Alternative energy and autonomy systems

ALBADRAAN INVESTMENT LLC

Description

The complex of projects of the investment company ALBADRAAN Investment is based on a unique construction technology based on innovative frame structures of a new type **«MONOSOTA»**

✓ **The features of the technology make it possible to make revolutionary changes in the energy and construction sector – to speed up the construction time several times and reduce its cost.**

Ecological industrialization of SAUDI ARABIA

Systems of alternative and autonomy energy "MONOSOTA”

- As part of the implementation of the main infrastructure projects of MONOSOTA, an innovative system of energy supply and energy autonomy for all constructed facilities has been developed.
- This energy system is based on the extensive use of alternative energy sources (solar, wind, geyser, tidal, hydrogen), as well as on a number of unique technologies in the field of energy that have no analogues in the world.
- This system allows you to create an urban eco-environment without harmful emissions into the atmosphere with a fundamentally new level of energy efficiency.

Multifunctional universal energy wind complex «MUV»

The purpose of the project:

- the growth of the economy of the whole country
- ecological industrialization
- production, turnkey installation, commissioning and maintenance of universal energy MULTI-complexes

MUV generating wind stations are designed for round-the-clock and year-round operation in the harsh conditions of the desert, the far north and the highlands, have high efficiency due to the unique structure of the wing blade, the presence of an automatic transmission and an intelligent system.

ADVANTAGES

WIND GENERATOR «MUV»

- **UNIVERSAL** - has the functions of regeneration (local restoration of damage without stopping performance) and reconstruction with an increase (decrease) in power.

- **MOBILE** - can be used on movable platforms, on land, water, in the air

- **MULTIFUNCTIONAL** - different types of energy conversion and types of equipment based on a single mono-structural unit are used.

- **ECONOMICAL** – high engine life, maintainable, reliable.

- **ECO-FRIENDLY** - the use of environmentally friendly types of energy conversion

- **SILENT** - 5-12 decibel instead of the usual 30-50 Db (banned in Germany): Noise characteristics are very low due to the special shape of the blades and aggregates of the system... the wing of the installation has a unique structure, which allows achieving unique qualities in terms of efficiency, noise and environmental friendliness in general. The unique design of the wing prevents air flows from slipping off, concentrating them at the right points, converting them into vortex flows and redirecting them to increase power, increasing efficiency;
- **Energy efficient - high efficiency (20-40% higher than conventional generators)**

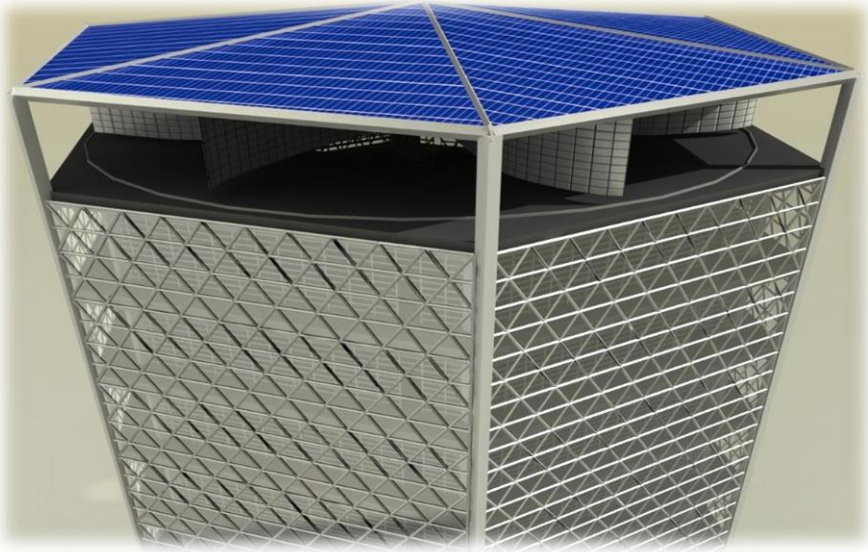
Multifunctional universal wind complex «MUV»

MUV of average capacity generates more than 100 MW of energy per month, having a permanent reserve reserve.
The MUV autonomous wind farm is capable of generating several times more than the required amount of electricity.

Brief description of the device

The device is a column filled with water. A chain of buckets circulates non-stop in it. The chain is driven by an air supply from below. Air bubbles enter the cavities of the buckets and cause them to rise. At the top point, the bucket turns over, the air escapes into the atmosphere, and the bucket falls down under the pressure of the gathering water.

The energy produced by the movement of the buckets turns out to be more than the amount of energy that is spent on air supply and maintaining the system in motion. Part of the created kinetic energy is supplied to the air supply device, and part can be used to power other devices, charge the battery, and so on.

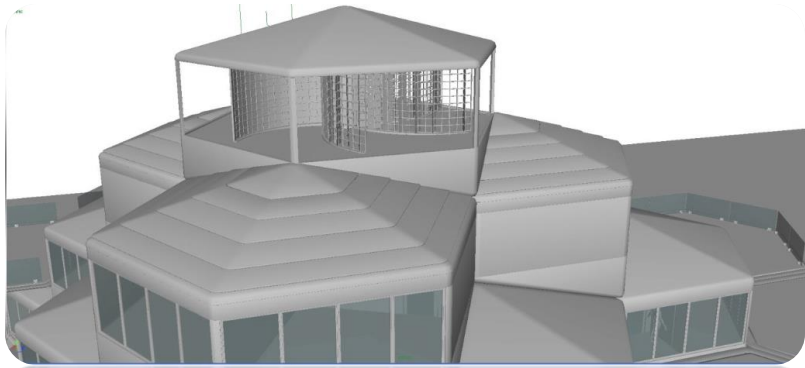


The payback period is from 1 to 2 years (depending on the PR company and sales policy), because the cost of the MUV generator is equal to the payback period of the building (Shopping mall)

OUR UNIQUENESS

Advantages of «MUV» wind turbines

- high efficiency (20-40% higher than known generators)
- unique wing, unique generator nodes
- intelligent system
- low cost (15-20% cheaper than market averages)
- high payback 0.6 -3 years.
- reliability and operability,
- maintainability, earthquake resistance
- easy to use,
- durability,
- wide range of performance characteristics (including wind - from 0.2 to 38 m/s)

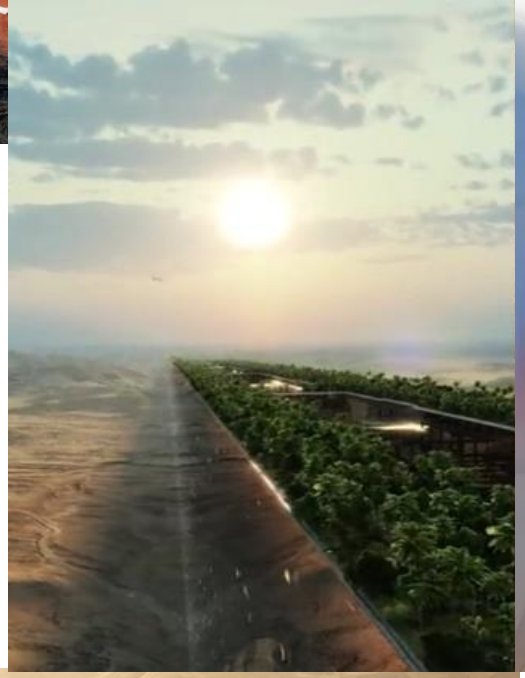


Purpose of wind generating stations and installations

- generation of various types of energy;
- cooling;
- smoothing of peak loads and equalization of voltage surges;
- backup/main power supply;
- power supply of power supplies for various objects.

Destiny

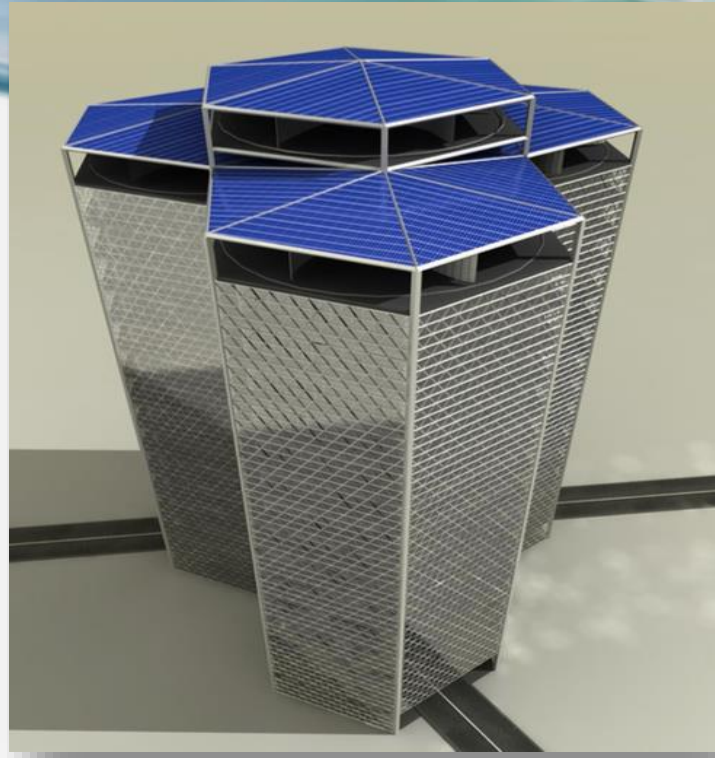
The opportunity to apply this technology and become part of the city of the future of **Neom Saudi Arabia.**



We can **apply this technology directly in the Mirror Line** skyscraper, thereby making it a completely non-volatile and quickly payback unique project.

Destiny

➢ Generation of electric types of energy// for the USE of EQUIPMENT: electric consumers/direct or alternating current; for INDUSTRIAL and PRIVATE CONSUMERS: electric consumers/electrical appliances/smoothing peak loads and equalizing voltage surges; backup and main power supply/powering power supplies for various facilities.



In addition to electricity, MUV can generate other types of energy

I. An installation for generating pneumatic energy/compressor, pneumatic tool, compressed air for internal needs, pneumatic elevator, pneumatic mail, etc. (according to the customer's technical specification).

II. Generation of magnetic type of energy; for THE USE of EQUIPMENT: motors/electric power generators//for INDUSTRIES and PRIVATE CONSUMERS: electric consumers//smoothing of peak loads and equalization of voltage surges; backup and main power supply/power supply of power supplies for various facilities.

III. Hydrogen station/Brown gas ; for engines/electric power generators.

What are We unique in\ developments that have no analogues in the WORLD

Environmental friendliness

➢ Due to its special structure, large wingspan (from 3 to 12 m) and the absence of vibrations on them, **low-frequency and high-frequency vibrations are not produced, which have a detrimental effect on human health and living organisms**, it is eco-friendly, energy-efficient and silent;

➢ The wind generator system can be equipped with **intelligent energy conversion, efficiency and protection systems.**

➢ May contain electric, hydrogen, magnetic, steam, pneumatic and similar motors and converters;

➢ Due to the uniformity, noiselessness and environmental friendliness, installations **can be built into buildings or placed on roofs;**

➢ The power of wind farms is almost unlimited **(from 50 kW to 1 GW)**.

The generator system is collapsible, can be multi-tiered and consist of several monostructural blocks **independent of each other**

➢ It is **self-cleaning and is able to work even in dust storms** and hurricanes. Thanks to the unique cleaning ability of the wings, sand clogging and gusty winds will not interfere with the efficient operation of the Device.

Explanations:

Lightweight, hexagonal, collapsible frame made of galvanized steel (carbon fiber, basalt. fibers, or others. materials) equipped with:

➢ shock absorbers

➢ cells for additional placement. equipment;

➢ air intakes;

➢sound insulation panels.

Options of MUV Wind generators

➢ Intelligent wind generator system
➢ Stabilization system (for floating and land stations);
➢ Fairings of the "gust" system - for operation in unstable (hurricane and gusty) winds;
➢ Fairings of the "vortex" system - for operation in conditions of ascending and vortex flows (including for mountainous terrain);
➢ Noise absorption system (for high-power stations; and special areas);
➢ Cable-stayed systems to increase stability.

We can produce 3-5 megawatts of electricity for every 50 meters. A column/ventilation is built every 50 meters, which generates energy. Significantly more efficient than the well-known wind turbines by 8 times. It works from the wind, starting from 0.5 m/sec, that is, almost regardless of its presence.

Related projects

Complex for desalination and water purification

When water is desalinated, we generate energy. 1000$ 1 kW, we can go down to 700 $.

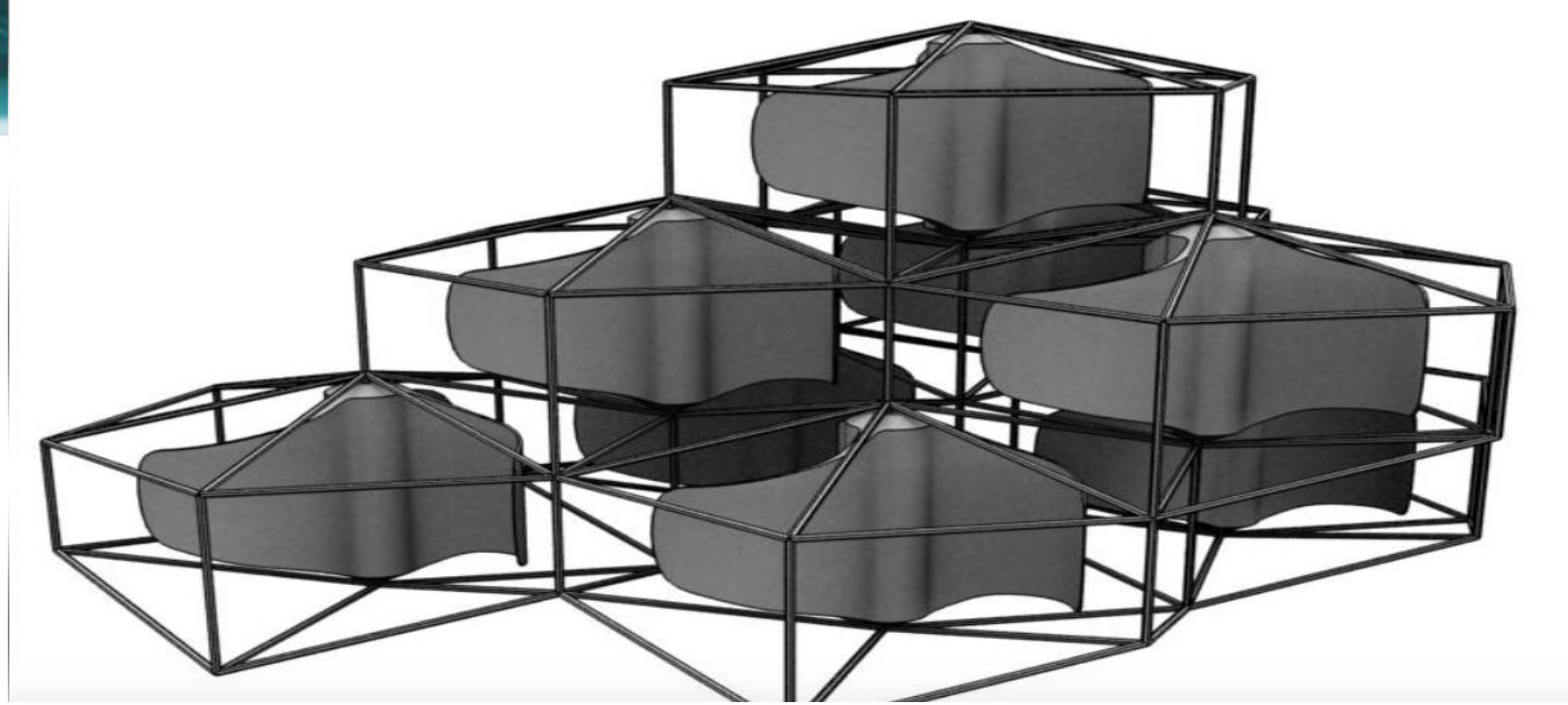
- ✓ Oases and gardens are being built along the trails, thereby there is constant irrigation of the desert.Water purification of any degree of pollution at a new qualitative level and with low costs, including:

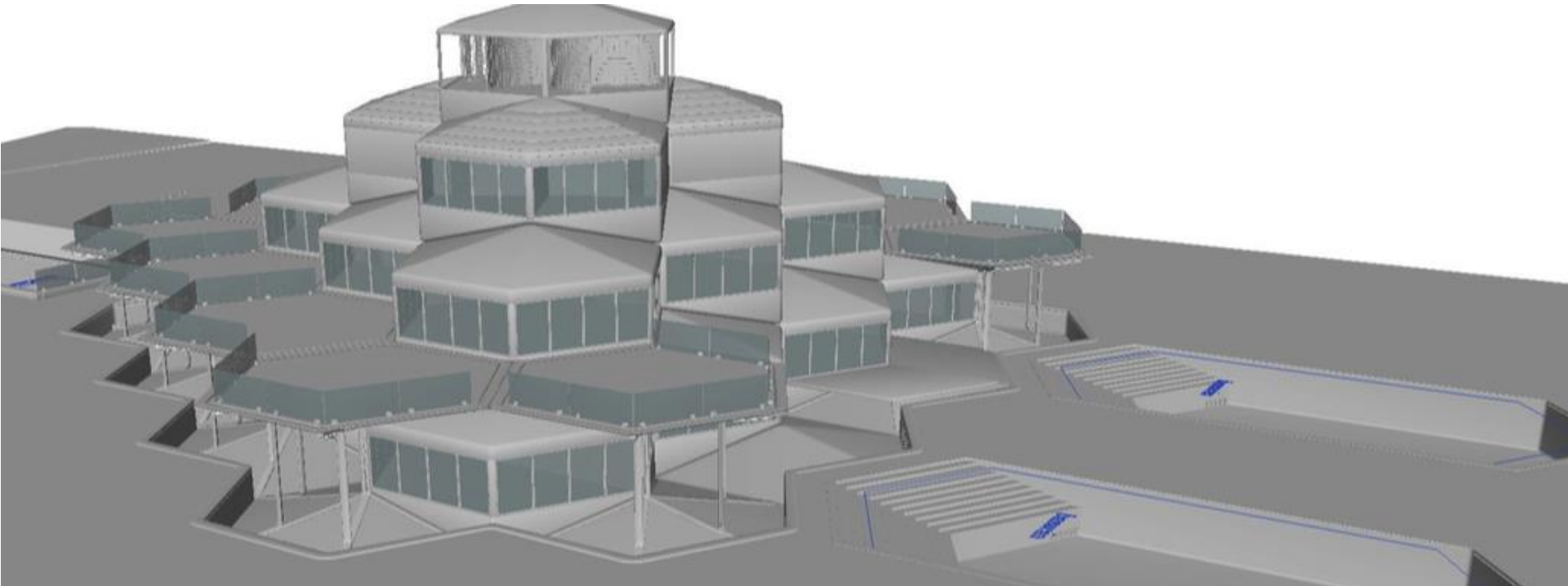
- petroleum products heavy metals
- liquid industrial waste
- salty water media of varying degrees of pollution
- Based on the technology of the hydrowave method, it significantly surpasses conventional installations in all characteristics

It has no analogues

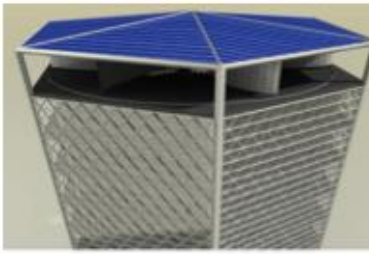
For the first time in world practice, purification and desalination of water from particles and soluble substances is carried out only due to hydrodynamic effects when exposed to water sources of mechanical vibrations.

Modern methods of water purification and desalination do not do without filtration or thermal distillation (for example, evaporation followed by steam condensation). All known methods are associated with large capital costs for construction and energy costs, consumables and related environmental problems. the complex provides water quality improvement based on scientifically based energy and physical methods.





Comparative characteristics of analogues



Name	solar panels	horizon-axial wind generator	carousel type wind generator	monosota MUV wind generator
Average efficiency coefficient	12	16	23	40
Cost of kW (conventional unit)	45	17	15	12
Occupied area\ exclusion zone	46	39	42	10
Time range\active work hour\day	11	9	21	23
Perfomance range	0	4-16 m/s	0,5-18 m/s	0,1-38 m/s
* from wind	0	12	18	38
* from the sun	++++	-	-	+
Efficiency factor	10-17%	15-20%	20% +	30% +
Reliability In operation	15	18	24	30
Protection from sand/ precipitation	-	-	+	+
Durability, wear resistance	10-30 years	20-40 y	30-50 y	50-80 y
Versatility	-	-	-	+
Maintainability	-	-	-	+
Availability of embedded options	-	-	-	-
Environmental friendliness	12	3	8	20
* harmful waste and	+-++++	+-+++	+-+-+	-++—
* dangerous radiation\noise LF, HF, UHF	——-	+++-+	-+—-	——

Conclusions

From the presented comparative characteristics for typical power generators in the alternative energy segment, it is clearly seen that the MUV energy complex is several times ahead of other technologies in terms of cost, environmental friendliness and reliability.

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DO YOU HAVE ANY QUESTIONS?

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