



Issue 45, 2018

### U.S. Global Change Research Program - Fourth National Climate Assessment

"Impacts, risks and adaptation in the United States Report-in-Brief"

Why this is important: The assessment posits the U.S. will lose 10 percent of its gross domestic product by the end of the century if no additional action is taken to curb climate change. This economic prediction is based upon research provided by Tom Steyer related organizations that assume worst case scenarios. Countervailing studies put the loss of GDP at approximately 1 percent by the end of the century. - *Hsiang et al. 2017. --- Nicholas S. Preservati* 

# How American Fracking is Changing the World

"Bigger than Brexit, more consequential than presidential tweetstorms, the American shale revolution is rapidly reshaping the global balance of power as energy prices plummet."

Why this is important: The ability of the U.S. to produce abundant amounts of shale oil and natural gas are not only boosting domestic economic benefits, but also changing the dynamics of our country's international relations. For many decades, OPEC and later Iran, Russia and Venezuela have used their oil and gas exports as a major component of their foreign policy by influencing their customer countries that are energy poor. Now, our domestic shale production has not only freed the U.S. from the stranglehold of foreign imports, but also has given us a powerful tool to use in our foreign relations with other countries. This seachange in the global energy market should give our federal government the incentive to permit expanded export facilities and minimize regulatory barriers to pipeline systems that efficiently and safely carry these energy products to market. --- William M. Herlihy

## Global Coal Demand Increased In 2017

"Even with the Paris climate accords signed in late-2015, global coal demand in 2017 rose for the first time in two years, as reported by the Paris-based International Energy Agency."

Why this is important: Coal now accounts for 40 percent of worldwide electrical generation and, as this article shows, is unlikely to change for some time. In 2017, global coal use rose for the first time in two years. 1500 GW of worldwide coal-fired electrical generation is sited in Asia and China. Worldwide, another 200 GWs is under construction and 450 GWs planned, which will increase the world coal-fired generation fleet by 30 percent. Last year, China alone added 39 GW of coal-fired electrical generation. In the U.S., the average coal-fired plant is 42 years old and in Asia the average is 11 years. Currently, China and Asia continue to be the largest users of coal. In 2017, China consumed 50 percent of the world usage of coal and India used 12 percent. The U.S. used 9 percent and Europe 8 percent. The author notes the demand for coal-fired electrical generation will continue to increase as 75 million people move to cities each year worldwide. In addition, the worldwide appetite for energy is growing at a tremendous rate. The IEA believes electrical power needs will increase 60 percent by 2040 and there are likely to be

900 million electric cars by then. Even attempts to replace coal with renewables will require large amounts of coal. The author notes it takes 150 tons of metallurgical coal to make the steel for one windmill generator on land. For windmills to be placed offshore, it takes 250 tons of metallurgical coal to the make the steel for those windmills. --- Mark E. Heath

#### Bipartisan Climate Fee Backers to Plant Flag During Lame Duck

"A small group of Democratic and Republican House members plans to introduce a carbon tax bill, the first bipartisan climate legislation in a decade."

Why this is important: The stated purpose of the bill is to spark debate on climate change reform. A cynic may see the purpose of the bill as legitimizing an otherwise untenable \$15 a ton carbon price on coal and gas companies that will drive them into bankruptcy. This article even suggests the proposal is a "modest starting point" compared to the \$25 a ton price suggested in other legislation. --- Nicholas S. Preservati



#### Shale Gas Fuels U.S. Chemical Plant Construction

"Modularization is just one step owners, designers and contractors are taking to keep costs and schedules under control as they begin designing and building a second wave of chemical plants."

Why this is important: The production of cheap shale NGLs has fueled a resurgence in the U.S. chemical processing industry. However, the bulk of this development has begun on the Gulf Coast in areas already dotted by processing facilities and because of their location, cannot refine the abundant NGLs from the Appalachian Basin in a cost effective manner. Constructing the Shell ethane cracker facility in Beaver County, Pennsylvania is a wonderful start to refining base materials close to their production sites and their ultimate customers. However, there is a need for the federal and state governments to create incentives for new chemical manufacturing operations in the region to help kickstart this industrial opportunity. --- William M. Herlihy

## Indian Power Utilities' October Thermal Coal Imports Up 27 Percent on Year

"Of the total, around 1.92 million mt was imported by 18 utilities for blending purposes, while 4.69 million mt was imported by eight utilities that run their thermal power stations on imported coal only."

Why this is important: Exports of U.S. thermal coal continue to grow and help producers sell thermal production in the face of a declining U.S. market due to the number of coal-fired electrical generation plants that have closed. These exports also have resulted in increased sales prices for U.S. producers. India imported 6.61 million tons of coal in October, which was used to help operate 26 coal-fired power plants. That tonnage is an increase of 27 percent from the same period last year. From April to October this year, India has imported 33.95 million metric tons of U.S. coal. That number is up a more modest one percent over the same period last year. --- Mark E. Heath



## 4 Problems with the New Climate Change Report

"Regardless, the American public would be better served by enjoying the holiday season and shopping, rather than worrying about an alarmist report."

Why this is important: All climate change research, even if conducted by the government, should be able to withstand scientific scrutiny. That is the reason the peer review process is held in such high regard. This article raises four very specific critiques of the assessment. While the critiques may or may not be correct, they need to be addressed by the authors of the assessment. ---Nicholas S. Preservati



# New Fortress Energy Building Second Pennsylvania LNG Export Facility

"In that filing, we learn some dynamite news: NFE is working on a \*second\* Pennsylvania LNG facility!"

Why this is important: This New Fortress Energy LNG facility is a hopeful sign natural gas processors are becoming more focused not only on the opportunities for the export of LNG, but also the use of LNG to supply domestic markets for which there is insufficient pipeline access. On the domestic scene, a small group of opponents to extending our natural gas pipeline systems continue to try to block new construction, which robs consumers of lower energy costs. In the short-term, overland transportation of LNG is a low cost solution to deliver natural gas to isolated consumers. --- William M. Herlihy



### <u>Vietnam Coal Shortage Forces Generators to Stop Operation</u>

"Two of four generators at the Qu?ng Ninh Thermal Power Plant have halted operations since last week due to lack of coal."

Why this is important: The growing need for coal worldwide can be seen in recent events in Vietnam. Shortages of steam coal in Vietnam have caused two plants to curtail and/or halt electrical generation. The two plants produce 1200 MW of power and will need 600,000 tons of thermal coal for the rest of this year alone. So far, the government could not produce the coal and the plants are suffering financially. The plants report the shutdown of two generating units has lost them the sale of 10.5 million kilowatts of electricity. --- Mark E. Heath



#### **EIA Energy Statistics**

Here is a round-up of the latest statistics concerning the energy industry.

#### **PETROLEUM**

**This Week in Petroleum** 

**Weekly Petroleum Status Report** 

#### **NATURAL GAS**

**Short-Term Energy Outlook - Natural Gas** 

**Natural Gas Weekly Update** 

**Natural Gas Futures Prices** 

#### COAL

**Short-Term Energy Outlook - Coal** 

**Coal Markets** 

**Weekly Coal Production** 

#### **RENEWABLES**

**Short-Term Energy Outlook** 

**Monthly Biodiesel Production Report** 

**Monthly Densified Biomass Fuel Report** 

What are your areas of interest? If there are particular industries or issues that you would like to hear about, <a href="mailto:email

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