# ***PROJECT IDEA NOTE***

## *A. Project description, type, location and schedule*

***Name of Project:*** **Amylum alcohol factory *sewage* disposal project**

***Technical summary of the project*** ***Date submitted: 12-10-2007***

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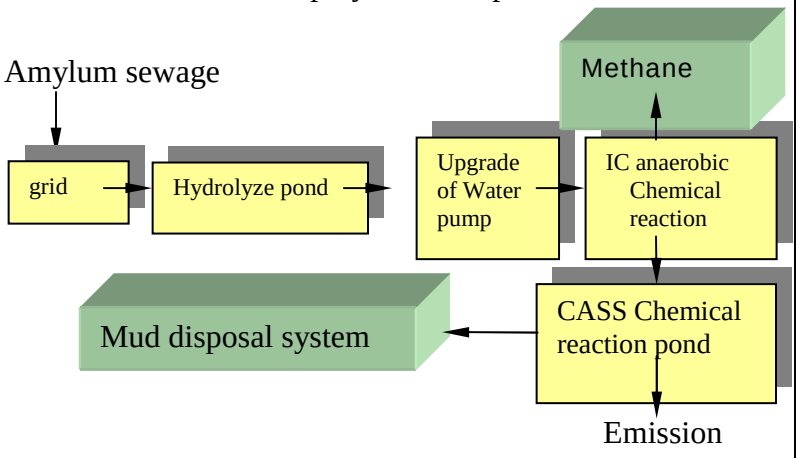
| **Objective of the project** | *This project is designed to achieve the general target of minimum pollution and emission, maximum of economic and social benefits by importing multi-circle economy industry structural system with focuses on the effective utilization of resource and protection of environment. It contributes to realization of the sustainable development model of "resource-product-renewable resource".* |
| **Project description and proposed activities** | *This project will be constructed in the industrial park. There are many public infrastructures such as railway-used station, thermal power plant and sewage disposal plant. In this project, corn is mainly used as the main material and other facility such as corn syrup, ferment workshop, distillery. It is expected that the total sewage amount will be 6000m$^{3/}$d. the water will meet the following requirements:* $COD_{cr}$16000mg/L $BOD_5$12120mg/L $SO_4^{2-}$ : 800mg/L SS : 25000mg/L pH : 4.0 - 5.0。the water after disposal will be: COD≤500 mg/L BOD ≤200 mg/L SS ≤150mg/L pH6 - 9 ; in total the recycle of methane will amount to 55176m$^3$/d。 |
| **Technology to be employed** | Anaerobic ferment is employed in this process as follows:<br>  <br><br>The technology of CASS Chemical reaction pond is imported from abroad, which is proved to be successful. |

| **Project developer** | |
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| Name of the project developer | **Guangzhou Institute of Energy Conversion, Chinese Academy of Science** |
| Organizational category | a. Government<br>b. **Government agency**<br>c. Municipality<br>d. Private company<br>Non Governmental Organization |
| Other function(s) of the project developer in the project | a. Sponsor<br>b. Operational Entity under the CDM<br>c. **Intermediary**<br>d. **Technical advisor** |
| Summary of the relevant experience of the project developer | A. Sino-Germany CDM capacity building in southeast China was successfully implemented from August, 2003 to August, 2004. most importantly we also published CDM guidebook in both English and Chinese version and distributed them to Chinese potential users.<br>B. China-European partnership in joint implementation of CDM project with Germany, Italy, the netherland, Greece from July, 2003 to August, 2005.<br>C. The undergoing CDM projects include 400 MW blast furnace gas to power and 25 MW biomass direct combustion power generation project. GIEC is one of national institute which has been engaged in developing CDM project until now. |
| Address | Nengyuan Road, No 1, Wushan district, Guangzhou, China, 510640 |
| Contact person | Name of the Project Development Manager |
| Telephone / fax | |
| E-mail and web address, if any | luozg@ms.giec.ac.cn |
| **Project sponsors** | |
| *(List and provide the following information for all project sponsors)* | |
| Name of the project sponsor | ***** Amylum Chemical factory *Co.,Limited*** |
| Organizational category | a.Government<br>b.Government agency<br>Municipality<br>d. **Private company**<br>e. Non Governmental Organization |
| Address (include web address, if any) | |
| Main activities | *Not more than 5 lines* |
| Summary of the financials | *This company is mainly devoted to disposal of sewage in the manufacturing phase based on 200 thousand per year acetum with corn as the main material. And also recycle the methane produced in the acetum workshop.* |
| **Type of the project** | |
| Greenhouse gases targeted | $CO_2$ / $CH_4$ / $N_2O$ / HFCs / PCFs / $SF_6$<br>*(mention what is applicable)* |
| Type of activities | Abatement / $CO_2$ Sequestration |
| Field of activities | |

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| a. Energy supply | Renewable energy, excluding biomass / biomass / cogeneration / improving energy efficiency by replacing existing equipment / minimization of transport and distribution / fuel switch (e.g., switch coal to biomass)<br>*(mention what is applicable)* |
| b. Energy demand | Replacement of existing "household equipment" / improvement of energy efficiency of existing production equipment<br>*(mention what is applicable)* |
| c. Transport | More efficient engines for transport / modal shift / fuel switch (e.g. public transport buses fuelled by natural gas)<br>*(mention what is applicable)* |
| d. Waste management | Capture of landfill methane emissions / utilization of waste and wastewater emissions<br>*(mention what is applicable)* |
| e. Land Use Change and Forestry | Afforestation/ reforestation/ forest management/ wetlands management/ watershed management/ improved agriculture / land degradation prevention<br>*(mention what is applicable) -> Additional information to be provided in Annex I* |
| **Location of the project** | |
| Region | **East Asia & Pacific** / South Asia / Central Asia / Middle East / North Africa / Subsaharan Africa / Southern Africa / Central America & the Caribbean / South America/Central & Eastern Europe<br>*(mention what is applicable)* |
| Country | China |
| City | Inner Mongolia |
| Brief description of the location of the project | |
| **Expected schedule** | |
| Earliest project start date | Dec, 2006 |
| Estimate of time required before becoming operational after approval of the PIN | Time required for financial commitments: 08 months<br>Time required for legal matters: 03 months<br>Time required for negotiations: 06 months<br>Time required for construction: 10 months |
| Expected first year of verified Emission Reduction or CER / ERU delivery | Year 2007 |
| Project lifetime | 25 |
| Current status or phase of the project | Identification and pre-selection phase / opportunity study finished / pre-feasibility study finished / feasibility study finished / negotiations phase / **contracting phase / etc.** |
| Current status of the acceptance of the Host Country | Letter of No Objection is available / Letter of Endorsement is under discussion or available / Letter of Approval is under discussion or available / Host Country Agreement is under discussion or signed / Memorandum of Understanding is under discussion or available / etc.<br>*(mention what is applicable)* |

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| **The position of the Host Country with regard to the Kyoto Protocol** | The Host Country<br>a. signed or acceded to the Kyoto Protocol or<br>b. signed and has demonstrated a clear interest in becoming a party in due time (e.g., countries which have already started or are on the verge of starting the national ratification, acceptance or approval process) or<br>**c. signed the Kyoto Protocol,**<br>d. .is a Party to the UNFCCC.<br><br>*(mention what is applicable)* |

***B. Expected environmental and social benefits***

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| **Estimate of Greenhouse Gases abated / $CO_2$ Sequestered (in metric tons of $CO_2$-equivalent)** | Annual:<br>Up to and including 2012: 350,000 $tCO_2$-equivalent<br>Up to a period of 10 years: 700,000 $tCO_2$-equivalent<br>Up to a period of 7 years: 490,000 $tCO_2$-equivalent<br>Up to a period of 14 years: 980,000 $tCO_2$-equivalent |
| **Baseline scenario** | CDM/JI projects must result in GHG emissions being lower than "business-as-usual" in the Host Country. At the PIN stage questions to be answered are at least:<br>• Which emissions is the proposed Clean Development Mechanism (CDM)/Joint Implementation (JI) project displacing?<br>• What would the future look like without the proposed CDM/JI project?<br>• What would the estimated total greenhouse gas (GHG) reduction be?<br>*(About ¼ - ½ page)* |
| For sequestration projects only: Existing vegetation and land use | *(What is the current land cover and land use? Is the tree cover more or less than 30%?)* |
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| **Specific global & local environmental benefits** | *(In total about ¼ page)* |
| Which guidelines will be applied? | Name and, if possible, the website location |
| Local benefits | |
| Global benefits | |
| **Socio-economic aspects**<br>What social and economic effects can be attributed to the project and which would not have occurred in a comparable situation without that project? Indicate the communities and the number of people that will benefit from this project. | *1 As the project is located at the industry park of City, which is just the filler of the underground water. the implementation of this project will contribute to the less pollution of underground water and is helpful to the public heath.*<br><br>*2 the implementation of this project will also enhance the competitive for the company. And at the same time it will also contribute to the local agricultural development.*<br><br>*3 the project will promote the advance of science and technology in this field by importing of state-art technologies from abroad.* |

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| Which guidelines will be applied? | Name and, if possible, the website location |
| What are the possible direct effects (e.g., employment creation, capital required, foreign exchange effects)? | 1 More job opportunities will be created through implementation of this kind project.<br>2 More energy will conserved, it is expected that about 9.83 milliion yuan in equivalent of energy will be saved annually by recycling of the methane. |
| What are the possible other effects? For example:<br>• | *training/education associated with the introduction of new processes, technologies and products and/or*<br>*the effects of a project on other industries* |
| **Environmental strategy/ priorities of the Host Country** | A brief description of the relationship of the consistency of the project with environmental strategy and priorities of the Host Country<br>*(Not more than ¼ page)* |

***C. Finance***

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| **Total project cost estimate** | |
| Development costs | xx US$ million |
| Installed costs | 2.85 US$ million |
| Other costs | 1.35 US$million |
| Total project costs | 4.2 US$million |
| **Sources of finance to be sought or already identified** | |
| Equity | ***** Renewable Energy Co,ltd (in 0.42 US$million) |
| Debt – Long-term | Guangdong ***** investment Co.,ltd (in 0.42 US$million) |
| Debt - Short term | |
| Debt - Short term | |
| Debt - Short term | |
| Debt – Long-term | Construction bank 1.05 US $ Million |
| Debt - Short term | Construction bank 1.05 US $ Million |
| Not identified | xx US$million |
| Carbon finance contribution sought | xx US$million |
| Carbon finance contribution in advance payments. (The quantum of upfront payment will depend on the assessed risk of the project by the World Bank.) | xx US$million and a brief clarification (*not more than 5 lines*) |
| **Sources of carbon finance** | Name of carbon financiers other than PCF that your are contacting (if any) |
| **Indicative CER/ERU or vER Price (subject to negotiation )** | |
| **Total Emission Reduction Purchase Agreement (ERPA) Value** | |
| A period until 2012 (end of the first budget period) | xxUS$ / € |
| A period of 10 years | xx US$ / € |
| A period of 7 years | xx US$ / € |
| A period of 14 years (2 * 7 years) | xxUS$ / € |
| If financial analysis is available | |

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| for the proposed CDM activity, provide the forecast financial internal rate of return for the project with and without the CER revenues. Provide the financial rate of return at the expected CER price above and US$3/ $tCO_2e$. DO NOT assume any up-front payment from the PCF in the financial analysis that includes PCF revenue stream.<br><br>Please provide a spreadsheet to support these calculations. | |