

CONSTRUCTION MATERIALS

5 PROJECTS FROM REGIONAL BUSINESSES

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| Creation of construction materials manufacture
("Misto Bud M" LLC, Dnipropetrovsk region) | 01 |
| Construction of a float glass production facility
("Orion-Glass-Float" LLC, the city of Vilnohirsk, Kamianske district) | 02 |
| Creation of a waste heat recovery system
(PJSC "KRYVYI RIH CEMENT", the city of Kryvyi Rih) | 03 |
| Modernization of the clinker kiln with the transition to alternative fuel
(PJSC "KRYVYI RIH CEMENT", the city of Kryvyi Rih) | 04 |
| Modernization of equipment for the use of RDF fuel in clinker burning during cement production
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CREATION OF CONSTRUCTION MATERIALS MANUFACTURE



Creation of production lines of energy saving materials (thermo facade) and the concrete products for urban landscaping (paving slabs, edgings and decorative concrete products).

Considering market conditions, it is planned to expand production, namely: concrete of various grades, road curbs, lighting poles, reinforced concrete trays, concrete fences.

Equipment: thermal vacuum moulder, dry press for paving slabs, sawmill for cutting fiber cement boards, vibrating table for casting, concrete unit for the production of various grades concrete.



Approximate volume:

concrete - 200 m³ per hour;
plate thermofacade - 500 m² per hour;
paving slabs - 1400 m² per hour.

INITIATOR:



"Misto Bud M" LLC

DURATION:



6 months

TOTAL PROJECT COST:



\$2.2 mln



PROJECT GOALS:

- ▶ meeting the demand for the high-quality modern energy-saving materials and the concrete products for urban landscaping;
- ▶ creation of 20 new jobs.



PROJECT ECONOMIC INDICATORS

Own floating assets: \$100 thsd.

Net Present Value (NPV)

\$3 mln

Profitability index (PI)

1.36

Internal rate of return (IRR)

46%

Payback period (PP)

2.6 years

EBITDA

\$800 thsd.

TECHNICAL PARAMETERS OF THE PROJECT



Land plot characteristics:

Land plot area:

0.25 ha

enterprises land plots,
cadastral number is available.

Project location:

Slobozhanska TC, Dniprovskyi district

Engineering infrastructure:

water, gas and electricity are available and
does not require any additional investments.

Initiator resources:

- workshop 300 m²;
- thermovacuum molder;
- dry press for paving slabs;
- sawmill for fiber cement board;
- vibrating tables;
- forklift truck;
- heavy vehicles.

Logistics infrastructure:

- 0.7 km – highway E-50;
- 10 km – railway station;
- 10 km – river port.

Mechanisms for cooperation:

- share participation;
- creation of joint venture.



ADDITIONAL INFORMATION

The company is a manufacturer of energy-saving “thermal facade” tiles for insulating existing buildings and structures, as well as the manufacture of paving slabs. Today, when energy efficiency is a real trend of our time this business is something more than just a relevant and profitable.

Energy modernization and energy efficiency are important areas in construction that are supported by the government and local authorities.



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CONSTRUCTION OF A FLOAT GLASS PRODUCTION FACILITY



The project initiator offers a land plot located in the industrial zone of the city of Vilnohirs'k for the implementation of the investment project: "Construction of a float glass manufacturing facility".

The territory has favorable logistical infrastructure and is supplied with a raw-material base for the rapid launch of production – quartz sand for the glass industry produced by the "Vilnohirs'k Mining and Metallurgical Plant" of JSC "United Mining and Chemical Company".



The project involves the construction of a modern float glass production facility by a specialized industry company in partnership with a Ukrainian enterprise.

ENTERPRISE TO
COOPERATE WITH:



"Orion-Glass-Float" LLC

<https://www.orionglass.com.ua/en/>

DURATION:



1 year

POTENTIAL PROJECT
COST:



\$200 mln



PROJECT GOALS:

- ▶ to provide the Ukrainian market with domestic float glass;
- ▶ to invest in float-glass production, import of which is 97% (\$150 mln/year);
- ▶ to use cooperation with local industrial enterprises, which extract raw materials (quartz sands) for float-glass production, to reduce production costs;
- ▶ attract the capacities of local enterprises to the project realization and create new jobs.



PROJECT ECONOMIC INDICATORS

1. expected productivity - **750 tons/day**.
2. domestic market - **\$150 mln/year**.



PROJECT TECHNICAL PARAMETERS

Land plot characteristics:

area:

26 ha

industrial purpose lands,
cadastral number is available.

Project location:

the city of Vilnohirsk, Kamianske district,
Dnipropetrovsk region.

Engineering infrastructure:

- water supply/wastewater disposal – is absent, there is a possibility of connection to the nearest point Ø 200 mm and supply volume of 100 m³ at a distance of 0.2 km;
- sewage collector Ø 600 mm at a distance of 0.2 km;
- gas supply – there is no gas supply, the nearest gas distribution point with a supply volume of 2500 m³ per hour at a distance of 1.6 km;
- electricity supply – 330/150/35/35/6 kV substation is located at a distance of 0.3 km.

Initiator resources:

- land plot for project implementation.

Transport infrastructure:

- 1.5 km – territorial highway;
- 0.4 km – railway line and access roads;
- 3.7 km – railway station;
- 108 km – city of Dnipro;
- 103 km – city of Kryvyi Rih;
- 171 km – city of Zaporizhzhia.

Mechanisms for cooperation:

- joint venture.



ADDITIONAL INFORMATION

“Orion-Glass-Float” LLC: an operating enterprise for industrial processing of glass, production of glassware and insulating glass units for use in construction, transportation engineering, furniture, commercial and industrial equipment, interior decoration and other areas.

Neighboring land plots:
“Vilnohirsk Glass” Ltd;
sand processing unit;
“Vilnohirsk” railroad station;
Vilnohirsk motor transportation enterprise;
electric substation “VDGMK”.

Alignment with the sustainable development goals:



DIA DNIPROPETROVSK
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CREATION OF A WASTE HEAT RECOVERY SYSTEM



PJSC "Kryvyi Rih Cement" plans to implement a project to create a waste heat recovery system at its production facilities. The project envisages the purchase, installation and integration of modern equipment that will enable it to convert the heat generated during the clinker burning process into electricity for own production needs.



INITIATOR:



**PJSC "KRYVYI
RIH CEMENT"**

<https://krcement.com/>

DURATION:



2 years

TOTAL PROJECT COST:



\$29 mln



PROJECT GOALS:

- ▶ improve the energy efficiency in production by utilising the heat lost during clinker burning;
- ▶ ensure own production of up to 43 GW of electricity per year to cover part of the company's energy needs;
- ▶ optimize production expenses and increase the competitiveness of cement products;
- ▶ create up to 15 new jobs.



PROJECT ECONOMIC INDICATORS

Company's resources for project implementation: \$8.7 mln

Net present value (NPV)

\$14.4 mln

EBITDA

\$6.5 mln

Internal rate of return (IRR)

19%

Revenue

internal economic impact

Payback period (PP)

9.9 years

PROJECT TECHNICAL PARAMETERS



- **key components:** waste heat recovery boilers, heat exchangers, steam turbine, generator, automation and monitoring systems;
- **expected reduction in external electricity consumption:** up to 40%;
- **CO₂ emissions reduction:** approximately 475 tons per year;
- **annual electricity generation:** up to 43 GWh;
- **readiness stage:** concept and preliminary calculations completed.

Project location:

the city of Kryvyi Rih, Dnipropetrovsk region.

Mechanisms for cooperation:

- attracting credit resources, grant funding and direct investments;
- financial partnership;
- other forms of cooperation.



ADDITIONAL INFORMATION

PJSC “Kryvyi Rih Cement” is a leading industrial enterprise in Dnipropetrovsk region, supplying the Ukrainian market with high-quality cement for the construction of infrastructure, industrial and residential facilities. The company is one of the largest cement manufacturers in Ukraine.

The implementation of the waste heat recovery system will enable the efficient use of production process resources, reduce energy consumption and enhance the environmental responsibility of the company.

Alignment with the sustainable development goals:



The proposed project creates an opportunity for local electricity generation from internal resources, which enhances energy autonomy and reduces dependence on the unstable energy market. In addition to its economic benefits this technology contributes to the modernization of industrial infrastructure, the development of competencies in industrial energy efficiency, and the integration of Ukrainian industry into the European energy space.

Project status: ready for the development of project documentation.



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MODERNIZATION OF THE CLINKER KILN WITH THE TRANSITION TO ALTERNATIVE FUEL



PJSC "Kryvyi Rih Cement" plans to modernize the clinker kiln to improve production efficiency and partially transition to alternative fuel (RDF).

The project involves installing an RDF feeding system and modernization the calciner, clinker cooler, and heat exchange units.



The implementation of the project will ensure the stability of the technological process and increase the daily clinker line output to 4,000 tons.

INITIATOR:



**PJSC "KRYVYI
RIH CEMENT"**

<https://krcement.com/>

DURATION:



2.5 years

TOTAL PROJECT COST:



\$25 mln



PROJECT GOALS:

- ▶ Increase the efficiency and capacity of clinker production;
- ▶ reduce coal consumption by 45% and decrease CO₂ emissions by 10%, enhancing the environmental efficiency of production;
- ▶ support the development of a circular economy by reusing waste as an energy resource;
- ▶ create up to 12 new jobs.



PROJECT ECONOMIC INDICATORS

Company's resources for project implementation: \$7.5 mln

Net present value (NPV)

\$39.8 mln

EBITDA

\$12.0 mln

Internal rate of return (IRR)

29%

Revenue

internal economic impact

Payback period (PP)

6.4 years



PROJECT TECHNICAL PARAMETERS

- **clinker production capacity:** up to 4.000 tons per day (+15%);
 - **share of heat substitution:** up to 45% through the use of RDF;
 - **reduction in coal consumption:** by 45%;
 - **reduction in CO₂ emissions:** by 10%;
- main equipment:** calciner, cross cooler, RDF
- feeding system, combustion process control and automation system;
- **expected energy resource savings:** ≈ 30-35 thsd tons of coal per year;
 - **readiness stage:** project documentation developed.

Project location:

the city of Kryvyi Rih, Dnipropetrovsk region.

Mechanisms for cooperation:

- attracting credit resources, grant funding and direct investments;
- financial partnership;
- other forms of cooperation.



ADDITIONAL INFORMATION

PJSC “Kryvyi Rih Cement” is one of the leading companies in Ukraine's cement industry. The company is actively modernizing its production by implementing energy-efficient technologies, automation, and gradually transitioning from coal to alternative fuel (RDF). This approach allows it to reduce carbon emissions, decrease its dependence on imported fuels, and meet the current requirements of the European cement market.

Alignment with the sustainable development goals:



The project creates an opportunity to reduce energy dependence, improve production efficiency, and use secondary resources instead of coal. Its implementation will contribute to the development of the domestic alternative fuel market, reduce environmental impact, and foster the creation of a circular economy model that aligns with the priorities of Ukraine's post-war reconstruction and integration into the European Green Deal.

Project status: ready for implementation.



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MODERNIZATION OF EQUIPMENT FOR THE USE OF RDF FUEL IN CLINKER BURNING DURING CEMENT PRODUCTION



PJSC "Kryvyi Rih Cement" plans to implement a project for the reequipment of production facilities to gradually replace part of the coal with RDF obtained from recycled municipal waste. It is expected that at least 20% of the total fuel will be replaced with RDF without reducing the quality of the clinker.



The project creates a full resource usage cycle, combining a waste management system, recycling, and application in the industrial process.

INITIATOR:



**PJSC "KRYVYI
RIH CEMENT"**

<https://krcement.com/>

DURATION:



1 year

TOTAL PROJECT COST:



\$4.4 mln



PROJECT GOALS:

- ▶ reduce the company's energy dependence and stabilize the cost of cement production;
- ▶ contribute to the development of the local waste management system by creating demand for RDF fuel;
- ▶ increase environmental sustainability and compliance with European decarbonization standards;
- ▶ create up to 15 new jobs.



PROJECT ECONOMIC INDICATORS

Company's resources for project implementation: \$1.4 mln

Чистий приведений дохід (NPV)

\$4.3 mln

EBITDA

\$1.3 mln

Внутрішня норма рентабельності (IRR)

25%

Revenue (per year)

\$1.3 mln

Період окупності (PP)

6.3 years

PROJECT TECHNICAL PARAMETERS



- fuel substitution rate:** at least 20% of the
 - total fuel share with RDF without reducing clinker quality;
 - CO₂ emissions reduction:** up to 60% compared to coal usage;
 - reduction of residual waste volumes:** up to 80%;
- main equipment:** RDF receiving, storage, dosing, and feeding system; modified
 - burners and combustion control system;
 - laboratory complex for fuel quality monitoring;
- readiness stage:** project concept developed, company is seeking financing.

Project location:

the city of Kryvyi Rih, Dnipropetrovsk region.

Mechanisms for cooperation:

- attracting credit resources, grant funding and direct investments;
- financial partnership;
- other forms of cooperation.



ADDITIONAL INFORMATION

PJSC “Kryvyi Rih Cement” is one of the leading companies in Ukraine's cement industry. The company is focused on reducing its carbon footprint and transitioning to sustainable energy sources, including through the implementation of RDF produced from recycled municipal waste. This solution contributes to reducing coal consumption, lowering CO₂ emissions, and developing the local waste management system, combining industrial production with the principles of a circular economy.

The implementation of the project underscores PJSC “Kryvyi Rih Cement's” position as an innovative and environmentally responsible manufacturer.

Alignment with the sustainable development goals:



The project creates an opportunity to combine industrial modernization with the development of the waste management system, forming a sustainable closed-loop cycle of “production – consumption – recycling”. Its implementation will contribute to the development of the local alternative fuel market, reduce the burden on municipal solid waste landfills, and promote Ukraine's progress towards the European Green Deal goals.

Project status: concept.



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