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Dominion Files to Recover Undergrounding Costs

Posted on [March 23, 2018](#) by [James A. Bacon](#) | [59 Comments](#)

	Phase 2	Phase 3
Miles of undergrounding	244	416
Tap lines undergrounded	679	1,090
Total cost (in millions)	\$105	\$179
Customers		8,578
Cost per customer	\$11,912	\$13,299
Cost per mile	\$422,496	\$430,000
Number of events (10 years)	3,553	5,815
Events per mile (10 years)	14.3	14.0

Key metrics for Phase 2 and Phase 3 of Dominion's Strategic Undergrounding Program

Dominion Energy Virginia has filed for a \$73 million rate increase to cover the cost of Phases 2 and 3 of its Strategic Undergrounding Program (SUP). The two phases of the program, designed to limit outages from severe weather events and shorten recovery times, will bury 660 miles of tap lines between them.

The State Corporation Commission (SCC) had permitted a trial of the undergrounding program advocated by Dominion but limited expenditures to \$40 million in Phase 2. In the recently approved Grid Transformation and Security Act, however, the General Assembly declared

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undergrounding to be in the public interest. Now Dominion is filing to recover the full \$105 million it has spent on Phase 2 plus another \$179 million for Phase 3.

Legally, the law removes the “rebuttable presumption” that the conversion of overhead lines to underground lines will provide local and system-wide benefits, and declares that the costs associated with new underground facilities “are deemed to be reasonably and prudently incurred.” The legislation contains two limits: The cost should not exceed \$20,000 per customer, and the average cost per mile should not exceed \$750,000 (exclusive of financing costs).

Said Alan W. Bradshaw, director of Dominion’s undergrounding program, in testimony included as part of the filing:

The Company remains firm in its belief that the targeted undergrounding of the most outage prone tap lines will continue to improve the resiliency of the Company’s electric distribution system. The Company believes that a targeted SUP will result in an annual reduction of the total number of outage events and a reduction of repair locations. When outages do occur, it will lead to a reduction in the time required to restore power, particularly as to outages resulting from severe weather events.

According to data provided in the filing, the two undergrounding initiatives would allow Dominion to bury 1,769 tap lines dispersed across the state for a total cost of \$284 million. The cost per customer and the cost per mile are well below the limits defined in the legislation.

There are tangible benefits to this investment, but Dominion documents only some of them in the filing. The buried lines accounted for 9,368 outages over the past 10 years — or about \$30,3000 per outage avoided. Assuming

at
jabacon[at]baconsrebellion.c
(substituting “@” for “at”).

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that a comparable number of outages would have occurred in the future without the undergrounding, how much will the company save in restoration costs? How much outage time will customers save, and what is the economic value of the time saved? Perhaps rate payers will see those numbers in the hearing so they can judge the value of the undergrounding program for themselves.

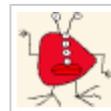
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59 RESPONSES TO “DOMINION FILES TO RECOVER UNDERGROUNDING COSTS”

Rowinguy1 | [March 23, 2018 at 2:03 pm](#) | [Log in to](#)

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And all those restoration costs reside in the utility's base rates and will continue to be paid by customers even if not incurred, in addition to their paying the rate adjustment clause charges that are incurred to bury those lines. More double-dipping.

TooManyTaxes | [March 23, 2018 at 2:56 pm](#) |

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Agree completely. If the undergrounding costs are recoverable from ratepayers, the saved costs from reduced outages ought to be offset against the added costs. Is there a lawyer in the General Assembly? Maybe we should have elected a lawyer to the Governor's mansion, rather than a doctor.

James A. Bacon | [March 23, 2018 at 3:02 pm](#)

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Rowinguy1, how is it possible that the \$73 million annual rate increase would be embedded in both base rates and a rate adjustment clause? Because it will be paid for by over-earnings? I thought language was

inserted in the legislation to expressly prohibit such double dipping.

TomH | [March 23, 2018 at 3:25 pm](#) | [Log in to](#)



[Reply](#)

Base rates usually have an assumed amount for storm damage baked into them. If exceptional storms hit, utilities can get specific rate relief for the outliers.

I think what is being suggested is this, for example:

If \$100 million in storm repair expenses are being recovered through base rates, and

The utility invests \$100 million in undergrounding to save \$10 million per year in storm repairs, the \$10 million in savings per year due to undergrounding should be removed from the \$100 million assumed in the base rates.

The ratepayers will not only repay the \$100 million for the undergrounding project, but they will pay perhaps \$200 million in profit to the utility (depending on the rate of return) and will also pay for the interest costs of the project, maybe another \$100 million.

In years when the storm damage is below the amount included in the base rates, customers will see no cost advantage.

Even if they save \$10 million per year, they will have paid \$400 million in total for that annual savings. Over 40 years that is breakeven at best for the ratepayers. In the meantime, the utility made \$200 million.

Steve Haner | [March 23, 2018 at 5:30](#)

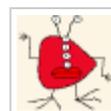
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Exactly right. We pay for the improvements, which keep the power on, which makes them more money, but which never, ever, ever will lead to any rate credits or rate reductions under the bill just passed and signed. And we pay a nice profit margin over years and years on the capital invested in those improvements. Kaching.

Rowinguy1 | [March 24, 2018 at 6:24 pm](#) |

[Log in to Reply](#)



It's not like the double dip in the renewables bill, but it is a double dip because any money sayed as a result of the dollars spent (and paid by customers) in undergrounding the lines is in base rates and until base rates can be reviewed and reduced (when pigs fly, in laymen's terms) those savings cannot be returned to customers.

TomH | [March 23, 2018 at 2:45 pm](#) | [Log in to Reply](#)



I put a crude calculation together based on the RTD article about the total proposal to bury 4000 miles of distribution line at a total cost of \$2 billion. It is not an official SCC calculation by any means, but here it is:

Putting electrical lines underground can increase reliability by reducing storm damage. But it is not necessarily a method of modernizing the grid. Investments in undergrounding have diminishing returns. Spending more often results in only slight improvements in reliability. Other options can offer more cost-effective solutions. The SCC reviewed Phase II of Dominion's pilot project to place certain

distribution lines underground. Both the SCC staff and the Attorney General's Office of the Consumer Advocate said this proposal was not cost-effective. Yet, without expert evaluation, the General Assembly said such activities were "in the public interest".

Dominion wasted no time taking advantage of this profit opportunity. On March 19, the utility filed for a rate increase to place existing distribution lines underground. Burying 4,000 miles of distribution lines underground is expected to cost \$2 billion. If the new Rate Adjustment Clause uses the existing 10 percent rate of return, plus the 0.7 percent overage allowance, ratepayers would pay back the \$2 billion investment, plus pay over \$4 billion in profit to the utility, if the project was depreciated over 40 years. If half of the project cost was financed at the same interest rate assumed for the pipeline (6.8%), ratepayers would be asked to cough up almost \$2 billion more for interest charges.

Is adding over \$8 billion to our energy bills a reasonable investment in exchange for what experts claim will be a 0.00002 percent improvement in grid reliability? The General Assembly seems to think so. Dominion must be happy with the prospect of over \$4 billion in profit. Commercial and industrial customers have sniffed out the scam and negotiated an exemption from these charges with the General Assembly. Our state legislators have placed this multi-billion dollar burden squarely in the lap of the residential ratepayers, their constituents.

[James A. Bacon](#) | [March 23, 2018 at 2:58 pm](#)

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Tom, Have you figured into your calculations the fact that the costs are capped at \$20,000

per customer and \$75,000 per mile of line?

Also, I'm curious how you came up with a 0.00002% improvement to reliability.

TomH | [March 23, 2018 at 3:12 pm](#) | [Log in to](#)

[Reply](#)



Jim, the cap is \$750,000 per mile of line, down from \$1 million per mile. The 0.00002 % was quoted in the RTD article. I presume it was from previous expert testimony when the project was first brought up.

TomH | [March 23, 2018 at 2:53 pm](#) | [Log in to Reply](#)

I am not saying that undergrounding distribution lines does not have value. But the cost can quickly escalate and have diminishing returns. Other types of investments can improve reliability more at a lower cost.



The proposals need to be reviewed in detail by qualified experts. The SCC should not have their hands tied by the GA. The ratepayers suffer for it.

LarrytheG | [March 23, 2018 at 3:07 pm](#) | [Log in to](#)

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The 20K per customer struck me ... how is Dominion deciding what customers deserve the undergrounding and which ones do not? I'd think you need some fair and equitable way to decide what neighborhoods and individual customers to invest in and which ones either have to wait or will never get it?

We bought a lot in a subdivision many years ago and one of the selling features that we undoubtedly paid extra for ... over other lots – was the underground utilities.

why is that not a direct cost to the customer?

it seems like we might be opening a bag of worms.

this is somewhat akin to the RECs getting into the internet business and not being able to give everyone service right away or possibly not at all.

undergrounding utilities in existing neighborhoods is far more expensive than undergrounding in new subdivisions.

idiocracy | [March 23, 2018 at 3:56 pm](#) | [Log in to](#)

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Tree trimming maintenance is far cheaper than repairing tree damage to lines, and reduces outages.

CleanAir&Water | [March 23, 2018 at 4:09 pm](#) |

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A piece of a letter I sent to RTD re the grid transformation bill partly

Upgrading the grid no longer means just burying transmission lines. It means adding storage, advanced grid technologies and distribution-level investments, including micro-grids.

“Micro-grids are expected to become a core piece of the electric system’s infrastructure,” said Fidel Marquez, senior vice president at ComEd, where a \$25 million micro-grid project will demonstrate how to move from today’s centralized grid to a grid-of-micro-grids, even a grid made up of networked microgrids.

Will Wagner’s new bill demand innovation for Virginia? Does it mention ‘non-wire alternatives’, virtual power plants that are cost effectively replacing previously thought

necessary transmission lines and upgrades to substations in New York? Does the plan mention IT investments moving to the cloud where rapid digitization can happen?

Innovative planning won't happen in Virginia any time soon. Innovation will require a strong SCC and a willingness from Dominion to move away from our outdated monopoly system. Starting their grid upgrade by burying lines is a 'stockholder first' move. Someone, somewhere, is going to have to step in and stop this desperate run-up of capital intensive/ratepayer responsibility expenditures.

LarrytheG | [March 23, 2018 at 5:10 pm](#) | [Log in to Reply](#)



I don't think we want top-down direction on what are believed to be the best ROI – from the GA, nor the SCC...nor Dominion.

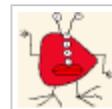
I don't think govt bureaucrats – elected or appointed have the boni fides to know what a utility should be investing in or not.

So the problem we have is we have a 4th group who are more activists than business folk – who also have their ideas on what returns ROI.

I've not yet seen much specificity from ANY of the players on what investments should be made, much less any truly independent assessments of the various options ROI.

What I oppose is continuing a higher rate of return – and then the inevitable food fights over what to spend it on.. Everyone has their favored dog in that hunt.

Rowinguy1 | [March 24, 2018 at 6:34 pm](#) | [Log in to Reply](#)



Ok, Larry. Tell us who you DO trust to make decisions regarding investments in power supply and delivery. You don't trust the utilities, you don't trust the government, you don't trust the SCC.

Who is it? Who's going to make those decisions?

Steve Haner | [March 23, 2018 at 6:39 pm](#) | [Log in to Reply](#)



<http://www.scc.virginia.gov/docketsearch#caseDocs/138346>

For the truly interested, the link above is to the documents filed with the application and the case docket number is PUR-2018-00042. It was actually established March 19, the second Monday following the Governor's signature two weeks ago today.

Somehow I doubt they put that filing together in ten days. Think they were darn confident about how that bill would turn out? Hmmm?

Notice how much is already marked confidential....

Mom | [March 23, 2018 at 7:11 pm](#) | [Log in to Reply](#)



The supporting testimony alone would take at minimum two months to prepare. That being said, it would appear that Dominion has quickly learned some lessons from the recent Rappahanock Crossing and Haymarket cases, namely, never ever publish the "projected" construction costs lest your opponents eviscerate you with a professional breakdown of your excessively inflated materials costs and reliance on outdated technology.

A quick review of the document schedule

indicates that all such data has been marked extremely confidential and withheld from public view. First sign of a rat are the rat droppings and the documents filed under seal smell like a huge pile of rat excrement.

If anyone knows anybody who intends to be respondent party to the case, I would be more than happy to forward the contact info. and credentials of a recognized industry expert who has in the past and remains willing, to slice and dice those estimates with the skill of a surgeon, albeit a surgeon wielding a machete. It helps that he has a healthy disdain for Dominion and its tactics as well as a personal animus.

Steve Haner | [March 24, 2018 at 7:43 am](#) | [Log in](#)
[to Reply](#)



The large industrial customer groups will not be intervening, since they were prescient enough to insist on an exemption for large general service customers when this was first proposed years ago. The AG's Office of Consumer Counsel will be involved, and the SCC staff, but the language in this new bill makes it pretty clear this is coming. Too bad the General Assembly has no interest in listening to experts before passing corporate welfare bills.

Yeah, I need to scan them again but the full cost to consumers is absent and probably buried in the confidential text. Say this phase 3 costs \$179 million, as advertised, but Dominion is looking for a 9.2 percent ROE and it is unclear over how many years it will be collecting the principal and interest back from customers. When amortizing costs makes money for the stockholders, the company is all for it, but when amortizing costs works to the advantage of ratepayers – well no, we can't have that.

Mom | [March 24, 2018 at 12:53 pm](#) | [Log in to](#)

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In perusing the filing, all materials and construction costs are redacted, making it impossible for all but those who file as respondents and sign the confidentiality order to analyze Dominion's projected costs.

Perhaps someone with standing should file a motion with the SCC to remove the confidentiality so that the ratepayers amongst others can review Dominion's numbers. From personal experience I can tell you that they customarily inflate those costs by a factor of at least 3 and as much as 10.

Again, one of the principal lessons they have learned from recent underground cases is that they must limit the opportunity for review and rebuttal of their projected costs. Those costs are simply too easy to shoot full of holes.

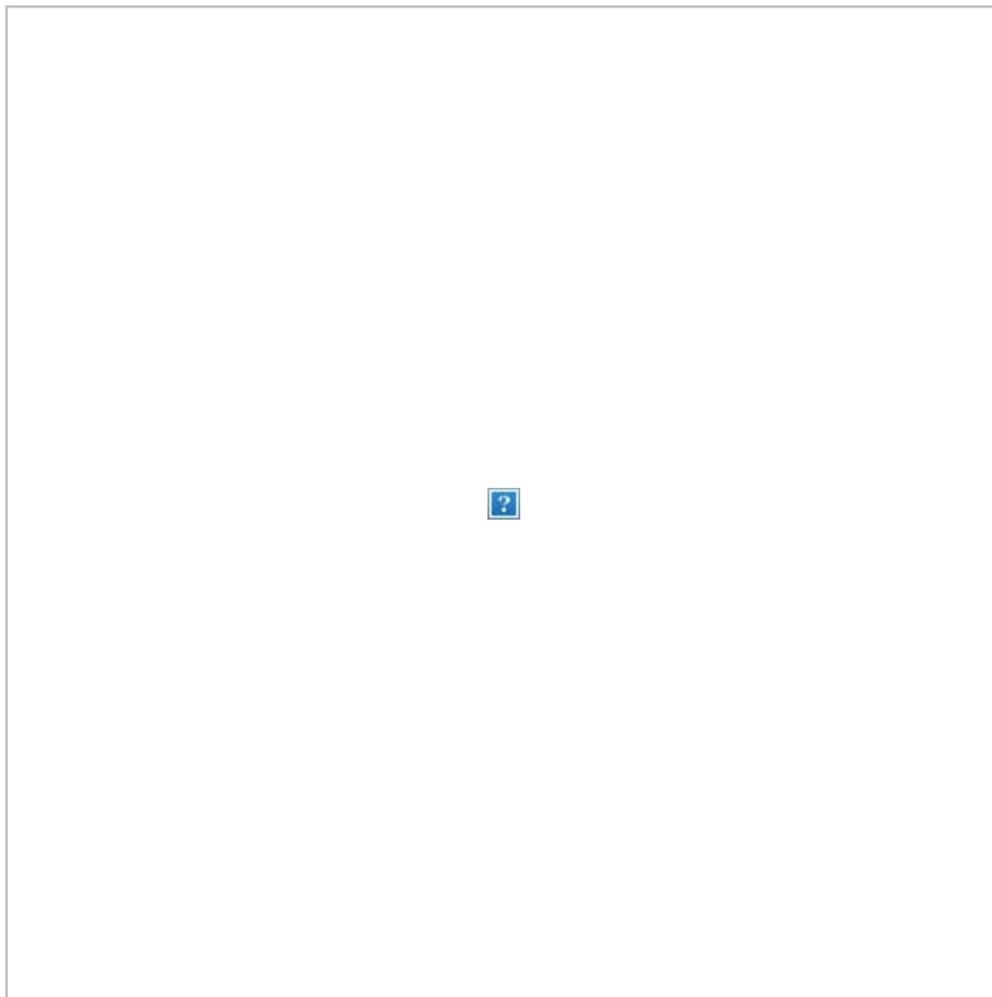
LarrytheG | [March 24, 2018 at 8:01 am](#) | [Log in to](#)

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just to re-post a map of Virginia to illustrate the various utilities and how , apparently, these rules and regulations are specific to the utility and not uniform to all utilities.

This is a 2010 map and may not reflect current territories.



LarrytheG | [March 24, 2018 at 8:18 am](#) | [Log in to](#)

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In other words – when we talk about “Grid Modernization” – in the context of only Dominion rather than the “grid” that spreads across Virginia and includes numerous other utilities jurisdictional service areas – it makes one wonder if it makes any real sense.

Looks like we’re actually talking about only SOME parts of Virginia that will be “grid modernized” not an actual real state-wide grid – approach.

It’s more about Dominion and what Dominion wants than an actual approach for all of Virginia’s “ratepayers”.

or perhaps I am wrong and the “Grid Modernization” IS state-wide and does apply to all utilities.

what say the folks who know?

Steve Haner | [March 24, 2018 at 9:13 am](#) | [Log in to Reply](#)



As TomH has previously pointed out, the major elements of the national grid in our part of the world are managed by the PJM organization, and what Dominion is planning to work on is largely the distribution network between that grid and the various customers. The legislation also creates some of the same incentives for the other major investor-owned utility, Appalachian, but not for the many regional co-operatives.

As to the major elements that interconnect the country, my understanding is that modernization work is moving forward, we are paying for it, and it is being done without self-righteous posturing or self-serving ad campaigns. In fact, I’m sure Dominion would be doing 99.9 percent of this work without the legislation – it was just a cover story for removing SCC oversight. The existing law allowed them full recovery. You was had, Larry.

LarrytheG | [March 24, 2018 at 11:40 am](#) | [Log in to Reply](#)



Steve – was not unknowingly “had”.. realized all along that Dominion gets what it wants irrespective of what is good for ratepayers and for that matter the total grid in Virginia.

So my question, not really answered yet is this – When we talk about the “Grid

Modernization” bill – does it apply to the entire grid in Virginia where the GRID itself which is actually maintained by the utilities and the RECs (as opposed to the power generators which ARE the province of PJM is the entire physical grid in Virginia – regardless of what utility is maintaining it – subject to being upgraded as a result of this bill or is it only Dominion’s territory?

pretty basic question.. anyone got an answer?

Acbar | [March 24, 2018 at 11:35 am](#) | [Log in to](#)

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Conventionally, “the Grid” means bulk power transmission and transmission substations. The transmission grid is what ties together all the generation and all the delivery points to those co-operatives and other LSEs on your map, Larry. This is regulated entirely by the FERC under federal law; all expansions of it and operation of it is entirely under PJM planning and operational control. Dominion owns some of it and is paid by PJM transmission customers for its use, according to rates fixed by the FERC.

There is another definition of “the grid” which incorporates all wires, both transmission and distribution lines. This doesn’t sound very significant, but in fact it is, because federal law assigns transmission and transmission rates to the FERC to regulate, while distribution was left to the States to regulate. Also significantly, the FERC must approve the need for new transmission facilities but the State must approve the siting. An example of this is that transmission line near Haymarket to supply the new data centers: PJM found

the need for it and FERC approved PJM's finding of need, but the VSCC had to find exactly where to build it (including the how of whether to underground it or not). This contrasts, by the way, with the way gas pipelines are regulated, where FERC *both* determines the need and the siting.

So, the VSCC regulates Dominion's need for new distribution lines and where they are to be built; and PJM plus the FERC regulate Dominion's need for new transmission lines but the VSCC determines where they are to be built.

Now let's apply this regulatory morass to the undergrounding of distribution lines. Steve says, "As TomH has previously pointed out, the major elements of the national grid in our part of the world are managed by the PJM organization, and what Dominion is planning to work on is largely the distribution network between that grid and the various customers." Correct! That means the work falls entirely under VSCC rate jurisdiction which, these days, means the GA is regulating everything by direct legislative initiative. Steve goes on, "As to the major elements that interconnect the country, my understanding is that modernization work is moving forward, we are paying for it, and it is being done without self-righteous posturing or self-serving ad campaigns." Correct. The bulk power grid under PJM and FERC planning authority is growing and modernizing largely behind-the-scenes. Dominion (which owns many of these facilities locally and will supervise the actual construction work on facilities it owns) is paid a FERC-determined transmission rate by all users of these transmission facilities — including by Virginia Power, wearing its LSE hat. Only when Dominion gets into a local

political cat fight over where to build one of those transmission facilities does it get nasty. The cost of undergrounding that Haymarket transmission line will go into transmission rates, and theoretically the FERC could reject the VSCC's recent decision to place it underground, but that's unlikely given the extensive record rejecting all the alternatives.

Meanwhile, the cost of undergrounding Dominion's *distribution* lines is entirely up to Virginia regulators. Others have already skewered Dominion appropriately on the subject of double billing; but there is a lingering question of fairness when it comes to asking all Virginia Power ratepayers to pay for undergrounding only in certain locations. Which locations get the benefit? Does that really save other ratepayers even in the long run? Larry and TomH are right to ask, and the numbers don't look good, even over 40 years.

Of course it's true that when a snow-covered tree limb falls, it isn't going to hit a buried distribution line. But the cost to bury that line is much more than the cost of a trench. You also have to bury all the transformers connected to it; and all the service drops from those transformers to customers; and the bigger transformers and wires must be ventilated underground with circulating oil and fans to keep them cool. All that buried equipment usually ends up under sidewalks and paved streets, which then have to be dug up if there is an equipment failure or if it becomes necessary to add capacity to the lines to handle new demand. The cost of all that amounts to a substantial subsidy of those cute, gentrified urban-scapes by regular electric customers out in the ex-urbs. Is this the "grid modernization" people really want?

LarrytheG | [March 24, 2018 at 12:08 pm](#) |

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Thank you Acbar – you always make things more clear than more muddy!

so does the Va GA “Grid Modernization” bill apply to all utilities and their respective GRID service areas that they maintain – or does it only apply to DOrnion and it’s service areas?

Acbar | [March 24, 2018 at 1:45 pm](#) | [Log in](#)

[to Reply](#)



I havent read it but my understanding is, all utilities within their service areas.

Service area means retail service/distribution area. There is no such thing as “grid service area” unless you mean that region assigned by FERC to PJM control (as opposed to MISO or ISONE etc. control).

Mom | [March 24, 2018 at 12:38 pm](#) | [Log in to](#)

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Just one correction, FERC and PJM had nothing to do with the Haymarket line as it was determined not to be an expansion of the PJM transmission grid, but merely a radial line to service a local “need”.

Acbar | [March 24, 2018 at 1:51 pm](#) | [Log in](#)

[to Reply](#)



You could be right — it’s a 230kV line which is usually considered “transmission” and therefore under FERC/PJM but they could disavow jurisdiction in advance based on

function. But my understanding from the COPN testimony is, it's planned to be a networked (loop) configuration not radial, eventually anyway, for reliability and stability reasons.

Mom | [March 24, 2018 at 1:58 pm](#) |



It's merely looped back to its origin point but you have hit on the possible reason, one I have long suspected, that Dominion was so willing to pursue this project even though Amazon failed its initial site pre-certification. A transmission line through this area gives them the one link they were unable to attain 10-15 years ago, making another extension to the coal fired plants in WV no possible.

CleanAir&Water | [March 24, 2018 at 2:17 pm](#) | [Log in to Reply](#)



Certainly complicated jurisdictional divides ... but while grid upgrades are taking place on the central grid and for those we don't have to worry about being a laggard ... that still leaves the really big changes up to Dominion, the changes that will define a very different future system.

As I said earlier, this new grid structure means ... adding storage, advanced grid technologies and distribution-level investments, including micro-grids.

"Micro-grids are expected to become a core piece of the electric system's infrastructure," said Fidel Marquez, senior vice president at ComEd.

This basic structural change, away from centralized generation, is what Dominion is subverting. Their actions will leave Virginia in the dust of the last century.

James A. Bacon | [March 24, 2018 at](#)

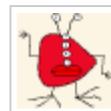
[3:53 pm](#) | [Log in to Reply](#)



Micro-grids are part of Virginia's grid modernization. It would be interesting to know exactly what Dominion has in mind, and what priority they will be given.

Rowinguy1 | [March 24, 2018 at 6:57 pm](#) |

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“This doesn't sound very significant, but in fact it is, because federal law assigns transmission and transmission rates to the FERC to regulate, while distribution was left to the States to regulate. Also significantly, the FERC must approve the need for new transmission facilities but the State must approve the siting. An example of this is that transmission line near Haymarket to supply the new data centers: PJM found the need for it and FERC approved PJM's finding of need, but the VSCC had to find exactly where to build it (including the how of whether to underground it or not).”

AC, you are mistaken in this portion of your comment. FERC has no role in determining either the need for or the siting of a transmission facility such as the Haymarket line. While PJM determines whether a line can be added safely to the grid, and in some instances, allocates the cost recovery if the line provides regional benefits, in Virginia the SCC must determine both that a line is needed and that the route selected reasonably minimizes adverse environmental impacts. PJM can only “veto” a line whose construction and operation cannot be

accommodated with the reliable operation of its service area power delivery function.

Further, no one certifies the construction or extension of distribution facilities—that's just the normal business of the utility exercising its franchise duty to serve.

But the SCC will be involved in the approval of the undergrounding of formerly over head distribution lines—if only to rubber stamp a program already found to be in the public interest by the GA.

Acbar | [March 25, 2018 at 5:23 pm](#) | [Log in](#)
[to Reply](#)



I'd better explain the jurisdictional split in greater detail. No, Ferc is the ultimate arbiter of need for a *transmission* line. Most need for new transmission capacity, however, can be satisfied in multiple ways; and that is the subject of a grid planning process run by PJM which of course entails an iterative interaction with the LSEs who have the obligation to serve the “requirements” of increased load, and also a queueing process for applicants who wish to add new generation facilities. PJM's resulting plan for added facilities (i.e., Grid transmission) is submitted to the FERC, and can be contested there. But first, it has been developed with input from the Transmission Owners of PJM, and also from OPSI, the “Organization Of PJM States, Inc.,” which consists of representatives of all the State Commissions in the PJM region. In fact the TOs initiate most of the requests for

new transmission facilities. PJM seeks OPSI's advice both because they know the local history and politics and in order to reach a consensus among the States (who may have different priorities) and to head off regulatory conflicts.

If PJM's regional transmission expansion plan (RTEP) were to incorporate a transmission facility over a State's objection, which that State were then to refuse to allow to be sited, there is an explicit process under the Federal Power Act authorizing the FERC to order it built over the State's objection, including siting, or to decide upon another course of action. To my knowledge that authority has never been invoked in the PJM region but it's there nonetheless.

Now, remember, the whole process is driven by the interaction of changes in load and generation. If generation historically has to run to meet the load in a "load pocket" such as The Peninsula, and then that generation is retired, that forces the issue of building new transmission. PJM did not decide that Dominion HAD to build the James River Crossing; what it did say was, NERC reliability criteria could not be met without adding new transmission (along several possible routes) or dropping load as necessary. Dominion proposed the James River Crossing from Surry to Skiffes Creek after looking hard at the Chickahominy crossing alternative. PJM endorsed the J.R. proposal. Dominion took that to the VSCC, where PJM supplied a witness

testifying to the need for more power on the Peninsula and to the adequacy (but not to the exclusion of alternatives) of the J.R. crossing as a solution. The VSCC approved the J.R. crossing subject to other agency approvals; those as you know took a long time. But let's suppose the CE had rejected the overhead crossing and the VSCC rejected every alternative like burying the line under the River — that could have ended up back at the FERC to direct construction of one of those alternatives notwithstanding the VSCC's objection to it. And meanwhile, PJM would direct Dominion to interrupt loads on the Peninsula as necessary to meet NERC reliability criteria.

You say "PJM can only veto a line whose construction and operation cannot be accommodated with the reliable operation of its service area power delivery function." I can't buy "only." In theory PJM could go to FERC and say that any new transmission line or transmission interconnection proposed by one of its members should be refused; but the iterative planning process should have flushed that out earlier. I could see PJM rejecting a proposal that met reliability criteria if two TOs proposed to attach two different facilities and they conflicted, and one of them was a better system planning enhancement overall, and the other TO wouldn't back down. New generation uses up the ability of the system to absorb it on a first-come, first served basis, but my recollection is that new transmission additions do not have an automatic priority just because first

in line.

Acbar | [March 25, 2018 at 5:28 pm](#) | [Log in](#)
[to Reply](#)



Rowinguy1 — One other thing — you say, “no one certifies the construction or extension of distribution facilities.” My recollection is, the cutoff in Virginia for requiring a certificate is strictly according to voltage (138kV and above) regardless of the line’s classification as transmission or distribution for regulatory purposes. A line at that voltage is usually considered transmission, but not always. If a 230kV line were built for such a local purpose that the regulators classified it as distribution, it would still require a COPN in Virginia. Conversely, transmission at 115kV would NOT require a COPN.

Rowinguy1 | [March 26, 2018 at 10:01](#)
[pm](#) |



You are still mistaken. FERC does not play any role in the certification of transmission lines, other than those connected to federally operated power authorities, such as TVA or Bonneville. While there is a provision of the Energy Policy Act that purports to give FERC so-called “backstop” authority, it is ONLY used if a STATE refuses to issue any ruling on a request filed by a utility for a certificate. Several years ago, Maryland, I believe denied an application for a power line in that state and the utility went to FERC to ask it to exercise that backstop authority and grant a certificate over

the state's objection. The state sued in federal court and the 4th circuit ruled that a denial by a state to issue a certificate, which occurred within a year of the application, was not a non-action that triggered FERC's jurisdiction. Therefore, so long as a state acts either to grant or deny an application within 1 year, FERC cannot exercise ANY jurisdiction in the 4th Circuit, which includes Virginia. So, had the SCC found no reason to permit the construction of the Surry to Skiffe's line, the FERC could do very little about it.

Now, you may be correct (although I don't think you are) that there is some way PJM's expansion PLAN can be challenged at FERC, but decisions about individual LINES are the province of the state regulatory authorities in the first instance and the state courts in the next instance.

PJM's Regional Transmission Expansion Plan is indeed developed by the members of PJM, but neither the state regulatory commissions or OPSI are members of PJM. The transmission owners are in constant tension with load interests and in some cases, generation operators, as to how much expansion is needed and where it should go. PJM identifies areas where reinforcement is needed and in some cases opens a "window" where many interests can propose solutions, mainly transmission lines, but sometimes load reduction efforts or a new plant in a congested area. In some instances, there is no

competition because the project is a rebuild of an aging facility, or not otherwise necessary for regional grid reliability. These are called supplemental projects. There is a huge battle now running over the proliferation of these type of projects, which are the main drivers of increased costs these days. But, this process proceeds without the state commissions, but sometimes with the state consumer advocates, which can be members of PJM. PJM, to my knowledge, has no way to deny the construction of a supplemental project, which by definition, IS NOT necessary for reliability or market development purposes (i.e., congestion relief). If a utility can convince its state regulator to permit the construction, there is just nothing PJM can do to stop it. What it can, and does, do, is to require that utility's customers to bear all the costs of the project rather than allocating those costs across all its member utilities.

You are correct that most lines 138 kV and above require certification in Virginia, unless these are minor projects that fall within the statutory exemption of an "ordinary construction or extension" in the regular operation of the utility's business. The SCC is occasionally asked by a utility to declare that a particular project does not need to be certificated due to this reason, but for most such lines and virtually all lines above this level (230 kV, 345 kV, 500 kV and 765 kV) a certificate is

requested, because, when issued the certificate overrides all local zoning requirements and permits the utility to exercise eminent domain, if necessary, to acquire right of way.

To my knowledge, the SCC has not ever declared a transmission voltage facility to be a distribution line, but as you note it may not make a difference—the law obligates the Commission to issue certificates to lines at 138 kV and above irrespective of that line's real purpose.

(Sorry about the generous use of the ALL CAPS; I don't have a way to italicize here.)

idiocracy | [March 26, 2018 at 2:58 pm](#) | [Log in to Reply](#)



In practice, when power distribution lines are undergrounded, the transformers are NOT placed underground. They are mounted on top of the ground, known as “pad mount” transformers, which are obvious as green metal enclosures that can vary in physical size from an end table to a large dumpster.

The underground transformers tend to be found in city/urban areas where electric lines are already underground.

LarrytheG | [March 24, 2018 at 8:34 am](#) | [Log in to Reply](#)



This map shows WHERE the proposed 3000 acre solar project in Spotsylvania is to be built – and it is NOT in the Dominion service area but instead REC.

Does the new law also apply to utilities like REC to “modernize” the grid in their territories also?

<https://goo.gl/MFq2GB>

Acbar | [March 24, 2018 at 11:42 am](#) | [Log in to](#)

[Reply](#)



See above. The new Virginia legislation, which applies ONLY to *distribution* improvements, does not affect REC’s construction of a *transmission* substation or transmission lines to it for the purposes of connecting a large, utility-scale solar generating station.

Of course REC has distribution lines, including down the road to your house, and theoretically the new legislation would allow REC to retain over-earnings on its retail services (assuming your co-op contracts allowed it to) to spend on undergrounding the distribution lines in your neighborhood — but that has nothing to do with that solar plant! Anyway, most likely any distribution undergrounding would be done in more built up parts of REC’s service territory.

LarrytheG | [March 24, 2018 at 12:34 pm](#) |

[Log in to Reply](#)

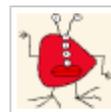


Thanks Acbar – you ALMOST go there.

does the Bill the GA passed – also apply to other service areas than just Dominions?

Rowinguy1 | [March 24, 2018 at 7:10 pm](#) |

[Log in to Reply](#)



The major changes in the law are placed in statutes that apply ONLY to Dominion and Appalachian Power. The Cooperatives are regulated by other

statutes and Old Dominion Power (Kentucky Utilities operating in Virginia) is largely exempted from the DVP/Apco statute.

TooManyTaxes | [March 24, 2018 at 12:05 pm](#) |

[Log in to Reply](#)



There is very good knowledge of the electric power industry among the posters. Why not file a complaint against Dominion at the VSCC? Could a complaint be filed at FERC? More than the complaint's legal status, a complaint alleging bad conduct — double dipping is bad press for Dominion.

TomH | [March 24, 2018 at 12:17 pm](#) | [Log in to Reply](#)



I believe that changes in the new law apply just to Phase I (APCo) and Phase II (Dominion Energy Virginia) utilities.

Steve Haner might be able to clarify this more.

Thanks for your excellent explanation Acbar regarding the differences in jurisdiction between transmission and distribution lines. If the only the GA had some inkling of what they are dealing with when they fiddle with our energy legislation. I imagine it is difficult, even with the best of intentions, to get fully up to speed on this as a part-time legislator.

LarrytheG | [March 24, 2018 at 12:36 pm](#) | [Log in to Reply](#)



I agree on the compliment to Acbar.. KUDOS!

I'm trying to understand if the VA GA passed a bill designed to modernize the grid across Virginia or just the portion of it in Dominion's territory.

Mom | [March 24, 2018 at 12:47 pm](#) | [Log in to](#)

[Reply](#)



If my understanding of the legislation is correct, the application is solely to Dominion and to a lesser extent APCO. The General Assembly was sold an overstated bill of goods regarding grid modernization and hardening by Dominion and Sen. Wagner. That this was intentional is evidenced by the manner in which Sen. Wagner (at his arrogant worst) quashed all questions and debate regarding those “benefits”. He knows better than the “experts” and is the sole authority on electric transmission issues in the Commonwealth, a self-appointed Energy Czar.

Little is likely to change not because of the influence of Dominion over the legislature but rather as a result of the power wielded by Wagner, Norment and Saslaw, Kilgore is simply their House puppet. That triumvirate is the three-heads of the bipartisan snake, an abomination that must be lopped off or marginalized. The '19 elections should be interesting for Wagner and Saslaw in particular as their in growing dissent with their actions within their own parties.

TomH | [March 24, 2018 at 1:09 pm](#) | [Log in to](#)

[Reply](#)



The major issues in the bill have very little to do with grid modernization. The GA has misinterpreted putting distribution and transmission lines underground as grid modernization. That is a reliability issue (if even that, because it is unlikely that these projects will increase reliability significantly).

The real issues related to grid modernization were not addressed in the bill. This was about taking money from the ratepayers, increasing utility profits, and wrapping it up in a bow that sounds like progress. Both the utilities and the customers deserve a bill that actually modernizes our energy system in a way that creates healthy utilities and serves the customers.

Mom | [March 24, 2018 at 1:17 pm](#) | [Log in to](#)

[Reply](#)



Exactly, it was a corporate welfare program wrapped in a glossy veneer of grid transformation. In order to make the welfare program work, the authority of the SCC had to be stripped from the process and the “myopic” members of the SCC replaced with those who would follow Wagner’s marching orders. Enter former Sen. Watkins. The only fly in the ointment for Wagner is the manner in which Norment pissed off the GOP House delegation at the end of the session, making it unlikely they will support Watkins’s nomination. Leaving Northam as the wildcard.

Acbar | [March 24, 2018 at 2:00 pm](#) | [Log in](#)

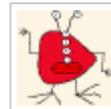
[to Reply](#)



Well said. But that’s politics. One more reason Virginia needs a utility regulatory commission with authority, time and staff to do its job quietly and comprehensively, instead of fixing utility rates in a subcommittee of a part-time legislature with far more important things to do and limited time to do them.

Rowinguy1 | [March 24, 2018 at 7:14 pm](#) |

[Log in to Reply](#)



The bill was designed to protect Dominion's base rates from examination and possible reduction, by its regulator, Larry. "Grid modernization" is merely this year's buzz words.

TomH | [March 24, 2018 at 1:01 pm](#) | [Log in to Reply](#)



A 9.2% rate of return on a \$100 million investment yields \$188 million in gross profit to the utility if the the project is depreciated on a straight-line basis for 40 years.

Interest charges on 50% of the project cost (the other half being an equity contribution) would require the ratepayers to pay an additional \$96 million, assuming a 6.8% interest rate (as assumed for the pipeline) if the loan was paid in monthly principal and interest payments similar to a mortgage.

That's \$384 million paid by ratepayers for a \$100 million project. That saves them how much? Acbar is correct, undergrounding distribution lines is complicated and has its own reliability issues. If they have a problem, the outage can last much longer because they have to find the location (they can't see it), dig it up (along with roads, sidewalks, or whatever else might be on top of it) and then repair it (which also could be during bad weather).

Undergrounding can have benefits. Aesthetics being one of them. But the overall benefits to ratepayers as a group is not as clear as we have been led to believe. These projects need to be carefully evaluated. It is clearly beneficial as a source of profit for the utility. It's not so clear that it will save customers any money or provide

a significant boost to system reliability (0.00002 percent improvement is not a big number).

LarrytheG | [March 24, 2018 at 1:38 pm](#) | [Log in to Reply](#)



Well.. whether the GA was myopic or misled on what Grid Modernization is or is not... it's a separate issue as to whether they really intended to address the entire grid in Va or just the grid that Dominion and Apco maintains.

In other words – was the GA seriously devoted to the task of upgrading the grid for all Virginians regardless of who they buy their electricity from or was this, instead, a bill that only applied to one or two utilities and not the many other utilities and the rest of Virginia?

If this Grid Modernization actually does apply to all of Virginia no matter who the utility is – then we can ding the GA for not understanding the Grid and modernization of it but if this bill does not apply to the rest of Virginia and really only to Dominion and Apco then it's really not about Grid Modernization at all.. even misguided modernization.

Mom | [March 24, 2018 at 1:43 pm](#) | [Log in to Reply](#)



You don't actually believe they cared enough to read or understand the bill do you? By and large they were simply lined up with instructions by their respective caucuses and marched forward with instructions on how to vote. The Dem caucus leadership went so far as to issue positions regarding dissent and amendments, and then when followed, left several of their own hanging out to dry. Politics not understanding the utility or benefits of the legislation ruled the day, the General Assembly at its clown show worst.

CleanAir&Water | [March 24, 2018 at 5:07](#)

[pm](#) | [Log in to Reply](#)



If you are talking about the CoOps that belong to ODEC ... then assume a very tight connection to Dominion. When I ran aground of all the rules blocking distributed energy in NOVA some years ago, I went to the CoOps up there and found Dominion basically in charge through ODEC.

LarrytheG | [March 24, 2018 at 1:54 pm](#) | [Log in to](#)

[Reply](#)



Well.. actually yes... I would expect the representatives from areas covered by other utilities – of which NoVa itself has others... to actually represent the interests of those they represented in the GA.

That's why I ask is the Grid Modernization bill a state-wide bill supported by all the representatives from other districts not served by Dominion.

Mom | [March 24, 2018 at 2:15 pm](#) | [Log in to Reply](#)

If you want the simplistic answer I would give most members of the GA, no it was not a “state-wide” bill but yes it was supported by representatives from other districts not served by Dominion or Apco as they either 1. were bought off with support for other legislation, 2. don't know who provides power in their districts (more of them than you would believe) 3. or simply did as they were instructed.



Acbar | [March 24, 2018 at 2:14 pm](#) | [Log in to Reply](#)

Tom H answered your question, I think (see at 12:17pm). The cross references to “Phase I” and Phase II” utilities refers as I recall to the groups



of utilities in the proposed phases of implementation of retail access. Well, retail access was largely repealed in 2007 but the cross-references still work legislatively as a deliberately-obscure way of differentiating between groups of electric utilities. Just part of the on-going shell game. How REC comes out of this specifically, I guess you'd have to ask them.

Steve Haner | [March 24, 2018 at 5:54 pm](#) | [Log in to Reply](#)



It's just APCo and Dominion. There is just one Phase 1 and one Phase 2 utility. That whole construction is just a ruse to avoid having all these bills declared to be "special legislation" which would set a higher required vote for passage.

LarrytheG | [March 24, 2018 at 6:56 pm](#) | [Log in to Reply](#)



so the concept of "grid modernization" is not actually to improve the Grid in Virginia but just the grid in Dominion's (and APCOs) service area?

So this is basically a ruse – a special legislation for Dominion and it's investors and not really for the other ratepayers in Virginia?

I'm a little surprised that Acbar and Tom are not calling this out for what it is. Not as surprised that Bacon is not calling it out... geeze.

Acbar | [March 24, 2018 at 11:20 pm](#) | [Log in to Reply](#)



Steve said it all. And both your interpretations are correct. I'm a little surprised the coops didn't object at the GA.

LarrytheG | [March 25, 2018 at 7:33 pm](#) | [Log in to Reply](#)



So one final question. In the service area that REC maintains – who decides what “modernization” needs to be done in that service area and would it be coordinated and consistent with “modernization” done in other service areas – like Dominion.

In other words is there a statewide approach to the grid modernization such that if some type of modernization is to be done in Dominion’s service area to make the grid more reliable – the same time of upgrades are also done in the other service areas – such that the entire grid is upgraded the same way so you actually do have some consistent approach overall?

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