ALUMINIUM
CRAFTED
BY GREEN
ENERGY

COMPANY PRESENTATION
March, 2018
WHO WE ARE

United Company RUSAL is a low cost, vertically integrated, low CO₂ aluminium producer with core smelting operations located in Siberia, Russia. In 2017, RUSAL was the world’s second largest producer of primary aluminium and alloys.

#1 ALUMINIUM PRODUCER OUTSIDE OF CHINA

RUSAL’s production chain includes bauxite and nepheline ore mines, alumina refineries, aluminium smelters and casting houses, wheels manufacturing, foil mills and packaging production centres as well as power-generating facilities.

TOP ALUMINIUM PRODUCERS

Source: Based on RUSAL’s internal Company report, and peer companies’ publicly available results, announcements, reports and other information.
RUSAL KEY FIGURES

CURRENT CAPACITY OF:

- 3.9 million tonnes of aluminium
- 10.6 million tonnes of alumina
- 17.4 million tonnes of bauxite

IN 2017 RUSAL ACCOUNTED FOR

- 5.8% of the world’s aluminium output
- 6.3% of the world’s alumina output
- 62,000 employees globally

All data on this slide: 2017
GLOBAL PRESENCE, LOCAL EXPERTISE

RUSAL’s supply chain is designed to ensure fast and reliable shipping services enabling the Company to provide its customers with the most viable and cost-effective logistical solutions.

RUSAL SALES GEOGRAPHY IN 2017, % OF SALES

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>42%</td>
</tr>
<tr>
<td>Russia &amp; CIS</td>
<td>24%</td>
</tr>
<tr>
<td>America</td>
<td>17%</td>
</tr>
<tr>
<td>Asia</td>
<td>16%</td>
</tr>
</tbody>
</table>

- Representative office
- Aluminium
- Alumina
- Bauxite
- Foil
- Powders
- Silicon
- Nepheline ore
- Production of cryolite and cathodes
- BEMO Smelter & HPP
POWER OF SIBERIA

RUSAL’s key aluminium producing facilities are located in Siberia, Russia, and benefit from access to clean renewable hydro power.

*Bratsk smelter (1,006kt), the first aluminium producing facility globally to reach a capacity of 1mn t*

*Krasnoyarsk smelter (1,013kt), RUSAL’s key site for testing and introducing new cutting edge technologies*

*Sayanogorsk smelter (542kt), Russia’s largest producer of aluminium alloys*

*Khakass smelter (297kt), a modern and one of the most technologically advanced smelters in the world*

*Irkutsk smelter (410kt), one of the oldest smelters in Eastern Siberia fully revamped in 2008-2010*

*Novokuznetsk smelter (215kt), supplier of alloys for various industries, including automotive*
OUR PHILOSOPHY

RUSAL believes that the protection of the environment and limiting CO₂ emissions are of fundamental importance. Currently, RUSAL has one of the lowest carbon footprints in the industry and benefits from access to clean, renewable hydro power in Siberia. We are constantly working and aspiring to improve this even further.

ACCESS TO RENEWABLE ELECTRICITY

Electricity is a key component in the aluminium production process and vast amounts are required. RUSAL’s core smelting operations are favorably located close to Siberian hydro power plants.

RUSAL sources over 95% of our smelters’ electricity needs from these hydro power plants.

Using renewable and environmentally friendly hydro generated electricity, RUSAL is committed to having the best CO₂ footprint in the industry.
OUR COMPETITIVE ADVANTAGES

PROPRIETARY R&D
A major competitive advantage of RUSAL is its in-house R&D, engineering and design resources, which enables the Company to develop cutting-edge technologies, state-of-the-art equipment and technically advanced facilities. A new energy efficient and environmentally friendly RA-550 smelting technology has been launched and revolutionary inert anode technology is currently under design.

FOCUS ON HIGHER MARGIN BUSINESS
RUSAL has a diversified and innovative product mix with a strong share of value added products in the portfolio (47% share of VAP products in 2017 sales mix). The Company is implementing projects to increase the sales of VAP by up to 60% by 2021.

CAPTIVE RAW MATERIAL SUPPLY
RUSAL’s bauxite mines and alumina production facilities are located in Russia and abroad. RUSAL’s operations cover over 100% of the Company’s total alumina needs and our existing bauxite resource base can support over 100 years of further operation.

OPERATIONAL EFFICIENCY
RUSAL’s focus on efficiency and cost reduction initiatives solidifies the Company’s global leadership on the aluminium cost curve.
Aluminium makes up to 75-80% of a modern aircraft structure
INNOVATIVE PRODUCTS OF THE HIGHEST QUALITY

ENTIRE PRODUCTION CYCLE
RUSAL’s core products are primary aluminum, aluminium alloys, foil and alumina. The Company has access to vast resources of raw materials and delivers the entire production cycle – from bauxite mining to the production of alloys.

FOCUSED ON HIGHER MARGIN BUSINESS
RUSAL places a strong focus on the development and output of value-added products (VAP) at the higher end of the upstream business. RUSAL’s in-house R&D centres and test laboratories provide the Company with a strong competitive advantage. In 2017, RUSAL created a new downstream division, whose main tasks will include developing value added production and bringing this business of the company to a whole new level.

ADDRESSING CUSTOMERS’ CHANGING NEEDS
RUSAL’s offer reflects the strong nature of our customer relationships, an area in which we are looking to develop even further in the year ahead. RUSAL closely evaluates market demands and adapts its product portfolio accordingly to meet the consumers’ ever changing needs. RUSAL’s focus is on differentiating its product portfolio based on demand and applications.

RUSAL’S SHARE OF VAP IN TOTAL SALES

- 2009: 19%
- 2017: 47%
- 2021: 60%
PRODUCT MIX

FOUNDRY ALLOYS

RUSAL produces a wide range of aluminium alloys that are typically used in automotive, transport, construction and electrical applications.

EXTRUSION BILLETs

Aluminium billets are most frequently used for automotive and construction applications. RUSAL operates modern facilities that produce a wide range of high quality aluminium billets, including hard alloyed billets, which are engineered to meet each customer’s specific requirements.

ROLLING SLABS

Slabs produced by RUSAL comply with the highest quality control requirements and are further applied in the production of aluminium foil, beverage cans, car body structures and building applications.

PRIMARY ALUMINIUM

Aluminium is the most extensively used non-ferrous metal in the world, used in beverage cans to auto body parts, cables and power lines to building frames. RUSAL’s facilities produce primary aluminium conforming to the highest international quality standards, Russian GOSTs and various technical specifications as agreed with each customer.
PRODUCT MIX

WIRE RODS

Aluminium is not only a universal structural material, but also a perfect electricity conductor. Today, along with copper, aluminium ensures power transmission worldwide. Wire rod is used in middle and high voltage cables, wire and cables for electrical application, mechanical application and for deoxidation in the ferro industry.

HIGH PURITY ALUMINIUM

High and super high purity aluminium is a rare type utilised in electronic and aerospace applications, where its quality is critical to the successful manufacture of precision instruments. RUSAL’s high purity aluminium products are used in the manufacturing of hard disc drives or memory discs for computers and cell phones. It is also used in the manufacturing of high performance alloys for the aerospace industry.

FOIL AND PACKAGING

RUSAL’s facilities produce many different types of aluminum foil (from 5 to 240 microns thick), flexible packaging, alloy straps and foil for domestic use. RUSAL’s packaging consumers are the food, pharmaceutical, construction, tobacco, perfume and cosmetics industries.

ALUMINIUM POWDERS

Aluminum coarse and fine powders and grains are widely used in the metals and mining, chemical, energy and construction industries. They are also applied in highly promising 3D printing. RUSAL is Russia’s largest producer of aluminium powder.
INNOVATION FUELING GROWTH

NEW SMELTER TECHNOLOGIES
The Sayanogorsk aluminium smelter is currently RUSAL’s platform for testing ultra-high power proprietary RA-550 cells. These cells have the highest environmental performance and energy efficiency.

CO₂ FREE TECHNOLOGIES
The use of inert anodes in the aluminium smelting process is a ground-breaking technology, capable of revolutionising the global industry. RUSAL’s rig tests are currently held in Krasnoyarsk where the Company has developed a completely new pot scheme for inert anode technology. Once introduced, it will enable RUSAL to significantly reduce carbon emissions.

SCANDIUM FROM WASTE
RUSAL developed a unique technology to produce scandium oxide from red mud. A pilot unit at the Urals aluminium smelter was launched to produce primary scandium concentrate using red mud for the production of alloys. The scandium oxide produced will be used for the production of aluminium-scandium alloys at RUSAL’s smelters.

MODERNISATION PROJECTS
RUSAL is running various projects to modernise its production facilities to raise efficiency and considerably cut emissions further. RUSAL’s smelters are being equipped with cutting edge casthouse equipment that is focused on manufacturing value-added products for the automotive, construction, aerospace, and electrical industries.
All types of vehicles, from bikes to spaceships, are made using aluminium, allowing people to move at breakneck speeds safely, cross oceans, fly in the sky and even leave our planet.

Share of transportation in total aluminium consumption, 2017

Growth forecast of global aluminium consumption in transport (CAGR) in 2017-2022

26%

4.5%
NOT ALL PRIMARY ALUMINIUM IS EQUAL

CARBON FOOTPRINT T CO₂ PER MT OF ALUMINIUM (SMELTER SCOPE 1&2)

Source: IAI 2015 data, UC RUSAL research.
POWERING BUSINESS WITH A LOW CARBON FOOTPRINT

GLOBAL ALUMINIUM PRODUCERS RANKING BASED ON CO₂ EMISSIONS PER TONNE (SCOPE 1&2)

<table>
<thead>
<tr>
<th>Company</th>
<th>Emissions (tonnes)</th>
</tr>
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<tbody>
<tr>
<td>UC RUSAL</td>
<td>2</td>
</tr>
<tr>
<td>Norsk Hydro</td>
<td>4</td>
</tr>
<tr>
<td>Alcoa</td>
<td>6</td>
</tr>
<tr>
<td>Rio Tinto</td>
<td>8</td>
</tr>
<tr>
<td>EGA</td>
<td>10</td>
</tr>
<tr>
<td>Alba</td>
<td>12</td>
</tr>
<tr>
<td>Century Aluminium</td>
<td>14</td>
</tr>
<tr>
<td>South32</td>
<td>16</td>
</tr>
<tr>
<td>Chalco</td>
<td>18</td>
</tr>
<tr>
<td>Hongqiao</td>
<td>20</td>
</tr>
<tr>
<td>Vedanta</td>
<td>16</td>
</tr>
<tr>
<td>East Hope</td>
<td>14</td>
</tr>
<tr>
<td>Xinfa Group</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: CRU, UC RUSAL research, emissions from alumina production not included, 2016

RUSAL HAS REDUCED GROSS GHG EMISSIONS BY MORE THAN 50% SINCE 1990
In 2017, RUSAL launched its new bespoke brand for low carbon aluminium – ALLOW with a certified carbon footprint.

ALLOW’s carbon footprint is lower than 4 tonnes of CO2 per tonne of aluminium, significantly lower than the industry average of 13.4 tonnes of CO2 per tonne of aluminium.

ALLOW will provide consumers and manufacturers with confidence that the aluminium from RUSAL used in their products has one of the lowest carbon footprints in the industry:

- Guaranteed low CO2 footprint
- Certificate with third-party verification
- Traceable to a single smelter
- Available worldwide

More information available at allow.rusal.com
ON A WAY TO CARBON NEUTRALITY: 2025 GOALS

**CARBON-FREE PURCHASED POWER**
To ensure that our aluminium smelters purchase at least 95% of electricity from hydroelectric power plants and other carbon free power generating.

**15% LESS GHG AT ALUMINIUM SMELTERS**
To reduce direct specific greenhouse gas emissions by 15% compared to 2014 at reduction processes at the existing aluminium smelters.

**10% LESS GHG AT ALUMINA REFINERIES**
To reduce direct specific greenhouse gas emissions by 10% compared to 2014 at the existing alumina refineries.

**7% LESS POWER CONSUMPTION**
To reduce the specific aluminium smelters power consumption by 7% as compared to 2011.

**MAXIMUM 2.7 T CO₂ PER 1 T OF ALUMINIUM**
To achieve the average level of specific direct and indirect energy related greenhouse gas emissions from reduction processes at the aluminium smelters not exceeding 2.7 t of CO₂e/t Al.

**APPLY INTERNAL CARBON PRICE**
To use an internal carbon price when making strategic and investment decisions starting in 2017.

**SUPPORT CLIMATE CHANGE INITIATIVES**
To support Russian and international initiatives and associations advocating active actions to prevent climate change and supporting carbon prices as long as they are aligned with the strategic goals of the company.

Producing aluminium from hydro power generates 3 to 5 times less CO₂ emissions than from coal-based electricity. 10 million tonnes of primary aluminium, 20% of total global production, made from hydroelectricity instead of carbon-based electricity, will save the equivalent of the total emissions generated by 3 countries of similar size to Portugal.

Source: UC RUSAL research.
RUSAL implements a range of programmes to reduce the release of hazardous emissions and to boost the amount of recycled and reusable water and waste.

RUSAL reduced:
- Industrial water waste by 65% since 2011
- Specific PFC’s emission per tonne of aluminium produced by more than 81% since 1990
- Specific GHG’s emission per tonne of aluminium produced by more than 57% since 1990

Expenditures on implementing environmental actions in 2017 totalled USD123.6 million.

In 2017, introduction of the international standards of the Aluminium Stewardship Initiative (ASI) was launched at a number of RUSAL’s facilities. ASI standards define environmental, social and governance principles and criteria, with the aim to address sustainability issues in the aluminium production and sales chain.

*Increase in 2016-17 CO numbers is due to change in calculation methodology at Sayanogorsk smelter
** Increase in 2017 is due to works at a bauxite residue at the Krasnoturyinsk site
Together with Russia’s power generating group RusHydro, RUSAL is constructing BEMO, the energy and metals complex on the Angara River in the Krasnoyarsk region in Siberia, which includes a BEMO HPP and BEMO smelter. The Company is also considering including the Taishet smelter project in Irkutsk region as part of the BEMO project.

The 3,000 MWt Boguchanskaya HPP is the fourth step of the Angara hydroelectric power chain, the biggest HPP completion project in modern Russia. The first hydropower units were put into operation in 2012.

The construction is divided into two stages (each one for 298 kt of aluminium per annum). The start-up complex of the first stage (149 kt of aluminium per annum, 168 pots) was launched in 2015 and the second part of this stage (149 kt of aluminium per annum, 168 pots) is scheduled for completion at the end of 2018.

Today, over 95% of RUSAL’s aluminium production is sourced by clean, renewable hydro power. The Company will continue to further improve its carbon footprint and aims to achieve ~100% carbon-free purchased power in energy mix by 2020.

Note: Share of electricity from non-carbon sources used for primary aluminium production.
INVESTING IN PEOPLE AND COMMUNITIES

SUSTAINABLE DEVELOPMENT

- RUSAL’s charitable foundation, the Social Programmes Centre, has been operating since 2004

- Priority areas of social investment and charitable activity are:
  - Developing the social infrastructure of the areas in which the company operates
  - Education
  - Healthy lifestyle
  - Support for socially disadvantaged groups

- Social and charity programmes cover Africa, Central America, Europe, Russia and CIS countries

- RUSAL’s sustainability reporting is fulfilled in accordance with the GRI Sustainability Reporting Guidelines G4 and principles of the UN Global Compact

- In 2017, RUSAL significantly increased its total investment in social programmes, charity and sponsorship to **USD23.9 million** (+73% from USD13.8 million in 2016)
INVESTING IN PEOPLE AND COMMUNITIES

HEALTH AND SAFETY PRIORITIES

- Zero injuries, zero emergencies, and zero fires
- Full compliance of equipment and production processes with legal and regulatory requirements for occupational health, industrial and fire safety
- Personnel safety and health in the workplace and constant improvement of workplace environment in order to increase the level of safety
- Prevention of occupational diseases

In 2017, 44 audits were carried out at the Company’s sites as part of the OHSAS 18001:2007 certification process.

Between 2014-2017, total investment in employee safety was USD233.44 million

RUSAL’s production facilities have ISO 9001 certified quality management systems, ISO 14001 certified environmental management systems and OHSAS 18001 certified health and safety management systems.

QMS of suppliers to the automotive industry are certified according to ISO/TS 16949. RUSAL is REACH, RoHS, ELV and SVHC compliant.

Lost Time Accident Frequency Rate

Source: *International Aluminium Institute and Company internal data. Note: LTAFR is calculated per 1,000,000 man-hours worked.
RUSAL IS A MEMBER OF:

Aluminium Stewardship Initiative
International Aluminium Institute
World Bank’s Carbon Pricing Leadership Coalition
Carbon Disclosure Project
UN Global Compact, UNDP
International Chamber of Commerce
Russian Aluminium Association
Climate Partnership of Russia
American Aluminium Association
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