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Date >> 17 November 2017

The Australian Competition and Consumer Commission

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City of Townsville, Submission to Retail Electricity Pricing Inquiry Preliminary Report

This submission has been prepared on behalf of the City of Townsville and its residents, in response to the Australian Competition and Consumer Commission's (ACCC) Inquiry into *Retail and Electricity Pricing – Preliminary Report* (the ACC Report), released on the 22 September 2017.

The City of Townsville was pleased that the ACCC conducted hearings in Townsville as a part of the stakeholder engagement process and sought the views of genuinely concerned North Queensland residents.

I would also like to thank the Chairman of the ACCC Mr. Rod Simms and Ms. Rebecca Holland Director Retail Electricity Pricing Inquiry for their time in meeting with me on the 8th August, it was a very productive discussion.

It is important to note that City Councils, in the same way as small, medium and large industrial energy users are suffering from ongoing increases in energy prices. However, unlike these users, we are not able to move our business to other areas in the country that have lower energy costs or more secure and reliable infrastructure.

Since FY2011-12, the cost of energy to council has increased by 10%, and now constitutes 4.2% of Council revenue generated from Council rates. This increase would have been 31% had Council not taken drastic energy conservation measures – reducing its electricity usage by 28% across all services.

Given the current level of economic activity within the Townsville City Council region, Council has not passed the energy cost increases on to the community via rates increases, and has managed costs and services in other areas. To add to this, land valuations in the region have been in decline for the last 5 years, which has

further impacted the Councils ability to offset the increasing costs of energy against rates revenue.

Major users of power in the region, such as Sun Metals Corporation, have noted that their power costs (around \$50-60M per annum) have tripled over the last 15 years, and the additional cost associated with energy and its transmission are impacting their global competitiveness. Sun Metals has noted that if their plant had been located in Gladstone rather than Townsville they would save approximately \$10.5M per annum on transmission charges alone, which have increased with the closure of Collinsville Power Station.

This is another example of how high energy costs to the region impact the local residential and business community.

Energy security for the region is also a concern for Council. Following the closure of the Collinsville Power Station in 2012, Townsville is now 675km from the nearest large-scale baseload generator, NRG Gladstone. It is our understanding that this station may close in 2028-30.

With this comes long distance transmission, and the uncertainty that North Queensland could be supported, if in the event of extreme weather event or other natural disaster, our transmission lines are lost.

To add to this, transmission assets, such as the 132kV powerline from Collinsville to Townsville - constructed in 1960, is now reaching the end of asset life (within the next 5-10 years). The main high voltage 275kV powerline to Townsville will also require replacement within the next 10 - 20 years.

Uncertainty on whether these lines will be decommissioned, refurbished or replaced hinges on the demand for energy in Townsville and North Queensland; whether there is a new power station constructed in the north; or whether North Queensland is redesigned as a distributed generation region.

As a part of the distributed generation, 25,773 houses in the Townsville ABS statistical area, have installed solar generation on their properties – constituting approximately one third of the total 79,982 households. However, with the average installed cost of a 5kW-6.4kW solar system costs between \$7,000 and \$10,000 (pre-government solar rebates), the ability for low-income earners in the community to install solar on their properties is limited. These people have been some of the hardest hit by recent energy price increases. To add to this hardship, it is noted that in the ACCC preliminary report, cost stack for electricity to non-solar households has increased by an additional \$52 per annum, due to the wider markets uptake of rooftop solar.

Greater assistance for householders to be able to generate their own electricity, as well as increasing the general public's understanding of energy costs and energy saving measures in the households is an essential step forward in maximising the existing generation assets currently available to the region. While this is not a Townsville City Council responsibility, each regional council is well equipped to facilitate educational campaigns to each of its residents.

It is noted that this submission is being prepared during the campaign period of the Queensland State Election, to be held on the 25th November 2017. Energy has been the major platform for all parties, with focus on maintaining or reducing the cost of energy for small, medium and large users.

Campaigns have focused on the construction of new, privately funded High Efficiency and Low Emissions (HELE) coal fired power stations in North Queensland by the Liberal National Party (LNP) and One Nation, the 50% renewables policy of the Queensland Labor government, and the scrapping of the same 50% renewables scheme by the LNP. Parties have proposed new structures for the Government owned generation assets, attractive retail rebates, energy audits, zero interest loans on households solar, new powerlines to service North Queensland and more retail competition.

Great uncertainty is being created as a part of this election campaign over the future of the proposed coal mines in the Galilee Basin – which holds a major influence over the future prosperity of Townsville and North Queensland.

There appears to be no focus from any of the parties on the abundant gas resource of the Bowen Basin, which could be delivered to a gas fired power station in Townsville via the existing North Queensland Gas Pipeline – if the State is willing to assist in actively ensuring that these gas reserves are produced for the market at a reasonable cost to consumers. The gas reserves of the Bowen Basin are not connected to the Liquefied Natural Gas (LNG) market in Gladstone – as is the remainder of the East Coast market, and therefore should be produced at a reasonably consistent cost to North Queensland consumers.

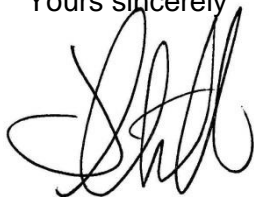
Townsville therefore wonders why we are being constrained to deliver a coal fired power station, which may suffer the risk of higher power prices in a future carbon constrained environment, over a natural gas power station which will produce significantly less emissions over the life of the projects.

These election commitments further add to the uncertainty of the affordability and security of energy for the Townsville City Council region and the wider community within North Queensland. Neither the promise of a new coal or gas fired power station will provide any near term resolution of the current energy affordability crisis, and may in fact become a distraction from the real need for immediate downward pressure on energy pricing.

While the ACCC's report itself is a summary of the preliminary findings on current pricing, it is hoped that the final report will reflect the genuine hardship that the residents and businesses of North Queensland are currently suffering regarding energy affordability, and will make firm recommendations to reduce the growing cost impacts to residential, commercial & industrial, business – and importantly the ability of Council to maintain employment and high-quality services to the region.

Townsville City Council is willing to continue its support for the work of the ACCC in drawing its conclusions on the prohibitive cost of electricity in Australia, so long as the recommendations in the final report clearly point to the actionable outcomes to return Australian power prices to its former level of international competitiveness, to assist regional centres such as Townsville and North Queensland to grow and attract new businesses and greater investment.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J Hill', written over a white background.

Cr Jenny Hill

Mayor of Townsville

Townsville City Council

Formal submission and response to the Australian Competition and Consumer Commission – *Retail Electricity Pricing Inquiry – Preliminary Report*

17 November 2017

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Townsville Overview

Townsville is the largest city in Northern Australia, is the gateway to mining and agricultural regions, and is perfectly positioned as Australia's gateway to Asia.

According to demographer Bernard Salt, 'no city of comparable size has quite the connection into the future prosperity of the Australian nation as does Townsville'. Townsville offers 'stability, urban concentration and prosperity' along with 'a unique mix of employment drivers' and 'the highest average disposable household income among Australia's 20 largest urban centres outside of a State or Territory capital'.

Townsville City Council has undertaken regulatory reform to improve efficiency in development approvals, and along with the new Townsville City Plan, the Townsville City Waterfront Priority Development Area and the world class Townsville City Waterfront Promenade Project continues the evolution of the CBD. The Townsville Jobs and Investment Package offers financial development incentives, and strategic management of council land has opened development opportunities in the city centre.

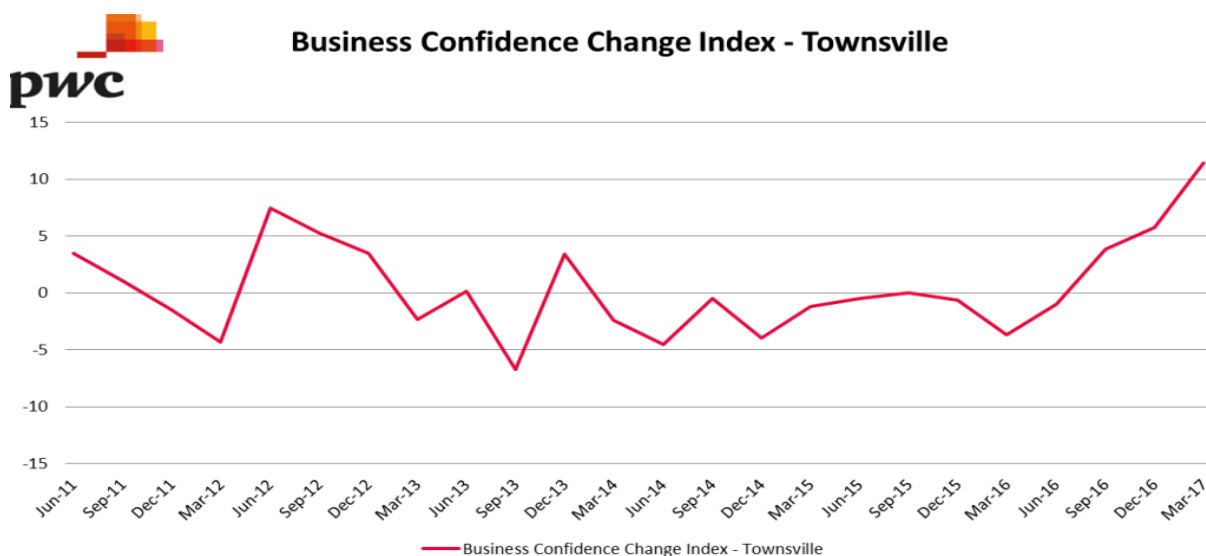
Business Confidence

Currently Townsville is experiencing the highest level of business confidence since the onset of the Global Financial Crisis, and the most positive quarter in 4 years, according to the Price Waterhouse Coopers (PwC) *Business Confidence Survey, June 2017*.

PwC notes:

"We expect this is likely due to the business community feeling that the Townsville economy is steadily recovering, they're encouraged by investment in the major projects announced over the past 12 months and now looking at growing employee numbers,"

Of those surveyed, 97% said they expect employment levels to remain stable or increase over the next three months with only 3% of participants predicting employment levels to decline.ⁱ



City of Townsville – Demographic Analysis



Figure 1 - Townsville Statistical Area

The Townsville City Council represents a population of 229,031 people with a median age of 36 years.

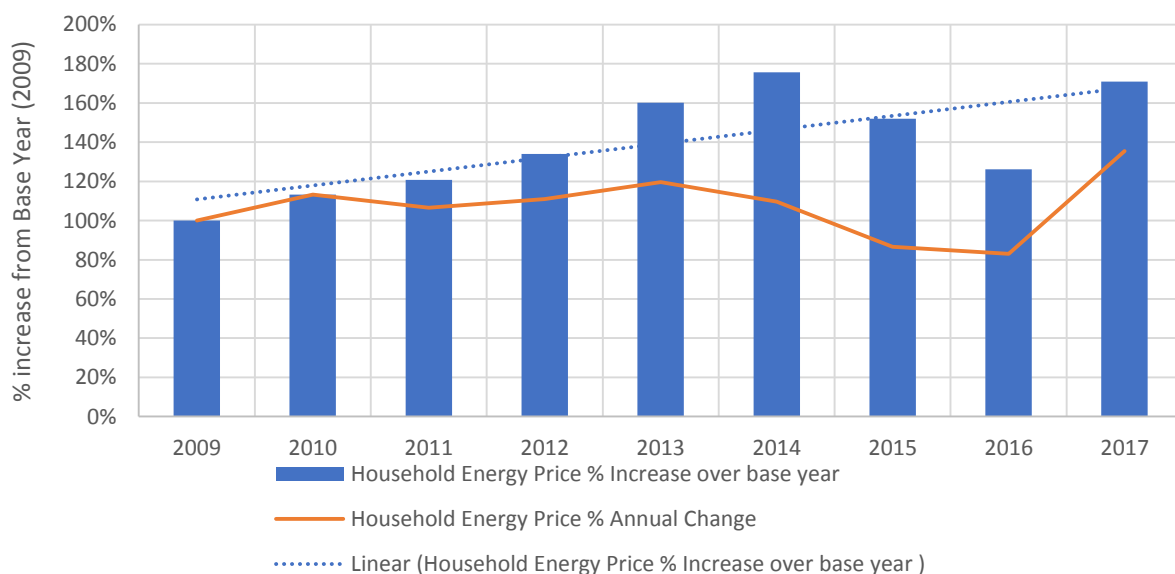
The city supports 16,368 businesses, of which 6,930 employ staff within the enterprise.

There were 113,785 people who reported being in the labour force in the week before Census Night in Townsville (Statistical Area Level 4). Of these 58.7% were employed full time, 27.4% were employed part-time and 8.7% were unemployed.ⁱⁱ However, youth unemployment is still a major concern in Townsville and remains at approximately 20.8%.ⁱⁱⁱ

The Median household income in Townsville is \$1,362^{iv} per week or \$70,824 per annum. For these household's electricity now constitutes more than 3% of total household income^v, based on an annual energy bill of \$2,723 per annum^{vi} as demonstrated in *Table 1 -Total Household Income (Weekly and 52-week Max)*.

This is important, as 49% of households in Townsville fall below bellow the median income^{vii}, and for these households, the electricity bill stress is apparent. For Townsville and North Queensland, we do not want a community living with, enshrined "energy poverty".

Queensland Energy Price Increases 2009-2017



Source: St Vincent de Paul Society National Council of Australia, 2017 Energy Report [Source Data](#)

Table 1 -Total Household Income (Weekly and 52-week Max)

Household Income	Total No. Households	Annual Household Income (Max)	% Total Households in income bracket	Energy as a % household Income (av bill - \$2723/a)
Negative/Nil income	1,023	-	1%	-
\$1-\$149	562	\$ 7,800	1%	35%
\$150-\$299	1,684	\$ 15,600	2%	17%
\$300-\$399	2,294	\$ 20,800	3%	13%
\$400-\$499	5,267	\$ 26,000	6%	10%
\$500-\$649	3,665	\$ 33,800	5%	8%
\$650-\$799	5,966	\$ 41,600	7%	7%
\$800-\$999	5,716	\$ 52,000	7%	5%
\$1,000-\$1,249	6,772	\$ 65,000	8%	4%
\$1,250-\$1,499	6,393	\$ 78,000	8%	3%
\$1,500-\$1,749	5,148	\$ 91,000	6%	3%
\$1,750-\$1,999	4,721	\$ 104,000	6%	3%
\$2,000-\$2,499	8,544	\$ 130,000	11%	2%
\$2,500-\$2,999	5,405	\$ 156,000	7%	2%
\$3,000-\$3,499	3,160	\$ 182,000	4%	1%
\$3,500-\$3,999	2,206	\$ 208,000	3%	1%
\$4,000 or more	3,098	\$ 208,000	4%	1%
Partial income stated(c)	7,389	-	9%	-
All incomes not stated(d)	2,031	-	3%	-
Total	81,043			

This table is based on place of enumeration.

(a) Excludes 'Visitors only' and 'Other non-classifiable' households.

(b) Comprises 'Lone person' and 'Group households'.

(c) Comprises households where at least one, but not all, member(s) aged 15 years and over did not state an income and/or was temporarily absent on Census Night.

(d) Comprises households where no members present stated an income.

Please note that there are small random adjustments made to all cell values to protect the confidentiality of data. These adjustments may cause the sum of rows or columns to differ by small amounts from table totals.

Townsville Industries

The top 5 industries – by employee numbers – totalling 54% of the workforce are:

- Healthcare and social assistance (14%)
- Public Administration and Safety (12%)
- Retail Trade (10%)
- Education and Training (10%)
- Construction (8%)

These businesses rely heavily on the provision of secure and affordable energy to support ongoing employment of Townsville's local population.^{viii} In the four years between 2011 and 2015 Townsville lost 350 registered businesses or 3% of total number of businesses.

Public Administration and Professional Services

Townsville serves as the principal administrative hub of North Queensland, with the largest Queensland Government sector outside of Brisbane.

Townsville is also a major private sector services centre, with legal, accounting, financial, and other professional firms servicing the broader North Queensland region.

In 2013 there were approximately 2,015 ongoing employees of the Australian Public Service (APS) in Townsville, accounting for approximately 11.4% of Queensland's APS employees. Key employers within the CBD include numerous state government departments, Energy Queensland, the Australian Taxation Office, the Australian Competition and Consumer Commission, and Townsville City Council.

The Townsville public administration sector contributes over \$500 million annually to GRP.

The professional services sector contributes around \$300 million to GRP, in addition to providing approximately 3,000 jobs in Townsville.

Retail

Townsville is the major retail hub for North Queensland. The city provides extensive offerings to the direct population and services the high end and speciality needs of broader regional centres including the Palm Island, Burdekin, Charters Towers, and Hinchinbrook.

With Townsville's population set to reach 300,000 within the next 20 years and high household income levels, further regional growth will drive demand for new shopping attractions.

Major retail centres in Townsville include Stockland Townsville (including a new Myer Centre established in 2012) and North Shore, Castletown Hyde Park, Willows Thuringowa Central, Domain, Fairfield Central and number of independent retailer offerings in the CBD. As an industry, retail trade contributes \$360 million (just under 4%) to Gross Regional Product (GRP) and employs approximately 9,000 people in Townsville.

Education and Tropical Science

Townsville is known as the education and science hub for North Queensland, has a concentration of world-class education, training and research facilities and has the potential to expand internationally as a recognised education provider. In addition to direct employment and economic activity, Townsville's research centre has been proven to generate a great deal of health, safety and productivity outcomes for the region.

The key education and tropical science facilities within Townsville include:

- Central Queensland University (CQU)
- James Cook University (JCU)
- Townsville General Hospital
- Australian Institute of Marine Science (AIMS)
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Tafe Queensland North
- TecNQ.

Townsville's education and training sector contributes over \$600 million (6.4%) to Gross Regional Product (GRP) each year, with technical, vocational and tertiary education services contributing around \$250M. Tropical science forms a core component of Townsville's professional, scientific and technical services industry, which contributes over \$370M (4.0%) to GRP.

Port Operations, Inter-modal Freight and Storage

Port of Townsville is northern Australia's largest container, automotive and general cargo port, supporting over 70% of Northern Australia's population and 8,000 jobs.

It is Australia's largest sugar, copper, zinc, lead and fertiliser port, servicing the North-West Minerals Province (NWMP), the significant Burdekin sugar-growing district, major cattle and other agriculture precincts and the copper and zinc refineries located in Townsville.

It is one of four designated Priority Ports in Queensland under the Sustainable Ports Development Act 2015 (Qld). It also is providing an increasingly strategic role in cruise shipping operations, and Australia's Defence capabilities, particularly with the Navy's two new flagship vessels, HMAS Canberra and HMAS Adelaide.

Overall trade volumes for 2016/17 was 7 million tonnes consisting of:

- Mining – 33%
- General and Industrial cargo – 27%
- Agriculture – 40%

Defence Force

Townsville is considered Australia's largest military city, with the Australian Defence Force (ADF) an important part of the economy. Known for being a critical air and sea port for defence operations, Townsville's strong industry and services support future defence growth in Townsville.

The city is a key defence site with the RAAF base and Lavarack Barracks, which is home to the 2nd Battalion with more than 4,500 soldiers and civilian employees

Townsville hosts 4 major defence establishments:

1. Lavarack Barracks
2. RAAF Base Townsville
3. Townsville Field Training Area
4. Port of Townsville's Berth 10 (designed for the Royal Australian Navy)

On 6 May 2016, Australia and Singapore signed a 25 year Memorandum of Understanding to strengthen cooperation and open access for annual military training. Under the initiative, up to 14,000 personnel will conduct training in Australia for up to 18 weeks per year – significantly increasing current personnel numbers. Up to AUD \$2.25 billion will be invested in the Townsville and Rockhampton regions from 2016 to 2026. This investment will focus on military training facilities of Shoalwater Bay in Central Queensland and the Townsville Field Training Area.

Townsville's Defence sector is the fourth largest industry, contributing \$1,662.6M or 18% to the 2014/2015 Gross Regional Product of the region.

This sector has experienced growth of 12.8%, largely due to the relocation of key battalions to Lavarack Barracks, including the 3rd Battalion Royal Australian Regiment from Sydney in 2012 and the 2nd Cavalry Regiment from Darwin in 2014.

The region is home to over 15,000 defence force personnel and their dependents, accounting for approximately 8% of Townsville's population (Townsville City Council, Townsville Enterprise Limited and Townsville Chamber of Commerce, 2011). The majority of the defence force personnel are between the ages of 20-30.

Mineral Processing, Mining and Agriculture

Townsville acts as a critical service centre for mining projects in the highly productive surrounding regions which produce significant copper, zinc, lead, gold, magnetite and coal. Townsville also currently hosts three major mineral processing facilities for zinc, nickel and copper, and provides a range of engineering, scientific, and specialised professional services to the mining and minerals industries.

Townsville currently hosts three major mineral processing facilities:

- Sun Metals zinc refinery
- Yabulu nickel refinery (in administration)
- Xstrata copper refinery

Combined, Townsville's metal and mineral manufacturing sectors contribute over \$450M (nearly 5%) to Gross Regional Product (GRP) each year, and provide around 2,500 local jobs.

In addition to being a significant minerals processor and port hub, Townsville provides a range of engineering, scientific, and specialised professional services to the surrounding mining centres. Townsville is also the service centre for North Queensland's extensive agricultural and horticultural industries. Key products include sugar, beef, and high value fruit and vegetables.

A key sector is Townsville's food product manufacturing industry, which contributes around \$90M to GRP each year. Significant establishments include the JBS Swift Australia Meat Works, which employs around 600 people, and has a processing capacity of over 900 beef cattle per day.

Tourism and Major Events

The Townsville North Queensland tourism and events industry welcomes visitors who come to the region for leisure, business, events, visiting friends and relatives (VFR) and education. Townsville attracts a healthy visitor mix, including around 40% holiday visitors, 40% VFR, and 20% business visitation. Tertiary education is also a major driver of visitation to the region through Central Queensland University and James Cook University.

The region recorded over 1 million (1,096,000) domestic overnight visitors in 2016/17 a reduction of 9.1%. Townsville has experienced consistent visitation of between 900,000 and 1,150,000 visitors over the past seven years. International visitors totalled 132,000 in 2016-2017 showing a healthy 7.5% increase.

Visitation to Townsville is dominated by the domestic market, accounting for 85-90% of total visitation each year with domestic tourism expenditure decreasing by 13.9% with an average spend of \$689.00. (*TEQ Domestic Tourism Snapshot June 2017*)

Townsville's attractive winter climate lures visitors to the region, which is enhanced with a vast July to August events calendar. Townsville is a major events centre, regularly attracting significant crowds.

The city hosts two national sporting franchises, the North Queensland Cowboys National Rugby League (NRL) and Townsville Fire (Women's National Basketball League (WNBL)).

Major annual events on the Townsville calendar include:

- Townsville 400 V8 Festival
- Australian Festival of Chamber Music
- Magnetic Island Race Week
- Strand Ephemera and annual international arts exhibitions

Tertiary education is also a major driver of visitation to the region through Central Queensland University and James Cook University. The industry contributes over \$2M to the regional economy every day and supports around 4,000 jobs.

North Queensland – Projects and Growth

North Queensland has incredible potential for growth, in particular Townsville, which provides much of North Queensland's major services, including health, manufacturing and primary resources export potential.

North Queensland has a Gross Regional Product of \$14 billion, and has several major projects that have been committed to by the Queensland State Government, including:

- North Queensland Stadium City Deal (\$250M)
- Australian Singapore Military Training Initiative (\$2.2B).
- Roads Upgrades including:
 - Haughton Floodplain (\$520M)
 - Mackay Ring Road (\$480M)
 - Gordonvale to Edmonton (\$497M)
- Townsville Port Channel Widening (\$193M)
- Haughton Pipeline Duplication (\$225M) ^{ix}
- Townsville Eastern Access Rail Corridor (TEARC) (\$150million committed)
- Townsville Exhibition and Entertainment Centre
- Port Expansion \$1.6B

Retail

The Australian retail trade industry has undergone significant change over recent years. Key factors including the strong Australian dollar and comparatively high labour, utility, and rental costs have accelerated moves to online purchasing and reduced traditional industry growth.

Within this environment, Townsville offers a strong location choice, with:

- A diverse economy (with no industry sector contributing more than 16% of GRP)
- High household incomes
- Historically low unemployment levels
- A significant defence force presence (whose expenditure is not closely linked to the traditional business cycle).

Council's economic activation team within the Future Cities division aims to secure investment that will play a strategic role in the economic growth of the city.

Significant potential exists to establish new specialist retail outlets and national and international franchises. Future commercial and residential development, combined with significant natural amenity has the potential to contribute to retail growth in Townsville's CBD, as well as investigating innovative uses of existing CBD spaces.

Townsville City Council is actively involved in major initiatives including a new 97 ha waterfront development (PDA) within the CBD and Thuringowa Central is a major retail and lifestyle hub, servicing rapid population growth in Townsville's north-western suburbs.

Public Administration and Professional Services

Townsville is currently seeking increased public-sector roles to be moved from southern bases to Townsville in line with stated state and federal government objectives. An example of this was the Queensland Government's location of Energy Queensland's head office into the Townsville CBD.

To support increased professional services and public-sector presence, substantial investments are continuing to be made. There is significant local and state government support to develop the CBD, with a declared target of having 30,000 residents and workers in the city centre by 2030.

The city's CBD has the capacity to cater for a far greater concentration of business and government services.

Further catalyst projects include The Waterfront project and associated Townsville City Waterfront Priority Development Area and the Council's Pure Projects Masterplan.

Education

Townsville has a competitive research advantage due to its proximity to the Great Barrier Reef and its tropical environment. The region has a strong history of researching architecture for tropical conditions. There is also increasing regional interest for research into high value aquaculture production.

James Cook University is one of Australia's leading tropical research universities, with its main teaching campus located in Townsville. The university has experienced strong enrolment growth, averaging 3.7% per annum over the past five years to approximately 13,000 students over 2014.

The co-location of research groups into the Townsville Campus has resulted in strategic and collaborative linkages between public health, tropical medicine and veterinary science. Key initiatives include:

- Co-location of the Townsville Hospital and the Health and Medical Precinct of JCU
- Development of the Australian Tropical Science and Innovation Precinct in collaboration with CSIRO and the Queensland Government. Key focus areas include marine microbiology and medicinal chemistry
- A Memorandum of Understanding with the Department of Primary Industries and Fisheries relating to the Australian Institute of Agricultural Sciences. The institute will have a strong focus on biosecurity issues and livestock production
- A \$40M expansion of medicine and pharmacy facilities.

There exists considerable scope to further expand Townsville's role as a nationally and internationally recognised education provider. Central Queensland University (CQU) recently opened a campus based in the Townsville CBD, and JCU has significant current and longer-

term expansion plans. With its competitive research advantages, Townsville is also establishing a profile as a leading centre for innovation in tropical urban living.

Key growth fields include architectural design, energy management, biofuels, aquaculture and tropical diseases.

Port Expansion

The Port of Townsville is undertaking significant expansion in order to facilitate future growth. Key works to date include upgrades to accommodate cruise ships to Townsville, expand live cattle exports, and enhance the capacity of the port to support major Australian Defence Force (ADF) activities.

The Port is also expanding to include six additional berths and 100ha of reclaimed land in addition to the development of “Berth 12” which will significantly increase the throughput of the port – enabling Panamax sized vessels.

Defence

The Australian Government’s Defence White Paper (2016) identified that further investment in national defence infrastructure is necessary to support new response capabilities to counter potential security threats to Australia. In response, the Federal Government announced an increase in defence spending, with funding to rise to 2 per cent of GDP by 2020-2021.^x

\$170 million-dollar funding is allocated over the course of the next decade to upgrade facilities at Lavarack Barracks and RAAF Base Townsville in support of new land combat and amphibious warfare capabilities.

Townsville City Deal (2016). This is the first City Deal in Australia and it involves a commitment from all three levels of government across multiple projects and one of these is, to sustain Townsville as a Defence Hub. It is designed to strengthen engagement between the Department of Defence, Defence Industries Queensland and Townsville City Council and to encourage investment and local business involvement. Major activities over the next decade provide opportunities to build local defence industry capability and expertise.

These include: Australian and Singaporean investments into training area facilities; a Townsville logistics hub; continued investment by Defence in Australia’s northern military bases, including RAAF Base Townsville; and a pipeline of projects including capital facilities for the F35A Joint Strike Fighter and P-8a Poseidon Maritime and Response.^{xi}

Mineral Processing, Mining and Agriculture

A falling Australian dollar, improving productivity, and advances in processing technology are providing significant opportunities for Townsville to expand its resources and agricultural support sectors.

Large-scale resource opportunities exist within the Galilee Basin to the southwest of the city. Major future projects include Adani Mining’s \$16 billion Carmichael Mine project and Townsville has been announced as one of two fly-in-fly-out bases for the project, as well as Adani committing its head office to be based in the city.

A range of potential new commodities have been identified within the North West Minerals Province (NWMP), including natural gas, iron ore, uranium, and oil shale.

Opportunities exist to support an expanded agricultural sector, including greenfield sugarcane industry development at Pentland and irrigated agriculture in the Gilbert and Flinders catchments of North West Queensland.

The Hells Gate Dam Feasibility Study has the potential to unlock significant rural land for agriculture and provide a secure and affordable water supply for generations.

There is also potential to strengthen refining operations and to expand engineering and support services for regional mining, including structural and prefabricated steel, metal coating and finishing, and non-ferrous metal containers.

The Townsville State Development Area is currently being master planned in order to attract industry and facilitate Townsville's growth as a value-adding centre for North Queensland manufacturing, light industry, agriculture and base metal resources from the North West Minerals Province.

Tourism and Major Events

Queensland aims to double the value of tourism by 2020. As part of this state-wide goal, Townsville North Queensland aims to lift the value of its overnight visitation from \$662 million in 2013 to \$1.04 billion by 2020 (an increase of \$382 million, \$54.5 million per annum).

To support this growth in tourism, the Townsville City Economic Development Plan and Townsville Enterprises Limited's Tourism Destination Plan targets three key tourism destination precincts:

- Townsville CBD
- Magnetic Island
- Balgal Beach, Northern Beaches and Paluma.

Although visitor activity is not confined to these three precincts, they are strategically important areas for future tourism activity. The precincts possess a significant share of Townsville's existing tourism activity, investment, and natural assets and have a high potential for future tourism development.

Townsville has secured a number of high profile events, International Cricket match between the touring English XI and the Australian A team, an International Darts Tournament featuring 8 world ranked players, an AFL match between the Gold Coast Suns and the Geelong Cats in March 2018 and Neil Diamond will perform in early 2018.

Impacts of High Energy Prices on Council Services

Townsville City Councils expenditure on energy has increased by 10% between FY2011-12 and FY2016-17 to \$13,455,000 per annum, despite significant effort and expenditure by Council in the implementation of energy efficiency measures to conserve over 13,000,000 kWh (28%) of energy.

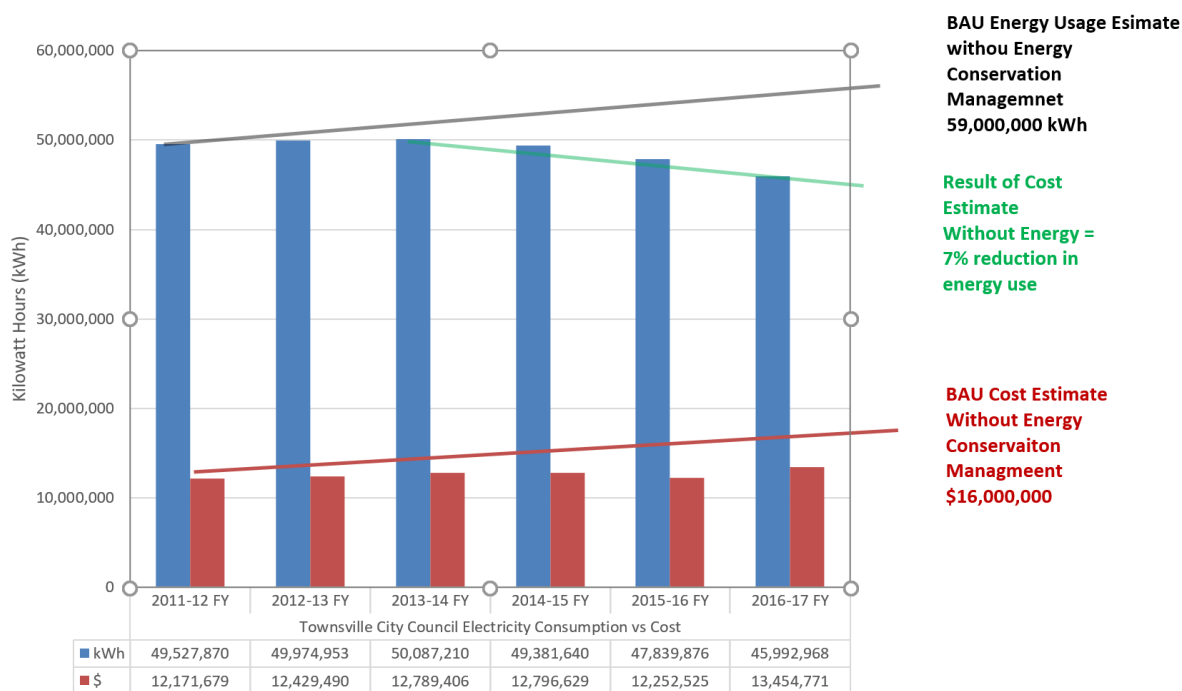
Energy costs currently equate to, 4.2% of the total rates revenue for the City of Townsville.

Under a Business as Usual (BAU) scenario, without the investment in the energy saving initiatives, the City's energy bill would have surged by some 31%, or an additional \$3,282,000 per annum.

These numbers represent direct usage by Council for the provision of street-lighting, public safety and building consumption, but does not include the additional cost of electricity that is embedded in the treatment and distribution of Townsville's water, which is contracted to Trility Water. Council estimates that the treatment and transport equate to a further \$5,000,000 approx. cost to Council per annum as a part of the cost of the provision of water to businesses and residents.

Given the genuine hardship suffered by residents in the City, Council has not passed these increases through to businesses or the community, and have given assurances to the residents within the 2017/18 budget that rates will only rise by a nett 1.48% - the lowest in the State.

To add to this, land valuations in Townsville have continued to decrease over the past 5 years (2013-2017 DNR valuation basis), which further impacts the Councils ability to maintain revenue from rates.



Townsville City Council and Major Industries efforts in coping with the Increased Cost of Energy

Like many areas across Australia, Townsville faces significant challenges facilitating business and population growth in an era of rising energy prices and increasingly scarce water supply.

Townsville has the opportunity to become a hub for sustainable technologies, as it has strong solar and tidal potential. By encouraging innovation in building design, water efficiency, cooling technology and network demand management, Townsville is positioning itself as an example of sustainable tropical living.

The Townsville region is well known for its research and tropical architecture industry, expertise that can be used to benefit from sustainable technologies.

The region leverages world-class research through locally based institutions including Central Queensland University (CQU), James Cook University (JCU), the Australian Institute of Marine Science (AIMS), and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Townsville's participation in the Australian Government's Solar Cities initiative, a leading-edge program trialling new, sustainable models for electricity supply, has built a national profile in the application of solar energy generation to domestic networks. By also fostering innovation in building design, water efficiency, cooling technology and network demand management, Townsville is positioning itself as an exemplar of sustainable tropical living.

Through key initiatives including Energy Transformation Townsville, Townsville City Council is applying sustainable technologies and practices to achieve significant energy efficiency, greenhouse gas reduction, and network demand management outcomes.

Energy Transformation Townsville involves three key elements:

- **Energy conservation measures at Townsville City Council facilities:** With clear measurable reductions in energy use
- **Smarter instrumentation and data management:** Reducing energy use through innovative technology, sensors and development of an enterprise-wide energy management system
- **Community education and capacity building:** Expanding on Townsville City Council's established practices to engage the community and promote sustainable technology uptake and real behaviour change

James Cook University

In 2010 JCU constructed the largest Central District Cooling System (CDCS) in the southern hemisphere, incorporating high efficiency chillers and large scale thermal energy water storage. The development allows JCU to double the air-conditioned building footprint without increasing net energy consumption.

Sun Metals Corporation – Demand Response, Energy Conservation and Generation

Sun Metals Corporation is a major enterprise in Townsville and their Zinc Refinery, constructed in 1996, is one of the most efficient in the world today. Sun Metals employs over 350 staff and contractors, mainly sourced from the local Townsville community.^{xii}

Energy Efficiency - Key Smelting Areas

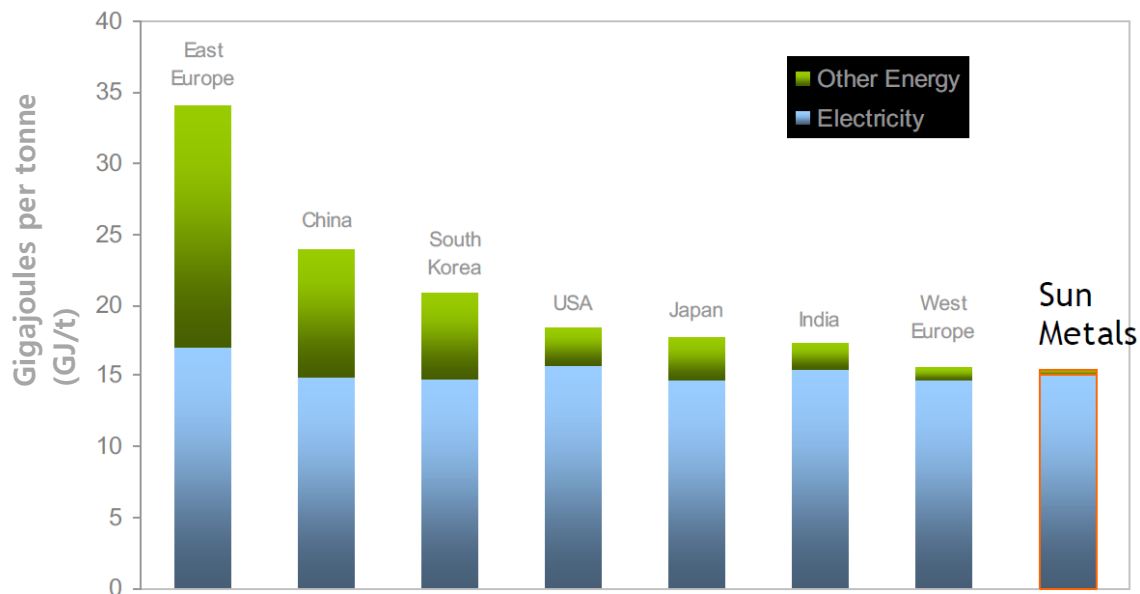


Figure 2 - Global Comparison of Energy Efficiency in Zinc Refining (Source: Sun Metals Corporation)

In order to produce 1 tonne ingot of zinc, the refinery consumes 15.1GJ of electricity and 0.36GJ/t of diesel or Liquid Petroleum Gas (LPG). In electricity terms, the zinc refinery uses 4MWh of electricity for every tonne of zinc produced and has an annual energy bill of between A\$50-60M.^{xiii}

For Sun Metals, the cost of energy has tripled over the last 15 years of operation and impacted the company's international competitiveness.^{xiv}

To remain competitive, Sun Metals has been required to invest significantly in energy efficiency measures within the plant, including the use of waste heat in a 7.6MW steam turbine, energy efficient lighting throughout the plant, installation of variable speed drives on the large equipment and replacement of energy efficient air conditioning / cooling systems.

Sun Metals has also implemented demand response software to control the production when costs of energy in the market is too high. The company has installed software to monitor the activity within the NEM, and once the power price exceeds A\$200MWh, the plant curtails production. This initiative so far has decreased the company's power costs by 19%, and decreased annual production by 2%.^{xv}

To level out the price that company receives from the NEM, Sun Metals has also commenced construction of a 115MW solar farm directly adjacent to the refinery. The cost of the solar project is estimated at \$182M and will supply up to 29% of the energy required for the running of the plant.^{xvi}

Sun Metals purchases electricity directly from the wholesale market within the NEM and avoids both retail and distribution costs. Sun Metals is however impacted directly by high voltage transmission charges.

High charges for electricity transmission has been a significant driver of the price increases to the company because of the regulated allocation of cost to North Queensland. Sun Metals cites transmission and not generation charges as the driver as the generators are only paid on the price of the pool, however as the majority of the generation for Queensland is in the central and southern part of the state, which leads to the penalisation of North Queensland users, based on the high marginal loss factor on long distance transmission. ^{xvii}

Sun Metals estimates that if its plant was constructed in Gladstone rather than Townsville, it would currently save \$10.5M per annum on energy costs, purely based on the cost of transmission. ^{xviii}

North Queensland Power Generation – Current and Proposed

In the preparation of a current Queensland State Election on November 25, all major parties are focused on the increase in development of major infrastructure in North Queensland. This will further increase the reliance on the regions for secure and affordable energy in the region.

All political parties have reached some form of agreement that energy reliability and affordability are essential to the growth of regional Queensland, however with a lack of bipartisanship in agreeing the composition of the energy mix between renewables and non-renewable leaves the business community uncertain of long term energy security, in relation to price and availability.

Table 2 - Summary of Energy Related Commitments made by Major Political Parties in the 2017 Queensland State Election 09/11/2017

Queensland Labor Policies	Queensland Liberal National Party Policies
<p>Powering Queensland invests \$771 million in 2016-17 to remove the cost of the Solar Bonus Scheme from electricity prices over the next three years.</p> <p>The Affordable Energy Plan features \$300 million of initiatives from 1 January 2018 including:</p> <ol style="list-style-type: none"> 1. Rebates of up to \$300 to purchase an energy efficient fridge, washing machines or air conditioner. This provides bill savings of up to \$50 a year for an energy efficient washing machine or fridge or \$135 a year for an air conditioner. Up to 100,000 Queensland households are expected to take up the offer. (\$20 million) 2. An Asset Ownership Dividend of \$50 a year for every household bill over the next two years, starting from January 2018 and evident on bills from the second quarter of 2018. (\$200 million) 3. Annual discounts for regional Ergon customers of \$75 for households and \$120 for small businesses that take up 	<p>Cheaper Electricity Plan will save a typical Queensland family an average of \$160 a year over the next two years by:</p> <ol style="list-style-type: none"> 1. Introduce more competition – through the restructure the Government-owned generators into three entities. 2. Freezing Executive Bonuses until prices decrease 3. Writing down the regulated asset base (RAB) of Energy Queensland by \$2 billion. 4. Ending subsidies for renewable energy, saving households up to \$115 a year from 2020 and scrapping the 50% Renewable Energy Target 5. Facilitate the development of a private sector funded baseload, high efficiency low emissions coal fired power station in North Queensland. 6. Giving regional Queensland more choice about who supplies electricity - removing the non-reversion policy

Queensland Labor Policies	Queensland Liberal National Party Policies
<p>monthly billing options. 200,000 regional households are expected to initially take up this offer. (\$15 million)</p> <p>4. Another 4000 regional households can save up to \$200 through the expansion of the Energy Savvy program. (\$4 million)</p> <p>5. Support for primary producers by delivering an additional 200 energy audits to agricultural customers through an expanded Energy Savers Plus program in partnership with the Queensland Farmers' Federation, as well as providing a 50% co-contribution (up to \$20,000) to implement audit recommendations. (\$10 million)</p> <p>6. Support for Queensland jobs and industry by providing energy audits for large customers including manufacturers, with a 50% co-contribution to implement recommendations (up to \$250,000 per customer). This is expected to deliver savings of 10% to 40% for large industrial customers. (\$10 million)</p> <p>7. Another \$41 million in affordability additional measures.</p> <p>8. Keeping our state-owned electricity network and generation assets in public hands</p> <p>9. Locking in our target of at least 50 per cent renewable energy generation in Queensland by 2030</p> <p>10. Establishing 'CleanCo' – re-structuring our two publicly-owned electricity generation companies into three with a strategic portfolio of low and no emission power generation assets designed to reduce power prices</p> <p>11. Supporting delivery of at least 1000MW of new renewable generation through CleanCo</p> <p>12. Committing up to \$50 million towards the development of Queensland's own baseload solar thermal plant with storage</p>	<p>7. Putting consumer representatives on the boards of network businesses</p> <p>8. Through a Resources and Energy Cabinet Committee, develop an efficient regulatory framework to encourage renewable investment in Queensland. Queensland needs a world-class regulatory framework to secure further investment in renewable energy. At the moment, Queensland has the lowest level of large-scale renewable energy capacity in the National Energy Market.</p> <p>9. Set up a one-stop shop to facilitate approvals for renewable energy projects. The \$380 million Mount Emerald wind farm, in the Atherton Tablelands, took four years to obtain project approvals from the Local, State and Federal Governments. The Coordinator-General will be empowered to overcome any unreasonable delays in obtaining project approvals.</p> <p>10. Investigate and monitor network linkages to the National Energy Market to ensure renewable energy projects in Queensland have access to the National Energy Market and will protect Queenslanders from excessive volatility in wholesale electricity prices.</p> <p>11. Maintain energy security by constantly monitoring intermittent generation for any threat to reliability of supply for Queenslanders.</p> <p>12. Support the National Renewable Energy target that will see more than 23 per cent of Australia's electricity generated from renewable energy by 2020.</p>

Queensland Labor Policies	Queensland Liberal National Party Policies
<p>13. Investing \$97 million to install solar and energy efficiency measures in Queensland state schools</p> <p>14. Rolling out renewable energy solutions for remote and isolated communities</p> <p>15. Partnering with the Australian Energy Market Operator (AEMO) to investigate a sustainable energy solution for the Daintree</p> <p>16. Advocating for national policy certainty through consistent and integrated climate and energy policy</p>	

On 12 November, the ALP Government announced, “a third-publically owned power generation company with a mandate to deliver 1000MW of new renewable energy projects for Queensland”^{xi}

Energy affordability has been significantly recognised as a major Queensland election platform, and both parties are increasing their drive for increased energy generation in the North. This covers election promises from the LNP to grant “priority project” status for the development of a new, privately funded, High Efficiency Low Emissions (HELE) clean coal power station, as well as continued Labor Party support for the \$1.6B of committed renewables projects (solar, wind) plus \$200M in hydro – run of river and pumped storage on the Burdekin Dam and \$150M in new transmission infrastructure for the North and North West.

Whilst the attention to the needs of new energy generation in North Queensland is essential, however it is generated, the more critical focus must be on decreasing power prices which have continued increasing year on year. Current figures show that power prices in 2017 are 71% higher than 2009^{xx}

The Queensland Government has prepared the Powering North Queensland Plan outlining proposed activities to increase the availability of power in North Queensland. At present there is 1250MW of existing capacity in the North Queensland Region (excluding Mt Isa, as this region is not connected to the NEM). The existing power stations within North Queensland have been listed in *Table 3 - Existing Operational Power Station - North Queensland*.

Total demand in North Queensland varies, however evening demand peaks are typically around 880MW and in 2016-17 demand peaked at 1458MW in February 2017^{xxi}.

Townsville contains two gas-fired power stations, at Yabulu and Mt Stuart. These power stations have low utilisation rates, and are generally used as backup generation in the event of a transmission fault. Several of the power stations (Table 3) supply remote communities and are not connected to the NEM. In addition, only 800MW of the note operated power stations are scheduled operators, with the remainder listed as non-scheduled^{xxii}.

The remainder of the power for the Northern region is supplied via the high voltage power grid, operated and maintained by Powerlink (Queensland GOC).

As at September 2017, 25,773 houses with have installed solar generation on their properties – constituting approximately 1/3 of the total 79,982 households. The maximum rated output of these panels is 107MW^{xxiii} - which at peak generation would collectively be the third largest power source in the region. However, given a capacity factor of just 20%, the volume of energy generated is approximately 22MW.

Table 3 - Existing Operational Power Station - North Queensland^{xxiv}

Name	Fuel Type	Owner	Capacity (MW)	Status
Collinsville	Coal	RATCH-Australia Collinsville	180	Decommissioned
Barron Gorge	Hydro	Stanwell	60	Operating
Farleigh Mill	Bagasse	Mackay Sugar Limited	13	Operating
Inkerman Mill	Bagasse	Pioneer Sugar Mills Pty Ltd	10.5	Operating
Invicta	Bagasse	Haughton Sugar Company	50	Operating
Kalamia Mill	Bagasse	Sucrogen (Kalamia) Pty Ltd	9	Operating
Kareeya	Hydro	Stanwell	88	Operating
Koombooloomba	Hydro	Stanwell Corporation Ltd	7.3	Operating
Mackay	Gas	Stanwell	32	Operating
Macknade Mill	Bagasse	Sucrogen (Herbert) Pty Ltd	8	Operating
Marian Mill	Bagasse	Mackay Sugar Limited	18	Operating
Mossman Mill	Bagasse	Mackay Sugar Limited	11	Operating
Mount St John	Sewage	Townsville City Council	5	Operating
Mt Stuart	Gas	Origin Energy	423	Operating
Mulgrave Mill	Bagasse	The Mulgrave Central Mill Co Ltd	13	Operating
Pioneer	Bagasse	Sucrogen	69	Operating
Plane Creek Mill	Bagasse	Sucrogen Plane Creek Pty Ltd	14	Operating
Proserpine Sugar Mill	Bagasse	Sucrogen (Pioneer) Pty Ltd	17	Operating
South Johnstone Sugar Mill	Bagasse	The Maryborough Sugar Factory Limited	20	Operating
Tableland Sugar Mill	Bagasse	The Maryborough Sugar Factory Limited	7	Operating
Thursday Island	Wind	Ergon Energy	0.5	Operating
Thursday Island	Diesel	Ergon Energy	9.55	Operating
Tinaroo Hydro	Hydro	Sunwater Limited	1.6	Operating
Townsville (Yabula)	Gas	RATCH-Australia Townsville	242	Operating
Tully Sugar Mill	Bagasse	Tully Sugar Limited	21.4	Operating
Victoria Mill	Bagasse	Sucrogen (Herbert) Pty Ltd	24	Operating
Weipa	Diesel	RTA Weipa	36	Operating
Weipa Solar Farm	Solar	First Solar	1.7	Operating
Yabulu Nickel Refinery	Steam/diesel	Qld Nickel Pty Ltd	39.2	Operating
TOTAL			1250.75	

With the average installed cost of a 5kW-6.4kW solar system costs are between \$7,000 and \$10,000 (pre-government solar rebates), the ability for low income earners in the community to install solar on their properties is limited. It has been noted that the Queensland Labor Party during the election campaign – as a part of their “Affordable Energy Plan” has offered interest free Loans for solar installation – available from early 2018. This commitment to interest free loans has not been matched by the LNP, and therefore cannot be considered a certain outcome for assisting low income families to reduce their power bills.

Greater assistance for householders to be able to generate their own electricity, as well increasing the general public’s understanding of energy costs and energy saving measures in the households is an essential step forward in maximising the existing generation assets currently available to the region. While this is not a Townsville City Council responsibility, each regional council is well equipped to facilitate educational campaigns to each of its residents.

North Queensland also currently has 1808MW of proposed power projects, all of which are renewable energy projects, using solar, wind and biomass fuels, see *Table 4 - Proposed Renewable Energy Projects in North Queensland (Source: DNRM)*. These projects are supported

by the Queensland Labor Government as a part of their commitment to obtain 50% of their generation from renewable resources by 2030, through the establishment of “Clean Co” – a Government Owned Corporation (GOC) established for the management of the operation of the States renewable and low-emissions generation assets^{xxv}.

Table 4 - Proposed Renewable Energy Projects in North Queensland (Source: DNRM)

Name	Fuel Type	Owner	Capacity (MW)	Status
Burdekin Dam	Hydro	Queensland Government	50	Under Construction
Clare Solar Farm	Solar	FRV Services Australia Pty Ltd	150	Under Construction
Collinsville North Solar Project	Solar	Equis	100	Proposed
Collinsville Solar Power Station	Solar	RATCH-Australia Corporation	42	Under Construction
Daydream Solar Farm	Solar	Edify Energy	180	Proposed
Forsayth Wind Farm	Wind	Infigen Energy	75	Proposed
Hamilton Solar Farm	Solar	Edify Energy	57.5	Under Construction
Hayman Solar Farm	Solar	Edify Energy	60	Proposed
High Road Wind Farm	Wind	RATCH-Australia Corporation	34	Proposed
Haughton Solar Farm	Solar	Pacific Hydro	500	Proposed
Hughenden Sun Farm	Solar	Overland Sun Farming Company Pty Ltd	14.2	Under Construction
Ingham	Biomass	North Queensland Bio-Energy Corporation Limited (NQBE)	115	Proposed
Kennedy Energy Park	Solar	Kennedy Energy Park Pty Ltd	19.2	Under Construction
Kennedy Energy Park (Phase II)	Solar	Kennedy Energy Park Pty Ltd	1200	Proposed
Kennedy Energy Park	Wind	Kennedy Energy Park Pty Ltd	30	Under Construction
Kidston Project	Hydro	Genex Power	330	Proposed
Kidston Solar Project	Solar	Genex Power Limited	270	Proposed
Koberinga Solar Farm	Solar	ESCO Pacific	55	Proposed
Lakeland Solar Farm	Solar	Conergy	10.8	Proposed
Mirani Solar Farm	Solar	ESCO Pacific	60	Proposed
Mt Emerald Wind Farm	Wind	RATCH - Australia and Port Bajool	180	Under Construction
Normanton Solar Farm	Solar	Scouller Energy	5	Proposed
North Queensland Solar Farm	Solar	KCSF Consortium	50	Proposed
Rollingstone	Solar	ESCO Pacific	110	Under Construction
Ross River Solar Farm	Solar	ESCO Pacific	135	Under Construction
Sun Metals solar farm	Solar	Sun Metals Corporation Pty	98.5	Under Construction
Tableland Sugar Mill	Bagasse	The Maryborough Sugar Factory Limited	24	Proposed
Weipa Solar Farm	Solar	First Solar	5	Proposed
Whitsunday Solar Farm	Solar	Edify Energy	57.5	Under Construction
TOTAL			4018	

The Federal Government and the Queensland Opposition have also offered their support for the construction of a new privately funded High Efficiency and Low Emissions (HELE) Coal Fired power station in North Queensland. This has also been supported by various reports prepared the Minerals Council of Australia, backed by costing’s from the engineering consultancy GHD Limited.

As noted by the Australian Energy Regulator (AER), the cause of the increased electricity prices is not Supply vs Demand driven, as there is still more energy generation capacity within the NEM than demand – as illustrated in *Figure 3 - Energy Supply vs Demand Profile for the NEM (source: AER)*.

These reports have focused on the construction of a power station that is supported by coal from the Galilee basin, and would use the latest technology for low emissions generation. The latest information released by Townsville Enterprise on the *North and North West Queensland Sustainable Resource Feasibility Report into Baseload Power in North Queensland and the Dalrymple Agricultural Scheme* (GHD, 2013) has called for the next 2,000MW of generation to be constructed in North Queensland, at a location north of Collinsville to take advantage of the existing powerline transmission network infrastructure.

The GHD report^{xxvi}, commissioned in 2013, notes that the construction of the “super critical” 800MW power station in the Galilee Basin (2 x 400MW plants), could take advantage of cheaper mine mouth coal supply. This is obviously predicated on the mines within the

Galilee Basins reaching financial closure. (Note that the GHD report models the benefit of constructing a “Super Critical” coal fired power stations. While super critical power stations are “efficient” and produce “lower emissions” than traditional coal fired boilers, the terminology for “HELE” power stations is typically reserved for “Ultra Super Critical” power stations, which are significantly more expensive than their super critical counterparts).

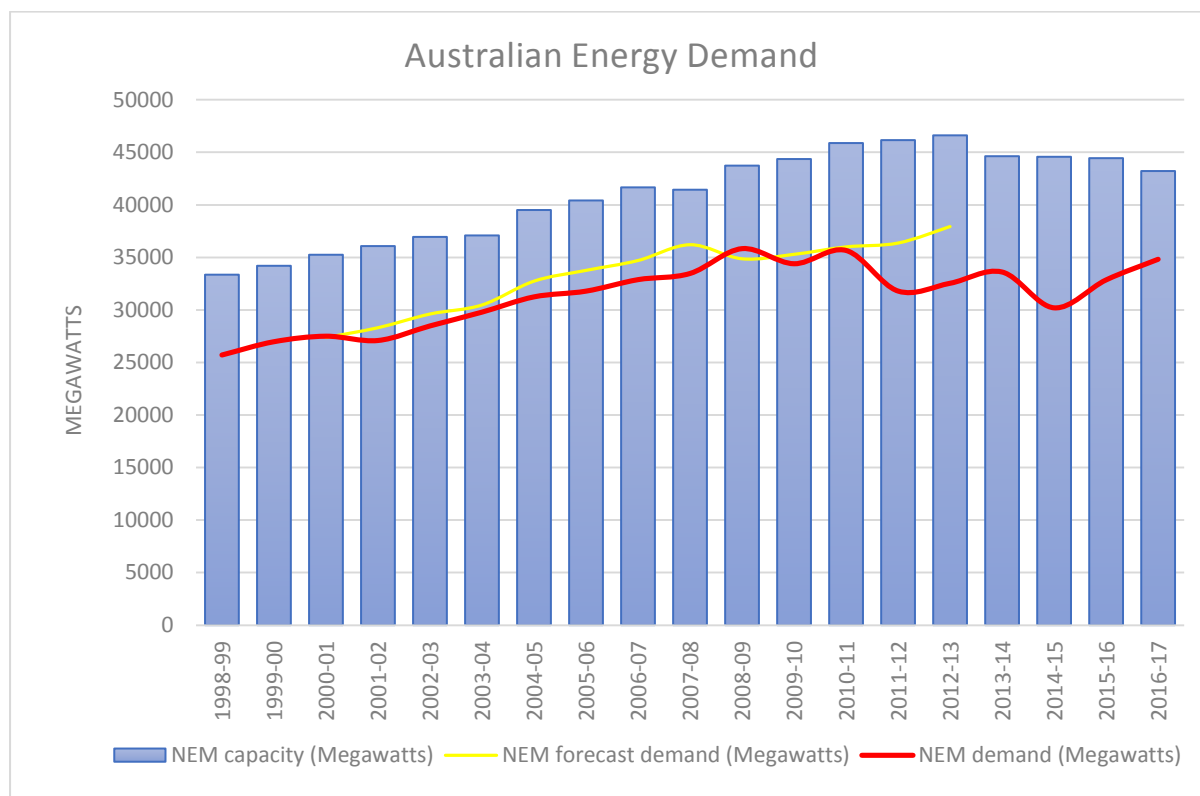


Figure 3 - Energy Supply vs Demand Profile for the NEM (source: AER)

The report indicates that a significant social benefit of the construction of the power station would be to reduce the Community Service Obligation (CSO) payments made by the state to regulate the price of electricity to the end user within the region. Numerous assumptions were also made on the viability of the power station including the long-term price of coal, initiating detailed water availability assessments and generation technology assessment and the potential impact of future carbon pricing.

The GHD report is clear that it has not been conducted to the level of a bankable feasibility study, and there are several scenarios presented, providing a narrow range of options where a new 800MW coal fired generation could be economical feasible. The report highlights the potential impact of increased renewable power generation in the system, noting that the project economics would weaken where greater than 500MW of solar is constructed within the system. We are unaware if the proposed 4018MW of renewable energy projects listed in *Table 4 - Proposed Renewable Energy Projects in North Queensland (Source: DNRM)* were considered in 2013, at the time that the report was prepared, or if a new report has been commissioned to update the assumptions made.

The report highlights the risk of a price applied to carbon (as CO₂) from the project and further notes that carbon capture technology (often referred to as Carbon Capture and Storage – CCS) is not cost effective if applied at the commencement of the project, however may be a viable option at some point in the future, if the carbon price applied to the project is

high enough. This would need to be retrofitted to the plant, and a suitable location for the underground storage of the CO₂ discovered.

The report does indicate that if new generation were constructed at a location north of Collinsville, that there is a potential for power prices to be reduced in North Queensland. The logic behind this assumption is that the network charges for the transmission of the energy would be reduced (a shorter distance to the market) as well as a reduction in the Marginal Loss Factor (energy lost during long distance transmission). It is considered that these are rational assumptions to be made for North Queensland.

However, the report does not consider the construction of a similar gas-fired power station within the region, nor does it generally consider the impact of the closure of the Gladstone Power Station, forecast for 2028-2030.

The Townsville City Council consider it necessary that a study into all power generation options be prepared to assess the best potential for new synchronous, dispatchable base load power within the region – including new gas fired generation.

At present, Townsville is connected to the Moranbah Gas Hub by the North Queensland Gas Pipeline. The construction of a new 800MW gas fired power station could be facilitated for and meet the need of the region. It is estimated that the power station would require approximately 30 petajoules (~30PJ's) of natural gas per annum.

The Northern Bowen Basin contains 118PJ of Proven Reserves (1P) and 3147PJ of Proved and Probable Reserves (2P)^{xxvii}. These gas reserves are contained within the projects directly adjacent to the North Queensland Gas Pipeline. Conservatively, based on these reserves – which are only a fraction of the total gas reserves within the Bowen Basin, there is enough gas to support an 800MW power station for 60 years.

At present these gas reserves are not connected to the international gas price via Liquefied Natural Gas (LNG) export, as the region has no connecting pipeline to the greater east coast gas infrastructure. This may occur at some time in the future, however the commercial agreement with the gas supply parties before this occurs has the potential to offset this risk.

As the gas fired generation produced significantly less CO₂ emissions, it is considered a lower impact of a carbon price.

Both the construction of a coal fired, or gas fired power station will take in the order of 6 – 8 years to complete, while engineering, environmental impact assessment with State and Federal Government approvals, connection agreement, power purchase agreements, financing and construction is complete.

It is noted that there have been no major announcements on the options assessment for the replacement of the 1638MW Gladstone Power Station in approximately 10 years, nor the impact that this may have on the NEM. If a new large-scale power station is to be constructed in the State, it should be located in Northern Queensland, as opposed to Central and South East Queensland.

The suggested construction of either a coal or gas fired power station is not a near term solution for the resolution of the current energy affordability crisis, and may distract from the need for immediate downward pressure on energy pricing.

Conclusion

The Townsville City Council, as a consumer in North Queensland views the cost of provision of electricity is rising unfairly based on high transmission costs and a lack of large scale generation in North Queensland and the lack of retail competition in the energy market. Large single employers in Townsville, such as Sun Metals Corporation have noted that they have suffered a tripling of energy costs in the last 15 years, and would be \$10.5M better off if their refinery was closer to large-scale generation in Gladstone.

As noted with the body of this submission, the closure of the Collinsville power station in 2012, North Queensland's power is now sourced from 675km to the south – from Gladstone Power station that has between 10-12 years of generation left before it is decommissioned.

The Townsville City Council consider it necessary that a study into all power generation options be prepared to assess the best potential for new synchronous, dispatchable base load power within the region. This will include a full cost benefit analysis into the provision of coal fired, renewable or gas fired generation. On the basis that a new large-scale power station may take between 5 – 8 years to design, approve, build and commission, there is an imperative to have the studies completed before the need to decommission the Gladstone Power Station arises.

As a City Council, we believe that further measures in respect to Demand Management and Demand Response, Energy Conservation at a residential, commercial & industrial and large user level should be actively encouraged, as well as a campaign to encourage residential consumers to conserve energy and therefore save money on electricity costs.

Competition in the electricity market in North Queensland is non-existent with a single entity Energy Queensland (Government GOC) owning Ergon Energy, the only retail option in North Queensland, while residents in South East Queensland have a number of retail opportunities to choose from when purchasing electricity.

North Queensland residents want a competitive retail electricity market and we urge the ACCC to seriously consider this option as one of the recommendations in the final report.

In addition, State and Federal Governments should focus on the increase in the penetration of domestic and commercial & industrial solar projects, with smart metering and energy efficient appliances, particularly focused on low income earners, socially disadvantaged customers and small to medium employers that will otherwise continue to be impacted by increasing energy prices.

Townsville City Council implores the State and Federal Government to increase the general public's understanding of energy generation, retailer obligations – and how to choose the right retailer/plan, energy transport and finally its use. This measure alone will assist the hole of the community in conserving energy with social benefits far beyond any subsidisation or regulation of energy prices. City Councils are well equipped to assist in the community consultation and education process and should be used as communication pathway to both residents and commercial enterprises.

Finally, it is noted that this submission is made during the height of a Queensland State Election, and all parties have made significant commitments in an effort to increase energy affordability for all consumers.

Considering the above, this submission is made on the understanding that the ACCC will seek additional feedback or submissions from affected Queensland stakeholders, once the election process has finished and a full analysis of these policy commitments can be made and Queenslanders know who will govern the State for the next four years.

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- ⁱ Price Waterhouse Coopers, Townsville Business Confidence Survey, 20 January 2017 [Source Data](#)
- ⁱⁱ Australian Bureau of Statistics, 2016 Census Statistics - Townsville Statistical Areas Level 4 - [Source Data](#)
- ⁱⁱⁱ Townsville Enterprise *Townsville North Queensland State Government Election Priorities, 2017*
- ^{iv} Australian Bureau of Statistics, 2016 Sensus Quick Stats [Source Data](#)
- ^v Weekly Household Income Data sourced from Australian Bureau of Statistics, General Community Profile 2016, Catalogue No. 2001.0
- ^{vi} St Vincent de Paul Society National Council of Australia, 2017 Energy Report [Source Data](#)
- ^{vii} Weekly Household Income Data sourced from Australian Bureau of Statistics, General Community Profile 2016, Catalogue No. 2001.0
- ^{viii} ABS 2015 [Source Data](#)
- ^{ix} Major Projects Pipeline NQ Update, Premiers Business Advisory Council, 20 October 2017 [Source Data](#)
- ^x The Australian Government's Defence White Paper (2016) [Source Data](#)
- ^{xi} Department of Prime Minister and Cabinet *Smart Cities Plan* [Source Data](#)
- ^{xii} Sun Metals Corporation – *Our Company* [Source Data](#)
- ^{xiii} Sun Metals Corporation, University of Queensland Energy Presentation, 2017
- ^{xiv} Sun Metals Corporation, University of Queensland Energy Presentation, 2017
- ^{xv} Sun Metals Corporation, University of Queensland Energy Presentation, 2017
- ^{xvi} Townsville Bulletin 9 February 2017, *Sun Metal Achieves Financial Close on \$182M Solar Farm at Townsville* [Source Data](#)
- ^{xvii} Sun Metals Corporation, University of Queensland Energy Presentation, 2017
- ^{xviii} Sun Metals Corporation, University of Queensland Energy Presentation, 2017
- ^{xix} <https://queenslandlabor.org/media/20293/alpq-powering-queenslands-future-policy-document-final.pdf>
- ^{xx} St Vincent de Paul Society National Council of Australia, 2017 Energy Report [Source Data](#)
- ^{xxi} Powerlink Q-Data and described with Australian Energy Council, "Where do we need a new dispatchable power station" [Source Data](#)
- ^{xxii} Powerlink Q-Data and described with Australian Energy Council, "Where do we need a new dispatchable power station" [Source Data](#)
- ^{xxiii} Post Code Data for Small Scale Installations of Solar, via Australian Clean Energy Regulator [Source Data](#)
- ^{xxiv} Department of Natural Resources and Mines Electricity Map [Source Data](#)
- ^{xxv} Queensland Department of Energy and Water Services – Establishment of a Clean Co. [Source Data](#)
- ^{xxvi} North and North-West Queensland Sustainable Resource Feasibility Report into Baseload Power in North Queensland and the Dalrymple Agricultural Scheme (GHD, 2013)
- ^{xxvii} Various Sources including Australian Stock Exchange (ASX) released by AGL and Blue Energy. The remaining reserves are held by the Arrow Energy Moranbah Joint Venture. 2P reserves have been ascribed a 50% probability of conversion to 1P – proven reserves.