

# COKING COAL

- strategic for steel

December 2020

# JSW Group Overview

JSW is the largest producer of high quality coking coal and a major coke producer in the European Union

## Located in the industrial heartland of Europe

- 4 existing and 1 under construction coal mines in Poland
- 3 coking plants
- headquartered in Jastrzębie-Zdrój, in Southern Poland

## Coking coal focused

- #1 independent, not integrated coking company in EU
- Holds 14% of the global coke trade market

## Long mine life

- 30–40 years expected life of mines

## Solid total resources and reserves

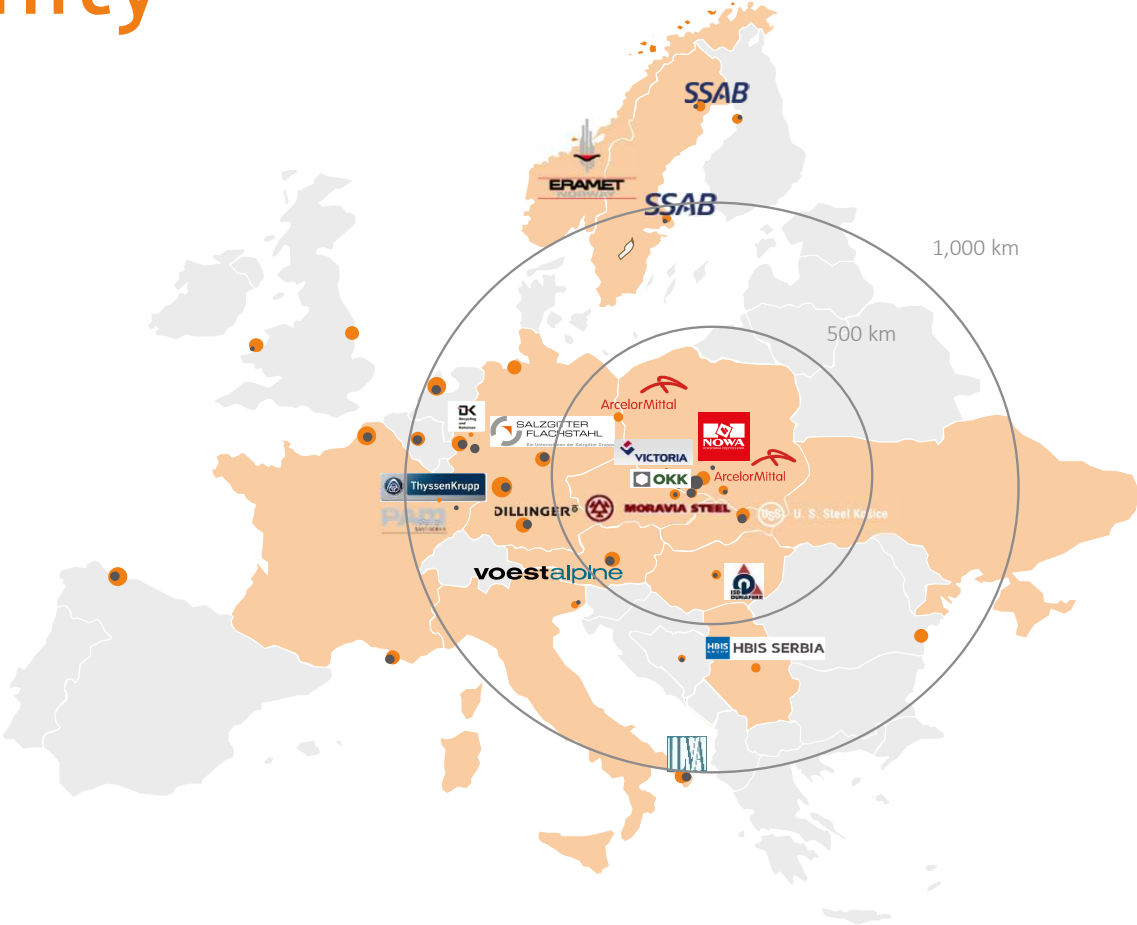
- Total resources of approx. 5.497 billion tonnes
- Reserves of 0.952 billion tonnes



JSW Group Key Financials								
EURm	2015	2016	2017	2018	2019		1H19	1H20
Revenue	1 657	1 538	2 091	2 299	2 018		1 095	778
EBITDA	-605	243	928	708	451		273	-130
EBITDA margin	-36,5%	15,8%	44,4%	30,8%	22,4%		24,9%	-16,7%
Net Income	-785	1	599	413	151		128	-219

# Geographic proximity to key clients

- The JSW Group supplies coking coal and coke mainly to the largest European steel producers
- The Group also supplies coke to overseas markets i.e. India
- Most European steel mills utilizing coke in a blast furnace process operate within a distance of up to 500 km
- European steel production is highly dependent on reliable supplies of coking coal and coke



Production capacity

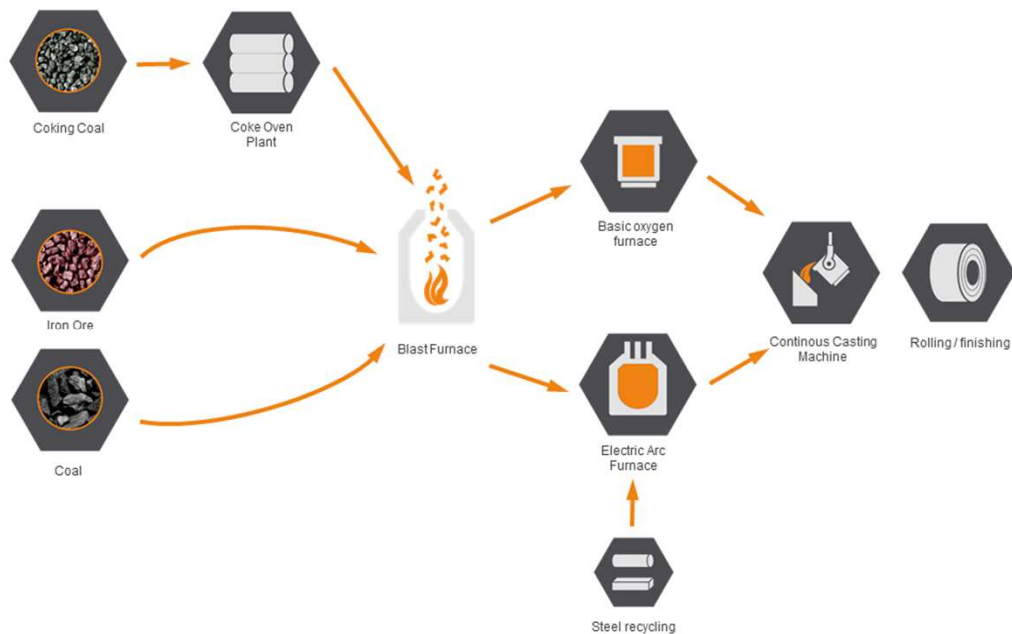
Crude steel production:	● > 6 mt/year	● 3-6 mt/year	● 1-3 mt/year	● 0-1 mt/year
Coke production:	● 3-6 mt/year	● 1-3 mt/year	● 0-1 mt/year	

■ Markets supplied by the JSW Group in coking coal and coke

# Coal to Steel

The conventional technology for steel production in a blast furnace process, i.e. using coke and thus coking coal is dominant across the globe and in the EU- 72% of steel is produced using coking coal

Stable, reliable and sustainable supply of coking coal for the European steel production as a foundation of a strong industrial base will be vital for the transformation towards a low-carbon economy

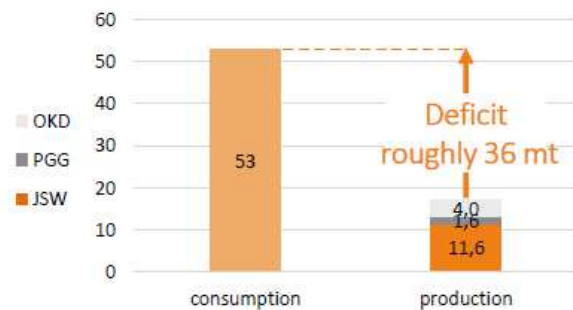


- Steel industry is one of the key sectors for European economy as it provides 2.6 million of jobs, is responsible for 2% of the total EU production, with the value of the steel production over 148 billion euro per year
- The steel industry has an enormous impact on the economy's key segments – automotive (EV), defense, aviation & space, energy (renewables), sustainable construction, rolling stock etc. - all crucial for the development of the EU. It is the cornerstone of our economic and social development.
- **On average to produce 1 tonne of crude steel around 500 kg of coking coal is needed**
- In the upcoming years the European transformation towards a low-emission industry will drive up the demand for environmentally-friendly products, i.e. electric vehicles and windmills
- European steel production is highly dependent on reliable supplies of coking coal and coke

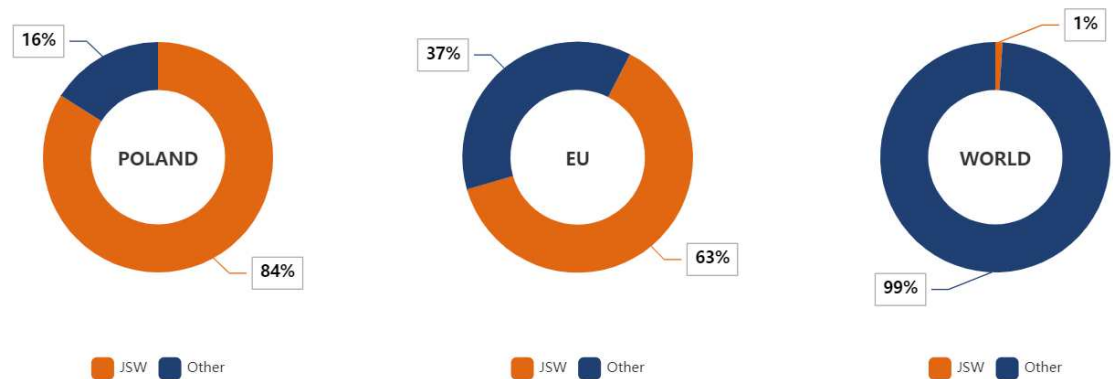


# EU demand for coking coal

Coking coal consumption vs. production (excluding PCI) in the EU (mt)



JSW's share in coking coal production in Poland, EU and globally



- JSW produces 10-11 mt of coking coal a year
- In total, the EU produces roughly 14-15 mt of coking coal, consumes 53 mt, so the deficit is roughly 36-39 mt
- Import needs will grow as OKD's mines are gradually decommissioned with the end of mining planned for 2030 the latest
- After 2030 JSW will be the only significant coking coal producer in the EU

- JSW's production in 2019: coking coal 69,2 %, thermal coal 30,8%
- The production of coking coal in Poland is conducted by JSW and PGG, together it stands for around 12 mln tonnes
- The consumption of coking coal in Poland only is around 12-13 mln tonnes

# EU demand for coking coal

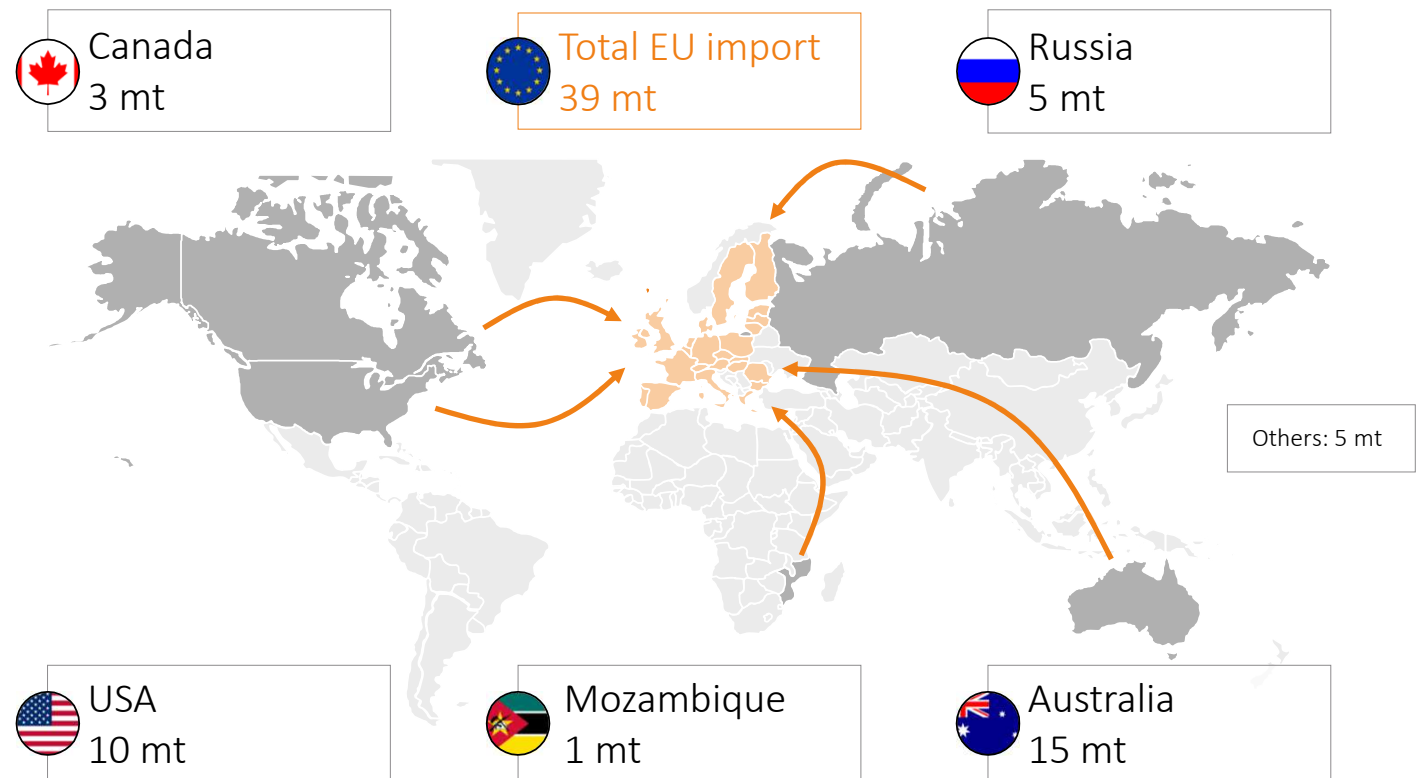
## World steel

- Global crude steel production reached 1,869.9 million tonnes (Mt) in 2019, up by 3.4% compared to 2018 and production was 873.1 Mt in the first six months of 2020, down by 6.0% compared to the same period in 2019
- The World Steel Association expects global demand for steel to fall by 6.4% to 1,654 Mt in 2020 due to the COVID-19 crisis. In 2021 steel demand is expected to recover to 1,717 Mt

## EU steel

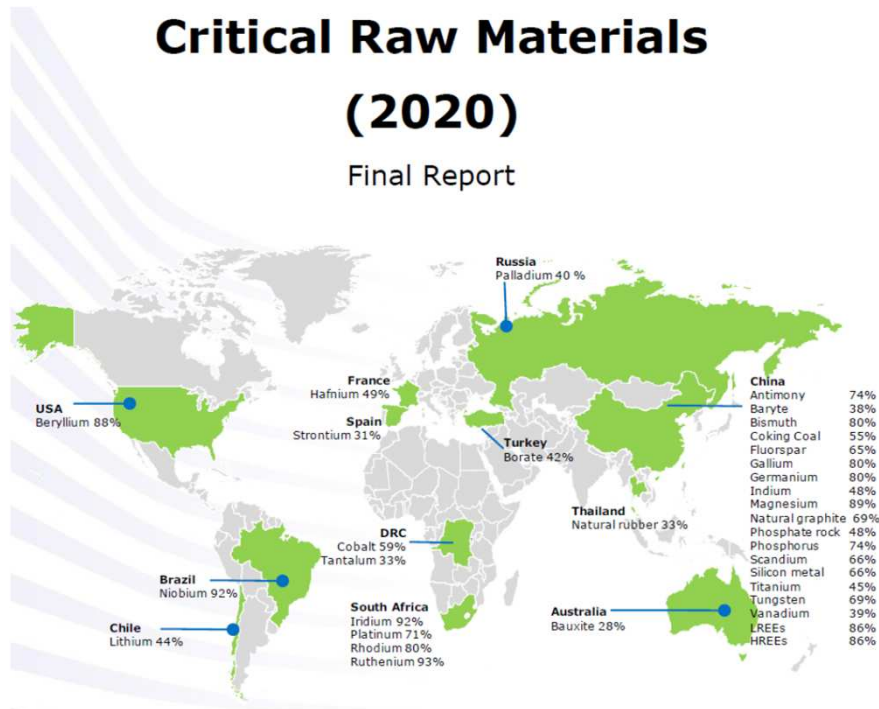
- The EU produced 159.4 Mt of crude steel in 2019 (8,5% of global production), a decrease of 4.9% compared to 2018 and in the first half of 2020-68.3 Mt, down by 18.7% compared to the first half of 2019
- For the EU countries, World Steel Association forecasts a 15.8% drop in steel demand in 2020, followed by a 10.4% increase in 2021

## EU Coking Coal import in 2019



# Coking coal on the list of critical raw materials

**Critical Raw Materials** for the EU – since 2014 coking coal has been identified as critical by the European Commission, meaning it is of high economic importance to which reliable and unhindered access is a concern for European industry and value chains and its sustainable domestic European production should be ensured and incentivised. In the 2020 revision of the CRM List coking coal is one of the 30 CRMs. A stable and secure supply of crucial raw materials for technologies and innovative sectors is recognized as a strategic issue to fulfill climate ambition adopted in The EU Green Deal in 2019.



2020 Critical Raw Materials (30)			
Antimony	Fluorspar	Magnesium	Silicon Metal
Baryte	Gallium	Natural Graphite	Tantalum
Bauxite	Germanium	Natural Rubber	Titanium
Beryllium	Hafnium	Niobium	Tungsten
Bismuth	HREEs	PGMs	Vanadium
Borates	Indium	Phosphate rock	Strontium
Cobalt	Lithium	Phosphorus	
<b>Coking Coal</b>	LREEs	Scandium	



Thank you for your attention !



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