

Western Balkans Sustainable Energy Direct Financing Facility

**Taylor-made financing for small Renewable
Energy and industrial Energy Efficiency projects**

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What is WeBSEDFF?

- A direct financing facility operated by the EBRD
- For (small) renewable energy and (industrial) energy efficiency projects
- In the Western Balkans (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro and Serbia, including Kosovo, under UNSCR 1244)
- Endowed with up to EUR 50 million of loan funds + up to EUR 13 million in TC and incentive payment funds

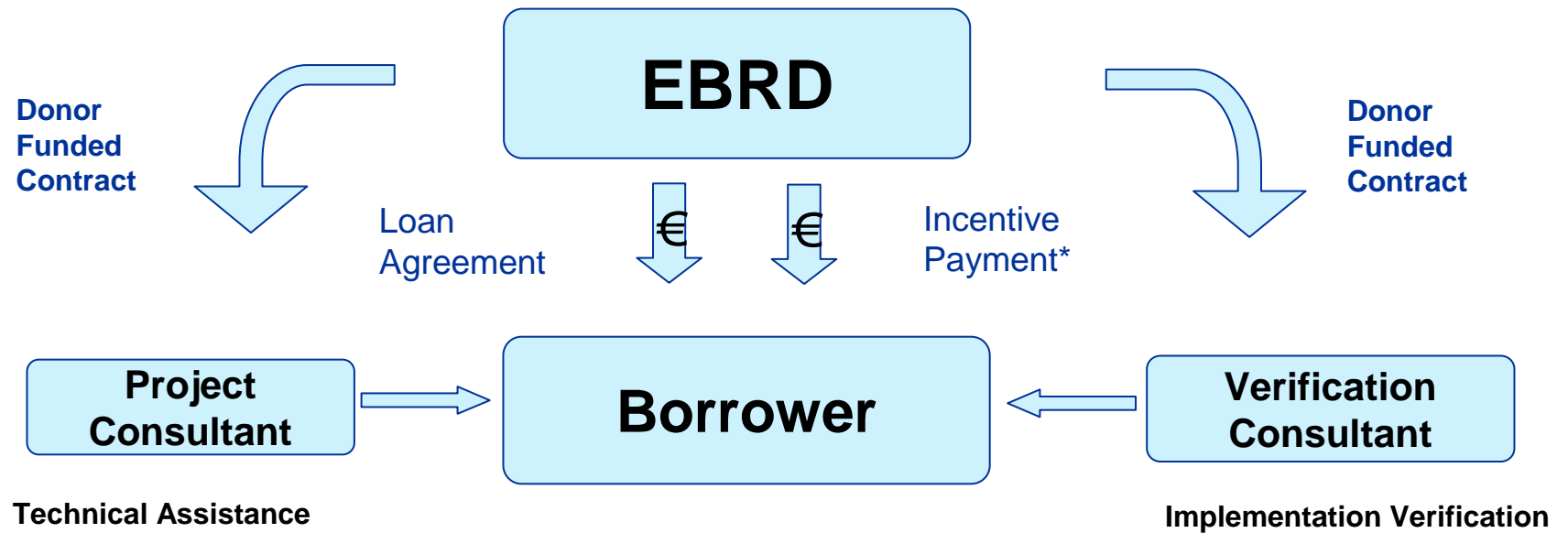


Financing instruments under WeBSEDF

- Senior (secured) loans and project financing arrangements
- From EUR 2 million to EUR 6 million EBRD financing
- Average (expected) maturity of 6-8 years for energy efficiency and 10-12 years for renewable energy projects, with appropriate grace periods and flexible repayment schedules
- Supported by TC funds for project identification and preparation as well as by incentive payments based on the estimated CO₂ emission reductions generated by each eligible project



Structure of the WeBSEDFF



** Incentive payments will be paid upon technical completion of the investments to eligible Borrowers*



Eligibility criteria (1)

- Eligible types of projects:
 - **Renewable Energy (only greenfield projects up to 10 MW)** – run-of-river hydro power plants, wind farms, PV solar systems, biomass systems generating heat and electricity, etc.
 - **Industrial Energy Efficiency** – on site co- or tri-generation; rehabilitation of boilers, compressed air systems and steam distribution systems; installation of chillers; installations for heat recovery from processes; various other EE improvement measures or combinations of them;

* Full list is available upon request



Eligibility Criteria (2)

- In order to **qualify for financing** and **incentive payments** under WeBSEDF the projects should meet certain eligibility criteria: *
 - **Technical criteria** - defined in terms of:
 - At least 20 percent of energy savings for industrial energy efficiency projects;
 - A minimum efficiency (utilization) rate for renewable energy projects;
 - **Financial criteria** – sound financial / economic structure and sufficient equity capital contributed to the project by the Sponsor;
 - **Other criteria** – for projects requiring concessions, licenses and permits, those should be obtained in compliance with the relevant EBRD requirements (transparent and competitive process, among others)

* Detailed information on the eligibility criteria can be provided upon request



Operational Arrangements

- **Approval Process and Other Features:**
 - A two-stage approval procedure carried out in London
 - Expected duration from initial discussions to final approval: 4 – 9 months
 - Legal costs: to be covered by the EBRD (subject to certain constraints)
 - Interest rates: market based, depending on the type and risk profile of the project, the Sponsor and other considerations



Incentive Payments

- In order to encourage local entrepreneurs to develop Sustainable Energy projects in a less than perfect market environment, WeBSEDFF will offer incentive payments to eligible projects
- The mechanism for provision of incentive payments under WeBSEDFF is **based on the CO₂ emissions reduction** that each project will achieve
- It emulates a CDM carbon credits transaction, but without generating actual carbon credits for the project sponsor or a third party



Incentive Payments: Operational Arrangements

- The incentive payments will be paid upon technical completion of each eligible project:
 - **Verification Consultant** will be hired using TC funds to establish the technical completion and operational viability of each project;
 - The incentive payments will be paid towards a **reduction of the outstanding loan principal** –the entrepreneurs will not receive a lump sum, but will benefit through reduced interest and principal payments over the life of the loan;
 - Incentive payment **cap** levels of **15-20%** of the loan principal will be introduced to prevent excessive subsidies for highly efficient projects or for projects with low leverage;



Mechanism Design: formula

- The general formula for calculation of the amount of the incentive payments for both RE and EE projects is as follows:

$$IP = \frac{CO_2 \text{ emissions avoided per year} \times \text{Price per ton of } CO_2}{\text{Annuity factor}} \times$$

Where:

CO₂ emissions avoided per year – a project specific variable

Price per ton of CO₂ – a shadow price stipulated by the EBRD

Annuity factor – a variable depending on a discount rate and the number of years over which CO₂ emissions reductions will be remunerated



Mechanism Design: formula (2)

- For RE projects the quantity of CO₂ emissions avoided per year can be calculated as follows:

$$\text{CO}_2 \text{ emissions avoided per year} = \text{MW of installed capacity} \times H_s \times C$$

Where:

MW of installed capacity – a project specific variable

H_s – a utilization rate parameter (annual effective hours of operation per year) that will be specified according to project type;

C – a coefficient that converts MWh of electricity generated into CO₂ emissions avoided (depending on the country specific electricity generation mix). Typical values can be in the range 0.5-1.1



WeBSEDFP Portfolio in FYR Macedonia

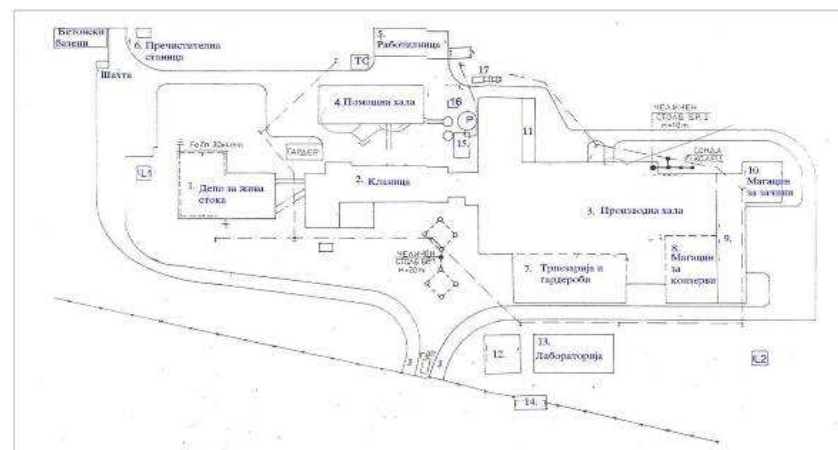
- **Four Projects Signed for a total amount of EUR 16.3 million:**
 - 13.4 MW Expected Power Generation from 14 SHPPs;
 - Expected 33% of IEE in MIK;

	Project Name	Sector	Type	Amount (EUR million)	Signing Date
1	MIK Sveti Nikole	Agribusiness	IEE	1.3	17/09/2010
2	Mali Hidro Elektrani	PEU	RES	6.0	23/12/2010
3	PCC Hydro	PEU	RES	6.0	14/04/2011
4	Hydro Energy Group	PEU	RES	3.0	17/05/2011



Energy Efficiency Project in Macedonia

- **The Company is active in meat production, processing and packing sector**
 - Proposed measures: steam boiler upgrading, installation of return condensate pipe system, replacement of insulation panels, replacement of old compressors, implementation of energy management system, installation of frequency controllers, lighting replacement, and others
 - Expected annual savings:
 - Electricity: 993 MWh → €109,000
 - Heavy Fuel Oil: 212 t → €189,000
 - Total investment: €1.5m



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