

Montañitas Hydropower Project



Austrian JI/CDM Workshop

Vienna, Austria

January 21-23, 2009



Who are we?

- Colombian public utilities company (founded in 1995)
- Development of:
 - Clean Power Generation Projects (Small Hydro, Run-of-River)
 - CDM projects in Colombia
- National consultancy in CDM in Colombia
- Construction management of hydropower projects
- Risk Management for hydropower projects



Development of Clean Power Generation Projects

- Rio Piedras Project (22 MW)
- In operation since 2000
- Amoyá River Environmental Services Project (80 MW) -
In construction
- Agua Fresca Environmental Services Project (7.5 MW) -
In operation since 2008



Development of Clean Power Generation Projects (II)

- Montañitas Hydropower Project (23 MW) - In construction
- Ambeima River Project (45 MW) and Chili River Project (60 MW) – Undergoing through technical Studies



Generadora Unión and the CDM

- Generadora Unión structures its own projects as CDM projects.
- Thanks to the conditions of the Colombian Electric Market, there is extensive data for monitoring (hourly generation) and a clear and extensively used methodology (ACM0002)
- The emission reduction calculations are made using a conservative approach



Development of CDM Projects in Colombia

- Amoyá River Environmental Services Project -signed ERPA with Netherlands through The World Bank Group
- Agua Fresca Environmental Services Project –signed ERPA with Austria through KPC, initial verification in process.
- Montañitas Hydropower Project – National Approval and negotiation of the ERPA



Recognitions

- Energy Globe Award – Category Water 2003. Amoyá River Environmental Services Project
- Agua Fresca Project was the first Colombian project to be registered before the UNFCCC
- Point Carbon selected Agua Fresca Project as one of the Top 5 CDM projects in the world in the year 2005
- Energy Globe Award – National Award for Agua Fresca Project, best project from Colombia in years 2007 and 2008



Montañitas Hydropower Project

- Run-of-river intake hydropower plant
- Located in Don Matías and Santa Rosa de Osos municipalities
- Installed capacity of 23 MW
- Annual Power Generation 170 GWh
- Reduces 58,791 tonCO₂eq/year



Innovative aspects of Montañitas Project

- Location
 - It complements an existing development scheme on the Grande River, being the third hydropower plant in a series and the only one that is a run-of-river and fits in the CDM scheme.
- Insurances
 - In case of a cease of generation, the insurances not only cover the losses due to power generation, but also for the CERs.



Innovative aspects of Montañitas Project (II)

- Selling of the Project's Rights
 - The project was sold through a private auction, where 5 private investors participated are new strategic agents in the Colombian Energy Business, committed to sustainable development.
 - The CER sale would be negotiated by Generadora Unión and the owner was committed to invest 15% of the revenues in sustainable development in the influence area, as originally stated.



Innovative aspects of Montañitas Project (III)

- ERPA
 - The ERPA is structured so that there is commitment to 60% of the expected CERs. These correspond to the firm power generation of the project and are not vulnerable to hydrological risk.
 - The remaining 40% is considered additional and is subject to the real power generation



Innovative Aspects of Montañitas Project (IV)

- Social Investment
 - The investment of the 15% of the CERr revenues was defined jointly with the local community, validated by the environmental authority.
 - Legal mechanisms were defined in order to fully comply the plan.



Challenges for the development of the Project

- The main challenge of the project was to structure it financially in order to make it attractive for strategic investors.
- The process of the auction was presented as a solution in order to motivate the possible investors, and had a very positive result.
- The CDM structure gave the project financial solidness and helped to gather new strategic investors interested in environmental services .



Conclusion

- Thanks to its contribution to sustainable development, its financial structure and its competitiveness, the project becomes a model for replication in Colombia, where the investment barriers can be broken by means of the CDM.
- Besides reducing the amount of greenhouse gases in the atmosphere, the CDM also provides an unique opportunity for wealth, trust and opportunities generation in the developing world, allowing for progress to come in a peaceful, environmentally conscious and sustainable way



Thank You

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