



GUGGENHEIM

Financing Sustainable Development in the Arctic

Responsible
Investment Solutions
for the Future

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With a population of more than 12 million¹ people and an annual economy of more than US\$500 billion², the Arctic represents one of the last great economic frontiers.

The Arctic Today...

The Arctic is often misconceived as a beautiful but vacant expanse of ice-covered land and sea. In reality, it is a vibrant and diverse region that spans eight of the world's leading economies—Canada, the Kingdom of Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, the Russian Federation, Sweden, and the United States of America—and more than 18 million square kilometers, an area larger than South America³.

Today, pan-Arctic economic activity exceeds US\$500 billion per year—larger than the economies of Belgium, Poland, or Thailand—and is responsible for a significant share of the world's food, minerals, and energy.

Although not widely recognized, the Arctic is a leading region for biotechnology, cutting-edge scientific research, and meaningful and measurable success in sustainability for the entire planet—countries like Norway and Iceland can generate 100 percent of their electricity from renewable sources⁴.

The simple truth is: The Arctic impacts people everywhere in their everyday lives. As climate change impacts the Arctic, the region will only grow in importance to the world, both environmentally and economically.



...The Arctic Tomorrow...

The Arctic is changing, creating extraordinary long-term investment opportunities—with real responsibility to protect the natural beauty of the region.

As the world adapts to a changing climate, the Arctic is discovering tremendous new opportunities. By 2040, the Northern Sea Route could be open year round, resulting in faster, more energy-efficient global trade routes. The Arctic of tomorrow is a new frontier of economic growth and global commerce, one with significant potential benefits to society. In the near future, the Arctic will:

- **Move more of the global economy** – Arctic sea ice coverage is already 65 percent of what it was in 1979⁵. In the future, the Arctic region will play a pivotal role in global trade, with more than 25 percent of Asia-Europe container trade expected to travel through the Northern Sea Route by 2030⁶.
- **Feed more of the world** – Over the next 40 years, warmer waters, sustainable aquaculture, and innovations in the “blue economy” could result in fishery catches 70 percent greater than today⁷.
- **Deliver more “green” products and innovations** – Marine bioprospecting in the Arctic continues to discover and develop new biological applications for medicine, biofuels, health and wellness, and industrial use.
- **Help power the world with clean energy** – While it is widely cited that the Arctic holds nearly one-quarter of the world’s undiscovered oil and gas reserves⁸, its greatest potential lies in renewable energy. The ability to generate and share energy from wind, hydro, tidal, geothermal, solar, and biomass makes the Arctic a meaningful leader in the future of clean energy. Subsea cables make it possible for the wealth of renewable energy in the Arctic to be exported to the world.

As the climate transforms the Arctic, the Arctic will transform the world. To adapt and thrive, communities will need critical and careful investment, paired with a strong commitment to protect and preserve the environment for future generations.

...Requires a New, Sustainable Approach...

Sustainable development in the Arctic is both essential and achievable. It represents a new approach that the world needs today.

Sustainable development is a global priority, one that requires healthy improvements in the Arctic, where the infrastructure requirements alone are expected to reach US\$1 trillion over the next 15 years⁹. That’s why smart, strategic investments today will make a substantial impact tomorrow.

Building a better Arctic—and a better world—requires long-term capital that carefully weighs environmental and societal impact to support sustainable growth. It demands an entirely new framework for investment on a truly massive scale. Guggenheim Partners, working with the World Economic Forum Global Agenda Council on the Arctic, has developed the Arctic Investment Protocol, a set of guidelines for sustainable investment in the region.

The Arctic Investment Protocol aspires to promote environmentally sound economic growth that furthers community wellbeing and personal quality of life, and builds resilient societies in a fair and inclusive manner.

Over US\$1 trillion in infra-structure is needed in the Arctic to deliver the healthy, sustainable economy the people of the Arctic deserve.

...Safe and Reliable Infrastructure and...

Guggenheim is leading the development of an authoritative and exhaustive database of the most urgently needed infrastructure projects across the Arctic region.

The Arctic Infrastructure Inventory is a thoughtfully and thoroughly researched database of more than 900 infrastructure opportunities valued at over US\$750 billion that will create good job opportunities, grow Arctic economies, and strengthen its communities. That means better roads, rails, ports, clean energy facilities, and other critical infrastructure to unlock the full potential of the region.

In addition to these identified projects, Guggenheim estimates there is another US\$250 billion in Arctic infrastructure investments that will be required over the next 15 years, not including investments in projects in other areas that would have positive impacts on sustainable development in the Arctic.

We are committed to working in close partnership with national bureaus and ministries and with local and indigenous communities to further develop the Arctic Infrastructure Inventory and ultimately share what we have learned with the world.

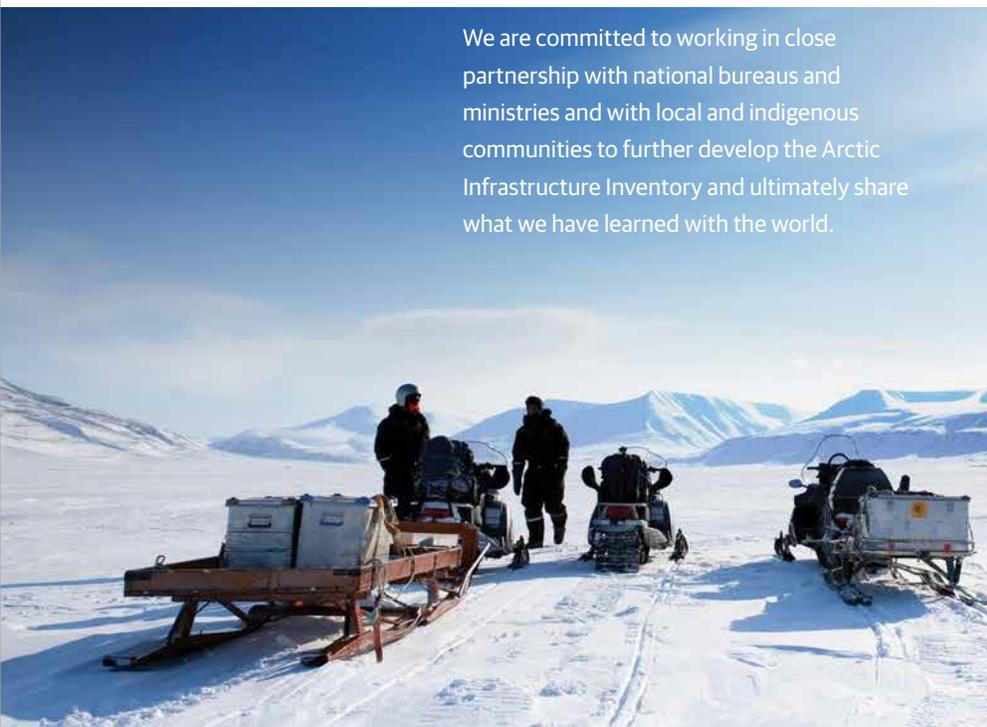
...Dedicated Investment for the Future.

Given the significant need for responsible investment in the Arctic, an opportunity exists for a dedicated sustainable investment vehicle to finance infrastructure projects with meaningful and positive impact in the region.

Investments would require a strict adherence to the Arctic Investment Protocol to ensure the responsible, accountable, inclusive development that the people of the region deserve.

Projects that have the highest priority would be those that are deemed financially sound, but also are researched and evaluated to be environmentally and socially sustainable, and have the greatest positive impact on the quality of life of the region's inhabitants, now and well into the future.

A dedicated sustainable investment vehicle will help ensure a responsible, bold, and bright future for the Arctic. With smart investment, genuine commitment to the habitat and its people, and strong international cooperation, we can deliver a sound environment, a healthier global economy, and a better world for all of us.



Global Agenda Council on the Arctic

Arctic Investment Protocol

The World Economic Forum Global Agenda Council on the Arctic has set forth six foundational and formative principles for responsible investment in the Arctic.

These principles—more defined and rigorous than any now in place—will guide investment in the region by establishing a set of clear standards for sustainable and responsible business practices, governance, and environmental stewardship:

1. **Build resilient societies through economic development**
2. **Respect and include local communities and indigenous peoples**
3. **Pursue measures to protect the environment of the Arctic**
4. **Practice responsible and transparent business methods**
5. **Consult and integrate science and traditional ecological knowledge**
6. **Strengthen pan-Arctic collaboration and sharing of best practices**

The Arctic Investment Protocol is an important step forward and a solid foundation to build upon for the future. It sets a higher standard and allows further advancement of sound practices for sustainable development.

About Guggenheim Partners

A leading global investment and advisory firm with more than US \$265 billion in assets under management¹⁰, Guggenheim Partners has a track record of delivering innovative financial solutions to the complex problems facing governments, institutions, and individuals. As a private sector partner, Guggenheim is committed to leading an ethical, responsible, and scalable approach to investment, sustainable development, and economic growth in the Arctic and throughout the world.

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Important Notices and Disclosures

Investing involves risk, including the possible loss of principal. Infrastructure investments may be subject to a variety of risks, not all of which can be foreseen or quantified, including operating, economic, environmental, commercial, currency, regulatory, political and financial risks. Investing in a specific sector such as infrastructure is more volatile than investing in a broadly diversified portfolio, as there is a greater risk due to the concentration of holdings in issuers of similar offerings. Sustainability requirements, including environmental, social, and governance (ESG) obligations may limit available investments, which could hinder performance when compared to strategies with no such requirements.

1 Guggenheim estimates using national source data; 2 Guggenheim estimates using national source data; 3 Guggenheim estimates using national source data; 4 International Energy Agency, Eurostat; 5 National Snow and Ice Data Center; 6 Korean Maritime Institute; 7 Reuters; 8 U.S. Geological Survey; 9 Guggenheim estimates; 10 Assets under management as of 9.30.2018 and include consulting services for clients whose assets are valued at approximately \$66 billion.

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