Transmission Line Proliferation
The impact of data center overdevelopment
Loudoun is the data center capital of the world
Data centers consume a huge amount of electricity. Over 60 MW per building = 15,000 homes.
Currently 57 million square feet existing or being constructed in the state...
Operational IT Load (MW)

Source: Cushman Wakefield Research, datacenterHawk, DC Byte
Data center proposals keep coming…

You can view this map and zoom in/out at:

pecva.org/data-center-map
There’s another 180 million square feet approved or in the pipeline...
Buildout compared to residential load demand: 1 MW serves 250 homes…

Total Current Load From Data Centers in VA

= 3,200 MW

800,000 homes

Proposed Data Centers in the State could reach up to…

54,105 MW!

13.5 million homes!
More demand than all the homes in these cities combined:

- New York
- London
- Paris
- Washington DC
- Miami
- Atlanta
Skyrocketing Load Demand

Dominion Energy

![Graph showing load demand projections with green for 2024 and blue for 2023, with peaks at 23GW and 22GW respectively.]

Green = 2024 projection
Blue = 2023 projection
Forecasted Dominion Energy annual electricity sales

Data center electric sales will increase by 152% in the next decade, while others sectors remain mostly the same.

The overall increase in electricity sales is forecasted to be 32% over 10 years. That accounts for increased energy efficiency among other sectors. The forecast does not include projected electricity demand from electric vehicles.

Chart: Emily Richardson/VCU Capital News Service • Source: The Energy Transition Initiative at the Weldon Cooper Center for Public Service. • Created with Datawrapper
Dominion Energy and data center companies are making major power agreements without any oversight or planning...
More data centers need more power and transmission lines
The cost to build these will be **passed on to ratepayers**.
Our bills to **double** in 11 years

“...the Company projects the monthly bill of a Virginia residential customer using 1,000 kilowatt hours (“kWh”) per month to be $243.20 by 2035, an increase of $127.02 over the May 1, 2020 level...”

- Dominion legal notice Oct. 25, 2023
72 projects proposed - Oct ‘23.
Narrowed to 3 in Loudoun - Dec. ‘23
3 Part Eastern Loudoun loop

For existing data centers.

Not for approved-but-not-built or new applications.
The Connecting Link

- Dominion is working on alternatives to propose to the public.
- Mailers to go out in mid-June.
- Open houses (virtual and in-person) expected end of July/early August.

ROUTE has yet to be determined.
**Other Northern VA Dominion Energy Projects**

- Twin Creeks to Apollo
- Aviator to Takeoff
- Reconductoring projects
- Line 514
What is NIETC?

The Federal Power Act authorizes the Secretary of Energy to designate any geographic area as a National Interest Electric Transmission Corridor (NIETC) if the Secretary finds that consumers are harmed by a lack of transmission in the area and that the development of new transmission would advance important national interests in that area, such as increased reliability and reduced consumer costs.

4 Phase process which began in February
Preliminary List of Potential National Interest Electric Transmission Corridors
A NIETC designation for the MARL line project could overrule the Virginia SCC.
# Threshold Need Determination

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<th>Resilience</th>
<th>Congestion</th>
<th>Consumer Costs</th>
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**Reliability** = Operate transmission system elements within equipment and electric system thermal, voltage, and stability limits

**Resilience** = Withstand and/or recover from system disruptions or unanticipated failure of system elements, particularly extreme weather events

**Congestion** = Alleviate economic impacts on the users of electricity that result from a transmission constraint

**Consumer Costs** = Facilitate delivery of lower-cost resources to high-priced demand areas

**Future Generation & Demand Growth** = Accommodate likely scenarios of future power system characteristics driven by market forces and utility, state, and federal policies

**Clean Energy** = Interconnect clean energy resources to reduce greenhouse gas emissions
A Billion dollar investment to connect to fossil fuel plants: Fort Martin and Harrison coal-fired plants to stay open
Wind mostly about 50 megawatts (MW)
Solar, Biomass, and Hydro mostly <10 MW

Mt Storm Coal
1700 MW
Est. 1965/66/73

Ft. Martin Coal
1100 MW
Extended to 2035

Harrison Coal
2000 MW
Extended to 2040

Long View Coal
860 MW
Est. 2011

Mitchell Coal
1600 MW
Est. 1971
Long Ridge Gas
521 MW

Cardinal Coal
1800 MW
Est. 1963, 67, 77

Sassis Coal
1700 MW
CLOSED 2023

Expanded 230 kV corridor

Dickerson Gas 330 MW
Est. 1992

Greenhill ROW

Stonewall Gas 780 MW
Est. 2017

New Creek Wind 100 MW

Ned Power Wind 264 MW

Greensburg

Almona

Rose Valley Lake

Doubt

502 Jctn
What can you do on transmission line proposals?

Send comments on NIETC
by June 24
NIETC@hq.doe.gov

Send SCC comments:
- Aspen to Golden online comments by September 10.
- MARL line TBD

More info to come
What can you do to advocate for state and federal reform?

- Share information with friends, family, contacts and neighbors.
- Reach out to state elected officials and ask them to support data center reform legislation at state level.
- Tell Congress to support the Artificial Intelligence Environmental Impacts Act.
- Financially support the local efforts and the broader campaign needed!
Still Digging the Hole Deeper
Pending Legislative Approvals

3 Applications Currently up for Consideration

- Orme Farm
  - BOS Public Hearing
  - BOS Vote
- Hiddenwood Assemblage
  - BOS Public Hearing
- Greenlin Park
  - Planning Commission Business Meeting
Orme Farm

Rezoning and 2 Special Exceptions

11.7 acres from JMLA 20 to PD-IP

Increased Floor Area Ratio from 0.6 to 1.0

Increased Maximum lot coverage from 0.45 to 0.60
Hiddenwood Assemblage

Rezoning

28.92 acres from CR-1 to PDIP

Allows for existing homes to be torn down to be replaced by a 756,024 sqft data center
Concept Development Plan from Application

Future Site Entrance onto Dulles West Blvd.

100' Building Setback

150' Building Setback

Hiddenwood Lane

Potential Interparcel Connection to JK Technology Park #2 parcel.
Proposed Data Centers Near Residential Parcels in Arcola

Residential Parcels
Existing Data Centers
Proposed Data Centers
Data Center Owned
Utility-owned land
Property Lines
Electric Transmission Lines

Hiddenwood Assemblage Proposed Data Center
Greenlin Park

Rezoning

81.17 acres from TR-10 and JMLA-20 to PD-IP

Building Height increase 36’ allowed, 60’ requested by applicant
Dates to Watch

Board of Supervisors  bos@loudoun.gov

- Public Hearing 2nd Wednesday (after the first Monday)
- Business Meeting 1st Tuesday

Orme Farm  July 2nd Business Meeting, final vote
Hiddenwood Assemblage  July 10th Public Hearing
Greenlin Park  Late Summer to Fall Public Hearing

Planning Commission  loudounpc@loudoun.gov

- Public Hearing 4th Tuesday
- Work Session 2nd Thursday

Greenlin Farm moved to July 11th work session
Time to Stop Digging and demand better solutions