

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

The Corredor dos Senandes CDM Project (hereinafter referred as Corredor dos Senandes Project) was registered by CDM Executive Board on 31 December 2012¹. This PDD is being submitted to request the renewal of the crediting period for its second crediting period.

Corredor dos Senandes CDM Project consists on the implantation and operation of the wind power complex Corredor dos Senandes. The Project has 108 MW of total installed capacity. This complex is formed by wind power plants (WPPs) Corredor dos Senandes II, Corredor dos Senandes III, Corredor dos Senandes IV and Vento Aragano I, located in the same site. This division in four wind power plants just happened for administrative/legal purposes. The complex was divided in four companies that are property of the same group. The project supplies clean electricity to the Brazilian National Interconnected System (SIN). It takes place in Rio Grande, Rio Grande do Sul State, south region of Brazil.

The main milestones of project implementation are presented at the following table:

Table 1: Main milestones of the project activity implementation

Date (dd/mm/yyyy)	Milestone	Evidence/Reference
18/08/2011	WPPs Electricity selling in the 2011 Auction of Reserve Energy	Results of the 2011 Auction of Reserve Energy.
27/02/2012	Signing of Turn-Key contract with supplier.	Turn-Key Contract established between Project Owners and Supplier for full WPPs implementation.
23/10/2012	Installation License issuance	Installation License 13,083 issued by Environmental Institute.
31/12/2012	CDM Registration date	Registration on CDM EB as CDM Project Activity.
18/12/2014	First Operation License Issuance	Operation License 7288/2014-DL
04/02/2015	Operation starting date of Corredor dos Senandes II	Operational starting date as authorized by ANEEL Dispatch 240, issued on 03/09/2015.
23/01/2015	Operation starting date of Corredor dos Senandes III	Operational starting date as authorized by ANEEL Dispatch 120 issued on 22/01/2015.
11/04/2015	Operation starting date of Corredor dos Senandes IV	Operational starting date as authorized by ANEEL Dispatch 1,011; issued on 10/04/2015.
30/04/2015	Operation starting date of Vento Aragano I	Operational starting date as authorized by ANEEL Dispatch 1,269; issued on 29/04/2015.
19/12/2018	Operation License Issuance	Operation License 8144/2018-DL

The main goal of the project is to help to meet the growing demand in Brazil due to its economic and population growth expanding the electricity supply through the provision of clean and renewable energy. Besides the contribution for the Brazilian energetic matrix diversification, Corredor dos Senandes Project promotes the development on a sustainable basis to the extent that:

- It reduces greenhouse gases (CO₂) emissions from the Brazilian electric matrix;
- It generates extra income for the landowners, while they can continue using the area for other activities, thus it increases and diversifies the lands productivity;

¹ <https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1356708850.22/view>

- Besides generating income for the landowners, it stimulates the regional economy by increasing tax revenues for the local government and job opportunities for local workers and service suppliers. The resulting economic stimulus improves capital availability in the region, which in turn will allow investment in the improvement of general infrastructure, productive capacity and consequently the satisfaction of the population's basic needs, thus promoting a virtuous cycle in the local economy.
- The described economic stimulus goes along with a general improvement of the local infrastructure such as road, electricity transmission system and stimulus for education
- It uses equipment which have a domestic content of at least 60% and therefore it induces the development of national technology and improvement of domestic know-how. By promoting the establishment and growth of the necessary industry equipment and services, the project contributes to the increasing availability of wind generation technology, which, consequently, reduces maintenance costs and risks of the technology in the country.
- The project operation requires services from skilled operators and maintenance staff and therefore stimulates the development of a service sector in the region, thus creating opportunities for education, professionalization, and employment.
- It is an important complement and diversification to the run-of-river hydroelectric generation capacities. As Brazil's hydro and wind regimes are largely complementary, their combination allows to partially compensate the lack of hydropower storage capacity with minimal installation of thermal power generation units, while still providing sufficient energy security based on a portfolio of these complementary renewable sources.
- The wind turbines of the plants presented, at the time of the construction, one of the greatest unitary installed capacities of wind power plants in the country (2.7 MW per turbine). Therefore, the land space required to implement the project is reduced and the environmental impact is minimized.

The project is formed by greenfield power plants. Therefore, according to the large-scale consolidated methodology ACM0002, the baseline scenario is that electricity delivered to the grid by the project activity 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) emission factor calculations described in "TOOL07: Tool to calculate the emission factor for an electricity system".

The spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the CDM project power plant is connected to. Corredor dos Senandes II, Corredor dos Senandes III, Corredor dos Senandes IV and Vento Aragano I WPPs are connected to Brazilian Interconnected System which is the project boundary of the CDM Project.

During the second crediting period, the project activity is expected to reduce 163,608 tCO_{2e} annually and 1,145,256 tCO_{2e} during the whole new crediting period of 7 years.