

From: Laura Ackerman [<mailto:lackerman@landscouncil.org>]
Sent: Tuesday, November 21, 2017 3:54 PM
To: Public Involvement (UTC) <PubInvolve@utc.wa.gov>
Subject: Avista's IRP Nov. 8, 2017 Hearing in Spokane

Dear UTC Commission Members,

I testified at the hearing in Spokane Valley on Nov. 8. Thank you again for coming to Spokane. It was much appreciated and very helpful in facilitating participation in comments for the IRP. I am sending you some additional studies regarding coal, health and economics.

I would like to reiterate that Avista is a very generous community partner. They are a smart, adaptive company and they clearly understand they have to get out of the coal business. I just want Avista and the UTC to fully realize the urgency of getting out of Colstrip.

Below are several more studies but not at all exhaustive. Thank you for reading this email, and again, for coming to Spokane.

Sincerely,

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[Chronic Illness Linked To Coal-mining Pollution, Study Shows ...](#)

Mar 27, 2008 ... "Residents of **coal**-mining communities have long complained of impaired health, " and researchers say "This **study** substantiates their claims.
<https://www.sciencedaily.com/releases/2008/03/080326201751.htm>

[Autism Risk Linked To Distance From Power Plants, Other Mercury ...](#)

Apr 25, 2008 ... A newly published **study** of Texas school district data and industrial ... Mercury- release data examined were from 39 **coal**-fired power plants and ...
<https://www.sciencedaily.com/releases/2008/04/080424120953.htm>

[Recent mercury pollution on the rise, but quick to change, study shows](#)

Jun 29, 2015 ... A **study** using a 600-year-old ice core shows that global mercury ... Toxic metal mercury is emitted to the atmosphere from **coal** burning, mining, ...
<https://www.sciencedaily.com/releases/2015/06/150629142147.htm>

[Better estimates of worldwide mercury pollution: New findings show ...](#)

Aug 12, 2015 ... While its increased burning of **coal** was known to exacerbate Recent Mercury Pollution on the Rise, but Quick to Change, **Study Shows**.
<https://www.sciencedaily.com/releases/2015/08/150812131458.htm>

[Mercury levels in rainfall are rising in parts of North America ...](#)

Jan 27, 2016 ... with increased emissions of mercury from **coal**-burning power plants in Asia ... In the new **study**, researchers analyzed data from a network of ...
<https://www.sciencedaily.com/releases/2016/01/160127101537.htm>

[Benefits associated with the reduction of mercury emissions far ...](#)

Feb 16, 2016 ... But that **study** is based on an extremely small subset of the population: ... But if you consider all of the benefits of reducing **coal**-fired power plant ...
<https://www.sciencedaily.com/releases/2016/02/160216152020.htm>

[Carbon capture analyst: 'Coal should stay in the ground ...](#)

Dec 2, 2015 ... The U-M researchers have found that most **economic** analysis of carbon capture and storage, or CCS, technology for **coal**-fired power plants ...
<https://www.sciencedaily.com/releases/2015/12/151202142317.htm>

[Global mercury regulations to have major **economic** benefits for US ...](#)

Jan 5, 2016 ... The researchers calculated the projected U.S. **economic** benefits from ... to reduce mercury pollution from the country's **coal**-fired power plants.
<https://www.sciencedaily.com/releases/2016/01/160105223542.htm>

[US electricity could be powered mostly by the sun and wind by 2030 ...](#)

Jan 25, 2016 ... So MacDonald, who has **studied** weather and worked to improve ... and greenhouse gas emissions of various energy mixes, including **coal**.
<https://www.sciencedaily.com/releases/2016/01/160125114231.htm>

Please see [The Impacts of Climate change on Human Health in the united States](#), a Scientific Assessment by U.S Global change Research Program. health2016.globalchange.gov

[U.S. Taxpayers at Risk of Being Saddled With Coal Cleanup Bills](#)

[Environmental Factors, Particularly Air **Pollution**, Increases Risk Of ...](#)

Apr 23, 2005 ... Exposure factors that are thought to compound the risk include passive smoking, air pollution, **noise pollution** and the chemical composition of ...
<https://www.sciencedaily.com/releases/2005/04/050422170441.htm>

Impact of climate change on public health

Health consequences of climate change: Doctors urge action to help mitigate risks and prepare for new challenges

Date:

March 1, 2016

Source:

Elsevier Health Sciences

Summary:

Doctors warn of the impending public health crisis brought on by climate change and call for action to help prepare the world for what is ahead.

[Global warming linked to the health of children: Pediatricians play ...](#)

Oct 26, 2015 ... **Climate change** poses a threat to human **health** and safety, but children ... vulnerable to the secondary **impacts** of **global warming**, like disease.

<https://www.sciencedaily.com/releases/2015/10/151026092754.htm>

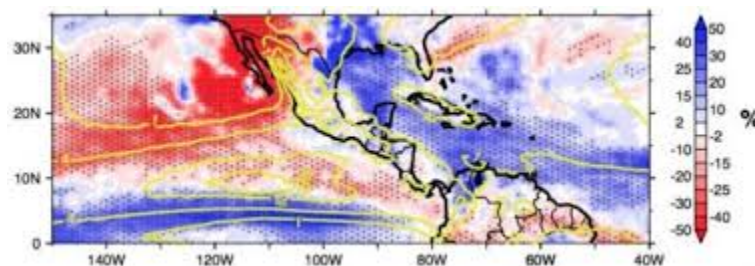
LabeledFeatured ...

[Major impacts of climate change expected on mental health ...](#)

Dec 7, 2009 ... Leading mental **health** researchers are warning that some of the most important **health consequences** of **climate change** will be on mental ...

<https://www.sciencedaily.com/releases/2009/12/091203101424.htm>

LabeledFeatured ...

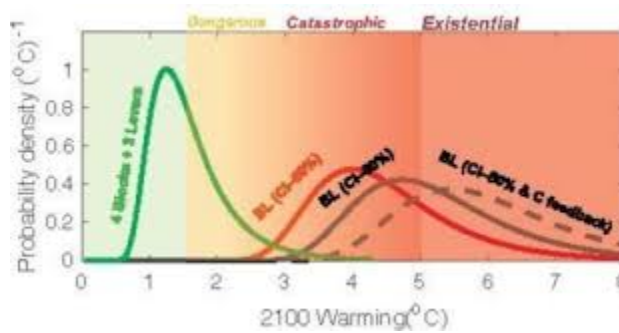


[Droughts and wildfires: How global warming is drying up the North ...](#)

Oct 9, 2017 ... Previous researchers had concluded that **global warming** was simply ... edge of the monsoon in response to warming, with **consequences** for ...

<https://www.sciencedaily.com/releases/2017/10/171009123151.htm>

LabeledFeatured ...



[New climate risk classification created to account for potential ...](#)

Sep 14, 2017 ... "Dangerous" **global warming** includes **consequences** such as ... to human water and food supplies in addition to the **health risks** posed by ...

<https://www.sciencedaily.com/releases/2017/09/170914210606.htm>

LabeledFeatured ...

[Climate change already dramatically disrupting all elements of nature](#)

Nov 10, 2016 ... Impacts to humans include increased pests and disease outbreaks, ... The broad footprint of climate change from genes to biomes to people. ... Government Accused of Neglecting Research on **Climate Change Health Impacts**.

<https://www.sciencedaily.com/releases/2016/11/161110115540.htm>

LabeledFeatured ...

[Threat of climate change found to be key psychological and ...](#)

Apr 5, 2016 ... **Climate change** is a significant threat to the **health** of Americans, creating unprecedented **health problems** in areas where they might not have ...

<https://www.sciencedaily.com/releases/2016/04/160405094231.htm>

LabeledFeatured ...

[Unabated climate change would reverse the development gains in ...](#)

Jul 14, 2017 ... Unabated **climate change** would bring devastating **consequences** to ... and regional security, trade, urban development, migration, and **health**.

<https://www.sciencedaily.com/releases/2017/07/170714140300.htm>

LabeledFeatured ...

<https://www.economist.com/news/briefing/21731386-cutting-emissions-will-not-be-enough-keep-global-warming-check-greenhouse-gases-must-be>

Climate change Impacts in the United States by the U.S. National Climate Assessment, U.S Global change Research Program. nca2014.globalchange.gov

<https://www.newyorker.com/magazine/2017/11/20/can-carbon-dioxide-removal-save-the-world>

Added Arctic data shows global warming didn't pause

Posted: 20 Nov 2017 08:13 AM PST

Missing Arctic temperature data, not Mother Nature, created the seeming slowdown of global warming from 1998 to 2012, according to a new study.

On the Blogs: Survey Finds Broad Support for Transition From Coal

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SustainableBrands.com:

People across all ages, political standpoints, education and geographies are in favour of a shift to 'green' energy, and three out of four believe that it will boost their country's economy.

The backing for renewable energy is clear: In the largest survey of attitudes on the subject* ever conducted, 82 percent favor a change from black to green energy.

According to the Green Energy Barometer, conducted by Edelman Intelligence on behalf of Danish energy giant Ørsted, and based on interviews with more than 26,000 people across 13 countries, three out of four (74 percent) even think that if their country builds and produces more renewable energy, it will boost economic growth.

And there's every reason to go full speed ahead, says Ørsted CEO Henrik Poulsen: "We're at a tipping point. Green energy has become cheaper than black, and the newly released Green Energy Barometer shows an overwhelming public support for a shift from black to green. We owe it to the planet and to future generations to transform our energy systems from black to green. And with the economics and public opinion now supporting a shift to renewable energy, there's no reason not to speed up the transformation."

The survey is released by the energy company Ørsted, headquartered in Denmark. Over the past ten years, the company has transformed from one of the most coal- and oil-intensive European utilities to the largest supplier of clean energy in Europe. By deciding to stop using coal, selling its oil and gas production and building the world's largest offshore wind business, the company is today dedicated to scaling access to clean energy. During the last six years, Ørsted has helped reduce the cost of offshore wind power by 63 percent; by 2023, it will have reduced its carbon emissions by 96 percent compared to 2006.

[More: New global survey reveals that everyone loves green energy — especially the Chinese](#)

<http://ieefa.org/blogs-survey-finds-broad-support-transition-coal/>

[Operator of One of Montana's Newest Coal-Fired Plants Says It Is Losing Money and Is for Sale <http://ieefa.org/operator-one-montanas-newest-coal-fired-plants-says-losing-money-sale/>](http://ieefa.org/operator-one-montanas-newest-coal-fired-plants-says-losing-money-sale/)

Billings Gazette:

The owner of a coal-fired power plant in Hardin has lost money from the site since 2014 and plans to leave town.

Gary Arneson, vice president of operations for Heorot Power, said in a Nov. 15 letter to the Montana Public Service Commission that if the company can't find a buyer for the facility, it could close by the first or second quarter of 2018.

The Hardin plant, constructed in 2006, is among the newest in the state. Heorot has relied on short-term energy contracts to sell electricity from the plant.

In his letter, Arneson wrote that though overhead is low relative to other thermal generators, the plant still lost money.

Pam Bucy, an attorney at Taylor Luther, said that the company has kept up payments on its \$3 million payroll, despite market conditions that temporarily halted operation.

A shutdown of the plant would affect the Absaloka Coal Mine on the neighboring Crow Reservation. Arneson said in his letter that the tribe would suffer losses from royalties derived from about 550,000 tons of coal mined annually to supply the Hardin plant.

Arneson also said a shutdown would “eliminate” \$440,000 in annual property tax payments to local governments. But the plant hasn’t paid those property taxes for 2014 and 2016. The company owes more than \$2 million to Big Horn County in delinquent taxes and penalties.

Those payments would have benefited local schools, infrastructure, and the city of Hardin’s tax increment financing district.

Hardin issued about \$12 million in bonds in 2006 to build infrastructure supporting the power plant. Payments on those bonds have been in default, as they relied on revenue from the plant.

The plant did pay 2015 taxes, but nothing since then, said Big Horn County Treasurer Jody Guptill.

Bucy said that the company is actively seeking buyers. She said that interest in the power plant includes those in the renewable energy sector. An environmental assessment was already completed as part of a solar array proposal from 2012.

[More: Owners of Hardin coal-fired power plant announce exit in 2018](#)

I recommend keeping up with IEEFA Blogs. There are many stories and reports on coal decline and alternative energy increases.

Local Author On Federal Climate Change Report Cites Urgency In Emissions Reductions

Bellamy Pailthorp | KNKX | Nov 14, 2017

The federal government’s latest special report on climate change directly contradicts the Trump administration’s policies. Hundreds of pages long, the report outlines the latest science and states that humans are the main cause of planetary warming.

One of the report’s 51 co-authors is Sarah Doherty, an atmospheric sciences professor at the University of Washington. She says even she was surprised by some of its content.

Doherty is a senior research scientist at the UW’s Joint Institute for the Study of the Atmosphere and Ocean. She helped write chapter two of the massive report, which covers the fundamental physics of climate change processes. She says she learned a lot.

“You know as research scientists you often are focusing on a very specific part of the problem. And it’s when you write a report like this that you get to step back and look at the whole picture,” Doherty said.

She says what surprised her most was the latest on how warming is expected to accelerate because of reinforcing feedback loops in the changing environment.

For example, as permafrost melts, methane will be released, speeding up the warming even more. That speed means meeting terms of the Paris agreement will require big changes, sooner than even Doherty knew.

“We’ve really only got a couple decades left of cruising along before we would have to stop emitting CO2 altogether, in order to stay within 2 degrees celsius.”

That’s the limit on warming above pre-industrial levels that parties at the climate talks in Bonn this week have agreed to work toward, including Washington Gov. Jay Inslee. Doherty says she hopes the report is helping shape policy there.

Inslee is co-chair of the U.S. Climate Alliance, in which 15 governors have pledged to meet the terms of the Paris accord, through local action.