Date: 6th June. 2020

To: Prime Minister's Office
Orchard Road, Istana
Singapore 238823

Email: pmo_hq@pmo.gov.sg

Att: The Honourable Prime Minister
**Lee Hsien Loong**

RE: **CRISIS FIGHT SOLUTION WORLD AFTER COVID**

# Storm's Project Proposal
## investment of $ 241,5 billion proposal for NEW LAND OF SINGAPORE

Dear Sirs:

Today, in 2020, the world faces new challenges, both natural and civilizational in nature, and in these conditions it is necessary to mobilize the intellectual and financial resources of countries to preserve and develop their well-being.

We offer Storm's Project in the field of creating new land in shallow water off the shores and islands of Singapore, while building energy infrastructure based on wind power and fresh water systems using original Storm's Project technologies.

The first stage of the project provides for the creation of a land convenient for life and activity off the coast of Singapore and on the basis of its islands with a total area of about 100 square kilometers, with a population of up to 1 million people, the creation of an energy system based on VAWT-20MW vertical-axis wind turbines according to Storm's Project concept with a unit capacity of 20 MW, with a total capacity of 5 GW, with an annual electricity production of 15000 GWh, i.e. with a disposable average annual power supply capacity per 1 resident of 1.7 kW, as well as with an independent fresh water supply system with a total capacity of up to 200 million.

The term of the project implementation is 10 years, and the commissioning of areas and capacities of energy and water supply will be carried out in stages, sequentially, with the development of the objects created by areas of 10-20 square kilometers per year, which increases the efficiency of development of funds spent on the project. The idea is to construct a new land in Singapore by expanding the area of islands and forming a new coastline using Storm's technology.

**Storm's Project** has the ability to raise over **US$100 billion** in funding immediately, right at the start of the project, thus giving Singapore a solid financial foundation for wind power development in the next 10 years or more, I .e. the country will not have to seek its own or borrowed funds to implement this significant project.

**TOTAL Budget : US$ 241,500,000,000.00**

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**69 square kilometres Bukom-Sudong-Pawai  with 5 lakes 573 hect. 40 mil. m3 water**


Fig.1. New land Singapore  Bukom-Sudong - link on Google maps:
https://www.google.com/maps/@1.1849632,103.7455648,12z?hl=en&authuser=0

The technology makes it possible to effectively create an island of at least 69 sq.km by uniting islands in the south of Singapore into one land:

**Pulau Sudong - Pulau Pawai - Pulau Busing - Pulau Bukom - Pulau Hantu - Pulau Semakau - Pulau Sekeng - Pulau Sebarok** and 10-20 more small islands with no name and no management within the perimeter of this small archipelago.

The total area can be increased up to 80-100 sq.km Depths do not exceed 10m, average depth - about 6m. At the same time, the maritime environment is improving.

A large island of at least 1.5% of Singapore's total area, ports with at least 10 km of berthing line length for vessels of any size capable of navigating the Singapore Strait and marinas for yachts including ocean mega-yachts, the island's connection to the mainland is a new space for housing, utilities and industrial construction. with a design population of up to 500,000 people.  5-6 freshwater lakes are being created on the island, with a total area of up to 600 hectares and a depth of up to 7 meters, which will allow the storage of up to 40 million cubic meters of fresh water for the island. This is an annual supply of water for a population of 500,000 with a daily consumption of 200-250 litres per person. The water is produced by

Storm air moisture plants and methods, providing the water cycle between the oceans, the air and the island.

At the price of this new land $10 million/hectare = $1 billion/sq.km the cost of such an island will be $80 billion, it is possible to create an island with the formation of infrastructure in 5-6 years, and to develop it - in 10-15 years.
The island is shown as an example of Storm's Project technology capabilities. We have plans to develop about 100 sq.km more here.

**Budget**: **US$ 80,000,000,000.00**

**6 square kilometers Tekskog - Seingat - Sekijang Pelepas - Sakijang Bendera**


Fig. 2. New land for Singapore Sentosa == Tekukor - Seingat - Sekijang Pelepas - Sakijang Bendera 6sq.km
- link on Google maps:
https://www.google.com/maps/@1.2269517,103.8458703,14.25z?hl=en&authuser=0

Sentosa Island is the one and only place in all of Singapore where you can buy land. As a pilot project to develop the shallow water around the islands of Singapore, it can be proposed to combine into a single land small islands in the shallow water south of Sentosa Island:
- Pulau Tekukor - Pulau Seingat - Pulau Sekijang Pelepas - Pulau Sakijang Bendera
The shallow depths around the islands allow you to create this island in a few years, connect it to Sentosa Island by bridge and get a much larger area of land for sale. And the price of land can be the highest due to high quality and cheap, if desired, autonomous power supply from wind power plants and autonomous fresh water, which will also work independently.

**Budget:** **US$ 10,000,000,000.00**

## Expanding the island Brani 1.2 sq.km


Fig.3. Expanding the island Brani 1.2 sq.km

Between the mainland of Singapore and **Sentosa Island** is Brani Island, to the east of which there is water with shallow depths, up to 7-10m, on which it is possible to build approximately 1.2 sq.km (120 hectares) of the island, stretched from west to east, convenient for the construction of a port, yacht port and other activities.

**Budget: US$ 1,500,000,000.00**

Storm's Project's technologies create unique opportunities to expand Singapore's shallow water area to a depth of 10 meters by 200-250 or more square kilometers.

**Storm's Project has the concept of a VAWT-20MW vertical-axis wind farm with a unit capacity of 20 megawatts with a cost of a unit not exceeding $20 million. The total capacity of the wind park is about 20GW. It will be enough both for the islands and for the whole of Singapore**.

VAWT turbines have lower maintenance costs, do not require huge foundations, have less noise, maintenance does not require lifting personnel to a high mast, because the generator and control system is at ground level, turbines can be installed not only at sea but also on land, including near buildings, do not interfere with radio and television, better resist hurricanes and have other advantages.

We offer for Singapore the concept of the project "**20 GW of wind power plants in 10 years**".

A thousand wind turbines of **20 MW each** will make it possible to add wind as the main source of energy to the country's economy. The project will increase the share of renewable sources and significantly reduce dependence on fossil fuels - coal, oil and gas, which can be exported. The annual generation of electricity at the project's plants in Singapore could reach **60,000 GWh per year** (30% of the WPS capacity utilization efficiency).

## Budget: US$ 20,000,000,000.00

Such volume of electricity production at thermal power plants requires the consumption of 10-15 million tons of hydrocarbon fuel - natural gas, fuel oil, or coal, which at a fuel price of roughly $200 per ton **will save** amount to **$ 2-2.5 billion annually**.

**Table of power inputs by year**

| Year | Power input, MW | Input of, turbines, units | Power total, MW | Total . turbines, units | Total . accumulating power, MW | Budget in US-Dollars: |
|---|---|---|---|---|---|---|
| 2021 | 0 | 0 (3-5) | 0 (30-50) | 0 (3-5) | 0 | R&D |
| 2022 | 500 | 25 | 500 | 25 | 0 | |
| 2023 | 1000 | 50 | 1500 | 75 | 0 | R&D battery & hydro ES |
| 2024 | 2500 | 125 | 4000 | 200 | 500 | |
| 2025 | 3000 | 150 | 7000 | 350 | 2000 | |
| 2026 | 4000 | 200 | 11000 | 550 | 3000 | |
| 2027 | 4000 | 200 | 15000 | 750 | 4000 | |
| 2028 | 5000 | 250 | **20000** | **1000** | 5000 | |
| 2029 | 0 | 0 | 20000 | 1000 | 6000 | |
| 2030 | 0 | 0 | 20000 | 1000 | 7000 | **Total: 20GWt** |

Plans for 2027-2028 can be adjusted with the transition to more powerful 25-40 MW turbines. This will depend on success in the previous phases.

Simultaneously, it is planned to build battery and hydro storage power plants for 2023-2030 to reserve power supply during periods of low winds. Battery electric power stations - for supplying at peak power consumption, **hydro-accumulation power stations** - for supplying at peak power consumption periods in small winds. Developments in this direction are conducted in parallel, the project can be considered as a complex.

**Budget: US$ 45,000,000,000.00**

**Storm's Project** is able to attract external sources of funding, and all we need is mutual understanding and support of the government, in the organization of reliable project financing, discussion of issues related to the allocation of territories, integration with existing energy

distribution networks, interface with consumers and other issues that need to be addressed jointly with the government.

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Storm's Project's original technologies also make it possible to create systems for the production of fresh water, in quantities sufficient for new lands and for the whole of Singapore.

**Budget ` US$ 20,000,000,000.00**

There are also many other policies on construction, environment, water supply, irrigation that can be fruitfully discussed, Storm's Project and its authors are ready to give detailed proposals on your competent request.

**Budget ` US$ 65,000,000,000.00**

**TOTAL Budget US$ 241,500,000,000.00**

**Potential investor are welcome, but for this project the main budget is still secured.**

**STORM's PROJECTS S/B**


in sing. Kamisah Binti Ahmad
for Managing Director / Ingo Storm