At a Glance:
The Atlantic Coast Pipeline in Western and Central Virginia
~ Highland, Augusta, Nelson, & Buckingham Counties ~

- Miles of Pipeline: 125.5
- Acres in the construction corridor and permanent right-of-way (ROW): 1,901 and 1,140
- Most impacted land cover types (ROW only): forest (795 acres) and pasture (247 acres)
- Parcels touched by ROW: 521
- Parcels in the 1.4-mile-wide evacuation zone: 6,148
- Parcels within one half mile of the compressor station: 87
- Residents and housing units in the evacuation zone: 15,128 people and 8,762 homes
- Parcels from which the pipeline would be visible: 31,117, or 29% of all parcels in the four-county study region

Baseline property value at risk (and expected one-time cost due to the ACP):
  - In the ROW: $277.1 million ($11.6 to $36.0 million)
  - In the evacuation zone: $1.13 billion ($43.0 million)
  - Near the compressor station: $4.9 million ($1.2 million)
  - In the viewshed: $7.44 billion (to avoid double counting with lost aesthetic value under ecosystem services, this impact is not separately estimated)

Total property value lost: $55.8 to $80.2 million
Resulting loss in property tax revenue (annual): $281,300 to $408,400
Lost ecosystem service value, such as for water and air purification, recreational benefits, and others:
  - Over the two-year construction period: between $16.9 and $61.0 million (a one-time cost)
  - Annually for the life of the ACP: between $4.9 and $17.8 million

Lost economic development opportunities due to the erosion of these Counties’ comparative advantages as attractive places to visit, reside, and do business. Under the scenarios described below, these could include:
  - Annual loss of recreation tourism expenditures of $41.3 million that supports 387 jobs and $7.4 million in payroll and generates $1.8 million in state and $1.3 million in local taxes
  - Annual loss of personal income of $6.6 million due to slower growth in the number of retirees
  - Annual loss of personal income of $1.6 million due to slower growth in sole proprietorships

One-time costs (property value and ecosystem services during construction) would total between $72.7 and $141.2 million
Annual costs (all other costs above) would range from $54.8 to $67.8 million
At a Glance:
The Mountain Valley Pipeline in Virginia and West Virginia
Craig, Franklin, Giles, Montgomery, and Roanoke Counties in Virginia and Greenbrier, Monroe, and Summers Counties in West Virginia

- Miles of pipeline: 143
- Acres
  - In the construction corridor and temporary roads and workspaces: 2449
  - In the permanent right-of-way (ROW): 861
  - In permanent access roads and other facilities: 76
- Most impacted land cover types (ROW only): forest (664 acres) and pasture (142 acres)
- Parcels touched by ROW: 716
- Parcels in the 1.4-mile-wide evacuation zone: 8,221
- Residents and housing units in the evacuation zone: 20,389 people and 9,700 homes
- Parcels from which the pipeline would be visible: 78,553 or 31% of all parcels in the six counties for which detailed parcel data are available
- Baseline (no pipeline) property value at risk (and expected one-time cost due to the MVP):
  - In the ROW: $125.9 million ($5.3 to $16.4 million)
  - In the evacuation zone: $972.6 million ($37.0 million)
  - In the viewshed: $16.8 billion (to avoid double counting with lost aesthetic value under ecosystem services, this impact is not separately estimated)
- Total property value lost (a one-time cost): $42.2 to $53.3 million
- Resulting loss in property tax revenue (annual): $243,500 to $308,400
- Lost ecosystem service value, such as for water and air purification, recreational benefits, and others:
  - Over the two-year construction period (a one-time cost): between $22.9 and $82.2 million
  - In the ROW (annual): between $4.1 and $14.8 million
- Lost economic development opportunities due to the erosion of these counties’ comparative advantages as attractive places to visit, reside, and do business. Under the scenarios described below, these could include:
  - Annual loss of recreation tourism expenditures of $96.8 million that supports 1,073 jobs and $24.3 million in payroll and generates $4.8 million in state and $2.6 million in local taxes
  - Annual loss of personal income of $15.6 million due to slower growth in the number of retirees
  - Annual loss of personal income of $2.1 million due to slower growth in sole proprietorships
- Total of estimated costs:
  - One-time costs (lost property value and lost ecosystem service value during construction) would total between $65.1 to $135.5 million
  - Annual costs (costs that recur year after year) would range from $119.1 to $130.8 million
    - Present discounted value of all future annual costs (discounted at 1.5%): $7.9 to $8.7 billion
  - One-time costs plus the discounted value of all future annual costs: $8.0 to $8.9 billion
### At a Glance:
The PennEast Pipeline in Pennsylvania and New Jersey
**Bucks, Carbon, Luzerne, and Northampton Counties in PA and Hunterdon and Mercer Counties in NJ**

- **Miles of pipeline:** 118
- **Impacted acres (area converted temporarily or permanently from its existing use or cover):**
  - In the permanent right-of-way (ROW): 717.3
  - In the construction zone (the construction corridor, new temporary roads, pipeyards, and temporary aboveground infrastructure): 1,852.7
  - In new permanent access roads and aboveground infrastructure: 55.8
  - The most heavily affected land cover types: forest (386.8 acres) and cropland (147.0 acres) (ROW only)
- **Parcels:**
  - In the ROW: 730
  - In the 1.2-mile-wide evacuation zone: 18,097
  - Within half a mile of the compressor station: 40
- **Residents and housing units in the evacuation zone:** 54,579 people, 23,293 homes
- **Lost ecosystem service value, such as for water and air purification, aesthetics, and recreation:**
  - Over the one-year construction period (a one-time cost): $6.3 to $22.1 million
  - In the ROW and in other permanent infrastructure (annual): $2.6 to $9.8 million
- **Property value:**
  - Baseline—that is, in a “no pipeline” scenario—property value at risk (and the expected one-time cost due to the pipeline in the following parentheses):
    - In the ROW: $200.5 million ($8.4 to $26.1 million)
    - In the 1.2-mile-wide evacuation zone: $3.9 billion ($149.9 million)
    - Within half a mile of the compressor station: $5.6 million ($1.4 million)
  - Total property value lost (a one-time cost): $159.7 to $177.3 million
  - Resulting loss in property tax revenue (annual): $2.7 to $3.0 million
- **The social cost of carbon:**
  - The project would contribute to an equivalent of 21.3 million metric tons of carbon dioxide a year. Using a 5% discount rate, the social cost of carbon ranges from $291.9 to $608.1 million per year between 2019 and 2048. Using a 2.5% discount rate for the same time period, the social cost of carbon ranges between $1.5 and $2.3 billion per year.
- **Other impacts for consideration:**
  - Visual impacts:
    - The ROW for the pipeline and laterals can potentially be seen from approximately 35% of the study region. At least 1 km (0.62 miles) of pipeline ROW is visible from roughly 20% of the study region. (While these visual impacts have financial implications, we do not estimate these strictly in property value terms. Instead, the economic cost of impaired views for homeowners, as well as losses experienced by recreational visitors, and others would be captured as part of the “lost ecosystem service value”)
  - Economic activity that depends on the region’s scenic, recreational, and quality-of-life:
    - (We consider scenarios in which visitor spending declines by 10% from current levels, and the rate of growth in retirement and proprietor’s income slows by 10%)
      - Annual loss of recreation tourism expenditures of $448.0 million that would otherwise support 4,090 jobs and generate $38.8 million in state and local tax receipts
      - Annual loss of personal income of $55.6 million due to slower growth in the number of retirees
      - Annual loss of personal income of $16.3 million due to slower growth in sole proprietorships
- **Total estimated costs:**
  - One-time costs (lost property value plus lost ecosystem service value during construction) would total between $166.0 and $199.4 million
  - Annual costs (costs that recur year after year) would range from $5.3 to $12.8 million PLUS the social cost of carbon, which varies by year, and ranges between $291.9 million and $2.3 billion per year
    - Present discounted value of all future annual costs (including the social cost of carbon): $13.1 to $56.4 billion
  - One-time costs plus the discounted value of all future annual costs: $13.3 to $56.6 billion
At a Glance:
The Eastern System Upgrade in New York
Delaware, Orange, and Sullivan Counties

- **Miles of pipeline loop**: 7.8
- **Additional aboveground facilities**: Highland CS, new compressor at the Hancock CS; new pig launcher/receiver, alternate interconnect, and modifications to 3 metering stations
- **Impacted acres**:
  - In the permanent right-of-way (ROW): 26.0
  - In the construction zone: 156.9
  - At the existing Hancock Compressor Station in Delaware County during construction and operation: 9.05, 5.5
  - At the new Highland Compressor Station in Sullivan County during construction and operation: 14.31, 5.4
- **Parcels in the portion of the loop not co-located with the existing Millennium Pipeline**:
  - In the ROW: 5
  - In the 1.2-mile-wide evacuation zone: 196
  - Within half a mile of the compressor stations: 32 for the Hancock CS and 11 for the Highland CS
- **Residents and housing units in the pipeline evacuation zone**: 1,092 people, 470 homes
- **Property value**:
  - Baseline—that is, in a “no ESU” scenario—property value at risk (with the expected one-time cost due to the ESU in parentheses):
    - In the ROW: $186,050 ($7,814 to $24,187)
    - In the 0.9-mile-wide evacuation zone: $19.8 million ($753,700)
    - Within half a mile of the compressor stations: $2.1 million ($519,900) for the Hancock CS and $2.9 million ($715,500) for the Highland CS
  - Total property value lost (a one-time cost): $2.0 million
  - Resulting loss in property tax revenue (annual): $36,005 to $36,298
- **The social cost of carbon (equivalent)**:
  - An annual cost that varies year to year, the project would contribute to an equivalent of 3.9 million metric tons of carbon dioxide a year. Using a 5% discount rate, the social cost of carbon ranges from $50.1 to $115.0 million per year between 2019 and 2048. Using a 2.5% discount rate for the same time period, the social cost of carbon ranges between $256.5 and $420.1 million per year.
- **Other impacts for consideration**:
  - Economic activity that depends on the region’s scenic, recreational, and quality of life: We consider a hypothetical scenario in which visitor spending declines by 5% from current levels, and the rate of growth in retirement and proprietor’s income slows by 5%)
    - Annual loss of recreation tourism expenditures of $47.2 million that would otherwise support 745 jobs and generate $3.1 million in local taxes and $2.6 million in state taxes
    - Annual loss of personal income of $6.3 million due to slower growth in the number of retirees
    - Annual loss of personal income of $1.2 million due to slower growth in sole proprietorships
    - The total of these losses is $82.5 million per year
- **Total estimated costs**:
  - One-time costs (property value lost during construction) would total to $2.0 million
  - Annual costs (costs that recur year after year) would range from $36,005 to $36,298 PLUS the social cost of carbon, which also varies year by year, and ranges between $50.1 and $420.1 million
  - One-time costs plus the discounted value of all future annual costs: $4.7 to $18.8 billion