

Japan-Russia Energy and Environment Dialogue Toward a Carbon-Neutral Society – Think Globally and Act Locally

Cluster of hydrogen technologies in Sakhalin region



Deputy Minister of Digital and Technological development of Sakhalin region
Getts Evgeniy

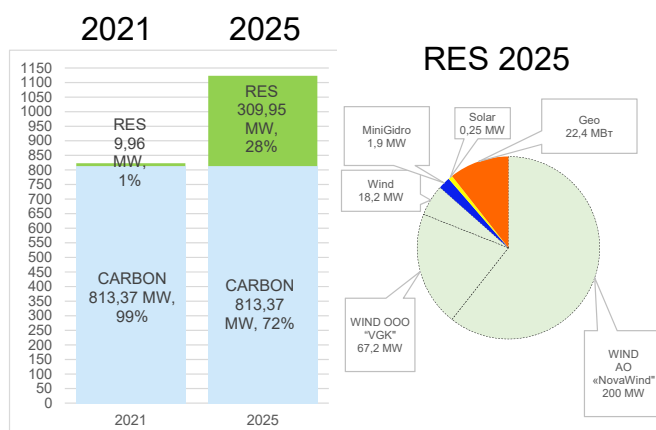
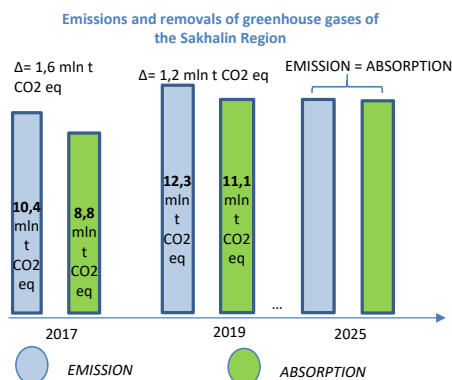
1

SAKHALIN REGION - PILOT REGION FOR CLIMATE REGULATION



The purpose of the experiment:

Achievement of carbon neutrality by 2025 in Sakhalin region and development of mechanisms for regulating emissions and removals of CO₂.





HYDROGEN CLUSTER OF SAKHALIN REGION



Domestic market for the use of hydrogen in Sakhalin region

- The use of hydrogen for autonomous power supply. Energy storage devices
- Application of methane-hydrogen mixtures (MHM) at gas-fired power plants, CHP-1 and boiler houses of housing and communal services
- Hydrogen fuel cell rail trains. Hereinafter - motor transport, UAS, sea transport
- The use of MHM as a gas engine fuel (in the development of the ongoing program of transferring vehicles to LPG)
- Concentration in the Hydrogen park of developments and services
- Competence center on the basis of SakhSU.
- Areas of complex application of hydrogen technologies: Ecopolis near Korsakov, hydrogen routes, etc.

Territorial hydrogen cluster of Sakhalin region.

Placement of companies of the full cycle of hydrogen energy:

1. Producers of hydrogen
2. Engineering companies
3. Service companies
4. Transport and logistics companies

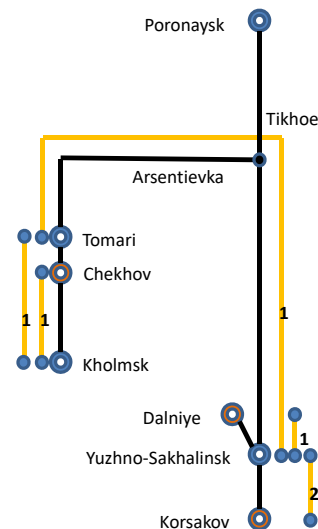
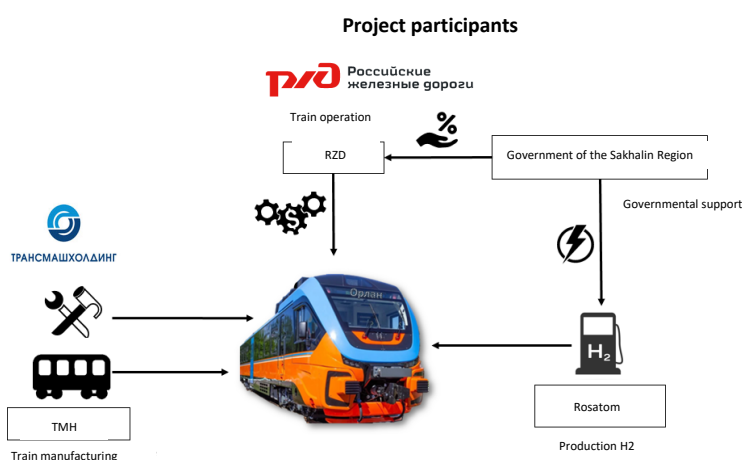
Export deliveries to Southeast Asia
Japan, South Korea, Singapore, China



AN EXAMPLE PROJECT



Project for the organization of railway passenger traffic using trains on hydrogen fuel cells

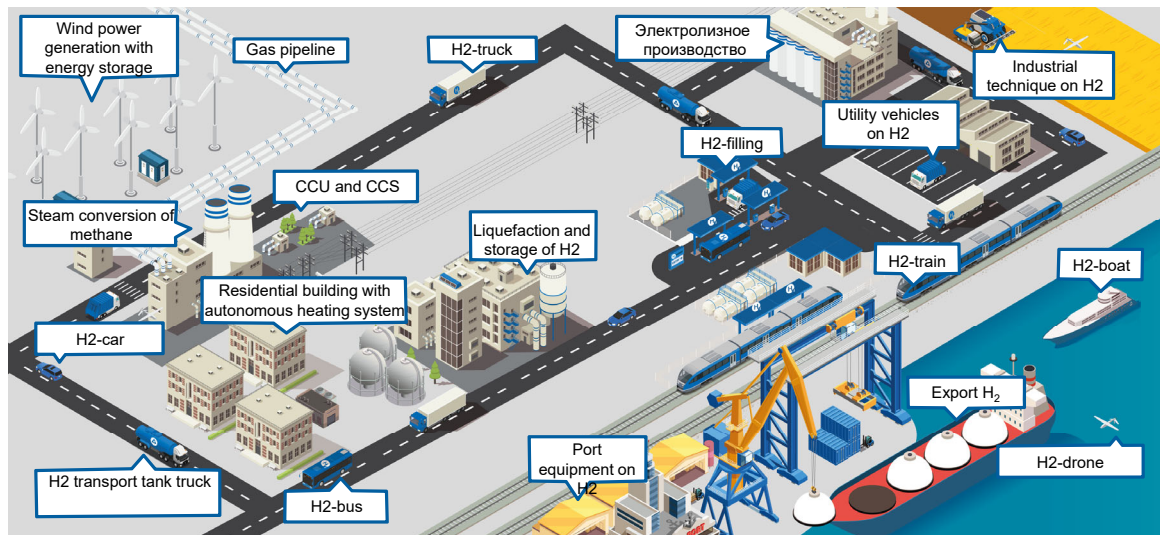


On September 4, 2019, an Agreement on cooperation and interaction was concluded on the project of organizing passenger rail traffic using trains on hydrogen fuel cells and systems for ensuring their operation.

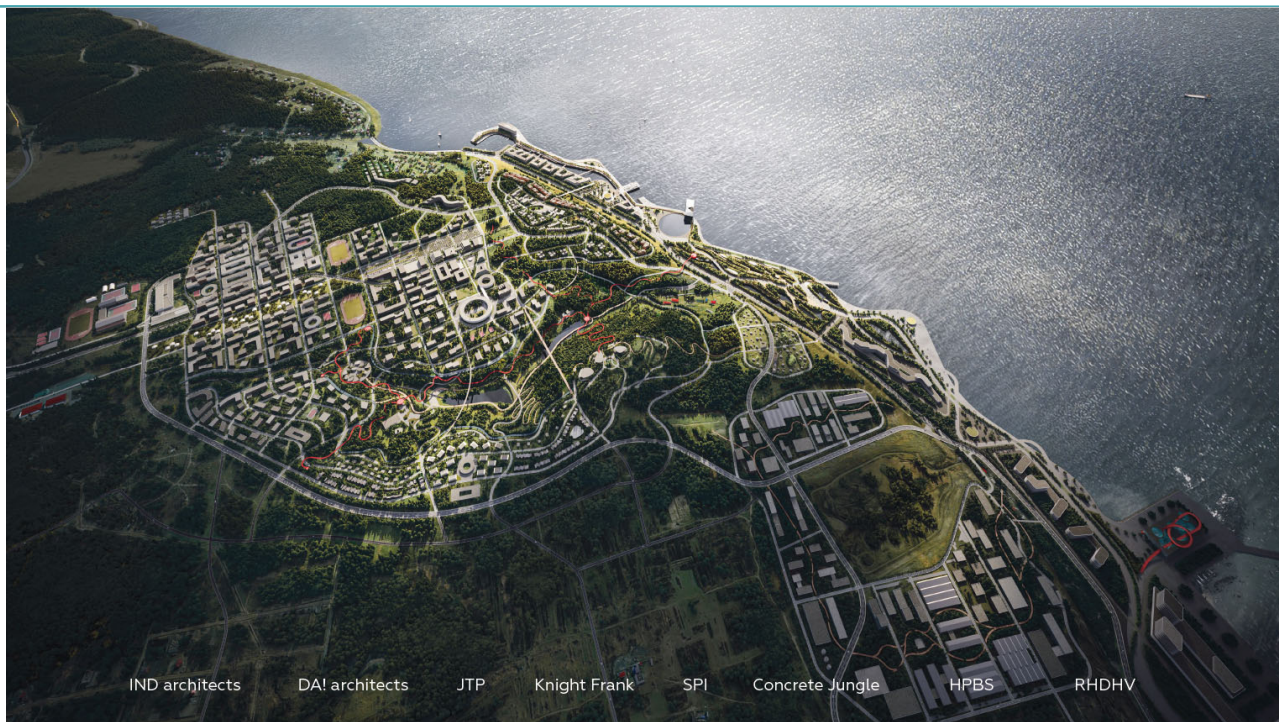
A MODEL FOR THE DEVELOPMENT OF HYDROGEN ENERGY SECTOR - AN INCREASE IN DOMESTIC CONSUMPTION



The Sakhalin Region is a promising platform for the implementation of the hydrogen valley concept: on the basis of a large industrial and infrastructure cluster with ample opportunities for export to the Asia-Pacific countries and for developing hydrogen technologies, including transport in various sectors of the economy in cooperation with Russian and international partners.



ECOPOLICE - THE MAIN WORTH IS THE UNIQUE ECOSYSTEM OF THE ISLAND



ECOPOLICE - THE MAIN WORTH IS THE UNIQUE ECOSYSTEM OF THE ISLAND



Japan-Russia Energy and Environment Dialogue Toward a Carbon-Neutral Society – Think Globally and Act Locally

THE MAIN ASPECTS OF ECOPOLIS SUSTAINABLE STRATEGY



CARBON NEUTRALITY
УГЛЕРОДНАЯ НЕЙТРАЛЬНОСТЬ



DECARBONIZATION
ДЕКАРБОНИЗАЦИЯ

ENERGY SECURITY
ЭНЕРГЕТИЧЕСКАЯ БЕЗОПАСНОСТЬ

Solar and wind energy Энергия ветра и солнца



- Wind energy as an important element of the energy supply concept
- Usage of solar panels and facades in the entire urban development

Green hydrogen energy Зеленая водородная энергетика



- Sakhalin is one of the first hydrogen production clusters in Russia

Marine energy Энергия моря

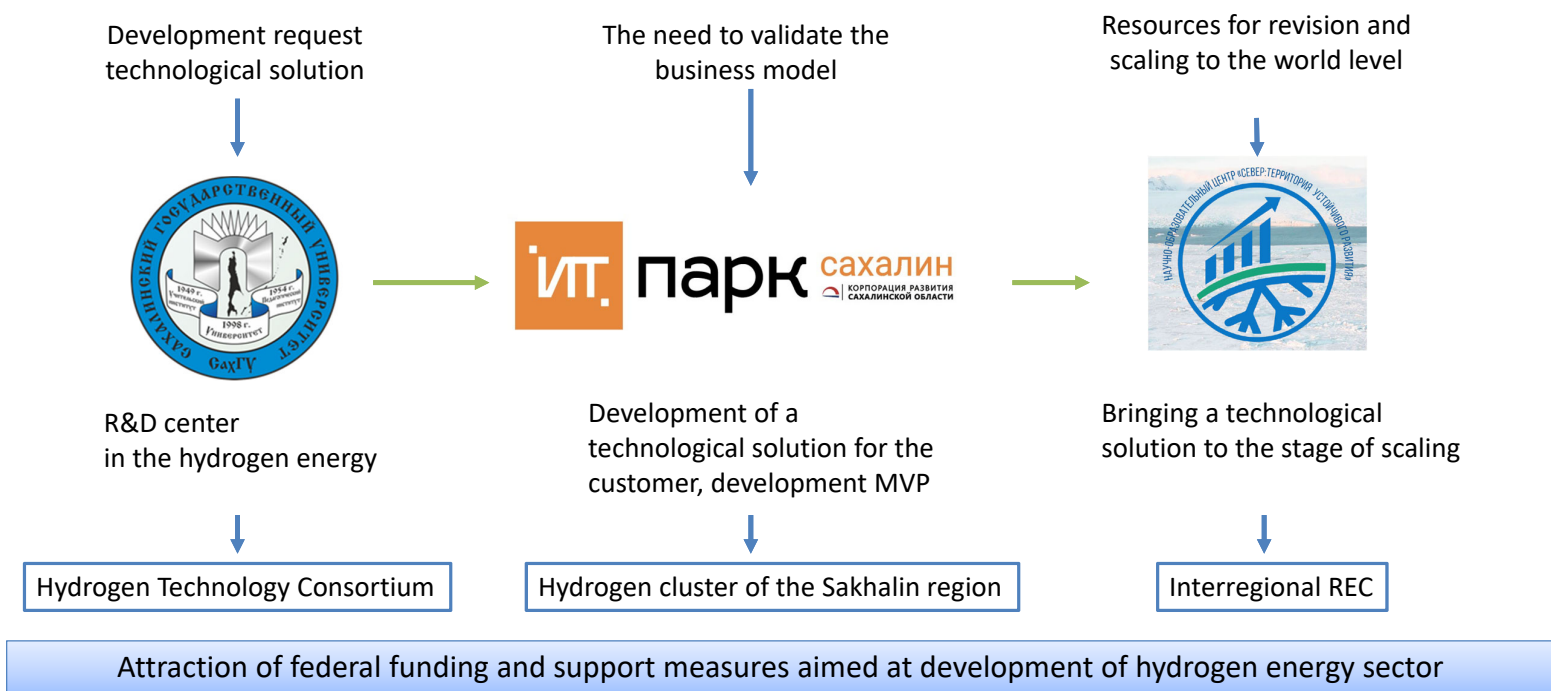


- Worldwide sea waves can generate more than two terawatts of power
- Tidal energy is also potentially one of the main sources of electricity in the future

Japan-Russia Energy and Environment Dialogue Toward a Carbon-Neutral Society – Think Globally and Act Locally



END-TO-END SUPPORT FOR DEVELOPMENT OF PROJECTS IN HYDROGEN ENERGY



Japan-Russia Energy and Environment Dialogue Toward a Carbon-Neutral Society – Think Globally and Act Locally

9



Thanks for attention!

e.getts@Sakhalin.gov.ru

