



COMUNI di SANTERAMO IN COLLE e ALTAMURA

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Studio Agronomico	STUDIO FRANCESCO PIGNATARO Via Carlo Levi snc - 74013 Ginosa (TA) Tel. 099/8294585 e-mail: segreteriastudiopignataro@gmail.com				
Opera	Progetto per la realizzazione di un impianto per produzione d' energia elettrica da fonte solare fotovoltaica di potenza di picco pari a 44,01 MWp e potenza di immissione pari a 42,00 MW su tracker ad inseguimento monoassiale (nord-sud) nei Comuni di Santeramo in Colle ed Altamura (Zona Industriale "lesce") e delle opere connesse ed infrastrutture indispensabili alla costruzione e all'esercizio dell'impianto nel Comune di Matera.				
Oggetto	Folder: Relazioni e documenti del progetto definitivo dell'impianto			Sez. A	
	Nome Elaborato: G4KMY67_AnalisiPrezzi_rev01.pdf			Codice Elaborato: A10	
	Descrizione Elaborato: Analisi dei nuovi prezzi delle opere di costruzione e dismissione del progetto definitivo				
01	Settembre 2021	Riscontro alla nota di integrazione dell'Ufficio Energia n.8721 del 06/08/2021	R. Montemurro	R. Montemurro	Emera S.r.l.
00	Febbraio 2021	Emissione per progetto definitivo	R. Montemurro	R. Montemurro	Emera S.r.l.
Rev.	Data	Oggetto della revisione	Elaborazione	Verifica	Approvazione
Scala:					
Formato: A4	Codice Pratica: G4KMY67				



Non-binding price offer for your Project

Date: 31.08.2021
Version: 00

Name of project: Natuzzi - EMERA srl

customer name (Client): EMERA s.r.l.
site location: Santeramo in Colle (BA)

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1) Overview and description of the project

This project-specific non binding quotation for a PV plant in address of site with a peak power of 44.010 kWp is based on:

- Client's technical specification
- Separate notes on the offer
- Existing agreements (site-visit, project-call)

Following documents were provided by the customer:

- CAD
- KMZ
- SLDs
- Site regulations

Execution of the project according to discussed time frame. Please see also chapter 7.
A detailed construction schedule has yet to be defined.

The findings and agreements made in the course of the site inspection carried out on 01/03/2021.

Your specific solution:

Plant size:	44.010 kWp
Specific yield:	1.797 kWh/kWp

With our turnkey solar PV systems, we ensure that our customers achieve the best returns from the systems through the use of experienced engineers, proven technologies and services.

In our offer you will find the technical description, the expected yield (attachement 3) and the expected costs, as well as the next steps for the development of this solar project.

For technical data of the PV plant please see attachments.

2) Major components

All system components are selected according to the following criteria:

- Long life
- High reliability
- Minimal maintenance

PV Modules

LONGI LR4-72HPH-450M

- Performance: 450 Wp
- State-of-the-art halfcut technology for more efficiency
- IP68 junction box for long-term weather resistance
- Tier 1 supplier with the highest quality standards
- Extensive range of certificates

For more detail please see datasheet in attachments.



Inverter

Huawei 105 - 3 Phase String Inverters

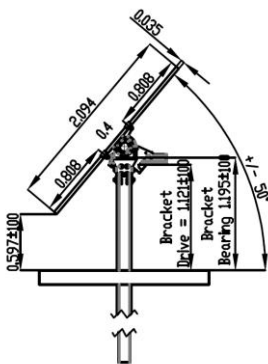
- World's leading provider (Fortune 100 company)
- Highest efficiency
- Power Line Communication (PLC) supports
- Smart String I-V diagnostics supported
- Type II DC and Type III AC Surge Protectors Integrated

For more detail please see datasheet in attachments.



Substructure

Zimmermann PV-Stahlbau specialized PV substructure "Zimtrack" (tracker single axis – North South)



- Hot dipped galvanized steel structure with Magnelis coating on C rails
- Design of the structure according to Eurocode regulation
- Manufacturer warranty 10 year

For more detail please see datasheet in attachments.

3) Technical description / Scope of work

A			
DC installation of the PV plant			
<i>Pos.</i>	<i>Quantity</i>	<i>Unit</i>	<i>Description</i>
A.1	44.010	kW_p	PV-Modules
	97.800	pcs.	<u>Technical specifications:</u> See datasheet
A.2	338	Pcs.	<p>Inverters</p> <p>Provision and mounting of the components including data communication unit and surge protective device type II.</p> <p>Installation performed according to local electrical standards and guidelines of the manufacturer.</p> <p><u>Technical specifications:</u> See datasheet</p>
A.3	1	lump-sum	<p>PV substructure</p> <p>Type: Zimtrack – 1 foot hot-dipped galvanized steel structure Manufacturer: Zimmermann PV-Stahlbau Tilt of modules: +/- 60° Orientation: east-west, 1 modules portrait</p> <p>The foundation is based on ram piles driven appr. 2,00m deep into the ground. Detailed foundation engineering after geotechnical analysis on site.</p> <p>Provision and mounting of the components. <u>Technical specifications:</u> See datasheet and drawing</p>
A.4	1	lump-sum	<p>Power plant monitoring and control unit</p> <p>Type: SPCC (according Italian grid code standard)</p> <p>Provision, mounting and programming of a data communication unit for remote monitoring of the PV plant via a web portal.</p> <p>Delivery, assembly and installation of the technology for the remote controlling of the power plant according to the requirements of applicable regulation as well as the transmission system operator (TSO).</p> <p>All control unit components of the TSO (e.g. ripple control receiver, TSO telecontrol technology) have to be provided by the customer.</p>

A.5	1	lump-sum	<p>DC-mounting</p> <p>Mechanical mounting of the substructure, PV modules and inverters by a PV mounting specialist according to all manufacturer guidelines and underlying standards.</p> <p>Including potential equalisation of all system components.</p>
A.6	1	lump-sum	<p>DC-Cabling</p> <p>DC-cabling of modules to inverter inlets in sufficient dimensions and lengths Halogen free cables Including multi contact connectors according to module and inverter specification Average voltage drop <1% DC cables laid out well protected in rails of support structure with minimal DC-Cabling in the ground.</p>
A.7	1	lump-sum	<p>Lightning protection</p> <p>Design and execution of the lightning protection system and/or integration of the photovoltaic system into this system by a certified expert company.</p>
A.8	1	lump-sum	<p>Construction site equipment / Health and Safety</p> <p>Provision of lifting and transportation gear, scaffolding and safety barriers according to local standards, waste disposal.</p> <p>Planning and implementation of all necessary health and safety measures.</p>
A.9	1	lump-sum	<p>Planning, project and building site management</p> <p>Overall system planning, e.g. module layout planning, ballast planning, electrical planning, on site management</p>
A.10	1	lump-sum	<p>Construction risks insurance</p> <p>Construction risks insurance for all offered works, especially mounting, repairing, construction, etc.</p>
A.11	1	lump-sum	<p>Technical documentation and marking of the system components</p> <p>Documentation of the (PV) installation according to EN 62446 and BayWa r.e. standards. Including 'as built' drawings, commissioning tests, modules flash test data, data sheets and O&M manuals of the installed components (English version). Digital versions. (USB stick).</p>

B	AC installation		
<i>Pos.</i>	<i>Quantity</i>	<i>Unit</i>	<i>Description</i>
B.1	1	lump-sum	<p>AC installation</p> <p>Provision and installation of the following components:</p> <ul style="list-style-type: none"> • Complete low voltage and high voltage AC-installation works on solar field. • Installation and connection works at transformer stations. • Including potential equalisation of all system components.
B.2	34	Pcs.	<p>Compact transformer station</p> <p>Dry transformer, 800/1000/1250/1600kVA Type: GEAFOL Neo® Three phase cast resin transformer Or equal Manufacturer: Siemens</p> <p>Technical specifications: See datasheet</p>
B.3	1	lump-sum	<p>Cable Route</p> <p>MV-Cabling between the transformer station at the solar field and the Point of connection.</p> <p>Soft Dig ARG7H1R 18/30 kV MV-Cable</p> <p>Exact position and length of the cable route to be clarified.</p>
B.4	1	lump-sum	<p>Provision and installation of transformer station</p> <p>Provision and installation of the transformer station according to the technical specifications in the data sheet.</p> <p>Incl. foundation and grounding for the transformer station</p>

C			
Grid connection			
<i>Pos.</i>	<i>Quantity</i>	<i>Unit</i>	<i>Description</i>
C.1	1	lump-sum	<p>Cable Route</p> <p>MV-Cabling between the transformer station at the solar field and the Point of connection.</p> <p>Soft Dig</p> <p>ARG7H1R 18/30 kV MV-Cable</p> <p>Exact position and length of the cable route to be clarified.</p>
C.2	1	lump-sum	<p>MV/HV user substation (33/150kV)</p> <p>Including (but not limited to):</p> <ul style="list-style-type: none"> • 1 HV/MV trafo 50 MVA ONAN/ONAF according TSO spec. • HV connections / busbar • Current transformer / voltage transformer according TSO spec • HV breaker • Surge protections • Earthing • Cable ducts • Building • Civil works • Auxiliary subs
C.3	1	lump-sum	<p>HV cable route (150 kV)</p> <p>HV-Cabling between the user substation and the Point of connection (TSO station).</p> <p>Soft Dig</p> <p>ARE4H1H5E 150 kV HV-Cable</p> <p>Exact position and length of the cable route to be clarified.</p>

D			
Environmental mitigation works			
<i>Pos.</i>	<i>Quantity</i>		<i>Description</i>
D.1	1	lump-sum	<p>Civil ground preparation works</p> <p>Supply and planting of trees as per the filed project</p>

E			
Plant auxiliary systems			
<i>Pos.</i>	<i>Quantity</i>		<i>Description</i>
E.1	1	lump-sum	Perimetral fencing
E.2	1	lump-sum	Perimeter and cabin LED lighting system
E.3	1	lump-sum	Anti-intrusion system and video surveillance Civil works Poles mounting

F			
Plant end-of-life dismantling			
<i>Pos.</i>	<i>Quantity</i>		<i>Description</i>
F.1	1	lump-sum	Dismantling operations including (but not limited to): <ul style="list-style-type: none"> - Site preparation - PV generator dismantling - Buildings/station/shelters dismantling - Electrical plant (cable ducts, pits, auxiliary plants) dismantling - Earthing system dismantling - Fencing removal - HV/MV User substation and cable route dismantling - Access roads / internal roads dismantling - Characterization of the waste by CER code - Electrical and Civil waste disposal - Final ground levelling / landscaping

4) Prices and terms of payment

Pricing (Net plus VAT)												
Points A-B-C-D-E	Specific price (approx.) This corresponds to a total price of	614 €/kWp 27.016.198 €										
Point F (optional)	Specific price (approx.) This corresponds to a total price of	44 €/kWp 1.955.514 €										
Terms of payment (net plus VAT)												
<p>1) Payment is made according to payment schedule:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">1st milestone: down payment</td> <td style="text-align: right;">10 %</td> </tr> <tr> <td>2nd milestone: after delivery of the modules on site</td> <td style="text-align: right;">30 %</td> </tr> <tr> <td>3rd milestone: finishing of the module mounting</td> <td style="text-align: right;">30 %</td> </tr> <tr> <td>4th milestone: after after works completion</td> <td style="text-align: right;">20 %</td> </tr> <tr> <td>5th and last milestone: after Provisional Acceptance Certificate (PAC)</td> <td style="text-align: right;">10 %</td> </tr> </table> <p>2) Each instalment is due for payment ten business days after the occurrence of the respective event or after the respective construction stage has been reached in accordance with the stipulations of the payment plan and the existence of a corresponding invoice.</p>			1st milestone: down payment	10 %	2nd milestone: after delivery of the modules on site	30 %	3rd milestone: finishing of the module mounting	30 %	4th milestone: after after works completion	20 %	5th and last milestone: after Provisional Acceptance Certificate (PAC)	10 %
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5th and last milestone: after Provisional Acceptance Certificate (PAC)	10 %											

5) Open issues and topics to be clarified

The following items still require clarification and are a prerequisite for final PV system design. Any deviations from the scope of works may lead to additional costs. Proven additional costs will be indicated and offered separately.

- Provide final design and specifications as per actual Authorization decree

Actions / Work to be provided by the client as required during the execution phase:

- Liaison with the Authorities for the obtention, e.g. building permit, final legalization of the PV plant. Support from BayWa r.e. when needed.
- Specific requirements arising from the issued permits which might affect the design of the solar PV installation.
- Liaison with the TSO for the obtention of permits/connection agreement with the support of BayWa r.e. (BayWa coordinates all actions required on site with the TSO).
- All components supplied to required by the grid network operator.
- Approval of the design provided by BayWa including the load calculations.
- Any works/certifications required as a result of the evaluation/risk assessment carried out as per the point above.
- Necessary space on site to set up a compound.
- Site security, if needed, is excluded from the offer. It is assumed that the works can be carried out at normal working hours.
- Provision of a SIM data communication card for internet access of the data logger.
- Spare parts

6) Warranty and guarantees

Warranty for the construction of the BayWa r.e. Solar Projectss	2 years BayWa r.e. Solar Projectss
Substructure	10-year manufacturer's product warranty
Inverter	10-year manufacturer's product warranty
PV Modules	10-year manufacturer's product warranty 25-year manufacturer's performance warranty

7) Development and construction time

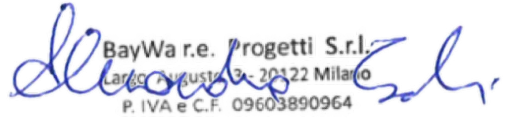
- Project development: approx. 8 months to 15 months (e.g. building permit, network inquiry, if necessary: development plan) .
- Construction time: approx. 10 months from technical clarification of the open issues which are mentioned above.

8) Attachments

Below is the list of attachments attached as separate documents:

- 01 Overview layout with mounting locations
- 02 Module layout
- 03 PVSyst report
- 04 Further designs and drawings (MV design, cabling design, substructure design)
- 05 Data sheet PV-modules
- 06 Data sheet inverters
- 07 Data sheet substructure
- 08 Data sheet data logger
- 09 Data sheet of the transformer station

Date:


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BayWa r.e.

r.e.think energy