

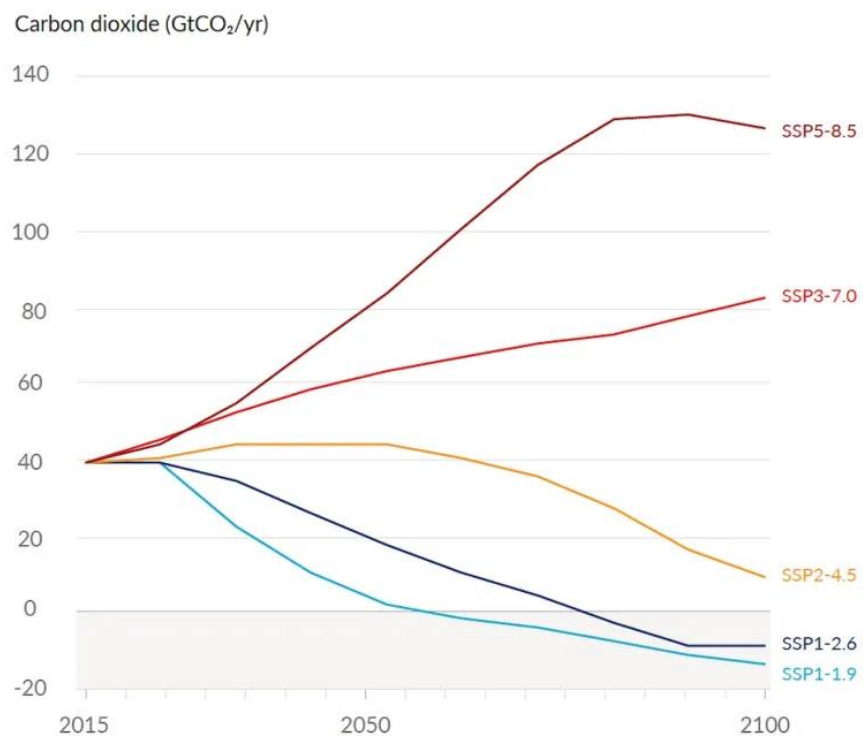
# PROSPECTS OF CCS IN RUSSIA

11 November 2021



# CCS IS ESSENTIAL TO ACHIEVE PARIS AGREEMENT GOALS

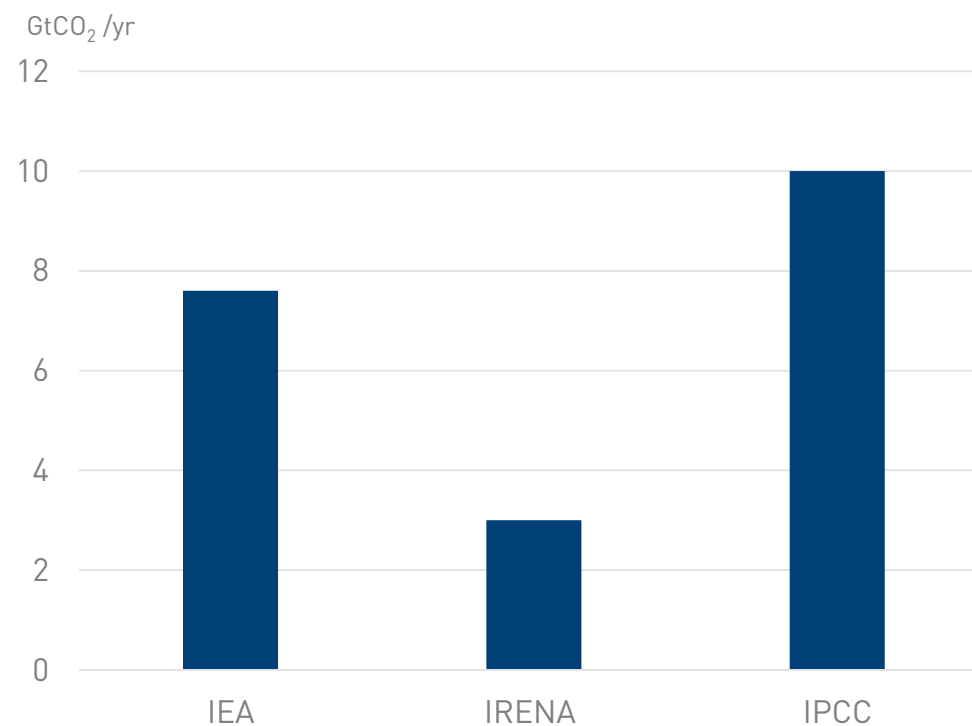
## IPCC SCENARIOS



Source: IPCC

## CCS CONTRIBUTION

CCS to have made a significant contribution to global decarbonization by 2050



IEA: «Net Zero by 2050», 2021

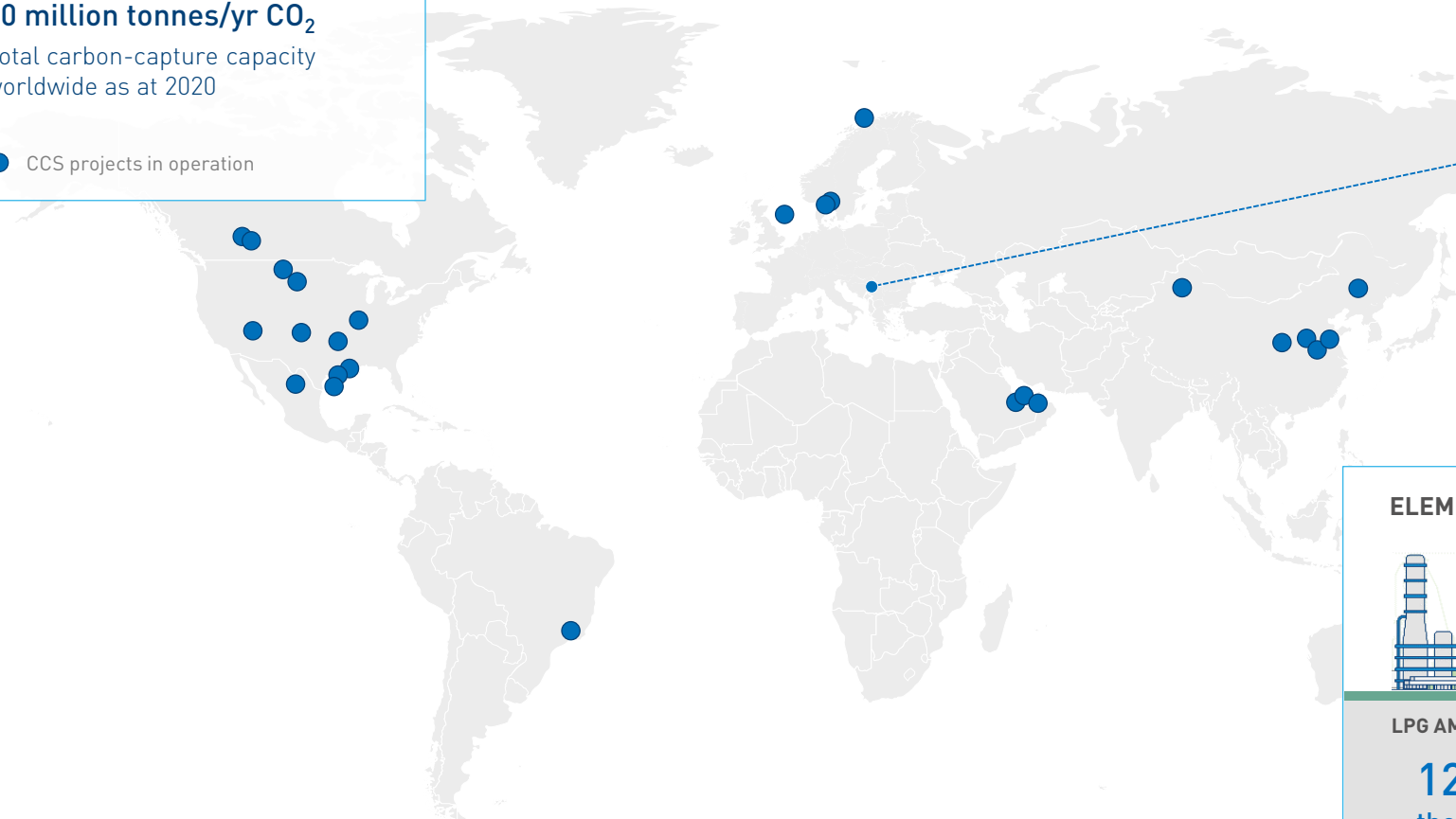
IRENA: «World Energy Transitions Outlook: 1.5°C Pathway», 2021

IPCC: «Special report: Global warming of 1.5 °C», 2021

# CCS SOLUTIONS ARE READY FOR DEPLOYMENT

**40 million tonnes/yr CO<sub>2</sub>**  
Total carbon-capture capacity  
worldwide as at 2020

● CCS projects in operation

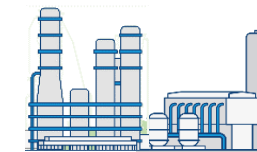


**Rusanda-Elemer**  
CO<sub>2</sub> utilization during  
gas treatment

Commissioned: 2015



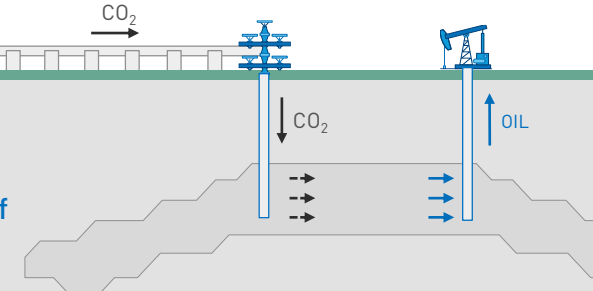
## ELEMIR GAS PLANT



CO<sub>2</sub> injection  
~120 thousand m<sup>3</sup>/day  
~88 thousand tonnes/year

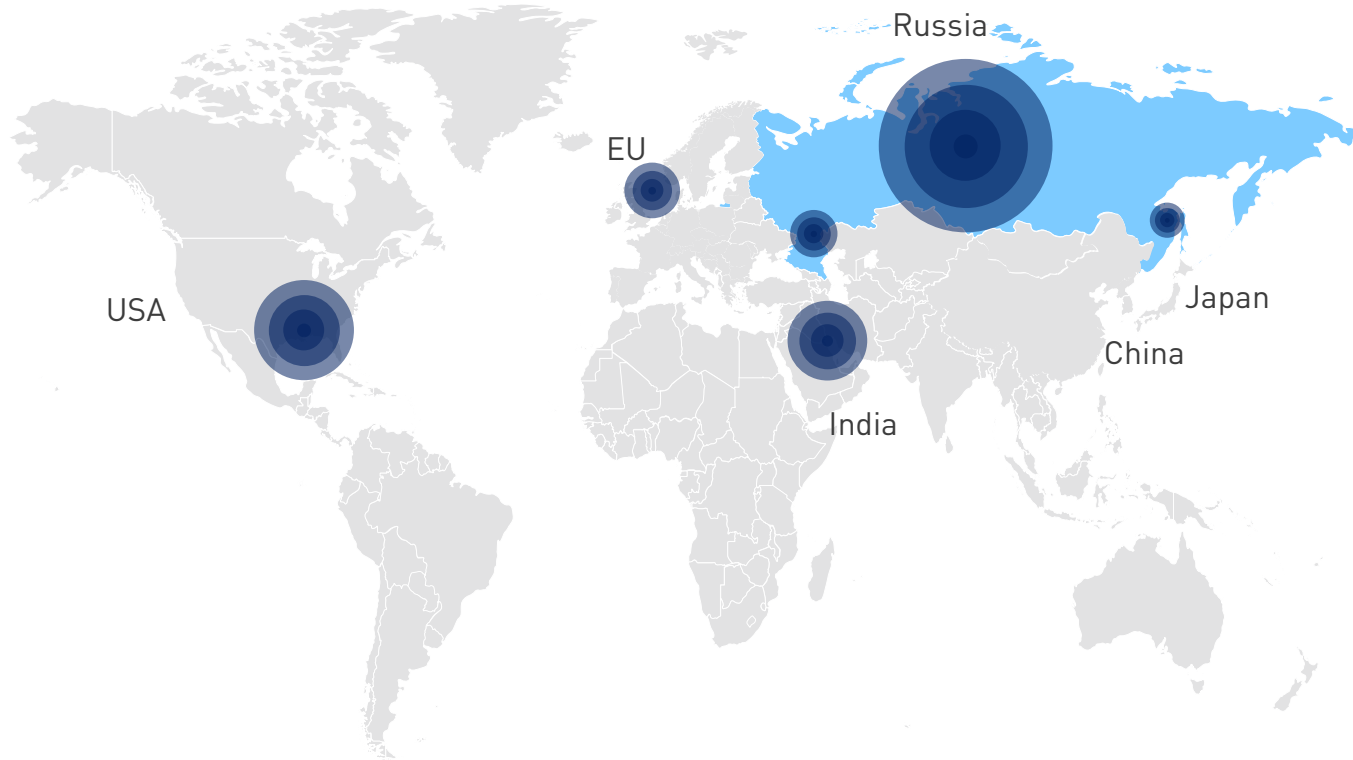
## LPG AMINE TREATMENT

**125**  
thousand tonnes of  
CO<sub>2</sub> per year

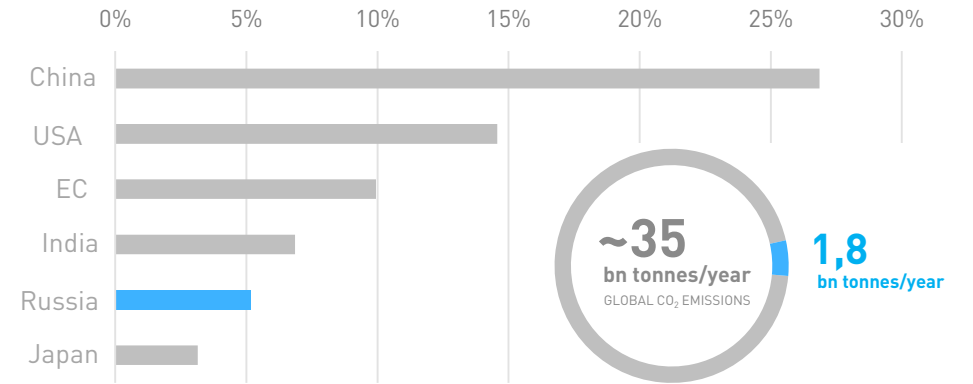


# RUSSIA HAS SIGNIFICANT POTENTIAL FOR CO<sub>2</sub> INJECTION AND STORAGE

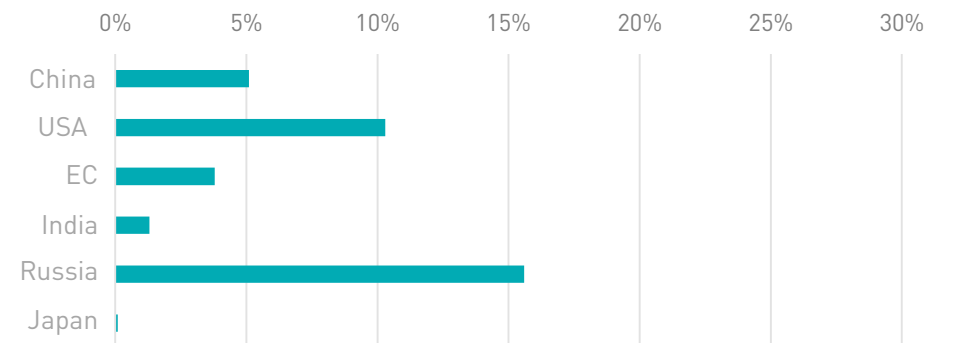
REGIONAL CO<sub>2</sub> STORAGE CAPACITY



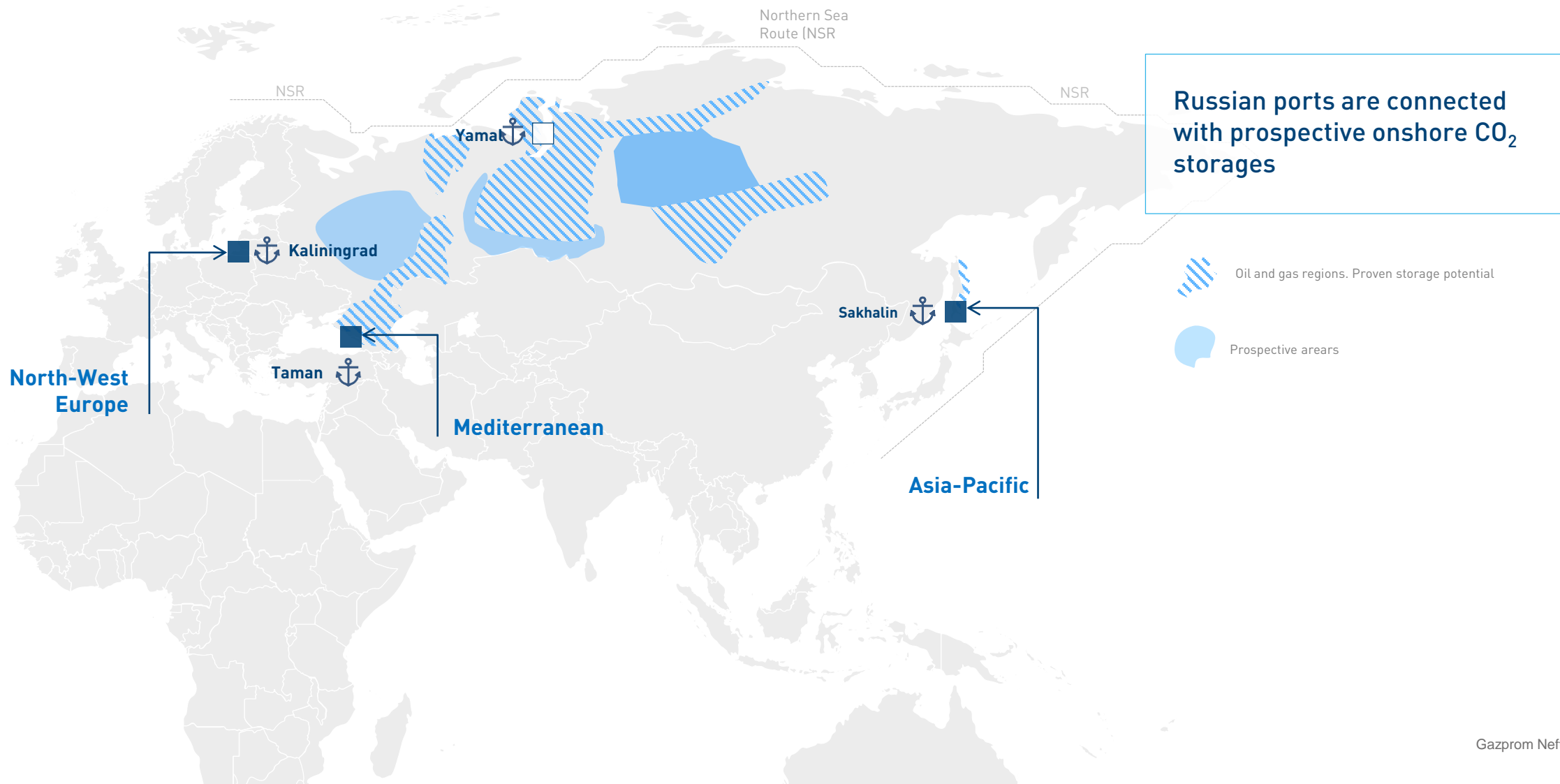
MAJOR EMITTING COUNTRIES CO<sub>2</sub> EMISSIONS (2018, %)



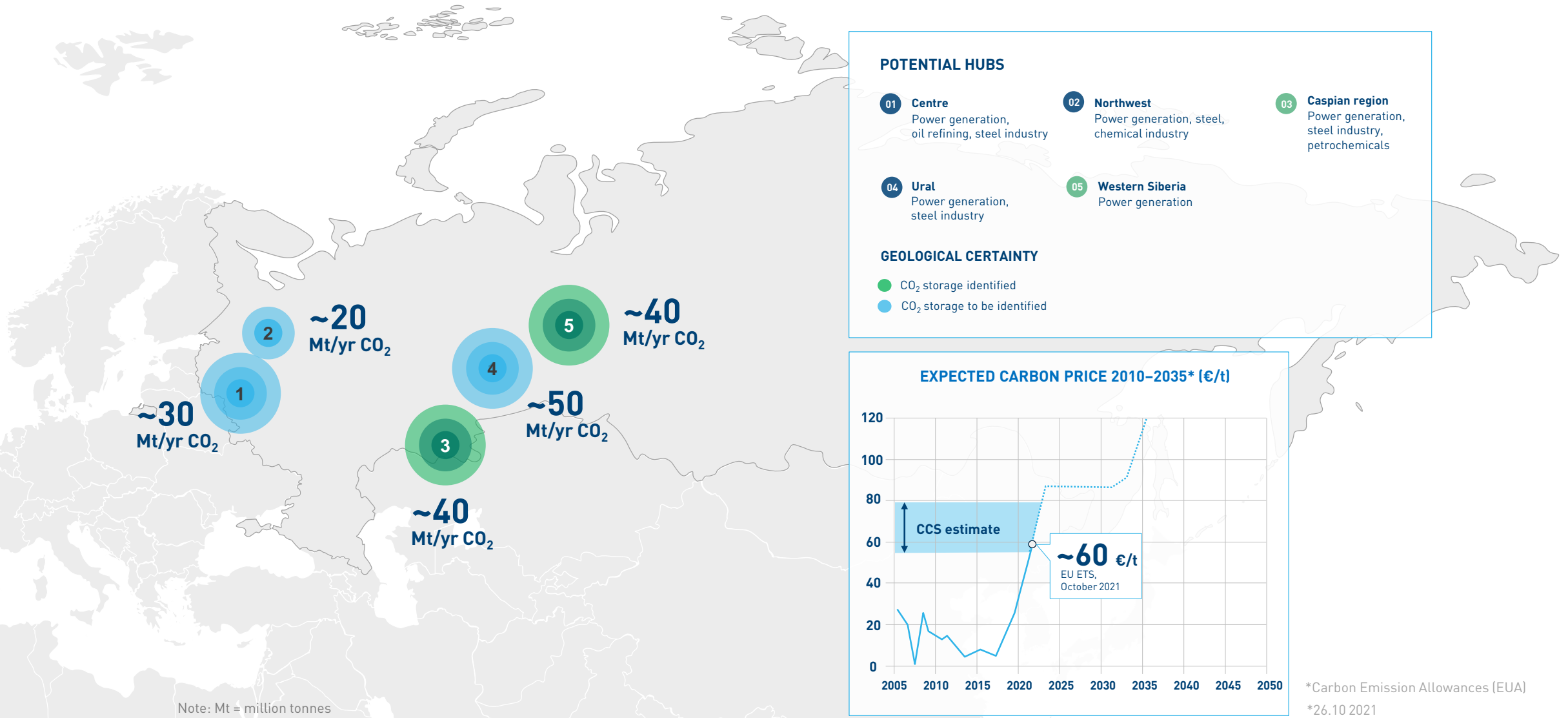
DISTRIBUTION OF CO<sub>2</sub> STORAGE RESERVOIRS WORLDWIDE (%)



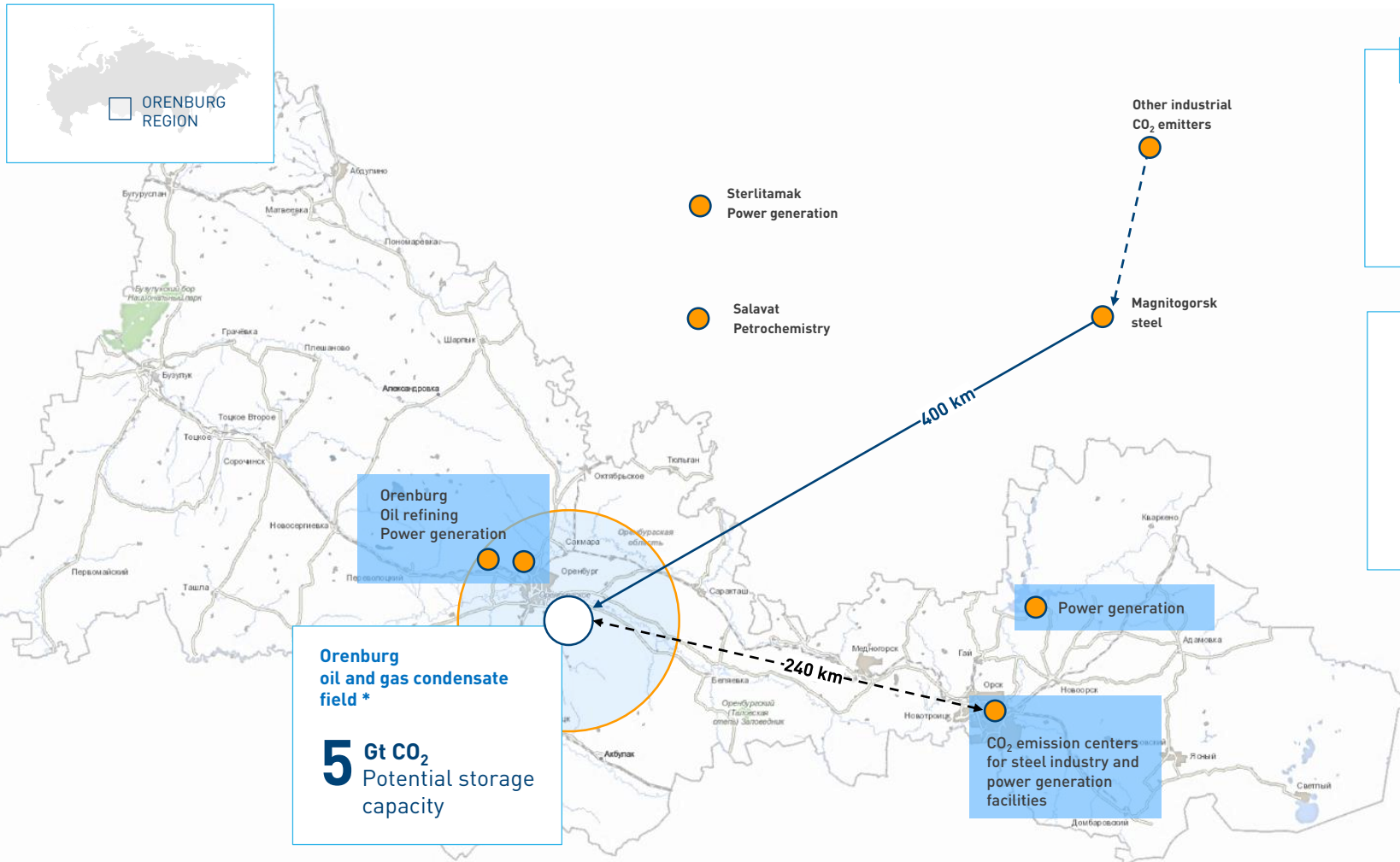
# RUSSIA'S GEOLOGICAL POTENTIAL OFFERS WIDE-RANGING OPPORTUNITIES FOR DOMESTIC AND CROSSBORDER PROJECTS



# GAZPROM NEFT HAS IDENTIFIED TOP LARGE SCALE CCS OPPORTUNITIES



# GPN AIMS TO LAUNCH A PILOT PROJECT IN ORENBURG REGION



## PILOT PROJECT

**>1 Mt/yr**  
CO<sub>2</sub> utilization

## HUB POTENTIAL

**>45 Mt/yr**  
CO<sub>2</sub> utilization

## PROJECT SCOPE

1. To pilot CCS onshore chain in Russia
2. To adjust the state regulation system
3. To set up regional CCS hub

\* Subsoil users : Gazprom Dobycha Orenburg and Gazprom Neft Orenburg Vostochny (eastern) block

## CONCLUSIONS

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1. CCS is essential to achieve Paris Agreement goals
2. Russia has significant geological potential for implementing CCS projects
3. There is a global opportunity to implement cross-border CCS projects based around Russia's geological reservoirs

