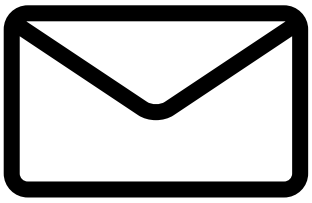

Online Submission

Mar 23 (21 days ago)

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ABC Science
Posted Tue 22/3/2016 at 1:25pm
http://www.a bc.net.au/news/2016-03-22/carbon-emissions-'highest-in-66-million-years'
Carbon emissions rate 'highest in 66 million years'
The rate of carbon emissions is higher than at any time in fossil records stretching back 66 million years to the end of the age of the dinosaurs, according to a new study that sounds an alarm about risks to nature from anthropogenic warming.
Key points
During Palaeocene-Eocene Thermal Maximum 55.8 million years ago temperatures rose 5 degrees C
Scientists analysed marine fossils to determine rate of carbon emissions at this time
Rate of carbon emissions was 10 times slower than current emissions
The study, published in the journal Nature Geoscience, indicated the pace of emissions even eclipses the onset of the biggest known natural surge in fossil records, 56 million years ago, that was perhaps driven by a release of frozen stores of greenhouse gases beneath the seabed.
The Palaeocene-Eocene Thermal Maximum (PETM) event â€" which drove temperatures up by an estimated 5 degrees Celsius and damaged marine life by making the oceans acidic â€" is often seen as a parallel to the risks from the current build-up of carbon in the atmosphere from burning fossil fuels.
On present trajectories, greenhouse gas emissions will heat up Earth 3 to 4 degrees Celsius by 2100.
"Of all the changes we have seen in 66 million years, this event is the one that most looks like anthropogenic, or man-made, warming," said study co-author Professor Andy Ridgwell, a paleo-climatologist at the University of Bristol.
Aside from the huge impact that killed the dinosaurs, what we are seeing now is the fastest rate of climate change in 66 million years.
Professor Andy Ridgwell
The parallels are striking: massive carbon emissions, followed by rapid global warming and major loss of species.
Fifty-six million years ago, those extinctions took place mainly in the ocean. Today the so-called "sixth great extinction" is underway both in the sea and on land.
But until now scientists could not figure out how quickly carbon â€" whether in the form of CO2 or, more likely, methane from the ocean floor â€" had been released.
"The biggest problem has been coming up with a firm timing for the PETM onset event," Professor Ridgwell said. "How quickly the emissions occurred is absolutely critical."
Analysis of chemical composition of fossils
To nail down the rate of carbon release, the team of scientists led by Professor Richard Zeebe from the University of Hawaii studied carbon and oxygen isotopes in fossils of tiny marine organisms in the seabed off New Jersey in the United States.
"If the carbon was released rapidly we would find in the sediment core a lag with warming," Professor Zeebe said.
"If carbon is released slowly, the climate adjusts more or less in sync."
There was no lag at all. A quick calculation showed that the carbon could not have been emitted in less then 4,000 years, or about 1 billion tonnes per year, the scientists reported.
By comparison, human activity â€" industry, energy production, deforestation, agriculture â€" is pumping out about 10

billion tonnes of carbon annually. That is 10 times as much.
"Aside from the huge impact that killed the dinosaurs, what we are seeing now is the fastest rate of climate change in 66 million years," Professor Ridgwell said.
This is bad news for species loss, he continued.
"Ecosystem impacts tend to show up more with the rate, rather than the size, of the change in temperature," he said. "It's all about the rate."
What is happening on Earth today, he noted, is closer in speed to the end of the Cretaceous â€" when an asteroid is thought to have wiped out the dinosaurs â€" than it is to events such as the PETM.
AFP/Reuters

This is a major opportunity. Act to protect community health, the environment, the climate and the hunter valley region. You can .prevent T4 from getting its approval. And thinking more about what affects the Hunter Valley region as climate change accelerates.
How will your children feel it you do not take the opportunity to protect the environment??

Email Details

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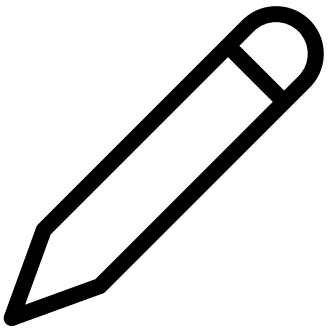
Priority	Medium
Class	Comment



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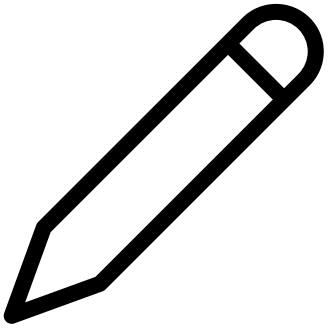

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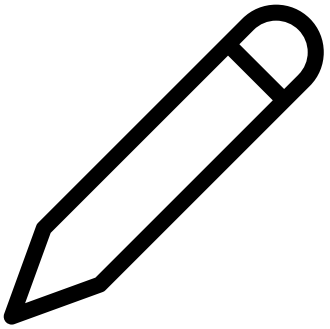

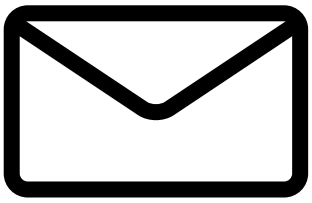

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Online Submission

Mar 21 (23 days ago)

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At a time when the rest of the world is rapidly moving away from fossil fuels, the approval of T4 will lock up precious and limited portside land in Newcastleâ€™s port that we could use to transition our economy away from carbon addiction. T4 will facilitate new and expanding coal mines in the Hunter Valley and Gunnedah Basin,Unique and cryptic wildlife abound - the Pilliga is home to one of the largest inland Koala populations in NSW and is the only place in the world where the tiny Pilliga Mouse is found. like those being pushed at Maules Creek the mine will emit approximately 30 million tonnes of CO2 per year. Over its 30 year life, the mine will emit about twice as much carbon pollution as the governmentâ€™s Direct Action Plan might save between 2014 and 2020.
Whitehaven's new coal mine will suck up to 3 billion litres of water per year from the local river and will lower the water table (in some places by up to 6 metres). This will place further stress on farmers in the Liverpool Plains area. These farmers are custodians of one of Australiaâ€™s richest food bowls and are already experiencing draught
. This ancient forest provides habitat for more than 30 threatened species including the Koala, the Regent Honeyeater and the Squirrel Glider.

Also the mines is threatening to swallow the township of Bulga and its 350 residents, These are the real costs of T4 â€" destroyed remnant bushland, devoured agricultural land, saline and acidified aquifers, and distressed and displaced communities.

Port Waratah Coal Services. The new coal terminal (T4) would have capacity for 70 million tonnes per year of coal if approved, massively increasing Newcastle coal exports. The coal stockpiles would not be covered, resulting in more dust pollution blowing onto portside suburbs from Stockton to Mayfield. The new coal terminal would result in more than 100 additional uncovered coal trains travelling through Newcastle every day, if approved. This would mean more coal dust and diesel pollution for communities along the coal rail line.

http://reneweconomy.com.au/2014/beginning-end-coal-citi-sees-structural-decline-30396

In short, Citigroup says, the evolution in electricity markets is being driven by a combination of regulatory and technology changes.

This, it says, has major implications for Australiaâ€™s vast coal resources, which require huge investments in infrastructure (rail lines and ports), and may simply not make economic sense. It already notes that financiers are absorbing these lessons, and many Australian projects have been delayed as a result.

The assessment â€" part of a growing flow of such reports from the worldâ€™s financial community â€" notes the growing risk to fossil fuels, and what Citigroup itself described in an earlier report as the impending â€oeAge of Renewables.â€

The Valley needs permanent and absolute protection for the wine industry, thoroughbred industry, water resources, good farmland and villages from coal mines.
Scrap plans for a fourth coal terminal in Newcastle and protect the world-renowned wetlands of Ash Island by adding

them to the Hunter Wetlands National Park.
Climate change is already changing our weather and all our lives. We want the Government to plan for sea-level rise, storm surges, changed rainfall patterns and provide for distributed energy, water and food systems so that our cities, suburbs and the bush are resilient to dramatic change
In short climate change is real and the planet and people need you Support
and Newcastle to stop the export of pollution and no more coal mines
For the planets sake.

Email Details

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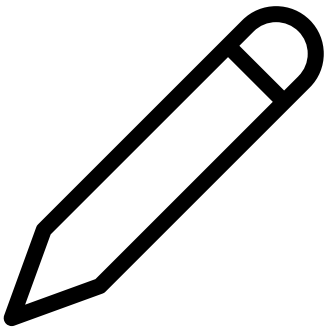
Tags	No Tags



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