

TAU INVEST SOLUTIONS PRESENTS

# Shetpe Wind Project

Mangystau Region, Kazakhstan · a project by Samal EcoEnergy

An ongoing wind-power project with secured land, bankable wind data and a guaranteed 20-year PPA — with the option of a combined wind-solar park.

**50+20 MW**

state auction + Heidelberg Cement

**8.79 m/s**

average wind speed on site

**19 %**

IRR

**20 yrs**

guaranteed PPA offtake



# Project profile

|                    |                                                                   |
|--------------------|-------------------------------------------------------------------|
| Total capacity     | 50 MW (Government auction) + 20 MW (Heidelberg Cement Kazakhstan) |
| Life cycle of CF   | 20 years                                                          |
| Average wind speed | 8.79 m/s                                                          |
| Configuration      | Possibility of implementing a combined wind-solar park            |
| Infrastructure     | Available: grid, road, city, customers, etc.                      |

Project overseen by an international expert firm · proven technology · qualified personnel · permits and rights on land of the site · favorable wind speed and climatic conditions

## Financial snapshot

IRR

19 %

NPV

TBC

TOTAL INVESTMENT

TBC

# Preferences and incentives for RES investors

## Preferences and incentives

- English Law (for AIFC residents)
- No license required for electricity production from RES
- Guaranteed free access to the grid · no transmission fees
- Guaranteed offtake and PPA — purchase of 100 % of electricity produced for 20 years with further prolongation
- Auction price cannot be unilaterally changed by the State
- Currency indexation of auction price based on inflation and national currency fluctuations
- State in-kind grants of up to 30 % of investments into fixed assets (for a legal entity of the RoK)

## Tax and customs incentives

- No customs duties for 5 years
- Exempt from VAT on imports for 5 years

*Sources: World Bank; Statista; Committee on Statistics of RK; National Privatization Program; IMF; The National Energy Strategy 2050; The National Bank of RoK*

# Required infrastructure, favorable climate

## Land for up to 200 MW WPP

500 ha with possible expansion

## Proximity to a big city

160 km

## Proximity to a potential customer

2 km to the Heidelberg Cement plant

## Access to the National Grid

50 km · potential customer

## Direct good-quality road

to the site

## Moderate climate

and scarce vegetation

## Favorable wind speed — 8.79 m/s\*

confirmed by wind-mast data (bankable)



Site location — Kazakhstan



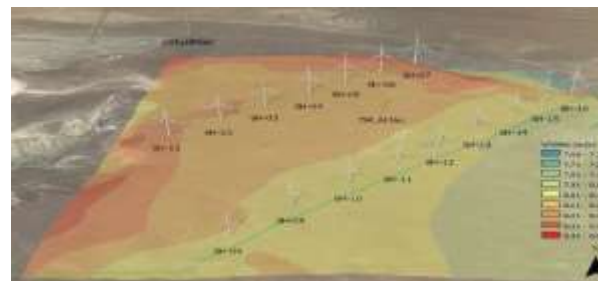
Site location — Mangystau



Cement plant substation



Road to the site



Average wind speed at the site

**8.79 m/s**

grid and cement plant within reach of the site

\* Confirmed by wind-mast data over a year period of time (bankable figures) · Sources: Google Maps; EREDA analysis; photos from the site

# For a strategic partnership

- The company has been researching, analysing and promoting green energy for about 10 years — and was at the root of green-energy development in Kazakhstan
- First-class professional reputation among state authorities, local and foreign companies (we know the people and people know us)
- A Kazakh company with Kazakh shareholders — priority and support from the government, authorities and market participants
- Always in the market, with an inside track
- Significant time and resources invested in the company's own project in Western Kazakhstan
- Practical, long-term experience in all project phases of development according to the changing legislation of Kazakhstan
- Good relations with state bodies and administrative resources

## Expert team in place

- Professional European (Spain–Germany) technical adviser with more than 30 years of experience worldwide
- Professional local Kazakhstan technical consultant with more than 30 years of experience
- Legal consultant specialized in this industry only
- A wind mast bought in Spain
- A sound ambition and focus on a long-term history and development strategy

# Work already done — and a partnership track record

## As part of the ongoing project

- The project site was chosen, with a large plot of land
- Land survey project was developed
- Wind measurement was performed
- Energy yield assessment was developed
- Power output circuit was developed
- Good relationships and support from the local government
- Support from the Ministry of Energy and KOREM

## Special advantages for the partner

- We have known and cooperated with you for over 5 years — introduced by a mutual friend with whom you have had great deals and trust
- We have never let you down, and we always help and support you as our close friends in Kazakhstan, without any profit or interest
- We have already proved that we value our friendship and relations, and we are for a long-term partnership with you
- We never give up — if we start something, we put it through (we have been through this with you before)
- We understand, respect and appreciate your mentality — and we want to build a long, large and successful history of success together

# 500 ha secured, EREDA pre-feasibility in place

The project is fully approved by EREDA. The Akimat (state body) of Mangistau region, Mangistau district, Shetpe, has assigned Samal Eco Energy 500 hectares of land, where the works were held together with EREDA. A wind mast was installed to collect annual wind data, after which EREDA issued its report confirming the wind suitability for the wind-solar park.

## Resulting facility

- 50 MW power-generating facility with proven potential to increase capacity up to 100 MW
- 16 wind power plants (WPP) of 2.0 MW nominal capacity each
- About 19,000 polycrystalline solar modules of 305 W each
- An innovative and infrastructural facility supplying electricity to a direct consumer



EREDA pre-feasibility study for the hybrid solar-wind generation plant in Shetpe (April 2017)



Akimat resolution assigning 500 ha to Samal Eco Energy

# Independent two-year wind analysis by EREDA



Energy Yield Assessment — Shetpe wind-solar farm (EREDA, January 2018)

|  Shetpe Wind-Solar Farm (Kazakhstan) Energy Yield Assessment |                  |                      |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------|
| DOCUMENT TYPE                                                                                                                                  | Author: CSS      | Approved by: MTS, CL |
| Client: Samal Eco Energy                                                                                                                       |                  |                      |
| Reference: IT-1801-CSS-ShetpeEnergyYieldAssessment-01                                                                                          | Date: 31/01/2018 | 078                  |
| Previous related documents:                                                                                                                    |                  |                      |
| Reference                                                                                                                                      | Date             | Description          |
| TR-1503- MBF-ShetpeEnergyYieldAssessment-01_EN                                                                                                 | 16/03/2015       | Energy Assessment    |
| TR-1503- MBF-ShetpeEnergyYieldAssessment-01_EN                                                                                                 | 29/05/2015       | Energy Assessment    |
| TR-1703- MBF-ShetpeEnergyYieldAssessment-01_EN                                                                                                 | 24/03/2017       | Feasibility study    |

Energy-yield calculation tables from the assessment

## Bankable wind data

- Independent wind-data report from the European technical adviser
- Based on the results of a two-year analysis
- Wind mast installed on site collected annual measurement data
- Average wind speed of 8.79 m/s confirmed — bankable figures for lenders and investors

# Scope of work — European technical partner

**ENERGÍAS RENOVABLES Y DESARROLLOS ALTERNATIVOS S.L.U.**  
Paseo Marqués de Monteleón 7, 28011 Madrid  
Tel: +34 91 5014755  
www.ereda.com - ereda\_info@ereda.com



**«HEIDELBERG CEMENT KAZAKHSTAN»**  
Konsortium «Samal EcoEnergy»

Dear sir,

Herewith, EREDA confirms that has been providing technical support to Samal EcoEnergy (TDO «Samal EcoEnergy») in the last 4 years in the conception and appraisal of renewable energy-based generation Project in Shetpe (Mangystau Region, Kazakhstan). The activities developed by EREDA included:

- preliminary wind and solar PV resource assessment,
- initial proposal of configuration for the Project,
- pre-feasibility study,
- definition of wind and solar measurement campaign according to international standards,
- installation on site of a meteorological mast with calibrated equipment according to international standards,
- support to measurements analysis during first year,
- final wind and solar PV energy reports with calculations and certification of expected Annual Energy Output for the Project.

Shetpe Project was deemed as a 38.8 MW Project combining wind and solar PV generation. A basic engineering with 3 alternatives of connection to grid and electricity delivery to Heidelberg Cement plant near Shetpe (TDO «Samal EcoEnergy») was elaborated.

EREDA hereby declares that is interested in further technical support to the Project and in case of award to Samal EcoEnergy will be happy to define a frame of cooperation.

EREDA continues:

- Good understanding of the Project, according to the already provided services and relation with Samal EcoEnergy.
- Experience in Wind and Solar PV Project development and implementation in different regions in the world (Western and Eastern Europe, North and Latin America, Africa and also Kazakhstan).
- Wind Energy projects where EREDA has been involved to commissioning and further technical operation range from 10 to 250 MW.
- Capability for the construction management, with specific references in the last 15 years of Owners Engineer and EPCM roles in Wind Energy projects.
- Capability for asset management activities during O&M phase.

Additionally, EREDA has been involved in Yrreñil Energy (<https://www.yrreñilenergia.com/es>) as shareholder and with direct involvement in the operation and management of an Operation&Maintenance Company in the wind energy field, with presence in up to 18 countries in Europe, America (North and Latin America) and Africa. Since 2018, Yrreñil Energy is included in Robur Group (<https://www.robur-industry-solutions.com/>), a German group aiming at the leadership in wind energy services in Europe and other geographical areas. EREDA keeps a close relation and collaboration with Robur Group.

Bearing in mind all the above mentioned, EREDA is in the position to contribute with a combination of technical capabilities and experience ensuring the success of the Project.

Main highlights in EREDA track record are described below.

EREDA was created in 2003 as a proposal of independent technical advice to market. EREDA is strictly a technical advisor and avoids any conflicts of interest related with supply of equipment, construction, Operation

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Tel: +34 91 5014755  
www.ereda.com - ereda\_info@ereda.com



and Management Works, investment etc. Headquarters are located in Madrid. Daughter companies in Spain (2011-2018) and in Argentina since 2018.

EREDA has provided services worldwide in the different stages of project life cycle: identification, resource assessment, project basic and construction engineering, supervision of construction and support and monitoring of Operation and Management, including contract negotiation, evaluation of projects and portfolio, Due Diligence, supervision of contractors, coordination and planning, experience with manufacturers and O&M providers, Asset Management, etc. Furthermore, EREDA has experience in construction and supervision with up to 11 different WTG technologies.

EREDA has a quality management system certified by AENOR. EREDA is a Registered Company according to ISO 9001 since 2005.

EREDA provides services worldwide in Spain, Romania (since 2007), Lithuania (since 2009), Croatia (since 2013), Angola (since 2008), Brazil (since 2010), Chile (since 2008), Kazakhstan (since 2014), Mexico (since 2011), Uruguay (since 2014), USA (since 2016), Uganda (since 2016), Argentina (since 2016), Cuba (since 2018), Burkina Faso (since 2017), Oman (since 2018).

EREDA team gathers experience in Wind Energy and participated in more than 40,000 MW of Wind and Solar Energy projects, out of which:

- More than 12,000 MW project identification and appraisal.
- More than 22,000 MW of Wind and Solar Energy: resource assessment and feasibility studies.
- More than 2,800 MW of Wind Farms and Solar facilities construction or supervised during construction.
- More than 2,500 MW of Wind Farms and Solar facilities inspected, analysed and/or supervised.
- More than 8,000 MW of project engineering for Wind Farms and Solar plants.

EREDA and EREDA experts have experience in solar fields, On Solar PV, Energy Efficiency, projects of Storage and Cogeneration (heat and power) for industrial and intensive consumption buildings and activities, Hybrid systems, etc.

Once again, EREDA confirms its interest and availability in further support to Wind Energy Project in Shetpe area ensuring Renewable Energy contributing to Heidelberg Cement Plant activities in Shetpe (Mangystau, Kazakhstan).

Sincerely yours

50809547V  
CRISTOBAL  
LOPEZ (R)  
883724724

Financiado por el Ministerio de Industria y Energía del Gobierno de España  
Cristóbal López  
Gerente de Gestión  
Energías Renovables y Desarrollo Alternativo S.L.U. (EREDA)

## European technical adviser

- Spain—Germany engineering firm with more than 30 years of worldwide renewable-energy experience
- Performed the wind measurement campaign and the energy-yield assessment for the Shetpe site
- Prepared the pre-feasibility study for the hybrid solar-wind generation plant
- Full scope-of-work documentation available for investor due diligence

# Scope of work — local Kazakhstan technical partner



«HEIDELBERG CEMENT KAZAKHSTAN»  
050004, Алматы, пр. Жибек Жолы, 76.

Должность: ТОО «Samal EcoEnergy»  
Управляющему директору  
г-ну Полону Е.В.

АО КазНППИТЭС «Энергия» (далее Компания) выражает Вам свое почтение и намерение в долгосрочное взаимовыгодное сотрудничество.

Настоящим письмом, мы бы хотели сообщить, что наша Компания является опытным долгосрочным партнером отношения с ТОО «Samal EcoEnergy» в целом и в частности – по развитию проекта в с.л. Шетпе, Мангистауского района, Мангистауской области по строительству ветропарка на 37 МВт (ожидаемый и проектируемый ранее объем). В 2018 году между нашими компаниями был заключен план мероприятий по развитию проекта по технической части, где наша Компания выступает Техническим Партнером ТОО «Samal EcoEnergy» и проекта в целом. В 2018 между нами был подписан Договор на оказание услуг «Схемы выдачи мощности Ветропарка Электростанции мощностью 37 МВт в Мангистауской области», который был успешно выполнен.

В рамках планируемого и объявленного Вами тендера на проект «обеспечения электроэнергией от источника ВИЭ для ТОО «Каспий Цемент» расположенный с.л. Шетпе, Мангистауского района, Мангистауской области», мы в партнерстве с ТОО «Samal EcoEnergy» как планируемый Поставщик по тендеру, хотим подтвердить нашу заинтересованность и готовность участвовать в данном проекте, включая полную техническую компетенцию на базе имеющегося долгосрочного опыта, а именно:

- опыт проектирования АО КазНППИТЭС «Энергия» составляет более 55 лет;
- опыт проведения проектных работ с тем числе инженерно-технических, инженерно-экономических, инженерно-заказных (испытаний) для объектов ВИЭ составляет около 20 лет в Казахстане и за рубежом;
- опыт проведения оценки выработки энергии от объектов ВИЭ;
- опыт участия в строительстве объектов ВИЭ;
- опыт монтажа металлоконструкций специальных сооружений высотой более 80 м (10 лет);
- опыт управления (оперирования) и генерации электроэнергии с объектов ВИЭ (10 лет);
- опыт проектирования ветро-солнечных парков АО КазНППИТЭС «Энергия» составляет более 20 лет в Казахстане и России (10 лет);
- наличие более 100 собственных, высококвалифицированных и опытных специалистов по технической обслуживанию объектов ВИЭ.

Также, хотели бы подтвердить наличие всей необходимой разрешительной документации и оборудования для проведения вышеуказанных работ, а именно:

- I категория лицензии на проектно-изыскательскую деятельность;
- собственный архив проектных работ с 1962 года;
- аккредитованная химико-грунтовая лаборатория и собственный парк буровой техники для изыскательских работ;
- специализированное оборудование для изыскательских работ;
- имеется более 50 современных лицензированных программ для проектирования (WindPro, DigSilent PowerFactorySoftware, Model Studio CS ЛЭП и т.д.);
- имеет аттестат промышленной безопасности и сертификаты ISO 9001, ISO 14001 и ISO 18001 (OHSAS);
- все сотрудники, которые будут привлечены к данному проекту имеют сертификаты и удостоверения по ОТ, БИОТ, ТБ, ПБ, ЭБ, ПТМ и др.

Кроме этого, хотим отметить, что на период работ в обязательном порядке Компания будет соблюдать все законодательные требования по технике безопасности, присутствие инспектора по технике безопасности и будем отвечать самостоятельно за обеспечение техники безопасности.

Приложение: Копии лицензий, рекомендательных писем и презентация о нашей Компании/проектах

С уважением,  
Президент



Исаев А.И.

## Local technical consultant

- Kazakhstan engineering consultant with more than 30 years of experience
- Licensed for design and survey works, with own laboratories and certified specialists
- Covered the local design, survey and grid-connection documentation for the project

# One local partner for the entire project

Tau Invest Solutions accompanies the investor through the full investment cycle in Kazakhstan — from due diligence and structuring to construction, financing and operations.

## Deal structuring & legal

Due diligence of the land rights, wind data and permits · AIFC structuring under English law · corporate law and JV structuring with Samal EcoEnergy

## Auction, PPA & state support

RES auction registration via KOREM, PPA signing, in-kind state grants of up to 30 % — through direct working relationships with the Ministry of Energy and akimats

## Turnkey construction (EPC)

Design and construction through a partner group with 20+ years of experience — one responsible contractor, fixed timeline and budget

## Financing & banks

Preferential financing packaged through BRK, Damu, QIC and KazakhExport — one application, four development institutions

## Grid & offtake

KEGOC grid-connection support and offtake structuring, including the direct corporate customer 2 km from the site

## Localisation & operations

Staff recruitment, work-permit and relocation support, O&M setup and ongoing company management

## C O N T A C T   U S

# Let's discuss the Shetpe wind project together

Share your investment criteria — we will respond within one business day with a proposed next step.

### Tau Invest Solutions

**EMAIL**      [info@tauinvestsolutions.com](mailto:info@tauinvestsolutions.com)

**PHONE**      +7 702 975 6366

**OFFICE**      Almaty, Zhetysu-3 district, Fortune BC, office 36

### Project developer



Samal EcoEnergy — Shetpe, Mangistau district, Mangistau region, Kazakhstan