



## Expression of Interest

Invitation to participate in selection of a Solar EPC and O&M Contractor for Engineering, Procurement, Construction and Operation & Maintenance Services for Solar PV Project with tentative capacity of 134 Mwe(dc) in Romania



# Key investment highlights

Unique opportunity to contribute to the development of the largest solar photovoltaic project in Romania.

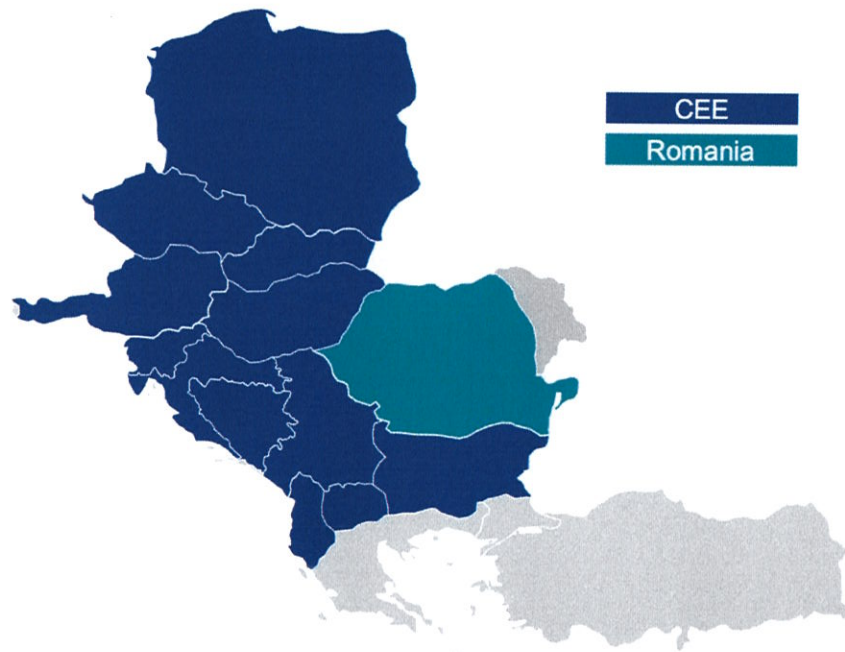
<b>Favorable market environment</b>	<ul style="list-style-type: none"><li>• Romania is consolidating its sizeable economic presence in the CEE space, converging with regional powerhouses like the Czech Republic and Poland.</li><li>• Strong macroeconomic fundamentals, fastest growing economy in CEE during the last 5 years, 5% CAGR GDP growth vs 3.7% for the region.</li></ul>	<b>Strategic location and access to infrastructure</b>	<ul style="list-style-type: none"><li>• Strong presence of TSO and DNO in the area nearby site 1 (Giurgiu) due to the vicinity with the capital city, where the electrical grid is dense.</li><li>• Sites locations can be easily accessed using the existing road network infrastructure.</li></ul>
<b>Favorable regulatory framework</b>	<ul style="list-style-type: none"><li>• Favorable energy policy context with encouraged shift towards renewable energy sources, both at EU and national levels.</li><li>• No additional regulatory barriers expected for solar power projects in the long-term, as Ruserio's contribution is crucial for the achievement of the national E-RES targets.</li></ul>	<b>Financial overview and upside potential</b>	<ul style="list-style-type: none"><li>• Power generation capacities which are expected to be decommissioned in the future generate the need for additional capacities to be developed, as to cover future demand, which is expected to increase.</li></ul>
<b>PPA law</b>	<ul style="list-style-type: none"><li>• The government Emergency Ordinance no. 143/2021 finally removes the PPA ban from the Energy Law no. 123/2012, after almost 10 years</li></ul>	<b>Proven technical solutions</b>	<ul style="list-style-type: none"><li>• High power density and high energy yield Bifacial PERC Si-mono silicon modules to leverage the total investment cost per kilowatt.</li><li>• The modules also harvest energy from the rear side, demonstrating higher energy yields.</li><li>• Monocrystalline 2x78 cell modules with peak power of 570Wp and maximum efficiency of 99%.</li><li>• Guaranteed yearly average performance ratio of 82.8% for the 1st year.</li></ul>
<b>Largest solar project in Romania</b>	<ul style="list-style-type: none"><li>• Project already gained momentum and is now in pre-construction phase, with grid connection study already in development and land already acquired in strategic locations for 2 PV projects.</li><li>• All 14 permits required for the construction of the facility have been granted.</li></ul>		



# Macroeconomic overview (1/2)

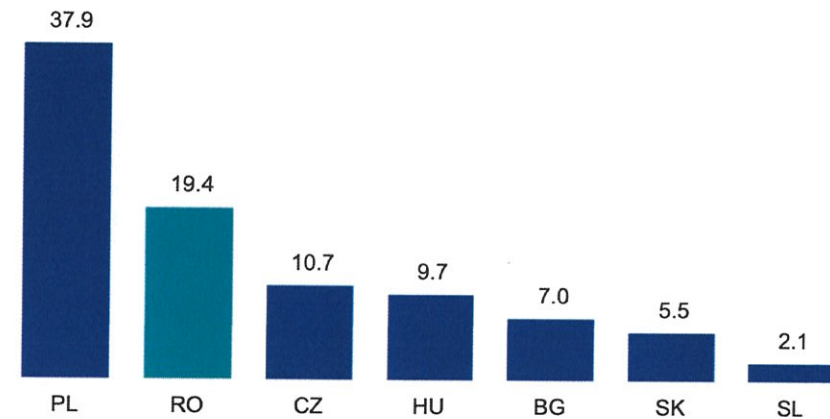
Positioned strategically, 2<sup>nd</sup> most populous CEE country

## Romania – 2019 snapshot



Source: EIU

## Population in 2019 (mn)



## Favorable economic position in CEE

2<sup>nd</sup> most populous CEE country after Poland

2<sup>nd</sup> fastest growing economy in 2019 after Hungary

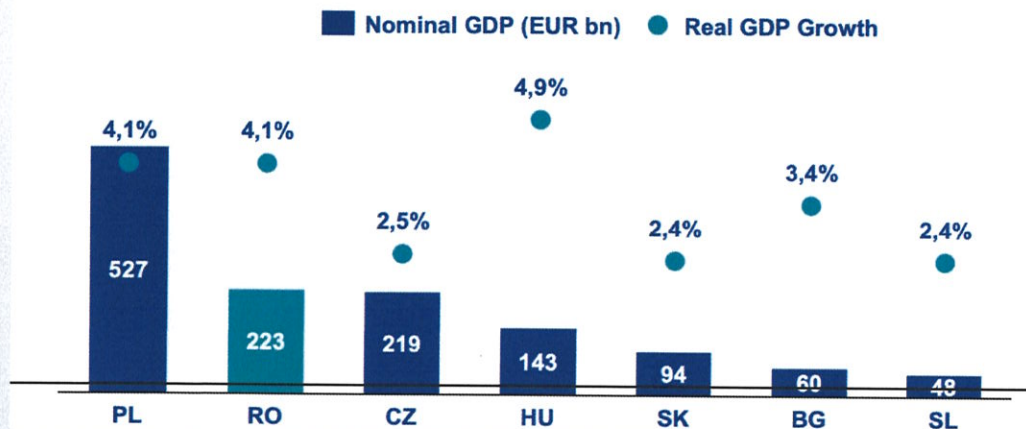
2<sup>nd</sup> largest economy after Poland

# Macroeconomic overview (2/2)

Strong macroeconomic fundamentals, fastest growing economy in the last 5 years

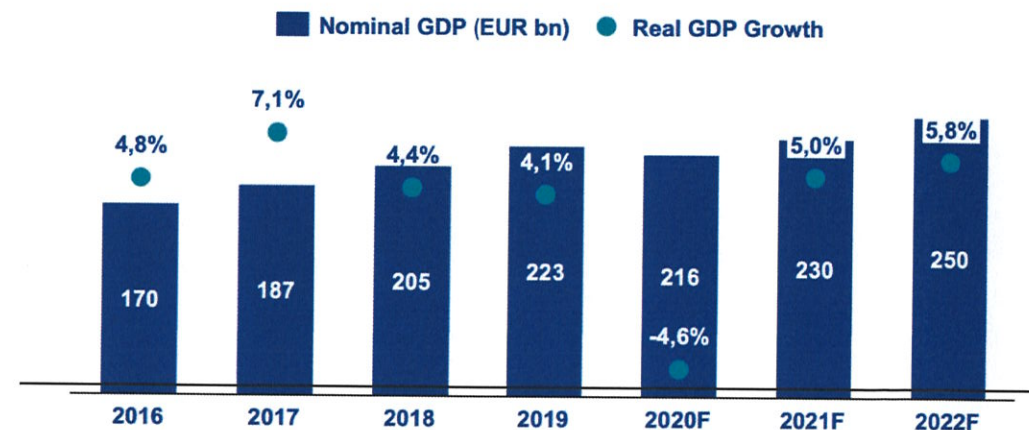
## Strong macroeconomic fundamentals, fastest growing economy in the last 5 years

Strong economic development in 2019



- Romania is consolidating its sizeable economic presence in the CEE space, converging with regional powerhouses like the Czech Republic and Poland.
- The country has developed based on solid fundamentals, with low levels of debt, and controlled inflation all while maintaining high levels of labor productivity.
- In 2019, following outstanding years from a macroeconomic perspective, Romania registered the second fastest growth rate in CEE.
- GDP is expected to decrease in 2020 due to COVID-19 prevention measures, followed by a recovery process starting from 2021.

Romanian GDP evolution forecast



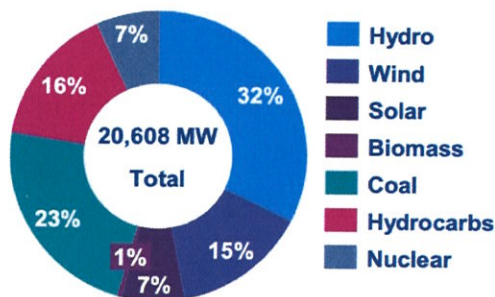
- The COVID-19 crisis brings uncertainty in the economy making it difficult to predict economic consequences; The EIU predicts a contraction of 4% in real GDP during 2020, the IMF a 5% decline, while the World Bank is the most optimistic with a 0.3% expected increase. All three, forecast a rebound starting from 2021.
- Compared to the 2010 crisis, government has been involved at an early stage in socio-economic affairs, through social protection measures, which have eased the lockdown's consequences and paved the way for a linear recovery process



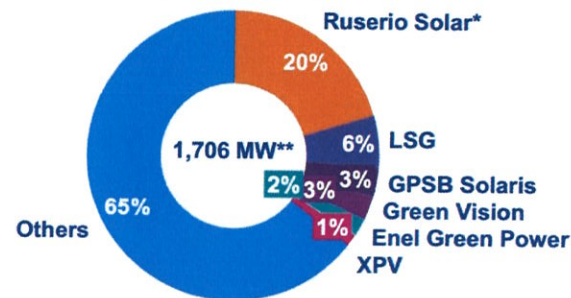
# Renewable Energy Market

Favorable energy policy context with encouraged shift towards renewable energy sources

Romanian EE – Installed capacity



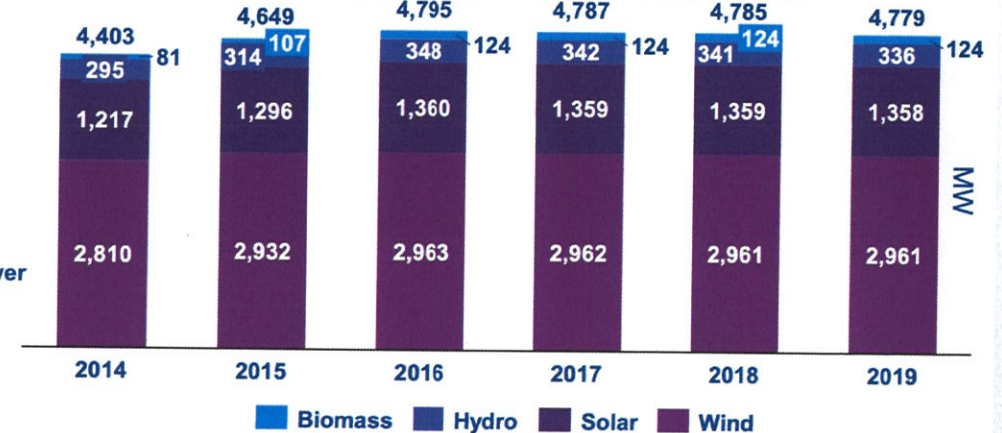
Solar PV Generation units – Installed capacity



\* Representation of Ruserio solar in the current E-RES market

\*\* 1,358 MW without Ruserio

E-RES Producers – Installed capacities



- Solar energy accounted for 28% of E-RES installed capacities in 2019. \
- Conventional sources of electricity production (namely thermo-energy groups) require reengineering and modernization, approx. 80% of them having exceeded their useful life and few of such power plants being equipped with GHG emission reduction facilities.
- Historically, Romania has been a net exporter of electricity. The gap between net internal consumption and net production has been lowering. Romania has become a net importer of electricity in 2019.

- While the baseline scenario in SEN development plan assumes the increase of E-RES installed capacities until 2027 by 23.5% (+1,056 MW), the green scenario (which implies major investments, integration of E-RES sources, increased energy efficiency, reduction of CO2 emissions, maximum development of Smart Grid solutions and energy storage capacities) assumes the increase of E-RES installed capacities until 2027 by 46.3% (+2,056 MW).
- Sustainability of the energy sector along with energy security and green energy generation are among Romania's key strategic objectives.



# Regulatory environment

Stable regulatory framework in line with EU regulation

- |                            |  |
|----------------------------|--|
| <b>Primary legislation</b> | <ul style="list-style-type: none"><li>• Issued by the Parliament and the Romanian Government.</li><li>• Energy and Natural Gas Law No. 123/2012 (the "Energy Act") establishes the general legal framework.</li><li>• Law No. 220/2008 amended establishes a system to promote E-RES.</li><li>• GD No. 1232/2011 approves the Regulation certifying the origin of produced E-RES.</li><li>• GD No. 540/2004 amended approves the Regulation for obtaining the authorizations in the electricity field.</li><li>• GD No. 90/2008 approves the Regulation for the connection of users to electricity grids of public interest.</li><li>• GD No. 1069/2007 approves the "National Energy Strategy 2007-2020": promotion of E-RES, implementation of new and clean technologies and promotion of trading of certificates as main objectives.</li></ul> |
|----------------------------|--|

- |                              |  |
|------------------------------|--|
| <b>Secondary legislation</b> | <ul style="list-style-type: none"><li>• Issued by the regulatory board – ANRE (Romanian Energy Regulatory Authority).</li><li>• Orders No. 42, 43, 44 and 45/2011 amended approve the regulation regarding applications and issuance for and of GC, working framework of GC market and methodology for the annual acquisition quotas of GC.</li><li>• Order No. 30/2013 enforces the Technical Norms and Regulation for the PV plants connection to the public energy grid, with the amendments provided by Order No. 51/2019.</li></ul> |
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## Compliance with EU provision

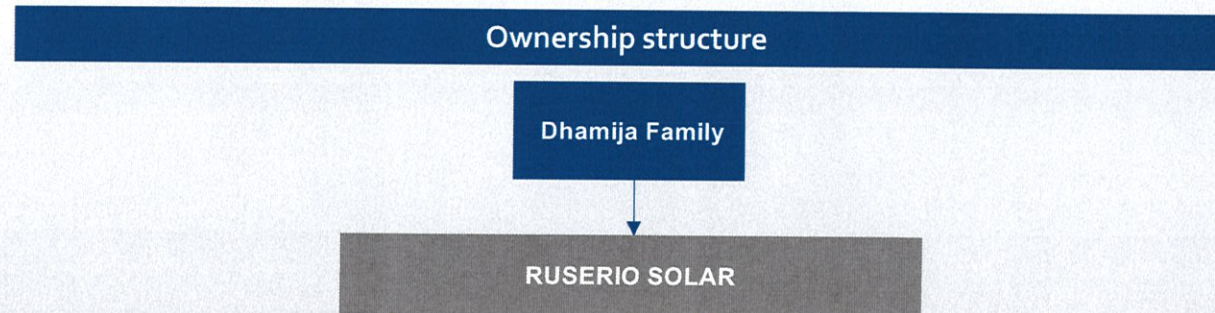
- The mechanism for promoting the production of RES-Electricity, consisting of a quota obligation system coupled with tradable GCs, the trading market for GCs and the targets set for the production of RES-Electricity, comply with the EU provisions.
- EU Directive 2003/30/CE for promoting and utilization of biofuels and other renewable fuels for transportation
- Directives 72/2009/EC and 73/2009/EC regarding common rules for the internal market in electricity and natural gas
- Regulation (EU) 2019/943 and Directive (EU) 2019/944 provide a framework for the further integration of renewable energy into the electricity market.

## Power Purchase Agreement legislation

- The Romanian Government has already passed legislation in May 2020 (through Government Ordinance), which would allow for the sale of electricity outside the OPCOM regulated market, this was however rejected by Parliament.
- (to be completed)



# Overview Ruserio Solar (1/2)



- Ruserio Solar ([www.ruseriosolar.com](http://www.ruseriosolar.com)) is a Special Purpose Company for the Dhamija Family ([www.dineshdamija.com](http://www.dineshdamija.com)) Green energy assets.
- The family wealth has been built on the sale of [www.ebookers.com](http://www.ebookers.com) a Nasdaq and London Stock Exchange company founded by Dinesh Dhamija. It was sold for \$471million in 2005. Ebookers.com was the first company in Europe to use an interactive internet website for travel bookings.
- Some of the accolades Dinesh got were, 2003 Entrepreneur of the Year UK, 2004 Asian man of the Year UK, and was admitted to the British Travel Hall of Fame in 2004. Benefactor Fellow of Fitzwilliam College creating 3 Fellowships and Member of the Guild of Benefactors for Cambridge University.
- From 2005-2015 Dinesh worked in the Charity sector in both UK and India, along with investing in Romania from 2007 onwards, when Romania joined the EU.
- From 2015-2020 Dinesh joined the Liberal Democrats which culminated in him being elected as a Member of the European Parliament in Brussels, representing London.
- The UK left the EU in February 2020 and Covid-19 hit us in March 2020, Dinesh has written his memoirs called "Book it !" His family office decided to use some of the land that they owned in Romania to build solar energy parks.



# Overview Ruserio Solar (1/2)



## Events in the Life of Dinesh Dhamija

Dinesh Started selling travel tickets from a kiosk at Earl's Court tube station in London



Appointed General Sales Agent for Royal Nepal Airlines in the United Kingdom and Ireland. Over the next decade, the company became known across Europe and established offices in 12 Countries. London

Founder of Ebookers



Sold Ebookers for 209 MEUR

Founder and chairman of the Copper Beech Group, a firm involved in residential property develop. in Romania and education infrastructure in India



Start Developing 1st Phase of 150 Mwe solar project



1980

1985

1990

1995

2000

2005

2010

2015

2020

The business venture had developed into Flightbookers, a travel agency with three established premises.



Ebookers became the first interactive online travel agency in the United Kingdom. Within a few years, the firm had established itself as one of Europe's leading travel agencies

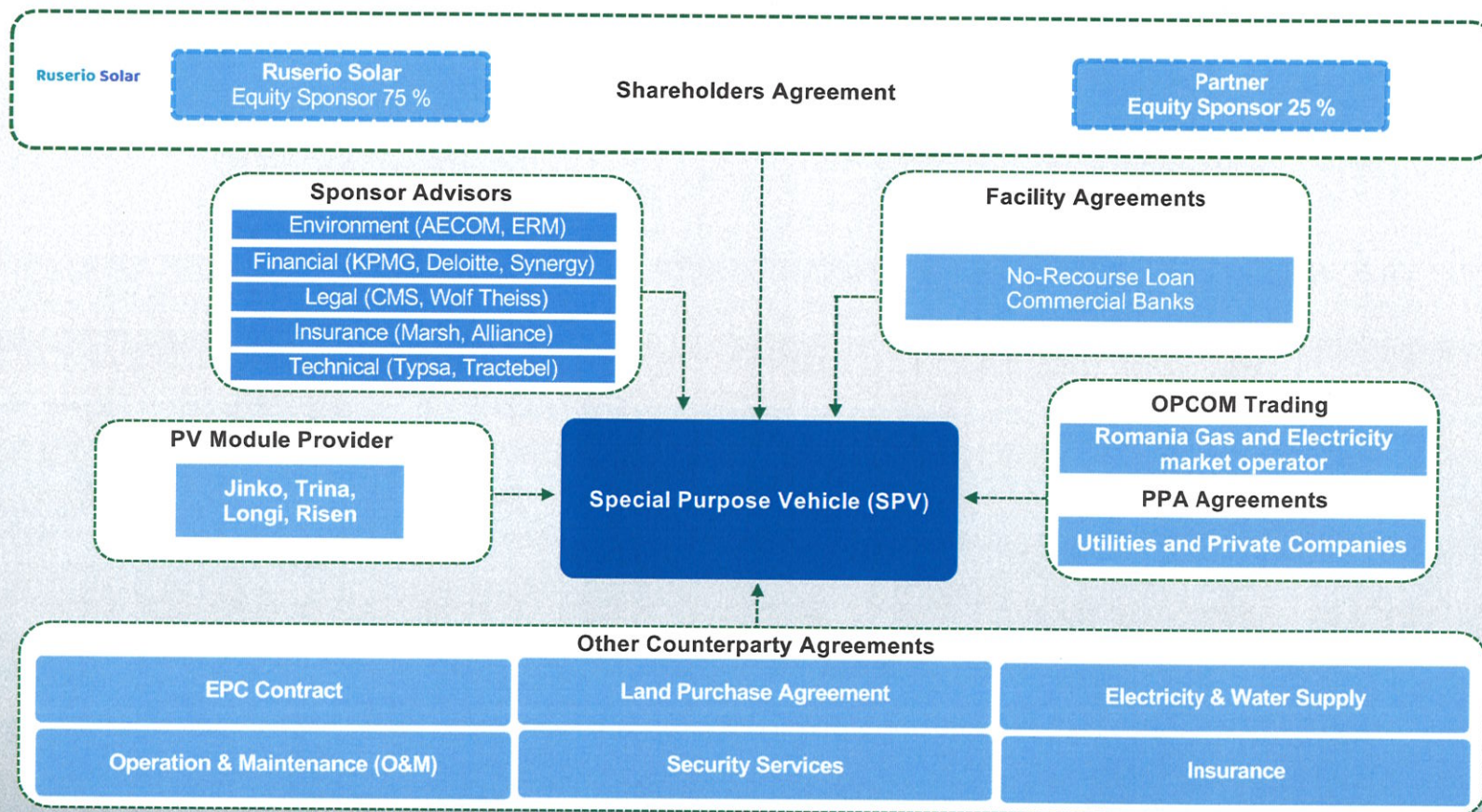
Ruserio Solar

Founder and chairman of Ruserio Solar, a firm involved in green solar and hydrogen projects in Romania....



# Commercial Structure

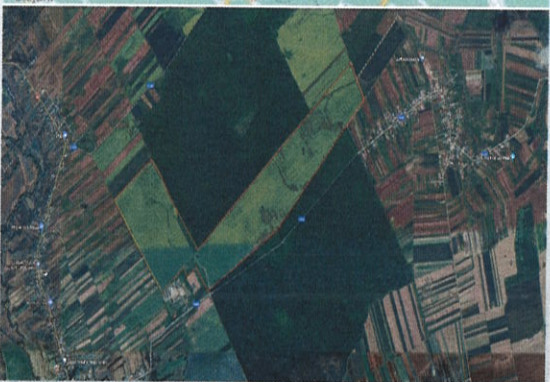
Stakeholders with great experience in the solar sector.





# Investment Project Overview

## Largest solar Project in Romania



### Project Overview

- Ruserio Solar is developing a solar PV plant at Bucsani district in Romania
- Project will involve (i) signing a corporate PPA with a private Offtaker and / or (ii) power trading at Romania Gas and Electricity market operator and/or (iii) power exchange and passing renewable auction
- Ruserio Solar will be responsible for the design, finance, build, own, operate, maintain and at the end of term decommission the solar PV plant

### Project Size and Site Location

- Giurgiu county, in Bucsani – Ogrezeni, with a capacity of 134 MWp (DC) / 113 MW (AC)
- Land has been secured and the site is located near Bucharest (35 km) and major city Ploiesti (20-25 Km)
- Site area: 150 ha
- Terrain is generally flat, no obstacle, structure or vegetation

### Road Infrastructure

- Land can be easily accessed through existing road infrastructure.

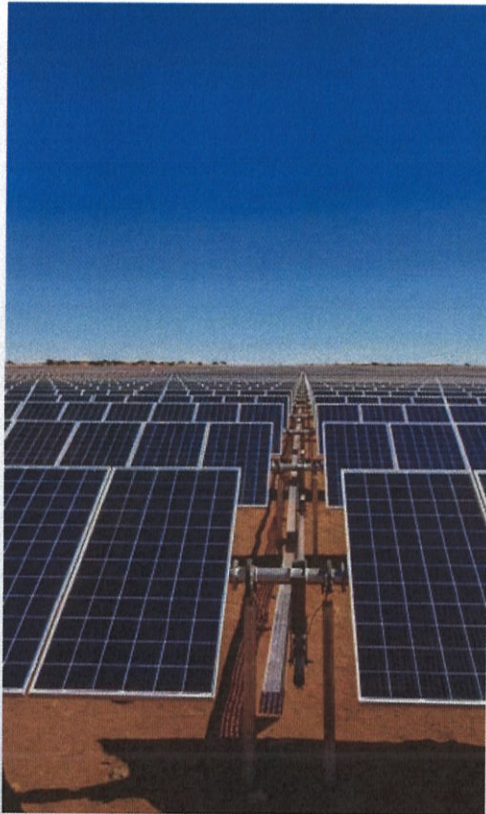
### Electrical Infrastructure

- Strong presence of TSO and DNO in the area nearby Giurgiu due to the vicinity with the capital city, where the electrical grid is dense.
- Electrical infrastructure present near Location 1, such as substations and overhead lines: 400 KV OHL Urechesi-Domnesti, 400 KV OHL Slatina- Bucuresti Sud, 110/20KV Marsa Substation, 110 KV OHL Videle-Clejani, 110/20KV Crivina Substation.



# Proposed Technical Solution

Expected performance ratio of 87% for the first years



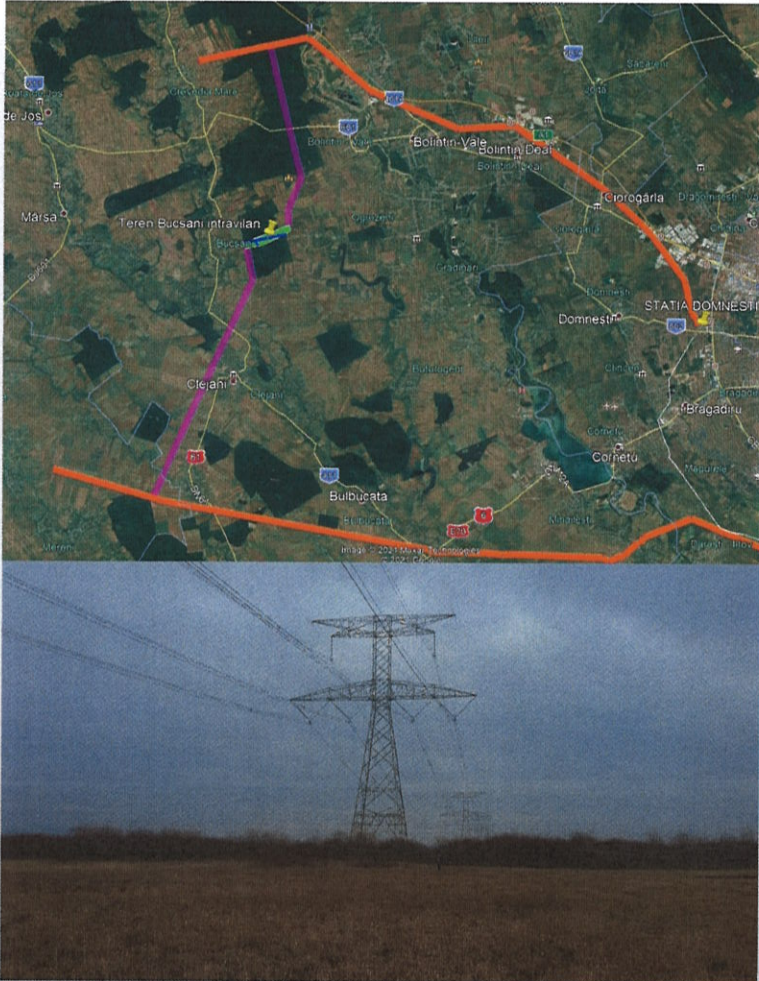
<b>Location and Resource</b>	Latitude Station: 44.122 DD Longitude Station: 26.058 DD Elevation: 85 m GHI: 3.77 KWh/m2/day
<b>PV System</b>	<ul style="list-style-type: none"><li>Plant Capacity: 134 MWe (dc) / 113 MWe (ac)</li><li>DC to AC ratio: 1.19</li><li>Number of Modules: 234,984</li><li>Number of strings in parallel: 9,791</li></ul>
<b>PV Modules</b>	<ul style="list-style-type: none"><li>Power: 570.24 Wdc</li><li>Efficiency: 25.9 %</li><li>Cell type: monoSI</li><li>Module Area: 2.2 m2</li><li>Module type: Bifacial</li><li>Mounting Configuration: Ground Mounted</li><li>Potential Vendors: Jinko, Trina, Longi, Raisen</li></ul>
<b>Inverter</b>	<ul style="list-style-type: none"><li>Maximum DC input power: 6.33 Mwe (dc)</li><li>Maximum AC output power: 6.25 Mwe (ac)</li><li>Efficiency: 98,7%</li><li>Minimum MPPT DC Voltage: 875 Vdc</li><li>Maximum MPPT DC Voltage: 1300 Vdc</li><li>Potential vendors: ABB, SMA, Sungrow</li></ul>

<b>Transformer</b>	<ul style="list-style-type: none"><li>The LV/MV transformer will be provided to increase the voltage from 0.6kV to 20kV and will be equipped with all relevant monitoring and protection devices.</li><li>The HV transformer will increase the voltage from 20kV to the grid requirements</li></ul>
<b>Mounting Structure</b>	<ul style="list-style-type: none"><li>Fixed structure system made from galvanized steel to prevent corrosion, with a 37 tilt to adapt to the terrain and to optimize the layout given the available land</li></ul>
<b>Weather Station</b>	<ul style="list-style-type: none"><li>Full meteorological station.</li><li>Integrated system comprised of main collector (crate), solar radiation collector, wind speed and direction collector, temperature sensor, radiation sensor, air velocity and wind transducer, RS485 communication, wind shaft and cross arm.</li></ul>



# Grid Connection Options

Largest solar Project in Romania



## Grid Connection Overview

The Project is proposed to be fed into the national transport PowerGrid through a MV/400 kV Substation connected in a IN-OUT configuration in one of the two 400 kV powerlines in the vicinity owned by Transelectrica (Romanian TSO).

The distances between the Project and the existing powerlines are:

- North approx. 10 km to 400 kV Domnesti – Urechesi
- South approx. 14 km to 400 kV Bucuresti Sud - Slatina

## Substation

- For a 400 KV Substation a safety distance of 35 meters around the Substation is required by the Romanian legislation. With the grid operator consent, the distance can be reduced to 10 meters.
- As an alternative to the AIS, a hybrid (air and SF6) Substation can be considered since it requires less terrain and less time for construction.

## Power line

- The 400 kV connection powerline to the national transport Power Grid through shall be double-circuit

## General

All the materials and equipment used in the construction of the Project Substation and connection powerline must be manufactured by well established international or Romanian manufacturers and must be in compliance with the European, Romanian, and TSO legislation, norms and regulations. For the design of the Substation and connection powerline the TSO must be consulted, otherwise he has the right to deny the connection to the National PowerGrid. By Romanian legislation, the design and execution of electrical installations on Romanian territory must be performed by companies approved by the Energy Romanian Authority (ANRE).



# Permits status

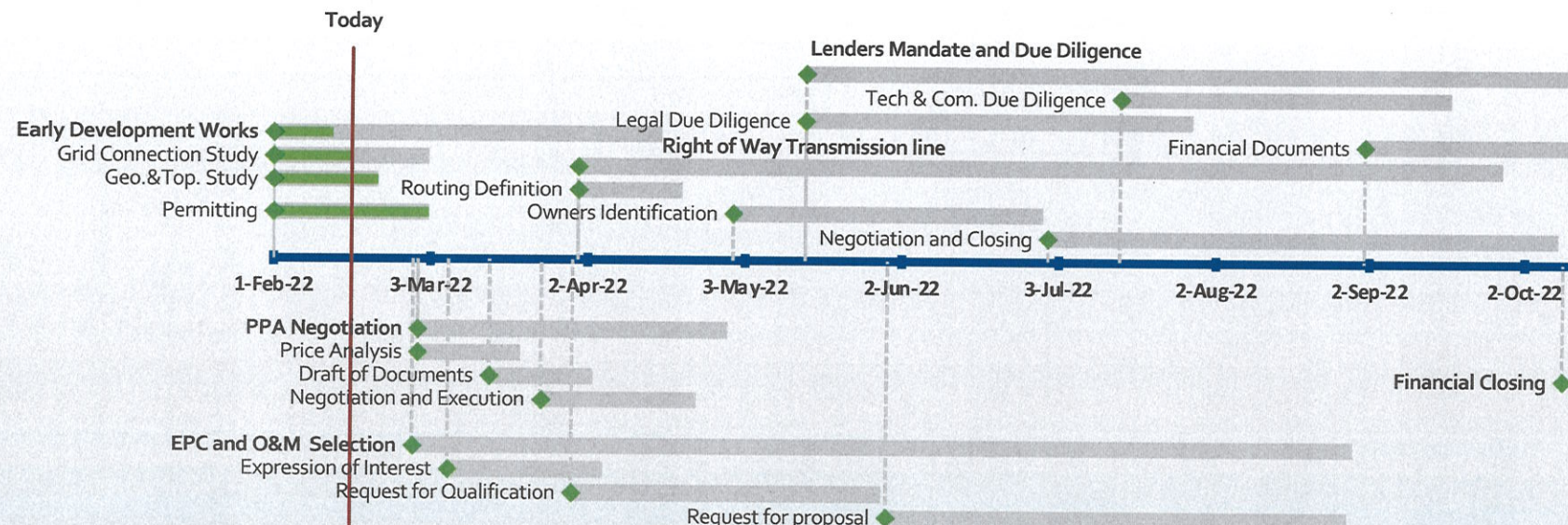
Largest solar Project in Romania

Risk Allocation	In Charge	Issuer	Status	Comments
Topographic survey	External provider	OCPI	✓	
Electrical infrastructure permit	Project developer	ENEL	✓	
Electrical infrastructure permit (ATR)	Project developer	TRANSELECTRICA	Ongoing	
Gas infrastructure permit	Project developer	TRANSGAZ	✓	
Fire safety	Project developer	ISU	✓	
Culture/archeological permit	Project developer	DJC	✓	
Irrigation infrastructure approval	Project developer	ANIF	✓	
Forestry permit	Project developer	Ocolul Silvic/Directia silvica	✓	
Geotechnical study	External provider		✓	
Watershed protection permit	Project developer (+ External provider)	ABA (Apele Romane)	✓	
Ministry of Defense approval	Project developer	MAPN	✓	
Technical Documentation for BP (DTAC)	External provider		✓	Pending DTAC
Environmental Permit	Project developer	APM	✓	



# Financial Closing Schedule

Targeting Financial Closing before the end of 2022



Milestone	Completion Date
Early Development works	15 April 2022
PPA Negotiation	1st May 2022
EPC and O&M Selection	2nd Sept 2022

Milestone	Completion Date
ROW transmission line	15th September 2022
Lenders Due Diligence	20th Sept 2022
Final Closing	15th Oct 2022



# COD Schedule

Targeting to start the Construction before the end of 2022



Milestone	Submission date
Step 1 - EOI	31 <sup>st</sup> March 2022
Step 2 - PQ	31 <sup>st</sup> May 2022
Step 3 - RFP	30 <sup>th</sup> Aug 2022

Milestone	Date	Commercial Operation Date
NTP	10 <sup>th</sup> October 2022	
COD	30 <sup>th</sup> Apr 2024	
Final Acceptance	30 <sup>th</sup> Apr 2026	



# Expression of Interest– EOI – Submission Date Before 31<sup>th</sup> March

Ruserio Solar formally announces the commencement of a competitive process to select a company or consortium to participate in Engineering, Procurement, Construction, and Operation and Maintenance Services for Solar Project in Romania with tentative capacity 134 MWp (“Project”).

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## **Step 1**

### **1. Expression of Interest**

All interested parties which have experience of undertaking similar projects are invited to participate and are requested to submit an expression of interest (“EOI”) no later than 5 PM on 31st March, 2022. The EOI should be submitted with an electronic copy to:

[bucsani.epc.tender@ruseriosolar.com](mailto:bucsani.epc.tender@ruseriosolar.com). The EOI Must include:

- a) Contact Details (Person, address, telephone number and e-mail)
- b) Corporate Presentation
- c) List of solar photovoltaic project references

Those bidders invited to RFQ will submit the qualification documents

## **Step 2**

### **1. Prequalification Request for Qualification Phase**

Bidders must comply with the technical and financial criteria defined in the PQ documents

Those bidders invited to RFP will submit the technical and commercial proposal

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## **Step 3**

### **1. Request for EPC and EPCF Proposal**

Bidders must comply with the technical and financial criteria defined in the RFP documents

Three shortlisted bidder will be invited for the final negotiation.