2020 Virginia Infrastructure Report

(January 1, 2020 – December 31, 2020)

April 2021

This report reflects information for the portion of Virginia within the PJM service territory.

Table of Contents

- **Existing Capacity:** Natural gas represents approximately 50.3 percent of the total installed capacity in the Virginia service territory while hydro represents approximately 15.4 percent and nuclear 13.7 percent. In PJM natural gas and coal are 43.4 and 4.5 percent of total installed capacity, and nuclear represents 17.7 percent.

- **Interconnection Requests:** Solar represents 63.4 percent of new interconnection requests in Virginia, while natural gas represents approximately 17.8 percent of new requests and storage 13.2 percent.

- **Deactivations:** 1,252.9 MW of generation in Virginia gave notification of deactivation in 2020.

- **RTEP 2020:** Virginia's 2020 RTEP projects total approximately $1.05 billion in investment. Approximately 82.6 percent of that represents supplemental projects. These investment figures only represent RTEP projects that cost at least $5 million.

- **Load Forecast:** Virginia's peak load growth is projected to range between 0.1 and 0.9 percent annually over the next ten years, based on the service territory. The overall PJM RTO projected load growth rate is 0.3 percent.
- **2022/23 Capacity Market:** No Base Residual Auction was conducted in 2020. For the most recent auction results, please see the 2018 Virginia State Infrastructure Report.
- **1/1/20 – 12/31/20 Market Performance:** Virginia's average hourly LMPs aligned with the PJM average hourly LMP.
- **Emissions:** Virginia's carbon dioxide and sulfur dioxide emissions slightly increased in 2020, while nitrogen oxides decreased.

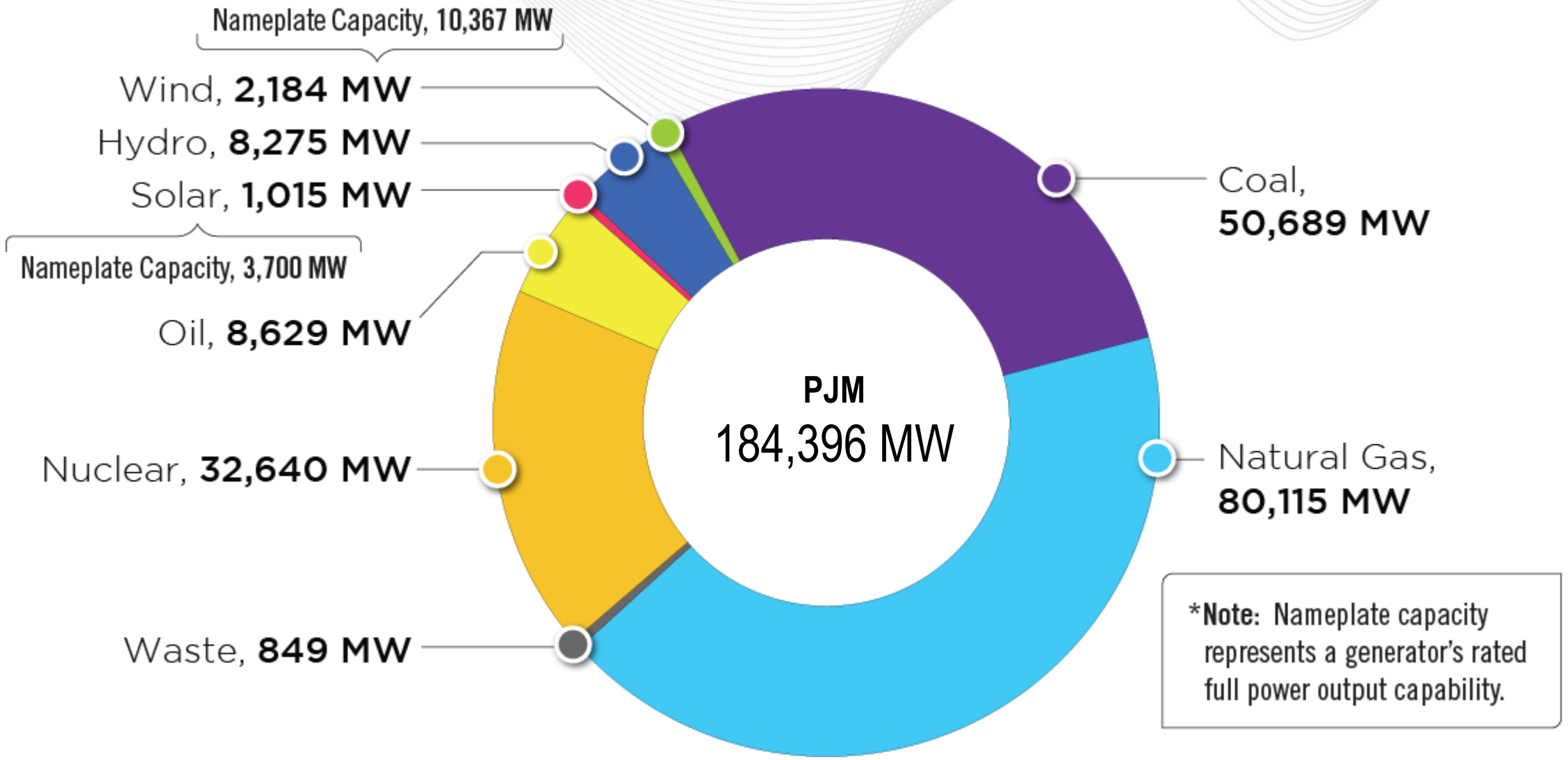
PJM Service Area – Virginia

Planning

Generation Portfolio Analysis

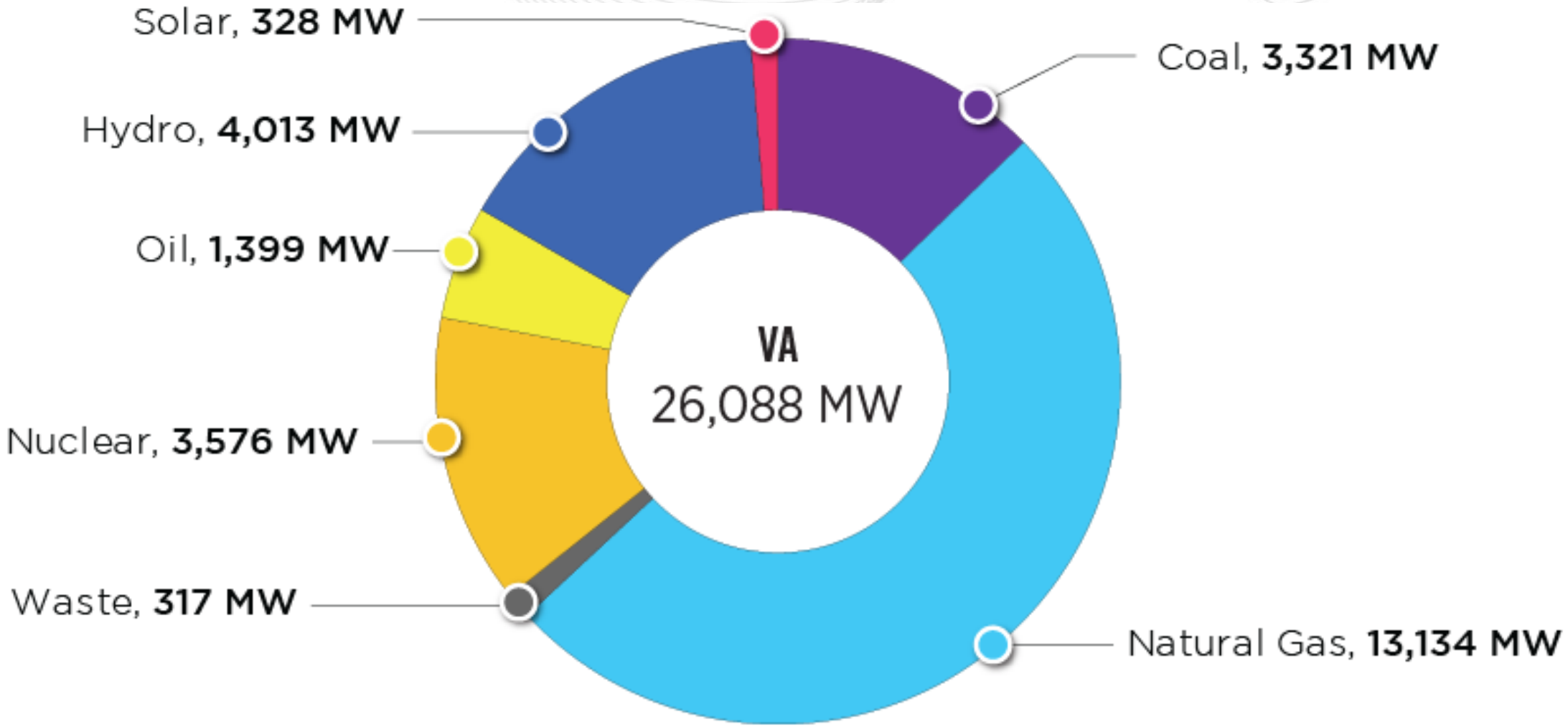
PJM – Existing Installed Capacity

(CIRs – as of Dec. 31, 2020)



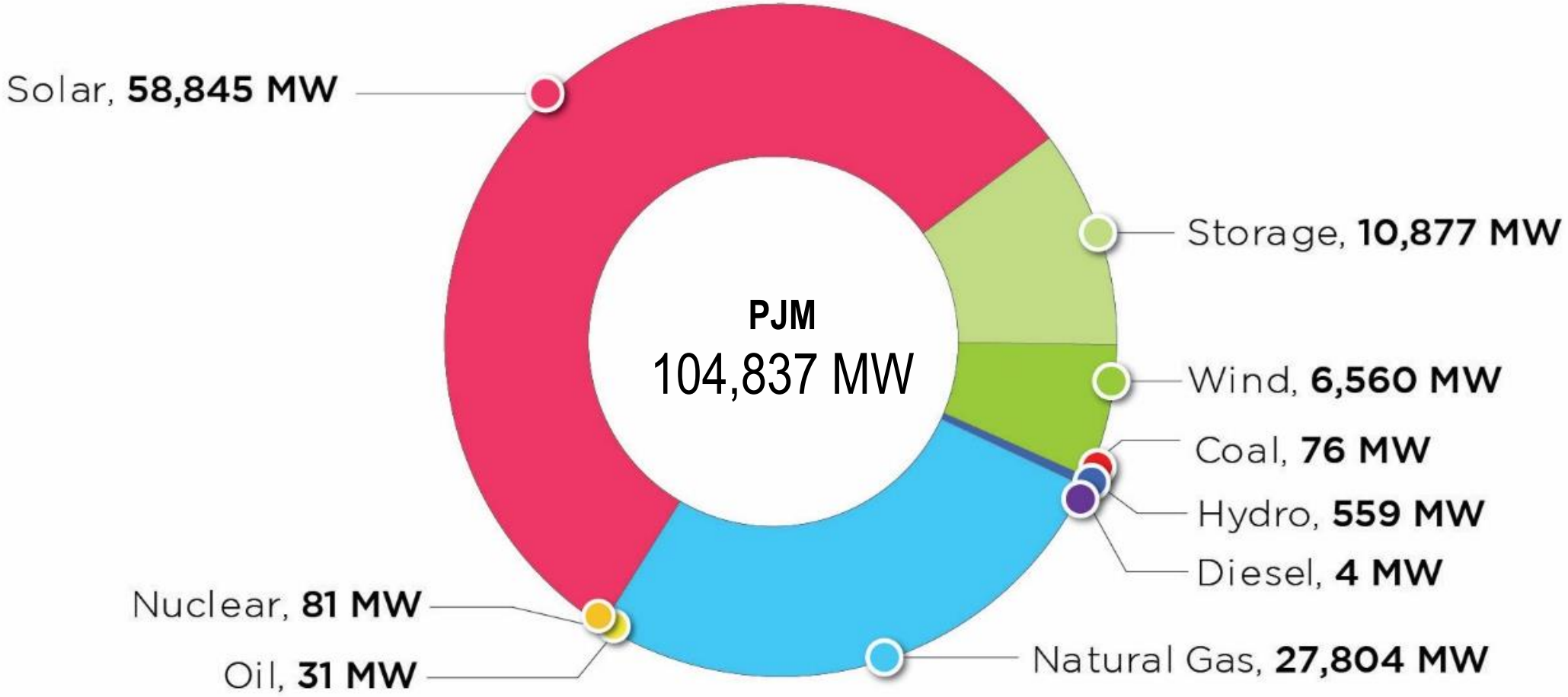
Virginia – Existing Installed Capacity

(CIRs – as of Dec. 31, 2020)



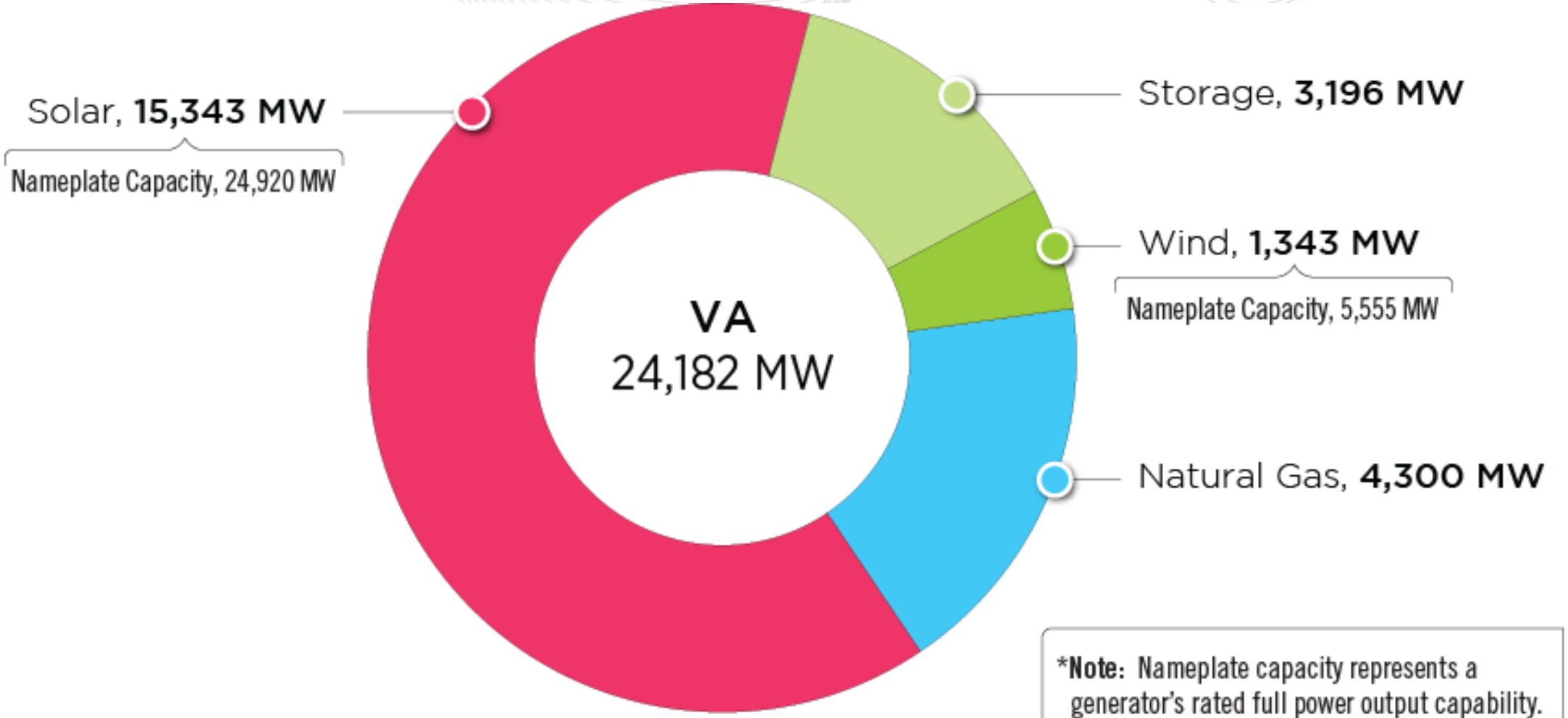
PJM – Queued Capacity (MW) by Fuel Type

(Requested CIRs – as of Dec. 31, 2020)



Virginia – Queued Capacity (MW) by Fuel Type

(Requested CIRs – as of Dec. 31, 2020)



Virginia – Interconnection Requests by Fuel Type

(Unforced Capacity – as of Dec. 31, 2020)

		In Queue						Complete				Grand Total	
		Active		Suspended		Under Construction		In Service		Withdrawn			
		Projects	Capacity (MW)	Projects	Capacity (MW)	Projects	Capacity (MW)	Projects	Capacity (MW)	Projects	Capacity (MW)	Projects	Capacity (MW)
Non-Renewable	Coal	0	0.0	0	0.0	0	0.0	8	718.9	2	35.0	10	753.9
	Diesel	0	0.0	0	0.0	0	0.0	2	2.1	2	20.2	4	22.3
	Natural Gas	4	1,621.0	0	0.0	4	2,679.0	46	7,269.4	43	17,246.8	97	28,816.2
	Nuclear	0	0.0	0	0.0	0	0.0	8	350.0	1	1,570.0	9	1,920.0
	Oil	0	0.0	0	0.0	0	0.0	6	322.2	2	40.0	8	362.2
	Other	0	0.0	0	0.0	0	0.0	1	0.0	2	136.3	3	136.3
	Storage	69	3,176.0	0	0.0	1	20.0	1	0.0	17	454.3	88	3,650.3
Renewable	Biomass	0	0.0	0	0.0	0	0.0	5	147.4	4	70.0	9	217.4
	Hydro	0	0.0	0	0.0	0	0.0	9	423.4	2	254.0	11	677.4
	Methane	0	0.0	0	0.0	0	0.0	15	100.4	11	81.8	26	182.2
	Solar	253	12,794.5	11	156.3	85	2,392.1	28	399.3	185	6,232.0	562	21,974.3
	Wind	9	1,323.9	1	9.4	1	9.9	1	1.5	31	886.2	43	2,230.9
	Wood	0	0.0	0	0.0	0	0.0	1	4.0	2	57.0	3	61.0
	Grand Total	335	18,915.5	12	165.7	91	5,101.0	131	9,738.7	304	27,083.5	873	61,004.3

Note: The ”Under Construction” column includes both “Engineering and Procurement” and “Under Construction” project statuses.

Virginia – Progression History of Interconnection Requests

Projects withdrawn after final agreement			Nameplate Capacity
15	Interconnection Service Agreements	**1,934** MW	2,275 MW
25	Wholesale Market Participation Agreements	**243** MW	403 MW

Percentage of planned capacity and projects that have reached commercial operation	
24% Requested capacity megawatts	**27 %** Requested projects

This graphic shows the final state of generation submitted to the PJM queue that completed the study phase as of Dec. 31, 2020, meaning the generation reached in-service operation, began construction, or was suspended or withdrawn. It does not include projects considered active in the queue as of Dec. 31, 2020.

Virginia – Generation Deactivation Notifications Received in 2020

Unit	TO Zone	Fuel Type	Request Received to Deactivate	Actual or Projected Deactivation Date	Age (Years)	Capacity (MW)
Birchwood Plant	Dominion	Coal	10/6/2020	3/1/2021	24	238.0
Chesterfield Unit 5			2/20/2020	5/31/2023	56	336.8
Chesterfield Unit 6			2/20/2020	5/31/2023	51	678.1

Planning

Transmission Infrastructure Analysis

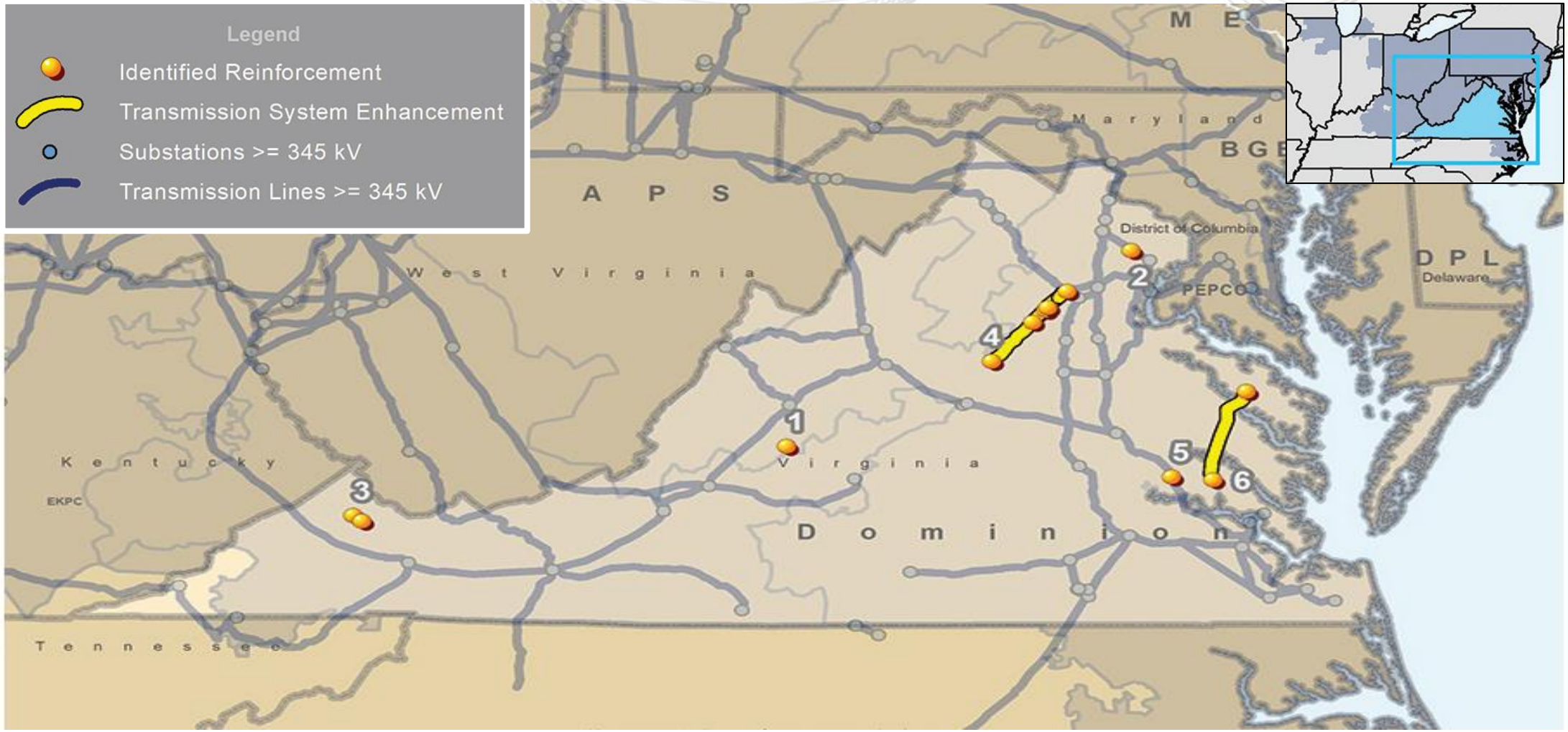
Please note that PJM historically used $5 million as the threshold for listing projects in the RTEP report. Beginning in 2018, it was decided to increase this cutoff to $10 million. All RTEP projects with costs totaling at least $5 million are included in this state report. However, only projects that are $10 million and above are displayed on the project maps.

For a complete list of all RTEP projects, please visit the “RTEP Upgrades & Status – Transmission Construction Status” page on pjm.com.

https://www.pjm.com/planning/project-construction

Virginia – RTEP Baseline Projects

(Greater than $10 million)



Note: Baseline upgrades are those that resolve a system reliability criteria violation.

Virginia – RTEP Baseline Projects

(Greater than $5 million)

Map ID	Project	Description	Required In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
1	b3098	Rebuild Balcony Falls substation.	6/1/2019	$29.00	Dominion	5/21/2020
2	b3110	Replace the Clifton 230 kV breakers 201182 and XT2011 with 63 kA breakers.	12/31/2021	$15.47		8/4/2020
3	b3139	Rebuild the Garden Creek-Whetstone 69 kV line (~0.4 mile).	6/1/2023	$14.00	AEP	10/17/2019
4	b3162	Acquire land and build a new 230 kV switching station (Stevensburg) with a 224 MVA, 230/115 kV transformer. Gordonsville-Remington 230 kV (Line No. 2199) will be cut and connected to the new station. Remington-Mount Run 115 kV (Line No. 70) and Mount Run-Oak Green 115 kV (Line No. 2) will also be cut and connected to the new station.	6/1/2024	$22.00	Dominion	12/16/2019

Virginia – RTEP Baseline Projects

(Greater than $5 million)

Map ID	Project	Description	Required In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
5	b3213	Install second Chickahominy 500/230 kV transformer.	6/1/2023	$25.76	Dominion	6/2/2020
6	b3223	Install a second 230 kV circuit with a minimum summer emergency rating of 1047 MVA between Lanexa and Northern Neck substations. The second circuit will utilize the vacant arms on the double-circuit structures that are being installed on the Line No. 224 (Lanexa-Northern Neck) end-of-life rebuild project (B3089).		$23.00		9/1/2020
	b3140	Rebuild the Whestone - Knox Creek 69 kV line (3.1 mile)	6/1/2023	$9.00	AEP	10/17/2019
	b3141	Rebuild the Knox Creek - Coal Creek 69 kV line (2.9 mile)	6/1/2023	$9.00		10/17/2019
	b3161	Install two, 2000 Amp, 115kV line switches. Extend Reymet fence and bus to allow installation of risers to Line #53.	6/1/2024	$5.30	Dominion	12/16/2019
	b3247	Replace 13 towers with galvanized steel towers on Doubs - Goose Creek 500 kV. Reconductor 3 mile section with 3-1351.5 ACSR 45/7. Upgrade line terminal equipment at Goose Creek substation to support the 500 kV line rebuild.	6/1/2025	$7.60		9/1/2020

Virginia – RTEP Network Projects

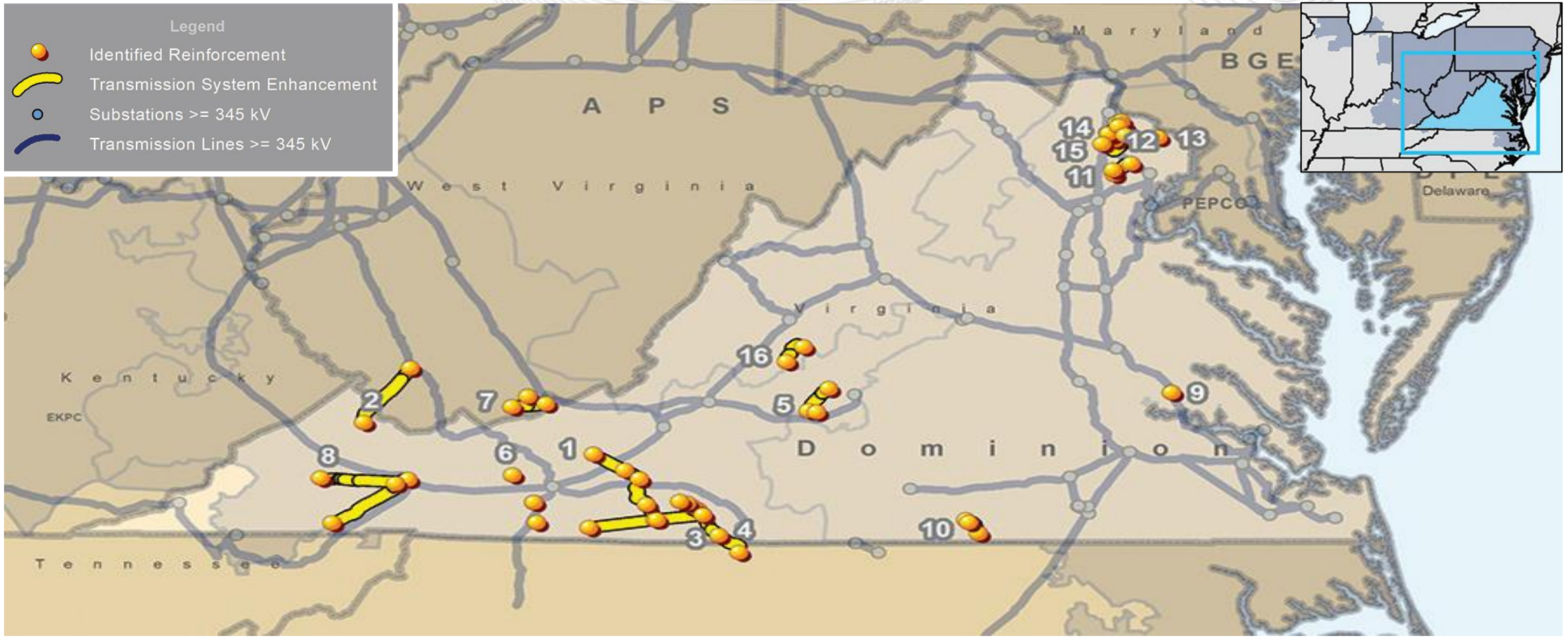
(Greater than $5 million)

Map ID	Project	Description	Generation	Required In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
	n5202	Build a three breaker ringbus at Wards Creek substation	AB2-190	2/1/2019	$5.99	Dominion	9/28/2020
	n5809	Buil new three breaker ring bus at the new AB2-160 substation	AB2-160	12/31/2021	$5.28		9/28/2020
	n5810	Install transmission structures to loop the Reams - Sapony line #69 and run fiber optic wire to Locks			$5.30		9/28/2020
	n6046	Build a three breaker ring bus at the new AC1-145 substation	AC1-145	12/18/2020	$5.06		9/28/2020

Note: Network upgrades are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission or long term firm transmission service requests, as well as certain direct connection facilities required to interconnect proposed generation projects. The costs of network projects are borne by the interconnection customer.

Virginia – TO Supplemental Projects

(Greater than $10 million)



Note: Supplemental projects are transmission expansions or enhancements that are not required for compliance with PJM criteria and are not state public policy projects according to the PJM Operating Agreement. These projects are used as inputs to RTEP models, but are not required for reliability, economic efficiency or operational performance criteria, as determined by PJM.

Virginia – TO Supplemental Projects

(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
1	s2179	Construct ~12.5 miles of 138 kV line from Alum Ridge to Claytor.	11/1/2027	$326.90	AEP	1/17/2020
		Construct ~6.5 miles of 138 kV line from Alum Ridge to Floyd.	11/2/2026			
		Construct ~7 miles of 138 kV line from Fieldale to Fairystone.	9/2/2024			
		Construct ~1.25 miles of double-circuit 138 kV line to connect Stanleytown.	11/16/2026			
		Construct 0.07 miles of 138 kV line from Bassett Switch to Bassett.	6/1/2026			
		Construct ~1.2 miles of 138 kV line from Philpott Dam to Fairystone.	10/31/2027			
		Construct ~22 miles of 138 kV line from Salem Highway to Willis Gap.	7/1/2024			
		Construct ~21 miles of 138 kV line from Salem Highway to Fairystone.	10/31/2027			
		Construct ~11 miles of 138 kV line from Floyd to Woolwine.				
		Construct ~10 miles of 138 kV line from Salem Highway to Woolwine.	11/1/2024			
		Remove ~11 miles of 69 kV line from Floyd to Woolwine.	6/2/2025			
		Remove ~10 miles of 69 kV line from Stuart to Woolwine.	10/31/2027			

Virginia – TO Supplemental Projects

(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
1	s2179	Remove ~12.2 miles of 138 kV line from Alum Ridge to Claytor.	11/1/2027	(Continued)	AEP	1/17/2020
		Remove ~6.25 miles of 138 kV line from Alum Ridge to Floyd.	11/2/2026			
		Remove ~19 miles of 138 kV line from Floyd to West Bassett.	8/14/2026			
		Remove ~6.4 miles of 138 kV line from Fieldale to West Bassett.	6/15/2026			
		Remove ~0.34 miles of 138 kV line from Philpott substation to Philpott.	11/16/2026			
		Remove ~19 miles of 69 kV line from Fieldale to Stuart.	8/14/2026			
		Remove ~7.1 miles of 69 kV line from Fieldale to West Bassett.	6/15/2026			
		Remove ~6.8 miles of 69 kV line from Fieldale to West Bassett.				
		At Floyd station, install two 138 kV circuit breakers (3000 A 40 kA). Install high-side circuit switcher on Transformer 2 (3000A 40 kA). Station expansion to accommodate new equipment and drop-in control module. Install 138 kV line relaying, CCVT's, breaker controls, bus differential protection, Transformer No. 2 protection.	9/1/2025			
		At Fieldale station, retire 69 kV circuit breakers G, D and C. Install CCVTs and arresters on 138 kV West Bassett line.	11/13/2026			
		At Bassett switch, install 138 kV switch with two 138 kV MOABs.	6/1/2026			
		At Bassett station, convert station from 69 kV to 138 kV. Install 138/12 kV transformer with high-side circuit switcher, transclosure and associated distribution feeders.				

Virginia – TO Supplemental Projects

(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
1	s2170	At Claytor 138 kV station, install line relaying. Remove wavetrap. Replace 1590 AAC risers.	11/1/2027	(Continued)	AEP	1/17/2020
		Retire Philpott 138 kV switch structure.	11/16/2026			
		At Willis Gap station, install two 138 kV MOABs. Terminate new Salem Highway-Willis Gap 138 kV line.	6/3/2024			
		At Woolwine station, convert station from 69 kV to 138 kV. Retire/remove 69 kV switch structure, 69 kV MOABs and 69/34.5 kV transformer. Install 138 kV three-way switch structure with MOABs and 138/34.5 kV transformer with high-side circuit switcher.	11/1/2024			
		At Salem Highway station, establish new 138 kV station replacing Stuart station. Install 138 kV five-breaker ring bus, 138/34.5 kV & 138/12 kV transformers with high-side circuit switchers. Terminate Huffman, Floyd and Fairystone 138 kV circuits.	9/2/2024			
		At Stuart 69 kV station, retire and remove all existing equipment and control house.	6/2/2025			
		At Stanleytown station, convert station from 69 kV to 138 kV. Retire/remove 69 kV switch structure, 69 kV MOABs, 69/12 kV transformer. Install 138 kV three-way switch structure with MOABs and 138/12 kV transformer with high-side circuit switcher.	11/13/2026			
		At Fairystone station, establish new 138 kV station replacing West Bassett. Install 138 kV, four-breaker ring bus, 138/34.5 kV transformer with high-side circuit switcher and associated distribution feeders. Terminate Salem Highway, Fieldale and Philpott Dam 138 kV circuits.	10/31/2027			
		At Claudville station, establish new 138/34.5 kV distribution station with two 138 kV CBs, 138/34.5 kV transformer and three 34.5 kV feeders.				
		Provide transition, entry and termination for OPGW connectivity at Willis Gap, Claytor, Alum Ridge, Floyd, Woolwine, Stuart, Fairystone, Philpott Dam, Bassett, Stanleytown, Fieldale and Salem Highway to support fiber relaying.	7/1/2024			

Virginia – TO Supplemental Projects

(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
2	s2189	Rebuild ~27.8 miles of the existing Baileysville–Hales Branch 138kV circuit.	8/1/2026	$98.50	AEP	2/21/2020
3	s2190	Rebuild approximately 15 miles of the AEP-owned portion of the 138 kV line between Fieldale and Dan River stations (AEP/Duke ownership changes at the border of North Carolina and Virginia).	10/31/2022	$32.20		
4	s2191	Construct ~5.75 miles of new double-circuit 138 kV line from the Fieldale-Ridgeway 138 kV circuit to a new Commonwealth Crossing station.	3/1/2020	$15.20		
		Establish a new 138/34.5 kV Commonwealth Crossing station with two 138 kV, 3000 A 40 kA circuit breakers, high-side 3000 A 40 kA circuit switcher, 138/34.5 kV, 30 MVA transformer and three 34.5 kV distribution feeders.				
		Install 5.75 miles of 48 count fiber between Commonwealth Crossing station and Ridgeway station to support SCADA and relaying.				
5	s2192	Rebuild 11.6 mile section of the Reusens-Altavista 138 kV line asset from Reusens to New London. ~5.5 miles consists of double-circuit 138 kV construction and ~6 miles consists of single-circuit 138 kV construction between Reusens and New London.	10/31/2022	$36.20		
		Install a 57.6 MVAR cap bank at Brush Tavern due to low-voltage concerns from operations during construction outages in the area.				
6	s2214	At Galax station, replace existing 69 kV circuit breakers F, G, and H with new 3000A 40 kA circuit breakers.		$10.20		3/19/2020
		At Byllesby station, replace existing 69 kV circuit breakers B and D with new 3000A 40 kA circuit breakers.				
		At Jubal Early station, replace the existing 138/69/34.5 kV 75 MVA XFR with a new 138/69/34.5 kV 90 MVA XFR.				
		At Wythe station, replace existing 138/69 kV, 75 MVA XFR with a new 138/12 kV 20 MVA XFR, remove 69 kV CBs F and M, remove 69 kV bus and install 12 kV bus. Retire Lee Highway station and serve load from Wythe.				
7	s2226	Construct ~10 miles of new 138 kV line between Glen Lyn and Speedway. New right-of-way will be required for the new Glen Lyn-Speedway 138 kV line. Retire the existing section of line from Glen Lyn to Hatcher switch (~8 miles), including Hatcher switch.	5/1/2023	$55.40		
		Retire Hatcher switch. Install MOABs at Speedway on new line to Glen Lyn and existing line towards South Princeton. Install a circuit switcher on the Speedway transformer.				
		Rebuild ~7.3 miles of the Glen Lyn-South Princeton 138 kV circuit between Speedway station and the previous Hatcher switch.	12/1/2026			
8	s2250	Rebuild the existing Broadford-Wolf Hills/Clinch River-Saltville No. 2 138 kV double-circuit line (~26 miles) section between Saltville and Wolf Hills stations.	5/1/2024	$107.10		4/20/2020

Virginia – TO Supplemental Projects

(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
9	s2319	Replace the three single phase 500/230 kV transformer banks and one spare bank with new units at Chickahominy.	9/30/2019	$14.10	Dominion	2/4/2020
10	s2320	Obtain land and build a 115 kV switching station (Cloud), adjacent to MEC's new Coleman Creek DP. Split Line No. 38 (Kerr Dam-Boydton Plank Rd.), extend a double-circuit 115 kV line for ~1.76 miles (new right-of-way) and terminate both lines into the new switching station. The switching station will consist of one breaker separating the two new lines. Provide one 115 kV line to serve MEC's new DP. Additionally, a 33 MVAR capacitor bank will be required at Herbert to provide additional voltage support.	11/30/2020	$16.00		2/11/2020
11	s2321	Install a 1,200 amp, 50 kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Cloverhill.	6/1/2022	$17.75		3/10/2020
		Install a 1,200 amp, 50 kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Winters Branch.	1/1/2022			5/12/2020
		Install a 1,200 amp, 50 kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Winters Branch.	3/1/2023			
		Reconductor the 230 kV line No. 2011 from Clifton to Cannon Branch (7.54 miles) using a higher capacity conductor as well as terminal equipment upgrades to achieve an expected rating of 1574 MVA.	12/31/2025			10/6/2020
12	s2324	Interconnect the new Aviator substation by cutting and extending line No. 2137 (Poland-Shellhorn) ~0.5 miles to the proposed substation. Terminate both ends into a four-breaker ring arrangement to create an Aviator-Poland line and an Aviator-Shellhorn line. Dominion's standard high-ampacity conductor (bundled 768 ACSS; normal summer rating: 1572 MVA) will be used for the line extension.	12/15/2024	$22.00		5/12/2020
13	s2326	Construct one 230 kV underground line from Tysons Substation to a new substation named Springhill substation to replace the portion of existing Ohio line No. 2010. Install a 230 kV, 50-100 MVAR variable shunt reactor at Tysons substation.	12/31/2025	$40.00		5/12/2020

Virginia – TO Supplemental Projects

(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
14	s2328	Install a 1,200 amp, 50 kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Waxpool.	10/1/2021	$29.30	Dominion	6/2/2020
		Install a 1,200 amp, 50 kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Pacific.	12/15/2021			8/4/2020
		Install a 1,200 amp, 40 kAIC circuit switcher and associated equipment (bus, switches, relaying, etc.) to feed the new transformer at Cumulus.	3/1/2022			8/4/2020
		Reconductor the 230 kV line 2152 from Beaumeade to Nimbus (2.16 miles) using a higher capacity conductor as well as terminal equipment upgrades to achieve an expected rating of 1574 MVA.	12/31/2025			10/6/2020
		Reconductor the 230 kV line 9173 from Nimbus to Buttermilk (0.94 miles) using a higher capacity conductor as well as terminal equipment upgrades to achieve an expected rating of 1574 MVA.				
		Reconductor the 230 kV line 9185 from Beaumeade to Paragon Park (1.0 miles) using a higher capacity conductor as well as terminal equipment upgrades to achieve an expected rating of 1574 MVA.				
		Reconductor the 230 kV line 2209 from Evergreen Mills to Yardley Ridge (0.16 miles) using a higher capacity conductor as well as terminal equipment upgrades to achieve an expected rating of 1574 MVA.				
		Reconductor the 230 kV line 2095 from Cabin Run to Shellhorn (4.73 miles) using a higher capacity conductor as well as terminal equipment upgrades to achieve an expected rating of 1574 MVA.				

Virginia – TO Supplemental Projects

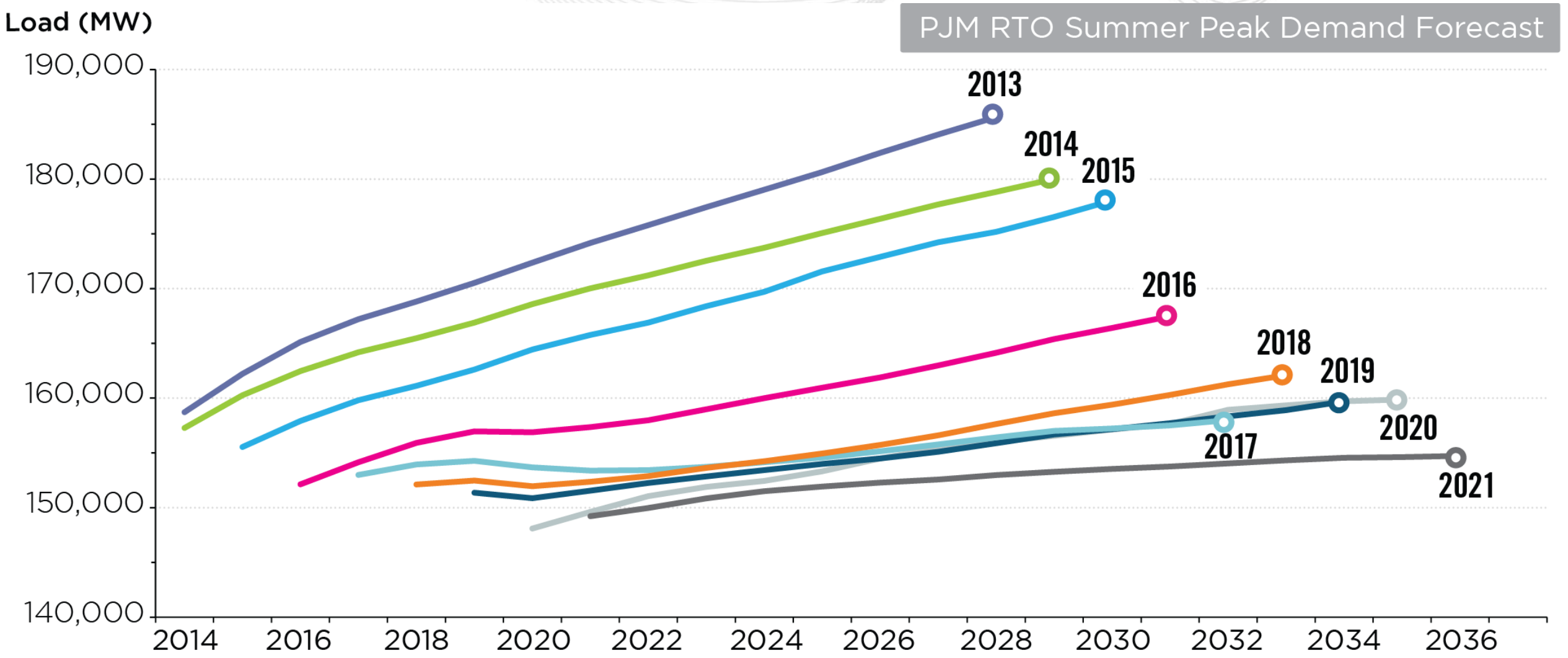
(Greater than $5 million)

Map ID	Project	Description	Projected In-Service Date	Project Cost ($M)	TO Zone	TEAC Date
15	s2329	Interconnect the new substation Lincoln Park by cutting and extending line No. 2008 (Dulles-Loudoun) and line No. 2143 (Discovery-Reston) to the proposed substation. Lines to terminate in a six-breaker ring arrangement.	9/1/2023	$10.47	Dominion	6/2/2020
		Replace 50 kAIC Clifton L282 breaker with 63 kAIC model.	6/1/2025			10/6/2020
16	s2337	Rebuild ~9.771 miles of line No. 26, between Balcony Falls and Buena Vista, to current 115 kV standards and with a minimum rating of 261 MVA.	12/31/2024	$20.00		8/13/2020
	s2252	Establish new Glenmary 138 kV station with 2-138 kV circuit breakers and a 138/12 kV, 25 MVA transformer with high-side circuit switcher and 3 distribution feeders.	8/1/2021	$5.10	AEP	4/20/2020
		Add a tap structure to the Kumis-Cloverdale (between Matt Funk and West Salem) 138 kV line.				
		Construct ~0.5 miles of double circuit 138 kV extending from the Kumis-Cloverdale 138 kV line to the new Glenmary Station.				
		Upgrade line relay and retire wave trap on the Matt Funk Line at Cloverdale station.				
		Upgrade line relay and retire wave trap on the Cloverdale Line at Matt Funk station.				
		Install 0.2 mi of fiber for station entrances into Glenmary station.				
	s2339	Interconnect new substation Sojourner by cutting and extending 230kV Line #2137 (Aviator-Shellhorn). Lines to terminate in a 230kV four-breaker ring arrangement with a provision to add two additional 230kV breakers for an ultimate of a six-breaker ring arrangement.	3/15/2022	$8.00	Dominion	10/6/2020

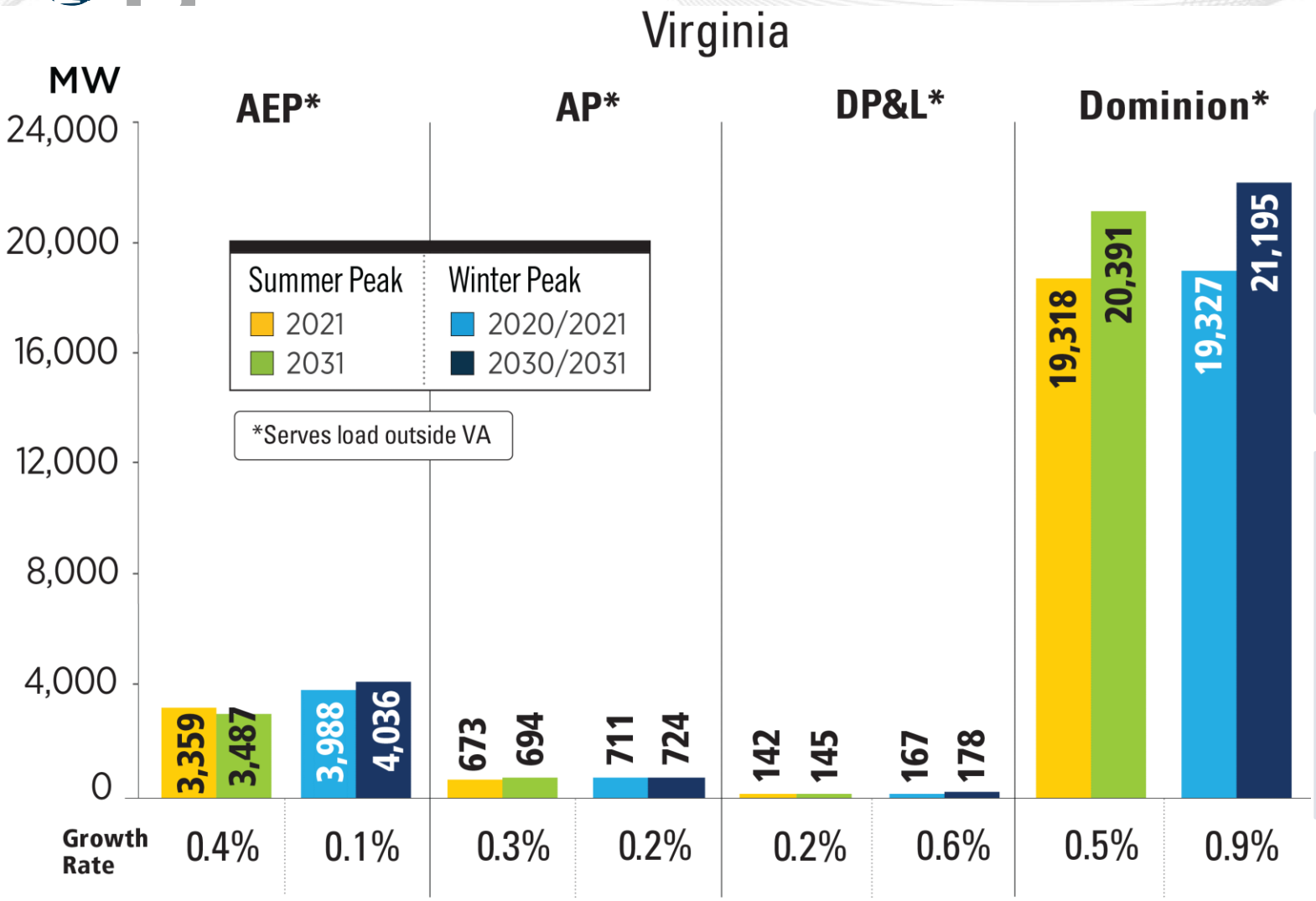
Planning
Load Forecast

PJM Annual Load Forecasts

(Jan. 2021)



Virginia – 2021 Load Forecast Report



PJM RTO Summer Peak

2021	2031
149,223 MW	153,759 MW

Growth Rate 0.3%

PJM RTO Winter Peak

2020/2021	2030/2031
132,027 MW	135,568 MW

Growth Rate 0.2%

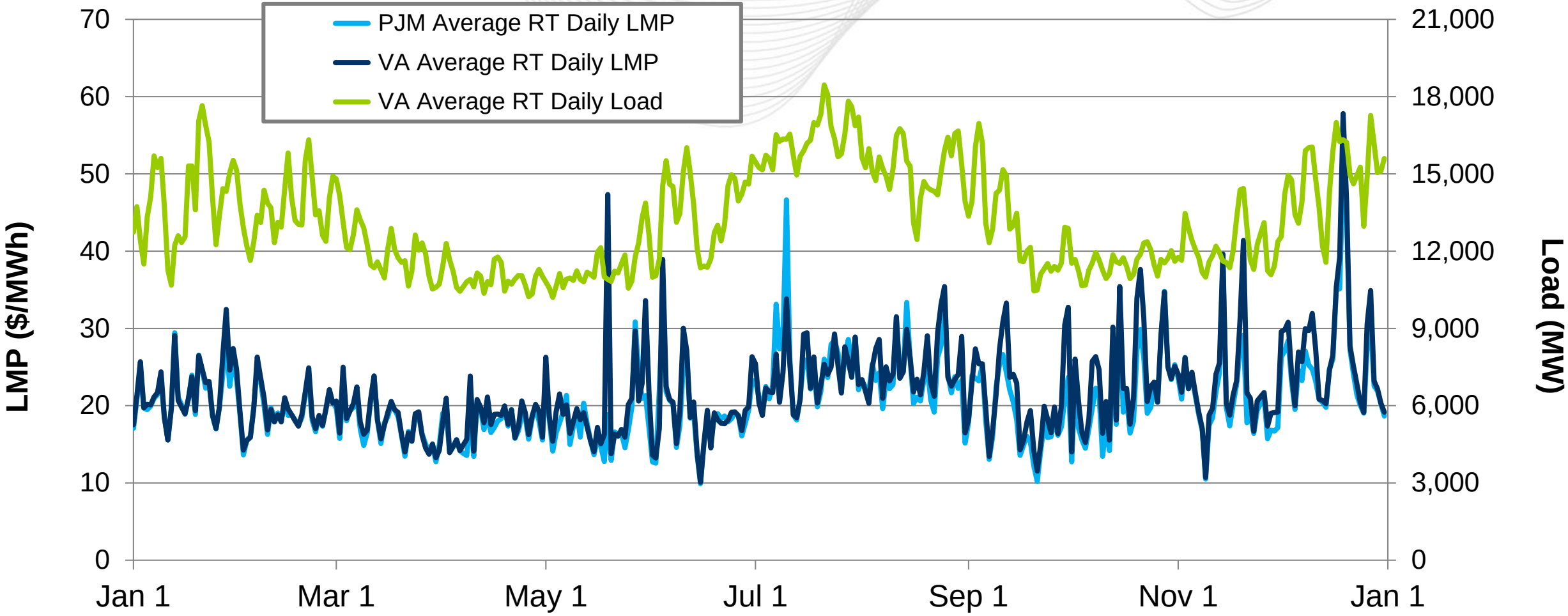
The summer and winter peak megawatt values reflect the estimated amount of forecasted load to be served by each transmission owner in the noted state/district. Estimated amounts were calculated based on the average share of each transmission owner's real-time summer and winter peak load in those areas over the past five years.

Markets

Market Analysis

Virginia – Average Daily LMP and Load

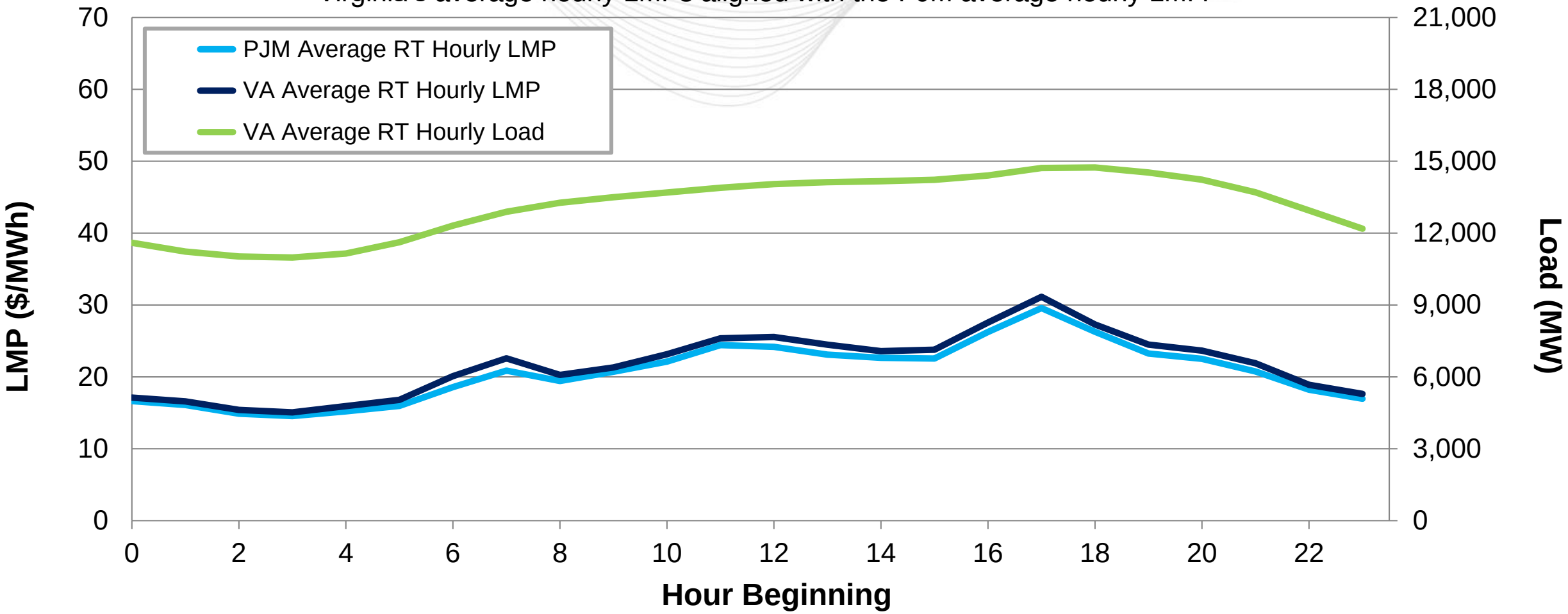
(Jan. 1, 2020 – Dec. 31, 2020)



Virginia – Average Hourly LMP and Load

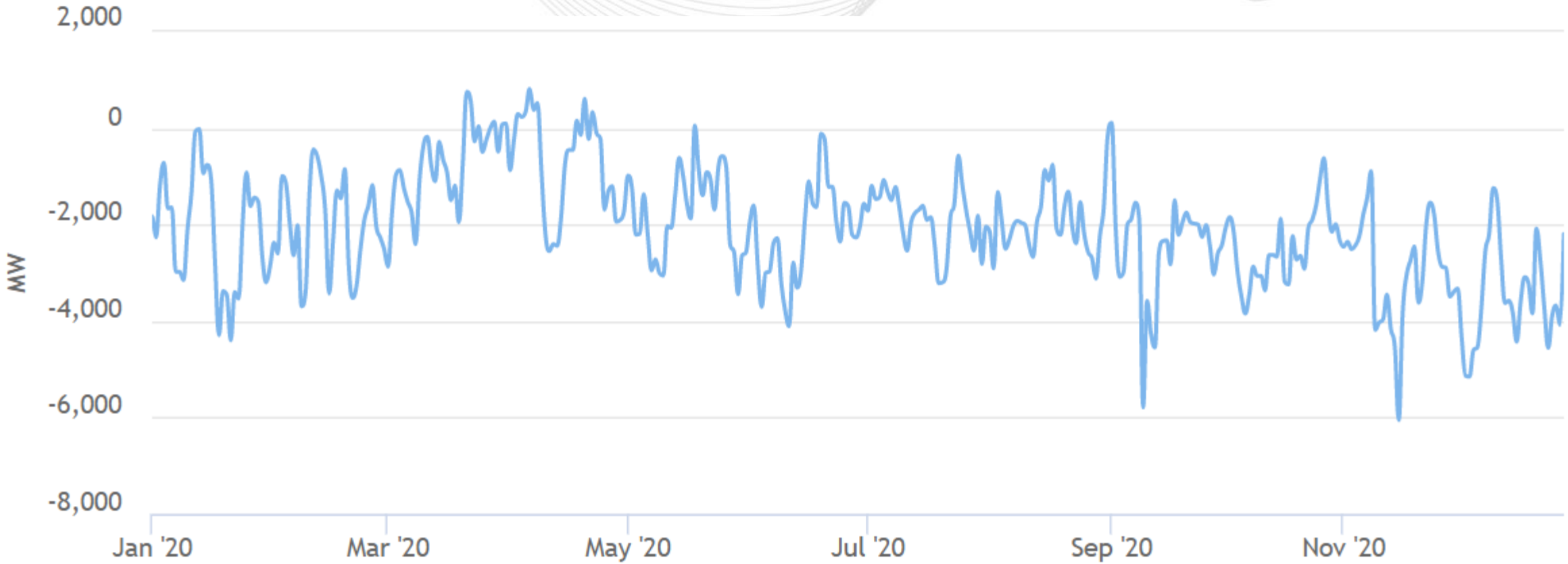
(Jan. 1, 2020 – Dec. 31, 2020)

Virginia's average hourly LMPs aligned with the PJM average hourly LMP.



Virginia – Net Energy Import/Export Trend

(Jan. 2020 – Dec. 2020)

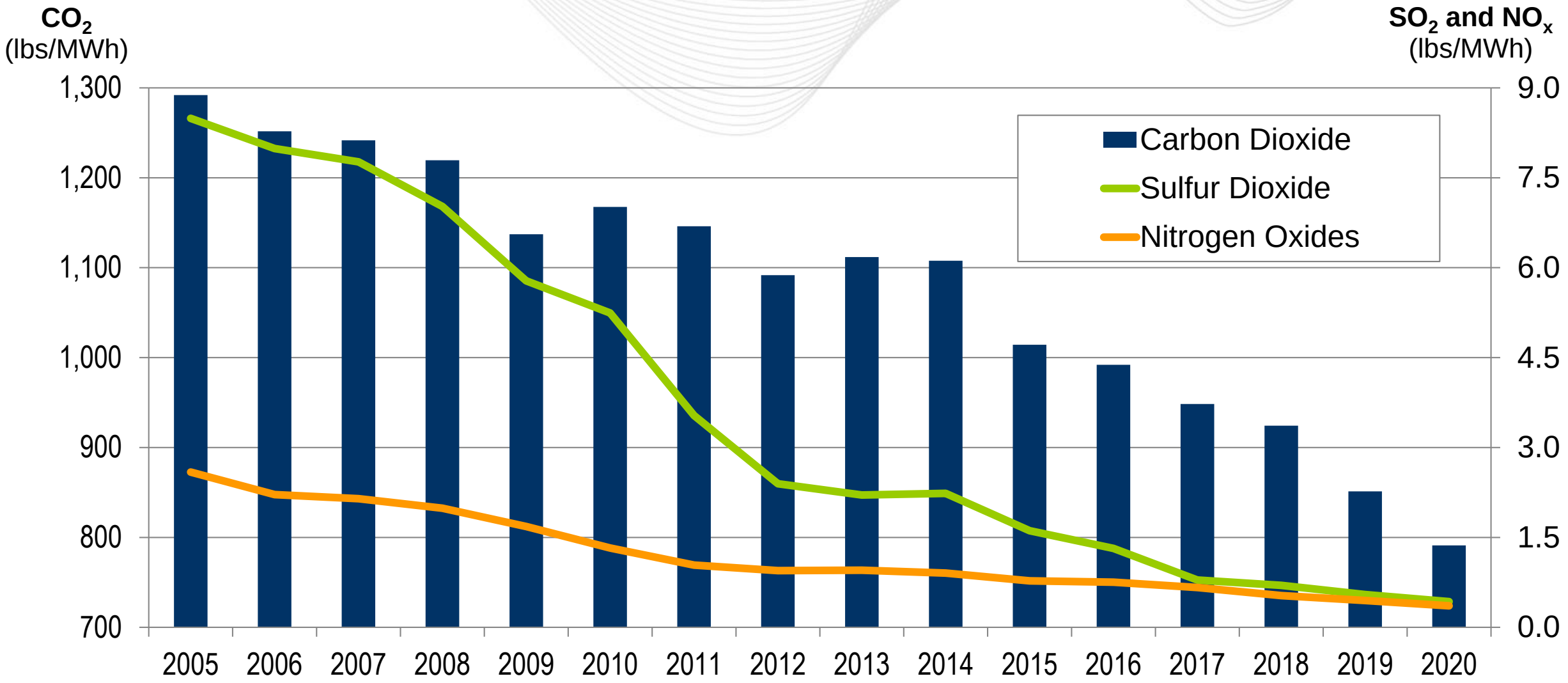


This chart reflects the portion of Virginia that PJM operates. Positive values represent exports and negative values represent imports.

Note – A significant amount of generation from units owned by Virginia jurisdictional utilities and included in regulated rates charged to Virginia customers are physically located outside of Virginia. They are categorized as imports in the chart.

Operations
Emissions Data

2005 – 2020 PJM Average Emissions



Virginia – Average Emissions (lbs/MWh)

(Feb. 2021)