

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

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The project activity involves implementation and operation of a 5.958 MW Small Hydroelectric grid connected renewable energy project on the irrigation canal of Akhuryan, located in Shirak region. The electricity generated by Jradzor SHPP will be sold to the Armenian Electricity Network (AEN).

The project involves 3 different units which are already installed with below details.

Unit no.	Installed capacity (MW)	Date of installation
1	1.95	10/11/2009
2	2.808	01/07/2013
3	1.20	18/01/2017
Total	5.958 ¹	

Purpose of the project activity

The main purpose of the project activity is generation of clean hydroelectric energy and contribution to climate change mitigation efforts.

View of project participants on the contribution of the project activity to sustainable development Ministry of Environment Protection of Armenia as the DNA has stipulated the following draft indicators (criteria) for assessment of the project's contribution to the country's sustainable development²

According to small-scale CDM modalities the project activity falls under Type - I - Renewable Energy Projects and Category I-D - Grid connected renewable electricity generation.

The estimates of annual average 8,734 tCO₂e and total GHG emission reductions for the chosen crediting Period will be 87,340 tCO₂e.

1. Social Criteria

"The project has positive effects on social development."

The project activity will create jobs opportunities in the area with very high unemployment level for skilled and unskilled labor during the construction and operation of the plant.

The implementation of the project will benefit the Armenia through development of additional sustainable generation capacity not dependant on the imported energy sources, which will add to the independence of the energy system of the Republic as well. The new road will be constructed on-site.

Implementation of the project will also contribute to development of experience and intellectual capacity among the local construction workers that will go through a set of trainings, organized by the Project Host during the project implementation, which will help them to become a skilled work force in future as well.

2. Environmental Criteria

"The CDM project leads to positive or decreased negative environmental effects."

According to the Environmental Impact Assessment conducted for this project, the construction of the Jradzor SHPP will not affect the quality of the river water, as well as the wellbeing of the local population.

3. Economic Criteria

The project has positive effects on the economic development of the country."

¹ While considering the capacity of the individual units, the minimum rated capacity among turbine and generator is considered.

² It is expected that these indicators will be approved by the end of 2007

During the operation of the Jradzor SHPP the expected tax revenue (including local – property taxes, and state – VAT and income taxes) will account to around \$200 000 USD per annum. The project will attract around \$2,500,000 USD investment. The project implementation will also generate employment possibilities for the local population which lacks available workplaces in their region.

During the project implementation locally, produced equipment will be used which will benefit the renewable energy technology an intellectual capacity development in Armenia.

4. Policy effect criteria

The project has positive effects on the achievement of national, regional and sector priority objectives.” The project activity complies with the Energy Strategy of Republic of Armenia which promotes the development of new renewable energy technologies and capacities. In addition, implementation of the project will also contribute to the sustainable development of Armenia through reducing the dependence on imported energy carriers, such as natural gas, thereby reducing the outflow of capital from Armenia to other countries.

5. Project Boundary

According to methodology AMS-ID, the project boundary encompasses the physical, geographical site of the renewable electricity generation source. Hence, the project boundary is the 10.5 hectare area where the powerhouse and transmission line is placed including the connection point with AEN – Jradzor substation.

6. Baseline Scenario

The baseline of the project is the electricity that would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in section B.4.

A.2. Location of project activity

>> Jradzor SHPP will be constructed on the right-bank irrigation canal of the river of Akhuryan, near the district center Amasiya. The geographical location of Jradzor SHPP is detailed in the maps below.

The Jradzor SHPP has the following GPS coordinates:

Latitude: 40° 56' 48" N

Longitude: 43° 45' 53" E