

ATTACHMENT 4

NCP AND THE SUNSHINE COAST SOLAR FARM

Executive Summary

The Sunshine Coast Solar Farm should not be identified as a business activity of Council because the project:

- is a cost replacement project being a mechanism to replace a portion of pre-existing committed electricity spend by offsetting Council's own electricity usage against the electricity output from the Project
- sees any excess electricity generation or requirements sold or purchased from the wholesale electricity market as required.
- will not be able to influence price setting and will take the:
 - Queensland spot price for all electricity generated
 - Large Generation Certificate (LGCs) spot price for all LGCs generated
- costs and prices of the project are already isolated, documented and transparent.

Therefore there is no additional benefit from applying the Code of Competitive Conduct National Competition Policy reforms.

National Competition Policy (NCP) objectives

The *Local Government Act 2009 (LGA)* defines business activity, of a local government, means trading in goods and services by the local government.

NCP reform relates to the issue of the competitiveness and efficiency of local government "business" activities which enjoy a statutory monopoly, or have some special statutory advantages (e.g. power to obtain revenue through the compulsion of the rating process, exemption from tax etc) as compared to any private operator which sought to provide a similar service.

The theory is that the statutory monopoly or other special advantages of these businesses may mean that they are not being conducted as efficiently as they would be if they were subject to the competitive pressures of the private sector or, alternately, that the prices being charged by these operations are distorted in the sense that they contain hidden subsidies or hidden surcharges as compared to the prices which would be charged if the services were provided commercially.

The NCP reforms included a requirement to consider the restructuring of business type activities which enjoy a statutory monopoly or have special statutory advantages so as to put them on the equivalent of a commercial footing ("competitive neutrality"). The theory is that this may result in cost savings or that, at least, it should result in the true costs of the service being isolated and documented so that the relationship between those costs and the price being charged for the service becomes transparent to the general community.

Expenditure threshold

The LGA requires previous financial year expenditure to be used in business activity expenditure threshold analysis. Following the first year of operation in 2017-2018 the Sunshine Coast Solar Farm is being assessed to determine whether it is a business activity for the 2018-2019 financial year.

The relevant expenditure threshold is \$328,000¹. Forecast expenditure of \$2.834m exceeds this threshold.

Cost replacement project

At a 15MW peak the total output of the farm will be approximately 30,000 MWh per annum which is typically sufficient in aggregate and during the daytime to offset all of the load required by all of Council's electricity consuming sites (large, small, watchman and public lighting).

The Sunshine Coast Solar Farm is a cost replacement project. The Solar Farm Project business case estimated that Council will spend over \$323 million over the next 30 years on electricity, irrespective of the decision to proceed with the Project. Council has historically received its electricity supply under forward electricity supply agreements, paying a premium for the price certainty this brings. The Sunshine Coast Solar Farm Project employs a pool pass through electricity retail model. This sees Council net its own electricity usage against the electricity output from the Project first, with any excess electricity generation or requirements sold or purchased from the wholesale electricity market as required.

Electricity spend is not a selective use of capital, but a financial commitment necessary for Council to continue to operate. The use of the cost of debt as the WACC for the Project reflects its cost replacement nature. The Project is a mechanism to replace a portion of pre-existing committed electricity spend. As such investment in the Project essentially has a zero equity risk premium as Council can't consider alternative use for the cash committed to future electricity spend.

Price transparency and influence on market electricity prices

The Sunshine Coast Solar Farm will sell electricity into the National Electricity Market (NEM) administered by the Australian Energy Market Operator (AEMO).

The NEM spans Australia's eastern and south-eastern coasts and comprises five interconnected states that also act as price regions: Queensland, New South Wales (including the Australian Capital Territory), South Australia, Victoria, and Tasmania. The NEM has a total electricity generating capacity of around 45,000 MW and supplies approximately 9 million businesses and household customers with about 200 million MWh of electricity each year.

The NEM uses sophisticated systems to send signals to scheduled generators instructing them how much energy to produce each five minutes, so production is matched to consumer requirements (spare capacity is kept ready for emergencies), and the current energy price can be calculated. A scheduled generator operates scheduled generating units in accordance with the central dispatch process. These generators must submit bids into the pool, and comply with dispatch instructions determined by the central dispatch process based on those bids. A dispatch price for each region is determined every five minutes, and the six dispatch prices in a half-hour period are averaged to determine the regional spot price for that half-hour trading interval. AEMO uses the spot price to settle all energy traded in the NEM.

¹ Local Government Regulation section 19 sets a \$9.35m expenditure threshold for significant business activities and section 39 sets a \$328,000 expenditure threshold for prescribed business activities.

The Sunshine Coast Solar Farm has a 15MW generating capacity and will supply around 30,000 MWh into the grid each year which will offset Council's total annual consumption. The facility was designed and is registered to operate over its 30 year design life as a non-scheduled market generator. It will not participate in the bid/dispatch process and will not be able to influence price setting. Instead it will take the regional spot price for all electricity generated. Output of the facility is sold under contract to Diamond Energy at the spot price.

Price transparency and influence on LGC market prices

The Clean Energy Regulator administers the Large-scale Renewable Energy Target (LRET) which encourages investment in renewable power stations so that at least 20% of Australia's electricity supply (33,000 GWh per annum) comes from renewable sources by 2020.

Large Generation Certificates (LGCs) are created based on the amount of eligible renewable electricity produced by the power stations, and can be sold or traded to RET-liable entities, in addition to their sale of electricity to the grid.

In 2016, a total of 17.3 million LGCs were validated, up from 16.5 million validated in 2015². Liable entities, mainly retailers, have a legal obligation to buy and surrender LGCs to the Clean Energy Regulator on an annual basis. LGCs are traded at a rate determined by supply and demand in the market.

The average LGC spot price in 2015 was \$54 and over 2016 and 2017 was \$83 to \$85. The theoretical market cap is the \$92.80 tax effective cost of the shortfall penalty. In March 2018, forward prices for calendar year 2018 were \$87, calendar year 2019 were \$79 and calendar year 2020 were \$47.

Importantly, spot prices do not typically reflect the average cost of certificates purchased for the purpose of acquitting liability. Relatively small volumes of LGCs are purchased through the spot market. Liable entities directly source LGCs from renewable power stations via confidential agreements.

The Sunshine Coast Solar Farm is accredited as a renewable power station and will create around 28,600 LGCs initially worth between \$1.5 million – \$2.5 million per annum. Council can offset around 3,500 LGCs for required unmatched electricity (purchases required at times that the farm is not generating) rather than purchasing LGCs from the retailer. LGCs from the facility are sold under contract to liable entities at the spot price.

Price setting for internal customers

Changes to the finance system accounting structure were implemented to insulate operational level budget and actual data from volatility inherent in the new retail strategy due to changes in the following:

- generation levels across the day and season
- timing of load and generation matching
- wholesale electricity price
- LGC prices.

The 'Operation – Solar Farm' within Business Development branch is used to capture this volatility. Electricity budget and actual costs for branches are treated as coming from the

² Clean Energy Regulator RET 2016 Administrative Report and Annual Statement

solar farm internal service provider, using fixed tariffs set each year (to facilitate internal budget and cost stability) and actual volumes. The energy component of the fixed tariff is based on retail market rates and actual network tariffs are used to determine network charges.

Operational savings will be held at the Council level rather than applied back to branches because this is the cleanest and most transparent method of reporting performance internally to Council and externally to the public.

This also ensures that any energy efficiency measures implemented by individual sites are fairly reflected in their charges as a result of the reduced consumption, and these can be easily measured from the point in time that a project was implemented. Without this ability to segregate highly volatile market pricing, it becomes impossible to measure and track any of those changes.

This reporting methodology is also consistent with the full cost pricing requirements of National Competition Policy for Council's business activities.

Performance Transparency

The website launched to coincide with the official opening of the facility on 25 July 2017 provides a range of information on the project including:

- Overview of the Project
- Business case summary
- Benefits to the Region
- Live generation, weather and carbon savings data

Monthly financial performance information is being developed to compliment the live data.

