



The source of our solar power.

Opinion

Opinion: Benefits of solar farming

Adam Joseph, corporate affairs manager at HydroSun, Townsville Bulletin
September 11, 2017 5:50pm

TOWNSVILLE for the Powering North Queensland Summit, state shadow minister for energy Michael Hart indicated the LNP would support a floating solar farm to power the Houghton pipeline pumps, which at present cost the council and ratepayers \$25,000 a day.

This is a "market led proposal" to which Opposition Leader Tim Nicholls referred in May this year.

The benefits of solar farming on dams are well known in places like India, China, the UK and Japan.

They generate more than 19 per cent more power than land-based equivalents because solar panels are kept cool by the shaded water below.

By shading water, they also reduce evaporation (according to the CSIRO, Burdekin Falls dam loses 1.9m each year through evaporation).

Shading water also reduces weeds, algae and waterborne bacteria.

It's a sensible use of taxpayer funds to secure both energy and water security with a single infrastructure spend, and even more so if it creates local manufacturing industries. Instead of installing a floating solar farm just to power pumps, Townsville could install a 40MW floating solar farm and store this electricity in a 200MW/h vanadium redox battery (VRB). This would allow the operator (most likely the government-owned Ergon, or "CleanCo" announced by Premier Annastacia Palaszczuk) to put downward pressure on electricity prices.

That can be achieved by using the battery to download cheap "off peak" (coal-fired) power at night, combine it with

renewable energy and deliver it back into the grid at "top of demand".

While US car maker Tesla is driving PR around lithium ion batteries, China, Japan, the UK, India and many other countries already use VRBs to store dispatchable power.

And like floating solar, it is an Australian invention yet to be commercialised in this country. The breakthrough was made in 1986 by Professor Maria Skyllas-Kazacos AM after NASA tried and failed.

Whereas lithium is the lightest known mineral, ideal for portable objects like cars, laptops, watches and phones, it is a rare earth mineral which is in finite supply. If it is wasted on stationary objects like large MW storage infrastructure, on current projections it will run out in 17 years.

In July, the State Department of Energy and Water Supply (DEWS) visited UNSW to learn about VRBs as it plans the Government's upcoming "reverse auction" for battery storage. Since then, UNSW, James Cook University, Australian Vanadium Ltd and HydroSun published a paper to outline the economic, social and environmental benefits of vanadium flow batteries over lithium ion.

As the Queensland election approaches, all political parties will be considering how their policies on energy and water security can maximise employment benefits to places like Townsville. Both the Coalition and Labor have backed the need for battery storage, yet One Nation supports local battery manufacturing rather than losing the value chain by "digging and shipping minerals" to other manufacturing countries. And Katter's Australian Party supports "multi-use water infrastructure".

What can this mean for the significant number of FIFO workers who live in Townsville, the former workers at Clive Palmer's nickel operation or those enjoying sporadic work at places like the Iplex factory (mothballed during this term of government)?

Auspac Energy, associated with the 800MW/h vanadium redox battery currently being built in China, calculates that a 200MW/h battery in Townsville would support 600 factory jobs and additional jobs in the local community. And these figures do not even include the jobs to be created in manufacturing flotation devices using HDDP poly pipe, at present manufactured in Australia.

Comments

Post Comment

You may like



Man dies in workplace incident

[News](#)



Winterstein girls are ready to cheer

[News](#)



Chris Scott 'grow some balls', Geelong leadership meeting, AFL finals 2017

[Fox Sports AU](#)



Kendall Jenner may not be walking in Victoria's Secret this year if this photo is anything to go by

[Vogue Australia](#)



Fatal car accident at Black River

[News](#)



Cowboys fans mob players

[News](#)

From around the web



When The Judge Read Out His Verdict, These Teens Started Crying Like Babies

[Scribol](#)



Scratching This Part of Your Body is a Sign of Alzheimer's

[memoryrepairprotocol.com](#)



Doctor Reveals The Truth About Foot Pain (Stop Doing This)

[Vital Updates](#)



Rosie O'Donnell's Ex-Wife Dies of Apparent Suicide

[E! Online](#)



80's Women: Erika Eleniak Is Almost 48... This Is What She's Doing Now

[Direct Expose](#)



Are Selena Gomez and The Weeknd Living Together?

[E! Online](#)

Most viewed

More Opinion

Featured stories

A NOTE ABOUT RELEVANT ADVERTISING: We collect information about the content (including ads) you use across this site and use it to make both advertising and content more relevant to you on our network and other sites. This is also known as Online Behavioural Advertising. You can "[find out more about our policy and your choices, including how to opt-out here](#)"

MOBILENEWSLETTERSEND PICSSEND STORIES

Follow Us	News	Sport	Entertainment	Network Sites	News Corp Australia
 About Us Contact Us Letter to the Editor Sponsorship Digital Print Edition Place an Ad Advertise with Us Subscription Terms Tributes	Breaking News Townsville Crime & Court National World Opinion Photos	Cowboys Local Sport Business	Competitions Lifestyle Property Travel Hipages	The Australian The Daily Telegraph The Advertiser news.com.au The Mercury Geelong Advertiser Herald Sun The Courier-Mail NT News Gold Coast Bulletin Cairns Post	Privacy Policy Relevant Ads Opt-out Cookie Policy Photo Sales Careers Terms of use Accessibility Code of Conduct

News Corp 2017 Copyright