

Carbon Fund of the community development

Project Identification Note (PIN)

A. Description of the project, type of the project, area/location and schedule of the project realization.

CDM Project Idea Summary Data Sheet

This section provides an overview of key information about the project.

CDM/JI Project: Summary Data Sheet	
Project title:	Reduction of PFC gas emission from Aluminum Smelter
Host country:	Tajikistan
Location of the project:	Tajik Aluminium Factory , Tursunzade, Tajikistan (located approximately 50km from Dushanbe)
Project type	Greenhouse gases targeted PFC Type of activities - Emissions Reductions Field of activities - Elimination of PFC emissions through introduction of Point Feeder method.
Abstract	<p>The project is focused on:</p> <ul style="list-style-type: none"> • Introduction of automation control process in order to reduce frequency of Anode effect. • Change the smelting method from the conventional Side-Worked Pre-Baked (SWPB) to Point Feeder Pre-Baked (PFPB) to minimum emission of PFC gas during Anode effect. • Modernization of off-gas treatment system to trap off-gas including PFC. <p>The Tajik smelter is one of the largest aluminium smelting factories in the CIS countries. Its annual production of the primary aluminium is 380 000 t in 2005. But currently it is emitting into atmosphere a big amount of PFC gases.</p> <p>At present the old SWPB smelting lines are emitting PFC gas into atmosphere at rate of 12.5 t-CO₂ equivalent per 1 t-Aluminum production (IPCC Guideline)</p>
Possible date for comple-	The Project will be implemented within 24 - 36 months from the com-

tion of project:	mencement date of financing.
Expected emission reduction per year	Until 2008: 0 CO ₂ eq/year 2009-2012: 4 427 000 t CO ₂ eq/year 2013-2017: 4 427 000 t CO ₂ eq/year
Expected project investment costs	US\$ 1 00 million
Expected project operational cost	Will be specified in PDD
Expected project revenue	CER generation only
Expected financing	Financing plan to be considered

1. General Information on the Project Host

The project host will be established as a special purposed company (SPC) company which will be later specified by project participants.

Primary Activities:

- Modification of the aluminium smelting lines from SWPB into PWPB system with the state-of-the-art automatic control unit and off-gas treatment system;
- Generation and sale of CER.

2. Project Background

Emission reductions will occur from:

- Reduced PFC gas emission by introduction of PFPB system with automatic control units with replacement of SWPB system

Project emissions currently comprise:

- PFC gas emission from PFPB system
- CO₂ emission from chemical reaction in the smelting process

The current status of the Project

The project is at the stage of planning. Preliminary technical feasibility studies have been undertaken and potential suppliers of PFPB system, project management and associated engineering services have already been identified.

Relevant Legal and Institutional Developments

Further legal and institutional analysis will be carried out in the Project Design Document stage after the Kyoto protocol is ratified by the Tajikistan government.

3. Technology

The project activity will

- Introduction of automation control process in order to reduce frequency of Anode effect.
- Change the smelting method from the conventional Side-Worked Pre-Baked (SWPB) to Point Feeder Pre-Bakes (PFPB) to minimum emission of PFC gas during Anode effect.
- Modernization of off-gas treatment system to trap off-gas including PFC.

4. Emission reductions

There are two principal components to the emission reductions generated by this project:

1. Project GHG emission as a result of introduction of PFPB system:.

PFC gas of 0.85 t-CO₂ equivalent is generating per 1 t-Aluminum production in accordance with IPCC Guideline.

CO₂ emission from chemical reaction in the smelting process is 1.7 t-CO₂ per 1 t-Aluminum production

The project emission can be calculated: 380 000 t- aluminium production per year x (0.85+1.7) t-CO₂ equivalent is generating per 1 t-Aluminum production = 969 000 t CO₂ equivalent.

2. Baseline GHG emissions from the conventional SWPB system:

PFC gas of 12.5 t-CO₂ equivalent is generating per 1 t-Aluminum production in accordance with IPCC Guideline.

CO₂ emission from chemical reaction in the smelting process is 1.7 t-CO₂ per 1 t-Aluminum production

The project emission can be calculated: 380 000 t- aluminium production per year x (12.5+1.7) t-CO₂ equivalent is generating per 1 t-Aluminum production = 5 396 000 t CO₂ equivalent.

3. Total GHG emission reduction:

Total GHG emission reductions are estimated to be 5 396 000 – 969 000 = 4 427 000 t-CO₂ equivalent

5. Preliminary assessment of project costs

The total US\$ 100 million capital expenditure is consisting of :

- Equipment – 80%
- Construction – 10%
- Designing and engineering – 5 %
- Permits and certificates – 3 %

- Others – 2 %

6. Project financing and implementation

The project financing will be possible after the ratification of Kyoto protocol by the Tajikistan government.

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