

Marcellus Drilling News

Helping People & Businesses Profit from Northeast Shale Drilling

MDN Weekly Digest

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The “meat” and essence of each main story appearing on the *Marcellus Drilling News* (MarcellusDrilling.com) website during the previous week. Read this, and you will have the gist of an entire week’s worth of news for those with an interest in what happens in the upstream, midstream and downstream in the Marcellus and Utica Shale region.

We use italics to indicate additional information in the online version of the post that is not included in this digest. For those with a keen interest in the added information not appearing here, simply visit the MDN home page and click on the date of the issue for that story, which appears on the right sidebar under “Recent MDN Issues.”

Below is a list of all the headlines for stories in this issue, as a quick way to zero in on the stories you want to read. Let us know how we can make this weekly digest more useful for you!

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Riverkeeper Appeals Atlantic Sunrise Lawsuit to US Supreme Court
TransCanada Changing Name to TC Energy
Big Green has Cost America \$110B by Blocking Energy Projects
Trump Officially Nominates Andrew Wheeler to Head EPA

Friday, Jan. 11:

PA Leases Youghiogheny River Land in SWPA to Chevron \$4K/Ac
FirstEnergy Offers \$3.5K/Ac to Drill Under SWPA Town Park
PA Enviro Hearing Board Rejects Air Permit for Marcus Hook
Sierra Club Makes Play to Stop EQT Hammerhead Pipeline
PA DEP Comes into 21st Century with e-Permits for Shale Wells
Cuomo’s Catch-22: No New NatGas Pipe? No New Long Island Arena
DOE Awarding \$88M in Grants to Research Better O&G Extraction

Chesapeake Cuts New Deal to Pay Top Management Big Bucks

Chesapeake Energy has just released details of new deals to keep in place its CEO and four executive vice presidents for the next three years, paying them all big bucks to stick around. How much money? The official paperwork filed with the Securities and Exchange Commission only reveals base salary, which is small portion of each person's overall compensation package. Chessy CEO Robert "Doug" ("the ax") Lawler will get a base salary of \$1.3 million. Domenic J. "Nick" Dell'Osso, Jr. (former friend of Aubrey McClendon, the founder of Chesapeake), Executive VP and Chief Financial Officer will get a base salary of \$725,000. James R. Webb, Executive VP, General Counsel and Corporate Secretary will get a base of \$625,000. Frank J. Patterson, Executive VP of Exploration and Production will get \$660,000. And M. Jason Pigott, Executive VP for Operations and Technical Services will get \$575,000. But that's certainly not the end of the story. While we don't have full compensation numbers from 2018 (yet), here's how much each of the individuals above made in 2017, total compensation with bonuses, stock awards, etc., from Salary.com. *The rest of the post covers 2017 full compensation packages for each person, which includes a \$14.9 million package for Lawler, with the others making in the \$4-\$5 million range per year.*

Adelphia Gateway Pipe Enviro Assessment Approved by FERC

Last Friday the Federal Energy Regulatory Commission (FERC) issued a favorable environmental assessment for New Jersey Resources' Adelphia Gateway pipeline project in the Philadelphia area. The Adelphia Gateway project is a plan to convert an old oil pipeline stretching from Northampton County, PA through Bucks, Montgomery, and Chester counties, terminating in Delaware County at Marcus Hook, to pump natural gas instead of oil. The project recently hit some opposition over the location of a planned compressor station. Regardless, FERC says the project, including the compressor station, "would not constitute a major federal action significantly affecting the quality of the human environment." Which is good news. Here's how it works: FERC studies a potential project, then issues an EA (environmental assessment). If the EA is positive, FERC almost always subsequently approves the project. Of course these days with a 2-2 split happening on many key pipeline projects, one never knows. Let's hope for the best! *This post includes the NJ Resources press release announcing the positive EA, followed by the full EA issued by FERC.*

Rogersville Shale Test Wells in KY, WV Appear to be a Flop

The clock has run out on state confidentiality laws and results are now available for several test wells drilled in both the Kentucky and West Virginia in the Rogersville Shale—and the results are rather lackluster. NGI ace reporter Jamison Cocklin has been checking records in records recently released to the public and found the following: "Test results from the Rogersville Shale in Eastern Kentucky and Southwest West Virginia continue to trickle out, but activity in the unproven play remains stagnant. Only six test locations have been permitted since 2013, when Cimarex Energy Co. subsidiary Bruin Exploration LLC was issued the first stratigraphic test permit in Lawrence County, KY. Charleston, WV-based Hard Rock Exploration Inc. had applied

for a vertical test permit in Putnam County, WV, but it filed for bankruptcy in 2017. The mid-2014 commodities downturn also helped to curtail exploration activity in the play. While there's been little activity recently, data from earlier wells that had been protected by state confidentiality laws has since become available, again revealing lackluster results from a play that has generated some buzz in recent years as an up-and-coming target for Appalachian producers." Jamison reviewed production records and shared numbers in the article—but they are his numbers to share. You'll need a subscription (or free trial) to read the full article. **The bottom line appears to be this:** With the prolific Marcellus, Utica and Upper Devonian shales to tap in PA, OH and WV, and with less-than-stellar results from the few Rogersville wells already drilled, don't look for any more Rogersville drilling to happen any time soon.

Experts Say Slow Growth Ahead for PA Marcellus in 2019

It's that time of year when the prognosticators haul out the ole crystal ball and make predictions about what's ahead for the coming year. Sometimes it's a useful exercise to predict what will happen. Most of the time such predictions are wrong, at least to some degree. What about new drilling, production, and overall activity in the Marcellus in Pennsylvania? Experts say to expect in 2019 what we saw in 2018—slow and steady growth. We'd point out that every single quarter in both PA and OH we set new record high natgas production records. Of course, there is a difference between drilling activity (the number of active rigs) and production activity. It used to be you could lay a ruler down and predict production growth based on the number of active drilling rigs. No more. Fracking techniques and technology over the past few years have revolutionized production. Far fewer rigs are required to produce far more gas. So while we may see "measured growth" in the number of active rigs, our prediction is that production growth will continue to soar. *This post included an article quoting experts and their predictions for 2019 in the PA Marcellus.*

York, PA Gas-Fired Plant Goes Online

Two units of the Calpine York 2 Energy Center, a new dual-fuel electric generating plant that primarily uses Marcellus Shale gas, are now up and running in York County, PA. According to the press release below from McDermott International, the project's builder, Units 5 and 6 are "generating power" with that power flowing onto the PJM grid. How much of the 828-megawatts the plant will be capable of producing once it's complete is flowing onto the grid now? We're not sure. We are sure the entire plant, all 828 MW, will be operational sometime between now and end of March. York 2 sits on the same site, next to, Calpine's York Energy Center, a 519 MW, combined-cycle plant that has been operational since 2011. The location is in Peach Bottom Township in York County, PA. This is another exciting new (big) market for Marcellus gas. *The rest of the post includes the McDermott press release.*

Chester County DA Gets "Free" Help with ME2 Pipe Criminal Probe

RINO (Democrat wannabe) Tom Hogan, District Attorney for Chester County, PA, continues his vendetta against Sunoco Logistics Partners and the Mariner East 2 pipeline—foolishly spending gobs of taxpayer money in a frivolous and fruitless investigation. In a new development, Hogan has just hired, supposedly for free, a former federal prosecutor who is tasked with finding dirt on Sunoco. Anything, even a small piece of lint,

will do—so that Hogan can file a criminal indictment against Sunoco and attempt to put out of business a major NGL pipeline that's now up and running, flowing ethane, propane and butane from eastern Ohio and southwestern PA to the Marcus Hook refinery near Philadelphia. The federal prosecutor is “volunteering” his time, which should be illegal because it's an outrageous conflict of interest. The prosecutor will get paid from someone—you can bank on it. He will join two on-staff prosecutors working the case full time, at considerable taxpayer expense. This is not the first time we've seen this type of sleazy, unethical behavior by elected lawyers. State attorneys general in several Democrat-controlled states are using this tactic—hiring “free” (to them) lawyers that are in reality being paid by Big Green groups in an effort to bankrupt fossil fuel companies. It is a corrupt practice. This is the first time we've seen it sink as low as a county DA's office, which should tell you something about how low antis will go in their misguided attempts to block fossil fuel projects. *The rest of the post includes an article detailing the new addition.*

NJ's Dem AG Lectures Fed Judge re PennEast Eminent Domain

New Jersey's radical Democrat Attorney General, Gurbir Grewal, is telling (off) a federal judge, telling him he erred in a recent decision that allows PennEast Pipeline to use the power of eminent domain to access 44 so-called “protected” properties owned by the Garden State. The arrogance of Grewal is breathtaking—thinking he can lecture a federal judge on the law. Grewal displays a pattern we've come to recognize now routinely used by the left: If you can't win at the ballot box, go to the courts. And if you can't win in the courts, bully the judges into submission. Nice people those lefties. *This post included an extended write-up from a sympathetic PBS reporter, justifying Grewal's behavior.*

TUESDAY - Jan. 8, 2019

EQT Lays Off ~15% of Workforce – Fires Back at Rice Brothers

On Monday EQT Corporation, the largest natural gas producing company in the U.S., laid off “more than 100” (possibly as many as 132) employees, and issued a letter to shareholders trying to gin up support for the company's “new” course of action. The company website says EQT employs roughly 900 people. Figuring they haven't updated that number to reflect the Monday layoffs, if you divide 132/900, you get 14.6%—roughly 15% of all EQT employees were let go. Which will supposedly save the company \$50 million per year. We seriously doubt the average salary/benefits package for the people tossed to the curb was \$379,000 each. But we digress. On Monday, EQT laid off (i.e. fired) “more than 100” employees according to “sources.” EQT won't confirm the exact number, but an EQT insider has told the Pittsburgh Business Times as many as 132 were let go on Monday, “to improve operational efficiency, cash flow and EQT's financial position.” We wonder how those who were let go feel about being sacrificed for operational efficiency. *In this post we outlined the recent history of EQT's purchase of Rice Energy, Toby and Derek Rice's recent play to “help” EQT management (by replacing McNally with Toby, and the current VP of drilling with Derek), and included excerpts from the best sources we could find on the current situation.*

Range SWPA Production Takes Hit After MarkWest Plant Explosion

Range Resources issued an updated 2018 (not 2019) capital spending and operational update yesterday to say (a) they spent about \$20 million less last year than originally forecast and (b) the company took a hit on production because of an outage at the MarkWest Houston/Harmon Creek processing facilities. How much of a hit? Range says production stopped when the Houston MarkWest facility experienced an explosion on Dec. 13. Sadly the worker in critical condition later died. Range said the “extended curtailment of both processing complexes” caused them to lose 10 Bcf of production. Both the Houston natural gas processing and NGL fractionation facility and the Harmon Creek processing facility were offline from Dec. 13 through Dec. 17—call it five days. Range lost roughly 2 Bcf/d of production they could have sold, were it not for the MarkWest accident. Ouch. *The rest of the post included Range's statement, and some extra color on Ranges announcement and numbers from an additional article.*

List of 18 PA Drillers Who Owe \$6M+ in Impact Fees from Strippers

Although Snyder Brothers Inc. valiantly fought a legal battle against the Pennsylvania Public Utility Commission (PUC) over paying impact fees (taxes) on low-producing “stripper wells,” they lost. But it wasn't just Snyder Bros. withholding impact fees on stripper wells. Stripper wells are natural gas wells that produce less than 90 thousand cubic feet per day (90 Mcf/d) of natural gas. In 2012 Pennsylvania passed the Act 13 drilling law that includes an impact fee on wells targeting shale layers, including the Marcellus. Snyder Brothers, headquartered in PA, drills mostly conventional (vertical only) wells in southwestern PA. In 2011-2012, Snyder Bros. drilled 45 vertical-only wells targeting the Marcellus. All 45 of the vertical-only wells were fracked. Initially those wells produced more than 90 Mcf/d, but by December of the year in which they were drilled, the wells produced less than 90 Mcf/d. The way the 2012 Act 13 law is written, if a well produces less than 90 Mcf/d during “any” month it is considered a stripper well and exempt from paying the impact fee. The state's Public Utility Commission (PUC) assessed the fee anyway because for 11 months the wells produced more than 90 Mcf/d, arguing the word “any” is not a get-out-tax-jail-free card. Snyder Bros. sued and after an appeal of the case, Snyder Bros. won the case in March 2017, exempting those wells from paying impact fees. That victory sent the PUC into a tizzy with claims the Act 13 impact fees are now in jeopardy. So the PUC appealed the case to the PA Supreme Court. The Supremes finally ruled in late December—in favor of the PUC and against Snyder Bros. But as it turns out, 17 other drillers were also withholding impact fee payments on their own stripper wells, awaiting the outcome of the court case. **The entire list of 18:** Alpha Shale Res LP; ARD Operating LLC; BLX Inc.; Chesapeake Appalachia LLC; Chief Oil & Gas LLC; EOG Resources Inc.; EQT Production Co.; MDS Energy Development LLC; Pin Oak Energy Partners LLC; Range Resources Appalachia LLC; RE Gas Dev LLC [Rex Energy]; Redmill Drilling; Rice Drilling B LLC [now EQT]; Snyder Bros Inc.; SWN Production Co. LLC [Southwestern Energy]; Vantage Energy Appalachia II LLC; XTO Energy Inc.; XTreme Energy Co.

PA Gov. Wolf Issuing Exec Order to Lower Greenhouse Gas

In typical lib Dem thinking, Pennsylvania Gov. Tom Wolf thinks he can wave his magic Executive Order wand and lower so-called greenhouse gas emissions (carbon dioxide and fugitive methane)

to help save Mom Earth. You know, just order it to happen, like Lord Obama did in lowering the sea levels, saving the polar bears, and walking on water. (Whoops, that was Jesus, not Barack.) Such is the enormous power of an Executive Order. Of course it's sheer madness and silliness to think that by signing a piece of paper anything will actually happen. But that's not the point. The point is to look like you're doing something. Whoever succeeds Wolf will just rescind his stupid order, before it can damage the PA economy too much.

New England Using Fuel Oil, Russian LNG to Survive Cold Winters

New England refuses to build new natural gas transmission pipelines to carry abundant, cheap, clean-burning Marcellus Shale gas to the region—and instead continues to rely on imported LNG from Russia and burning dirty fuel oil to generate electricity when the nights get really cold. Is there any explaining the leftist mind? How does one explain insanity? Big Green, which has a tight hold on New England, professes they want to Save the Planet. And yet, they insist on policies that require the region to continue using one of the dirtiest and most inefficient forms of generating electricity—burning fuel oil. And their policies result in imported LNG from Russia, extracted from the environmentally sensitive Arctic region. Yet New England refuses to allow a relatively short pipeline to get built from the Marcellus region. Maddening! *This post included an excerpt from an RBN Energy article laying out the wacky ways New England keeps the lights on and the furnaces running in wintertime.*

Out-of-Control Mass. AG Tries to Block More NatGas to Boston

Does Massachusetts Attorney General Maura Healey actually *want* citizens living in Boston to be denied natural gas to heat their homes in the dead of a New England winter? It sure seems that way. Tennessee Gas Pipeline (Kinder Morgan) has filed its “261 Upgrade” project to built approximately 2.1 miles of 12-inch diameter pipeline loop and replace two older, less efficient compressor units (with a combined horsepower of 6,689) with a single new and more efficient compressor unit (with horsepower of 11,107) at the location of Compressor Station 261 in Agawam, Massachusetts. The 261 Upgrade work would result in an extra 72 million cubic feet per day (MMcf/d) of natural gas flowing to the Boston metro region. This project is about as benign and small as they get as far as earth disturbance. Yet these small changes will yield a big, beneficial outcome for Boston residents. And yet, Massachusetts AG Healey, a hardened anti-fossil fueler, wants to block it. You see, she believes in the fairy tale of man-made global warming, and her view is that she's so smart, only she and arrogant politicians like her can step in to stop the further expanded use of fossil fuels that contribute to global warming. She is stark...raving...mad. Healey, a lawyer (NOT a scientist) even lectured the Federal Energy Regulatory Commission about how to factor global warming into their decision-making process. Talk about arrogant! *The rest of this post was an article about Healey's opposition to the 261 Upgrade project, and a comment filed with FERC by the Mass. Energy Siting Facilities Board with respect to the project.*

Mirror Mirror on the Wall, Who's the Best Pipeline Co of Them All?

The results are in from a recently released 2018 Oil & Gas Midstream Services Customer Satisfaction Survey conducted by EnergyPoint Research. This year's top overall rating for the country's best midstream (i.e. pipeline) company goes

to...**MarkWest Energy!** But not necessarily for their (excellent) work in the Marcellus/Utica. MarkWest won overall largely based on their work in the Permian Basin and Texas Intrastate regions. The top vote-getter in the Marcellus/Utica? **EQT – Rice Midstream.** *We didn't have the full report, which we assume costs money or is for EnergyPoint customers only. But we did share some great data released by EnergyPoint about the survey in the rest of the post.*

WEDNESDAY - Jan. 9, 2019

Antero Resources 2019: Spending & Drilling Less, Producing More

Antero Resources, a “pure play” driller focused on wet gas drilling in the Marcellus/Utica region, released its 2019 capital budget and production “guidance” (estimates) yesterday. We found some interesting things in the press release and accompanying slide presentation. Right out of the chute Antero says because oil and NGL prices have recently declined (and because NGLs are key part of Antero's business), the company will spend less in 2019 to drill than it did in 2018. The company has budgeted \$750-\$800 million on capex for 2019. Who says the price of oil doesn't impact gas drillers?! But don't take less drilling to mean less production. Antero says production in 2019 will average 3.15-3.25 billion cubic feet equivalent per day (Bcfe/d). That would be 17-20% higher than 2018 production numbers. After 2019, the plan is to grow production 10-15% each year 2020-2023. Antero will operate an average of 5 drilling rigs and 4 completion crews this year, down 1 to 2 crews from 2018, and will drill and complete 115-130 wells. If you run the calculations and assume the lower number of 115 wells, those 5 drilling crews will drill one new well every 15-16 days! Incredible when you think about where we've come from in just the past few years. The startup of the Mariner East 2 NGL pipeline in late December was an important development for Antero, which flows 50,000 barrels per day of ethane along the pipeline. Using Mariner East 1, Antero began exporting ethane shipments to Sweden last November and has a contract to ship one load per month (337,000 barrels of ethane) to Sweden for the next 10 years! Antero continues to be one of, if not THE best, hedgers in the business—locking in pre-sales of their gas and NGLs up to a year in advance at a specific (above-market) price. *The rest of the post included a full copy of Antero's guidance update, and a copy of the company's latest PowerPoint presentation, full of great slides.*

Va. State Agency Approves Atlantic Coast Pipe Compressor Stn

Finally a little good news for Dominion Energy's 600-mile Atlantic Coast Pipeline project: The Virginia State Air Quality Board voted yesterday 4-0 to approve a compressor station for the pipeline in Buckingham County. Not that yesterday's vote matters much at the moment. The entire project is currently shut down from a court action in response to a lawsuit brought by colluding Big Green groups. In November, Virginia Gov. Ralph Northam abruptly replaced two (of seven) Virginia State Air Pollution Control Board members who were leaning against an approval for a compressor station needed for the Atlantic Coast Pipeline (ACP) project. The Air Pollution Control Board held two days of public hearings in Buckingham County in November to consider plans by ACP to build a compressor station in the county. Antis, detecting they may lose the battle to stop the compressor station, trotted out their so-called “environmental justice” argument, which is that pipelines like to build in poor

communities of “color” where the local yokels won’t or can’t fight back. It’s a sleazy, racist argument that is 100% false. But it grabs headlines and intimidates (bullies) regulators. Following a decision to delay a vote on the compressor, Northam acted and ejected the two radicals on the State Air Pollution Control Board. It’s a good thing he did. With the compressor station now approved, once Dominion is allowed to resume construction (and make no mistake, construction WILL resume), they can begin to work on the compressor station too. *The rest of this post included an article detailing the vote and comments made by board members following the vote.*

St. Louis Marcellus/Utica Pipeline Begins Construction

In February 2016, MDN told you about an exciting new market for Marcellus and Utica Shale gas that may open up one day in the Midwest. That day is coming—this year. Laclede Group, a St. Louis-based natural gas utility, said they want to build a ~65-mile pipeline from St. Louis through southwest Illinois and connect to the Rockies Express (REX) and Panhandle Eastern Pipeline. The new pipeline would bring low-cost Marcellus and Utica Shale gas from REX to the utility—not only for resale to gas customers, but also potentially for new natgas-powered electric plants planned to replace retiring coal-fired plants. In February 2017 Laclede was renamed Spire and the Spire STL Pipeline filed an official application with the Federal Energy Regulatory Commission to build the 24-inch diameter pipe that would flow 400 million cubic feet (MMcf) per day of yummy Marcellus/Utica gas from REX to St. Louis. In August 2018, just before FERC Commissioner Rob Powelson slipped out the door to leave behind a deadlocked 2-2 FERC, the agency finally issued a full, final approval for the Spire STL project. The “in-service” date was recalculated to be “late 2019.” But before you build, you have to have access to folks’ property—some of whom won’t allow you access. Spire went to court to gain eminent domain access to begin construction, and in December an Illinois federal court granted that request. We are delighted to report construction is now beginning, in Illinois. *The rest of this post included a video and article about where, exactly, equipment was being moved to begin construction.*

New Quebec Pipeline to Help Western Canada Export LNG

This is so cockamamie: Build a pipeline across the Canadian province of Quebec, a province that has outlawed fracking and shale drilling, in order to flow natural gas that IS fracked from shale thousands of miles away, so it can be exported from an LNG facility on Canada’s East Coast. In June, the Quebec government implemented a total ban on all fracking. There’s Utica Shale under Quebec. While they were at it, the Quebec government also imposed a “no drill zone” for conventional (non-shale) drilling of 1 kilometre (.62 miles) from municipalities, 300 metres (984 feet) from private residences, 550 metres (1,804 feet) from schools, hospitals or public buildings, and 200 metres (656 feet) from “ecotourism” sites. In other words, all drilling of any kind is now pretty much banned, pretty much everywhere in Quebec Province. So now comes the bright idea to build a 450-mile pipeline across the entire province, connecting gas supplies in Ontario—piped there from a thousand miles away in Western Canada—so the gas can then make its way to the Canadian East Coast and get liquefied and exported to Europe and Asia. It’s bonkers. *The rest of this post was an article from Canada outlining the plan for the new pipeline.*

Time for Exxon to “Resist” & Refuse to Comply with Mass. AG?

When the radical left repeatedly loses court cases, they put on their arrogant “civil” disobedience clothes and pronounce they are engaging in the age-old American practice of resisting an unethical practice or situation. Is it time for Exxon Mobil to do the same? We think it is. The following situation is disgusting. In 2015, a couple of far-left “media” outlets—InsideClimate News and the Los Angeles Times—engaged in collusion and coordination with Big Green groups to target and try to assassinate Exxon Mobil, the largest oil company in the U.S. They used fake news stories with manufactured “evidence” to claim that Exxon “knew” (decades ago) that oil is causing man-made global warming, and that Exxon intentionally used misleading public statements to investors to cover up their carnal knowledge. The sleazy collusion didn’t stop there. The media worked with far-left attorneys general in states like New York and Massachusetts to target Exxon. The AGs demanded every slip of paper, every piece of toilet paper, every electronic communication going back decades, hoping they could manufacture a case out of nothing. Exxon resisted. Exxon countered and asked for paperwork (and emails) from the AGs, in order to prove what we all know: this is a carefully coordinated and choreographed attack. New York State’s then-AG, Eric Schneiderman, along with Massachusetts AG Maura Healey and other lefty Dems had formed an unethical secrecy pact in their campaign to shake down Exxon. The AGs subpoenaed paperwork and emails from Exxon, yet refused to comply and hand over their communications in response to a subpoena. They just ignored it. Massachusetts (as you’ll read) finally, a few days ago, won the right to get all of that paperwork going back decades—to make Exxon respond to their subpoena. To which we say: Exxon should refuse. Not cave in. Just say “no” the way Mass. AG Maura Healey said no and refused to turn over her communications to Exxon. Sauce for the goose is sauce for the gander. When will people stand up to this kind of tyranny and shout, NO MORE! *The rest of the post included the news, and then analysis from Energy in Depth, who doesn’t believe the decision against Exxon matters all that much in light of New York went down this path three years ago and found nothing in their document search.*

Government Research Uses Sound Waves to Help Frack Wells

The process of fracking (hydraulic fracturing) of shale uses water, a LOT of water, forced into small cracks in order to force those cracks open and allow the gas and oil to escape. What if you could use far less water (and chemicals) by first bombarding the rock with sound waves? That’s the intriguing question addressed in new research being done at the Dept. of Energy’s Oak Ridge National Laboratory (ORNL) in Tennessee. A team of researchers “are using a combination of neutron and x-ray scattering to make the [fracking] process safer and more efficient.” They call it acoustic fracking. Kind of catchy, no? If this research bears out it can greatly benefit fracking. Water used for fracking isn’t going away any time soon, but if we can use far less of it, that’s certainly a win. *Read about how the technology works, the technical details, in this post.*

Must-Watch Video: Puncturing the Myth of 100% Renewables

What do fossil fuels, capitalism, industrialization and free speech have in common? They’re all under attack by the radical left, and we’re in danger of losing the fight to preserve them—and our way

of life. Please take four minutes to watch the video below. Mark Mathis, founder of the Clear Energy Alliance, nails the issues we face today with the idiots (our word) that oppose fossil fuel extraction and use. Today we increasingly see a simplistic, childish view that says, "We can and MUST convert to 100% renewables—as soon as possible." It's total nonsense. The same people who hate fossil fuels are also the people who hate capitalism and industrialization and free speech—the very things that have given us our modern-day way of life. Without fossil fuels, and capitalism, we'd go back to living in the Stone Age. Fast. Mathis does a superb job, in just over four minutes, of laying out the issues and challenges we face. This video should be required watching in every elementary school in the United States! Next time your child's teacher shows Al Gore's An Inconvenient Truth, demand that they give equal time and show this video! Watch the video here: <https://goo.gl/TMymV9>.

THURSDAY - Jan. 10, 2019

Chesapeake Drills Monster Record-Breaking Marcellus Wells in NEPA

Yesterday Chesapeake Energy issued a preliminary report on fourth quarter 2018 results, and an operational update looking ahead to 2019. Embedded in the 2018 information is some blow-the-doors-off big news! The big news, embedded in the update, is that Chesapeake drilled and turned online a Marcellus well in Sullivan County, PA (northeast PA) that is, as far as we can tell, the largest IP (initial production) shale well anywhere, ever! And that includes the Utica, where the previous record-holder sits. Chesapeake said the JOEGUSWA 5HC well was drilled with a lateral length of 9,808 feet set a 24-hour initial production record of 73.4 million cubic feet per day (MMcf/d) at a 3,000 psi flowing pressure. Massive! We've combed our archives looking for the previous highest IP rate well drilled, and we believe we are correct in saying that a well drilled by EQT in Green County, PA in 2015 was the previous record-holder, with an IP of 72.9 MMcf/d. The fact that Chessy's well is a Marcellus (not Utica) well is amazing. Even more amazing—the lateral isn't all that long compared with some of today's super-laterals that run into 19,000+ feet. In 2017 Chesapeake experimented with unleashing "32 million pounds of Hell on Earth" (meaning frac sand) to frack a Marcellus well in Wyoming County, PA, which subsequently had an IP rate of 61 MMcf/d. Chesapeake used 3,000 pounds of frac sand per foot to frack their Wyoming County well in 2017. For the more recent Sullivan County JOEGUSWA 5HC record-holder, they used just 1,600 pounds/foot of frac sand. That wasn't the only news. Chesapeake drilled a second well on the same pad in Sullivan County—the JOEGUSWA 4HC well with a lateral length of 13,803 feet. The second well had a 24-hour IP rate of 62.6 MMcf/d with a 2,600 psi flowing pressure. A higher IP rate than the previous Rambo well in neighboring Wyoming County, again using just 1,600 pounds/foot of sand for the 4HC well. *This post included Chesapeake's operational update and the newest company PowerPoint slide deck with some interesting slides.*

Huntley & Huntley Proposes Shale Wells 10 & 11 in Upper Burrell

Huntley & Huntley of Monroeville, PA is doing it again. The company previously requested permits for 9 wells in Upper Burrell (Westmoreland County), PA. They've just filed for two more permits in Upper Burrell. In October 2017, Upper Burrell supervisors approved a plan by Huntley & Huntley to drill four shale wells in the town. The supervisors endured an extremely

hostile crowd as they voted to approve the plan. Those wells, at least some of them, have since been drilled. H&H came back with a plan to drill another five wells at the same location—the Zeus well pad—in October 2018. This time there was no crowd opposing the plan. Just a simple, quiet approval by town supervisors. And now, H&H is back for a third time, but this time the request is to drill one well each on two different well pads, which would make this wells #10 & #11 by our count. *We ended this post with an article about H&H's latest filing to drill in Upper Burrell.*

Mountain Valley Pipe Defends Southgate Expansion into NC

A month ago MDN told you that EQT Midstream's (now Equitrans) 300-mile Mountain Valley Pipeline (MVP) from West Virginia to southern Virginia is now 70% done. We expect that number is even higher now. Last November MVP filed a new project plan with the Federal Energy Regulatory Commission (FERC) to expand MVP *another* 70 miles south, into North Carolina. The MVP Southgate project, as it's called, will flow gas from the MVP mainline where it terminates in Pittsylvania County another 70 miles south to new delivery points in Rockingham and Alamance counties in North Carolina. It didn't take long for Big Green groups to swing into action to oppose the Southgate plan. The Center Biological Diversity, Appalachian Mountain Advocates, Appalachian Voices, Sierra Club, Haw River Assembly, and Chesapeake Climate Action Network filed a motion to intervene, meaning they want a voice in the decision. A rogues' gallery of sleazy organizations. But they aren't the only ones objecting. The North Carolina Utilities Commission and North Carolina Dept. of Environmental Quality have also filed with FERC to object to the project, putting MVP on the defensive. On Tuesday, MVP responded to the Negative Nellies, filing a response with FERC that lays out chapter and verse, coolly and calmly, why the Southgate project is needed, and how it won't be the environmental catastrophe Big Green says it will be. *The rest of the post included an article summarizing the MVP response, and a copy of the full MVP filing with FERC.*

Riverkeeper Appeals Atlantic Sunrise Lawsuit to US Supreme Court

THE Delaware Riverkeeper, Maya van Rossum, along with a couple of radicals from Lancaster County flying under the name Lancaster Against Pipelines (the Clatterbucks), are hoping they can convince the United States Supreme Court to consider a case that a series of lower courts have dismissed—a case that would shut down the now-operating Atlantic Sunrise Pipeline. In May 2016, three Big Green groups—THE Delaware Riverkeeper, Lancaster Against Pipelines and the Sierra Club—conspired and sued the Pennsylvania Dept. of Environmental Protection (DEP) saying the DEP erred in granting federal Clean Water Act "401" stream crossing permits for Williams' Atlantic Sunrise Pipeline project. It took nearly two and a half years, but last September, the U.S. Court of Appeals for the Third Circuit finally tossed the lawsuit. The pipeline went online in September, and has, along with several other pipelines, resulted in a big increase in the price drillers now receive for their gas. How and why THE Delaware Riverkeeper is even involved in attempting to block this project is still a mystery to us. Not one inch of Atlantic Sunrise passes through the Delaware River Basin, which is Riverkeeper's stated remit in their documents of incorporation. How could the courts allow Riverkeeper to sue, when they have no compelling interest? No dog in this fight. But we digress. Riverkeeper and Lancaster Against Pipelines, using money from the William Penn Foundation and Heinz Endowments, have just

appealed the case to the U.S. Supreme Court. We don't think it stands a chance in Hades of being heard by the Supremes, but sometimes lightning does strike, so one never knows. We included the press release from THE Delaware Riverkeeper herself, and a copy of the Supreme Court filing. THE Delaware Riverkeeper states she hopes to convince the Supremes to overturn the DEP decision (which would shut down Atlantic Sunrise), which would then set a precedent to block PennEast from getting built. A two-for-one. By the way, we call Ms. van Rossum THE Delaware Riverkeeper because of her arrogant claim to be the one-and-only voice who speaks for the river. She calls herself that, so we honor her arrogance by calling her that too.

TransCanada Changing Name to TC Energy

TransCanada is undergoing a name change, from TransCanada to TC Energy, in order to more accurately reflect the fact they operate in more than just Canada. Indeed, TransCanada has a significant presence in the U.S. (and Mexico) simply from their purchase of Columbia Pipeline Group for \$10 billion back in July 2016. TransCanada is a big company with many projects, all over North America. We suppose a rebranding and name change is in order to reflect that fact. *Following the TransCanada press release, we concluded with this... An aside:* Norwegian oil giant Statoil changed its name to Equinor last year. They did it because they didn't like the word "oil" in their name. Can you imagine an oil company being ashamed of the word "oil"? Must be a European thing. Although we think TransCanada's name is just fine the way it is, their name change to TC Energy makes a whole lot more sense to us than Statoil's name change did. "Equinor" sounds like somebody's great aunt. "Let's invite Aunt Equinor over for Christmas this year."

Big Green has Cost America \$110B by Blocking Energy Projects

A new report by the U.S. Chamber of Commerce Global Energy Institute (GEI) found that the anti-energy "Keep it in the Ground" (KIITG) movement has prevented at least \$91.9 billion in domestic economic activity and eliminated nearly 730,000 job opportunities. In addition, federal, state, and local governments have missed out on more than \$20 billion in tax revenue. Add the two together and it's a combined total negative impact of \$110 billion! This is a modern-day tragedy. Can you imagine how much good could have been done with that \$110 billion?! We once heard George Stark of Cabot Oil & Gas say at a rally, "How many jobs has the Sierra Club created?" Great line! These Big Green groups who want to "keep it in the ground" are jobs destroyers. They create nothing beneficial in the economy. They don't even "protect" the environment that they profess to love so much. They're bloodsucking destroyers who keep the underprivileged right where they "belong" with no way of advancing. Abundant, cheap fossil fuel energy benefits poor people the most, raising many out of poverty. *We included a full copy of the Chamber's latest report in this post.*

Trump Officially Nominates Andrew Wheeler to Head EPA

Yesterday President Trump formally nominated Andrew Wheeler to become Administrator of the federal Environmental Protection Agency, a job he's been doing without the title for the past few months. We freely admit we are conflicted about Wheeler. On one hand Wheeler appears to be following President Trump's lead and is working hard to roll back, defang, and otherwise file down some of the very sharp regulatory teeth

added to the agency during the disastrous Obama years. Wheeler says he's in the job to help President Trump and further Trump's agenda at the agency. We believe him. On the other hand, Wheeler has worked in Washington pretty much his whole professional life, in and out of government (he's a swamp dweller), and he's attempting to make peace with leftist Democrats who populate the rank and file workers at the EPA. That is, he's attempting to placate swamp dwellers—instead of draining the stagnant swamp (i.e. firing them). That's a mistake. A big mistake. Because those swamp dwellers will continue to undercut Wheeler at every turn. But Trump likes Wheeler and the job he's done since the unceremonious exit of Scott Pruitt, hounded out by political enemies (like the Washington Post and Athens News). Now it's official. *This post included details of the official announcement.*

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PA Leases Youghiogheny River Land in SWPA to Chevron \$4K/Ac

The Pennsylvania Dept. of Conservation and Natural Resources (DCNR), every now and again, will lease state-owned land for gas drilling. The DCNR has just leased land under the Youghiogheny River in Allegheny and Westmoreland counties. We have the full lease, and lease terms, below. If you're a landowner in Pennsylvania and you own the land on both sides of a "navigable" creek or river, and you want to lease all of your land for gas drilling, you can't. At least not legally. The land under the creek or river, according to PA, belongs to the state and they are the ones who will do the leasing of it, thank you very much. It bugs us. The state uses this provision to lift money out of the pockets of landowners. We suppose since paddle a canoe along some of the Youghiogheny, there's a case to be made the land under it belongs to the state. At any rate, the state claims it and signed a lease agreement in July with Chevron (just being made public now) that allows Chevron to drill under (without disturbing) portions of the Youghiogheny in South Versailles and Elizabeth townships in Allegheny County, and Sewickley Township in Westmoreland County. Chevron signed a lease for 239.4 acres for \$4,000 per acre, and should the acreage get drilled under, a 20% royalty to the state—with NO post-production deductions allowed. Note that the PA legislature won't pass a new law upholding an older existing law ensuring landowners get a "minimum royalty" of 12.5% (regardless of deductions), yet the state itself insists on a 20% royalty with no deductions. Just one more rank hypocrisy to throw on the pile with many others. *We included a copy of the official notice appearing in the PA Bulletin, along with a copy of the original signed lease from July.*

FirstEnergy Offers \$3.5K/Ac to Drill Under SWPA Town Park

We spotted a second story today about a new lease, in this case proposed lease terms, for land in southwestern Pennsylvania. This time the driller, FirstEnergy, wants to drill under (not on) a town park that sits on the border of Allegheny and Beaver counties. Linbrook Park is located in the Borough of Franklin Park. The Borough Council was supposed to vote on Dec. 19 on a proposed deal by FirstEnergy Corp. to drill under the park from a well pad across the town (and county) line, in Beaver County. Proposed terms: \$283,500 as a bonus plus an 18% royalty to lease the entire 80-acre park. The bonus works out to be \$3,543.75 per acre. The original December vote was postponed to Monday, Jan. 14 because a few residents kicked up a fuss about

the “environmental impacts” of such drilling. Uh, excuse us. What impacts? The drilling will be done UNDER the park from 3/4 of a mile away. There *are no* impacts! But you know, politicians have to look like they’re seriously considering all sides and options and opinions before voting. We suspect the vote will be in favor, after this slight delay. *The rest of the post was an article about the upcoming meeting to consider FirstEnergy’s offer. We concluded with this note:* The FirstEnergy Corp. that we know about is the ginormous electric utility based in Akron, Ohio, operating one of the nation’s largest investor-owned electric systems with more than 6 million customers in Ohio, Pennsylvania, New Jersey, Maryland, West Virginia and New York. FirstEnergy owns electric generating power plants (coal, natgas, etc.) and runs big electric lines to gas processing stations. But we’ve never heard of FirstEnergy actually drilling shale wells. Ever! Which makes us wonder if the FirstEnergy in this story is a different company than the Akron-based company. Perhaps a sharp MDN reader who knows the answer to this mystery will drop us a line, so we can update this story?

PA Enviro Hearing Board Rejects Air Permit for Marcus Hook

Score a minor victory for the odious Philadelphia Clean Air Council in their fight to block any/all fossil fuel projects any/everywhere. They’ve convinced the PA Environmental Hearing Board to question a previously issued air quality permit for the Marcus Hook refinery in Delaware County, near Philadelphia. Why be concerned about the Marcus Hook refinery? Because it’s the place where NGLs flowing through the Mariner East 1 & 2 pipelines get processed and loaded on ships (and other forms of transportation) and distributed. We have to confess we’re just now coming up to speed on this story and the action brought against Marcus Hook permits. The short version is that when Sunoco Logistics Partners filed for permits (plural) for the facility, they filed for separate permits for separate/different functions that happen at the facility. Separating NGLs in one place, storing NGLs in another place, liquefying ethane to store on cargo ships, liquefying propane and butane for storage and shipping. Plus other things that happen at the facility that have nothing to do with NGLs. Clean Air Council (CAC) fought against the multiple permits issued by the state Dept. of Environmental Protection (DEP) for the facility and its many different functions. CAC claimed all of the varying and different functions and permits should be viewed as one function and one permit. Issuing a single clean air permit for the entire facility is a much bigger proposition for regulators, and the facility may not qualify for such a permit without expensive additional machinery. The DEP didn’t view a larger, more complex project of issuing a single permit to be necessary. So they didn’t. The CAC challenged the DEP. But in this case, you don’t go to a regular court to challenge the decision—instead you go to the Environmental Hearing Board (EHB), a special court set up to hear challenges of DEP decisions. It was the EHB that issued a decision yesterday, finding in favor of the radical CAC and against the DEP. The EHB sent the permit back to the DEP for more work. Nothing is shutting down. This entire issue has now become a paperwork shuffle. *We ended the post with the propaganda release from CAC crowing about their “win,” and with a story appearing in the Delaware County Daily Times covering the news, with some extra color on the decision. Finally, we included a copy of the EHB decision.*

Sierra Club Makes Play to Stop EQT Hammerhead Pipeline

In October MDN brought you news about a proposed new EQT Midstream (now Equitrans) pipeline project in Pennsylvania and West Virginia that will feed into the Mountain Valley Pipeline, a project called Hammerhead. Hammerhead is a pipeline that will connect gathering systems in southwestern PA. It will run 64 miles to Mobley, WV where it will connect with MVP and EQT’s Ohio Valley Connector, which went online in October 2016. Hammerhead will flow 1.2 Bcf/d when it’s up and running. The \$555 million project has a target in-service date of late 2019. But not if the Sierra Clubbers have their way. The Clubbers, via the “Public News Service,” claim some 40% of the Hammerhead Pipeline will get “built on slopes 35 degrees or steeper” in WV, and therefore subject to landslides and explosions like the one that happened to Columbia’s Leach XPress last summer. Ergo, according to the Clubbers, Hammerhead should not get built. Notice it’s never, “Here are some suggestions for how to make this safer, better. Let’s try this different route to cut down on the steep hillsides you’ll have to cross.” You NEVER hear that from the radicals at the Sierra Club. It’s always, “NO, don’t build it. Ever. Under any circumstances.” That’s the view of unreasonable (not able to be reasoned with) people. Their minds are closed. They’re controlled by a rigid orthodoxy, unable to compromise or move from their position. *We included a story running on the so-called Public News Service, a propaganda outfit financed by radical left wing groups and foundations, attacking the Hammerhead project.*

PA DEP Comes into 21st Century with e-Permits for Shale Wells

Bureaucracies move about as fast as the glaciers in Antarctica. It doesn’t matter where the bureaucracy is located—federal, local, or in this case, state government. But the bureaucracy (hopefully) DOES move, eventually. Such is the case with the Pennsylvania Dept. of Environmental Protection (DEP) and its hamstrung bureaucracy that has, in the past, made shale drillers wait more than eight months to receive a simple erosion and sediment control (Chapter 102) used in building roads and shale well pads. Turnaround from the time a permit is requested until it is supposed to be approved is, by DEP’s own statutory standards, 14 days. In 2017 it was taking over 250 days in some areas of the state. The DEP has improved over the past year or so. And now, maybe, it will improve even more. Yesterday the DEP announced a number of changes in the department, including the new use of electronic permits (e-permits) for erosion and sediment control (Chapter 102) and water obstruction and encroachment (Chapter 105) permits—both of which are used in shale drilling. In addition to new e-permits, DEP is shifting the workload among some of its regional offices. *We concluded with an article outlining the changes at DEP.*

Cuomo’s Catch-22: No New NatGas Pipe? No New Long Island Arena

Ole Andrew Cuomo (pronounced Coo-moh by many people we know) is facing a classic Catch-22 situation. He has long promoted and earnestly wants a new arena as the home for the New York Islanders hockey team, but unless he allows a new natural gas pipeline under New York bay, he’s not going to get it. The Northeast Supply Enhancement (NESE) is a Williams Transco Pipeline project meant to increase pipeline capacity and flows heading into northeastern markets, including to Long Island. There are a number of components to NESE, but the key component, the heart of the project, is a new 23-mile pipeline

from the shore of New Jersey into (on the bottom of) the Raritan Bay—running parallel to the existing Transco pipeline—before connecting to the Transco pipeline offshore. The project is facing stiff opposition on both sides of the bay—New Jersey and, of course, New York. The NY Dept. of Environmental Conservation (DEC), a lapdog for Cuomo, is reviewing it. Cuomo directs what happens—whether projects get approved or not. Over the past few years, he’s told the DEC to reject every major and minor new pipeline project. Some of those projects are federally approved, and in some cases NY has been overruled (i.e. the Valley Lateral Project and the Northern Access Project). It’s pretty much a given that Cuomo will tell the DEC to reject NESE. Except... if he does reject it, National Grid, the local natural gas distribution company that would provide gas for the new \$1 billion Belmont Park arena, is saying they won’t supply gas to the arena (and associated buildings), and that the project won’t get built. What’s a corrupt lib Dem like Cuomo to do? *We included the Politico article about Cuomo's dilemma, and then ended with our own thoughts:* With Cuomo, money talks and...you know the rest. We expect this threat by National Grid may be the thing that tips Cuomo in favor of approving NESE. It will be interesting to watch this one play out.

DOE Awarding \$88M in Grants to Research Better O&G Extraction

Here’s an interesting factoid: Even with our improved fracking technology, the amount of oil and gas that stays in the ground after a well is fracked is around 90%! Yes, even on our best days we’re only extracting maybe 10% of the fossil fuels down there. Can that ratio be improved? That’s what the Dept. of Energy hopes to do—improve the ratio of hydrocarbons we’re able to extract from existing wells. How can we improve it? A couple of promising technologies already exist: injecting carbon dioxide into the well (“miscible gas injection”); cooking the rock (thermal technologies that include “steam flooding”); and something called “chemically enhanced waterflooding.” The DOE is willing to make up to \$88 million (!) available to researchers to fund projects enhancing technologies for oil and natural gas recovery. But don’t wait. Applications for research projects are due by Feb. 25. *The post concludes with the official announcement and details for where to apply for the grants.*