



# Mackay Sugar Co-operative Association Limited

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## Racecourse Mill

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The Greenhouse and Energy Reporting Taskforce  
Australian Greenhouse Office  
Department of Environment and Water Resources  
GPO Box 787  
Canberra ACT 2601

Dear Sir,

### **National Greenhouse and Energy Reporting System Regulations Discussion Paper Mackay Sugar Submission**

Mackay Sugar Cooperative Association Ltd is a large Queensland sugar company, producing approximately 20% of Australia's raw sugar and owning interests in sugar refining operations in Australia and New Zealand. The cooperative owns four sugar mills in the Mackay district and is a joint venture partner in a collocated sugar refinery at one mill site, where energy and other services are sold directly to the refinery.

Typical of most sugar mills, Mackay Sugar is largely energy self-sufficient, deriving the vast majority of consumed thermal and electrical energy from the combustion of bagasse, the renewable fibrous waste from the sugar milling operation. Surplus renewable electricity is exported to the national grid from all mills, and, with the exception of the refinery operations, the mills are net exporters of energy. That is, exported electrical energy exceeds imported electrical energy plus all fossil fuel transport energy.

It is within this context that Mackay Sugar makes this submission to the taskforce. As the National Greenhouse and Energy Reporting System (NGERS) will be an important part of the Australian Emissions Trading Scheme (AETS), Mackay Sugar is keen to understand how a predominantly self-sufficient renewable energy producer will have to report under the proposed system, and more importantly, how it will be treated under the AETS.

With bagasse energy taken into account, Mackay Sugar's energy use far exceeds the 0.5 PJ per year threshold imposed by the Energy Efficiency Opportunities Act (and the proposed NGERS), and we therefore already report on possible energy efficiency projects. Unfortunately, most energy efficiency projects available to Mackay Sugar will lead to a surplus of renewable bagasse which currently has no value or financial return to the company.

Mackay Sugar fully supports an AETS and, as a renewable energy consumer and exporter, views the scheme as an opportunity to promote our low greenhouse emitter status. The comments and questions listed below do not directly address the "feedback questions" in the discussion paper, but rather provides views and some questions on how the National Greenhouse and Energy Reporting System may apply to Mackay Sugar, and sugar mills in general.

## 1. Reporting structure

Mackay Sugar would be the reporting Corporation, with each of its four factories classed as Facilities. The sugar refinery, which is collocated at one mill site, is partly owned under a Joint Venture, and would be classed as a separate entity, responsible for its own energy and emission reporting.

## 2. Boundary of each Facility (i.e. milling operations)

It is considered that all operations for which Mackay Sugar is directly responsible should fall within the Facility boundary. These include:

- Factory operations and maintenance
- Cane railway transport, from railway sidings to the factory
- Mill vehicle transport
- Cane railway maintenance
- Effluent ponds

The following activities are beyond the Company's control and should be excluded from Corporate reporting:

- All farming operations, including cane harvesting and transport to sidings
- Sugar, molasses, bagasse, mud and ash transport (performed under contract)
- Transport of all other goods and consumables to factories (contract)

## 3. Greenhouse emission sources to be included

### *Scope 1 Emissions*

- Bagasse fuel (t) (non- CO2 only)
- Coal fuel (t)
- Oil fuel (t)
- Wood waste (t)
- Loco diesel (L)
- Other vehicles diesel (L)
- All vehicles petrol (L)
- Effluent ponds (t) (non- CO2 only)

### *Scope 2 Emissions*

- Electricity import (MWh)
- Electricity export (MWh – negative)

The collocated sugar refinery (JV) at Racecourse Mill purchases steam and electricity directly from the mill, and these would be reported separately by the refinery 'Facility' as Scope 2 emissions.

## 4. Energy to be included in reporting

Mackay Sugar assumes that the energy "produced or consumed" by a Facility refers to the raw energy in the fuel used, as opposed to the useful energy generated by that fuel. We also believe that self-generated, renewable bagasse fuel should be excluded from reportable energy. This could result in some sugar mills falling below the energy threshold for reporting, particularly if they export renewable electricity.

Some sugar mills may use sufficient extraneous fossil fuel to exceed the energy or greenhouse emission thresholds nominated in the discussion paper. In this case, the sugar mill should be expected to report their energy and greenhouse emissions.

## 5. Operations under an AETS

Even if bagasse is excluded from energy reporting, Mackay Sugar's energy production and greenhouse emissions levels will probably exceed nominated threshold levels by the second reporting year, due to coal usage in supplying refinery energy. Does this mean:

- Mackay Sugar will be given an emission 'cap' under an AETS?
- Credits can be created if emission levels can be reduced below the assigned 'cap'?

## 6. Cogeneration

Mackay Sugar currently creates Renewable Energy Certificates under the Federal 2% MRET Scheme. A major Cogeneration project is planned at one mill that will increase exported renewable electricity by about 200,000 MWh per year. If bagasse energy is excluded from the reporting system, this project will result in Mackay Sugar's net energy consumption becoming negative. Scope 2 emissions, which include electricity consumption, will also most likely be negative.

We would like to know how this would be handled under the reporting scheme.

## 7. Ethanol

Mackay Sugar is also investigating the production of ethanol at one of its sites. It is assumed that CO<sub>2</sub> emissions from the fermentation process (the major greenhouse gas produced in the process) would be excluded in the calculation of Scope 1 emissions, due to it originating from a renewable source.

Scope 2 emissions from the ethanol plant would include any steam and electricity purchased from the adjacent mill Facility, where Scope 1 emissions may increase if fossil fuel consumption increases at the site.

As transport fuels are to be included under an AETS, we also seek some indication as to how low-greenhouse gas emission benefits flow back to renewable transport fuel production. Does this mean that project Life Cycle Analyses of new ethanol projects will be required to determine their greenhouse emission intensity, relative to fossil based transport fuels? This may impact on the economics of our ethanol project.

The points raised above highlight some of the issues that face Mackay Sugar, and possibly many other sugar milling companies, when required to report under the proposed National Greenhouse and Energy Reporting System, and a complimentary Australian Emissions Trading Scheme.

Mackay Sugar believes that it is important that the Australian sugar industry, which is a major energy producer and consumer, is consulted when formulating the regulations for reporting, and that the reporting system caters for the peculiarities of the industry. We strongly believe that the sugar industry can contribute significantly to reducing Australia's greenhouse emission intensity through diversification into renewable electricity and ethanol production. Unfortunately, government policies and market incentives to date have not provided the certainty needed for such major investments on a large scale.

We also note in Clause 3.1 of the discussion paper that "trade-exposed and energy intensive" industries may gain compensation under an AETS. The Australian Sugar industry falls within this category and is becoming increasingly disadvantaged against our major

trading partners, who typically have access to buoyant renewable energy markets in their country of origin, and have successfully diversified.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'John Pollock', written in a cursive style.

John Pollock  
Chief Executive