

Date: 26th MAY. 2020

To: Ministry of Finance Malaysia
No. 5 Persiaran Perdana, Presint 2,
62592 WP Putrajaya

Att: Minister of Finance,
Tengku Dato' Sri Zafrul Tengku Abdul Aziz

Email: prihatin@treasury.gov.my



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

Storm's Project Proposal for Wind Energy for Malaysia

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 wind energy of high power capacity.

Storm's Project has the ability to raise over **US\$40 billion** in funding immediately, right at the start of the project, thus giving Malaysia 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.

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.

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 Malaysia 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

STORM
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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 Malaysia could reach **60,000 GWh per year** (30% of the WPS capacity utilization efficiency).

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 amount to **\$ 2-2.5 billion annually**.

Not only fuel costs are reduced, but also transport costs, wages, environmental damage is reduced. As a result, the economic effect from the introduction of wind power plants can be estimated at US\$ 10 billion annually, and taking into account the lifetime of wind power plants, at least 50 years - at least 500 billion dollars.

Implementation of the 20 GW wind turbine capacity project will take approximately 10 years, with commissioning by year (2021 and part of 2022 will be the design of wind farms on the ground):

Table of power inputs by year

| Year | Power input, MW | Input of, turbines, units | Power total, MW | Total . turbines, units | Total . accumulating power, MW | Costs/investment |
|------|-----------------|---------------------------|-----------------|-------------------------|--------------------------------|-----------------------|
| 2021 | 0 | 0 (3-5) | 0 (30-50) | 0 (3-5) | 0 (R&D) | US\$ 5 Billion |
| 2022 | 500 | 25 | 500 | 25 | 0 | US\$ 5 Billion |
| 2023 | 1000 | 50 | 1500 | 75 | R&D battery & hydro ES | US\$ 5 Billion |
| 2024 | 2500 | 125 | 4000 | 200 | 500 | US\$ 5 Billion |
| 2025 | 3000 | 150 | 7000 | 350 | 2000 | US\$ 5 Billion |
| 2026 | 4000 | 200 | 11000 | 550 | 3000 | US\$ 5 Billion |
| 2027 | 4000 | 200 | 15000 | 750 | 4000 | US\$ 5 Billion |
| 2028 | 5000 | 250 | 20000 | 1000 | 5000 | US\$ 5 Billion |
| 2029 | 0 | 0 | 20000 | 1000 | 6000 | US\$ 5 Billion |
| 2030 | 0 | 0 | 20000 | 1000 | 7000 | US\$45 Billion |

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.

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.

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.

As Result and **Economic Effect** from STORM's Wind Turbine Energetic setup is US\$45Bill still in the first years of the project, - and the **US\$100Billion in next 10 years**.

STORM's PROJECTS S/B



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