

The name of the project

« Light * UKRAINE »

**The equipment of the Concert Hall «UKRAINE» (Kharkiv)
Sun power plant for the autonomous automatic illumination of the Kharkiv Zoo,
Cascade, Fountain light-muzik in park T. G. Shevchenko and the adjacent territory**

Nomination contest in which participates the project

**Best investment project in the fuel and energy complex
and of energy efficiency**



Solar panels - infinite energy source. And if earlier they were used mainly only in the aerospace industry, now they are available for almost everyone. I suggest (without undermining the architectural appearance of the building) set on the facade outside the hall "Ukraine" of Kharkov the solar batteries that will illuminate the interior, and the facade of the building, a fountain of things, water cascade park them Shevchenko and adjacent territory of the Zoo.

Energy is a basic sector of the economy. The degree of own energy resources largely determines the sovereignty of any country. Therefore, the strategic goal of economic development is to maximize its energy balance of the share of energy produced from its own energy resources. Energy of Ukraine covers nuclear power, hydroelectricity and thermal energy. Hydropower practically exhausted the possibilities of its future development because of limited natural places suitable for construction of new hydropower plants. Fuel for nuclear and thermal power plants is necessary to purchase abroad. In addition, these two directions in the development of the power sector in industrialized countries are considered unrealistic and environmentally friendly. Economic forecasts show that by the middle of 21 century energy consumption will be in 15 times more energy spent during the 20th century and require the use of about 80% of the stocks of liquid and solid fuel planet. By 2100 the integral power consumption more than doubled to exceed the known cost estimation of available natural resources. Heavy use of thermal power plants led to the emergence of a number of environmental issues, among which in its most acute adverse effects - increasing emissions of carbon dioxide and reducing the thickness of the ozone layer. Every kilowatt capacity thermal power plant for one year produces as by-products of the average 2,4t ash, sulfur oxide 30kg and 3kg of carbon monoxide. Over the past 100 years the concentration of carbon dioxide in the Earth's atmosphere has risen by 13%. This could lead to the development of greenhouse effect on the planet. Carbonic gas detains infrared radiation of our planet, breaking the same thermal equilibrium between the Earth and the surrounding space space. It toughened the average temperature of the earth and melting ice in the Arctic and Antarctic. If this process is stopped, the full melting these ice will lead to rising sea levels by 80-90 meters and planetary catastrophe.



The main objective of this project - development in Ukraine alternative energy sources. Will be created in the company, which will give new jobs and boost budget revenues to the state budget of Ukraine. Work on designing, manufacturing and installing solar stations are performed exclusively by the Ukrainian specialists from domestic materials and components for. The development of alternative energy will allow our country being a truly independent, ecologically pure and bright building which live for our children and grandchildren.

Governments of developed countries strongly promote the development of photovoltaic electricity. February 25, 2000 in Germany adopted a law under which the government takes power generated during the day, the price 0.99DM for 1kW /hour from owners of photovoltaic solar modules, inverters connected via counters in the state electricity network, and in the evening and at night gives its citizens the amount of electricity they need at a price of 0.2 per Dm kWh. The law in Combined with German program "100 000 solar roofs" led to the fact that only in the last two days of April received applications for PV modules with a total capacity of 20 MW - a fifth of the total annual production of solar cells in Europe and two times more than previously estimated for the whole of Germany 2000. Thus for buyers PV module power 5kWp offered to virtually interest-free loan for 10 years. Thus the government encourages Germans to buy photo Electric solar modules. In Japan, with the active support of the government is developing the program "25,000 buildings' energy consumption which is provided through the use of solar cells. Since 1997, the US and Western Europe have started similar the "Million Solar Roofs".

Solar energy confidently strong position in the global energy sector. The attractiveness of solar energy due to several factors:

- Solar power is available at every point of the planet, differing radiation flux density of no more than twice. Therefore, it is attractive to all countries, responding to their interests in terms of energy independence.
- Solar energy - a clean energy source that can be used in an increasing scale without negative impact on the environment.
- Solar energy is practically inexhaustible source of energy, which will be available through the million years.

The main directions of solar energy usage are:

- a direct solar energy into electric energy;
- reception of heat by absorption of solar radiation.

Description of the essence of the project and its competitive advantages

On July 1, 2015 came into force the Law of Ukraine "On amending some laws of Ukraine to ensure competitive conditions of electricity from alternative energy sources", introduced mechanisms to stimulate production of electricity from alternative energy sources. In particular, clarifies the obligation of the wholesale electricity market of Ukraine in the purchase of undertakings, which set "green tariff", and the implementation of full payment for the electricity generated at the power from alternative energy sources for the "green tariff", taking into account the premium to the "green tariff".

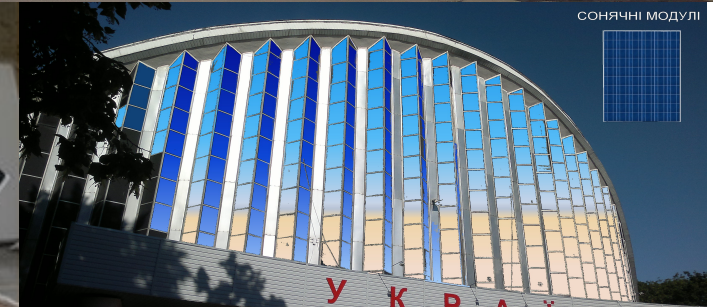
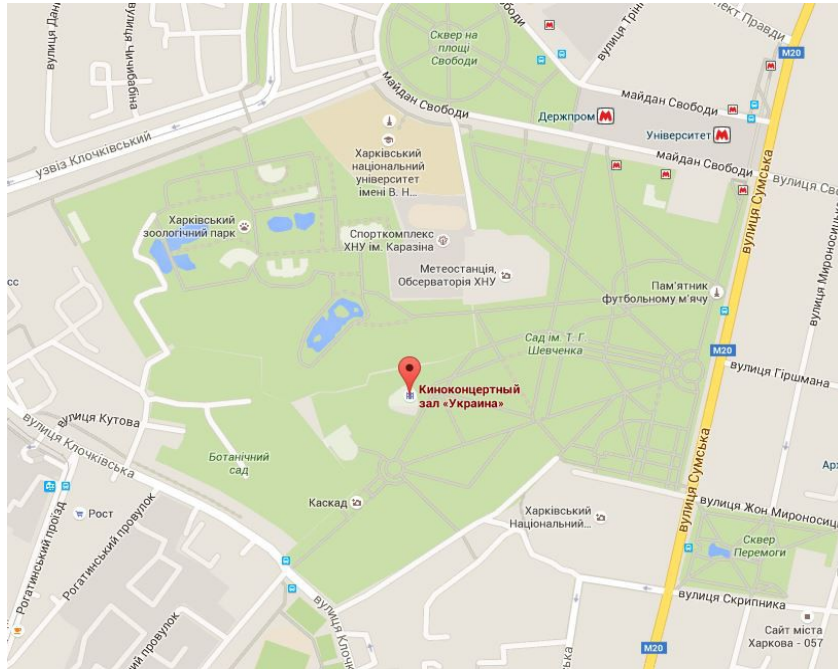
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In Ukraine, the energy of solar radiation per average daylight hours is an average of 4 kW / hours per 1m² (in summer days - up to 6.5 kW / h), or about 1.5 thousand kilowatt / hours per year per square meter. This is about the same as in the middle of Europe, where solar energy is very broad. In addition to favorable climatic conditions, Ukraine is highly qualified scientific personnel in the use of solar energy. The foregoing suggests that in Ukraine there are the necessary and sufficient conditions for large-scale implementation of solar power in the economy.

Established kompaniyiia «**Light * UKRAINE**» will provide functions to implement a single project management, project management, monitoring their implementation, training companies exploiting solar systems and others. Our experts will provide you with the necessary assistance in drawing up the specification, analysis of possible technical solutions necessary to conduct a survey of your assets. We give you the necessary advice and support in the design stage, in the preparation of project documents, preparation of cost estimates and budgets for construction works. We can help you equip the system with all necessary equipment and related materials, organizing the delivery of engineering systems "turn-key" mozhlyvyist get one-stop full-service training and service, warranty on all engineering systems, the implementation of which involved our company, and can also offer after-sales service and repairs.

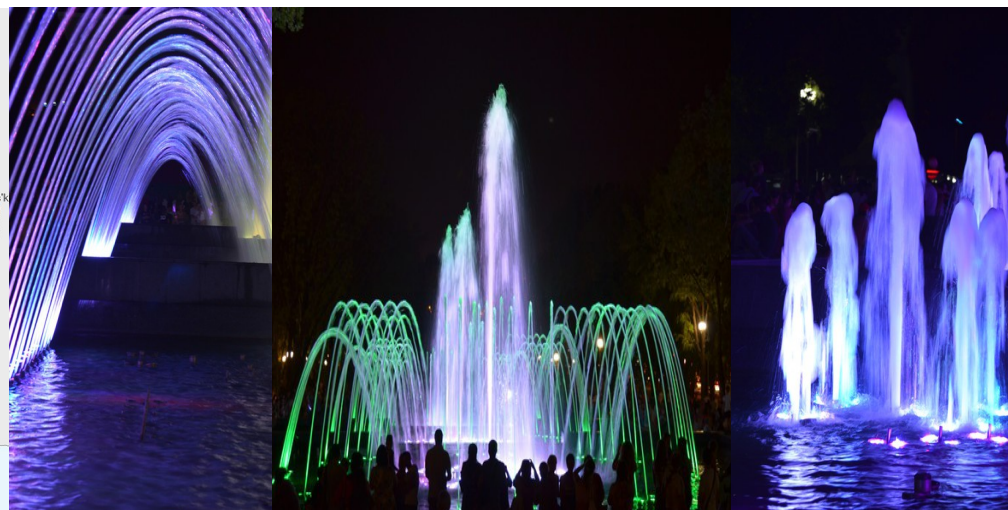
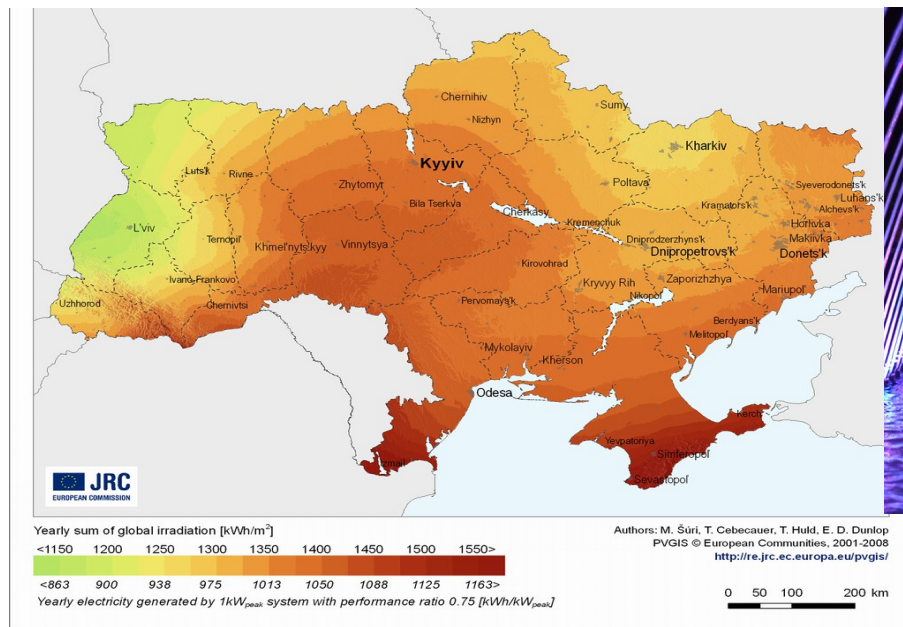
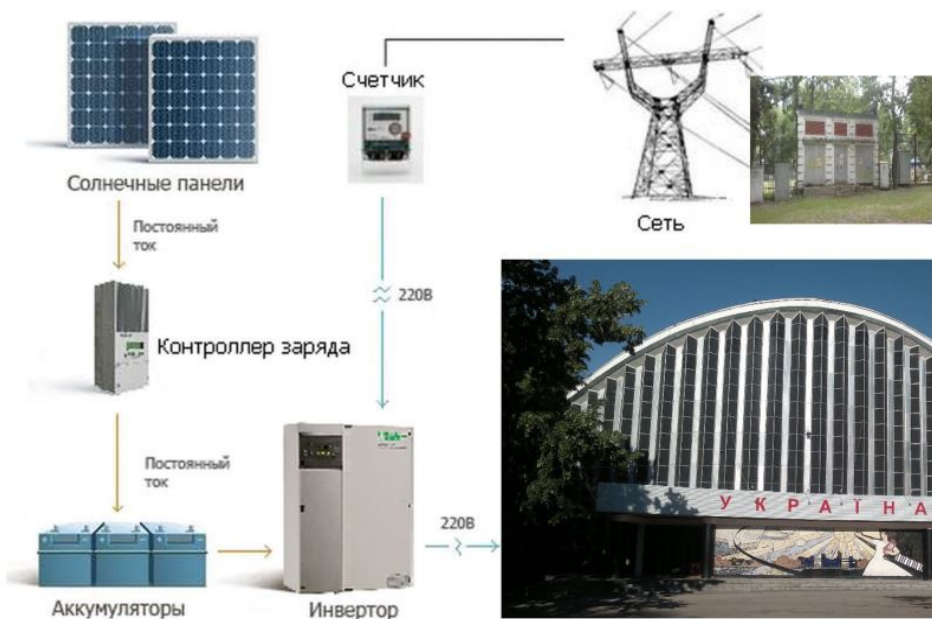
Location of the project

The park them T.G. Shevchenko, 35 st. Sumska, Kharkiv, Ukraine



The system includes: 1. An array of solar modules - the main part of the system that generates electricity.
2. Підтримуючі конструкції для сонячних модулів. 3. Network inverter - translating DC variable and reset the electricity produced in a centralized network.

Принципиальная схема работы "ЗЕЛЕНОГО ТАРИФА"



Services JV «Light * UKRAINE»

Consulting in the field of solar energy:

JV «Light * UKRAINE» provides a wide range of consulting services for both consumers with no experience in solar energy, and for existing companies that already work in the field of solar energy. We advise the following elements of solar energy:

- Examination of solar energy projects in Ukraine and abroad.
- Preparation Technico feasibility study projects in the field of solar energy.
- Procedure for Obtaining and "green tariffs".
- Training of personnel assigned to the installation and operation of energy based on solar modules.

Design of Solar Energy:

- Implementation of projects "turn-key".
- Development of technical solutions for energy systems based on solar modules of any complexity.
- Development of pre-project documentation and systems for energy based on solar modules.
- Development of design and manufacture of innovative solar modules output power from 1W to 500W with a unique design.
- Development of solar systems to solve applied problems - lighting, drinking water, autonomous energy systems for telecommunications equipment, security systems and others.
- Development and manufacturing of solar cell and portable systems to address the specific problems of geological parties, various research expeditions, travelers and tourists.

Projects developed by us taking into account the individual characteristics of the object.

Delivery of equipment for solar systems:

Provision of services of logistics projects (in any regions of the world) including all types of equipment.

- Delivery of the main equipment (solar modules, inverters, controllers, akkulatory).
- Delivery of supporting structures for solar modules.

Construction works:

- Providing services for erection works during the construction of power plants and when the start-up to the introduction of the facility.

Servicing of solar systems and equipment:

- Providing service support for use in warranty period;
- Training on operation of energy based on solar modules.

Joint Venture «Light * UKRAINE» - is providing customer service capabilities to get the most from a single source. Thus, an important step towards the finished system is the choice of the equipment most efficiently decisive technical specifications of the client.

Joint Venture «Light * UKRAINE» - works owners on a direct contractual relationships with equipment manufacturers (solar modules, inverters, controllers, batteries, etc.) This scheme allows us not only to provide its customers with the best conditions for security, but also provide the most attractive price offers.







Now in Ukraine there are several companies that produce solar cells and energy systems for residential, public, commercial and industrial, and solar mobile and fixed installations for special purposes. These systems are safe for the environment and users, high-tech, easy to install and require virtually no maintenance during operation.

	KV 175-200/24 M	KV 220-255M	KV 210-240P
			
- номинальная мощность (Вт)	175-200	220-255	210-240
- удельная номинальная мощность (Вт/м ²)	137-157	133-156	127-146
- сортировка по мощности (Вт)	-0 +5	-0 +5	-0 +5
- количество элементов	72	60	60
- размер фотоэлемента, мм	125X125 (моно)	156X156 (моно)	156X156 (мульти)
- размер модуля, мм	1585 x 805 x 40 (35)	1665 x 997 x 40 (50) 1652 x 992 x 40 (50)	1665 x 997 x 40 (50) 1652 x 992 x 40 (50)
		Спецификация (PDF)	Спецификация (PDF)

Особенности и преимущества

- Высококачественный кремний собственного производства
- Усиленный профиль из анодированного алюминия
- Закаленное защитное стекло толщиной 4 мм
- Комплекующие стран Европейского Союза и США
- Положительна сортировка по мощности 0+5 Вт
- Класс тестера: А
- Тестирование методом электролюминисценции
- Гарантия качества до 10-ти лет

	K4M150	K5M150	K5M165
			
- мощность (Вт)	1,70-1,88	2,42-2,74	2,56-2,80
- материал базы	монокремний	монокремний	монокремний
- диагональ, мм	135 ± 0,5	150 ± 0,5	165 ± 0,5
- размер фотоэлемента, мм	102,8 x 102,8 ± 0,5	125 x 125 ± 0,5	125 x 125 ± 0,5
- площадь, см ²	104,7	148,6	154,7
- КПД, %	16,20-18,00	16,30-18,50	16,60 - 18,20
	Спецификация (PDF)	Спецификация (PDF)	Спецификация (PDF)
	K6M200	K6M	K6P
			
- мощность (Вт)	4,12-4,41	4,05-4,50	3,95-4,22
- материал базы	монокремний	монокремний	мультикремний
- диагональ, мм	200 ± 0,5	полный квадрат	полный квадрат
- размер фотоэлемента, мм	156 x 156 ± 0,5	156 x 156 ± 0,5	156 x 156 ± 0,5
- площадь, см ²	238,5	243,4	243,4
- КПД, %	17,20 - 18,50	16,60-18,70	16,20 - 17,50
	Спецификация (PDF)	Спецификация (PDF)	Спецификация (PDF)

In cooperation with the company **JV «Light * UKRAINE»** you can be sure that you will get equipment and accessories with the best - the price / quality ratio.

The total amount of expenditure required for the project: **\$ 350,000 USD**

including

- costs of equipment, materials and components: - \$ 175,000 USD.
- payroll costs: - \$ 70 000 USD.

- taxes: - \$ 52 500 USD.
- travel expenses: - \$15 000 USD.
other costs: the development of the Kharkiv Zoo: - \$ 17 500 USD.
Own funds for the project - \$10 000 USD.
Term of project realization: - 6 months.

Market sales of products / services:
Kharkiv and Kharkiv region, Ukraine regions, export.

Types of existing assets:
- Land plot of 0.00 ha
- Industrial buildings and not for production purposes, an area of 0.00 m²
– Equipment worth 0.00 USD
– Intangible assets (including intellectual property) value of \$10 000 USD.

The overall assessment of the level of developing draft:
30 days - a preparatory phase, the project. 20 days - a technical prototype.
30 days - partial research implementation. 10 days - operation a prototype
30 days - serial production. 60 days - assembling works

Availability of documentation:
* Project Concept: Yes
* Business Plan: Yes
* Design documentation: No
* Conclusions expertise, permits: No
* Intellectual Property Rights: No

Legal status of investment
creating a new entity.
attracting investment loan

Financial parameters:
Discounted payback period - DPB 36 months
Adjusted net income - NPV \$ 35 000 USD.
Profitability index - PI > 1
Internal rate of return - IRR 42%

The social significance of the project:
number of jobs created: 10-50 person
the planned average monthly salaries: \$ 500-1500 USD

The environmental significance
of the project: Very high



GENERAL INFORMATION ON THE PROJECT INITIATOR

Sergey BIENKO - Project Manager

One of the first I organized the supply and installation of modern systems in Ukraine glazing with aluminum and PVC.
I have extensive experience of working in foreign exhibitions, tenders and projects.

Ownership: - Private.

Legal / postal address:

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