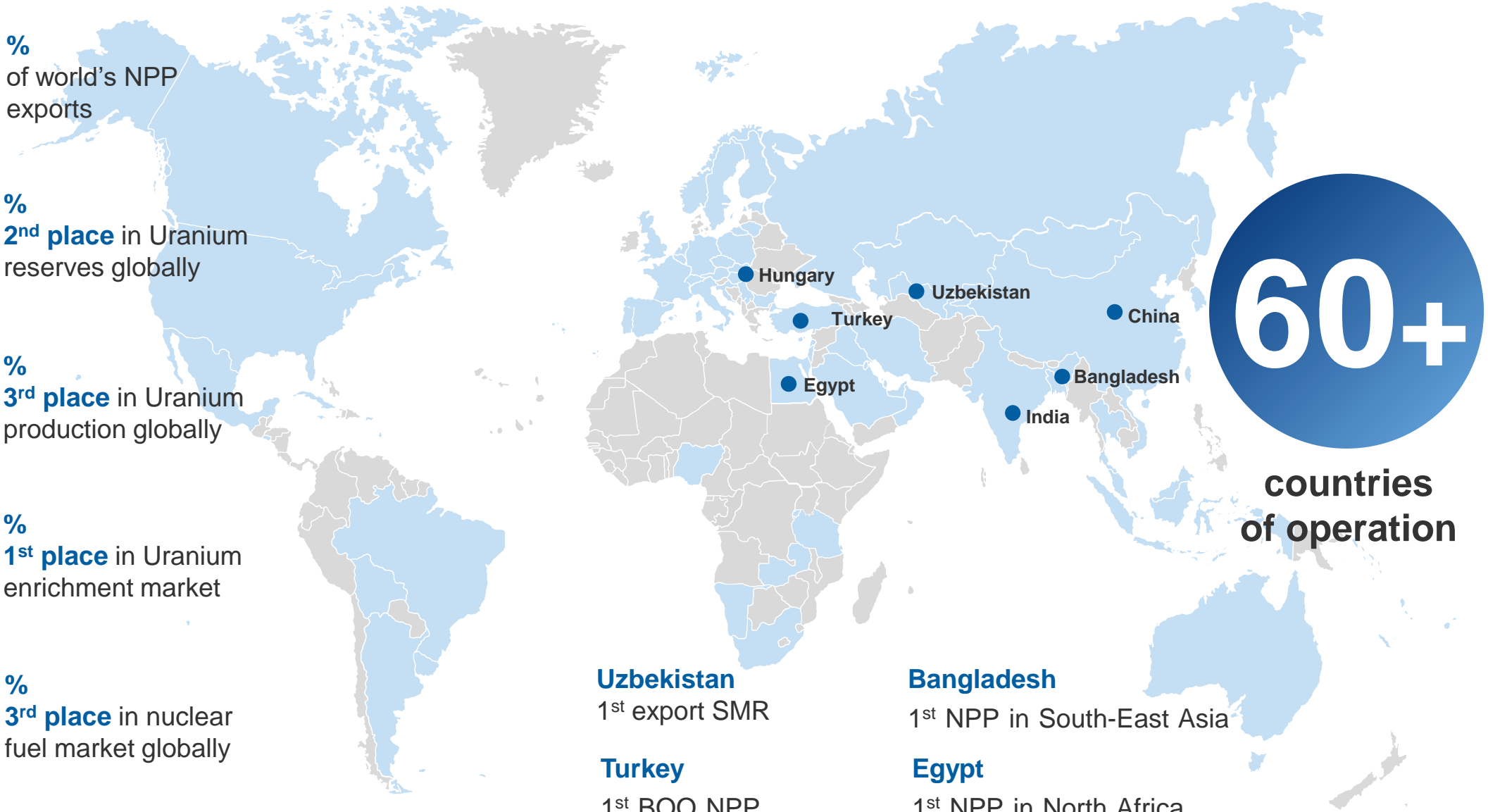
% **3rd place** in Uranium production globally

35

% **1st place** in Uranium enrichment market

17

% **3rd place** in nuclear fuel market globally



Uzbekistan
1st export SMR

Turkey
1st BOO NPP

Bangladesh
1st NPP in South-East Asia

Egypt
1st NPP in North Africa

**ROSATOM
success
story**

33+6 units
in the overseas NPP
portfolio (large and SMR units)

10 countries

Hungary
Paks II NPP
VVER-1200



China
Xudapu NPP
VVER-1200

China
Tianwan NPP
VVER-1200



Türkiye
Akkuyu NPP
VVER-1200

Egypt
El-Dabaa NPP
VVER-1200



India
Kudankulam NPP
VVER-1000

Bangladesh
Rooppur NPP
VVER-1200



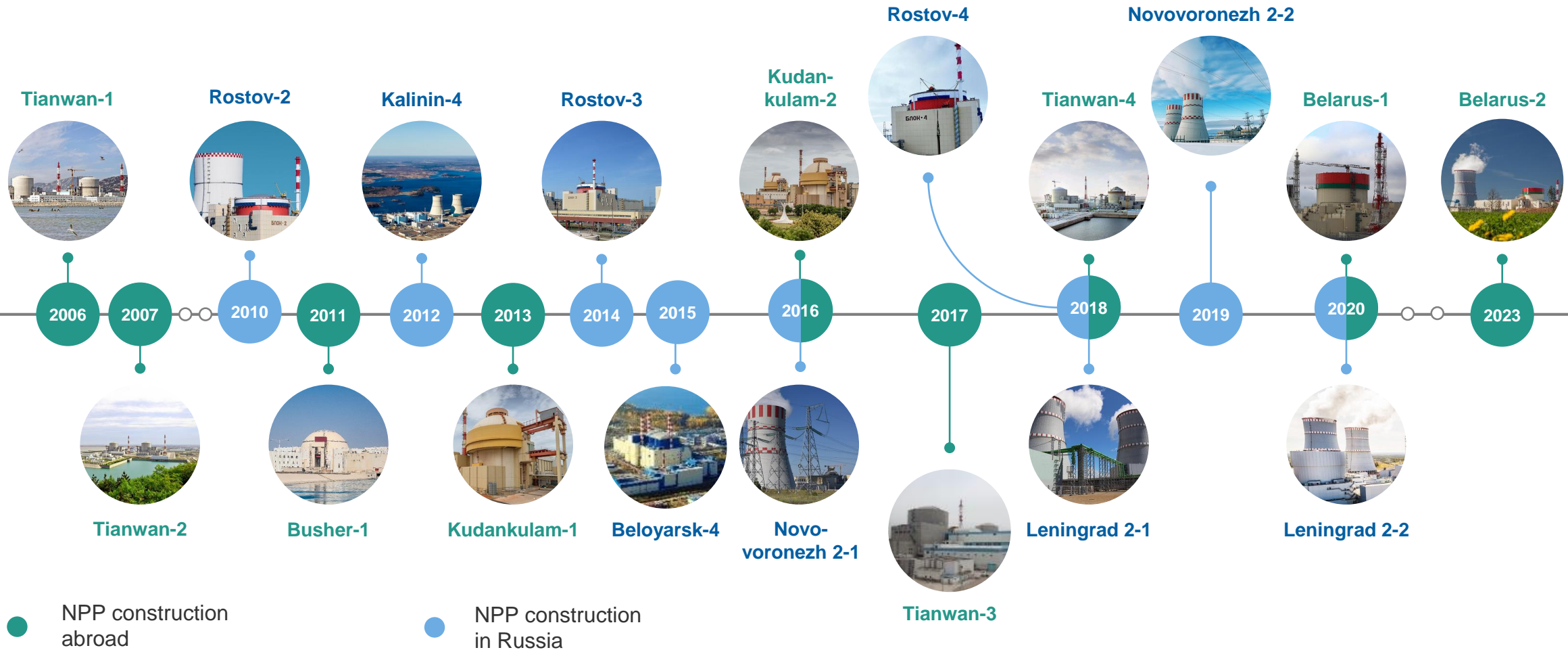
Uzbekistan
SMR NPP
RITM-200N



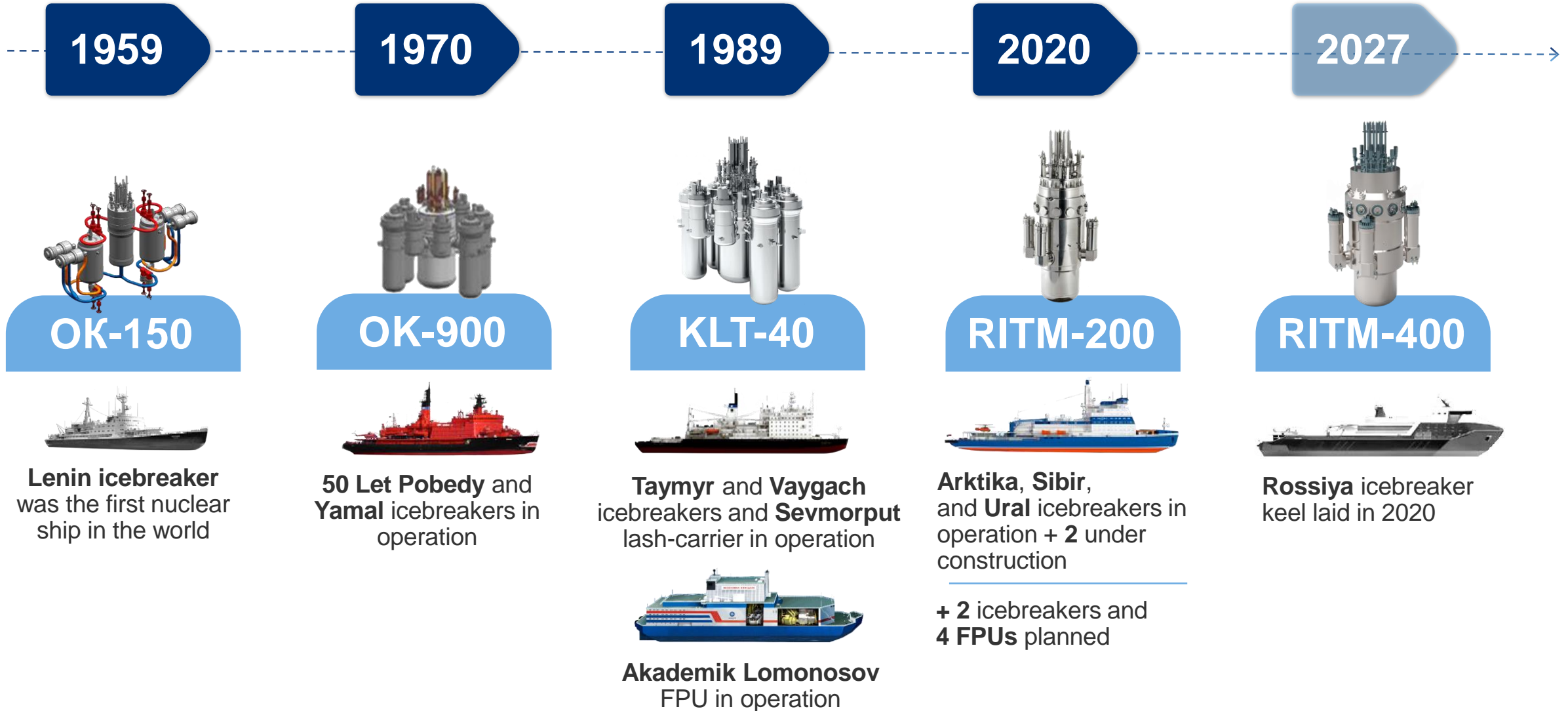
THE ONLY COMPANY IMPLEMENTING SERIAL NPP CONSTRUCTION GLOBALLY



18 NPP units in 18 years connected to the grid



CIVIL MARINE REACTOR EVOLUTION



ROSATOM OFFERS TWO SMR OPTIONS:



ELECTRICITY FROM FLOATING POWER UNIT



LAND-BASED SMR NPP

110 MW
ELECTRICAL CAPACITY

2x55 MWe
2 RITM-200M reactors

Up to 10 years
FUEL CYCLE



2x55 MWe
2 RITM-200N reactors

110 MW
ELECTRICAL CAPACITY

Up to 6 years
FUEL CYCLE



60 years
DESIGN LIFE





FLOATING POWER UNIT



PROOF OF CONCEPT: AKADEMIK LOMONOSOV FPU IN PEVEK



Rigid mooring legs

▶ **2×KLT-40S**
REACTORS

▶ **77 MWe**
CAPACITY

▶ **3 years**
REFUELING
CYCLE

▶ **40 years**
DESIGN LIFE



District heating

Switchyard

◀ FPU

▲ Berth

✓
IN OPERATION SINCE 2020

FLOATING POWER UNIT FOR OVERSEAS MARKET

BUSINESS MODEL BASED ON SALES OF ELECTRICITY BY ROSATOM

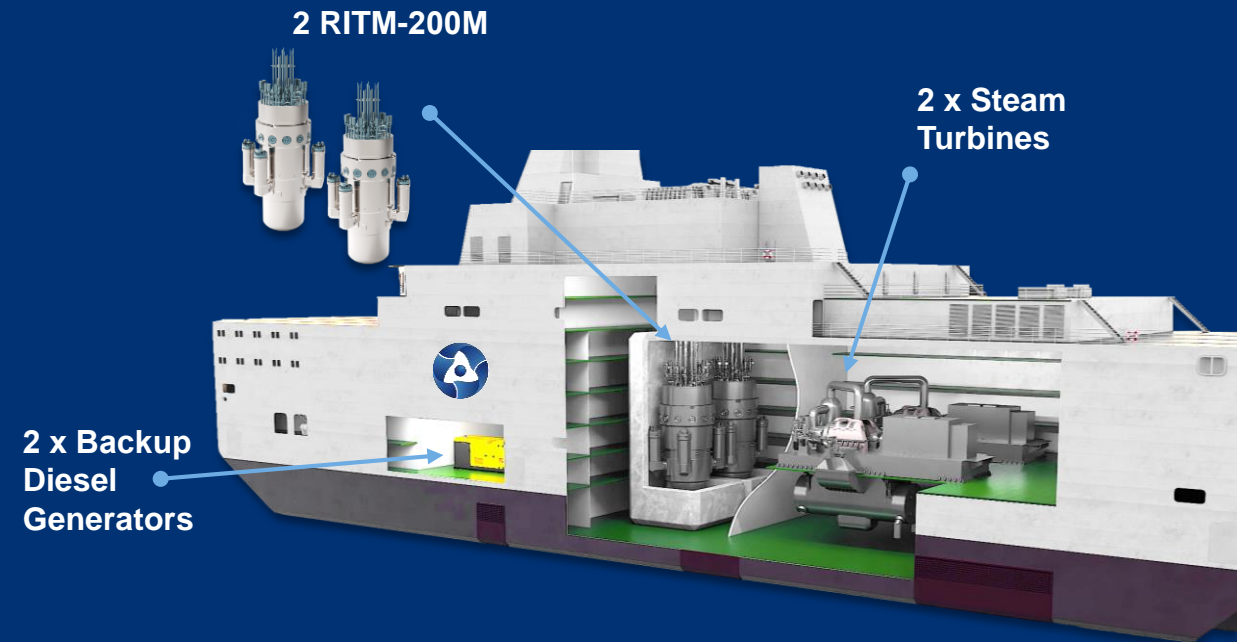
“NUCLEAR BATTERY” APPROACH

Quick solution to supply power to remote and coastal areas

- ➔ Uninterrupted power supply
- ➔ A “turn-key” project ready to supply power to the customer
- ➔ Predictable cost of electricity fixed for up to 60 years (indexed for inflation)
- ➔ Significant decrease in CO2 emissions and protection of unique local environment



FPU is a non-self propelled rigidly moored vessel



▶ **110 MWe**

CAPACITY

▶ **60 years**

DESIGN LIFE

▶ **up to 10 years**

FUEL CYCLE

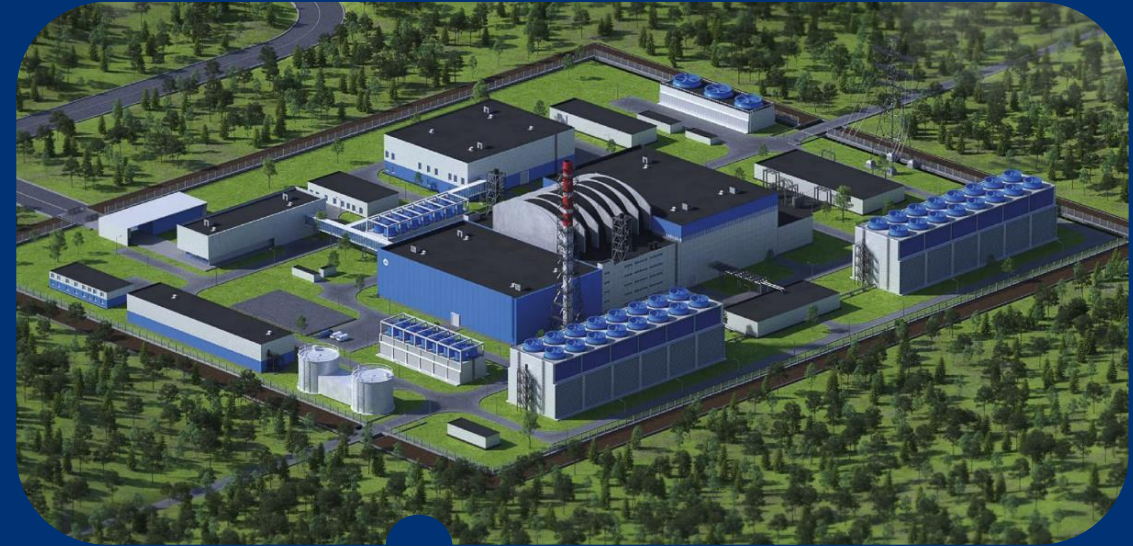


LAND-BASED SMR NPP

LAND-BASED SMR NPP BASED ON RITM REACTOR



2×55 MWe
2 RITM-200N reactors



Flexible, tailor-made SMR NPP solution based on RITM SMR is designed to address a wide range of customer demands

- ▶ Local municipalities
- ▶ Industrial sites
- ▶ Remote and isolated areas

▶ Thermal capacity
380 MW
(2 x 190 MW)

▶ Refueling cycle
up to 6 years

▶ Design life
60 years

▶ Plant area
0.17 km²

✓ MODULARITY

2 reactors

▶ **110 MW**

+2 additional reactors

▶ **220 MW**

+2 additional reactors

▶ **330 MW**

FIRST-OF-A-KIND LAND-BASED SMR IN RUSSIA, YAKUTIA



Site Permit

Issued (21.04.2023)



55 MWe

Power



5-6 years

Fuel cycle



60 years

Design life

DISCUSSION IS UNDERWAY:
TWO-UNIT SMR NPP in Yakutia

110 MW
2×55 MWe

EXTREME AND SEVERE CLIMATE
Regular winter averages below $-35\text{ }^{\circ}\text{C}$



THE FIRST-OF-A-KIND EXPORT EPC CONTRACT FOR SMR NPP IS SIGNED BETWEEN RUSSIA AND UZBEKISTAN



▶ **330 MW**

6 × 55 MWe



▶ **2029-2030**

PLANNED FIRST ELECTRICITY TO THE GRID

▶ SITE

**Jizzakh region,
Uzbekistan**



27.05.2024 an agreement on the construction of a small nuclear power plant was signed



The chosen site **HAS ALREADY BEEN SURVEYED** and **CONFIRMED FOR SUITABILITY AND SAFETY**, which will shorten the project implementation timeline.

Construction works at the site will begin **THIS YEAR**

ROSATOM A PARTNER OF CHOICE

