



ROSATOM

STATE ATOMIC ENERGY CORPORATION "ROSATOM"

NUCLEAR TECHNOLOGY SUPPLY – CONTRIBUTION TO DECARBONIZED ENERGY FUTURE

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Director Rosatom Central Europe

NERS 2019

Prague

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WHAT IS ROSATOM?

Key facts

Over 340

ENTERPRISES

250.000

EMPLOYEES

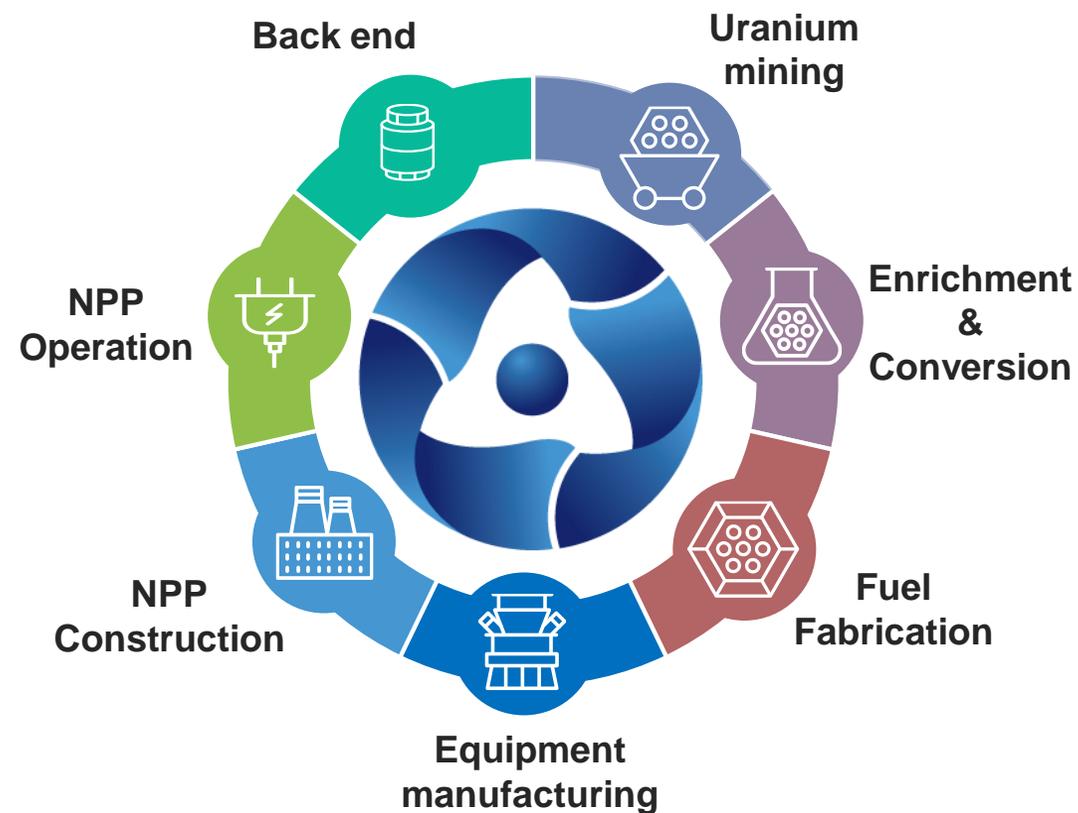
Over 50

COUNTRIES OF PRESENCE

1

IN KEY AREAS OF
NUCLEAR SECTOR

Full cycle of nuclear energy activities



NUCLEAR ENERGY DIRECTLY CONTRIBUTES TO UN SUSTAINABLE DEVELOPMENT GOALS



 Nuclear power plants – provide **clean** and **affordable energy**, **combat climate change**, provide **industry** and **economic growth**

 Nuclear Medicine & Isotopes – provide **good health and well-being**

 Desalination and water treatment – provide **clean water & sanitation**

 Multifunctional irradiation centers – battle with **hunger** and provide **good health and well being**

 Centers for Nuclear Science & Technologies – provide **innovation, infrastructure and industry development, good health and well-being** and **education**



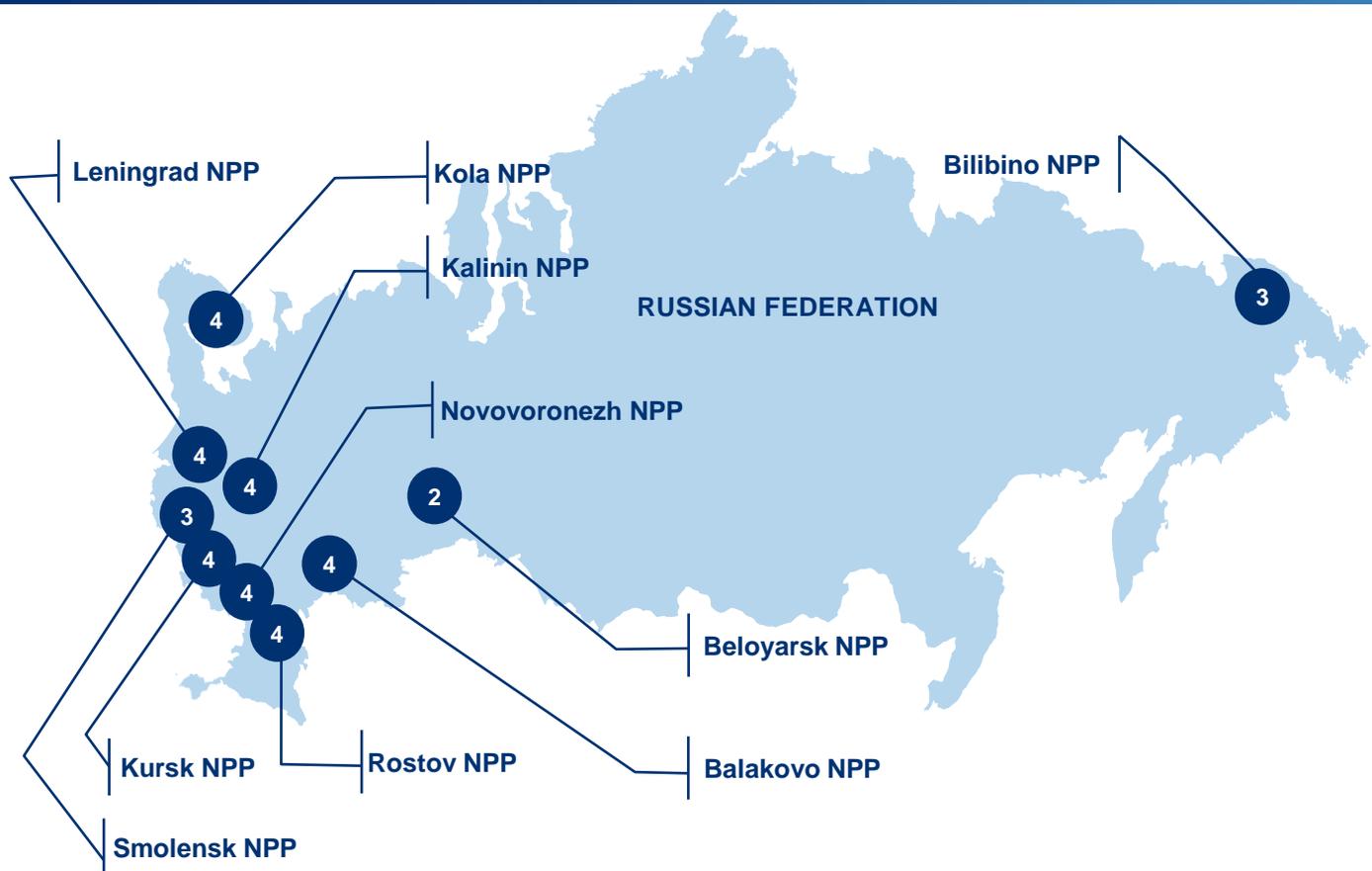
Source: Climate change and nuclear power 2018 IAEA



Nuclear technologies help to achieve UN Sustainable Development Goals

<https://youtu.be/ZmjiQUISi6M>

RUSSIAN NPPs SIGNIFICANTLY CONTRIBUTE TO CO₂ EMISSIONS REDUCTION



● Number of units



All **RUSSIAN NPPs**
(in 2018)
contributed to **CO₂ emissions**
REDUCTION by
262 mln. tn

~
emissions from **58** million vehicles

36

OPERATIONAL UNITS

29 GWe

INSTALLED CAPACITY

18,9%

**SHARE OF ELECTRICITY
GENERATED**

GLOBAL VVER FLEET



36 UNITS UNDER CONSTRUCTION

12 COUNTRIES



All Rosatom-BUILT NPPs OVERSEAS
(in 2018)

contributed to CO₂ emissions
REDUCTION by **294** mln. tn

emissions from **65** million vehicles

When operating, Rosatom NPPs
OVERSEAS that are currently under
construction

(throughout their lifecycle)

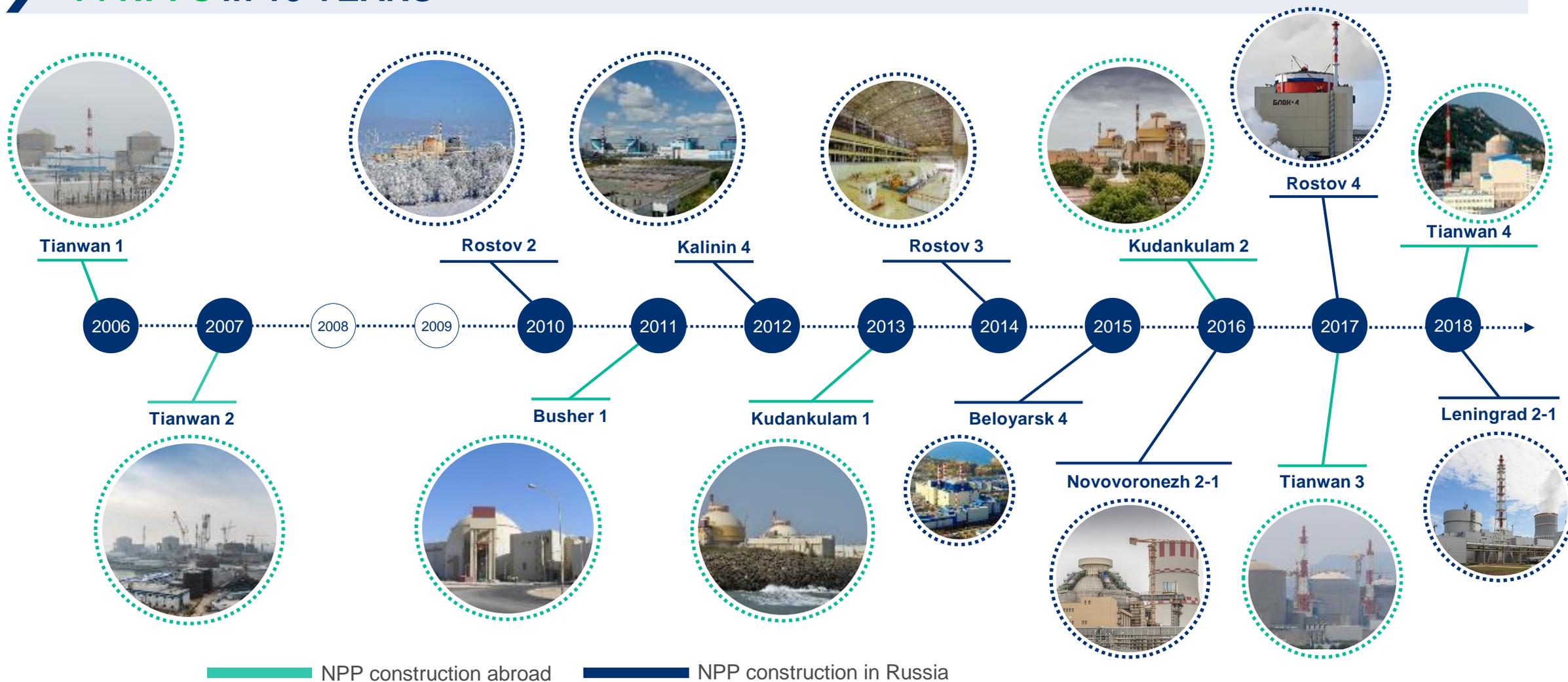
will contribute to CO₂ emissions

REDUCTION by **22 000** mln. tn

emissions from **5 000** million vehicles

THE ONLY COMPANY IMPLEMENTING SERIAL NPP CONSTRUCTION

➤ 14 NPPs in 13 YEARS



ROSATOM: 2018 FIRST CONCRETE

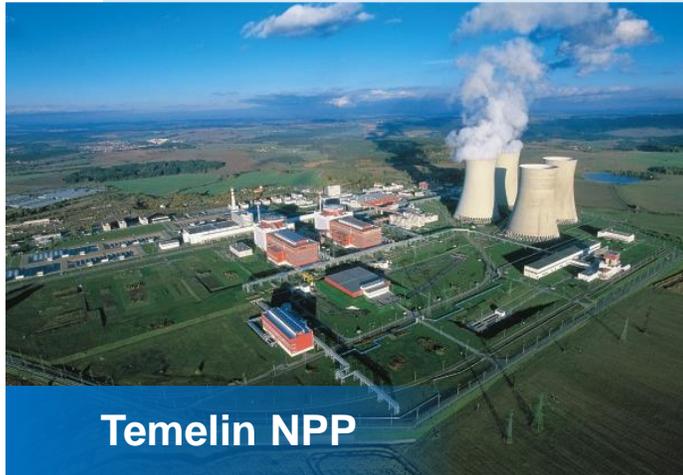
Out of 5 NPP first concrete's globally, 3 were implemented by Rosatom



ROSATOM: 2018 CONNECTION TO THE GRID



Rosatom localization in the Czech Republic



Temelin NPP



JE Dukovany



Successful track record of cooperation in construction, operation and maintenance of the existing VVER NPPs in Dukovany and Temelín



Czech suppliers have vast experience with Russian nuclear legislation



Czech suppliers' extensive references in Rosatom-built NPPs worldwide – Czech supplies are present in each Rosatom NPP both in Russia and abroad



Vast potential for cooperation between Russian NPP suppliers and Czech manufacturers



Extensive knowledge/experience/results gained during latest Temelín 3-4 tender preparation/negotiation.
Consortium/cooperation/localization experience



NORMALLY, FIRST PROJECT LOCALIZATION LEVELS REACH **25-35%**, BUT ROSATOM OFFERS **>50%**



IN EXISTING CZECH NPPs LOCALISATION EXCEEDS **80%**, THIS AMBITIOUS TARGET CAN BE SET FOR NEW UNIT(S)

CZECH COMPANIES INVOLVED IN ROSATOM PROJECTS

MORE THAN **25**
CZECH COMPANIES
 supply various
 equipment and services
 for Rosatom projects



...and many others

FIRST FLOATING NUCLEAR POWER PLANT IN THE WORLD



to be commissioned in 2019

2 KLT-40S reactors

Thermal capacity 300 MWe

Electric capacity 77 MWe



ONSHORE NPP BASED ON RITM SERIES SMR



2 × 57 MW(e) – 114 MW(e)

2 RITM-200 Reactors ✓ Modularity available

TECHNICAL PARAMETERS

Electrical capacity 114 MW (2 x 57 MW)

Thermal capacity 330 MW (2 x 165 MW)

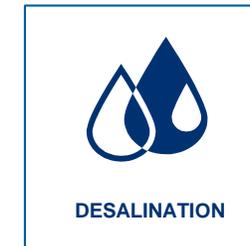
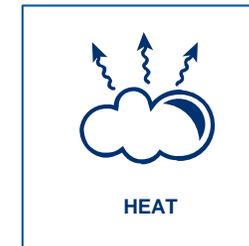
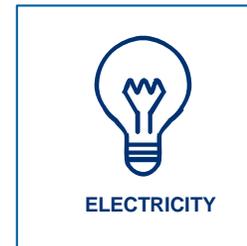
Refueling cycle up to 6 years

Design life 60 years

Availability factor 90%

Plant area 15 acres (0.06 km²)

Construction period 3 - 4 years



FLEXIBLE, TAILOR-MADE SMALL NPP SOLUTION BASED ON RITM SMRs IS DESIGNED TO ADDRESS A WIDE RANGE OF CUSTOMER DEMANDS

Thank you for your attention,

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