

Judi Knights ref no 20033381 Deadline 1 10th March 2023
Medworth Energy from Waste CHP – EN010110

Water for this proposed facility?

I agree MVV's 'closed loop' air-cooled condenser system would help to some extent in reducing the amount of water used . However, MVV seemed to be inferring in ISH1, a 'closed loop system' would return most, if not all, the water for re-circulation. If that was meant, I do not agree.

By MVV's own admission, in ISH1, the technology proposed is the same for their Plymouth facility. There's an online presentation by MVV of it, co-hosted by some staff from Exeter University, on a You-tube live-streamed question and answer phone-in, where someone phoned in, asking about water use. MVV replied their facility 'exports' 15-20 tonnes per hour of steam in the winter for use by the naval dockyard, and, said *'The Navy return a portion of this'*. (1)

Looking at it mathematically, 15-20 tonnes of steam is 15-20,000 kgs water, which is 15-20,000 litres of water – per hour, so 360,000-480,000 litres daily. Medworth facility would be much bigger and so vast quantities of water could be 'exported' in the form of steam and not returned.

I can therefore agree with MVV that they have a need for the 22.22 litres of water per second. (2)

This would I believe be for 40 years, night and day, every day, apart from two weeks each year 'down time'. Calculating the amount of water this would be over time:

22.22 litres per second = 1,333.20 litres per minute = 79,992 litres per hour, and so 1,919,808 litres per day.

As a mega litre is a million litres, so this would be over 1.9 mega litres (1.9ML/day),

The water would be potable water from the mains, supplied by Anglian Water. The Anglian Water area is known to be an area of relatively low rainfall.

Anglian Water produce a 5 yearly report, and, in their most recent, in 2019, a map of Anglia Water's various zones, shows Wisbech in zone 12, which is Southern Fenland. That area is coloured red, showing it under threat of being over 15 million litres (15 Ml)/day in deficit by the year 2045, when the facility would be only halfway through its expected 40 year life. (3)

Even before that time there will have been a growing deficit of water. Water is not as plentiful as it once was. It was a shock in the summer to hear from the Environment Agency that our family's farming partnership in West Norfolk, might not be allowed to fill our reservoir over winter. Eventually we could

extract, thanks to the level of the particular local source of water we abstract from.

Some farmers have in recent months, and still have, difficulty though filling their reservoirs. A Farmer's Weekly magazine cover in winter 2022 showed an almost empty reservoir in the Anglian area. (4)

This means for instance in some places that irrigation of potatoes, and other crops is unlikely to take place, pushing up food insecurity, imports and so costs, and inflation.

It is unclear how much water would or could be supplied to AW's WRZ (water resource zone) of South Fenland. AW say in their most recent, Water Resources Management Plan 2019, (5)

'Largely due to supply-side pressures, by 2025 only three WRZs will have a surplus greater than 3 Ml/d (East Lincolnshire, South Humber Bank and Hartlepool) compared to 14 at the beginning of the forecast period. We have limited options for new local surface and groundwater resources in many parts of our region due to the over allocation of existing resources; the only feasible supply options for 14 WRZs out of 22 in deficit are transfers; and transfers are the least cost options.'

Regarding large infrastructure, the government's assets publishing service has a publication entitled 'Overarching National Policy Statement for Energy (EN-1), which says in paragraph 5.15.2:

'Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES [Environmental Statement] or equivalent (See Section 4.2)'

Next paragraph (5.15.3) says

'The ES should in particular describe:...existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies)...

These details don't seem to be in the application as far as I can tell. I do not see how this proposed facility can, or should, for all its 40 years, be guaranteed such large quantities of water, as supplies will need to be diverted to it from elsewhere, at a likely high cost to farmers and even householders.

The Water Resources Long Term Planning Framework, Water UK, 2015-2065 published in 2016 looked at the plans of different water companies in the UK and said regarding East Anglia that it recognises that there will not be enough water in this region within the next few decades and the solution appears to be the strategic transfer of water from the River Trent. (6)

How ironic it is therefore that Anglian Water is already in an agreement with Severn Trent Water, and is supplying **them**. The Severn Trent Drought Plan, of ST's pdf, says:

'We import up to 18 Ml/d of treated water from Anglian Water...How would this supply operate in a drought? There are no drought conditions in this agreement but, if entered a drought, we would engage with Anglian Water and if we are able to, we may reduce our import'. (7)

I believe MVV should not simply defer to Anglian Water for their assurance that all is well regarding water supply to this proposed facility. I believe it should not go ahead.

References:

- (1) ESC Live Pilot Plymouth Energy From Waste Facility – Youtube
See 30:00 minutes in, up until 30:55
- (2) 3.4.66 in examination library
- (3) Page 16, (the page which the computer cites when the saved pdf is opened)
- (4) Farmer's Weekly, November 22 cover photo, article online
- (5) Page 12 (the page which the computer cites when the saved pdf is opened)
- (6) see pages 137 and 148 (the page which the computer cites when the saved pdf is opened)
- (7) 'Drought Plan' 2022-2027 – Severn Trent Water
(table on page 33, the page which the computer cites when the saved pdf is opened)



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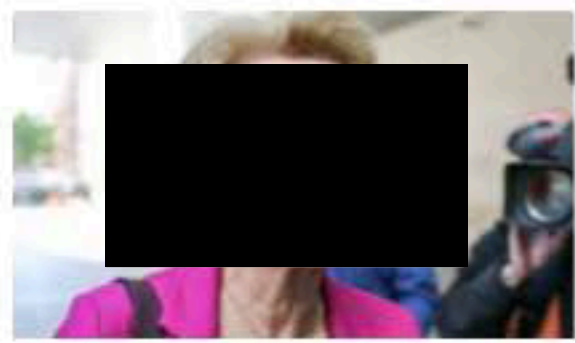
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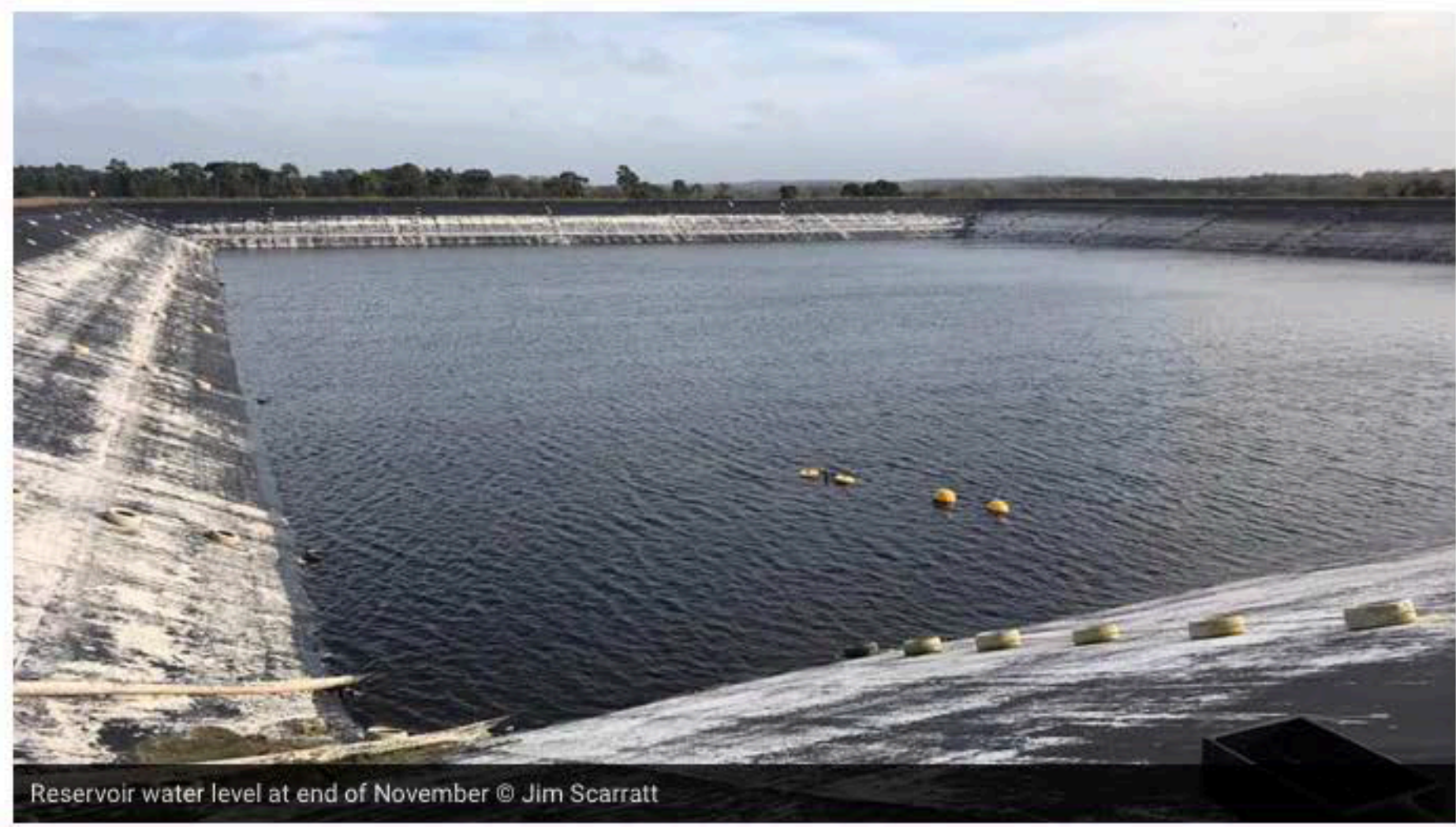
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