

MONTENEGRO ENVIRONMENTAL PROTECTION FUND (ECO-FUND)

Pursuant to Article 76 paragraph 4 of the Environmental Law ("Official Gazette of Montenegro", No. 052/16, 073/19), Article 13 of the Articles of Association of the Environmental Protection Fund ("Official Gazette of Montenegro", No. 61/19), Rulebook on requirements to be fulfilled by beneficiaries, the manner of allocation and use of funds of the Environmental Protection Fund, Rulebook on the procedure of announcing a Public Call, evaluation of applications and decision-making in the selection of beneficiaries of funds of the Environmental Protection Fund, the Rulebook on the manner of monitoring the designated use of funds of the Environmental Protection Fund of and the Decision of the Board of Directors of the Eco- Fund on the adoption of the Annual Program for the announcement of Public Call for the year 2021 from 02.08.2021. (number: 01-077/21-207/3), on 20.12.2021Eco-Fund announces:

PUBLIC CALL

FOR

ALLOCATION OF SUBSIDIES FOR THE IMPLEMENTATION OF RENEWABLE ENERGY SOURCES PROJECT - FOR THE PRODUCTION OF ELECTRICITY FOR SELF-CONSUMPTION IN THE NETWORK OR INDEPENDENTLY "ON-GRID AND OFF-GRID PHOTOVOLTAIC SYSTEMS"

1. Subject of the "On-grid and Off-grid Photovoltaic Systems" Public Call

The subject of the Public Call is the award of subsidies for the implementation of RES projects - for the production of electricity for self-consumption, on-grid or off-grid "On-grid and Off-grid photovoltaic systems".

The implementation of this project will contribute to the development of the market and greater use of renewable energy sources, encouraging the application of energy efficiency measures, reducing CO2 emissions and producing electricity for self-consumption in places where the distribution network in Montenegro is not available.

The Eco-Fund provides a subsidy for micro, small and medium-sized enterprises, entrepreneurs

and all natural persons who are registered with the competent authorities for self-employment and on that basis generate income (hereinafter: the beneficiary/s) for the purchase and installation of photovoltaic panels (in hereinafter: photovoltaic system) for the production of electricity from RES:

- On-grid system: power not less than 3 kWp, on the roof of the main or auxiliary building, with accompanying equipment.
- Off-grid system: power not less than 600 Wp, battery reserves not less than 200 Ah, inverter power not less than 1000W and other accompanying equipment.

Photovoltaic system in terms of this Call, is a system for the production of electricity from solar energy in accordance with the Law on Energy ("Official Gazette of Montenegro", No. 005/16 of 20.01.2016, 051/17 of 03.08.2017, 082/20 of 06.08. 2020), where Article 96 defines the production of electricity for self-consumption in network operation.

Photovoltaic on-grid system includes: photovoltaic panels (modules), mounting substructure for the installation of photovoltaic panels, inverters, cable distributions for connecting and operating the photovoltaic system, protective equipment, surveillance/monitoring system over the photovoltaic system, lightning protection, connection cabinet with space for a two-way meter.

Photovoltaic off-grid system includes: photovoltaic panels (modules), assembly substructure for the installation of photovoltaic panels, off-grid inverters, batteries, smart device for recording electricity production/consumption, cable distributions for connection and operation of the photovoltaic system, charging controller batteries and protective equipment.

2. A) General conditions to be met by beneficiaries for on-grid systems:

- The building built on the basis of the appropriate act in accordance with the Law on Spatial Planning and Construction of Facilities ("Official Gazette of Montenegro" No. 064/17 of 06.10.2017, 044/18 of 06.07.2018, 063/18 of 28.09.2018, 011 /19 from 19.02.2019 and 082/20 from 06.08.2020) and any other that is equated with it by the special law;
- An object that has not been extended or changed in relation to the act that proves its legality;
- Photovoltaic panels for the production of electricity from renewable sources, power up to 10 kW, on the roof of the main or other auxiliary building, in terms of the Law on Spatial Planning and Construction of Facilities are auxiliary buildings;
- The existing meter for calculating electricity is in the name of the same investor of the photovoltaic system, that is, the owner of the facility;
- Objects on which the legalization procedure has been initiated cannot be subject to financing until the legalization of the procedure is completed;
- The applicant cannot be a founding entrepreneur and/or a founder who owns shares in another legal entity that was previously granted a subsidy through this Public Call;

- The lessee of the building cannot exercise the right to subsidy via this Public Call;
- The applicant cannot exercise the right to a subsidy for the procurement and installation of an off-grid system through this Public Call.
- The applicant cannot exercise the right to a subsidy for the procurement and installation of an on-grid system through this Public Call if he has exercised the right to the subsidy on the same facility within the framework of other programs and projects in 2022.

B) General conditions that the user of the funds must fulfill for the off-grid system:

- Production of electricity for self-consumption in places where the distribution network is not available;
- An object that has not been extended or changed in relation to the act that proves its legality;
- Objects on which the legalization procedure has been initiated cannot be subject to financing until the legalization procedure is completed;
- The applicant cannot exercise the right to a subsidy for the purchase and installation of an on-grid system through this Public Call.

3. Public Call Objective

The objective of the electricity production project using "On-grid and Off-grid photovoltaic systems" is to encourage the purchase and installation of photovoltaic systems in order to provide support to:

- low-carbon development through increasing energy efficiency, independence, security of supply, reducing energy consumption, and thus the associated costs;
- reduction of greenhouse gas emissions;
- more secure energy supply;
- affirming the use of RES;
- support for rural development, through improving EE and increasing the competitiveness of agricultural products, with the aim of reducing energy consumption, and thus reducing production costs;
- improvement and refinement of agricultural production;
- encouraging and improving EE in the tourism sector;
- production of electricity for self-consumption in places where the distribution network is not available.

4. Beneficiaries

The right to the Eco-Fund subsidies according to this Call can be exercised by:

- micro, small and medium enterprises,
- entrepreneurs and
- all natural persons who are registered with the competent authorities for selfemployment and earn income on that basis.

5. The type and amount of allocated subsidies

Provided by this Public Call, subsidies will be allocated to micro, small and medium-sized enterprises, entrepreneurs, as well as to all other natural persons who are registered with the competent authorities for the performance of independent activities and on that basis provide income.

The total amount for the allocation of subsidies for this Public Call is €190,000.00, out of which €150,000.00 is designated for on-grid systems, while €40,000.00 is for off-grid systems.

On-grid system: The maximum amount of subsidy beneficiary can obtain for the purchase and installation of photovoltaic systems is 40% out of eligible costs, i.e. a maximum of €25,000.00, VAT included.

Off-grid system: The maximum amount of subsidy beneficiary can obtain for the purchase and installation of photovoltaic systems is 40% out of eligible costs, i.e. a maximum of €5,000.00, VAT included.

In the event that subsidies provided for the procurement and installation of photovoltaic systems by this Public Call are not used in the amount provided for one of the systems, it is possible to redistribute the subsidies for another system.

6. List of documents that must be attached to the application

For all applicants:

- Completed, signed and stamped application for participation in the Call (for natural persons who are registered with the competent authorities for self-employment and earn income on that basis, the stamp is not required) in a closed envelope with the name and address of the Eco-Fund, the name and address of the applicant, an indication of the subject of the Public Call to which the application relates, on address: Environmental Protection Fund, Ul. Slobode 2, 81000 Podgorica.
- Declaration of the applicant that includes the following items:
 - that in addition to subsidies received under this Call, the remaining financial resources for the implementation of the project have been secured;
 - ability to implement the planned investment within 60 calendar days upon the Subsidy allocation Agreement with Eco-Fund is signed;
 - To submitt data in the next three years on the amount of electricity produced through the photovoltaic system, should the Eco-Fund require;

- statement on the accuracy and truthfulness of the data;
- Power of attorney confirming that the person is authorized to submit the documentation;
- Consent of the co-owner if the applicant is not the sole owner of the facility;
- Original extract from the real estate register with all attachments, which establishes the right of ownership of the main or auxiliary object (provide an extract from the cadastre not older than 30 days from the date of application for the Call);
- Photo documentation of the facility for the installation of the photovoltaic system (photos can be submitted in printed or digital form).

For companies and entrepreneurs:

- Proof of registration with the authority responsible for the registration of economic entities in Montenegro with data on authorized persons (original extract from the Central Register of Economic Entities of Montenegro) not older than 7 days from the date of application;
- Certificate issued by the Revenue Administration of Montenegro that due taxes and contributions are paid (value added tax, taxes and contributions on personal income of employees, tax on the profit of legal entities, etc.) not older than 30 days from the date of application for the Call;
- Certificate from the competent Local Public Revenue Administration that obligations based on local public revenues are settled (real estate tax, personal income tax surcharge, utility fees and fees), no older than 30 days from the date of application for the Call;
- Statement from the Central Securities Depository and Clearing ompany;
- Statement of the applicant regarding the award of low value aid de minimis aid;
- Evidence from the competent authority issued on the basis of a criminal record, which
 must not be older than six months until the day of the announced Public Call, that he or
 his legal representative has not been convicted of any of the criminal offenses of
 organized crime with elements of corruption, money laundering and fraud;
- Evidence from the competent authority, which must not be older than six months until the day of the announced Public Call, that no criminal proceedings are being conducted against the applicant, as well as the authorized persons of the applicant, for any of the criminal offenses of organized crime with elements of corruption, money laundering and fraud;
- The investment program (Business Plan) for the on-grid system should contain:
 - basic information about the project,
 - project description,
 - main goals and project tasks/activities,
 - specific goals and contribution of the project (including personnel capacities of the beneficiaries and the projected impact on employment growth),
 - technical and technological solutions of the project,

- location analysis,
- expected results and effects of the project (environmental effects and economic-financial effects) with performance indicators, ¹
- economic and financial assessment of the project.²
- dynamics of project implementation,
- the total estimated value of the project and the expected participation of the Fund in its financing,
- analysis of potential project risks.

For natural persons who are registered with the competent authorities for selfemployment and based on which earn income:

- Proof of the competent authority on registration for self-employment issued before the date of publication of the Public Call;
- Photocopy of the identity card of the authorized person;
- Permit for residence and work in Montenegro issued by the competent ministry (this applies to foreign nationals).

For on-grid photovoltaic systems with a power greater than 10 kW:

- Revised main project with estimate and preliminary calculation prepared in accordance with the Law on Spatial Planning and Construction ("Official Gazette of Montenegro", No. 064/17 of 06.10.2017, 044/18 of 06.07.2018, 063/18 of 28.09. 2018, 011/19 from 19.02.2019, 082/20 from 06.08.2020);
- As an attachment to the revised main project, it is necessary to submit a technoeconomic analysis containing: the average annual electricity consumption of the facility for three calendar years (that is, if the facility was built in the last three years, for the period from the beginning of use to the end of the last calendar year), calculation of potential annual electricity production using relevant software and data from the available literature or using data from measurements in the field, calculation of the profitability of the investment in the construction of a photovoltaic power plant;
- Agreement on consulting services for the technical document created (for projects created and revised from the date of announcement of the Public Call until the deadline for submission of applications) and proof of payment;
- Agreement on the services of professional supervision over the execution of works;
- The offer of the selected contractor that contains evidence of the efficiency and

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¹Article 8 of the Rulebook: https://www.eko-fond.me/files/documents/1610703807-

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²Article 8 of the Rulebook: https://www.eko-fond.me/files/documents/1610703807-Regulations%20o%20procedure%20publishing%20public%20competition,%20valuation%20application%20and%20decision%C4%8Divanju%20o%20selecting%20users%20funds%20funds%20for%20for%C5%A1titu%20%C5%BEivotne%20sredine.pdf

technical characteristics of the equipment (manufacturer's certificates). The characteristics of the equipment listed in the main project, which directly affect the techno-economic analysis, cannot be changed during the execution of the project.

For on-grid photovoltaic systems up to 10 kW:

- Conceptual solution in accordance with the Law on Spatial Planning and Construction ("Official Gazette of Montenegro", No. 064/17 dated 06.10.2017, 044/18 dated 06.07.2018, 063/18 dated 28.09.2018, 011/19 dated 19.02.2019, 082/20 dated 06.08.2020) and accompanying documentation in accordance with the municipal Decision on the installation or construction and removal of auxiliary facilities, which is valid for the territory of the municipality where the installation of the photovoltaic system is planned;
- Agreement on consulting services for the technical document created (for the Conceptual solution created from the date of announcement of the Public Call until the deadline for submitting applications) and proof of payment;
- As an attachment to the conceptual solution, it is necessary to submit a techno-economic analysis that contains: analysis of monthly electricity consumption for the previous three years (that is, in the case that the facility was built in the last three years, for the period from the beginning of use to the end of the last calendar year), calculation of potential annual electricity production using relevant software and data from the available literature or using data from measurements in the field, calculation of the profitability of the investment in the construction of a photovoltaic power plant;
- The offer of the selected contractor that contains evidence of the efficiency and technical characteristics of the equipment (manufacturer's certificates).

NOTE: The conceptual solution must be prepared in accordance with Articles 75, 76 and 122 of the Law on spatial planning and construction and the Rulebook on the method of preparation and content of technical documentation for construction. A company that prepares technical documentation (enginer), i.e. a company that builds a building (contractor), is obliged to have at least one authorized engineer employed in order to carry out the activity of creating technical documentation, part of technical documentation, i.e. construction or execution of certain types of works on the construction of the building according to the type of project that is created, namely for: architectural, construction, electrotechnical and mechanical projects, or the type of work performed based on those projects. That is, the company must have a license for the design and execution of power system works.

For off-grid photovoltaic systems:

- Conceptual solution that contains: technical description, calculation of electricity production on an annual level, bill of quantities and estimate of works and equipment, single-pole system diagrams, license of the company that created the Conceptual solution, license of the responsible engineer, insurance policy of the company, extract

from the Central Register of Companies of Montenegro not older than one month.

- The offer of the selected contractor that contains evidence of the efficiency and technical characteristics of the equipment (manufacturer's certificates).

Annex 1: Technical requirements for on-grid photovoltaic systems up to 10 kVA Anex 2: Connection diagram for on-grid photovoltaic systems up to 10 kVA with a meter Annex 3: Connection diagram for on-grid photovoltaic systems from 10 kVA to 30 kVA with meter

Annex 4:Technical requirements for off-grid photovoltaic systems

Annex 5: Equipment connection diagram for off-grid photovoltaic systems

The entire documentation submitted on the basis of this Public Call remains in the relevant archives of the Eco-Fund without the obligation to return or copy it on the part of the Eco-Fund.

At the moment of submission of the application to the Eco-Fund, the applicant receives a confirmation of submission of the application with the indicated day, hour and minute of submission and with the indicated request code/code.

NOTE:

All the above statements must be certified by a notary or a competent court or municipality.

You can download all the necessary forms, applications, statements and other documents from the official website of the Eco-Fund at the following address: www.eko-fond.me

7. Criteria for the allocation of subsidies for on-grid systems (complex or investment project)³:

Basic criteria (75 points in total):

- 2. Technical characteristics of the project [warranty period (efficiency) for PV modules and degree of maximum inverter efficiency]......up to 10 points
- 3. Financial characteristics of the project (investment payback period)..... up to 15 points

Other criteria (total 25 points):

5. Female Involvement (responsible person, owner of the facility, etc.)......up to 5 points

³Rulebook on requirements to be fulfilled by beneficiaries, the manner of allocation and use of funds of the Environmental Protection Fund

- 6. Sector agriculture and tourismup to 10 points

8. <u>Criteria for allocation of resources for off-grid systems (simple pojekt⁵):</u>

Basic criteria (75 points in total):

- 2. Technical characteristics of the project [warranty period (efficiency) for PV modules and battery life]......up to 35 points

Other criteria (total 25 points):

- 3. Female Involvement (responsible person, owner of the facility, etc.).....up to 5 points
- 4. Sector agriculture and tourismup to 10 points
- 5. Municipal development index⁶up to 10 points

The maximum number of points that can be allocated to the beneficiary of Eco-Fund is 100. Requests with a higher number of achieved points have priority in the allocation of funds. A project rated with 0 points for the basic criteria will not be taken into consideration.

Information and documentation related to the basic criterion point 4 for on-grid systems, necessary for the evaluation of the readiness of the project for execution, can be supplemented in accordance with the requirements of the Eco-Fund during the evaluation of the fulfillment of the formal and legal conditions of the application.

In the event that according to any of the basic criteria points 2, 3, and 4 for on-grid systems determined by the Public Call, zero (0) points are awarded, the Commission may reject the application or, in accordance with the conditions of the Call, request a supplement to the application within a certain period.

In the event that zero (0) points are allocated according to the basic criterion point 2 for off-grid systems determined by the Public Call, the Commission may reject the application or, in accordance with the conditions of the Call, request a supplement to the application within a certain period.

In the event of an equal number of points, the priority is given to the beneficiary who submitted the application earlier.

9. Place and deadline for submitting the application

The documentation is submitted:

- by registered mail or handing it to the protocol of the Eco-Fund in a closed envelope

⁴Solar resource maps of Montenegro – Photovoltaic Electricity Potential (2020 The World Bank, Source: Global Solar Atlas 2.0, Solar resource data: Solargis) https://solargis.com/maps-and-gis-data/download/montenegro;

⁵Rulebook on requirements to be fulfilled by beneficiaries, the manner of allocation and use of funds of the Environmental Protection Fund

⁶Rulebook on establishing the list of the level of development of the local self-government unit ("Official Gazette of Montenegro", No. 077/19 of 31.12.2019, 113/20 of 25.11.2020).

with the name and address of the Eco-Fund, the name and address of the applicant, an indication of the subject of the Public Call to which the application relates,

- to the address: Environmental Protection Fund, Ul. Slobode 2, 81000 Podgorica
- with the indication: "Documentation for the Public Call for the allocation of subsidies for the implementation of renewable energy sources project for the production of electricity for self-consumption on grid or independent operation "On-grid and Off-grid photovoltaic systems".

Submission of applications begins on the day of announcement of the Public Call.

The deadline for submitting applications is 60 calendar days from the date of announcement of the Public Call, i.e. until 3:00 p.m. in the premises of the Eco-Fund, ending on February 17, 2022.

The results of the Public Call will be published on the website of the Eco-Fund.

Applicants from the previous Public Call "Photovoltaic panels for the economy and agriculture" that have not gained the right to a subsidy, and whose technical documentation has already met all the prescribed conditions, have the opportunity to participate in this public call without submitting it. They are obliged to submit a new application form and documentation prescribed by this Public Call, with a cover letter of notification referring to the application from the above-mentioned Public Call. Applicants from the previous Public Call "Photovoltaic panels for the economy and agriculture" will be treated like all other applicants according to this Public Call, without any real advantage over the others.

Processing of documentation

Eco-Fund will evaluate applications:

- which were submitted by the applicants who were designated by this Public Call as beneficiaries of Eco-Fund subsidies,
- which are the subject of this Public Call,
- which contain all the prescribed documentation by the Public Call.

Applications that are not submitted within the prescribed period, in the manner and in the form prescribed by this Public Call, will be considered unacceptable and will not be considered.

Applications that do not meet the formal and legal requirements will be rejected.

The Commission can ask the applicant to supplement the documentation and assign him a deadline of 8 calendar days for the delivery of the same. If the applicant submits the amended documentation within the specified period, the day of receipt of the amended documentation will be considered the day of receipt of the complete application. In the event that the applicant does not submit additional documentation within the given deadline, it will be considered that he has abandoned the application, and the Eco-Fund will inform him in writing that, for the stated reason, he cannot claim the right to the funds provided by this Public Call.

The Eco-Fund will deliver the Decision on the Selection of Beneficiaries to the applicant in

writing, and the list will be published on the Eco-Fund's official website. Against the Decision on the selection of beneficiaries based on the published public call, the applicant who has not been granted the funds can submit an objection to the Eco-Fund within 5 working days of receiving the notification.

10. <u>Conclusion of the Agreement with the beneficiary and method of subsidy disbursement</u>

The Eco-Fund will conclude an Agreement on the Allocation of Eco-Fund subsidies with the applicants who have obtained the right to use the subsidies by decision and will pay the funds to the bank account of micro, small and medium-sized enterprises, entrepreneurs or natural persons registered with the competent authority for self-employment, under the conditions and within the period stipulated by the Agreement.

The agreement regulates the amount of approved funds of the Eco-Fund and the dynamics of their allocation, the conditions and method of using the allocated funds, the documentation that the beneficiary is obliged to submit to the Fund, the term of validity of the contract, which will be determined in accordance with the updated dynamic plan submitted by the beneficiary, and other mutual rights and obligations of users of beneficiaries and the Fund.

After making the Decision on the selection of the beneficiary, and before signing the Agreement, the Program Engineer and the Eco-Fund will conduct a control and determine the zero balance. Controls on the ground can be performed at any time during the implementation of the project.

The agreed amount of financial support will be specified in the Agreement, and will be based on the cost estimate from the selected contractor's offer, which contains evidence of the efficiency and technical characteristics of the equipment (manufacturer's certificates). The approved financial support is both an estimate of costs and an upper limit for acceptable costs that must be based on actual costs and not on an arbitrary estimate.

Beneficiaries who will install an on-grid photovoltaic system with a power of more than 10 kW are obliged to submit a final report on the expert supervision (which is carried out in accordance with the Law on Spatial Planning and Construction) in which it is stated that the photovoltaic system was built in accordance with the revised master project.

The beneficiary, after the implementation of the project, submits the Financial and Narrative Report to the Eco-Fund. The subsidy is allocated with the condition of complete reports a delivery nd after an on-site control of the conducted works to be carried out by Program engineer and expert appointed by Eco-Fund-Report on the implementation of the installation of the photovoltaic system.

The time frame for the implementation of the project is 60 calendar days from the date of conclusion of the Agreement between the Eco-Fund and the beneficiaries, not later than June 10, 2022.

Eligible expenses

Applications can be sent for the co-financing of the project that will be implemented in 2022, i.e. all costs that will be implemented from the date of announcement of the Public Call, as well as within the agreed deadline for the implementation of the project.

With the means determined by this Public Call, it is possible to cover the costs:

On-grid systems:

- **Procurement and installation of NEW equipment** which makes the photovoltaic system in accordance with market prices and includes: photovoltaic panels, mounting substructure for the installation of photovoltaic panels, inverters, cable distributions for connecting and operating the photovoltaic system, protective equipment, surveillance/monitoring system over the photovoltaic system, lightning protection⁷, connecting cabinet with space for a two-way meter.
- **Development of project and technical documentation**: for systems up to 10 kW, the costs of creating a conceptual solution, and for on-grid systems over 10 kW, the costs of creating a revised main project.
- **Professional supervision costs** for systems over 10kW.

Off-grid systems:

- **Procurement and installation of NEW equipment, which includes:** photovoltaic panels, mounting substructure for the installation of photovoltaic panels, off-grid inverters, batteries, smart device for recording the production/consumption of electricity, cable distributions for connecting and operating the photovoltaic system, protective equipment.
- **Development of the conceptual solution:** the costs of developing the Conceptual Solution.

In order to be acceptable, according to this Public Call, costs must meet the following conditions:

- They must be clearly indicated in the offer of the selected contractor, which contains evidence of the efficiency and technical characteristics of the equipment (manufacturer's certificates);
- They must be in line with the real market prices valid at the time of project preparation and implementation. If the commission assesses that the presented costs do not correspond to real market prices, it is authorized to request an explanation from the applicant, and ultimately reject the application if the clarification procedure has a negative outcome according to the commission's assessment.
- They must be in accordance with the principles of fair financial management, which especially refers to the value of the invested money and the effectiveness of costs

⁷ The lightning protection of the photovoltaic system will be connected to the existing lightning protection of the building and the grounding of the building. It is understood that the grounding of the building meets the applicable regulations and standards, and the eventual need for reconstruction of the grounding is not included as a cost that will be covered.

(getting the right value for the invested money);

- The costs were incurred for the preparation of technical documentation from the day of the announcement of the public call, while the costs for procurement and installation (works) and professional supervision after signing the Contract with the beneficiary of the subsidy within the agreed period (retroactive covering of costs is not allowed);
- During the period in which the project is implemented, expenses must be recorded in the financial books of the applicant, must be recognizable and verifiable and supported by original documentation that must be made available to the Project Team of the Eco-Fund.

Rejected expenses:

- Expenses incurred before the date of announcement of this Public Call, regardless of whether they cover any of the above-mentioned items;
- Costs of office supplies;
- Purchase or lease of land and existing facilities;
- Interest, fines, financial penalties and court costs;
- Bank costs (commissions, transfers, etc.);
- Used/second-hand equipment, devices (systems);
- Maintenance, depreciation and space rental costs;
- Costs in kind;
- Insurance costs;
- Items funded from other sources (to avoid double funding).

11. Other information

This public call was published in the daily newspapers "Pobjeda", "Vijesti" and "Dan" and on the website of the Eco-Fund (www.eko-fond.me). By submitting documentation to this Public Call, the applicant gives permission to the Eco-Fund to publish basic information about him and the submitted project on the Eco-Fund's website and in other reports.

Additional information can be obtained by phone +382 20 262 933 and the contact person Jovana Daković - Head of the Department for the implementation of support measures and development-project activities and Lidija Škatarić - Expert for energy efficiency and climate change, or by e-mail to the address:projekti@eko-fond.me.

Annex 1: Technical requirements for on-grid photovoltaic systems up to 10 kVA

Photovoltaic panels (modules) must meet the following technical requirements:

- The nominal power of the photovoltaic module is a minimum of 250 Wp
- Module efficiency under standard test conditions (STC): not less than 17.5%
- Frame material: anodized aluminum
- The photovoltaic module should be covered with tempered glass with an antireflective layer
- Permissible snow/wind load: not less than 5300 Pa / 2300 Pa
- Endurance to hail, not weaker than: diameter 25 mm at a speed of 80 km/h
- Temperature range: not lower than -30°C to + 50°C
- Guaranteed efficiency of the PV module after 10 years: not less than 91 % of the nominal efficiency
- Guaranteed efficiency of the PV module after 25 years: not less than 82 % of the nominal efficiency
- Ground screw
- The structure/supports of photovoltaic panels should be made of aluminum alloy with stainless steel screws.

Grounding: Form a PE bus connected to the grounding of the object. All parts of the metal constructions of photovoltaic modules within one string must be connected to each other, according to the manufacturer's instructions, so that they form a single galvanic unit and connect it via P/F or Cu rope (25/35/50 mm2) to the PE busbar. It is also necessary to galvanically connect the metal frames that carry the photovoltaic modules (if installed) and connect them via P/F or Cu rope (25/35/50 mm2) to the PE bus. The lightning protection installation on the roof of the building (unless the roof is tin) should be isolated from the panels (so that there are no joints with the panel frames). On the one-way distribution, provide for the installation of appropriate surge arresters (if this function is not enabled with the inverter itself).

The inverter must meet the following technical requirements:

- Three-phase (3/N/PE, 230/400 V)
- Maximum efficiency: not less than 98%
- Maximum European efficiency: not less than 97%
- Frequency change range: not weaker than 45-55 Hz
- Indicated frequency: 50 Hz

- Power factor at rated power: greater than or equal to 0.99
- THD: less than 3% (at rated power)
- Injecting the DC component of the electricity: less than 0.5 % In
- Temperature range: not lower than -20° C to $+50^{\circ}$ C
- Degree of protection (according to IEC 60529): IP 65
- Integrated protections:
 - Protection against islanding
 - AC overvoltage/undervoltage protection
 - AC overfrequency/underfrequency protection
 - Overcurrent protection on the AC and DC side
 - Protection against reverse polarity of the connection on the DC side
- Integrated monitoring and communication interface:
 - Screen with information about voltage, energy production, power and voltage
 - Ethernet or Wi-Fi
 - A web application or smartphone application for monitoring the basic parameters of the production of a photovoltaic power plant.

The contractor is obliged to choose a place for the inverter respecting the manufacturer's conditions regarding temperature, humidity and other parameters of interest in order to ensure its reliable operation.

Standards

All components of the photovoltaic system for the production of electricity must comply with international standards, including standards concerning the safety of beneficiaries (safety from electric shock, security, fire protection).

Photovoltaic panels must comply with the following standards and certificates:

- MEST EN IEC 61853-1:2019
- MEST EN IEC 61853-2:2019
- MEST EN IEC 61853-3:2019
- MEST EN IEC 61853-4:2019
- MEST EN 61215:2013
- MEST EN 61215-1-1:2017
- MEST EN 61215-1-2:2018
- MEST EN 61215-1-3:2018
- MEST EN 61215-1-4:2018
- MEST EN 61215-2:2018
- MEST EN 61730-1:2011

- MEST EN 61730-1:2011/A1:2012
- MEST EN 61730-1:2011/A11:2016
- MEST EN 61730-1:2011/A2:2016
- MEST EN 61730-2:2011/A1:2012
- MEST EN IEC 61730-1:2019
- MEST EN IEC 61730-2:2019
- IEC 62804-1:2015
- IEC 61701:2011
- MEST EN 62716:2014
- TUV certified

The structure/supports of the photovoltaic panels must be made in accordance with the following standards:

- Eurocode 1, 3, 9
- ISO 9001 / ISO 14001.

Inverters must comply with the following standards and certifications:

- MEST EN 50524:2013
- MEST EN 50530:2013
- MEST EN 50530:2013/ A1:2016
- MEST EN 50530:2013
- EN 50549-1:2019 or EN 50438:2007
- IEC/EN 61000-3-12
- IEC 61727: 2004
- MEST EN 62109-1:2012
- MEST EN 62109-2:2012
- MEST EN 62116:2016
- Certificate G59/3.

The AC cabinet of the photovoltaic system must meet the following technical requirements

The cabinet in question is installed with appropriate equipment and in accordance with Technical Recommendation No. 10-10-28948 issued by CEDIS on September 13, 2021.

Standards

The cabinet is made of polyester in accordance with IEC 62208 and IEC-60529; 0.4kV; degree of protection IP65.

Circuit breakers must comply with the IEC/EN 60947-2 standard.

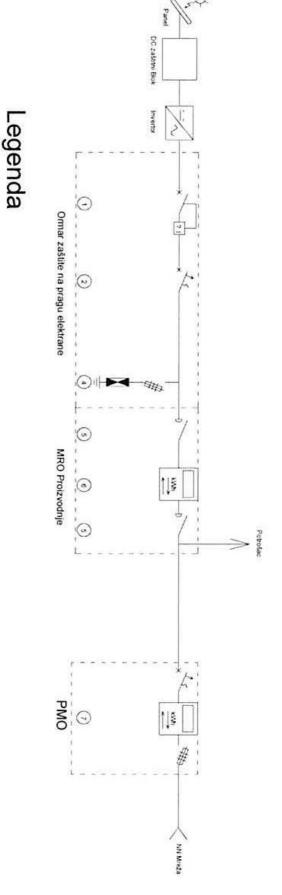
The construction of cable distribution must meet the following technical requirements:

- It is necessary to use cables that are specially adapted for use in photovoltaic system installations and have been tested according to the following standards: EN 60332-1-2, EN 50267-1-2, EN 50267-2-2 and EN 60216.
- Due to the high temperatures generated by photovoltaic modules, it is necessary to use cross-linked polyethylene conductors or conductors with halogen-free rubber insulation.
- Cable is placed in PNK racks on the roof of the building.

If the cable is laid in an earth trench, a FeZn strip 25x4 mm2 or a Cu rope of the appropriate cross-section is placed next to the cable.

<u>Annex 2: Connection diagram of the on-grid photovoltaic system with a power of 10 kVA with a meter</u>

Solarna elektrana snage manje od 10 kVA sa jednim invertorom Principijelna šema



Prenaponska zaštita (2P ili 4P) (Zaštita Elektrane)

Ormar zaštite na pragu elektrane

ZUDS - "B" Karaktenstika (2P til 4P) (Zaštita Elektrane)

Automatski zaštitni prekidac - "C" karaktenstika (1P ili 3P) (Zaštita Elektrane)

(6) Brojilo proizvodnje

(5) Rastavljac za brojilo proizvodnje

MRO Proizvodnje

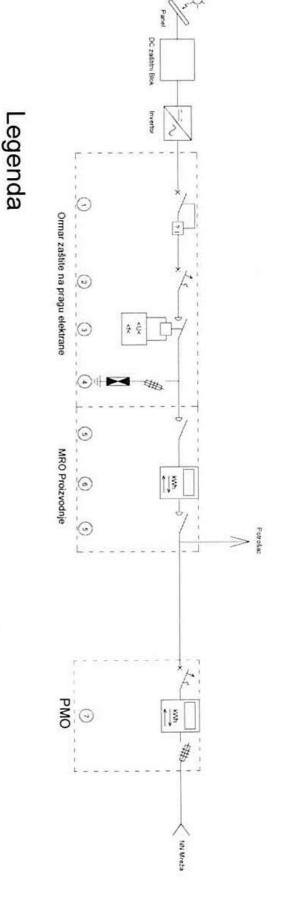
PMO

Obracunske brojilo

Zaštita od ostrvskog rada (Relej + kontaktor)

Napomena: Oprema za ormar zaštite na pragu elektrane i MRO proizvodnje može biti smještena u jednom ormaru, i u tom slucaju ormar mora biti lociran u skladu sa tackom 4.3 ovih Tehnickih zahtjeva.

Principijelna šema Solarna elektrana snage manje od 10 kVA sa više invertora



Napomena: Oprema za ormar zaštite na pragu elektrane i MRO proizvodnje može biti smještena u jednom ormaru, i u tom slucaju ormar mora biti lociran u skladu sa tackom 4.3 ovih Tehnickih zahtjeva.

Automatski zaštitni prekidac - "C" karakteristika (1P ili 3P) (Zaštita Elektrane)

6 Brojilo proizvodnje

Prenaponska zaštita (2P ili 4P) (Zaštita Elektrane) Zaštita od ostrvskog rada (Relej + kontaktor) Ormar zaštite na pragu elektrane

MRO Proizvodnje

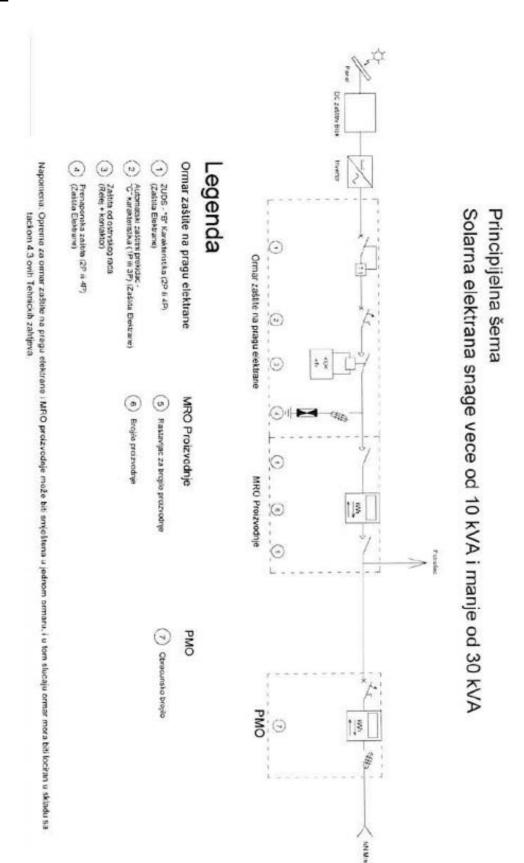
PMO

Obracunsko brojilo

(5) Rastavljac za brojilo proizvodnje

ZUDS - "B" Karaktenstika (2P iii 4P) (Zaštita Elektrane)

Anex 3: Connection diagram for on-grid photovoltaic systems from 10 kVA to 30 kVA with a meter



Annex 4:Technical requirements for off-grid photovoltaic systems

Photovoltaic panels (modules) must meet the following technical requirements:

- The nominal power of the photovoltaic module is a minimum of 250 Wp
- Module efficiency under standard test conditions (STC): not less than 17.5%
- Frame material: anodized aluminum
- The photovoltaic module should be covered with tempered glass with an antireflective layer
- Permissible snow/wind load: not less than 5300 Pa / 2300 Pa
- Endurance to hail, not weaker than: diameter 25 mm at a speed of 80 km/h
- Temperature range: not lower than -30° C to $+50^{\circ}$ C
- Guaranteed efficiency of the PV module after 10 years: not less than 91 % of the nominal efficiency
- Guaranteed efficiency of the PV module after 25 years: not less than 82 % of the nominal efficiency
- Ground screw
- The structure/supports of photovoltaic panels should be made of aluminum alloy with stainless steel screws.

Grounding: Form a PE bus connected to the grounding of the object. All parts of the metal constructions of photovoltaic modules within one string must be connected to each other, according to the manufacturer's instructions, so that they form a single galvanic unit and connect it via P/F or Cu rope (25/35/50 mm2) to the PE busbar. It is also necessary to galvanically connect the metal frames that carry the photovoltaic modules (if installed) and connect them via P/F or Cu rope (25/35/50 mm2) to the PE bus. The lightning protection installation on the roof of the building (unless the roof is tin) should be isolated from the panels (so that there are no joints with the panel frames). The earthing rail in the AC cabinet should be connected to the PE busbar.

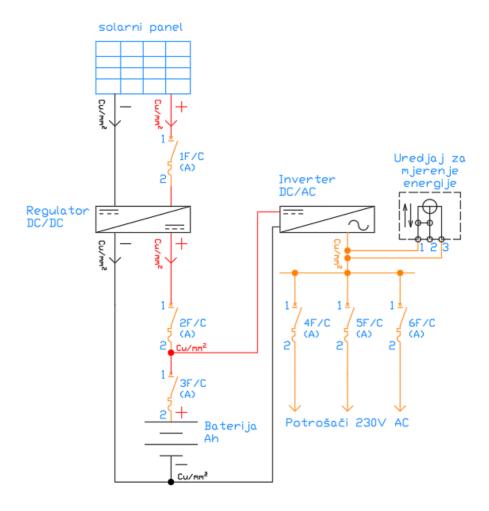
The inverter must meet the following technical requirements:

- OFF GRID inverter (12,24,48 VDC/230V AC)
- Output short circuit protection
- Overload protection
- Battery overvoltage protection
- Protection against low battery voltage
- Protection against excessive temperature
- Output voltage 230VAC

The battery must meet the following technical requirements:

- VRLA technology (AGM and GEL batteries) or Lithium-ion
- No maintenance
- To have a low self-discharge (less than 2%/month at 20 C°)
- Lifetime at a temperature of 20 C° minimum 7 years
- That their number of cycles (discharging/charging) is greater than 300

Annex 5: Equipment connection diagram for off-grid photovoltaic systems



Attachment:

Rulebook on determining the list of the level of development of local self-government units ("Official Gazette of Montenegro", no. 077/19 of 31.12.2019, 113/20 of 25.11.2020).

Map of photovoltaic potential for electricity production in Montenegro (2020 The World Bank, Source: Global Solar Atlas 2.0, Solar resource data: Solargis) https://solargis.com/maps-and-gis-data/download/montenegro;



Jedinica lokalne samouprave Budva	Indeks razvijenosti (Crna Gora=100)	Stepen razvijenosti jedinice lokalne samouprave 1.	Grupe (prema % odstupanja od prosječne vrijednosti indeksa razvijenosti u Crnoj Gori)	
			Iznad 125%	Šesta
Tivat	133,83	2.	IZING 12570	grupa
Podgorica	121,12	3.	Od 100% do 125%	Peta grupa
Kotor	118,91	4.		
Herceg novi	115,33	5.		
Bar	100,53	6.		
Danilovgrad	94,97	7.	Od 75% do 100%	Četvrta grupa
Nikšić	93,54	8.		
Cetinje	91,19	9.		
Žabljak	89,98	10.		
Ulcinj	83,47	11.		
Plužine	82,35	12.		
Pljevlja	78,55	13.		
Kolašin	74,11	14.	Od 50% do 75%	Treća grupa
Mojkovac	73,48	15.		
Šavnik	66,47	16.		
Bijelo polje	64,78	17.		
Berane	58,43	18.		
Tuzi	56,35	19.		
Rožaje	52,73	20.		
Plav	47,24	21.		
Gusinje	43,96	22.	1	
Andrijevica	41,60	23.	Ispod do 50%	Druga
Petnjica	28,13	24.		grupa

"Prilog