

# Iceland Liechtenstein Norway grants



**Project:** [BGENERGY-1.001-0001 “Feasibility study of the use of hydroenergy potential of existing water supply systems and increasing the potential of existing small hydroelectric power plants in water supply system”](#)

**Funded by** [Renewable Energy, Energy Efficiency and Energy Security Program](#), financed under the Financial Mechanism of the European Economic Area 2014-2021

**Beneficiary:** [Sustainable Energy Development Agency \(SEDA\)](#), Bulgaria

**Donor project partner:**

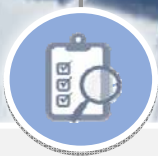
[Norwegian Water Resources and Energy Directorate \(NVE\)](#), Norway

**Project duration:** 12 months (15.06.2021 г.)

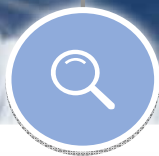
## PROJECT SUMMARY

The project will provide basic data on major water supply schemes in Bulgaria, which are expected to have the potential to combine water supply with hydropower production, by replacing reducing valves in the main pipelines from reservoirs to hydropower turbines. A database will be created after the project is completed, including hydrology in the catchment areas for determining the inflow, the consumption of water from the reservoirs to the reservoirs for distribution of water supply, the average annual distribution of water electricity and the potential surplus of water for additional energy production. The project is based on sustainable hydropower, through modern environmental and social know-how, using the optimum available hydropower resource with the lowest negative impacts. The scope of the project activities provides for an in-depth review of current policies, legal and regulatory frameworks related to hydropower in water supply schemes; review of existing pre-investment surveys of water and sewerage companies in the Ministry of Regional Development and Public Works; exchange of experience and good practices with representatives of the Norwegian Water and Energy Directorate; conducting trainings to enhance the qualification of hydropower experts and promote the results through an information campaign.

# OBJECTIVES



Assessment of the hydropower potential, as RES, by studying all aspects – political, legal, regulatory, technical and economic



Development of a database, including assessment of the water catchment areas and documentation of the existing technical characteristics of the hydropower facilities



Highlighting the production potential, costs and technical challenges related to the implementation of instruments for the use of hydropower resources



Analysis of the need to initiate changes to facilitate the increase of the potential of existing small hydropower plants in water supply systems



The information from the project will be used to encourage water supply scheme operators to apply for EEA assistance to realize some of the opportunities for energy production

# ACTIVITIES

01

Review of current policy, legal and regulatory framework in the hydropower sector



02

Review of the existing in the MRDPW pre-investment studies of the water supply and sewerage companies



03

Data collection from the water supply and sewerage companies in the country according to the identified checklist



04

Study visit to Norway (virtual)



05

Data collection, including from on-site measurements



06

Processing of the collected data



Analyzes of the data collected in the facts establishment process, including identification of types / sizes of possible projects

07



Submission a report to the program operator with analyzes of the potential for use of hydropower as RES in existing water supply schemes

08



Translation of all project documents into English and Bulgarian

09



Information campaign to promote the results of the project

10



Preparation of courses for hydropower experts in applicable renewable energy technologies in the WSS sector

11



External audit of costs

12



Project organization and management

13

## Summary report

[“Construction / Reconstruction and Connection to the grid of a Hydropower Plant – Summary of the Regulatory Framework”](#)

## PISs

[Review of the results of the pre-investment studies of the water supply and sewerage companies existing in the Ministry of Regional Development and Public Works](#)

## Report

[with data collection results from the water supply and sewerage companies in the country, according to an identified checklist](#)

## Reports

with the identified places for performing measurements with their full description, incl. photographic material and assessment of the energy potential

## Database

Collected data summary list, including measurements on site

## Summary report

Measurements results, including an assessment of the possibilities for expanding the water supply scheme and the possibilities for combining energy production through hydropower instead of pressure relief valves

## Analysis

Derived potential for the use of hydropower as a renewable energy source; scope and size of possible projects; sustainability of potential projects for the use of the hydropower resource with the lowest negative impacts

## Training

Performed a virtual visit organized by the Norwegian partner of the project

Conducted courses for hydro experts to get acquainted with applicable renewable energy technologies in the water supply and sewerage sector

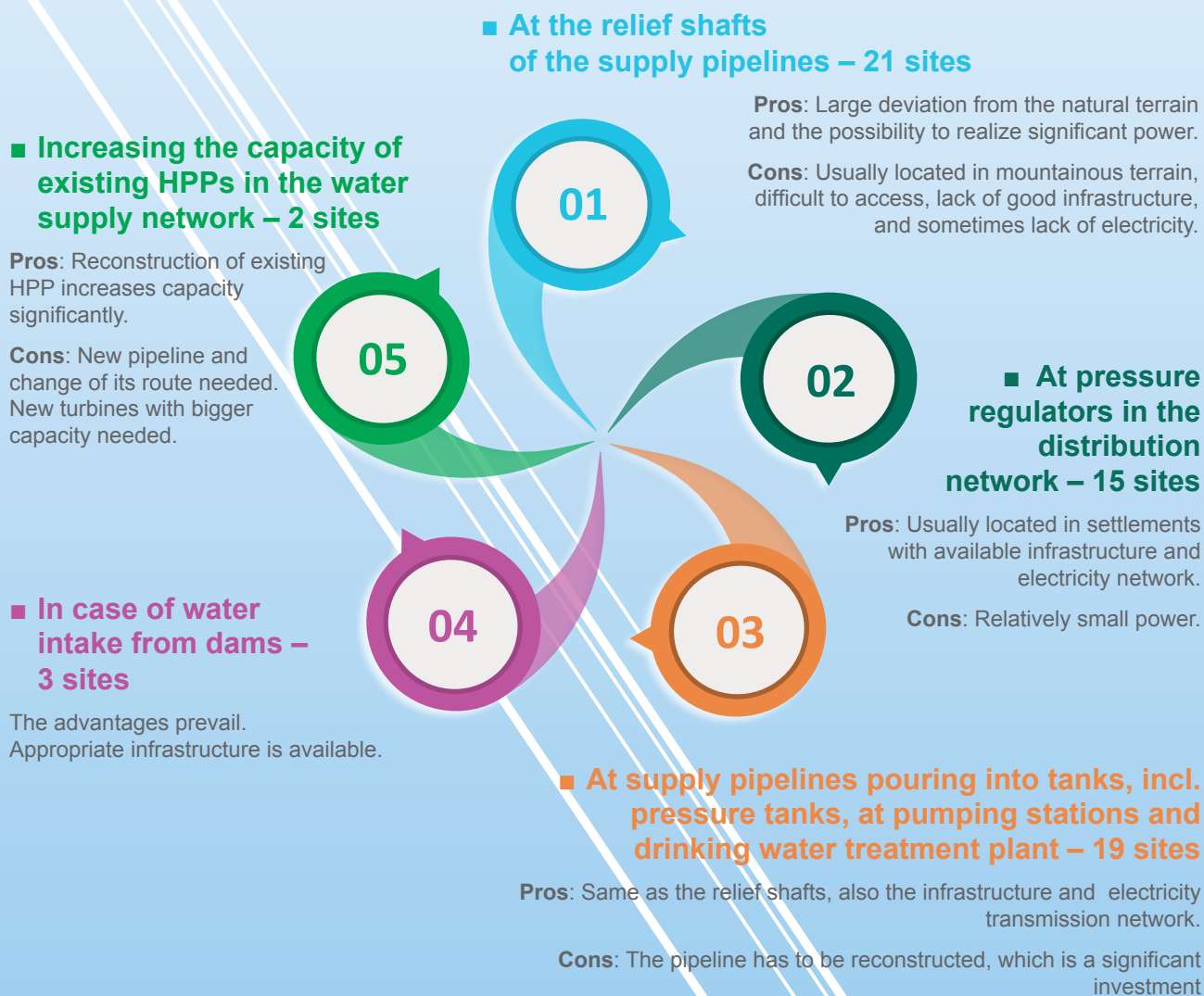


## Report to the Program Operator

in order to assist in opening an invitation to potential beneficiaries of future investment projects



## The potential sites with hydropower potential after measurements at 60 sites in the country are grouped into several conditional groups:



For more information, visit SEDA Website at:  
<https://seea.government.bg/en/> in the "Projects / [BGENERGY-1.001-0001](#)" section.

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