

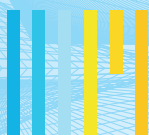
UKRAINE
OPEN FOR INVESTORS

CATALOGUE OF INVESTMENT PROJECTS
投资项目目录



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官方支持



MINISTRY
OF INFRASTRUCTURE
OF UKRAINE



UKRAINE-CHINA GROUP FOR
INTER-PARLIAMENTARY
COOPERATION OF THE
VERKHOVNA RADA OF UKRAINE

PARTNERS

合作机构支持



SILK ROAD CHAMBER
OF INTERNATIONAL COMMERCE
丝绸之路国际商会



CENTER FOR
CONTEMPORARY CHINA
The guide to the world of news and opinions



ABOUT SILK LINK SILK LINK 丝路联盟简介

SilkLink (Silk Road Association of Ukraine) is a non-governmental organization, established for maintaining political dialogue and providing support for inter-parliamentary, intergovernmental, and interregional cooperation.

SILK LINK is:

- A driving force for transcontinental and interregional cooperation;
- A B2B2G-platform focused on boosting business and political cooperation between Ukraine, China, and the European countries;
- A venue for exchange of ideas, projects and resources;
- A global network that brings together partners from more than 25 countries in Europe and Asia;
- Favorable conditions for enhanced cooperation between Europe and Asia;
- Public-private partnership in implementation of iconic (key) infrastructure projects.

SILK LINK aims:

- To realize the potential of Ukraine as an important transport and logistics hub, financial and business, commercial and economic, and cultural center of Eastern Europe and the Baltic-Black Sea region within One belt, One road project;
- To bring together partners to implement new investment opportunities.

乌克兰丝绸之路联盟SilkLink.NGO（非政府组织）负责政府间对话，为议会、政府和区域间的合作提供帮助支持。

SILK LINK :

- 洲际区域间的合作动力；
- 乌克兰、中国和欧洲国家之间的商界、政界机构B2B2G合作平台；
- 观点、思想、项目和资源的交流平台；
- 汇集欧亚大陆25+国家的全球性合作网络；
- 推进欧亚大陆全方位合作；
- 推广政府和社会资本在基础设施领域典型项目合作模式。

SILK LINK的目标：

- 在“一带一路”建设中，支持乌克兰成为东欧与波罗的海—黑海地区之间的重要运输和物流枢纽、贸易和经济金融中心；
- 与合作伙伴共同创造投资新机遇。

SILK LINK BUSINESS AREAS SILK LINK核心业务领域

TRANSPORT,
LOGISTICS AND
INFRASTRUCTURE



交通、运输
和基础设施

AGRO-INDUSTRIAL
COMPLEX



农工联合体

IT



信息技术

ENERGY



能源

SECURITY



安全

CULTURE
AND MEDIA



文化与媒体

SILK LINK SPHERES OF ACTIVITIES ARE: SILK LINK 核心业务

SilkLink.FUND – direct investment fund, which was created to manage implementation of projects, reduce risks and costs, reduce the time of projects implementation, improve the profitability of investors.

KEY TASKS OF THE FUND:

- To provide project owners and investors with the best possible results at the lowest cost and expenses;
- To increase the project value and maximize the returns of invested capital.

www.silklink.fund

SilkLink.PRO – is a project office which was established for finding and selecting projects using investors' criteria, and bringing projects to the point of making a decision on implementation.

KEY TASKS OF THE OFFICE:

- Consulting in terms of looking for partners;
- Project "package" and its sale to investors.

www.silklink.pro

SilkLink.FUND丝路联盟信托投资基金 - 项目管理、降低运营风险和控制投资成本，压缩程序和时限，协助项目业主提高投资资本收益率。

基金的主要任务:

- 为项目方和投资方提供最优方案：控制项目成本和其他费用标准等；
- 提高项目商业价值，并保证资金最高回报率。

www.silklink.fund

SilkLink.PRO丝路联盟项目管理办公室PMO - 帮助投资商寻找对应项目，推动项目实施。

项目管理办公室PMO的主要任务:

- 为合作伙伴提供信息咨询；
- 项目打包，出售等整体方案。

www.silklink.pro

II UKRAINIAN SILK ROAD FORUM 2017

第二届乌克兰丝绸之路年度论坛

November 16, 2017
Kyiv, Ukraine, FAIRMONT GRAND HOTEL
2017年11月16日,
乌克兰基辅费尔蒙特酒店

The II UKRAINIAN SILK ROAD FORUM 2017 is a large-scale event in the area of expanding Ukrainian-Chinese partnership. Business and political circles of Ukraine and China will meet on the B2B2G platform to discuss opportunities and joint implementation of projects, trade expansion, infrastructure facilities construction, e-commerce development and the entry of Ukrainian companies into the Chinese market. Along with the Ukrainian politicians and businessmen, this year key speakers of the Forum include China's influential investors and representatives of big business ready to discuss directions of cooperation at B2B meetings.

WHAT IS THE UKRAINIAN SILK ROAD FORUM?

- Partners network expansion
- \$100 mln of Chinese investments
- Direct business contacts
- Entry into new international markets
- Exchange of experience and best practices

REAL PEOPLE – REAL OPPORTUNITIES – REAL BUSINESS

www.forum.silklink.org

2017年乌克兰第二届丝绸之路论坛

乌中两国多领域合交流大型活动项目。该论坛是乌克兰和中国企业界和政界互相交流的B2B2G专业平台，论坛期间参会厂商有机会面对面地讨论联合实施项目、扩大贸易、发展基础设施项目、发展电子商务以及乌克兰公司如何进入中国市场等问题。同时，除了乌克兰的政治家和企业家外，将在论坛上进行发言的人还包括几位来自中国最具影响力的投资商，他们专程来参加乌中两国国际合作B2B论坛。

什么是乌克兰丝绸之路论坛？

- 商务拓展
- 1亿美元的中方投资资金
- 直接面对终端商
- 开拓国际新市场
- 实践与经验交流

切身-切实-切利

www.forum.silklink.org



MINISTRY
OF INFRASTRUCTURE
OF UKRAINE

CATALOGUE OF INVESTMENT PROJECTS
投资项目目录



UKRAINE AT GLANCE 乌克兰简述

Location: Borders with Poland, Romania, Slovakia, Hungary and Moldova in the west, with Belarus and Russia to north and east, and connects via the Black Sea, Bulgaria, Georgia and Turkey in the south

Trade: Geographical center of Europe, which makes the country an ideal trade hub to the EU, Middle East and Asia

Free trade agreement (DCFTA) with the EU and member of the WTO

Free trade: EU, CIS, Canada, EFTA, FYROM, Georgia, Montenegro. Ongoing negotiations with Israel, Turkey

Area: 603 500 square kilometers. Largest country within Europe

Population: 42.8 million people. 70% urban-based

Workforce: 20 million people. #1 country in the CEE by the number of engineering graduates

GDP (PPP): \$341 billion in 2015. Top-50 economy globally

Average salary: \$250 per month. Most cost-competitive manufacturing platform in Europe

地理位置：西部与波兰、罗马尼亚、斯洛伐克、匈牙利和摩尔多瓦接壤，北部与白俄罗斯毗邻，东接俄罗斯，南濒黑海，与保加利亚、格鲁吉亚和土耳其隔海相望。

经贸体系：位于欧洲中心的优越地理位置让乌克兰成为欧盟、中东和亚洲理想的贸易枢纽。

与欧盟签署了自由贸易协定(DCFTA)，并且是世界贸易组织成员。

建立自由贸易关系的国家包括：欧盟、独联体国家、加拿大、欧洲自由贸易联盟、前南斯拉夫马其顿共和国、格鲁吉亚、黑山。目前正在与以色列和土耳其等国家进行相关会晤。

面积：60.35万平方公里
为欧洲国土面积最大的国家

人口总数：4280万
城市人口占70%

劳动人口：2000万人
理工科毕业生总数占东欧国家首位

国内生产总值（购买力平价）：2015年为3410亿美元
世界经济排名前50名

平均工资：250美元/月
成为欧洲最具有成本竞争力的生产平台





MINISTRY
OF INFRASTRUCTURE
OF UKRAINE

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UKRAINE IS A TRANSPORT AND LOGISTICS HUB IN THE NEW SILK ROAD PROJECT

乌克兰是中国“一带一路”中的交通和物流枢纽





MINISTRY
OF INFRASTRUCTURE
OF UKRAINE

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INFRASTRUCTURE: HUGE GROWTH POTENTIAL

基础设施：巨大的开发潜力



19 airports
19 座机场



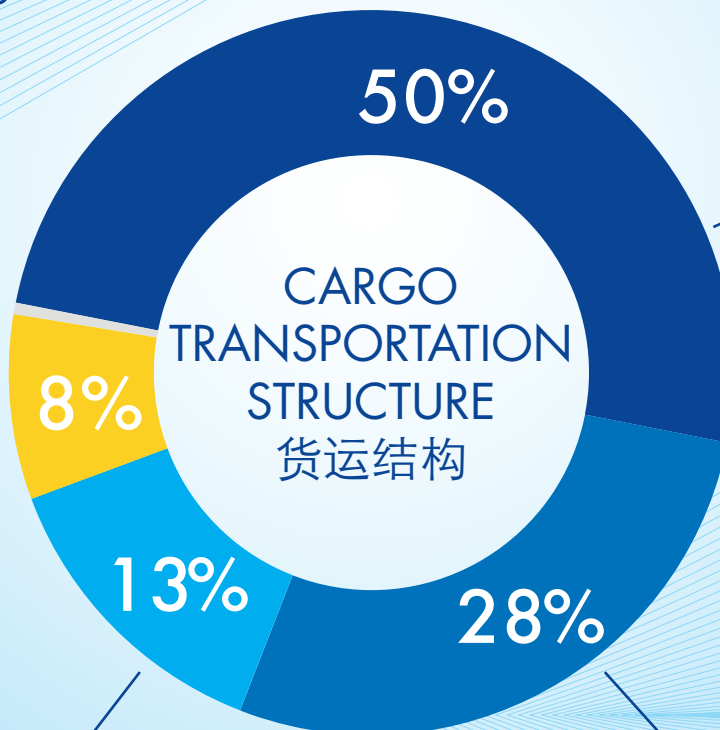
22,000 km of railways
铁路网总长度为22 000公里



13 sea & 16 riverports
13个沿海海港口和16个内河
港口



170,000 km of roads
公路总里程为17万公里





INFRASTRUCTURE 基础设施

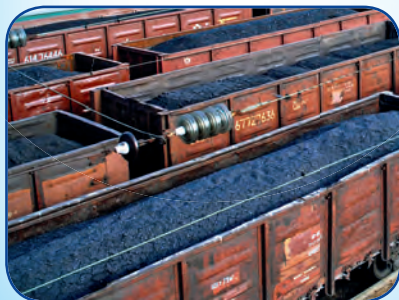




FOUNDATION OF AN INDEPENDENT RAIL CARGO OPERATOR IN UKRAINE 铁路物流独立运营项目



Project territorial scope:
the whole country of Ukraine
项目规模：
乌克兰全国各地铁路货运单位



Key facts

- open railroad cars: 40 thousand units
- annual cargo transportation: 100 million tons
- market share: 30%
- introduction of modified transformable railway cars will increase the indicators of business turnover

基本信息

- 敞车:4万辆
- 年物流量:1亿吨
- 市场份额:30%
- 改进后的多用途敞车的推广应用可以有效的提高总资产周转率

PROJECT STATUS:

- the railway transportation market has been analysed
- the project business plan has been developed
- risk assessment has been performed

项目执行状态：

- 已完成铁路物流市场可研分析
- 已制定项目商业计划书
- 进行了项目风险评估

Parameters 项目大数据	US \$ mln	亿美元
Revenue/产值	611	6.11
OPEX/OPEX	308	3.08
EBITDA/EBITDA	294	2.94
EBIT/EBIT	268	2.68
Net income/净利润	207	2.07
CAPEX incl. VAT/CAPEX (含增值税)	2,095	20.95
Working capital/净营运资本	100	1.0

IC

总投资额

\$1,274 mln / 12.74亿美元

NPV

净现值

\$1,594 mln / 15.94亿美元

PLC

项目生命周期

23 years / 年

DPP

贴现回收期

9.6 years* / 年*

IRR

内部收益率

17%

ROI

投资回报率

20%

* - the discount rate is applied as 5% per annum/ - 以每年5%的贴现率计算



INDUSTRIAL SHUNTING DIESEL LOCOMOTIVES MODERNIZATION 调车内燃机车更新改造项目



Key facts

- 60 maneuverable diesel locomotives
- diesel fuel consumption is reduced by 2.5 times
- immediate replacement of the Client's old locomotives with new modernized diesel ones
- zero downtime for the Client
- minimal technical risk for the Client
- duration of modernization procedures does not exceed 3 months

PROJECT STATUS:

- business plan has been developed

基本信息

- 调车内燃机车：60辆
- 机车降耗：2.5倍
- 旧换新即时执行
- 客服零滞留
- 客户端技术风险指数低
- 机车维改周期小于3个月

项目执行状态：

- 已编制项目商业计划书

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	49.74	4974
OPEX/OPEX	7.60	760
EBITDA/EBITDA	38.29	3829
EBIT/EBIT	36.29	3629
Net income/净利润	29.76	2976
CAPEX incl. VAT/CAPEX (含增值税)	36.00	3600
Working capital/净营运资本	7.61	761

IC

总投资额

\$44 mln / 0.44亿美元

NPV

净现值

\$302 mln / 3.02亿美元

PLC

项目生命周期

15 years / 年

DPP

贴现回收期

2.3 years* / 年*

IRR

内部收益率

90%

ROI

投资回报率

66%

* - the discount rate is applied as 5% per annum/ - 以每年5%的贴现率计算



KYIV RING ROAD CONSTRUCTION 基辅环城公路建设



Key facts

- Kyiv region has the most intense traffic
- The traffic flow across Kyiv reached 30,000 cars per day (estimated in 2011)
- Today the freight traffic is moving from Odessa and Yuzhnyi seaports via Kyiv to Europe
- The 1st stage of the project will connect interstate roads M-03 and M-05 with Boryspil airport, with the total length of 93.5 km, category 1A with 4 lines 3.75 m wide, 12 transport interchanges in two levels, 1 bridge across the Dnipro river and 3 small bridges
- The total length of the Ring road will be 149 km with 35 interchanges, 50 overpasses, Northern and Southern bridges over the Dnipro river, bridge over the Desna river, 42 roadside services
- The project is expected to unload Kyiv from freight transit transport

基本信息

- 基辅地区的交通量最大
- 基辅的车流量每天达到30 000辆（2011年统计）
- 目前敖德萨和南方港通过基辅物流欧洲
- 项目一期工程轩打通鲍里斯波尔机场到敖德萨方向路线，全长93.5公里，1A级别4车道，3.75米宽，12座双层互通式主交桥，1座跨越第聂伯河大桥，3座小桥
- 新建道路长度共为149公里，共有35个交汇处，50个主交桥，第聂伯河南北大桥，杰斯纳河大桥，42个路边服务区
- 该项目将缓解基辅地区的货物中转量

Total length
总长度
149 km / 公里

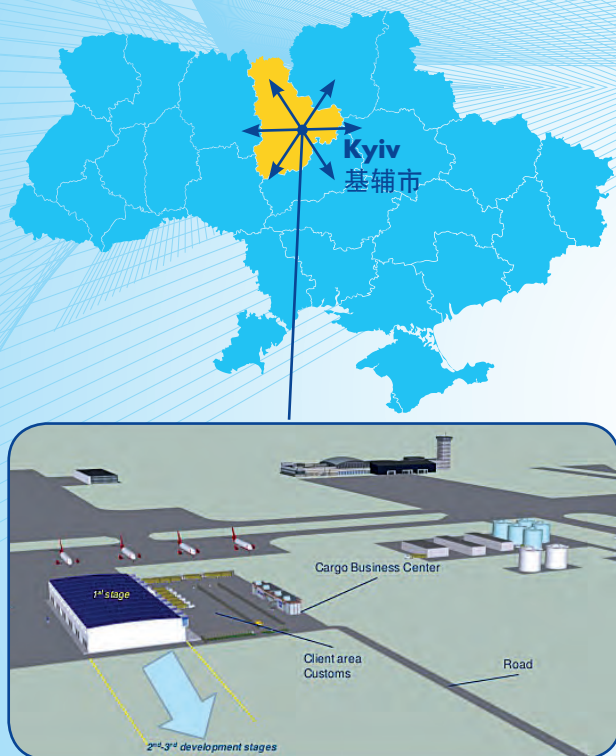
Timeline
工期
4 years / 年

Investments required (2009 est.)
投资额度(2009年估计)
\$6.8 bln / 68亿美元

TRAFFIC GROWTH REQUIRES CONSTRUCTION OF NEW ROADS
AND BRIDGES TO UNLOAD THE CITY
需要建设新的道路和桥梁来缓解城市的交通压力



SUBPROJECT IN BORYSPIL AIRPORT 鲍里斯波尔国际机场的子项目



Key facts

- Total existing area: 14,580 m²
- 9 warehouses with total area of 5,072 m² cold storage area of 450 m²
- Current storage capacity: 2,686 pallets, 805 tons/day
- Cargo transportation requires construction of a new modern cargo terminal with:
 - new road access to the terminal
 - parking lot for TIRs
 - special temperature storage facilities
 - appropriate infrastructure for clients
 - new automated control system
 - IT systems, CCTV system in order to comply with airlines requirements

基本信息

- 总面积为1.458万平方米
- 总面积为5 072 平方米的9个仓库和总面积为450 平方米的冷藏区
- 现有货运规模：2686个托盘，805吨/天
- 建设现代化设备配套的航站楼包括：
 - 航站楼附近道路
 - 国际跨境货运工具停车场
 - 特殊温度储存仓库
 - 为客户提供配套的基础设施
 - 新型自动化控制系统
 - IT系统，网络视频，等航空公司业务必需品

Investments
投资额度
~\$900/m²

1st stage
第一层
up to 10 000 m²

Cargo turnover
货物吞吐量
30 100 tons / 吨

DEVELOPMENT OF MODERN CARGO FACILITIES
IN THE BIGGEST AIRPORT OF UKRAINE
在乌克兰最大国际机场系统内开发现代物流系统



PRIVATIZATION OF THE UKRAINIAN DANUBE SHIPPING COMPANY 乌克兰多瑙河航运公司私有化



Key facts

- The Danube Shipping Company is one of the largest shipping companies both in Ukraine and in the Danube region
- It has sea and river vessels, operates close to Reni, Izmail and Ust-Danube ports, which allow to create a transportation hub in the Black Sea
- The Company's fleet has 75 self-propelled and 245 non-self propelled vessels, including:
 - river barges with dead-weight of 1,000-2,300 tons
 - river push-tow boats with engine-power capacity of 1,050-3,000 hp
 - self-propelled vessels with dead-weight of 1,814 tons
- It also operates a fleet of foreign JV companies consisting of 125 vessels
- Handles 2.7mln tons of cargo per year and ensures 20% of all Danube shipping

基本信息

- 多瑙河航运公司是在乌克兰以及多瑙河区域最大的航运公司之一。
- 公司拥有海轮，内河船舶，凭借靠近Reni、伊兹梅尔和Ust-Danube港口地理优势，公司在黑海交通枢纽系统中占有重要位置
- 本公司由75艘机动船和245非自航船组成，其中包括：
 - 载重量为1 000-2 300吨的河驳船
 - 1 050-3 000马力的拖船
 - 1814吨的在载重量的机动船
- 同时运营125艘船组队的合资公司
- 每年270万吨货物吞吐量，占多瑙河航运的总运量的20%

Revenue (2016)

产值(2016)

\$25 mln / 2500万美元

EBITDA margin (2016)

EBITDA利润率(2016)

3.6%

Cargo turnover (2016)

货物吞吐量(2016)

2.8 mln tons / 280万吨

ONE OF THE LARGEST SHIPPING COMPANIES IN THE REGION
该区域内规模最大的航运公司之一

CONSTRUCTION OF A BUSINESS DISTRICT 基辅州CBD中央商务区建设项目



Key facts

- the project goal is to create a “new city” – a cluster center for development, production, showcases and sales of high-tech products
- total land area: 106 ha
- Gross Building Area (GBA): 326 thousand m²
- Gross Leasable Area (GLA): 230 thousand m²
- expected investment: \$440 million

PROJECT STATUS:

- the research stage is completed (5 years, \$640 thousand invested)
- the general concept, project implementation plan, and assessment of investment needs are all completed, planning stage has been started
- the site is included into the city administration's list of objects requiring investments
- negotiations with potential investors are in progress

基本信息：

- 规划建立《崭新城市》关联行业集聚区，主营高科技产品的研发、生产及展销
- 商务区总占地面积：106公顷
- 建筑占地面积（GBA）：32.6万平方米
- 总租赁面积（GLA）：23.0万平方米
- 预期投资总额：4.40亿美元

项目执行状态：

- 完成项目科研(5年,已投资64万美元)
- 已编制项目概念方案，投资估算，进入项目建设规划阶段
- 该项目已被列入基辅市政府招商引资清单
- 与潜在投资商进行合作洽谈阶段

Project implementation phases:

- 1: BUSINESS ENVIRONMENT: 20.1 ha
 - business center, showcase facility, commercial complex
- 2: LOGISTICS: 24.5 ha
 - system of storage facilities, logistics center, manufacture facilities
- 3: R&D: 21.5 ha
 - research center, manufacture facilities
- 4: TRADE INFRASTRUCTURE: 29.5 ha
 - wholesale center, logistics terminal, manufacture facilities

项目执行阶段：

- 1、商务区：20.1公顷
 - 写字楼、展区、商业中心
- 2、物流区：24.5公顷
 - 仓储中心、物流中心、生产中心
- 3、研发区：21.5公顷
 - 研究中心、研制中心
- 4、贸易基础设施区：29.5公顷
 - 批发贸易中心、物流码头、生产加工中心

THE POWER OF NATURE INTERNATIONAL MULTIFUNCTIONAL RENEWABLE ENERGY CLUSTER BASED ON ECO-INDUSTRIAL PARK 在绿色工业园基础上建立“大自然能源”可再生能源国际产业关联聚集 区项目



Industrial park
工业园区

Key facts

- project initiator: the City Council
- total land area: 196 ha
- Eco-industrial park: 46 ha
- Energy cluster (generation): 150 ha

PROJECT STATUS:

- the energy cluster and park concepts are being developed
- the Eco-industrial park is registered

基本信息：

- 项目倡议者：日托米尔市议会
- 占地面积：196公顷
- 绿色工业园：46公顷
- 能源集聚区（发电行业）：150公顷

项目执行状态：

- 正在规划工业园区和能源集聚区概念性方案
- 已办理绿色工业园注册手续

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	7.75	775
OPEX/OPEX	0.34	34
EBITDA/EBITDA	7.04	704
EBIT/EBIT	5.86	586
Net income/净利润	4.80	480
CAPEX incl. VAT/CAPEX (含增值税)	45.31	4531
Working capital/净营运资本	0.03	3

IC

总投资额

\$45.3 mln/4530万美元

NPV

净现值

\$11.9 mln/1190万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

12.3 years/年*

IRR

内部收益率

9.8%

ROI

投资回报率

10%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

INDUSTRIAL PARK

工业园区建设项目



Key facts

- project initiator: the City Council
- total land area: 15 ha
- construction period: 3 years

PROJECT STATUS:

- the concept is approved
- the facility has been added to the Ukrainian Industrial Parks Register
- the procedure for holding company tender has been approved

基本信息：

- 项目倡议方：基辅市政府
- 占地面积：15公顷
- 施工期：3年

项目执行状态：

- 项目概念性方案已批复
- 已列入乌克兰工业园区注册企业名录
- 园区托管招标规范已获批

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	1.88	188
OPEX/OPEX	0.40	40
EBITDA/EBITDA	1.58	158
EBIT/EBIT	1.49	149
Net income/净利润	1.22	122
CAPEX incl. VAT/CAPEX (含增值税)	5.45	545
Working capital/净营运资本	0.04	4

IC

总投资额

\$5.5 mln/550万美元

NPV

净现值

\$4.0 mln/400万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

6.3 years/年*

IRR

内部收益率

28%

ROI

投资回报率

30%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A LOGISTIC HUB IN KYIV REGION 物流枢纽区建设项目



Logistic hub
物流枢纽区

Key facts

- project initiator: the City Council
- total land area: 8.5 ha
- construction period: 3 years
- basic services: customs registration and transshipment

PROJECT STATUS:

- the logistic hub concept is being developed
- the preliminary business plan has been developed

基本信息：

- 项目倡议方：基辅市政府
- 占地面积：8.5公顷
- 施工期：3年
- 服务核心：海关港务，物流配送

项目执行状态：

- 正在编制物流枢纽区概念性项目设计方案
- 已编制初步商业计划书

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	2.28	228
OPEX/OPEX	0.15	15
EBITDA/EBITDA	2.00	200
EBIT/EBIT	1.81	181
Net income/净利润	1.48	148
CAPEX incl. VAT/CAPEX (含增值税)	6.82	682
Working capital/净营运资本	0.02	2

IC

总投资额

\$6.8 mln/680万美元

NPV

净现值

\$13.8 mln/1380万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

7 years/年*

IRR

内部收益率

28.3%

ROI

投资回报率

32.2%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CREATION OF A NEXT GENERATION TRANSPORTATION AND LOGISTICS ECOSYSTEM 现代物流配送生态系统组建项目



Ukraine and Europe
乌克兰和欧洲

Key facts

Conservative growth scenario

- freight vehicles registered in the system: 410 thousand
- countries within the project scope: 35
- business users of the platform: 46 thousand
- number of transactions per day: 3.5 thousand
- monthly volume of goods transported by platform users: 16.4 million tons

PROJECT STATUS:

- the IT platform has been developed
- the company site is operational
- new users are being registered
- the project is ready for "round A" financing

基本信息：

平台发展保守方案

- 在线调运车辆：41万
- 参与该项目的国家：35个
- 平台商业用户：4.6万
- 调配量：3500/天
- 平台货物调配量：1640万吨/月

项目执行状态：

- 已开发IT网络平台
- 网站已运营
- 网站用户注册阶段
- 项目A期投资落实阶段

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	47.9	4790
OPEX/OPEX	8.3	830
EBITDA/EBITDA	34.8	3480
EBIT/EBIT	34.0	3400
Net income/净利润	26.5	2650
CAPEX incl. VAT/CAPEX (含增值税)	5.6	560
Working capital/净营运资本	0.4	40

IC

总投资额

\$6 mln/600万美元

NPV

净现值

\$43 mln/4300万美元

DPP

贴现回收期

3.5 years/年*

IRR

内部收益率

32%

ROI

投资回报率

40%

Offered shares

项目生命周期

20%/年

* - the discount rate is applied as 10% per annum /以每年10%的贴现率计算

Details of the project and business model description are available upon signing NDA

在签署保密协议之后，提供该项目详细介绍和商业模式介绍



ENERGY AND POWER
能源



CONSTRUCTION OF THREE 115.2 MW WIND POWER STATIONS 3个装机总容量为115.2兆瓦的风力电站建设综合项目



Wind power stations
风力电站

Key facts

- installed capacity of three wind power stations: 115.2 MW
- annual power generation: 336GWh
- debt financing: €119.3 million
- equity: €54.1 million

PROJECT STATUS:

- three sites each of capacity of 39.6, 39.6 and 36.0 MW
- each site has 12 months certified wind measurements with German Geo-Net
- land lease has been obtained for each site
- the first site has all the permits required: grid connection contract, construction permit, completed and approved project design
- procurement of permissions for the other two sites is at its final stage
- potential project expansion is up to 200 MW

基本信息：

- 3个风力电站装机总容量：115.2兆瓦
- 年发电量：336吉瓦时
- 土地资产：1.193亿欧元
- 净资产：5410万欧元

项目执行状态：

- 电厂装机容量分别为39.6, 39.6 和 36.0 兆瓦
- 每个风场具备德国Geo-Net公司提供的12个月风资源测试记载
- 每个风场具备用地工业化征地合同
- 第一个风电场所有手续齐全：签署并网合同, 获得项目工程施工许可; 项目设计方案获得批复
- 另2个风电场处于文件报审尾声阶段
- 项目具有扩增200兆瓦的潜力

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	33.9	3390
OPEX/OPEX	5.0	500
EBITDA/EBITDA	28.9	2890
CAPEX incl. VAT/CAPEX (含增值税)	171.4	17140

IC

总投资额

€173.4 mln/1.734亿欧元

PLC

项目生命周期

25 years/年

Project IRR

项目内部收益率

16%

Project DPP

项目贴现回收期

11.2 years/年*

Equity IRR

权益内部收益率

25%

Equity DPP

权益贴现回收期

3.9 years/年

* - cost of debt financing is applied at 8% per annum/以每年8%的贴现率计算

CONSTRUCTION OF A 132 MW SOLAR POWER PLANT 132兆瓦太阳能电站建设项目



Kherson region, Ukraine

乌克兰赫尔松州



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 132 MW
- annual solar irradiation: 1,300 kWh / m²
- annual power generation: 166 GWh
- total land area: 300 ha

基本信息：

- 电站装机容量：132兆瓦
- 年总辐射量：1300千瓦时/平米
- 年发电量：166吉瓦时
- 占地面积：300公顷

PROJECT STATUS:

- the business plan has been developed
- the land is in lease for 49 years

项目执行状态：

- 已编制商业计划书
- 49年征地合同

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	16.94	1694
OPEX/OPEX	2.12	212
EBITDA/EBITDA	14.23	1423
EBIT/EBIT	9.43	943
Net income/净利润	7.73	773
CAPEX incl. VAT/CAPEX (含增值税)	125.9	12590
Working capital/净营运资本	2.35	235

IC

总投资额

€128.3 mln/1.283亿欧元

NPV

净现值

€54.7 mln/5470万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.6 years/年*

IRR

内部收益率

12.7%

ROI

投资回报率

9.2%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 77 MW SOLAR POWER PLANT 77兆瓦太阳能电站建设项目



Zhytomyr region, Ukraine
乌克兰日托米尔州



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 77 MW
- annual solar irradiation: 1,350 kWh /m²
- annual power generation: 100 GWh
- total land area: 103 ha
- distance to 10 kV substation: 1.3 km

PROJECT STATUS:

- the business plan has been developed
- the technical conditions have been received
- the land is allocated for energy sector use
- the development of the project documentation is in progress
- the land lease agreement has been signed

基本信息：

- 太阳能电站装机容量：77 兆瓦
- 年总辐射量：1350千瓦时/平方米
- 年发电量：100吉瓦时
- 占地面积：103公顷
- 与10千伏高压变电站之间距离：1.3公里

项目执行状态：

- 已编制商业计划书
- 技术规范报审阶段
- 工业用地性质
- 已编制项目设计初步方案
- 征地合同

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	10.88	1088
OPEX/OPEX	0.13	13
EBITDA/EBITDA	10.75	1075
EBIT/EBIT	7.82	782
Net income/净利润	6.41	641
CAPEX incl. VAT/CAPEX (含增值税)	87.72	8772
Working capital/净营运资本	0.16	16

IC

总投资额

€87.8 mln/8780万欧元

NPV

净现值

€43.8 mln/4380万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.1 years/年*

IRR

内部收益率

12.7%

ROI

投资回报率

10.6%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 30 MW SOLAR POWER PLANT 30兆瓦太阳能电站建设项目



Kyiv region, Ukraine
乌克兰基辅州



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 30 MW
- annual solar irradiation: 1,110 kWh / m²
- annual power generation is 37 GWh
- total land area: 60 ha
- distance to 110/35/27.5 kV substation: 7.6 km

PROJECT STATUS:

- the land ownership has been contracted
- the business plan has been developed
- the grid connection options have been developed

基本信息：

- 太阳能电站装机容量：30兆瓦
- 年总辐射量：1110千瓦时/平方米
- 年发电量：37吉瓦时
- 占地面积：60公顷
- 与110/35 / 27.5 千伏变电站的距离：7.6公里

项目执行状态：

- 土地变更手续完毕
- 已编制商业计划书
- 已编制上网方案

Parameters 项目大数据	USD \$ mln	万美元
Revenue/产值	5.54	554
OPEX/OPEX	0.05	5
EBITDA/EBITDA	5.49	549
EBIT/EBIT	4.19	419
Net income/净利润	3.44	344
CAPEX incl. VAT/CAPEX (含增值税)	38.26	3826
Working capital/净营运资本	0.15	15

IC

总投资额

\$38 mln/3800万美元

NPV

净现值

\$21 mln/2100万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.5 years/年*

IRR

内部收益率

12%

ROI

投资回报率

22%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 25 MW SOLAR POWER PLANT

25兆瓦太阳能电站建设项目



Cherkasy region, Ukraine
乌克兰切尔卡瑟州卡明斯基区

Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 25 MW
- annual solar irradiation: 1,300 kWh /m²
- annual power generation: 28.1 GWh
- total land area: 50 ha

PROJECT STATUS:

- the project feasibility study has been developed
- the land is in lease for 49 years
- the town-planning terms and restrictions have been received
- the technical conditions for connection to Cherkasoblenergo have been received
- the NERC license has been received, green tariff has been approved, an agreement with SE Energorynok has been concluded (with installed capacity of 30 kW for the 1st complex)

基本信息：

- 太阳能电站装机容量：25兆瓦
- 年总辐射量：1300千瓦时/平方米
- 年发电量：28.1吉瓦时
- 占地面积：50公顷

项目执行状态：

- 已编制项目技术经济分析报告
- 49年征地合同
- 得到城建局控制性规划指标批复
- 已获得与切尔卡瑟州能源公司并网技术规范批复
- 获得乌克兰国家能源和公共服务监管委员会供电许可，获得国家供电“绿色费率”，并与国有“能源市场统筹公司”签署供电合同（第一批30千瓦太阳能电站运营）

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	2.95	295
OPEX/OPEX	0.08	8
EBITDA/EBITDA	2.87	287
EBIT/EBIT	1.96	196
Net income/净利润	1.61	161
CAPEX incl. VAT/CAPEX (含增值税)	23.70	2370
Working capital/净营运资本	0.09	9

IC

总投资额

€23.8 mln/2380万欧元

NPV

净现值

€12.3 mln/1230万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.0 years/年*

IRR

内部收益率

14.3%

ROI

投资回报率

10.6%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 20 MW SOLAR POWER PLANT 20兆瓦太阳能电站建设项目



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 20 MW
- annual power generation: 22.5 Gwh
- annual solar irradiation: 1,300 kWh /m²
- total land area: 36 ha

PROJECT STATUS:

- the project feasibility study has been developed
- the land is in lease for 50 years
- the land is allocated for energy sector use
- technical conditions for connection to Kirovogradoblenergo have been received

基本信息：

- 太阳能电站装机容量：20兆瓦
- 年发电量：22.5吉瓦时
- 年总辐射量：1300千瓦时/平方米
- 占地面积：39公顷

项目执行状态：

- 已编制项目技术经济分析报告
- 50年场地租赁合同
- 工业性质用地
- 已取得电站与基洛夫格勒州能源公司并网技术规范批复

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	2.27	227
OPEX/OPEX	0.07	7
EBITDA/EBITDA	2.20	220
EBIT/EBIT	1.54	154
Net income/净利润	1.26	126
CAPEX incl. VAT/CAPEX (含增值税)	16.87	1687
Working capital/净营运资本	0.08	8

IC

总投资额

€17 mln/1700万欧元

NPV

净现值

€10.1 mln/1010万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

8.7 years/年*

IRR

内部收益率

15.1%

ROI

投资回报率

12%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 20 MW SOLAR POWER PLANT 20兆瓦太阳能电站建设项目



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 20 MW
- annual solar irradiation: 1,300 kWh /m²
- annual power generation: 23.7 GWh
- total land area: 38 ha
- distance to 35 kV HVTL : 1 km

PROJECT STATUS:

- the business plan has been developed
- the technical conditions have been requested
- the land allocation for energy sector use is under development

基本信息：

- 太阳能电站装机容量：20兆瓦
- 年总辐射量：1300千瓦时/平方米
- 年发电量：23.7吉瓦时
- 占地面积：38公顷
- 与35千伏高压干线之间距离：1.0公里

项目执行状态：

- 已编制商业计划书
- 项目技术规范书报审阶段
- 工业用地性质设施设计初步方案编制阶段

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	2.74	274
OPEX/OPEX	0.18	18
EBITDA/EBITDA	2.52	252
EBIT/EBIT	1.85	185
Net income/净利润	1.51	151
CAPEX incl. VAT/CAPEX (含增值税)	20.75	2075
Working capital/净营运资本	0.26	26

IC

总投资额

€21 mln/2100万欧元

NPV

净现值

€10.1 mln/1010万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.1 years/年*

IRR

内部收益率

12.6%

ROI

投资回报率

10.4%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 20 MW SOLAR POWER PLANT 20兆瓦太阳能电站建设项目



Ivano-Frankivsk region, Ukraine
乌克兰伊万诺-弗兰科夫斯克州



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 20 MW
- annual power generation is 23 GWh
- annual solar irradiation: 1,200 kWh /m²
- total land area: 40 ha
- on-site 35/10 kV substation

PROJECT STATUS:

- 25 ha land plot is in lease
- * there is a potential to expand the land area up to 40 ha
- the business plan has been developed

基本信息：

- 太阳能电站装机容量：20兆瓦
- 年发电量：23吉瓦时
- 年总辐射量：1200千瓦时/平方米
- 占地面积：40公顷
- 电场配置35/10千伏变电站

项目执行状态：

- 已征地25公顷
- 可扩征至40公顷
- 已编制商业计划书

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	2.4	240
OPEX/OPEX	0.2	20
EBITDA/EBITDA	2.2	220
EBIT/EBIT	1.6	160
Net income/净利润	1.3	130
CAPEX incl. VAT/CAPEX (含增值税)	14.7	1470
Working capital/净营运资本	0.2	20

IC

总投资额

€14.9 mln/1490万欧元

NPV

净现值

€8.8 mln/880万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.0 years/年*

IRR

内部收益率

12.5%

ROI

投资回报率

14.9%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 12.5 MW SOLAR POWER PLANT 12.5兆瓦太阳能电站建设项目



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 12.5 MW
- annual power generation is 11.8 GWh
- annual solar irradiation: 1,250 kWh /m²
- total land area: 30 ha

PROJECT STATUS:

- the business plan has been developed
- the land is in lease for 49 years
- the land is allocated for energy sector use
- the contract and technical conditions for connection to Zhytomioblenergo have been received

基本信息：

- 太阳能电站装机容量：12.5 兆瓦
- 年发电量：11.8吉瓦时
- 年总辐射量：1250千瓦时/平方米
- 占地面积：30公顷

项目执行状态：

- 已编制商业计划书
- 49年征地合同
- 工业用地
- 已获得与日托米尔州能源公司并网合同，技术规范已经获得批复

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	1.36	136
OPEX/OPEX	0.06	6
EBITDA/EBITDA	1.30	130
EBIT/EBIT	0.86	86
Net income/净利润	0.71	71
CAPEX incl. VAT/CAPEX (含增值税)	11.45	1145
Working capital/净营运资本	0.06	6

IC
总投资额

€11.5 mln/1150万欧元

NPV
净现值

€4.9 mln/490万欧元

PLC
项目生命周期
20 years/年

DPP
贴现回收期
9.9 years/年*

IRR
内部收益率
12.3%

ROI
投资回报率
9.6%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 10 MW SOLAR POWER PLANT

10兆瓦太阳能电站建设项



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 9.9 MW
- annual power generation: 14.5 GWh
- total land area: 16 ha
- on-site substation

PROJECT STATUS:

- the business plan has been developed
- the technical conditions have been requested
- the development of the project documentation is in progress
- the commercial offers of the contractors have been collected
- the preliminary agreements with the creditor have been reached

基本信息：

- 太阳能电站装机容量：9.9兆瓦
- 年发电量：14.5吉瓦时
- 占地面积：16公顷
- 变电站位于电场区内

项目执行状态：

- 已编制项目商业计划书
- 技术规范报审阶段
- 已编制项目初步设计方案
- 承包商初步商业报价完毕
- 与融资方达成初步协议

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	2.1	210
OPEX/OPEX	0.1	10
EBITDA/EBITDA	2.0	200
EBIT/EBIT	1.3	130
Net income/净利润	1.0	100
CAPEX incl. VAT/CAPEX (含增值税)	9.6	960

IC

总投资额

€9.6 mln/960万欧元

NPV

净现值

€7.8 mln/780万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

6 years/年*

IRR

内部收益率

15%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 9.8 MW SOLAR POWER PLANT 9.8兆瓦太阳能电站建设项目



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 9.8 MW
- solar irradiation: 1,310 kWh /m² annually
- power generation is 11.9 GWh annually
- total land area: 20 ha
- the distance to 35/10 kV substation is 1.5 km

基本信息：

- 太阳能电站装机容量：9.8兆瓦
- 年总辐射量：1310千瓦时/平方米
- 年发电量：11.9吉瓦时
- 占地面积：20公顷
- 与“欧利尚味”35/10Kv高压变电站之间距离：1.5公里

PROJECT STATUS:

- the business plan has been developed
- the technical conditions have been requested
- the land has been allocated for energy sector use
- the project documentation has been developed

项目执行状态：

- 以编制商业计划书
- 技术规格书报审阶段
- 已办理用地工业转化手续
- 以编制项目设计方案

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	1.38	138
OPEX/OPEX	0.09	9
EBITDA/EBITDA	1.22	122
EBIT/EBIT	0.86	86
Net income/净利润	0.71	71
CAPEX incl. VAT/CAPEX (含增值税)	9.09	909
Working capital/净营运资本	0.10	10

IC

总投资额

€9.2 mln/920万欧元

NPV

净现值

€6.9 mln/690万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

6.7 years/年*

IRR

内部收益率

18%

ROI

投资回报率

16%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 9.8 MW SOLAR POWER PLANT 9.8兆瓦太阳能电站建设项目



Cherkasy region, Ukraine
乌克兰切尔卡瑟州波兰斯基区



Solar Power Plant
太阳能发电站

Key facts

- installed capacity: 9.8 MW
- annual solar irradiation: 1,300 kWh /m²
- annual power generation: 11.2 GWh
- total land area: 20 ha

PROJECT STATUS:

- the business plan has been developed, feasibility study has been approved
- the land is in lease for 50 years
- town-planning terms and restrictions have been received
- the technical conditions for connection to Cherkasyoblenergo have been received
- the working project has been developed
- the construction commencement certificate has been received

基本信息：

- 太阳能电站装机容量：9.8兆瓦
- 年总辐射量：1300千瓦时/平方米
- 年发电量：11.2吉瓦时
- 占地面积：20公顷

项目执行状态：

- 已编制商业计划书，获得项目技术经济分析报告批复
- 50年征地合同
- 得到城建局控制性规划指标批复
- 获得与切尔卡瑟州能源公司并网技术规范批复，已编制项目设计初步方案
- 获得项目工程施工许可

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	1.16	116
OPEX/OPEX	0.05	5
EBITDA/EBITDA	1.10	110
EBIT/EBIT	0.74	74
Net income/净利润	0.61	61
CAPEX incl. VAT/CAPEX (含增值税)	9.66	966
Working capital/净营运资本	0.05	5

IC

总投资额

€9.7 mln/970万欧元

NPV

净现值

€4.2 mln/420万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

9.7 years/年*

IRR

内部收益率

12.0%

ROI

投资回报率

9.2%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 76 MW BIOMASS POWER PLANT 76兆瓦生物质发电建设项目



Biomass Power Station
火电站

Key facts

- installed capacity: 76 MW
- annual power generation: 583 GWh
- total land area: 12.5 ha
- distance to 110 kV substation: 0.5 km

PROJECT STATUS:

- the business plan has been developed
- the technical conditions are being developed
- the land has been allocated for energy sector use
- the preliminary project documentation has been developed

基本信息：

- 火电站装机容量：76兆瓦
- 年发电量：583吉瓦时
- 占地面积：12.5公顷
- 与110千伏变电站之间距离：0.5公里

项目执行状态：

- 已编制商业计划书
- 项目技术规范书报审阶段
- 项目工业用地性质变更完毕
- 已编制项目设计初步方案

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	54.39	5439
OPEX/OPEX	31.46	3146
EBITDA/EBITDA	22.93	2293
EBIT/EBIT	20.84	2084
Net income/净利润	17.09	1709
CAPEX incl. VAT/CAPEX (含增值税)	65.46	6546
Working capital/净营运资本	38.46	3846

IC

总投资额

€104 mln/1.04亿欧元

NPV

净现值

€191 mln/1.91亿欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

3.9 years/年*

IRR

内部收益率

47.9%

ROI

投资回报率

40%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 7.6 MW BIOMASS POWER PLANT 7.6兆瓦生物质发电建设项目



Biomass Power Station
火电站

Key facts

- installed capacity: 7.6 MW
- annual power generation: 58 GWh
- total land area: 4.4 ha
- distance to 110 kV substation: 1 km

PROJECT STATUS:

- the business plan has been developed
- the technical conditions are being developed
- the grid connection has been approved
- the land is allocated for energy sector use
- the project documentation has been developed

基本信息：

- 火电站装机容量：7.6兆瓦
- 年发电量：58吉瓦时
- 占地面积：4.4公顷
- 与110千伏变电站之间距离：1公里

项目执行状态：

- 已编制商业计划书
- 项目技术规范书报审阶段
- 工业用地性质变更完毕
- 并网许可获批复
- 已编制项目初步设计方案

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	5.4	540
OPEX/OPEX	3.15	315
EBITDA/EBITDA	2.26	226
EBIT/EBIT	2.07	207
Net income/净利润	1.70	170
CAPEX incl. VAT/CAPEX (含增值税)	5.75	575
Working capital/净营运资本	3.84	384

IC

总投资额

€9.6 mln/960万欧元

NPV

净现值

€19.3 mln/1930万欧元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

3.7 years/年*

IRR

内部收益率

52.2%

ROI

投资回报率

45%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 10 MW BROWN COAL THERMAL POWER PLANT 10兆瓦热电站建设项目



TPP
火电站

Key facts

- installed capacity: 10 MW
- annual power generation: 86 GWh
- total land area: 4,000 m²

PROJECT STATUS:

The agreements have been reached with:

- the Ukrainian investors for providing 20% of financing
- the law firms
- the geological companies
- the equipment suppliers

基本信息：

- 热电站装机容量：10兆瓦
- 年发电量：86吉瓦时
- 占地面积：4000平方米

项目执行状态：

- 融资总额的20% 乌方已独立解决
- 与法律咨询公司达成合作协议
- 与地质勘察公司达成合作协议
- 与设备供应商达成合作协议

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	3.81	381
OPEX/OPEX	1.56	156
EBITDA/EBITDA	2.25	225
EBIT/EBIT	1.67	167
Net income/净利润	1.36	136
CAPEX incl. VAT/CAPEX (含增值税)	8.50	850
Working capital/净营运资本	0.13	13

IC

总投资额

\$8.6 mln/860万美元

NPV

净现值

\$6.5 mln/650万美元

PLC

项目生命周期

10 years/年

DPP

贴现回收期

6.2 years/年*

IRR

内部收益率

27%

ROI

投资回报率

19%

* - the discount rate is applied as 10% per annum /以每年10%的贴现率计算

PROCESSING OF VERY THIN COAL SEAMS (0.55-0.75 M) 开采极薄煤层（煤层厚度为0.55~0.77米）项目



Key facts

- annual production from lava: 400 thousand tons
- ash content of coal: 21%
- output per face : 1,200 tons/day

PROJECT STATUS:

- the project documentation has been developed
- the technical conditions have been requested
- the technology has been tested by Ternovskoye Colliery group of the DTEK Pavlogradugol

基本信息：

- 年开采量：40万吨
- 灰分含量：21%
- 落煤量：1200吨/昼夜

项目执行状态：

- 已编制项目商业计划书
- 技术规范报审阶段
- 该项技术已经在“DTEK Pavlogradugol”公司下属的“Ternovskoe”矿务局通过了认证

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	17.01	1701
OPEX/OPEX	5.27	527
EBITDA/EBITDA	11.73	1173
EBIT/EBIT	9.46	946
Net income/净利润	7.78	778
CAPEX incl. VAT/CAPEX（含增值税）	68.98	6898
Working capital/净营运资本	6.18	618

IC

总投资额

\$75.2 mln/7520万美元

NPV

净现值

\$58.6 mln/5860万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

8.3 years/年*

IRR

内部收益率

15.6%

ROI

投资回报率

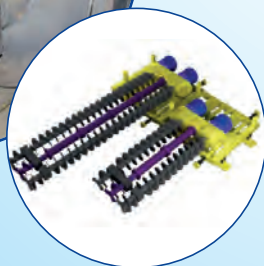
14.5%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

AUGERING COAL PRODUCTION WITH KSB COMPLEX 螺旋钻机开采矿区安全煤柱技术项目



Paired augering complex KSB
双杆螺旋钻机



Key facts

- mine annual yield: 2,840 thousand tons
- feasible working stocks: 12.3 million tons
- technical capacity: 120 tons/ha
- depth of developed layers: 0.65-0.9 m

PROJECT STATUS:

- the business plan has been developed
- the design documentation for KSB complex has been developed
- the technology was tested at the Ukrainian mines («Dobropolska», «Zarychna», «Mospynska» and other ones)

基本信息：

- 年落煤量：284万吨
- 理论可采安全煤柱储量：1230万吨
- 螺旋钻采煤机落煤能力：120吨/小时
- 煤层可采厚度：0.65-0.9米

项目执行状态：

- 已编制商业计划书
- 螺旋钻机结构设计书编制完毕
- 乌克兰多家煤矿企业对该技术进行了技术验证(«Dobropolskaya»矿、«Zarichnaya»矿、«Mospinskaya»矿等)

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	85.9	8590
OPEX/OPEX	29.4	2940
EBITDA/EBITDA	56.3	5630
EBIT/EBIT	51.9	5190
Net income/净利润	43.6	4360
CAPEX incl. VAT/CAPEX (含增值税)	26.4	2640
Working capital/净营运资本	39.2	3920

IC

总投资额

\$65.6 mln/6560万美元

NPV

净现值

\$413.4 mln/4.134亿美元

PLC

项目生命周期

6 years/年

DPP

贴现回收期

1.8 years/年*

IRR

内部收益率

107%

ROI

投资回报率

69%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

MODERNIZATION OF A 80 MW COMBINED HEAT AND POWER PLANT 80兆瓦热电厂更新改造项目



Kherson region, Ukraine
乌克兰赫尔松州



CHP
热电

Key facts

- installed capacity: 80 MW
- heat supply for the public needs: 50%

PROJECT STATUS:

- the technology for replacement of 60% of natural gas has been defined
- the business plan has been developed

基本信息：

- 热电厂的装机容量：80兆瓦
- 用于居民供热：50%

项目执行状态：

- 供热发电技术方案已确定，新技术的应用可取代60%+天然气耗量
- 已编制商业计划书

Electricity supply, GWh/year / 供电，吉瓦时/年	Heat supply, thou Gcal/year / 供热，千亿大卡/年	Fuel equivalent consump- tion, thou tons/year / 标 准燃料耗量，万吨/年
187.4 / 187.4	322.7 / 3227	137.3 / 13.73

Implementation of technology:
coal combustion in circulating fluidized bed
循环流化床燃烧技术



NPV
净现值
\$105 mln/1.05亿美元

IRR
内部收益率
17%

CAPEX
资本性支出
\$70 mln/7000万美元

Payback period
贴现回收期
7 years/年*

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A WATER-COAL PLANT AND A HEAT BOILER STATION 水煤浆锅炉集中供热系统及厂房建设项目



Plant and boiler station
厂房和锅炉房

Key facts

- installed capacity of the water-coal plant: 20 tons/hour
- installed capacity of the boiler plant: 16.5 Gcal/hour
- annual heat production: 94 thousand Gcal
- public heat price reduction: ≥10%
- \$2 million have been invested

PROJECT STATUS:

- the feasibility study has been conducted
- all technical conditions have been obtained
- two land plots are in lease
- the construction works are in the progress
- the license for heat generation has been obtained

基本信息：

- 水煤浆厂的装机容量：20吨/小时
- 锅炉房的装机功率：1650万大卡/小时
- 年供热：940亿大卡
- 降低居民取暖费用：≥10%
- 已投资额度：200万美元

项目执行状态：

- 已编制项目技术经济分析报告
- 所有技术规范已得到批复
- 工业征地2处
- 工程施工进行阶段
- 得到供热许可证

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	11.71	1171
OPEX/OPEX	8.28	828
EBITDA/EBITDA	3.33	333
EBIT/EBIT	2.35	235
Net income/净利润	1.93	193
CAPEX incl. VAT/CAPEX (含增值税)	10.61	1061
Working capital/净营运资本	0.60	60

IC

总投资额

\$11.2 mln/1120万美元

NPV

净现值

\$16.7 mln/1670万美元

PLC

项目生命周期

5 years/年

DPP

贴现回收期

5 years/年*

IRR

内部收益率

31.7%

ROI

投资回报率

14%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

PROCESSING OF WASTE INTO SYNTHETIC MOTOR FUELS

废料加工以及生产发动机燃料



Kyiv
基辅市



Waste processing plant
垃圾处理厂

Key facts

- annual waste processing volume: 480 thousand tons
- annual production of motor fuels: 41.2 million l
- total land area: 6 ha
- construction period: 2 years

PROJECT STATUS:

- the business plan has been developed
- the development of project documentation is in the progress

基本信息

- 垃圾处理量：48万吨/年
- 发动机燃料的年产量：4120万升
- 占地面积：6公顷
- 施工工期：2年

项目状态：

- 完成制定商业计划
- 正在准备项目相关的文件

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	34.6	3460
OPEX/OPEX	12.7	1270
EBITDA/EBITDA	21.9	2190
EBIT/EBIT	16.2	1620
Net income/净利润	13.3	1330
CAPEX incl. VAT/CAPEX (含增值税)	136.3	13630
Working capital/净营运资本	15.1	1510

IC

总投资额

\$151 mln / 1.51亿美元

NPV

净现值

\$108 mln / 1.08亿美元

PLC

项目生命周期

20 years / 年

DPP

贴现回收期

7.4 years* / 年*

IRR

内部收益率

18.7%

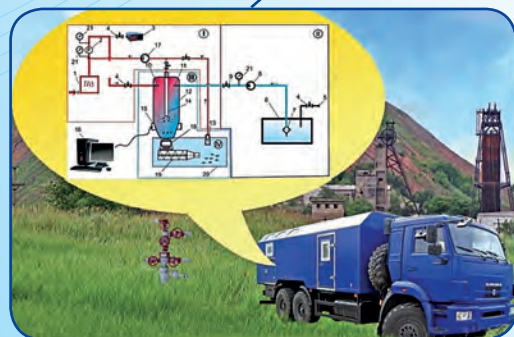
ROI

投资回报率

12%

* - the discount rate is applied as 5% per annum/ 以每年5%的贴现率计算

PRODUCTION OF GAS HYDRATES FROM NATURAL GAS AND THEIR COMPACT TRANSPORTATION TO THE CONSUMER (NANOTECHNOLOGY) 纳米技术天然气提取可燃冰(天然气水合物)及产品液化运输项目



Key facts

- plant productivity: 16 thousand m³/day
- annual gas production: 5.84 million m³
- gasification from one well during heating season: 285 houses
- gas content (G) in 1 m³ of gas hydrate (GH): 1 m³ GH=200 m³G
- gas hydrate transportation temperature: -5...-10 °C

PROJECT STATUS:

- the nanotechnology of hydrate formation has been developed
- the technical conditions have been requested
- the project documentation is being developed
- the technology has been tested with degassing at Pokrovskoye Colliery group

基本信息：

- 设备生产能力：1.6万立方米/天
- 年产气量：584万立方米
- 季节性单井供气量：285栋居民楼
- 1立方米可燃冰天然气含量：1立方米可燃冰= 200立方米天然气
- 可燃冰运输温度：-5...-10 °C

项目执行状态：

- 已成功研发纳米可燃冰技术
- 技术规范报审阶段
- 已编制初步设计方案
- 在“巴克洛夫斯卡雅”煤矿井下瓦斯排放项目中对该技术进行了实际应用认证考核

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	1.21	121
OPEX/OPEX	0.06	6
EBITDA/EBITDA	1.15	115
EBIT/EBIT	1.11	111
Net income/净利润	0.91	91
CAPEX incl. VAT/CAPEX (含增值税)	4.13	413
Working capital/净营运资本	0.07	7

IC

总投资额

\$4.2 mln/420万美元

NPV

净现值

\$7.7 mln/770万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

5.1 years/年*

IRR

内部收益率

27%

ROI

投资回报率

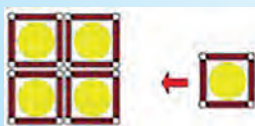
24%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF A 250 MWT SEA WAVE POWER PLANT (SWPP) PRODUCTION FACTORY 250兆瓦+ 海洋能电站设备基地建设项目



Cluster assembly of the plant
浮体排列组合方式



Cell unit parameters:

- 6m x 6m x 12m
- Capacity: 120 kWt

单块尺寸:

- 6米 x 6米 x 12米
- 发电能力120千瓦

Key facts

- installed capacity: 259 MW
- annual electricity output: 2,270 GWh
- production capacity: 2,160 cell units/year
- total production facilities area: 97 thousand m²
- commissioning the factory: 36 months (+equipment delivery)

PROJECT STATUS:

- the technology and product documentation have been developed
- the business plan has been developed
- engineering, construction, commissioning, and personnel training services are ensured

基本信息:

- 电站装机容量: 259兆瓦
- 年发电量: 2270吉瓦时
- 年生产量: 2160块
- 生产占地面积: 9.7万平方米
- 投产运营工期+备货运输期: 36月

项目执行状态:

- 已确定项目生产技术, 已编制项目初步设计方案
- 已编制商业计划书
- 已落实工程、安装调试、人员培训等服务项目

Parameters 项目大数据	EUR mln	亿欧元
Revenue/产值	854	8.54
OPEX/OPEX	475	4.75
EBITDA/EBITDA	378	3.78
EBIT/EBIT	372	3.72
Net income/净利润	317	3.17
CAPEX incl. VAT/CAPEX (含增值税)	586	5.86
Working capital/净营运资本	117	1.17

IC

总投资额

€703 mln/7.03亿欧元

NPV

净现值

€4,080 mln/40.80亿欧元

PLC

项目生命周期

20 years/年*

DPP

贴现回收期

5.7 years/年**

IRR

内部收益率

34%

ROI

投资回报率

40%

* - calculation of sea wave power plant production efficiency + generation and sale of electric power / 海洋能电站关键绩效指标+发电,售电

** - the discount rate is applied as 5 % per annum / 以每年5%的贴现率计算



AGRICULTURE
农业



CONSTRUCTION OF A LOGISTICS GRAIN COMPLEX

粮食仓储物流综合运营体系建设项目



Complex
综合体

Key facts

- simultaneous storage capacity: 400 thousand tons
- annual grain processing: 1.8 million tons
- total land area: 16 ha
- distance to the river port: 0 km

PROJECT STATUS:

- the business plan has been developed
- the site for the project development with access to the railway and river infrastructure has been selected

基本信息

- 仓储规模：40万吨
- 年粮食加工规模：180万吨
- 占地面积：16公顷
- 离内河码头零距离：0公里

项目执行状态：

- 已编制项目商业计划书
- 已选定临近铁路，河运等基础设施齐全的项目建设场地

Parameters 项目大数据	US \$ mln	亿美元
Revenue/产值	52.0	0.52
EBITDA/EBITDA	23.5	0.235
EBIT/EBIT	15.5	0.155
Net income/净利润	11.1	0.111
CAPEX incl. VAT/CAPEX (含增值税)	120.0	1.2
Working capital/净营运资本	1.4	0.014

IC

总投资额

\$121 mln / 1.21亿美元

NPV

净现值

\$81 mln / 0.81亿美元

PLC

项目生命周期

11 years / 年

DPP

贴现回收期

6 years* / 年*

IRR

内部收益率

14%

* - the discount rate is applied as 5% per annum/ 以每年5%的贴现率计算

FOUNDATION OF AN INDEPENDENT GRAIN EXPORT OPERATOR

组建国际粮食贸易独立运营商项目



Key facts

- lead time between Ex Elevator and CIF China: 70 days
- annual grain export (feed corn, barley, soybean): 500 thousand tons
- diesel import: 50 thousand tons
- fertilizers import: 25 thousand tons
- purchase of grain from the elevator at fixed price of 80% for volumes
- hedging of diesel and grain price volatility through futures put options at the Chicago Commodity Exchange

PROJECT STATUS:

- the business plan has been developed
- the preliminary agreements have been reached with certified farms/elevators

基本信息

- 粮仓库房起运(EXW)-中国口岸(CIF)操作周期：70天
- 粮食年出口量(饲料玉米、大麦、大豆)：50万吨
- 进口柴油：5万吨
- 进口化肥：2.5万吨
- 农作物总运营量的80%在粮仓按固定价格收购
- 通过在芝加哥商品交易所采购期货(卖方期权)，对冲柴油和粮食的价格

项目执行状态：

- 已编制商业计划书
- 与在中国有进口备案的农企和粮仓达成初步合作协议

Parameters 项目大数据	US \$ mln	亿美元
Revenue/产值	128.8	1.288
OPEX/OPEX	102.6	1.026
Oper.Margin/营业收入	26.2	0.262
EBITDA/EBITDA	25.9	0.259
Net income/净利润	21.2	0.212
Working capital/净营运资本	39.3	0.393

IC

总投资额

\$39.3 mln / 3930万美元

NPV

净现值

\$54 mln / 5400万美元

PLC

项目生命周期

3 years / 年

DPP

贴现回收期

1.1 years* / 年*

IRR

内部收益率

226%

ROI

投资回报率

54%

* - the discount rate is applied as 6.5% per annum/ * 以每年6.5%的贴现率计算

GRAIN AND OIL CROPS AGRICULTURAL COMPANY 粮食油料作物农业生产公司组建项目



Key facts

- land bank: 10 thousand ha
- grain and oil crops annual yield: 47 thousand tons
- main crops: wheat, corn, sunflower, soybeans, barley

基本信息：

- 耕地面积：1万公顷
- 粮食油料作物年产量：4.7万吨
- 主要农作物：小麦、玉米、葵花籽、大豆、大麦

PROJECT STATUS:

- the business plan has been developed

项目执行状态：

- 已编制商业计划书

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	9.88	988
OPEX/OPEX	6.73	673
EBITDA/EBITDA	3.15	315
EBIT/EBIT	2.97	297
Net income/净利润	2.44	244
CAPEX incl. VAT/CAPEX (含增值税)	13.80	1380
Working capital/净营运资本	7.98	798

IC

总投资额

\$21.7 mln/2170万美元

NPV

净现值

\$3.5 mln/350万美元

PLC

项目生命周期

8 years/年

DPP

贴现回收期

6.1 years/年*

IRR

内部收益率

13.2%

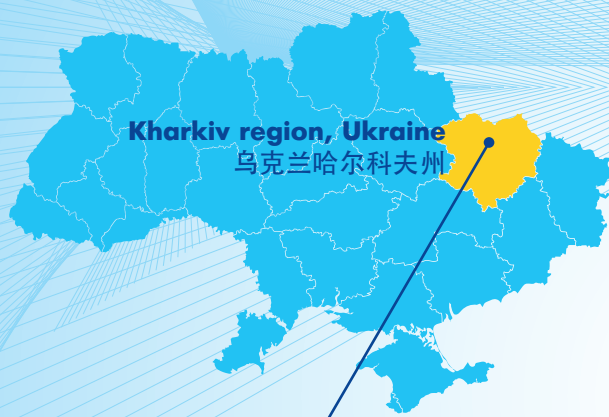
ROI

投资回报率

12.1%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

CONSTRUCTION OF AN OIL EXTRACTION PLANT IN KHARKIV REGION 哈尔科夫州油脂精炼厂建设项目



Kharkiv region, Ukraine
乌克兰哈尔科夫州



Oil extraction plant & elevator
炼油厂和粮仓

Key facts

- annual capacity of the plant: 330 thousand tons
- elevator: storage capacity 150 thousand tons
- total land area: 11.6 ha
- sunflower oil production: 150 thousand tons/year
- bio-products manufacture (food protein biogas, bio-fertilizers)

PROJECT STATUS:

- the construction feasibility study has been completed
- the project documentation is under development
- the negotiations with equipment suppliers and construction companies are in progress
- protein production technology is being developed

基本信息

- 油脂精炼厂年产量：33万吨
- 粮仓储存规模：15万吨
- 占地面积：11.6公顷
- 油脂年产量：15万吨
- 有机产品生产加工（食用蛋白、生物气、有机肥料）

项目执行状态：

- 已编制项目建设可研报告
- 正在编制项目初步设计方案
- 与设备供应商和工程承包商进行合作会晤
- 蛋白质加工技术研发阶段

IC 总投资额 \$203 mln / 2.03亿美元	NPV 净现值 \$228 mln / 2.28亿美元	PLC 项目生命周期 7 years / 年
DPP 贴现回收期 5,2 years* / 年*	IRR 内部收益率 40%	ROI 投资回报率 25%

Parameters 项目大数据	US \$ mln	亿美元
Revenue/产值	125.3	1.253
OPEX/OPEX	42.7	0.427
EBITDA/EBITDA	82.6	0.826
EBIT/EBIT	71.6	0.716
Net income/净利润	58.2	0.582
CAPEX incl. VAT/CAPEX (含增值税)	198.2	1.982
Working capital/净营运资本	5.0	0.05

* - the discount rate is applied as 5% per annum/ 以每年5%的贴现率计算

MEAT PRODUCTION: VERTICALLY INTEGRATED HOLDING 垂直整合运营模式肉联厂建设项目



Terminal
码头

Key facts

- quality control: ISO
- chicken production per year: 7.2 thousand tons
- beef production per year: 2.5 thousand tons
- refrigerated container terminal – access to export markets

PROJECT STATUS:

- the business plan has been developed
- the project implementation site has been selected

基本信息

- 质量监督：ISO
- 鸡肉年产量：7200吨
- 牛肉年产量：2500吨
- 冷藏集装箱码头 - 产品出口贸易先决条件

项目执行状态：

- 已编制商业计划书
- 已选定项目建设场地

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	73.5	7350
Costs/费用	54.0	5400
EBITDA/EBITDA	19.6	1960
Net income/净利润	6.8	680
CAPEX incl. VAT/CAPEX (含增值税)	64.7	6470

IC

总投资额

\$65 mln / 6500万美元

NPV

净现值

\$94 mln / 9400万美元

PLC

项目生命周期

10 years / 年

DPP

贴现回收期

4 years* / 年*

IRR

内部收益率

35%

* - the discount rate is applied as 5% per annum/ 以每年5%的贴现率计算

CONSTRUCTION OF A FISH FARMING FACILITY 养鱼场建设项目



Volyn region, Ukraine
乌克兰沃伦州



Fish farm
鱼场

Key facts

- complete production cycle, own forage supply
- total land area: 53.6 ha
- Volume of fish output: 1,800 tons/year
 - trout
 - salmonids
 - sturgeons

PROJECT STATUS:

- the long-term land lease contract has been signed
- the enterprise has been founded, 3 basins of 800 thousand tons/year capacity have been built
- 3 more basins of 1,000 tons/year capacity are under construction
- \$5.6 million are already invested by the owners

基本信息：

- 完整的产业链，自备饲料生产基地
- 占地面积：53.6公顷
- 鱼产量：1800吨/年
 - 鳟鱼
 - 鲑鱼
 - 鲟鱼

项目执行状态：

- 签署长期租赁合同
- 公司已注册，年产80万吨的3个鱼池一期工程已竣工
- 年产1000吨的鱼池二期在建工程
- 项目已投资560万美元

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	49.17	4917
OPEX/OPEX	37.65	3765
EBITDA/EBITDA	11.23	1123
EBIT/EBIT	7.84	784
Net income/净利润	6.43	643
CAPEX incl. VAT/CAPEX (含增值税)	11.00	1100
Working capital/净营运资本	3.73	373

IC

总投资额

\$14.7 mln/1470万美元

NPV

净现值

\$1.2 mln/120万美元

PLC

项目生命周期

10 years/年

DPP

贴现回收期

5 years/年*

IRR

内部收益率

23.2%

ROI

投资回报率

31.7%

* - the discount rate is applied as 15% per annum /以每年15%的贴现率计算

ENLARGING GREENHOUSE FACILITIES OF A STRAWBERRY HARVESTING PLANT TO 50 HA 草莓种植大棚覆盖面积扩展到50公顷



Greenhouse facility
温室（大棚）栽培

Key facts

- biggest greenhouse complex in Ukraine, one of the top 10 farms growing strawberries in Eastern Europe
- total land area: 80 ha
- greenhouse facility area by 2019 (planned): 50 ha
- volume of output (planned): 3,500 tons/year
- harvesting technology: hydroponics
- greenhouse types: tunnel greenhouses separated rows
- investments needed: \$10.3 million

PROJECT STATUS:

- the land is in lease
- the 1st stage of the project has been completed: 10 ha of greenhouses are built, present volume of output is 200 tons/year
- 15 ha of land is ready for construction of greenhouses (2nd stage of the project)
- product distribution markets are present
- \$5.1 million has been invested

基本信息：

- 乌克兰规模较大的温室大棚基地，草莓种植东欧排名TOP10
- 占地面积：80公顷
- 2019年大棚规模：50公顷
- 生产规模计划：3500吨/年
- 种植技术：水培法
- 温室（大棚）类型：普通大棚，分垄大棚
- 投资额度：1030万美元

项目执行状态：

- 已签署土地租赁合同
- 完成项目1期工程建设，搭建大棚10公顷，年产20万吨
- 2期15公顷大棚搭建工程建设前期准备工作已经就绪
- 产品拥有市场销路
- 项目已投资510万美元

NPV

净现值

\$24 mln/2400万美元

PLC

项目生命周期

10 years/年

DPP

贴现回收期

4.8 years/年

IRR

内部收益率

47.9%

CONSTRUCTION OF A QUICK-FROZEN FRUITS, VEGETABLES AND BERRIES PLANT

速冻浆果、蔬菜、水果工厂建设项目



Kherson region, Ukraine
乌克兰赫尔松州



Quick-freezing plant
速冻工厂

Key facts

- annual production capacity: 3.5 thousand tons
- IFQ quick-freezing technology
- total land area: 1.2 ha

The plant products:

- quick-frozen vegetables: sweet peppers, onions, tomatoes
- quick-frozen fruits: cherries, apricots, strawberries, peaches

PROJECT STATUS:

- the business plan has been developed
- the land is in long-term lease
- all the utility networks are available at the facility
- the production technology is available
- the resource supply and distribution market is available

基本信息：

- 年产量：3500吨
- IFQ单体速冻技术
- 占地面积：1.2公顷

工厂产品：

- 速冻蔬菜：辣椒、洋葱、西红柿
- 速冻水果：樱桃、杏子、草莓、桃子

项目执行状态：

- 已编制商业计划书
- 长期租赁土地
- 市政设施齐全
- 具有相关的生产技术
- 拥有原材料和产品销售市场

Parameters 项目大数据	EUR mln	万欧元
Revenue/产值	2.23	223
OPEX/OPEX	1.30	130
EBITDA/EBITDA	0.72	72
EBIT/EBIT	0.54	54
Net income/净利润	0.45	45
CAPEX incl. VAT/CAPEX (含增值税)	2.49	249
Working capital/净营运资本	0.14	14

IC

总投资额

€2.6 mln/260万欧元

NPV

净现值

€1.2 mln/120万欧元

PLC

项目生命周期

12 years/年

DPP

贴现回收期

5.6 years/年*

IRR

内部收益率

30.1%

ROI

投资回报率

26.2%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算



MANUFACTURE AND RECYCLING

生产及加工



CONSTRUCTION MATERIALS MANUFACTURING FACILITIES

建材综合加工基地建设项目



Key facts

- the volume of quartz sand confirmed reserves: 5 million tons
- annual production:
sheet glass: 45 million m² (δ=4 mm)/year
foam glass: 100 thousand tons/year

基本信息

- 石英砂证实储量：500万吨
- 平板玻璃年产量：4500万平方米(δ=4毫米)
- 泡沫玻璃保温绝热材料年产量：10万吨

PROJECT STATUS:

- the business plan has been developed
- the technical conditions have been requested
- the land deposits are privately owned

项目执行状态：

- 已编制项目商业计划书
- 技术规范报审阶段
- 土地所有权私有化

Parameters 项目大数据	US \$ mln	亿美元
Revenue/产值	491.4	4.914
OPEX/OPEX	135.0	1.35
EBITDA/EBITDA	327.6	3.276
EBIT/EBIT	304.6	3.046
Net income/净利润	188.0	1.88
CAPEX incl. VAT/CAPEX (含增值税)	1,190.0	11.9
Working capital/净营运资本	8.2	0.082

IC
总投资额

\$1,198 mln / 11.98亿美元

NPV
净现值

\$453 mln / 4.53亿美元

PLC
项目生命周期
10 years / 年

DPP
贴现回收期
7 years* / 年*

IRR
内部收益率
16.8%

ROI
投资回报率
15.7%

* - the discount rate is applied as 5% per annum/ * 以每年5%的贴现率计算

CONSTRUCTION OF A BURNED CLAY AND OTHER CONSTRUCTION MATERIALS PLANT 粘土原料烧结土砖，建筑墙体等制品生产线建设项目

Chernihiv region, Ukraine

乌克兰切尔尼戈夫州



Key facts

- production capacity: 35 million bricks/year
- total land area: 46.6 ha
- construction period: 2 years

PROJECT STATUS:

- the production license and other permits have been received
- the project documentation has been developed

基本信息：

- 陶瓷砖生产量：3500万块/年
- 占地面积：46.6公顷
- 项目建设周期：2年

项目执行状态：

- 已获得烧结粘土原料开采许可批复
- 已编制项目设计初步方案

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	3.41	341
OPEX/OPEX	1.66	166
EBITDA/EBITDA	1.75	175
EBIT/EBIT	1.41	141
Net income/净利润	1.15	115
CAPEX incl. VAT/CAPEX (含增值税)	8.32	832
Working capital/净营运资本	0.16	16

IC

总投资额

\$8.48 mln/848万美元

NPV

净现值

\$9.6 mln/960万美元

PLC

项目生命周期

20 years/年

DPP

贴现回收期

7.4 years/年*

IRR

内部收益率

20.7%

ROI

投资回报率

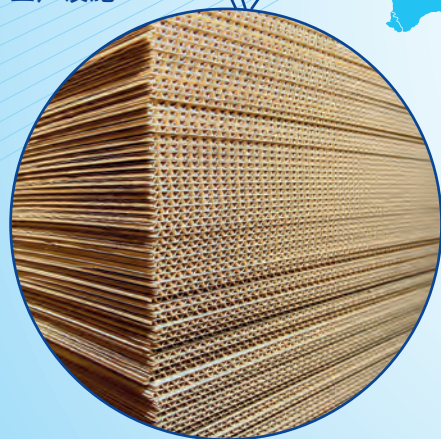
23%

* - the discount rate is applied as 5% per annum/以每年5%的贴现率计算

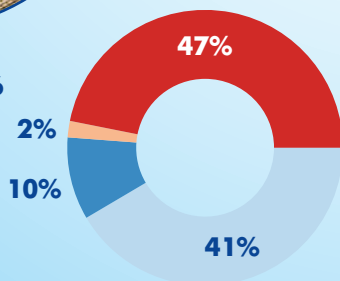
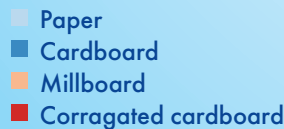
PAPER & CARDBOARD PRODUCER IN WESTERN AND CENTRAL UKRAINE 乌克兰西部和中部地区的纸张和纸板生产商



Production facilities
生产设施



Sales breakdown, 2016
2016年销售分配图表



- ISO 9001
- FSC certification
- paper & cardboard market share: 24%
- corrugated cardboard market share: 21%
- production area: 142 thousand m²
- 7 companies in 1 holding
- capacity of corrugated cardboard production facilities: 12 million m²/month

Key facts:

- leading millboard manufacturer in Ukraine
- own raw materials for corrugated cardboard manufacture
- respected clients

- ISO 9001
- FSC 认证
- 纸张和纸板市场份额：24%
- 波纹纸板市场份额：21%
- 面积：14.2万平方米
- 控股7家公司
- 波纹纸板生产能力：1200万平方米/月

基本信息：

- 乌克兰纸板生产行业领军
- 拥有生产波纹纸板的原材料
- 客户资源丰富

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	52.2	5220
OPEX/OPEX	15.3	1530
EBITDA/EBITDA	11.7	1170
Net income/净利润	8.7	870

Estimated Enterprise Value

企业身价

\$100 mln / 1亿美元

FURNITURE MANUFACTURER IN ZAKARPATTIA REGION

外喀尔巴阡地区家具生产项目



Zakarpattia region, Ukraine
乌克兰外喀尔巴阡州



Manufacture facilities
生产设施

Estimated Enterprise Value
企业身价

\$10 mln/ 1000万美元

- FSC certification
- beech wood only: >60 SKUs
- export in total sales: 99%
- export territory scope: >20 countries
- special training program for PP: 750 employees
- the key client: IKEA, 59% in total sales
- 70 thousand m³ of beech cut down annually
- total area of the property: 100 thousand m²
- manufacture and storage facilities: >60 thousand m²

Key facts:

- main product: chairs (>70%)
- complete production cycle (from wood cutting to products sales)
- quality testing in LGA laboratory (Nuremberg, Germany)
- rented premises

- FSC认证
- 榉木原料：>60储存单元
- 产品出口量：99%
- 出口国家和地区：>20
- 技工岗位培训：750员工
- 主要客户：IKEA（宜家家居）
IKEA占总销售额的59%
- 每年伐树：7万立方米
- 工厂占地总面积：10万平方米
- 生产设备占地，仓储面积：>6万平方米

基本信息:

- 主要产品：椅子(>70%)
- 完整的产业链（从木材切割到完成产品）
- 在LGA家具测试实验室（德国纽伦堡）进行质量检测
- 租用场地

Parameters 项目大数据 *	US \$ mln	万美元
Revenue/产值	8.5	850
Cross profit/净利润	1.7	170
Equity/财产净值	3.1	310
Long term debt/长期债务	-	-
Short-term liabilities/短期负债	2.7	270

PLYWOOD MANUFACTURE AT 20,880 M³/YEAR CAPACITY 胶合板加工厂建设项目（年产量20 880立方米）



Zakarpattia region, Ukraine
乌克兰外喀尔巴阡州



Plywood manufacture
胶合板生产厂家

Key facts

- daily production: 58 m³
- annual round timber consumption: 23 thousand m³
- plywood parameters (in mm): 2,440x1,220
- timber reserves in Ukraine: 1.3 billion/m³
- total land area of the plant: 4,500 m²

基本信息

- 58立方米/天
- 圆木年耗量：23千立方米
- 胶合板规格：长度为2440,宽度1220
- 乌克兰木材储备量：13亿/立方米
- 企业占地面积：4500平方米

PROJECT STATUS:

- the agreements with equipment and raw materials vendors have been reached

项目执行状态：

- 与设备供应商达成合作协议
- 与原料供应商达成合作协议

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	2.98	298
OPEX/OPEX	0.24	24
EBITDA/EBITDA	2.27	227
EBIT/EBIT	2.22	222
Net income/净利润	1.82	182
CAPEX incl. VAT/CAPEX（含增值税）	0.80	80
Working capital/净营运资本	0.32	32

IC
总投资额

\$1.1 mln / 110万美元

NPV
净现值

\$16.6 mln / 1660万美元

PLC
项目生命周期
10 years / 年

DPP
贴现回收期
0.5 years* / 年*

IRR
内部收益率
177%

ROI
投资回报率
167%

* - the discount rate is applied as 5% per annum/ 以每年5%的贴现率计算

PLASTIC WASTE RECYCLING

塑料垃圾处理加工厂建设项目



Plastics recycling
废旧塑料加工厂

Key facts

- annual waste recycling volume: 18.2 thousand tons
- ukrainian market annual volume: 7.2 million tons
- the plant total land area: 8 000 m²

PROJECT STATUS:

- the agreement with the equipment suppliers has been reached

基本信息

- 塑料垃圾年加工量：1.82 万吨
- 乌克兰塑料垃圾规模：720万吨/年
- 企业占地面积：8000平方米

项目状态:

- 与设备供应商达成合作协议

Range of products/种类

	Volume/数量
• storage vessels for liquids/液体容器	302,400 pcs./个
• fuel cans/燃油桶	1,978,200 pcs./个
• household chemicals storage items/日化包装容器	2,592,000 pcs./个
• irrigation pipes/喷淋管	1,028,160 m/米
• PET roofing/PET卷材屋面	2,592,000 m/米
• PET sheet/PET片材	3,024,000 m/米
• PET paving flags/PET人行道砖	4,836 tons/吨
• staple fiber/人造短纤维	5,400 tons/吨

IC 总投资额 \$7.2 mln / 720万美元	NPV 净现值 \$121 mln / 1.21亿美元	PLC 项目生命周期 10 years / 年
DPP 贴现回收期 0.3 years* / 年*	IRR 内部收益率 129%	ROI 投资回报率 110%

Parameters 项目大数据	US \$ mln	万美元
Revenue/产值	20.75	2075
OPEX/OPEX	8.88	888
EBITDA/EBITDA	11.87	1187
EBIT/EBIT	11.44	1144
Net income/净利润	9.38	938
CAPEX incl. VAT/CAPEX (含增值税)	5.93	593
Working capital/净营运资本	1.28	128

* - the discount rate is applied as 10% per annum/* 以每年10%的贴现率计算