# Policy Assumptions in the BAU Case for the Virginia EPS

## **Buildings**

* Energy efficiency
  + Data includes some endogenous improvement in equipment performance based on external market data (as described [here](https://www.nrel.gov/docs/fy18osti/70485.pdf)). It is unclear which, if any, EE policies are explicitly included. We can assume Virginia’s EE policies are **not** explicitly modeled, included things like building rebates.

## **Transportation**

* Fuel efficiency
  + Start year data taken from NREL. Later years include fuel efficiency improvements from Corporate Average Fuel Economy Standards (CAFE) including the 2021-2025 phase 2 standards. Full text from [AEO](https://www.eia.gov/outlooks/aeo/assumptions/pdf/summary.pdf): *CAFE standards are increased for model years 2011 through 2016 to meet the final CAFE rulemakings for model years 2011 and 2012 to 2016. CAFE standards are increased for model years 2017 to 2025 to meet final CAFE joint rulemakings for model year 2017 to 2021 and to meet augural CAFE standards for model year 2022 to 2025, which will undergo a midterm evaluation to finalize. CAFE standards are held constant through the end of the projection period.*
  + Start year data taken from NREL. Includes Phase I and Phase II standards for HDVs. Full text from AEO: *HD National program Phase I and Phase II standards are modeled, with both engine and chassis technologies; compliance is modeled among 13 heavy-duty vehicle V regulatory classifications that represent the discrete vehicle categories set forth in the rule; the standards are held constant in model years after 2027.*
* EV subsidies
  + Includes federal subsidies for EVs, weighted based on available credits and model availability.

## **Industry**

* Non-energy emissions
  + No implementation of Kigali Amendment to the Montreal Protocol..
* Industry energy
  + Data includes some endogenous improvement in equipment performance based on external market data (as described [here](https://www.nrel.gov/docs/fy18osti/70485.pdf)). It is unclear which, if any, EE policies are explicitly included. We can assume Virginia’s EE policies are **not** explicitly modeled, included things like building rebates.

## **Electricity**

* Renewable portfolio standard: The Virginia Clean Economy Act is **not** included in the BAU case.

## **Fuels**

* Carbon pricing: No carbon pricing assumed (i.e. did not build joining of RGGI into the BAU).

# Policy Assumptions in the VCEA Case for the Virginia EPS

## **Clean Electricity Standard and Plant Retirements**

* The scenario estimates a weighted average clean electricity standard in every year, based on historical data on generation by utility and electricity demand projections from the model to approximate generation by utility. We subtract out nuclear generation, then calculate the clean generation requirements for Phase I and II utilities according to the VCEA targets. For implementation purposes, we then calculate the total clean electricity requirements in each year by summing the requirements by utility and adding nuclear generation back in (since the model includes nuclear as a qualifying source). We have **not** addressed any specific carve-outs.
* All existing gas and petroleum plants owned by Phase I and II utilities are retired by 2045. Plants are phased out linearly.
* All coal retired by 2024.
* All biomass retired by 2028.

## **Offshore Wind**

* Mandated offshore wind construction reaches 5.2 GW by 2035. The scenario uses Dominion’s planned ~2 GW construction for 2024-2026, then allocates the remaining additions evenly through 2027 to 2035.

## **Battery Storage**

* 3,100 MW battery storage modeled by 2035. We do **not** assume additional increases after 2035.

## **Energy Efficiency**

* Annual BTU electricity savings were calculated based on the energy efficiency improvement requirements by utility. The scenario meets these annual BTU targets through the building component efficiency and retrofit policy levers. We do **not** assume increasing efficiency requirements after 2025.

# Customized Assumptions in the Virginia EPS

* Changes in fuel demand will be met by changes in imports and exports, not through changes in in-state production.
* The total amount of imported electricity will be held constant.