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Arctic Investments 2025

NunaGreen
Empowering Green Opportunities

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NunaGreen

Arctic Investments

London

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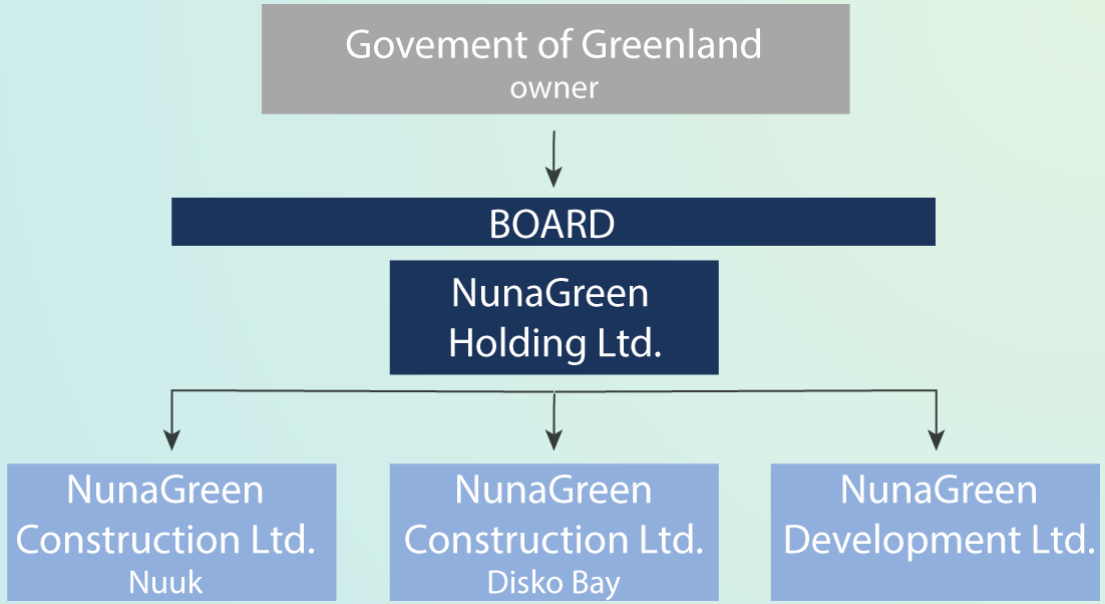
WHO IS NunaGreen A/S

NunaGreen is a limited liability company, wholly owned by the Government of Greenland, with a mandate to develop renewable energy projects both within and outside Greenland.

Mission Through its subsidiaries and partnerships, NunaGreen is mandated to finance, construct, own, and operate hydropower plants in Greenland. The company's mission is to safeguard Greenland's interests in renewable energy by developing sound business cases, ensuring active ownership, and building national competencies. In doing so, NunaGreen contributes to Greenland's economy and the broader benefit of society.





Greenlands renewabel potential

Hydropower. Greenland has an estimated hydropower potential of up to 20 TWh annually. With the impact of climate change, new lake formations in high-altitude terrain are increasing the potential for future hydropower projects.

Other renewable energy sources include solar energy, wind energy, wave energy, and tidal turbines.

Focus on Off-Take. Opportunities remains a key challenge where NunaGreen will play an important role. By leveraging Greenland's strategic focus on energy-intensive industries, future projects can provide energy to sectors such as mining, heavy industry, and Power-to-X (PtX) initiatives.



Political visions for renewable energy development in Greenland

Strengthened security of energy supply

Investments aimed at building a *resilient and stable energy system*, even in remote locations. Modernisation of infrastructure, redundancy and backup capacity across isolated grids.

Accelerating the green transition

Phasing out fossil fuels across electricity, heating and transport. Hydropower as the backbone, supported by wind, solar and battery solutions in smaller communities.

Electrification of industry / enabling green value chains

Use surplus renewable power to decarbonise industries such as processing plants, mobility and future PtX. Policy support to attract new energy-intensive industries.

Export of surplus renewable energy – diversification of the national economy

Exploit large-scale hydropower potentials. Goal: become a *net exporter of green energy* and reduce reliance on a single-sector economy.

Partnership and predictable framework conditions

A clear regulatory pathway for investors, including long-term concessions, price transparency and grid access. Government commitment to stable, commercially viable project frameworks.



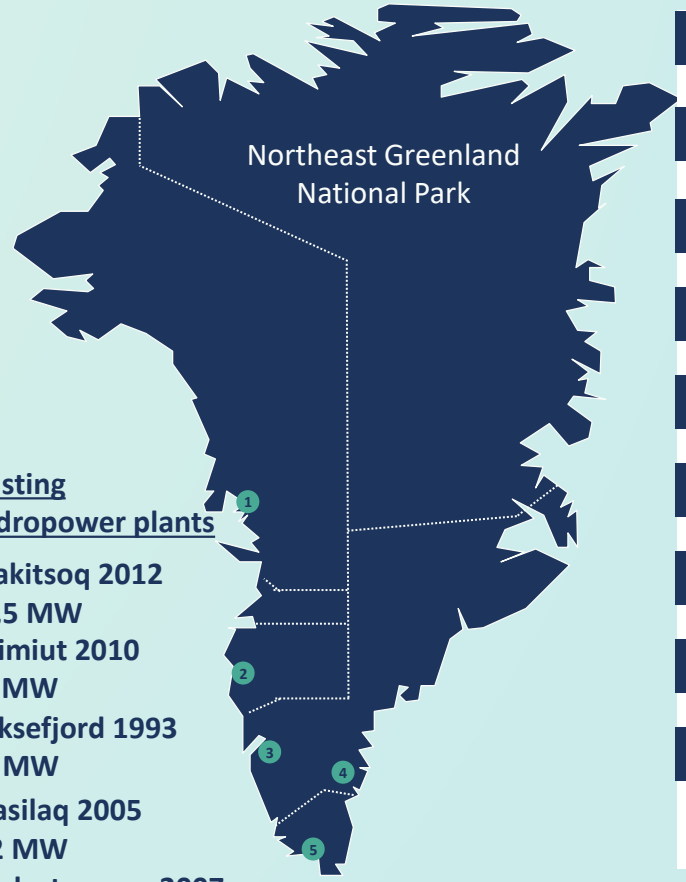
The energy market in Greenland

Almost 3 TWh annual domestic energy production and consumption

Brief introduction to the energy market in Greenland

- Greenland is divided into 5 municipalities (Avannaata, Kujalleq, Qeqertalik, Qeqqata, and Sermersooq) and the unincorporated Northeastern Greenland National Park, which the largest national park in the world
- The population of Greenland (approx. 57,000) is spread across a vast geographical area, with the majority situated in the southwestern part of the island. Due to the large distances, the country has historically relied on easily transportable fossil fuels, such as diesel, as its main source of energy
- There are four main cities (Nuuk, Sisimiut, Ilulissat and Qaqortoq), 17 towns, and 54 smaller villages. The larger cities are connected to hydroelectric power and operate on separated city grids, while remote towns and villages rely on individual power hubs, typically diesel-based, resulting high carbon emissions
- Greenland consumes about 2.8 TWh of energy annually, with the majority derived from imported diesel. Currently 0.5 TWh comes from renewable sources, with hydroelectric power being the main contributor, supplemented by 4 small-scale wind turbines and 16 solar panel systems. Additionally, hydroelectric power accounts for approximately 80% of Greenland's electricity generation
- Nukissiorfiit has long been committed to integrating renewable energy into its operations. In recent years, this focus has expanded. Previously, the primary goal was to harness hydroelectric power, but attention has since shifted to include a broader mix of energy sources, such as solar and wind, in plans for future energy production

Utility and Energy in Greenland



5	Hydropower plants
92	Power plants
16	Solar panel systems
4	Wind turbines
73	Water facilities
411	Net stations
4	Battery banks
210	Oil tanks
8	Oil pipes

The electricity market is fully regulated

Greenland's reforms ensure uniform pricing and transparency

Regulated and stable electricity prices in Greenland

"Monopoly" structure

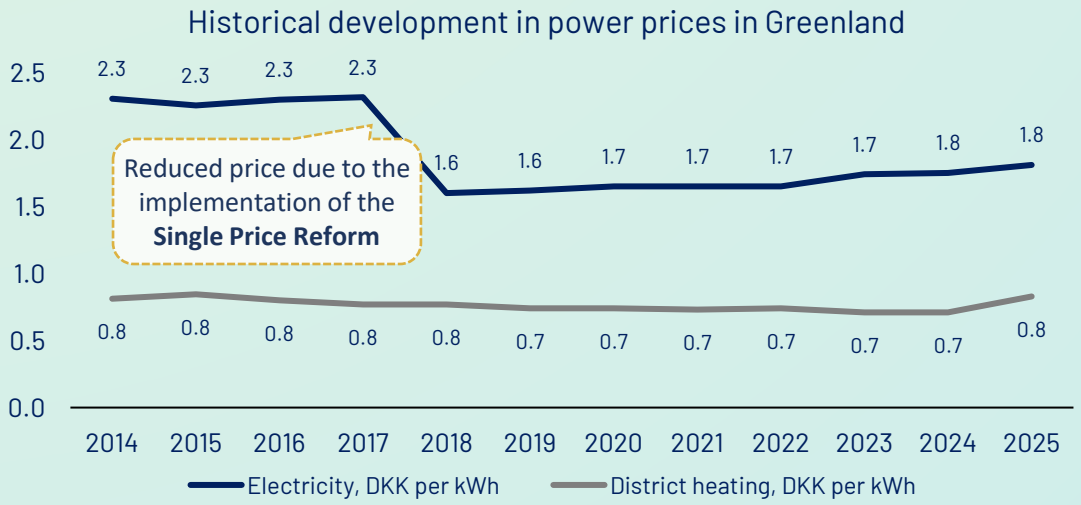
Greenland's electricity market is operated by Nukissiorfiit, the state-owned utility company, which holds a "monopoly" on electricity, water, and heating services

Uniform pricing

The current pricing system ensures uniform and stable prices for all consumers across Greenland and are based on a total cost of production/break-even principle

Regulated stability

Prices are set by the Government of Greenland, based on proposals from Nukissiorfiit, with the aim to have stable tariffs despite fluctuations in production cost



Pricing and subsidies impact on customers

- Certain sectors, like the land-based fishing industry, benefit from subsidized rates, paying up to 50% of national unit costs
- These subsidies ensure that energy prices remain affordable in areas with higher production costs, such as small settlements relying on diesel power
- The uniform pricing system ensures stable and predictable energy costs for all consumers, regardless of their location, helping both urban and remote settlements



Hydroelectric power plays an important role

Greenland will continue to develop and construct its hydroelectric power capacity

Hydroelectric power as a key pillar of Greenland’s sustainable energy future

Hydroelectric power is a key energy source in Greenland, with five hydroelectric power assets already in operation. The country has favorable conditions for hydroelectric power generation, with its mountains, lakes, high precipitation, and glacier melting

As a result of the growing energy demand in Greenland, the government has partnered with NunaGreen Construction Nuuk to further expand its hydroelectric power portfolio, with key projects including the Buksefjord expansion (HPP3) in Nuuk and a new hydroelectric power plant in the Disko Bay region

The Government of Greenland has also partnered with Nukissiorfiit to oversee the transition to reliable and sustainable solutions. Nukissiorfiit's "Balanced for 2030" strategy, launched in 2023, aims to accelerate Greenland’s green transition by enhancing energy reliability, efficiency, and supply. A dedicated green team was also established to strengthen communication and support for ongoing sustainability projects nationwide

Strategic importance of hydroelectric power initiatives

Environmental commitment:	Greenland’s commitment to reducing CO_2 emissions is reinforced by its decision to join the Paris Agreement in 2022
Dominance of hydroelectric power:	Hydroelectric power accounts for ~80% of Greenland’s electricity generation, positioning the country among the top 15 globally in terms of renewable energy share
Carbon emission reduction:	As of 2023, hydroelectric power in Greenland has reduced CO_2 emissions by nearly 200,000 tonnes



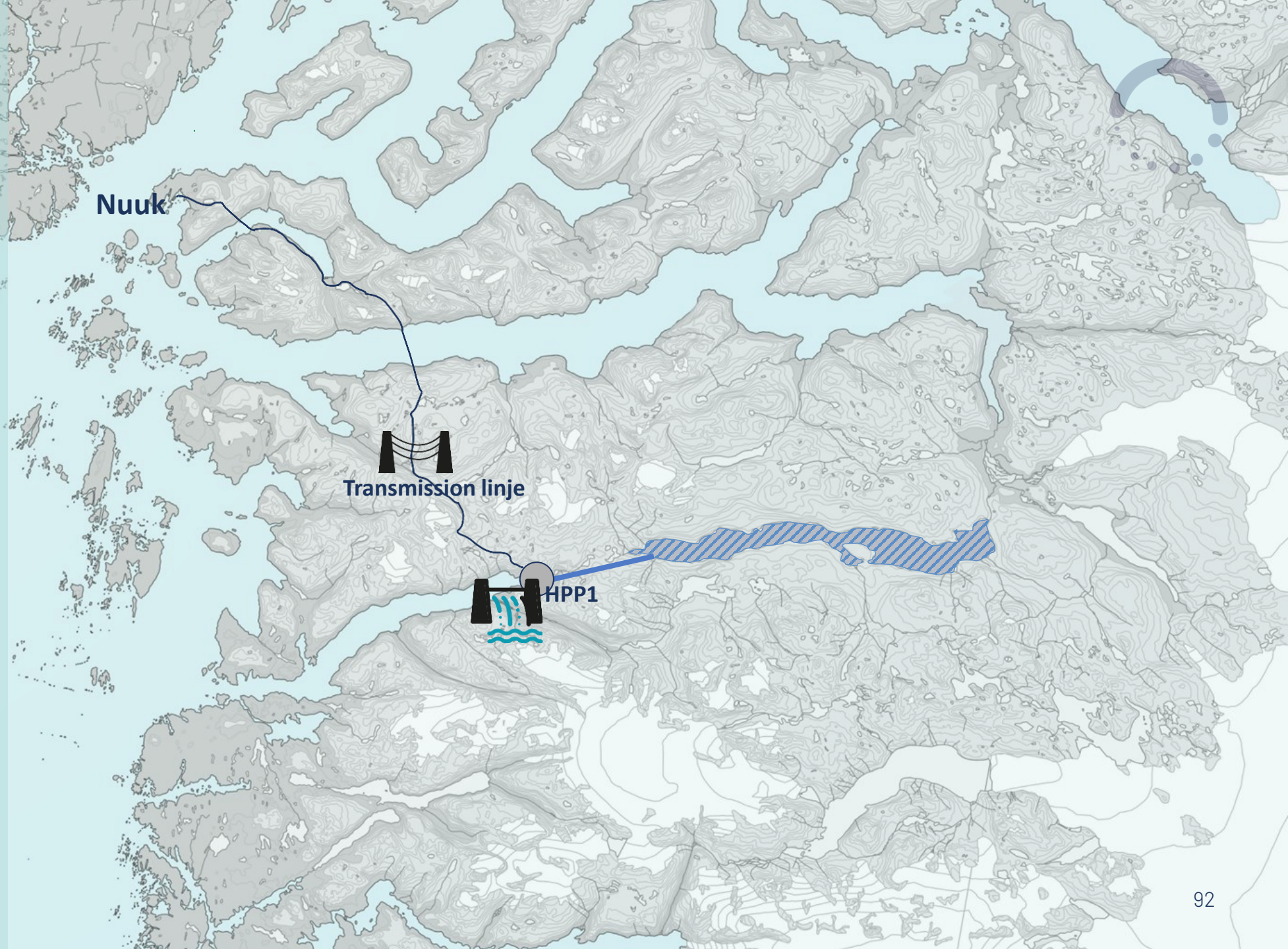

Utoqqarmiut Kangerluarsunnguat
Hydropower Project

NunaGreen Construction A/S

Nuuk

Excisting powerplant

- Constructed 1990 - 1993
- 11 km tunnel
- 57 km transmission linje
- Output 45 MW
- Annual production 273 GWh



NunaGreen Construction Ltd.

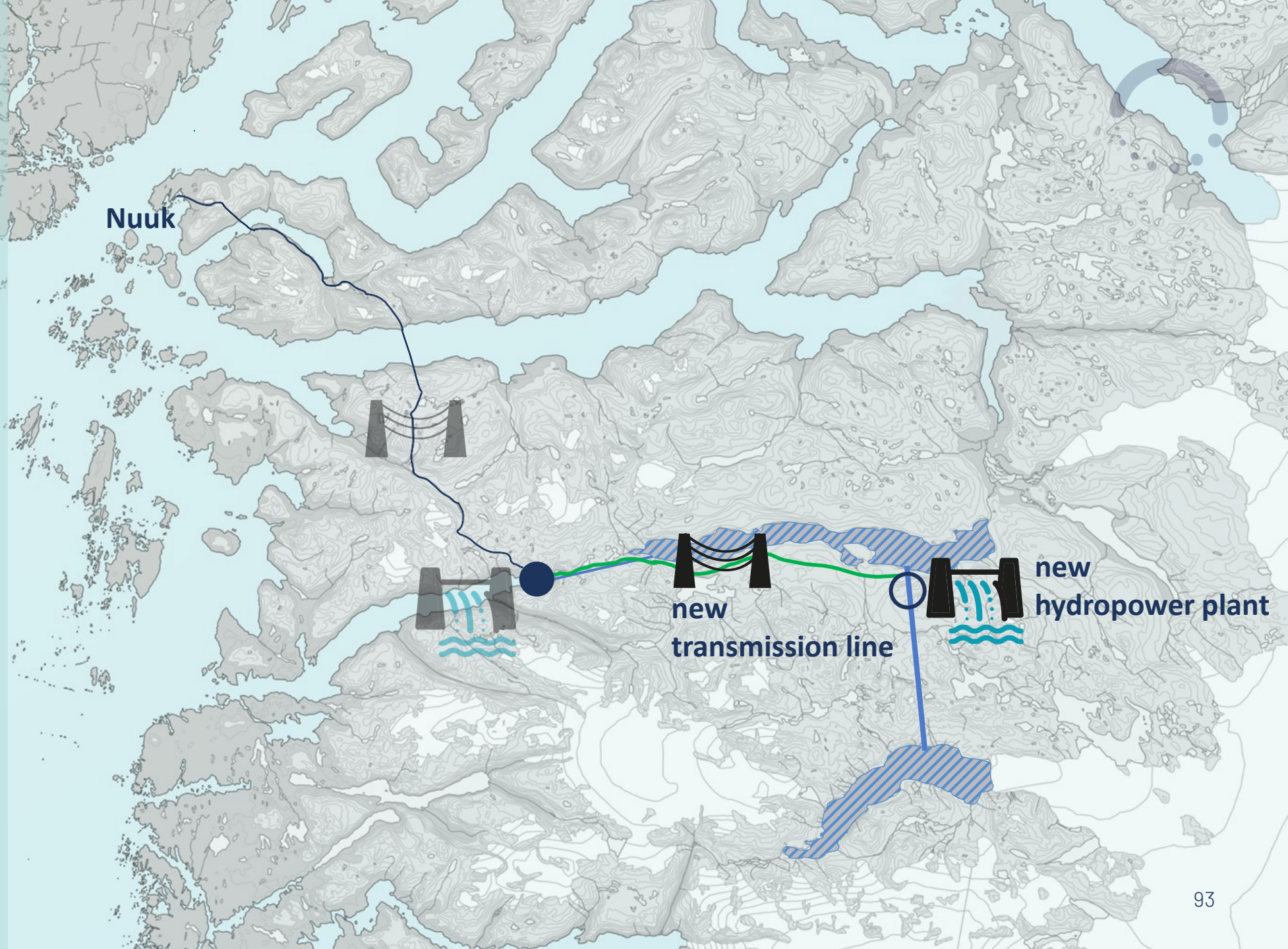
Nuuk

New hydropower plant

- Construction periode 2026 - 2032
- Tunnel 16 km
- Output 76,9 MW
- Annual production 500 GWh

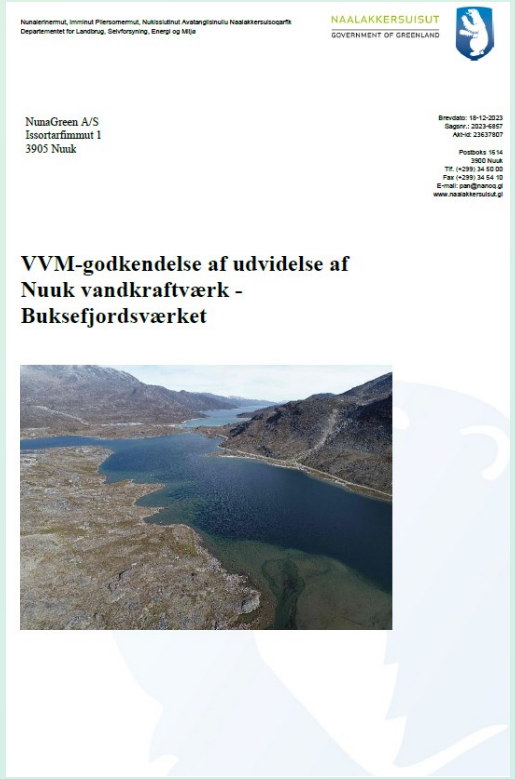
Combined

- Output 121,9 MW
- Annual production 773 GWh



EIA Report and Exploitation license are in place

EIA process completed and compliance confirmed for expansion



Exploitation license was granted in June 2025

January 2025	May 2025	June 2025
Application submission	Feedback process	License issuance

- **Hydropower Act and licensing system:** Activities related to the prospecting and exploitation of hydroelectric power resources in Greenland are governed by Parliament Act No. 5 of 27 November 2018 (the "Hydropower Act"). The Act establishes a mandatory licensing system, where the Government of Greenland may grant licenses for prospecting and/or exploitation of hydroelectric power resources for energy production
- **License of exploitation:** A License of Exploitation may be granted for up to 40 years, with possible extensions of two periods of 20 years, for a total maximum duration of 80 years, which corresponds to the HPP3's technical lifetime. Upon expiration, the Government of Greenland and the licensee may renegotiate the license period
- **Joint application approved:** Following a productive dialogue with the Ministry of Agriculture, Self-Sufficiency, Energy, and Environment and their legal advisors, a formal application for an exploitation license under the Hydropower Act was submitted on 30th of January 2025. The Ministry's granted the license in June 2025, with effect for the next 40 years

Large-Scale Hydropower Potentials
for industrial commercial use in Greenland

Located in south-west Greenland with large catchment areas from ice melt-off

Energy potential:
9.600 GWh/a – and maybe more?

Offering attractive opportunities for industrial development

Green energy for mining

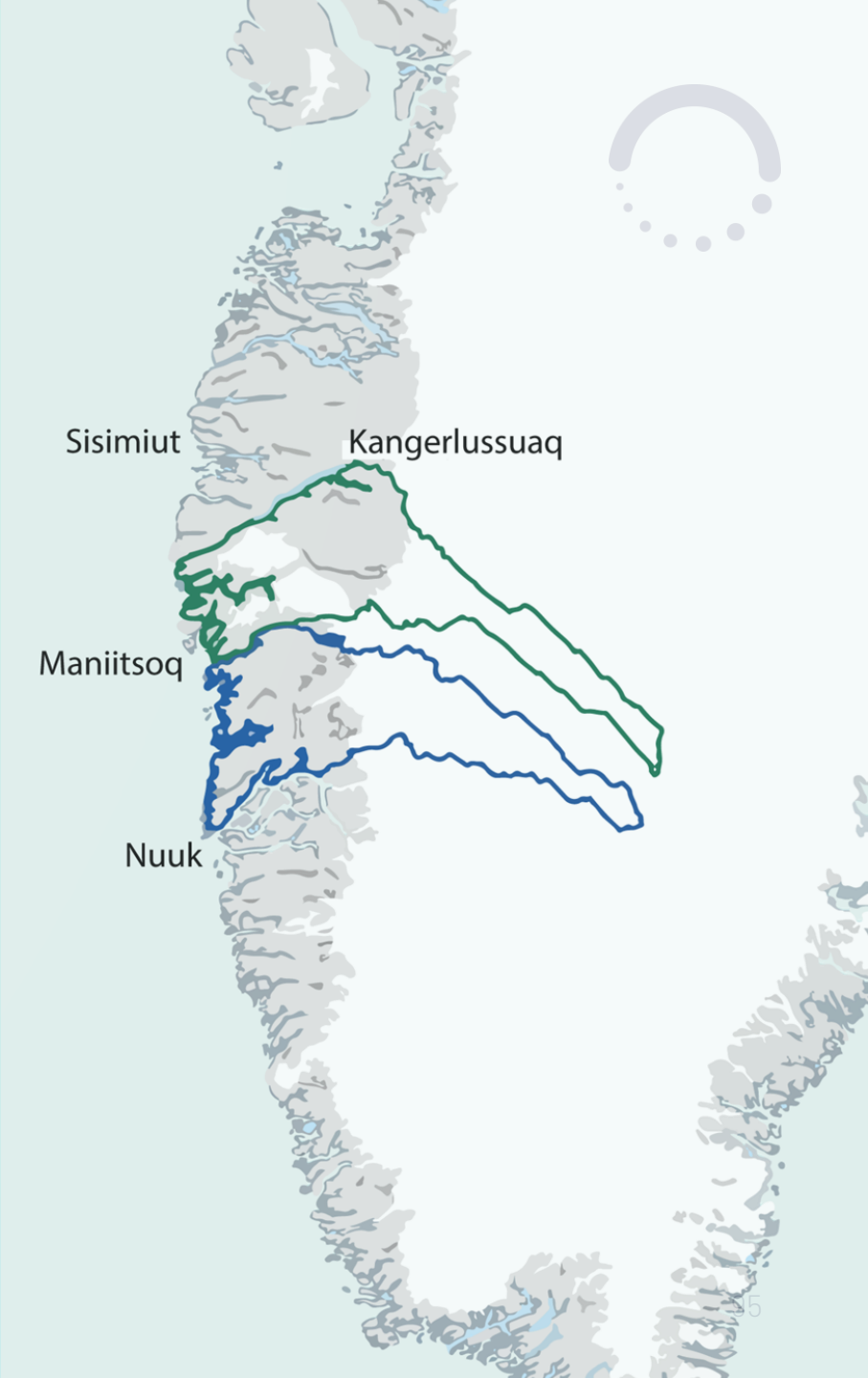
Green energy for industry

- Data centers
- Aluminum smelter
- Glacier flour
- Indoor farming, agriculture, and fish farming

Green energy for export

- P2X production
- High-voltage sea cable

Visit www.hydropower.gl for more information





Thank you for your attention