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En+ Group presentation of I-RECs and Hydrogen strategy

With the support of the Trade Representation of the Russian Federation in Japan

April 27, 2021 (Tue) | 16:00-17:15 (Tokyo time) = 10:00-11:15 (Moscow time)

Webex Online conference / Speakus app

En+ Group would like to invite you to the online presentation regarding international renewable energy certificates (I-RECs) and our hydrogen strategy as a part of our ambition to reach net zero by 2050 and to reduce greenhouse gas emissions by at least 35% by 2030.

In order to move towards this goal, En+ Group has become the Russia's first energy producer and supplier to trade international Renewable Energy Certificates (I-RECs). Energy consumers can use I-RECs to meet their carbon targets and to advance in implementation of their internal corporate social responsibility policies.

Clean hydrogen is currently enjoying unprecedented political and business momentum, with the number of policies and projects around the world expanding rapidly. Hydrogen is already widely used in some industries, but it has not yet realized its potential to support clean energy transitions.

En+ Group is seizing the opportunity to introduce the Company's strategy in the "carbon neutrality by 2050" goal. This fully aligns with the Japan's pledge to net-zero carbon emissions by 2050.

AGENDA

1. Welcome Greeting of the Ministry of Economy, Trade and Industry of Japan - 5 min
2. Greeting of the Trade Representative of the Russian Federation in Japan - 5 min
3. Greeting of En+ Group Representative - 5 min
4. I-RECs presentation - 15 min
5. Hydrogen strategy presentation - 15 min
5. Q&A - 15 min
6. Closing remarks - 10 min

MAIN SPEAKER

Vyacheslav Solomin – Chief Operations Officer, En+ Group

MODERATOR

Trade Representation of the Russian Federation in Japan

Please note: The event will be held in Russian and Japanese with simultaneous interpretation through the Speakus application (live remote interpreting platform).

Speakus is needed to be installed in advance on your mobile device (Android, iOS) or computer (<https://speakus.club/en/>).

Please register [HERE](#) to receive the link to the Webex conference, instructions and a Speakus access code.

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ABOUT En+ Group

En+ Group is a leading vertically integrated aluminium producer and biggest independent hydropower generator (3 of 20 the world's largest HPPs).

With an annual production capacity of 3.9 mmt of aluminium, En+ Group is the largest aluminium producer in the world (outside of China), while our 15.1GW of installed hydropower capacity makes us the largest independent hydropower company globally. En+ Group accounts for circa 7% of the Russia's total electricity generation. The Group has a well-established presence across five continents with 12 countries and c.90,000 employees.

About 77 % of the En+ Group installed electricity capacity is represented by hydropower plants (5 HPPs), with the remaining 22.9% represented by combined heat and power plants (16 CHPs) and one solar plant.

This En+ Group ambition calls for new business solutions, which include green hydrogen projects. The emphasis on “green hydrogen” refers to production of hydrogen by electrolysis using hydropower of Siberia in the Russian East and Karelia in the North-West of Russia. En+ Group is the first company in Russia to take part in I-REC system and now sells I-REC certificates to international customers.

En+ Group is a leading international corporate champion of climate action. It has set the most ambitious 2030 carbon reduction targets of any aluminum producer worldwide. In January 2021, En+ Group announced its ambition to reach net zero by 2050 and to reduce greenhouse gas emissions by at least 35% by 2030, with 2018 serving as the benchmark.

Eng: <https://enplusgroup.com/en/>

Global leader in aluminium production and hydroelectricity generation	#1 Aluminium producer in the world (ex-China) ¹ One of the leading electricity generators globally ²
Vertically integrated green business model	En+ Siberian HPPs have a long-term average electricity production of 64 TWh vs. the Metals segment's 59.5 TWh electricity consumption in Siberia in 2018. 100% self-sufficiency in alumina and c.70% in bauxites and nephelines with 100% to be achieved by 2020 via Dian Dian Project in Guinea ³
Unique asset base and operational excellence contributing to cost leadership	Favourably located cost-efficient HPPs resulting in one of the lowest cost positions in aluminium for En+
Upside potential from multiple catalysts	Spare capacity of existing HPPs can be utilised to meet increased demand upon ramp up of the Metals segment's brownfield smelters
Experienced management and robust corporate governance	Board with 12 directors with a majority of independent directors

En+ Group I-RECs

En+ Group is the largest independent producer of hydropower.

En+ Group owns and operates some of the world's largest hydropower plants, which power the regions of Siberia and the Group's aluminium production plants, making En+ Group an integrated renewable energy and metals productions group. The Group's focus on increasing the supply of renewable energy is fundamental to helping customers around the world meet their own carbon reduction targets.

What are I-RECs?

- An I-REC (International Renewable Energy Certificate) is a type of Energy Attribute Certificate (EAC), which represents one megawatt hour (MWh) of electricity produced by renewable sources.
- Electricity is not tangible, and it can be difficult for companies to prove their usage.
- But I-RECs allow users to demonstrate their energy usage – e.g. 'my factory runs on 100% renewable energy'
- Measure electricity requires a system that 'books' all charges of electricity that go into the grid as 'unique units'. These booked unique units can then be traded independently
- This mechanism is called a book-and-claim system and is the cornerstone of EACs worldwide

I-RECS in Russia

- I-RECS were registered in Russia in summer 2020
- With no national certificates for green energy in Russia, I-RECS are expected to develop quickly
- I-RECS are cross-border in nature therefore ensuring liquidity of the Certificate trading market
- As a world leader in the production of clean renewable energy from hydropower plants in Siberia, En+ Group is in a strong position.



Encourages users to demonstrate their energy usage



Reduces impact on the environment



Encourages production of renewable energy



Certified clean energy

Where to use I-RECs

- Growing number of countries in Asia, Africa, Middle East and Latin America
- Participants of I-REC include, among others, the world's largest brokers and power companies

New Energy Programme Increasing efficiency of HPPs

RUB 21bn

investments until 2026

2.3 mln t CO₂

greenhouse emissions cut

2.0 TWh

additional power production of modernised equipment

- In 2007 En+ Group initiated a programme to modernise the Angara-Yenesei HPP cascade and thereby increase the clean energy output by 2.5 billion kWh per year with the water volumes passing through the HPP turbines.
- En + Group carries out large-scale work on the reconstruction and modernisation of generating equipment for HPPs, as a result of which it meets the world's best indicators, which leads to a significant reduction in greenhouse gas emissions
- Reduces the environmental impact
- Helps avoid GHG emissions from nearby CHPs
- The programme envisages upgrades of the hydropower generators, replacement of runners, transformers and open switchgear. The new more efficient runners use better-profiled blades and improved materials (max +8% efficiency).

Expected results of ongoing and future projects

Increase in power generation above baseline

1.68

bln kWh pa
2019

2.5

bln kWh pa
2025

GHG emission prevention

1.95

Mt CO₂
2019

11.5

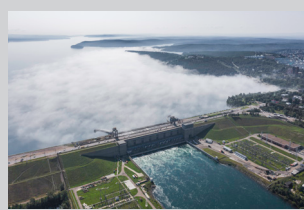
Mt CO₂
2007-2019

26.6

Mt CO₂
planned 2007-2025

En+ I-RECs and HPPs - clean energy production for I-RECs:

Irkutsk HPP



662.4 MW

installed power capacity

4.1 TWh

power generation

- First dam on the Angara River cascade
- First large hydroelectric power plant constructed in eastern Siberia

Since New
Energy
programme:

0.27 bln
kWh pa increase
in production

0.231 Mt
CO₂ Emission
prevention

Bratsk HPP



4,500 MW

installed power capacity

21.1 TWh

power generation

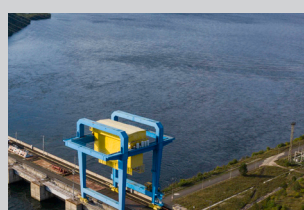
Second dam on the Angara River cascade system

Since New
Energy
programme:

1.1 bln
kWh pa increase
in production

1.246 Mt
CO₂ Emission
prevention

Ust-Ilimsk HPP



3,840 MW

installed power capacity

19.3 TWh

power generation

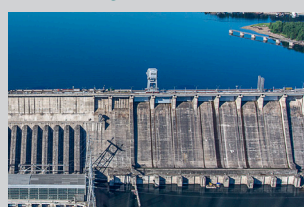
Third dam on the Angara River hydroelectric plant cascade

Since New
Energy
programme:

0.3 bln
kWh pa increase
in production

0.421 Mt
CO₂ Emission
prevention

Krasnoyarsk HPP



6,000 MW

installed power capacity

19.7 TWh

power generation

The first En+ Group HPP to be registered in the I-REC register and the first to be registered on I-REC register in Russia'

Since New
Energy
programme:

0.3 bln
kWh pa increase
in production

0.714 Mt
CO₂ Emission
prevention

Abakan SPP



5.2 MW

installed power capacity

6.2mn kWh

power generation

20,000

solar modules

18 hectares

of land

- En+ Group is considering potential expansion
- Along with Krasnoyarsk HPP, first to be registered on I-REC register in Russia

Why buy En+ Group's I-RECs

En+ Group is among the global leaders in Sustainable Development

By buying En+ Group's I-RECs you support the green economy, the energy transition, and the reduction of global emissions

You are supporting the Siberian region and its sustainable development

Reliability is built into En+ Group's I-RECs