

CDM Programme of Activities for small hydro power generation in Indonesia

Name	CDM Programme of Activities for small hydro power generation in Indonesia
Duration	01.01.2008 – 31.12.2010
Objective	Developing and testing a co-financing mechanism for investments in small hydro power projects in Indonesia by making use of the Program of Activities (PoA)
Fields of PoA implementation	Development of a PoA for on-grid small hydro power schemes and a PoA for off-grid small hydro power schemes
Country	Republic of Indonesia
Cooperation partner	
Public partner	Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH
Private partner	South Pole Carbon Asset Management Ltd.
PoA Coordinator	PT. Hydro Programme International
Knowledge Facilitator	Indonesian Institute for Energy Economics (IIEE)

BACKGROUND

Indonesia has a large hydropower potential with only a small fraction currently being exploited. A growing demand of electricity in line with sustainability concerns makes hydropower very attractive to be developed. However, large investment costs, among other barriers, reduce its attractiveness especially for small hydro power schemes.

Under the Clean Development Mechanism (CDM) of the Kyoto Protocol, developers of renewable energies can produce Certified Emission Reductions (CERs), which can be sold to increase the profitability of the installation and / or to reduce investment costs. However, up to present, small projects have seen major difficulties in obtaining CDM registration. The relatively complex validation, registration and verification process leads to substantial transaction costs that have been hard to overcome for small projects. The CDM Executive Board (CDM EB) agreed to allow a new concept of CDM projects. Under the so-called Programme of Activities (PoA) the project proponents are allowed to submit unlimited numbers of similar small project activities as one larger bundle. Clearly, engaging in a PoA is probably the only way of unlocking CDM revenues for small hydro power projects. However, due to the novelty of the concept, experiences are rarely available worldwide with the implementation of such PoAs.

OBJECTIVE

The project “CDM Programme of Activities for small hydro power generation in Indonesia” aims at developing and testing a co-financing mechanism for investments in small hydro power in Indonesia by making use of the Programme of Activities (PoA), an innovative approach that can be applied for bundling a multitude of small hydro power schemes within the Clean Development Mechanism (CDM).

THE COOPERATION BETWEEN SOUTH POLE LTD. AND GTZ

Beginning of 2008, South Pole Ltd. and the 'Deutsche Gesellschaft für Technische Zusammenarbeit' (GTZ) joint forces in a Public Private Partnership (PPP) to create one of the world's first CDM PoAs.

Public Private Partnership (PPP) projects are development partnerships between a development cooperation agency and a private company or association. Underlying these partnerships is the conviction that if both parties pool their resources, they can achieve their respective objectives better, faster and at lower cost. The goal is to contribute to sustainable development of the partner countries.

The main challenge, necessitating the PPP between GTZ and South Pole Ltd., is the large need for capacity development at the level of project developers, local communities, financial institutions and policy makers to make a PoA in the field of small hydro economically viable.

More precisely the PPP targets at promoting PoA in Indonesia and herewith giving small, community-based hydropower projects and small commercially run hydro power stations access to a sustainable additional source of income through carbon finance. Two different PoAs are developed within the PPP PoA project: an on-grid and an off-grid PoA. Due to the fact that rarely any practical experiences in the field of PoA implementation exist, these PoAs shall serve as models on national and international level. Once the concept is successfully established, it is expected that it will be copied in areas such as biogas, biomass or energy efficiency.

The implementation of the pilot PoAs (the projects that "start" a PoA and which constitute the core projects of a PoA), will be accompanied by information workshops and trainings. These activities aim at building capacity amongst relevant stakeholders within governmental institutions, renewable energy project developers, trade associations and civil society organisations.

To support the acceleration of PoA in Indonesia the obtained knowledge about the implementation processes, best practices and lessons learnt will be carefully documented. In order to secure this knowledge in the long term an independent Indonesian institution will serve as a Knowledge Facilitator (KF). The selected KF within the PPP PoA is the Indonesian Institute for Energy Economics (IIEE). Main tasks of the KF are documentation of knowledge obtained by implementing the CDM PoA, support of the knowledge dissemination, data collection and management.

KEY INTERVENTIONS

The services provided by the project are linked to the objectives of the PPP PoA e.g. contracting pilot projects, framework improvement for the realization of PoAs, the consideration of sustainable values, knowledge facilitating.

1. Implementation of the PoA with small hydro power projects

- Establishment of a coordinating unit
- Coordination with DNA, DOEs and CDM EB
- PDD documents, validation, certification
- Coordination with project owners, planned installed capacity 3 MW

2. Information and consulting advice on the micro-, macro- and meso level

- Supporting enabling regulatory framework conditions
- Awareness raising (relevant stakeholders)

3. Documentation and dissemination

- Establishment of knowledge platform – Knowledge Facilitator (KF)
- Sound documentation of procedures (incl. contract arrangements etc.), experiences, lessons learnt

EXPECTED IMPACTS OF THE PPP

The PPP effects various impacts in different fields. All these impacts contribute to the Millennium Development Goal (MDG) 1 “Eradicate Extreme Poverty & Hunger” and MDG 7 “Ensure Environmental Sustainability”.

One expected impact of the PPP PoA is the generation of additional income through the revenue of CERs creating a lasting possibility for co-financing small hydro power projects. A higher financial reliability of small hydro power schemes is consequently generated and will attract more investors over time. Therefore more capital is allocated, the number of installed small hydro power plants increases and results in a higher use of on- and off-grid small hydro power. Additionally the PoA enhances the frameworks for the dissemination of CDM PoA in Indonesia and possibly increases the number of PoAs for other sectors as well.

Due to the higher implementation rate and use of small hydro power schemes generated through the mentioned impacts above the electricity from hydropower significantly replaces grid-electricity, which in Indonesia is produced mainly from fossil fuels (coal and oil). Also diesel generator systems, used especially in rural areas, are substituted by hydropower. In consequence greenhouse gas emissions are reduced which results in climate change mitigation. In addition, the dependency on fossil fuels decreases.

In areas with grid-electricity access the installation and the use of small hydro power schemes impacts a more reliable stability of electricity supply.

For the off-grid scope, the added value of small hydro power schemes is the increased access to electricity for rural areas. The energy produced by the schemes can be used for productive needs. Hence jobs and additional income are generated and the attractiveness of rural areas rises. So migration from rural areas in cities, especially of young people, can be reduced. The development of rural areas is supported by the project.

PoAs can be implemented all over the world, but until now hardly any practical experiences were made. The PPP PoA project functions as a model and the experiences and instruments collected within the PPP will be documented. The documents will be made available in Indonesia and worldwide. In consequence the exemplary PPP PoA project impacts the dissemination of knowledge about implementing PoAs. For this reason it motivates imitators in Indonesia and other countries to develop new PoAs with the practice of the model PoA. The activity therewith supports the increase of CDM PoAs in development countries.

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