

PROJECT IDEA NOTE (PIN)

Description of size and quality expected of a PIN

Basically a PIN will consist of approximately 5-10 pages providing indicative information on:

- A.** Project participants
- B.** Project description, type, size, location and schedule
- C.** Avoided / reduced GHG emissions
- D.** Financial aspects
- E.** Expected environmental and socio-economic benefits
- F.** Risks
- G.** Other relevant information

A. PROJECT PARTICIPANTS

Name of the Project Participant	Food and Allied Industries Ltd (FAIL)
Role of the Project Participant	Project implementation and operation
Organizational category	Private company - Limited
Contact person	Brigitte Masson
Address	Gentilly, Moka. P.O Box Mauritius
Telephone/Fax	+230 433 42 25
E-mail and web address, if any	bmasson@food-allied.com
Main activities <i>Describe in not more than 5 lines</i>	As a pioneer in the poultry industry in the sixties, FAIL has since diversified into food distribution and marketing, wheat flour milling, dairy processing, fruit and vegetable canning, Kentucky Fried Chicken (KFC) franchises, hotels and IT services among others. Today, the group is organized in six divisions namely: industry, animal production, commercial, shipping, services and hotels.
Summary of the financials <i>Summarize the financials (total assets, revenues, profit, etc.) in not more than 5 lines</i>	FAIL is one of the largest company groupings in Mauritius. Turnover: Rs 5582 million (€133 million) Profits: Rs 133 million (€3.15 million) Net assets: Rs 3261 million (€77.6 million) (2005 figures)
Summary of the relevant experience of the Project Participant <i>Describe in not more than 5 lines</i>	The project promoter has over 45 years' experience in the agro-food industry and already manages other animal food processing plants. The company has all the necessary knowledge to successfully undertake this kind of project in-house, including a team of experienced engineers.

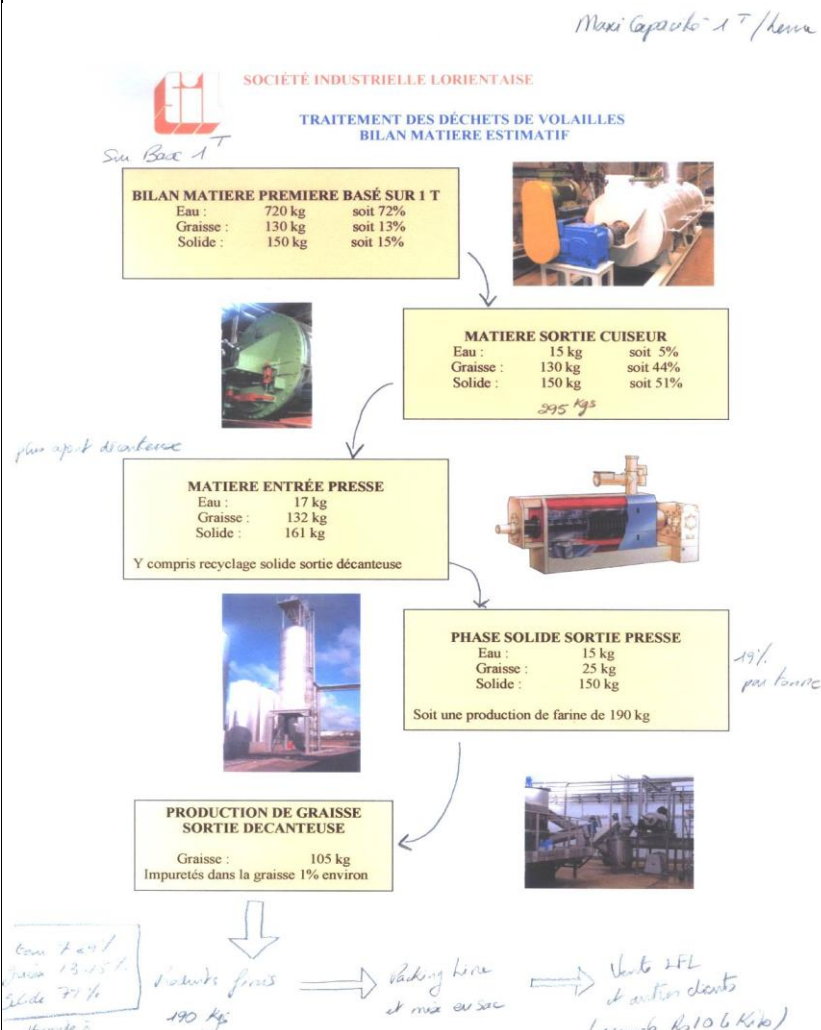
B. PROJECT DESCRIPTION, TYPE, LOCATION AND SCHEDULE

OBJECTIVE OF THE PROJECT <i>Describe in not more than 5 lines</i>	The project's objective is to reduce methane emissions generated from the anaerobic decomposition of poultry waste in Mauritius's only landfill – Mare Chicose. The project aims at valorizing the abattoir waste by turning it into animal foodstuff in the most energy neutral way.
PROJECT DESCRIPTION AND PROPOSED ACTIVITIES <i>About ½ page</i>	<p>Under the proposed project, FAIL will transform abattoir waste into a pet food derived from animal flour. This industrial process will take place within Phoenix industrial zone, close to FAIL's abattoir where the chickens are processed. The production of this protein-rich flour will be carbon neutral, as the heat necessary to cook the waste will be derived from the burning of the greases produced as by-product of the flour's production. The pet food will be sold into the local and export market.</p> <p>Phoenix abattoir produces 10 tons of organic waste every day comprising leftover chicken parts (e.g., guts, legs, necks and feathers). This highly organic, degradable wet waste is transported to Mare Chicose landfill site. The waste stream from FAIL's activities represents just below 1% of the total waste currently landfilled in Mauritius (i.e., 3650 tons out of the yearly average 400,000 tons of waste deposited at the landfill). This waste disposal and its associated handling, transporting and dumping costs amounts to 1.5 million rupees (€35,000) per year and is an emitting source of many pollutants.</p> <p>It is worth noting that in 2010, the landfill's flaring efficiency should increase; however, that would be linked to a CDM Project and should thus not be taken into consideration in developing the baseline.</p>

	<p>The nature and characteristics of the waste in question do not lend itself to composting or incineration. Thus, the project activity proposed by FAIL is the most viable technical alternative to the <i>status quo</i> situation.</p> <p>FAIL is in the process of determining its overall chicken processing carbon footprint. This waste processing project aims at lowering this overall carbon footprint while creating a valuable by-product and lowering the operational costs associated with dumping the waste in Mare Chicose. The carbon footprint study is FAIL's property and is not yet in the public domain – it is therefore not yet possible to determine the impact of this project on the company's overall carbon footprint.</p>
<p>TECHNOLOGY TO BE EMPLOYED¹ <i>Describe in not more than 5 lines</i></p>	<p>The chicken waste will undergo the following process:</p> <ol style="list-style-type: none"> 1. Waste from the abattoir will be transported on a pneumatic belt to a waste processing operation at an adjacent building 200 m away. 2. The waste will be cooked in an industrial pressure cooker. The heat necessary for this operation will come from burning the high quality fats and greases extracted from the waste processing operation. To kick start operation, a very small amount of diesel will have to be used (roughly 20 tons per year or <75 tCO₂e per year) 3. The cooked waste mass is then passed through an electrically powered press (use 37.5 kW) that will separate the solid (flour) and liquid (fat/grease) phases of the cooked waste mass (est. 58.5 MWh ~ 64 tCO₂e per year) 4. The liquid phase will then transit to a decanter (10 kW ~ 23 tCO₂e per year) so that solids in suspension and other impurities settle and are separated from the fat/grease (in order for it to be of a quality suitable for use as fuel). 5. The flour is air-dried naturally (without energy input) and bagged.

¹ Please note that support can only be provided to projects that employ commercially available technology. It would be useful to provide a few examples of where the proposed technology has been employed.

Here below, a schematic representation of the chicken waste processing operation:



TYPE OF PROJECT

Greenhouse gases targeted
CO₂/CH₄/N₂O/HFCs/PFCs/SF₆
(mention what is applicable)

Type of activities
Abatement/CO₂ sequestration

Field of activities
(mention what is applicable)
See annex 1 for examples

Methane (CH₄)

CH₄ emissions avoidance by processing chicken waste into pet food, this waste would otherwise end up in the landfill where CH₄ is generated and emitted to the atmosphere. Currently, only part of the biogas and associated CH₄ produced by the landfill is collected and flared.

4c. Waste Management – recycling

LOCATION OF THE PROJECT

Country
City
Brief description of the location

Mauritius
Phoenix Industrial Zone (exact site to be confirmed)
Phoenix (20.30°S 57.48°E) is located on the Island's central plateau. It is one of

<p>of the project <i>No more than 3-5 lines</i></p>	<p>the main industrial zones of the island, well connected to the port and airport via the motorway. As the poultry abattoir is located in the Phoenix industrial zone the opportunity to reduce transportation costs/needs between the two sites has been seized.</p>
<p>EXPECTED SCHEDULE</p>	
<p>Earliest project start date <i>Year in which the plant/project activity will be operational</i></p>	<p>Since financing is not yet secured but in the process of being secured, it is hard to give a proper estimate of the project's start of operations. If financing secured by October 2009, the project could start in July 2010.</p>
<p>Estimate of time required before becoming operational after approval of the PIN</p>	<p>Time required for financial commitments: 3 months Time required for legal matters: 3 months Time required for construction: 6 months</p>
<p>Expected first year of CER/ERU/VERs delivery</p>	<p>At best July 2011</p>
<p>Project lifetime <i>Number of years</i></p>	<p>20 years</p>
<p>For CDM projects: Expected Crediting Period <i>7 years twice renewable or 10 years fixed</i></p> <p>For JI projects: Period within which ERUs are to be earned <i>(up to and including 2012)</i></p>	<p>10 year fixed</p>
<p>Current status or phase of the project <i>Identification and pre-selection phase/opportunity study finished/pre-feasibility study finished/feasibility study finished/negotiations phase/contracting phase etc. (mention what is applicable and indicate the documentation)</i></p>	<ul style="list-style-type: none"> - Pre-feasibility completed - Process finalised – plans drawn - Equipment providers contacted - Bank approached for debt financing <p>NB: All reports are accessible upon direct request to project participant and confidentiality agreement signature.</p>
<p>Current status of acceptance of the Host Country <i>Letter of No Objection/Endorsement is available; Letter of No Objection/Endorsement is under discussion or available; Letter of Approval is under discussion or available (mention what is applicable)</i></p>	<p>The project has not yet received a Letter of Approval. As part of the UNEP RISOE/Ministry of Environment capacity building programme, this project has been earmarked and will be able to do get a "Letter of No-Objection" from the DNA if the promoter wishes to go ahead with the project.</p> <p>This project is of very small scale and may well seek approval under the Gold Standard Micro-Scale VER development pathway. If adopted it will therefore not need, officially, to contact the DNA for a "Letter of No-Objection".</p>
<p>The position of the Host Country with regard to the Kyoto Protocol</p>	<p>The Host Country acceded to the Kyoto Protocol in 2001</p>

C. AVOIDED / REDUCED GHG EMISSIONS

<p>ESTIMATE OF GREENHOUSE GASES ABATED/ CO₂ SEQUESTERED <i>In metric tons of CO₂-equivalent, please attach calculations</i></p>	<p>Annual (if varies annually, provide schedule): 1-1,500 tCO₂-equivalent Up to and including 2012: 3,000-4,500 tCO₂-equivalent Up to a period of 10 years: 10,000-15,000 tCO₂-equivalent</p> <p>NB: The project could produce 2.5-3 times the amount of ER stated above in theory if FAIL can successfully acquire poultry waste from the other poultry processing plants in Mauritius (there are two main ones). This could be done in the framework of the CDM, using some CER revenue to buy/transport waste to the animal flour factory. This would also increase the financial viability of the project.</p>
<p>BASELINE SCENARIO</p> <p>Baseline Methodology to be used This project is covered by an existing approved CDM Small-Scale Methodology: III.E./Version 15.1 “Avoidance of methane production from decay of biomass through controlled combustion, gasification or <u>mechanical/thermal treatment</u>”. However, a modification to the methodology will need to be made to account for the portion of biogas that is currently being flared, since the baseline for III.E. is based upon no existing methane capture at the landfill site. AMS III.F./Version 06 “Avoidance of methane emissions through controlled biological treatment of biomass” was considered, but this does not cater for an industrial process such as accepted in AMS III.E.</p> <p>The project will use the Methodological tool to determine the baseline methane emissions: “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site” (Version 04)</p> <p>What would the future look like without the proposed CDM project? What modifications the project would induce?</p> <p>Due to the low economic return of this project, and the lack of viable waste disposal/treatment alternatives, it can be justified that the most plausible baseline scenario would be “business as usual” – i.e. waste being landfilled at Mare Chicose, resulting in CH₄ emissions. Without the project being implemented as CDM project, the waste produced by the abattoir after processing the chicken will continue to be sent by trucks to the only landfill of the island. In the landfill, some of the gas generated will be destroyed by an inefficient flaring system. The establishment of the project will result in some minor additional consumption of diesel to kickstart the combustion of waste grease/fats in the animal flour processing plant.</p>	
<p>ADDITIONALITY Please explain which additionality arguments apply to the project: (i) there is no regulation or incentive scheme in place covering the project (ii) the project is financially weak or not the least cost option (iii) country risk, new technology for country, other barriers</p>	<ul style="list-style-type: none"> • No regulation or incentive in place covering this type of project • The project is financially weak and not profitable without carbon revenues.

<p>(iv) other</p> <p>SECTOR BACKGROUND Please describe the laws, regulations, policies and strategies of the Host Country that are of central relevance to the proposed project, as well as any other major trends in the relevant sector.</p> <p>Please in particular explain if the project is running under a public incentive scheme (e.g. preferential tariffs, grants, Official Development Assistance) or is required by law. If the project is already in operation, please describe if CDM/JI revenues were considered in project planning.</p>	<ul style="list-style-type: none"> • The project is not under public incentive scheme and is not necessarily required by law. • The project is not in operation.
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D. FINANCIAL ASPECTS

TOTAL CAPITAL COST ESTIMATE (PRE-OPERATIONAL)	
Development costs	0.02 US\$ million (Feasibility studies, resource studies, etc.)
Installed costs	0.75 US\$ million (Property plant, equipment, etc.)
Land	0.15 US\$ million
Other costs (please specify)	0.01 US\$ million (Legal, consulting, etc.)
Total project costs	0.93 US\$ million
SOURCES OF FINANCE TO BE SOUGHT OR ALREADY IDENTIFIED	
Equity Name of the organizations, status of financing agreements and finance (in US\$ million)	None
Debt – Long-term Name of the organizations, status of financing agreements and finance (in US\$ million)	Mauritius Commercial Bank – Loan possibilities are being investigated at present time.
Debt – Short term Name of the organizations, status of financing agreements and finance (in US\$ million)	Mauritius Commercial Bank
Carbon finance advance payments ² sought. (US\$ million and a brief clarification, not more than 5 lines)	None

² Advance payment subject to appropriate guarantees may be considered.

SOURCES OF CARBON FINANCE Name of carbon financiers that your are contacting (if any)	None at this stage
INDICATIVE CER/ERU/VER PRICE PER tCO₂e³ <i>Price is subject to negotiation. Please indicate VER or CER preference if known.⁴</i>	VER Gold Standard Micro-project: € 5.00 per VER (without validation and auditing costs – paid by buyer).
TOTAL EMISSION REDUCTION PURCHASE AGREEMENT (ERPA) VALUE	
A period until 2012 (end of the first commitment period)	To be negotiated / € 5000
A period of 10 years	To be negotiated / € 50,000

E. EXPECTED ENVIRONMENTAL AND SOCIAL BENEFITS

LOCAL BENEFITS E.g. impacts on local air, water and other pollution.	<ul style="list-style-type: none"> Reduction of air pollution near landfill by avoiding decay smell of poultry waste
GLOBAL BENEFITS Describe if other global benefits than greenhouse gas emission reductions can be attributed to the project.	<ul style="list-style-type: none"> Avoiding generation and emission of methane gas to the atmosphere thus reducing the impacts of global warming
SOCIO-ECONOMIC ASPECTS	
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. <i>About ¼ page</i>	<ul style="list-style-type: none"> Local pet food production will diversify FAIL's income, support employment creation, and establish a potential new export commodity that would bring in foreign currency. The project will reduce some highly odoriferous waste sent to the landfill reducing a nuisance for surrounding communities.
What are the possible direct effects (e.g. employment creation, provision of capital required, foreign exchange effects)?	<ul style="list-style-type: none"> 10-15 direct employment created 10-15 indirect employment supported

³ Please also use this figure as the carbon price in the PIN Financial Analysis Model (cell C94).

⁴ The World Bank Carbon Finance Unit encourages the seller to make an informed decision based on sufficient understanding of the relative risks and price trade-offs of selling VERs vs. CERs. In VER contracts, buyers assume all carbon-specific risks described above, and payment is made once the ERs are verified by the UN-accredited verifier. In CER/ERU contracts, the seller usually assumes a larger component - if not all – of the carbon risks. In such contracts, payment is typically being made upon delivery of the CER/ERU. For more information about Pricing and Risk, see "[Risk and Pricing in CDM/JI Market, and Implications on Bank Pricing Guidelines for Emission Reductions](#)".

<p><i>About ¼ page</i></p> <p>What are the possible other effects (e.g. training/education associated with the introduction of new processes, technologies and products and/or the effects of a project on other industries)?</p> <p><i>About ¼ page</i></p>	<ul style="list-style-type: none"> This technology, once installed, could be used at the other abattoir sites or the waste stream from other chicken processing plants could all be treated in this only factory, thereby reducing the associated nuisance of “poultry waste” over the whole industrial sector. Note that FAIL represents about 40% of the poultry market.
<p>ENVIRONMENTAL STRATEGY/ PRIORITIES OF THE HOST COUNTRY</p> <p>A brief description of the project’s consistency with the environmental strategy and priorities of the Host Country</p> <p><i>About ¼ page</i></p>	<p>Due to Mauritius’ limited capacity to absorb waste due to its size and location and increasing consumption patterns, improving waste management is a core issue being debated and addressed by various Government policies. New management strategies have increased the landfill’s capacity and technical improvements are also anticipated. Realizing that more sustainable actions need to be taken the Government is investigating alternative projects like incineration, waste selection, composting and recycling.</p>

F. RISKS

<p>Risks in the Project</p>	<p>Please describe the factors that may cause delays in, or prevent implementation of the project</p>
<p>Estimate the Degree of Risk</p>	
<p>Technical risk</p>	<p>Low – this technology will be provided by foreign companies that master the technology fully. The local company will be fully trained on the technology and has high technical skills in its staff.</p>
<p>Timing risk</p>	<p>Medium-high – timing is the greatest risk in this project. Even if banks provide the financing, the company might want to wait a year or two before launching itself in this project. The company is currently looking into many other ways to be “less carbon intensive” and to produce “new product lines” and this project may not go ahead if the board doesn’t see the full benefits of the project. Getting carbon financing could well be a factor that would help the board push this project ahead.</p>
<p>Budget risk</p>	<p>Medium-Low – the company should not have too many problems to get the financing loans from the bank as it is a very large and important company in Mauritius.</p>

G. OTHER RELEVANT INFORMATION

<p>Please mention any additional information or precisions to justify the project under CDM</p>
