

ENERGY

Total 4 projects
3 – business of the region
1 – territorial communities

Construction of 5 MW solar power station («MEGAVATY», Mezhyrichska TC, Pavlohrad district)	1
Construction of 10 MW solar power station (Vakulivska TC, Kryvyi Rih district)	3
Construction of solar power plants with capacity of 110 MW (LLC «METINVEST HOLDING»), the city of Kryvyi Rih, Kamianske, Zaporizhzhia)	5
Construction of solar power plants with a capacity of 25.4 MW and energy storage systems (PJSC «KRYVYI RIH CEMENT», the city of Kryvyi Rih)	7



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CONSTRUCTION OF 5 MW SOLAR POWER STATION



Initiator

MEGAVATY, Ltd.



The project involves the construction of solar power station with the use of solar panels on the land plot with an area of 10 hectares.

Planned capacity: 5 MW.

Solar-radiation level: 1.375 kW/m².

Key features:

- electricity sale on «green» tariff;
- «green» tariff is pegged to the Euro exchange rate;
- increase of the total share of renewable energy in total.

According to the project :

- land plot in private ownership;
- the solar power plant construction draft was prepared;
- a feasibility study has been developed;
- an agreement with «Ukrzaliznytsia» PJSC (Pridniprovska Railways) on connection to the electric network has been concluded;
- declaration for the construction beginning was received.



Project goals:

- electricity generation from renewable sources;
- generation of environmentally safe electricity for the further sale within a «green» tariff;
- reducing greenhouse gas emissions from electricity generation.
- creation of 8 new jobs



Project economic indicators

Required investment capital: \$ 5,6 mln



Net Present Value (NPV)	\$ 4 mln	Payback period- PP	5 years
Profitability index (PI)	1,69	EBITDA	\$21,2 mln
Internal Rate of return (IRR)	8 %	Common benefit per year:	\$1,5 mln



CONSTRUCTION OF 5 MW SOLAR POWER STATION



Project technical parameters

Land plot characteristics:

- **area:** 10 ha (5 land plots of 2 ha);
- **intended purpose of the use:** power industry;
- **cadastral number:** 1223583800:01:001:0442;
- **leaseholder:** MEGAVATY, Ltd..

Engineering infrastructure:

- distance to the electric power substation «Mineralna» with capacity 150/35/10 is 1,5 km;
- electric power substation owner – «Ukrzaliznytsia» PJSC (Pridniprovska Railways).

Transport infrastructure:

distance to:

- European highway E50 – 1.5 km;
- paved road of Karabynivka village – 5 m;
- Mineralna railway station – 1.2 km;
- Dnipro city – 50 km
- Pavlograd city – 50 km.



Mechanisms for cooperation:

- proprietary funds – 30%;
- potential investor – 70% .



Additional information

"Green" tariffs for electricity produced from alternative sources for the period of martial law in Ukraine:

- payments under the "green" tariff during martial law are made, but the very model of payment for the sale of electricity generated by solar power plants has changed. The price for 1 kW of electricity sold is on average UAH 1.68;
- it is possible to build solar power plants during martial law, but only those who received the technical conditions before February 24, 2022 will be able to receive a contract for the sale of electricity under the terms of the "green" tariff, and new SPPs will be able to receive technical conditions only after the end of martial law in the country.

**The amount of payments will be determined by the formula: the tariff for the population (1.68 hryvnias/kWh) multiplied by the percentage of payment received from consumers in the region in the month of generation.*



Project location: Mezhyricka TC, Dnipropetrovsk region



Dnipropetrovsk Regional Investment Agency (DIA)

Address: 2, O. Paul Ave, office 538, the city of Dnipro, Ukraine, 49004 **Web:** www.dia.dp.gov.ua

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Construction of a solar power station on the territory of Vakulivska TC, with an area of 21 hectares



The community offers a prepared plot of land with an area of 21 hectares for the implementation of an investment project - the construction of a solar power station use of solar panels.

Solar-radiation level: 1.375 kW/m².

Key features:

- electricity sale on «green» tariff;
- «green» tariff is pegged to the Euro exchange rate;
- increase of the total share of renewable energy in total.

According to the project :

- a land management project was prepared and a cadastral number was assigned;
- the purpose of the land plot on the land of the energy industry was changed;
- a detailed plan of the territory was approved;

Also, Vakulivska TC will assist in: obtaining the necessary permits, drawing up documents, attracting specialists and will provide comprehensive informational support to the investor.



Initiator

Vakulivska TC



Duration

6 months



Project goals:

- electricity generation from renewable sources;
- generation of environmentally safe electricity for the further sale within a «green» tariff;
- reducing greenhouse gas emissions from electricity generation.
- creation of 8 new jobs.



Project economic indicators

Estimated cost of the construction project with a planned capacity of 10 MW ≈ \$ 12,7 mln*

Net Present Value (NPV)	\$ 8,2 mln	Payback period- PP	6 years
Profitability index (PI)	1,69	EBITDA	\$21,2 mln
Internal Rate of return (IRR)	8 %	Common benefit per year:	\$2,9 mln

**Economic indicators of the project may change depending on the capacity of the SPP that will be installed in the specified territory and the current "green" tariff after commissioning*



Construction of a solar power station on the territory of Vakulivska TC, with an area of 21 hectares



Project technical parameters

Land plot characteristics:

- **area:** 21 ra;
- **intended purpose of the use:** power industry;
- **cadastral number:** 1225283300:02:001:0070;
- **leaseholder:** Vakulivska TC;
- **distance from the residential area:** 50 m;

Engineering infrastructure:

- in the zone of 50-100 m - there is electricity, water and gas supply;
- 100 m - the nearest power transmission line for connection, with a capacity of 10-35 kW.
- 100 m - transformer substation.

Transport infrastructure:

- there is an access dirt and slag road;
- 1 km – territorial highway T0419 (Pyatikhatky–Zelenodolsk);
- 10.9 km – railway station "Pavlopilla";
- 65 km – international airport "Kryvyi Rih";
- the nearest cities: Apostolovo (31 km); Kryvyi Rih (35 km); Nikopol (60 km).



Mechanisms for cooperation:

- land lease and business registration on the territory of the community;
- desired participation in community social projects.



Additional information

"Green" tariffs for electricity produced from alternative sources for the period of martial law in Ukraine:

- payments under the "green" tariff during martial law are made, but the very model of payment for the sale of electricity generated by solar power plants has changed. The price for 1 kW of electricity sold is on average UAH 1.68;
- it is possible to build solar power plants during martial law, but only those who received the technical conditions before February 24, 2022 will be able to receive a contract for the sale of electricity under the terms of the "green" tariff, and new SPPs will be able to receive technical conditions only after the end of martial law in the country.

**The amount of payments will be determined by the formula: the tariff for the population (1.68 hryvnias/kWh) multiplied by the percentage of payment received from consumers in the region in the month of generation.*



Project location: Vakulivska TC, Dnipropetrovsk region



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The project provides for the construction of a modern complex for thickening iron ore enrichment waste at the existing Northern Iron Ore Enrichment Works of Metinvest Group in Kryvyi Rih.

New technological complex will reduce the volume of pulp transported to tailings storage facilities by 30%, significantly reducing electricity consumption by 125 MW per year.

Realization of the project is aimed to improve the efficiency of iron ore enrichment processes and rational use of water resources.



Initiator

LLC" METINVEST HOLDING"

<https://metinvestholding.com/ua>



Duration

3 years



Project goals

- Optimization of the technological process of enrichment waste management and improvement of the energy efficiency of the enterprise.
- Rational use of water resources by reducing the volume of water in the cycle
- Increasing the competitiveness of Metinvest Group.
- Creation of 62 new jobs.



Economic indicators of the project

Total project cost: \$146 mln, including:

Initiator contribution to the project implementation: \$114 mln

Net Present Value (NPV)	on request	EBITDA (annually)	on request
Internal Rate of Return (IRR)	on request	Income (annually)	on request
Payback period (PP)	on request		



Technical parameters of the project

- **Purpose:** thickening of iron ore enrichment waste in order to reduce the need for technical water and lower transportation costs.
- **Outcome:** 30% reduction in the volume of pulp transported to tailings storage facilities.
- **Energy efficiency:** reduction of electricity usage by 125 MW per year.
- **Main equipment:** modern thickeners, pumping stations and automated process control systems.
- **Infrastructure:** implementation at the existing Northern Iron Ore Enrichment Works of Metinvest Group in Kryvyi Rih.
- **Technology partners:** Metso Outotec, Habermann Aurum Pumpen GmbH.
- **Environmental efficiency:** reducing the energy intensity of processes and the technological load on the environment.
- **Readiness stage:** a land plot has been rented. Construction and installation works are in progress and equipment is in production.

LLC" METINVEST HOLDING" :

the leading company of Metinvest Group, one of the largest vertically integrated mining and metallurgical holdings in the world. The group unites enterprises with a full production cycle, from iron ore mining to the production of finished metal products. It has facilities in Ukraine, Europe and the US and supplies products to more than 100 countries worldwide.



Project location:

The city of Kryvyi Rih



Mechanisms of cooperation

- Involvement of credit resources, grant funds and direct investments.



Additional information

- Project is a part of energy efficiency program of Metinvest Group which is focused on implementation modern production waste management technologies.
- The construction of the thickening complex will ensure the rational use of natural resources and reduce the need for clean water.

Project status: in progress



Construction of solar power plants with a capacity of 25.4 MW and energy storage systems

7



PJSC "Kryvyi Rih Cement" is implementing a comprehensive energy project aimed at increasing energy efficiency and achieving energy independence for the company. The project involves the construction of three solar power plants (SPPs) with energy storage systems at the company's key production sites:

- At the cement plant – SPP with a capacity 24 MW with a 20 MW energy storage system;
- at the Rybalsky quarry – 1.1 MW with a 1.8 MW storage system;
- at the Khust quarry – 0.3 MW.

The total installed capacity of the SPP will be 25.4 MW, enabling it to generate approximately 31 GWh of electricity per year, reducing external energy consumption, cutting operating expenses by about \$3.5 mln and reducing CO₂ emissions.



Initiator

PJSC "KRYVYI RIH CEMENT"

<https://krcement.com/>



Duration

1 year



Project goals

- Ensure the energy independence of the company.
- Reduce electricity expenses and decrease CO₂ emissions by 475 tons annually.
- Optimize production processes through stable energy supply.
- Contribute to the development of green energy and energy resilience in the region.
- Create up to 30 new jobs.



Project economic indicators

Project cost: \$18 mln, including:

Company's resources for project implementation: \$5.4 mln

Net Present Value (NPV)	\$14.4 mln	EBITDA (3 rd year)	\$4.8 mln
Internal Rate of Return (IRR)	22%	Income	Internal economic impact
Payback period (PP)	6.8 years		



Construction of solar power plants with a capacity of 25.4 MW and energy storage systems

8



Project technical parameters

- Total installed capacity of the SPP: 25.4 MW.
- Energy storage system capacity: 21.8 MW.
- Expected annual electricity generation: ≈ 31 GWh.
- Reduction in external electricity consumption: up to 40%.
- CO₂ emissions reduction: ≈ 475 tons per year.
- Grid connection status: technical conditions preliminarily agreed.
- Project readiness stage: concept developed, feasibility study prepared, and locations determined.

About the company PJSC "Kryvyi Rih Cement":

- PJSC "Kryvyi Rih Cement" is one of the leading companies in Ukraine's cement industry, providing the construction sector with high-quality products for infrastructure and industrial projects. The company consistently implements energy efficiency principles and sustainable development practices, modernizes its production facilities, and adopts environmentally safe technologies.
- To enhance energy independence, the company is implementing a project aimed at significantly reducing external electricity consumption, minimizing environmental impact, and increasing the company's competitiveness.



Mechanism of cooperation

- Attracting credit resources, grant funding and direct investments.
- Financial partnership.
- Other forms of cooperation.



Additional information

- In the context of the full-scale war and regular attacks on Ukraine's energy infrastructure, ensuring a stable energy supply for industrial enterprises is of strategic importance. The implementation of the project to build solar power plants with a capacity of 25.4 MW and energy storage systems will not only reduce PJSC "Kryvyi Rih Cement's" dependence on centralized electricity sources, but also support the resilience of Ukraine's energy system in crisis situations.
- The company will independently implement the construction of solar power plants and energy storage systems, which will become an integral part of the company's energy complex. This solution will ensure the stability of production processes, optimize energy consumption, and enhance the company's energy independence.

Project status: ready for implementation.



Project location

The city of Kryvyi Rih



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