



17 January 2014

Standing Committee on Environment and Communications References Committee
PO Box 6100,
Parliament House
CANBERRA ACT 2600

Email: ec.sen@aph.gov.au

Dear Committee Chair,

INQUIRY INTO THE GOVERNMENT'S DIRECT ACTION PLAN

I make this submission on behalf of the Australian Dairy Industry Council (ADIC), the peak industry body representing the whole of the dairy value chain – dairy farmers and manufacturing companies.

The dairy industry takes an interest in this Inquiry with particular reference to the following parts of the Inquiry:

- ii. whether the Direct Action Plan has the capacity to reduce greenhouse gas emissions adequately and cost effectively,
- iii. the effect of technical issues that arise for measuring abatement under the Direct Action Plan, including additionality and establishing emissions baselines for emitting entities and long-term monitoring and reporting arrangements,
- iv. the impact of the absence of policy certainty derived from the Direct Action Plan to encourage long-term business investment in the clean, low carbon economy,
- v. the repeal of the Clean Energy Package and the Direct Action Plan's impact on, and interaction with, the Carbon Farming Initiative,

Dairy industry context

Australian dairy is a \$13 billion farm, manufacturing and export industry directly employing 43,000 Australians and indirectly providing a livelihood for more than 100,000 people in service industries. The dairy industry has significant opportunity to grow in future years, but recognises the potential for its growth to impact on emissions, and the role of innovation and farm practice in managing emissions.

The dairy industry is keen to contribute to national efforts to improve energy efficiency and reduce greenhouse emissions. The dairy industry's Sustainability Framework sets a target to reduce greenhouse gas emission intensity by 30% by 2020¹.

While the dairy industry is committed to contributing to Australia's efforts to reduce greenhouse emissions, the industry does not support any carbon tax or pricing scheme that results in a less competitive position for a trade-exposed industry such as the dairy industry.

Compared to other primary producers, the Australian dairy industry is disproportionately affected by the current carbon tax due to the industry's high electricity needs in milking machinery, cool milk storage, and intensive milk processing procedures. ABARES has identified that electricity accounts for 2.4% of total dairy farm operating costs, compared with 0.8% in livestock/cropping enterprises and

¹ http://www.dairyaustralia.com.au/~/-/media/Documents/Industry%20overview/Sustainability/CC-537%20Dairy%2012pg_web_2.pdf

around 1% in beef and sheep². This is because electricity is dairy farming's main energy source, not the transport fuels that were exempted from the carbon tax to reduce its impacts on cropping, sheep and beef grazing. Analysis commissioned by Dairy Australia indicates that dairy farmers are spending between \$20 and \$100 a day on electricity in their dairies following substantial rises in tariffs and fixed charges since 2010.

With 40% of milk production exported, the dairy industry is trade-exposed and already has to operate in challenging international market conditions. The risk with carbon pricing is that it could result in Australia's dairy industry being disadvantaged in the global market compared to its major dairy competitors. For example, the New Zealand dairy industry is not subject to the same liabilities under the New Zealand ETS as the Australian industry is under the Australian carbon tax and ETS.

The opportunity for emissions reduction in the dairy industry

It is our assessment that energy efficiency is the primary opportunity for emissions reduction in the dairy industry, as the industry is a large user of electricity on farm, and both electricity and gas in manufacturing. Some on-site energy generation technologies may also supplement energy efficiency (such as cogeneration or solar PV or solar thermal). But for all these opportunities, there are significant capital cost barriers.

Energy efficiency in the dairy industry has the potential to not only reduce emissions, but also reduce operating costs. Dairy farmers are already embracing renewable energy technologies, with 40% of farms in 2012 having installed some form of renewable energy installation (such as heat pumps or solar water heating). In many cases, federal and state rebate programs assisted farmers with the upfront capital costs, and thereby increased their participation.

The greenhouse abatement benefits are significant. Preliminary analysis commissioned by Dairy Australia indicates that solar water units installed in dairies at an average cost of around \$16,000 can save more than 15 t/CO₂e a year as well as saving the dairy farmer more than \$3000 a year in electricity costs.

Dairy farmers have also been quick to take up 1700 energy assessments co-funded through Dairy Australia and the Federal Government's Energy Efficiency Information Program. The audits are identifying many no or low cost energy efficiency and energy reduction opportunities, as well as options that are more expensive but have significant cost savings and greenhouse gas abatement. Unfortunately, the carbon tax and the previous Clean Energy Policy did not provide much in the way of incentives for dairy farmers to invest in these energy efficiency measures, and several State rebate programs are no longer being funded.

Dairy manufacturers are also embracing new clean technology. For example, dairy manufacturing projects that were part of the Clean Technology Food and Foundries Investment Program in the 2012-13 year included more than \$25 million investment in equipment upgrades including installing heat exchange, solar PV and/or gas alternatives for water heating and power, and equipment upgrades for refrigeration and lighting. Investment in clean technology is expected to reduce emissions intensity at some dairy plants by up to 50%. Unfortunately this Clean Technology program is now closed and comparable investment in these types of projects is unlikely to continue.

The emerging question is how to finance large, up-front capital costs for equipment upgrades and renewable energy options in tight economic conditions. For example installing heat recovery pre-heaters and variable speed drives on vacuum and milk pumps on dairy farms have an estimated capital cost of \$5000-\$17,000, with a 4 – 20 year payback period. Similarly, for a dairy manufacturer to upgrade to new energy efficient refrigeration or to switch to solar power could require a capital cost of several hundred thousand dollars with a payback period of 3 – 20 years.

The capacity for the Direct Action Plan to support emissions reduction in the dairy industry

The Emissions Reduction Fund (ERF), if appropriately designed with realistic benchmark prices per tonne of CO₂e, could offer the industry an opportunity to contribute substantially to reducing Australia's target of 5% reduction on emissions levels by 2020. The ERF at the same time could improve the

² 'Possible short-run effects of a carbon pricing scheme on Australian agriculture', ABARES Research Report 11.10, December 2011, p4.

dairy industry's profitability and international competitiveness by reducing the substantial energy costs for manufacturers and on farm (ranging from \$20 to \$100 a day per farm).

The terms of reference for the ERF state that the Government intends to seek low cost abatement opportunities through the Carbon Farming Initiative (CFI). However, the CFI has limited value at this time for the dairy industry.

Current dairy industry modelling suggests that well-managed dairy farms have limited currently cost-effective options to profitably reduce methane and nitrous oxide emissions. For example, for the approved methodology for methane capture from effluent ponds to be a cost-effective investment option for dairy farmers, the Carbon Credit Units (or equivalent benefit under the Direct Action Plan) generated would need to be priced substantially above the \$23/tCO_{2e} carbon tax price and the expected price of \$8-12/tCO_{2e} under the ERF. .

Soil carbon storage similarly offers limited to negative opportunities, as well-managed dairy pastures established for many years have few prospects for increased storage. Again, the benefit would need to be priced well about the price of the carbon tax or ERF. Conservation planting for the carbon benefit alone is unlikely to be cost-effective but planting for other reasons may attract an extra CFI benefit.

The dairy industry is also concerned that with the repealing of the carbon tax, funding for continued research under the CFI is uncertain. Australian agriculture needs continued investment in developing methodologies and discovering novel carbon sequestration or abatement opportunities. Without this investment, we risk missing opportunities for cost-effective abatement measures, and our international reputation and competitive advantage as a sector that takes climate change seriously.

For dairy to make a meaningful contribution to Australia's emissions reduction, the ERF needs to be designed in a way that will enable the dairy industry to exploit the opportunities for carbon abatement through improved energy efficiencies in dairies on farms, and in dairy manufacturing.

Indications about the ERF to date suggest that the fund will have limited opportunities to incentivise emissions reduction in the dairy industry.

For example, we have considered the feasibility of a collective industry tender under the proposed auction process to deliver carbon abatement through improved energy efficiency on-farm. This seems to be the type of industry response that the Government's policy intends to encourage. However, we are concerned that the transaction costs involved in such an undertaking involving hundreds or thousands of small to medium enterprises (SMEs) would be prohibitive, given the need to determine historic energy baselines on individual farms (and/or for the industry), measure and verify carbon savings over time, and the risk of penalties if emissions rise above the industry baseline. At an indicative funding of up to \$12/tCO_{2e} from the ERF, these transaction costs would far outweigh the potential benefit of facilitating a program for the dairy industry.

It is therefore our current conclusion that with the capital costs of the energy efficient or alternative energy technology, combined with the transaction costs, it would be difficult for a collective dairy industry bid representing multiple SMEs to compete in a one-size fits all auction for lowest cost abatement. If baselines and verification are required on a company, rather than industry, basis, this would also rule out SMEs in dairy, due to the high transaction costs.

Technical aspects of the Direct Action Plan

We have commented above about transaction costs, difficulty in determining baselines, monitoring and timing issues.

Another technical aspect for consideration is the focus of the ERF on absolute emissions reduction rather than emissions intensity. While absolute emissions reduction provides a measure of emissions activity at a particular time, an approach to reduce emissions intensity provides a measure of long-term impact relative to production. This is particularly relevant for the agriculture sector where there is a strong expectation that production will increase in the coming decades. Sustainable intensification of agriculture with increased production over time is a realistic scenario for Australia. However, it is not possible to keep cutting back absolute emissions with a growing industry. The dairy industry seeks to focus on reducing emissions intensity in production. This concept does introduce yet another question about measurement. The dairy industry has done some work on emissions intensity calculators but further work is required on this.

The Direct Action Plan approach relies on robust methodologies. As mentioned above, certainty is required for ongoing funding for research and development of CFI methodologies and initiatives.

The importance of policy certainty

If the Direct Action Plan and ERF are designed in such a way to provide a benefit for the dairy industry in reducing emissions, the timing lag in creating the investment certainty needed still presents a concern.

As outlined above, there were a number of programs under the Clean Energy Package that the dairy industry capitalised on with demonstrated emissions reductions. The timing lag between the closure of the Clean Energy Package and finalising the Emissions Reduction Fund has created investment uncertainty to the industry and impacted on companies and farms implementing emission reduction projects. In the absence of this certainty, we seek interim programs being made available to provide opportunities for emissions reduction and energy efficiency projects, not only from the dairy industry but other impacted sectors, to compete for Government funding.

The Direct Action Plan's interaction with the Carbon Farming Initiative

We have commented above on aspects of the CFI and its link to the Direct Action Plan.

What the dairy industry needs from Government emissions reduction policy

We seek Government Policy that supports reducing emissions intensity and improving energy efficiency in agriculture. This will require an acknowledgement that emissions intensity is a key measure in agriculture. It will also require ongoing research and development and support for development of CFI methodologies and initiatives.

Recognising the dairy context and opportunities to reduce emissions, we particularly endorse designing a Direct Action Plan and ERF which will support energy-intensive agriculture sectors (including the interrelated processing sector) to reduce emissions intensity. For dairy, the most cost-effective opportunity to reduce emissions is in transition to more energy efficient farms and factories.

To effectively support this, the ERF may need to incorporate sector or activity bands. This would provide a flexible approach for energy-intensive agriculture sectors to participate in the national effort to reduce greenhouse emissions, in a cost-effective way that would not be enabled without banding.

We also suggest that the Policy needs to provide a specific focus on SMEs and energy efficiency to enable broad scale and long term impact on Australia's energy use. For example, the ERF could incorporate a national 'white certificate' scheme along the lines of those operating in Victoria and New South Wales. The scheme could include a register of eligible energy efficient equipment relevant to energy-intensive agricultural industries such as dairying, and could be a reliable source of carbon abatement based on recognised methodologies to establish baselines and verification. Such a scheme would complement the Federal Government's Small-Scale Renewable Energy Scheme.

As noted above, we endorse the importance of policy certainty. The timing lag between the Clean Energy Package and the details of the Direct Action Plan creates investment uncertainty. Consideration should be given to interim programs being made available to support emissions reduction and energy efficiency projects while maintaining the interest and momentum created under previous Government Policy. In a broader sense, as dairy operates in an international market, we need the certainty of a sound domestic policy to assist with Australia's international reputation and competitiveness.

Yours sincerely,

Noel Campbell
Chairman, Australian Dairy Industry Council