

# CUMMINGS ECONOMICS

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## **Submission to QUEENSLAND COMPETITION AUTHORITY**

Cummings Economics carries out a great deal of work with industries and businesses in the Far North Queensland Region that makes it aware of many of the trends in the region and implications of changing energy prices. It makes this submission on its own behalf.

We draw to the Commission's attention to the following:

1. The region lies at the frontier of the Queensland electricity grid.
  - There are substantial issues of power reliability in this situation.
  - There will be a future desirability for this grid to expand into Cape York Peninsula.
  - It would be desirable to achieve a higher level of generation in the region to reduce long transmission costs from distant major power stations and improved power reliability. In the case of this region, it may be useful to look at subsidizing local generation as an alternative way of achieving a uniform tariff. In assessing this, the need to extend the frontier of the grid has to be taken into account.
2. While the region's growth has slowed in more recent years, this has been due to temporary circumstances in national and world economic settings. These conditions are passing.

A new era of major expansion of tourism is being signaled by the proposed \$4.2bn AQUIS development based on a rapidly expanding Chinese market.

The region contains major areas of relatively high rainfall and 26% of Australia's water runoff. Potential to increase agricultural production is signaled by the proposed \$1.2bn IFED agricultural project.

Cape York region's remote economic status is about to be changed through the \$200m sealing works on the Peninsula Developmental Road.

Diversified mining development is continuing in the region and delivery of FIFO and other services across northern Australia and into Papua New Guinea and Papua Indonesia has been continuing.

It can be expected there will be a substantial leap in population and electricity demand over the next decade.

3. A number of the prospects for electricity generation in the Far North Queensland Region relates to non fossil fuel including sugar cogeneration, potential biofuels (pongamia), wind generation, hydro electricity, as well as solar. In any policy solutions for this region, the future of Commonwealth policy especially in relation to Renewable Energy Targets and investment in carbon abatement will need to be known before policy solutions can be developed for this region. Other prospects include local coal and coal gas and imported LNG.
4. It needs to be appreciated that while the introduction of competition into electricity distribution in regional Queensland appears to be desirable, the economic realities of the electricity industry, need to be taken into account. The whole question needs to be looked at in a broader sector context.

It is not uncommon for industries to have uniform price policies throughout Australia. The internal economies of scale offset the costs of distribution to remote markets. There is an effect under the UTP of increasing the scale of the market in remote areas leading to significant economies in power generation and distribution that consumers in South East Queensland benefit from.

There is already evidence that sharp rises in electricity costs have led to reductions in demand (see table, [Appendix 1](#)).

If changes to the UTP policy delivery resulted in sharp increases in costs in northern Queensland, some of the economies of scale in generation and distribution likely to be benefiting southern Queensland may be lost. It is well known that much of the costs of electricity distribution are fixed in the short run. Reduced demand because of higher prices seems likely to have a further effect in prices having to be raised further to cover costs.

We wish to suggest that the QCA is not in a position to make firm recommendations on the questions it has been asked to inquire into until:

- a) The whole question of future electricity generation in the northern regions has been looked into thoroughly including the possibility of achieving uniform tariffs through subsidizing local generation.;
- b) The directions of future Commonwealth government policy, especially in relation to the RET and funding to reduce carbon emissions, are resolved.

Attached please find some further notes ([Appendix 2](#)) on the relevant issues.



W S Cummings



## Appendix 1

Table: Household Electricity Usage &amp; Cost, Regional Queensland

	<u>2011/12</u>			<u>2012/13</u>			<u>Gwth in use 2011/12 to 2012/13</u>
	<u>Average Electricity use per household</u>	<u>Price per kwh</u>	<u>Average Electricity bill per household</u>	<u>Average Electricity use per household</u>	<u>Price per kwh</u>	<u>Average Electricity bill per household</u>	
Far North Qld	7321 kWh	\$0.21	\$1537	6985 kWh	\$0.24	\$1676	<b>(-4.6%)</b>
North Qld	8304 kWh	\$0.21	\$1744	7872 kWh	\$0.24	\$1889	<b>(-5.2%)</b>
Mackay Region	7829 kWh	\$0.21	\$1644	7324 kWh	\$0.24	\$1758	<b>(-6.5%)</b>
Central Qld	7374 kWh	\$0.21	\$1543	7039 kWh	\$0.24	\$1689	<b>(-4.5%)</b>
Wide Bay	5623 kWh	\$0.21	\$1178	5370 kWh	\$0.24	\$1289	<b>(-4.5%)</b>
South West	6306 kWh	\$0.21	\$1334	6068 kWh	\$0.24	\$1456	<b>(-3.8%)</b>

*Note:* Increase in price per kwh = 14.2%.

*Source:* Cummings Economics from Ergon Energy data.

## Appendix 2

**Further Notes – Submission by Cummings Economics****Reduced consumption and domestic electricity prices**

Queensland has been subjected to ongoing energy saving campaigns by Ergon Energy and private solar energy companies espousing the message that to save money on electricity bills, households and businesses must reduce their electricity usage.

This ongoing campaign fails to inform consumers that any reduction in electricity consumption has the undesired impact of increasing the unit cost of electricity. Reduced consumption has recognised environmental benefits but reduced consumption does not necessarily translate to a static or falling electricity bill.

The general public is mostly unaware of the composition of the electricity price and consequently is not aware that the network (poles and wires) accounts for approximately 44 percent of the electricity price. Consumers need to understand that as electricity consumption decreases, it has the undesired effect of increasing the cost of the fixed components of the electricity system, such as poles and wires, which results in higher electricity prices.

The following Ergon data demonstrates that in each of the regions served by Ergon Energy falling domestic energy consumption has not resulted in cheaper electricity bills for the average household.

Table – Appendix 1

**Solar photovoltaic installations and domestic electricity prices**

The installation of grid connected solar photovoltaic (PV) systems under the Solar Bonus Scheme has also had a major impact on the cost of the pole and wire system and hence soaring electricity prices.

Ergon Energy's Statement of Corporate Intent 2012-13 (pg 17) states:

*'The network's ability to cope with a two-way flow of electricity has limits. As the number of PV connections to the network rises, capital expenditures higher than normal load growth would demand are required to mitigate performance impacts. In addition, PV systems generate electricity outside of typical peak consumption periods. This can have the perverse impact of reducing off-peak electricity usage, while increasing electricity usage in peak periods. The penetration levels and network impacts increase pressure to introduce smart grid technologies to better manage both customer demand and network performance. Work will continue over 2012-13 on trialling and implementing various technical solutions to voltage and other network impacts of PV systems.'*

*Ergon Energy is a revenue capped business which enables a return on long fixed assets. As most revenue is recovered from consumptions the offsetting impact of PVs increases the unit price of energy for customers.'*

The uptake of solar PV has been dramatic since the introduction of government rebates and high feed-in tariffs.



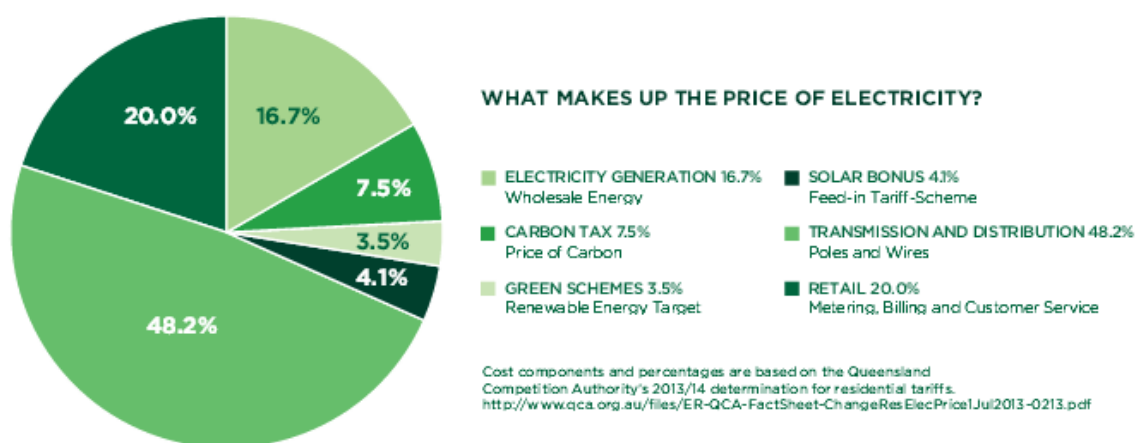
## Connected Inverter Energy Systems – Solar Photovoltaic

		2009/10	2010/11	2011/12	2012/13	2013/14*
Ergon Network	– number of systems	7,831	22,946	47,178	80,964	91,734
	– installed capacity kW	19,133	60,563	143,771	277,876	324,080
Far North Qld	– number of systems	1,410	3,265	6,553	11,138	12,839
	– installed capacity kW	3,297	8,506	20,171	38,427	45,689
Northern Qld	– number of systems	1,306	3,735	7,781	16,306	18,417
	– installed capacity kW	3,981	11,129	26,128	63,368	73,381
Mackay Region	– number of systems	413	1,458	3,295	6,234	7,372
	– installed capacity kW	932	3,913	10,561	22,467	27,445
Central Qld	– number of systems	930	2,812	7,020	12,774	14,390
	– installed capacity kW	2,179	7,738	22,262	44,273	51,038
Wide Bay	– number of systems	2,436	7,547	13,893	20,338	22,523
	– installed capacity kW	5,086	18,469	37,995	60,178	68,548
South West Qld	– number of systems	1,336	4,129	8,636	14,174	16,193
	– installed capacity kW	3,659	10,808	26,653	49,163	57,981

*Note:* Installed capacity is based on the capacity of the inverter. \* YTD: as at February 2014

Source: Ergon Energy

Even though the solar feed in tariff has been reduced from 44 cents to 8 cents the cost to customers is substantial as it now accounts for 4.1 percent of the electricity price.



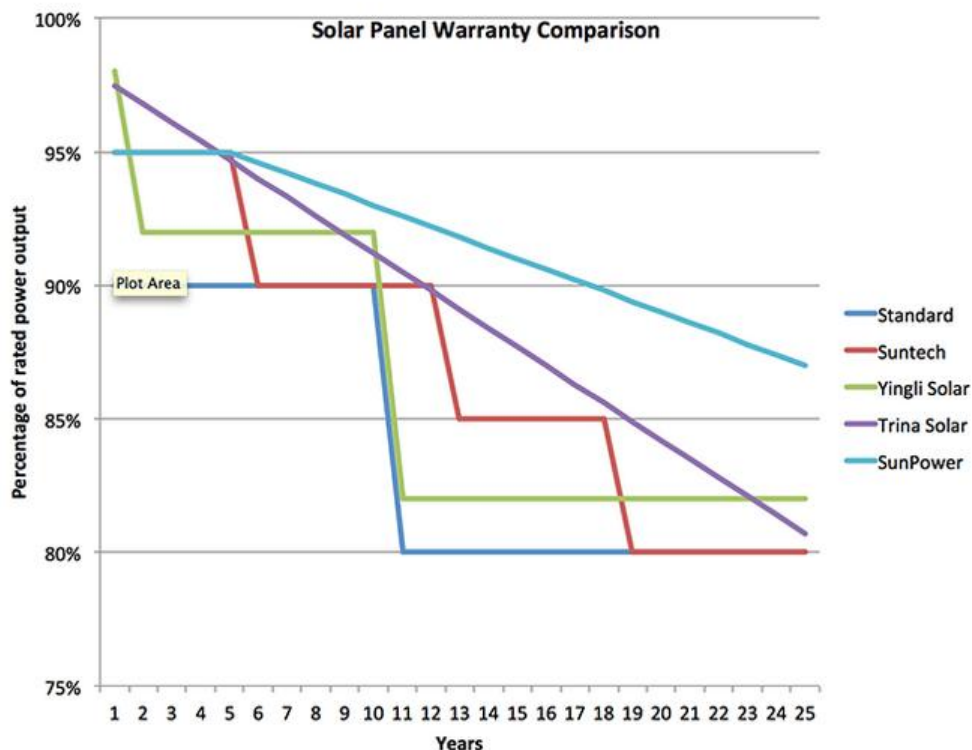
Source: Ergon Energy Annual Stakeholder Report 2012/13

As Solar PV uptake is strongly influenced by price signals, any recommendation by the QCA to increase the existing 8 cents feed-in tariff will increase electricity prices directly via the feed-in tariff and indirectly by increasing demand during peak periods.

Regional Queensland needs to explore cheaper and more reliable generation to solar PV.

The ongoing support of solar PV generation does not take into account critical elements that particularly affect regions prone to cyclones and major storm events.

At present the life of a solar PV system is approx. 25 years and the installed capacity deteriorates with time and can be reduced to 80 percent of installed capacity after 10 years. This will mean that over time consumers with solar PV may slowly increase their demand from the grid as their solar PV panels deteriorate. In addition a large supply of power will need to be re-installed in about 25 years time and the capacity of consumers without rebates and favourable feed-in tariffs to pay for new solar PV is questionable. The combined result of the deterioration and non installation of solar PV may result in a grid system that is unable to cope with the additional demand.



Source: Website of Energy Informative – The Homeowner's guide to solar panels

At present there is no requirement for private installations of solar PV systems to have a building certification confirming the roof to which the solar PV is attached can withstand a cyclone or storm event. Ideally the roof should be structurally sound and the roofing material sound. If the roof is not new it will require replacement prior to the end of the life of the solar PV. In the event of a cyclone or major storm event many buildings and homes will be severely damaged if their roof is compromised. This will have a double affect with the loss of supply to the grid from the damaged solar PVs.

**Table: No. of solar pvs**

As at February 2014	Number of solar PV systems	Installed capacity kW	Average installed capacity kW	Percentage of Ergon network	
				Number of solar PV systems	Installed capacity
Far North Qld	12,839	45,689	3.56	14	14
North Qld	18,417	73,381	3.98	20	23
Mackay Region	7,372	27,445	3.72	8	8
Central Qld	14,390	51,038	3.55	16	16
Wide Bay	22,523	68,548	3.04	24	21
South West Qld	16,193	57,981	3.58	18	18
<b>Ergon Network Total</b>	<b>91,734</b>	<b>324,082</b>	<b>3.53</b>	<b>100</b>	<b>100</b>

Source: Ergon Energy data.



Regional Queensland needs to explore cheaper and more reliable generation to solar PV.

## **Impact of electricity prices on demand from regional business & industry customers**

Increasing electricity prices has resulted in many businesses employing energy efficient measures. Similar to the domestic consumer experience, falling consumption has not resulted in static or falling electricity bills for regional businesses and industry.

The recently released draft Queensland Plan calls for half the population to live outside South East Queensland. This will require jobs, jobs require industry and industry requires competitive and reliable electricity.

Whilst the Queensland Plan will require the creation of more industry in regional Queensland, the government needs to first understand the elasticity of demand of existing industries to soaring electricity prices. Should a cane grower reduce his acreage of sugar cane the flow on effect to the sugar mill and associated industries multiplies with each grower that either reduces his cropped area or drops out of the sugar industry. At the QCA meeting in Mareeba a cane grower clearly articulated that at the current predicted price increases to the transitional tariffs he would not be cane farming in 2 years. The Arriga sugar mill is a major economic driver on the Atherton Tablelands.

The mining industry is also a major employer in areas west of Cairns. Two mines in the area are classified as large customers and employ 100 and 70 people respectively. At a time where mine costs are being highly scrutinised it is alarming to hear rhetoric that suggests that mines are able to pay their way.

With both the farming and mining example it is imperative that the QCA takes into account the elasticity of demand due to rising electricity prices. Since the majority of electricity in regional Queensland is used by business and industry any drop in the demand from business and industry will increase the price to the remaining customers including domestic customers.

Any increase in unit cost will have an adverse impact on the Uniform Tariff Policy (UTP) and supporting Community Service Obligations. Any change to the UTP and CSO arrangements needs to take into account all the “most needy consumers” which means business and industry not just domestic consumers.

If electricity prices in regional Queensland are not equal to South East Queensland, contrary to the Queensland Plan the population will remain in South East Queensland with the jobs and industry.



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## W S (BILL) CUMMINGS



**OVERVIEW:** Bill Cummings is one of Australia's most highly experienced regional business economists. He was born and educated in Cairns, and completed an Economics Degree at the University of Queensland. This was followed by eight years high level experience in economics in Canberra, initially as a research officer in the Tariff Policy section of the Department of Trade and five years as the Economic Research Officer in the Canberra Secretariat of the Australian Chamber of Commerce.

This included researching and writing on major national policy issues of concern to the business community, preparing and presenting Tariff Board cases, especially supporting the Chamber's Export Council, and generally liaising with business, government and overseas commercial representatives on national economic policy issues.

In 1968, he returned north and for the next 13 years managed development and tourism promotion organisations, initially for five years at Ingham, where he was especially concerned with agricultural development. This was followed by eight years in Cairns as Manager of the Far North Queensland Development Bureau and its sub Board for Tourism & Travel, now Tourism Tropical North Queensland. This especially involved promotion and development of domestic and international tourism, arguing the case for upgrading of Cairns airport, promoting trade with Papua New Guinea, administering the region's crown industrial estate, achieving fishing industry infrastructure upgrading, and regional development strategies in general.

In 1981, he established his own economic research business which has subsequently also filled a need in the north for professional market research services under the trading name of Compass Research.

Over the years, the firm has addressed economic development questions ranging over almost all aspects of the north's economy with a heavy emphasis on tourism, primary industries, fishing, mining, retailing, university development and transport infrastructure including Cairns airport and seaport, and road development throughout the region and across the north.

**Full Name** William Samuel Cummings

**Born** Cairns 09-08-1939

**Education** B Econ Q'ld 1962, with majors in Economics, Accounting, Pure Maths I/Statistics/ Stat Maths. Further Studies, ANU Canberra, Economics & Political Science.

**Work - Current:** Principal, own Economic & Market Research firms,

**CUMMINGS ECONOMICS & COMPASS RESEARCH, CAIRNS, since 1981.**



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Cont'd

**1973 – 1981:** Manager, *Far North Queensland Development Bureau and Sub Board for Tourism & Travel*, 1978 changed to *Far North Queensland Promotion Bureau*, now *Tourism Tropical North Queensland (TTNQ)*.

**1968 – 1973:** Manager, Ingham District Research & Promotion Bureau, North Queensland.

**1963 – 1968:** Economic Research Officer, Tariff Officer & Secretary of Export Council, Australian Chamber of Commerce Canberra Secretariat.

**1961 – 1963:** Research Officer, Tariff Policy Section, Department of Trade, Canberra.

#### General Outline of Activities

1961 - 1968	<ul style="list-style-type: none"> <li>Extensive post university top level experience in economics and research on national policy issues, preparation &amp; presentation of Tariff Board cases, contact with all levels of government, overseas commercial representatives, media and business throughout Australia.</li> </ul>
1968 - 1973	<ul style="list-style-type: none"> <li>Heavily involved in promotion of agricultural diversification, roads, mining development and reforestation.</li> <li>Served as an outside representative Commerce &amp; Economics Faculty, James Cook University.</li> <li>Founding Secretary, North Queensland Travel Council &amp; key role in 1971 ANTA Tourism Report on North Queensland.</li> </ul>
1973 - 1981	<ul style="list-style-type: none"> <li>Responsible for the co-ordination of promotion of development in the Cairns/Far North Queensland region.</li> <li>Organised most tourist promotion activities out of North Queensland during this period all over Australia and FNQ Visitor Guiding systems.</li> <li>Administered State Crown Industrial Estates in the FNQ region and State industry support programs for manufacturing and industry.</li> </ul>
1981 to Present	<ul style="list-style-type: none"> <li>Provided key economic strategy direction to the region and author of various regional strategy reports.</li> <li>Publication of economic profiles/tourism profiles/property market analyses including Year Book/Data Base, Chamber of Commerce annual publications, and the 600 page Cairns 2020 – 2050 Business Research Manual.</li> <li>Numerous economic research tasks involving almost all sectors of the economy for private clients and key regional organisations including Councils, Tourism Organisations, the Regional Development Corporation, Chambers of Commerce, Port Authority, Newspapers, Casino, Convention Centre, Retailers Association of Queensland, Dept of State Development, Dept of Transport, Q'ld Dept of Primary Industries.</li> <li>Numerous market research tasks for clients ranging from Sydney through to the Torres Strait and across to the Northern Territory, including household surveys, street surveys, visitor surveys, focus groups, auditing of shopping centre pedestrian counts with clients including a range of government, statutory bodies and leading northern businesses.</li> <li>Served on numerous boards and committees including as Chairman of the Edward River Crocodile Farm Pormpuraaw Aboriginal Community, Deputy Chairman, North Australia Development Council, as a Governor in Council appointee to the Council of James Cook University, Advisory Council Cairns TAFE, Management Committees of Development Bureaus, Chamber of Commerce, and Federal Government Area Coordinating Committee.</li> <li>Current memberships include the Economic Society of Australia, Australia NZ Regional Science Association, the Australian Market &amp; Social Research Society, and the Australia Papua New Guinea Business Council.</li> </ul>

