DATA CENTERS DISCUSSION: GHG EMISSIONS INVENTORY AND ENERGY STAR CERTIFICATION

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BEEAC Meeting Agenda Item 4

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Metropolitan Washington
Council of Governments

Comprehensive Climate Action Plan (CCAP): Developing a Data Center GHG Inventory and Projection

- As part of the Climate Pollution Reduction Grants (CPRG) program, we are updating the GHG inventory for the region to break out data center GHG emissions from the broader commercial buildings sector.
- To inform projections of data center growth in the region, MWCOG sent out a survey to all localities in the MSA asking for information on planned and permitted data centers, and expectations for growth.
- **Next Step**: Conduct the update to GHG inventory and review results with localities.

Methodology:

1. Gather existing and planned data center square footage (SF) information from localities via data survey
   - If no projections were provided through the survey, no growth is assumed for that locality
2. Apply an energy use intensity metric (kWh of electricity consumption per SF) = estimated electricity consumed by data centers
3. Subtract data center electricity use from the total commercial electricity consumption

Data Center Survey Responses

Localities that provided expected future growth for data centers (2025+):

- City of Manassas
- Frederick County
- Loudoun County
- Prince George's County
- Prince William County

If you are aware of planned data centers and your locality is not listed here, please reach out!!

Data Center Survey Results: Square Footage

Existing Data Center Square Footage

Jurisdiction Name	2024
District of Columbia	545,939
Frederick County	547,000
Montgomery County	1,469,501
Prince George's County	42,000
Fairfax County	2,425,706
Loudoun County	43,000,000
Prince William County	10,000,000
City of Manassas	250,000
Culpeper County	517,265
Total	**58,797,411**

Projected Data Center Square Footage

Region	2024	2030	2050
DC	545,939	545,939	545,939
MD	2,058,501	2,178,501	2,178,501
VA	56,192,971	89,568,971	113,168,971
Total	**58,797,411**	**92,293,411**	**115,893,411**

Data Centers: Electricity Demand Estimate

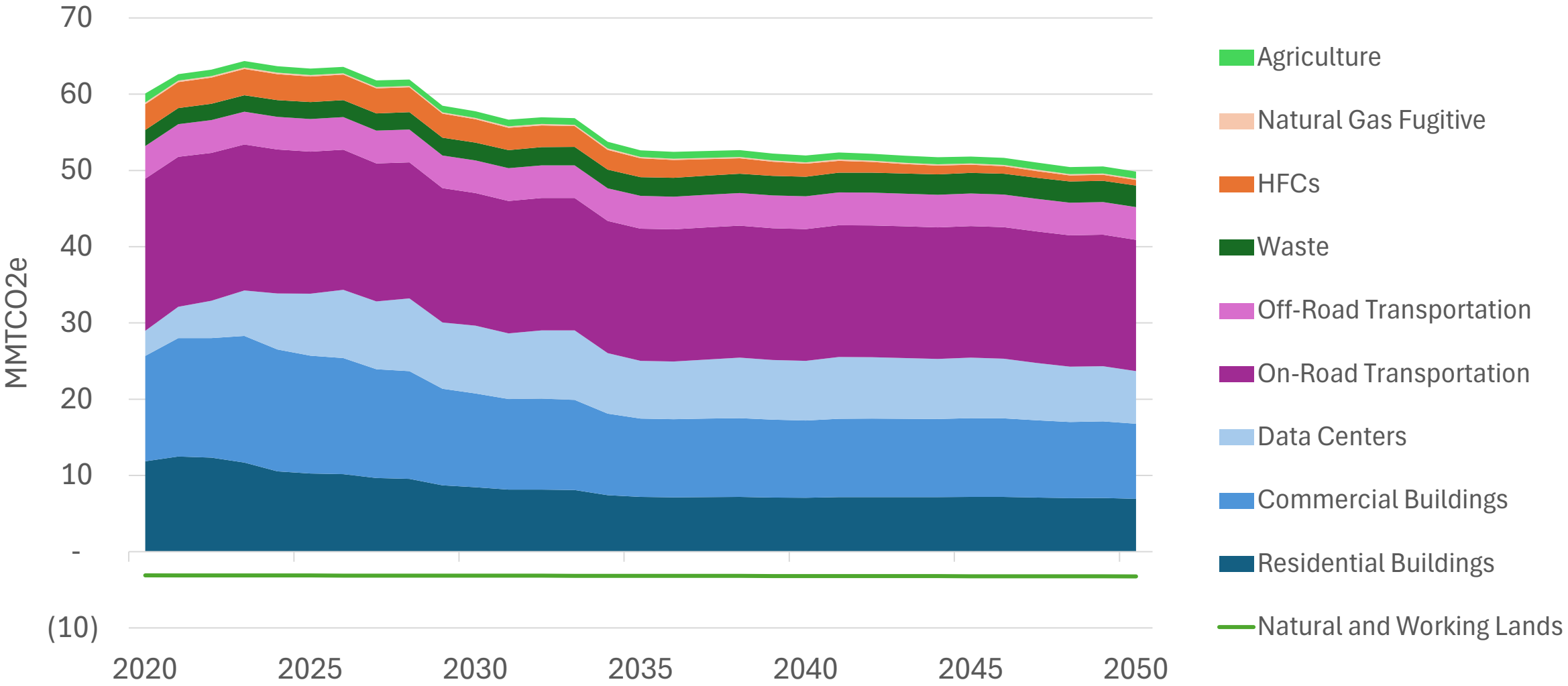
Data Center Electricity Consumption (MWh): BAU Projection

Region	2024	2030	2050
DC	243,591	243,591	243,591
MD	918,477	6,237,468	11,493,468
VA	25,072,583	42,592,517	54,980,773
Total	**26,234,651**	**49,073,576**	**66,717,832**

PJM 2025 Load Forecast Comparison: Virginia

	2025	2030	2050
Estimated VA State Data Center Load (MWh)	43,546,976	125,101,014	270,286,794
CCAP MSA Share - VA only	58%	34%	20%

Draft CCAP MSA BAU GHG Projections



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