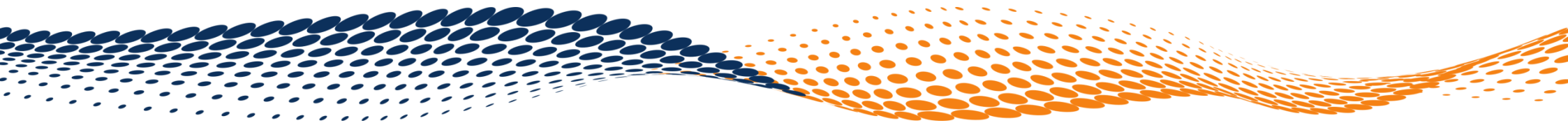




Sustainable Development in the Russian Electric utilities industry: Case Study of PJSC Inter RAO





30.8
GW

Installed capacity
(October 2021)*



106
TWh

Electricity output
(2020)*



986
bn RUB.

Revenue
(2020)



48.9
thsd.

Number of employees
(2020)



13
TWh

Export/import volumes
(2020)

GENERATION IN RUSSIA

28.0 GW

- 35** TPPs
- 5** Small-scale units
- 7** HPPs
- 1** Wind farm

SUPPLY

- 17** Mln customers
- 3** Independent supply companies
- 11** Guaranteeing suppliers
- 66** Regions of Russia

FOREIGN ASSETS

2.8 GW

- 1** TPPs
- 2** HPPs
- 1** Wind farm
- 3** Countries 

TRADING

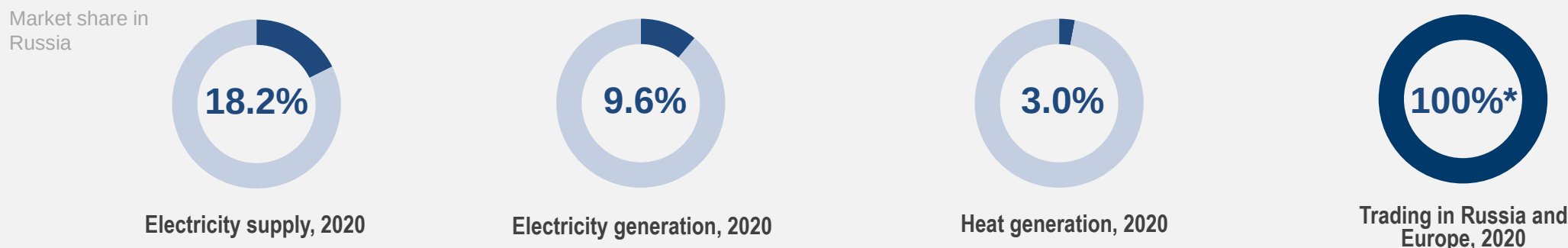
- 15** Countries
- Major export / import operator

ENGINEERING AND OTHER

- Inter RAO Engineering LLC
- Quartz Group LLC
- Russian Gas Turbines LLC – JV between GE (50%) and Inter RAO (50%)
- Inter RAO – Export LLC
- A group of construction and engineering companies

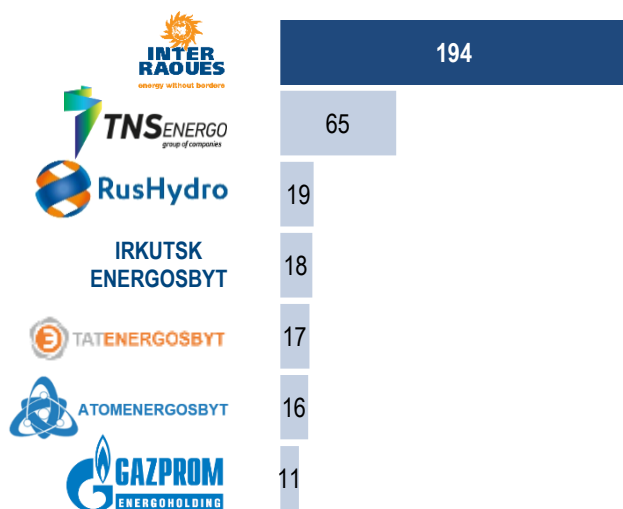
INTER RAO GROUP – COMPETITIVE POSITION IN THE RUSSIAN MARKET

LEADING POSITIONS IN ELECTRICITY AND HEAT GENERATION AND SUPPLY IN RUSSIA

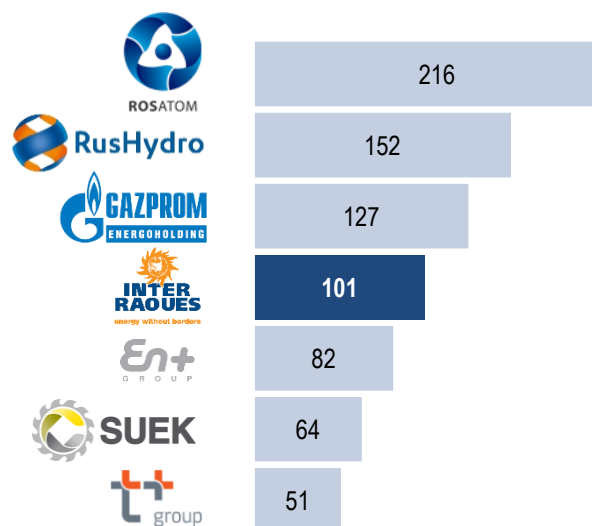


INTER RAO GROUP RANKS AMONG TOP-15 RUSSIAN COMPANIES BY REVENUE

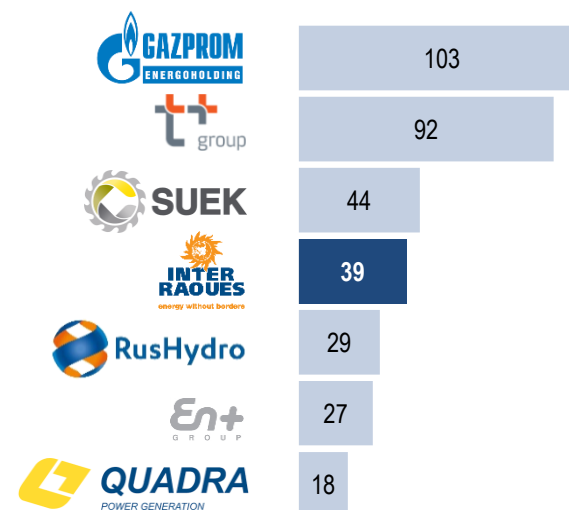
№ 1 Among top electricity supply companies in Russia
(by electricity sales, TWh)⁽¹⁾



№ 4 Among top power generation companies in Russia
(by electricity generation, TWh)⁽¹⁾



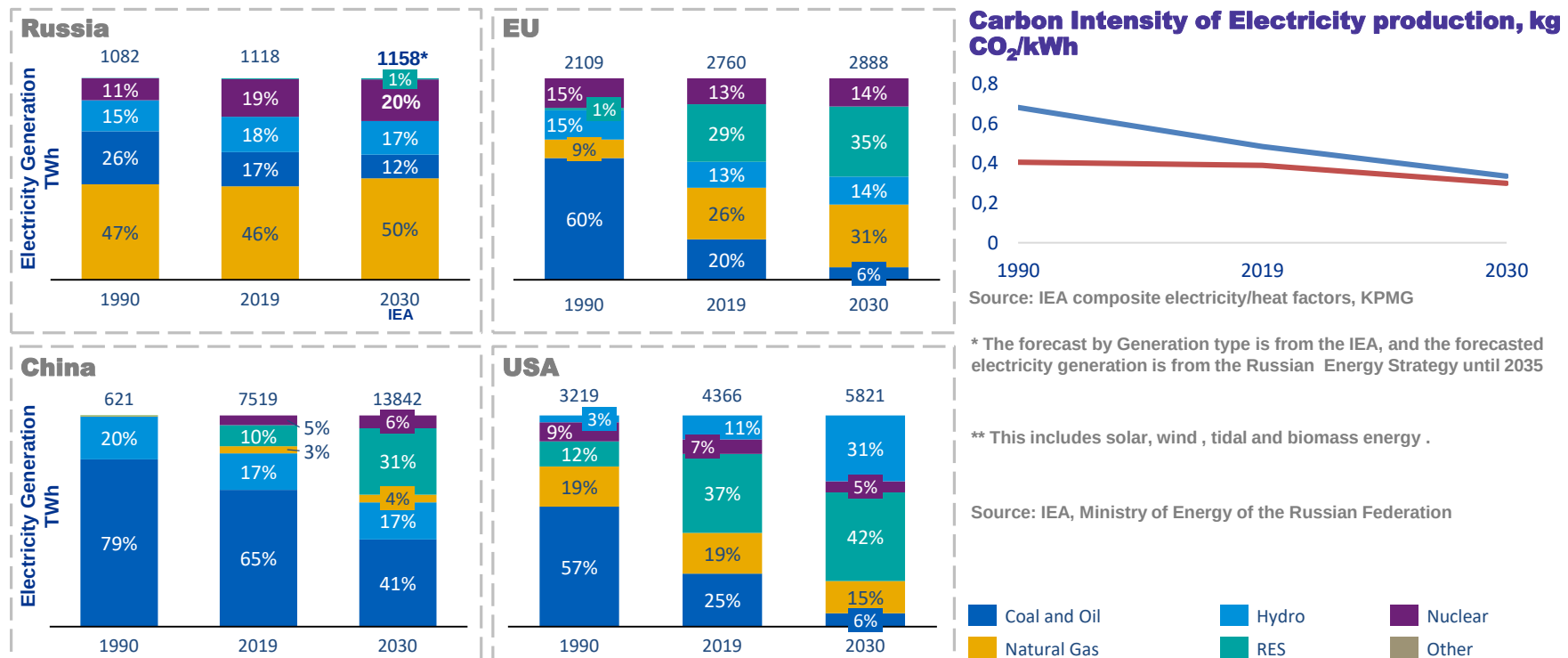
№ 4 Among heat generation companies in Russia
(by heat generation, mln Gcal)⁽¹⁾



(1) As of 31.12.2020

*In terms of exports from the wholesale electricity and capacity market in Russia, while PJSC Inter RAO is the only participant in export-import operations on the domestic wholesale electricity and capacity market

Global Electricity Generation Trends



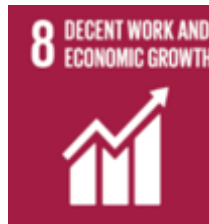
Key takeaways:

- The general trend in electricity and heat generation is a decrease in the share of coal and oil, an increase in the share of renewable energy sources and natural gas.
- The Russian Federation is characterized by a relatively low level of carbon intensity of electricity generation due to a high share of natural gas, which in the future until 2030 will not undergo significant changes.
- The largest increase in electricity and heat generation in retrospect, as well as in the framework of the forecast, is observed in China, which is associated with high economic growth rates

Inter RAO - Managing sustainability

- **Supporting United Nations Sustainable Development Goals (SDG)** focusing on Good Health and well being, Climate action, Affordable and Clean energy, Decent work and Innovations. **Inter RAO is an UN GC participant since 2019 and has achieved the Advanced status;**
- **Implementation of International sustainability standards such as TCFD, UN Universal Declaration of Human Rights, GRI**
- **Integrating Sustainable Development principles into key business processes; ESG integrated into the Groups Strategy until 2025 with a view to 2030**

TOP PRIORITY



KEY POLICIES

- **Sustainable Development policy**
 - Human Right policy
 - Environmental responsibilities and protection
 - Shareholders Relations
- **Code of conduct for suppliers**
- **Human resources diversification**
- **Customer interaction**
- **Code of Corporate Ethics**
- **Environmental declaration**

STRUCTURE

- **The Strategy and Investment Unit** coordinates the process of ensuring the Group's sustainable development
- **The Board of Directors reviews sustainable development reports and the workplan** twice a year.

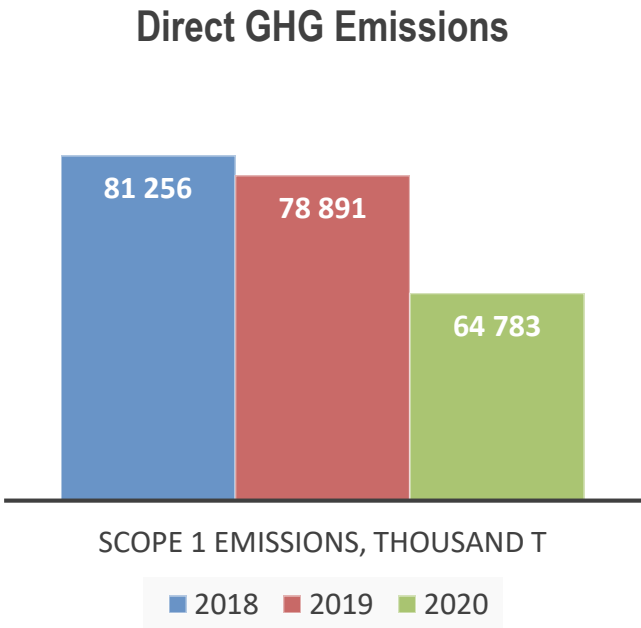
Key Environmental achievements

- **Inter RAO carries out its activities in accordance with generally accepted business standards** and strives to comply with best international standards in corporate social responsibility and sustainable development
- **Inter RAO plans to develop measures to prevent, adapt, and mitigate the impact of the climate crisis** in order to promote international efforts to combat global climate hazards and natural disasters
- **Gross greenhouse gas emissions** from fixed fuel combustion sources underwent the procedure of **external certification for 2018–2020** in accordance with **International Standard on Assurance Engagements 3410**. Currently we are verifying Scope 2 emissions.

In 2020 Inter RAO has reduced direct greenhouse gas emissions by **44% compared with the 2014 level** (adopted as the baseline) and **22% versus the 2018 level**.

Specific greenhouse gas emissions amounted to **427g CO2/kWh in 2020, down by 4% compared with 2019**

The Inter RAO Development Strategy until 2025 with a View to 2030, which was approved in 2020, calls for reducing specific **CO₂ emissions by 7% from the 2019 level**



Modernization of 8.9 GW is planned between 2022-2027 as part of the CDA-2 programme. Decommissioning of inefficient generating facilities (980MW in 2020)

Increase in the use of **cogeneration** **reduces** fuel consumption for power generation and also reduces the emissions of harmful substances and GHG emissions

The Group's **Energy Conservation and Energy Efficiency Improvement Program** helps to improve the operational, energy, and environmental efficiency of business.

Key ESG achievements + Future plans

- In February 2020, The Audit Committee is entrusted with ESG functions and was renamed **the Audit and Sustainable Development Committee**

- Local operational headquarters **were set up at 46 of the Group's key** companies to combat the spread of COVID-19



0.082

The LTIFR injury rate
(number of injury cases ×
1 million man-hours / total
hours worked) **for 2020**

A-

Inter RAO was placed in the
Leadership category in the
international CDP Climate
Change 2020

3,8%

**Active staff turnover in
2020 (65% reduction
compared with 2019)**

Inter RAO is looking into SBTi – we are calculating our Scope 3 (we expect to complete this by 3Q 2022) and will then consider option 1 : committing to setting science-based emissions reduction targets across all scopes 1, in line with 1.5°C emissions scenarios and the criteria and recommendations of the Science Based Targets initiative

Inter RAO is monitoring the Russian RES sector for opportunities:

IRAO Engineering is involved in the construction of several renewable energy projects in Russia.

Mosenergosbyt is selling solar panels solar collectors for its retail clients.

November 2021 – We are completing the registration of Pavlovskaya HPP as an i-REC generator, and intend to sell green i-REC certificates later this year.