

Large Hydro still a large problem

Status Note on Large Hydro and the Clean Development Mechanism for COP9

November 2003

International Rivers Network & CDM Watch

Introduction

As the CDM approval process nears the point at which the first projects may soon be registered, large hydro projects continue to be a concern. In addition to the millions of credits already being claimed by CDM large hydro projects, many more have signalled an interest in using the CDM. At the same time, concerns about the non-additionality of large hydro projects has been borne out by the validation opinions for the Dutch CERUPT projects and the baseline methodology review of other large hydros, underlining the need to exclude them altogether.

Also disturbing is the backdown by the European Union from its previously progressive positions on large hydro in the CDM. The EU once sought to exclude all hydro projects larger than 10 MW from the CDM¹, yet they are now the most active of all Annex I Parties in using the mechanism to develop large hydro projects, through the Dutch CERUPT program and through their investment in the World Bank's

Prototype Carbon Fund (PCF).² Moreover, the EU is proposing to give large hydro projects access to the European Emission Trading Scheme (ETS) without even a requirement for World Commission on Dams criteria to be met.

By allowing large hydros to sell credits into the ETS, the world's largest carbon market, the EU will make big dams a much more attractive target for carbon finance. It will also signal that the EU accepts large hydro projects - without any quality controls on their social and environmental impacts - as a sustainable and renewable energy source, and a part of their climate strategy. Previously the most progressive player regarding large hydro projects in the CDM, the European Union has now become the biggest problem.

Big hydro in the pipeline

A number of large hydro projects are in the CDM pipeline. Together the

¹ This was the EU position at COP6 in November 2000.

² Of the 6 governmental investors, three are Sweden, the Netherlands and Finland. State-owned entities Electrabel (Belgium) and Gaz de France are also investors.

following projects would generate millions of carbon credits and divert much needed investment from truly sustainable projects:

1) The World Bank has signalled in its February 2003 Water Resources Sector Strategy that it sees the outcome of the Johannesburg sustainable development summit as a green light for further big hydro development and that the CDM is one of the financing tools it wants to use. The PCF is currently seeking approval for 3 large hydro projects totalling 112MW which are expected to generate just over 7 million credits³. In addition, another 73MW worth of large dams are being considered by the PCF:

- 39MW Rio General project in Costa Rica
- 19MW Chilatan project in Mexico
- 15MW Benito Juarez project in Mexico⁴

There have also been reports that the developers of the PCF's Chacabuquito hydro project in Chile are considering the use of carbon finance for another Chilean dam, the 55MW Hornitos plant, through one of the funds that the World Bank manages for the Dutch Government⁵.

If the Rio General, Chilatan and Benito Juarez projects go ahead they will generate about 4 million carbon credits in total, meaning that the PCF will generate approximately 11 million credits in total from its 6 large hydro projects, while the 12 renewables

³ The projects are El Gallo, El Canada and Chacabuquito.

⁴ The last two are part of an umbrella project consisting of four hydro projects in Mexico, although it now seems that El Gallo will be developed separately.

⁵ <http://www.editec.cl/electricidad/Elec70/articulos/pionera.htm>. An english language version of this article is available from CDM Watch.

projects currently on the PCF website will generate only about 14 million credits, assuming they are all implemented⁶. Strikingly, credits from the Bank's PCF large hydro projects will equal estimates of the combined total of credits generated by the Bank's much publicised "high-quality" carbon funds – the BioCarbon Fund and the Community Development Carbon Fund. Expectations are that these two funds will generate about 11 million credits from all of their CDM, JI and non-Kyoto eligible projects combined⁷. Behind the rhetoric about promoting renewables and "extending the carbon market to the world's poor", the Bank is also using the CDM to continue its role as the world's number one financier of large dams.

2) A recent UN Industrial Development Organisation guide to the CDM in Brazil lists two 100MW hydro projects as potential CDM projects in the state of Amapá. Estimated carbon credit generation for 21 years is 8.3 million and 11.67 million respectively.

3) The *Initial CDM project portfolio* for Panama lists 6 big dams totaling more than 162MW as potential CDM projects. Panama is already host to the blatantly non-additional Esti and Bayano large hydro projects that are being developed through the CERUPT program. The 6

⁶ The figure for Rio General is for 17 years. The figures for Chilatan and Benito Juarez are for 14 years using the "medium" estimate given in the PIN on the PCF website. The El Gallo figure is for 21 years and is from the baseline made available for public comment. The renewable figure includes the 8MW Trojes hydro project which is part of the Mexican umbrella project. Figures must be considered provisional given that some of these projects are only at the PIN stage and don't have fully developed baselines. They may not go ahead at all. Those that do may generate a different amount of credits than that estimated in the project documentation.

⁷ BCF = less than 4M credits; estimate given for first commitment period in May 15, 2003 presentation by Ken Newcombe, "Extending the carbon market to the world's poor". CDCF = roughly 7M credits; estimate given in email to CDM Watch by Karan Capoor, World Bank, 26.11.03.

proposed dams could generate up to 4 million carbon credits if they used a similar baseline to Esti and Bayano.

Large hydro projects listed in the “*Initial CDM project portfolio for Panama*”

- 32.6MW Pando
- 51.65MW Monte Lirio
- 25MW Bajo de Mina
- 12.4MW Paso Ancho
- 11.2MW Algarrobos
- 30MW Bonyic

4) A paper presented to the Southeast Asia Forum on GHG Market Mechanisms and Sustainable Development in Manila in September 2003 by the Indonesian organisation YBUL lists two large hydro projects of 18.7MW and 30MW as part of a bigger “Outer Islands” proposed CDM project⁸. Total credits generated from these projects over 21 years is estimated at about 5 million.

In addition, a couple of monsters lurk in the shadows. Australian company SMEC International (formerly Snowy Mountains Engineering Corporation) has long been trying to finalize the financial structuring of the 750MW West Seti Hydropower Project in Nepal which it estimates could generate 3.5 million carbon credits annually and 73 million credits over 21 years. Even this is dwarfed by the 1,300MW Mphanda Nkuwa dam in Mozambique which is proposing to sell 7 million carbon credits per year, a massive 147 million over 21 years⁹. This compares with a Dutch

government estimate for the total supply of JI and CDM credits up to 2012 of 200-300 million¹⁰.

Warning signs – beware a flood of fake credits

Many of the first batch of large hydro projects seeking approval as CDM projects are clearly non-additional, and attempts to prove otherwise have in some case involved questionable methods:

Peñas Blancas

Peñas Blancas is a non-additional CDM hydro project selected by the Dutch Government through the CERUPT program. The project start date was 1994 – 3 years before the CDM came into being. The project documentation estimates completion in 2002 – last year. Regardless, the Peñas Blancas project recently sought to have its baseline methodology approved by the CDM Executive Board, a necessary precondition before seeking validation. The Board rejected it, noting that the project documentation offers no credible explanation as to why the project is additional. As one expert reviewer pointed out by way of example, the developer cites capital scarcity as a justification for why the project needs CDM revenues, yet all the capital has been raised and construction is complete. The methodology reviewers noted that the version of the Costa Rican National Expansion Plan provided in the Peñas Blancas project documentation does not list Peñas Blancas, despite the fact that it is under construction, and despite the

⁸ http://www.icta.org/About_IETA/Events/Manila03.htm.

⁹ 21 years is the longest possible crediting period for a CDM project, and consists of 3x7 year crediting periods.

¹⁰ M.B. Henkemans, ‘ViewPoint: Will JI/CDM be stimulated by the linking proposal?’, Carbon Market Europe, November 21, 2003.

fact that the project *did* appear in the June 2001 version of the NEP available on the Costa Rican national utility's website¹¹. It seems that the developer had simply removed Peñas Blancas to try and make it appear CDM eligible.



Esti and Bayano

The CERUPT program also approved two large hydro projects in Panama which became emblematic of the problem of non-additional dams – Esti and Bayano. In September 2002 the certifying firm SGS provided an “Unqualified validation report” for the Esti and Bayano projects which, while not a formal validation report, did test the projects against the requirements of the Marrakech Accords. According to SGS the projects met the Dutch additionality requirements and the test known as “environmental additionality” – ie that the project had lower emissions than the without-project scenario - yet SGS noted in both cases that they found no evidence *“that convincingly demonstrate that this project is not a business as usual project”*, and also that

the project documentation *“makes it very clear that the completion of the project is not conditional upon the project’s registration as a CDM project”*¹². It is incontestable that any credits generated from these projects will be fake.

Conclusion

Large hydro has an extremely poor social, environmental and economic record yet it continues to be a popular technology under the CDM, a mechanism with a mandate to promote sustainable development. Concerns that many CDM large hydro projects would be non-additional are being borne out, with a number of the first dams being shown to be blatantly business as usual projects, some of which have employed questionable methods in their attempt to establish additionality. Parties to the Kyoto Protocol with a commitment to using the CDM as a tool to promote sustainable development and protect the climate should agree to exclude large hydro projects from their CDM portfolios and make the WCD criteria a mandatory screen for small hydro projects they consider. It is also critical that the EU apply these criteria to its ETS.

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¹¹www.ice.go.cr/esp/qsomos/planes/plan_exp.htm#.

¹² SGS validations of Esti and Bayano projects; www.sgs.nl/climatechange.