



# OVERBURDENED & OVERLOOKED:

*Communities Harmed by Transco's Southeast Supply Enhancement Project*

Transco's proposed Southeast Supply Enhancement Project (SSEP) would bring new gas infrastructure to North Carolina and Virginia, hurting communities already suffering from some of the worst air pollution in those states. This report is an expert analysis of the impacts SSEP would have on the region.



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“Today we learned that federal regulators have decided not to conduct an Environmental Impact Statement on one of the largest methane gas expansion proposals in decades, Transco’s SSEP. They will give the public and our elected leaders just 30 days to study and respond to their findings. The message to impacted communities is clear: understanding the full picture of the impacts of this giant, polluting infrastructure on our water, soil, air and health is not a priority, nor is our input.” – **Dr. Crystal Cavalier-Keck, Co-Founder, 7**

### **Directions of Service**

"The Southeast Supply Enhancement Project is an unnecessary addition to our region's energy infrastructure, as affordable, cleaner renewable energy options are readily available to meet our needs. We should be investing in sustainable energy sources instead of locking ourselves into costly, outdated fossil fuel projects." – **Caroline Hansley, Campaign**

### **Organizing Strategist, Sierra Club**

*All images courtesy of 7 Directions of Service or Sierra Club unless otherwise specified.*

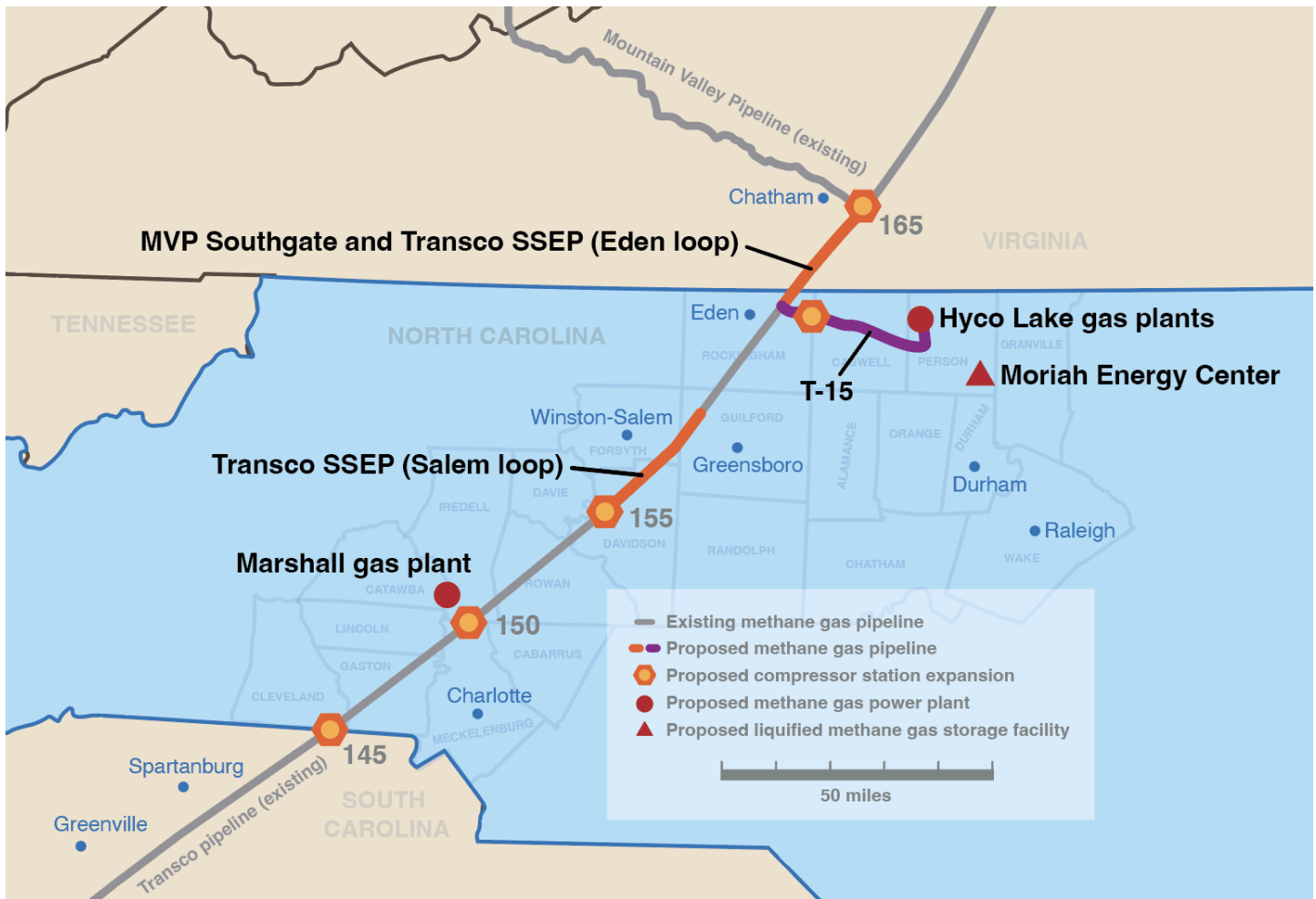
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## Key Findings

- Communities around Transco's proposed Southeast Supply Enhancement Project (SSEP) already suffer from some of the worst air pollution in their states. The North Carolina Department of Environmental Quality will be considering air and water quality permit applications for SSEP, and should apply close scrutiny given the threats that the project poses to the air and water resources of local communities.
- SSEP would impact local communities near the proposed pipelines and compressor station expansions, including environmental justice communities.
- Emissions from combusting the gas transported by SSEP would be incompatible with meeting North Carolina's climate goals.
- The Federal Energy Regulatory Commission should undertake a more thorough and nuanced environmental justice analysis than Transco did, and should do so in an Environmental Impact Statement; instead, however, the Commission has said it will prepare a less comprehensive Environmental Assessment for SSEP, and has recently deleted environmental justice content from its website.
- This project and others in the region are being justified by projected demand from data centers that may not materialize. Regulators should take their own hard look at whether this gas capacity is truly needed.

## Introduction

Figure 1



Source: Appalachian Voices

**Williams Companies' Transco** pipeline system is the largest gas pipeline system by volume in the country, transporting approximately one-third of the gas consumed in the United States.<sup>1</sup> The Transco system includes about 10,000 miles of pipe running from the Gulf Coast up the eastern states all the way into New York. Williams subsidiary Transcontinental Gas Pipe Line Company, LLC (Transco) is currently planning expansions of this pipeline system with multiple projects along the southeast section, including the high-impact Southeast Supply Enhancement Project (SSEP).<sup>2</sup>

<sup>1</sup> [Southeast Supply Enhancement](#), Williams Companies, August 2024.

<sup>2</sup> [Expansion Projects](#), Williams Companies, accessed January 2025.

SSEP would span five states and facilitate the transport of an additional 1.6 million dekatherms of gas per day in the southeastern U.S. It would include installation of 55 miles of new, large-diameter pipe and substantial horsepower increases at four compressor stations in North Carolina and Virginia – two of which would be gas-fired – as well as modifications at facilities across three other states.<sup>3</sup> In October 2024, Transco filed an application with the Federal Energy Regulatory Commission (FERC) to construct and operate SSEP, submitting Resource Reports that contain the company’s analysis of environmental conditions in surrounding areas and the project’s impacts.<sup>4</sup>



SSEP represents one of the largest expansions in gas transportation capacity in decades.<sup>5</sup> According to Transco’s own submissions, construction of the pipeline, compressor units, and associated facilities would impact nearly 1,500 acres of land, including more than 42 acres of wetlands, while operation of the pipeline would permanently disturb more than 364 acres along the right-of-way.<sup>6</sup> The large-diameter pipe would make more than 100 individual waterbody crossings in 16 watersheds,<sup>7</sup> including one major crossing of the Dan River in North Carolina that would span 230 feet.<sup>8</sup> The Dan River is the site of Duke Energy’s disastrous coal ash spill in 2014, which dumped 27 million gallons of wastewater and 39,000 tons of coal ash into the river.<sup>9</sup>

<sup>3</sup> [Southeast Supply Enhancement](#), Williams Companies, accessed January 2025.

<sup>4</sup> [Application for a Certificate of Public Convenience to construct and operate re the Southeast Supply Enhancement Project](#), Transcontinental Gas Pipe Line Company, L.L.C., FERC Docket No. CP25-10, Accession No. 20241029-5076, October 2024. In March 2025, Transco submitted updated information based on proposed “minor Project reroutes and workspace adjustments.” This report is based on the original Resource Report 5 filing (see the methodology section for details). [Transcontinental Gas Pipe Line Company, LLC submits supplemental information to the application for Certificate of Public Convenience and Necessity re the Southeast Supply Enhancement Project](#), FERC Docket CP25-10, Accession No. 20250328-5273, March 2025.

<sup>5</sup> Much of this report is sourced from joint comments submitted to FERC in December 2024 in response to Transco’s request to forgo an Environmental Impact Statement for SSEP: [SSEP Need for EIS Organization Comment](#), Sierra Club et al., FERC Docket CP25-10, Accession No. 20241217-5121, December 2024 (hereafter referred to as [SSEP Need for EIS Organization Comment](#)).

<sup>6</sup> [Resource Report No. 3: Fish, Wildlife, and Vegetation](#), Transcontinental Gas Pipe Line Company, L.L.C., Docket No. CP25-10, Accession No. 20241029-5076, October 2025, page 3-37.

<sup>7</sup> [Resource Report No. 2: Water Use and Quality](#), Transcontinental Gas Pipe Line Company, L.L.C., Docket No. CP25-10, Accession No. 20241029-5076, October 2025, pages 2-30–2-35, 2-38–2-43.

<sup>8</sup> *Ibid*, page 2-32.

<sup>9</sup> Eric Martinson, [EPA coal ash rule still not done](#), POLITICO, March 2014.

SSEP’s pipeline expansion would be placed next to existing Transco pipe, which watchdog group Pipeline Safety Trust has pointed out means an enlargement of the potential impact radius of a rupture, fire, or explosion of any sort – the so-called “blast zone” – putting more landowners and communities at risk.<sup>10</sup>

This report focuses on the community impacts and environmental justice threats posed by SSEP’s pipeline expansions, as well as the new gas-fired compressor units. The **Eden Loop** would involve 31 miles of additional 42”-wide pipeline, adjacent to the aging Transco pipeline, mostly in Pittsylvania County, Virginia but crossing into Rockingham County, North Carolina. The **Salem Loop** would add 24 miles of 42”-wide pipeline in Guilford, Forsyth, and Davidson Counties, North Carolina. Transco also plans to construct new gas-powered compressor units at **Compressor Stations 150 and 155** in Iredell and Davidson Counties, North Carolina.<sup>11</sup>

Compressor Stations 150 and 155 already produce pollutants that are well known to cause harm to human health, and the SSEP expansions would only increase harmful emissions. Nitrogen dioxide, for example, can exacerbate respiratory diseases such as asthma.<sup>12</sup> Volatile organic compounds (VOCs) can cause difficulty breathing and damage to the central nervous system.<sup>13</sup> VOCs and nitrogen oxides react together to produce ozone, which can also inflame and damage the airways, make the lungs more susceptible to infection, exacerbate lung diseases, and cause more frequent asthma attacks.<sup>14</sup> Gas compression also emits particulate matter (PM2.5), and research has shown that there is no evidence of any safe level of PM2.5 exposure.<sup>15</sup>

Compressor Stations 150 and 155 are both located in areas that already have high burdens of PM2.5, ozone, and toxic releases into the air,<sup>16</sup> with more people of color and low-income people experiencing more pollution than in most other areas of the state. For instance, Compressor Station 155 is right across the street from a block group with an Environmental Justice (EJ) index in the 84th percentile for particulate matter, 80th percentile for ozone, and 75th for toxic releases to air, as compared to the rest of the state.<sup>17</sup>

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<sup>10</sup> [Comments of Pipeline Safety Trust re the Planned Southeast Supply Enhancement Project](#), Pipeline Safety Trust, Docket No. PF24-2, Accession No. 20240702-5027, July 2024, pages 1–2.

<sup>11</sup> [Resource Report No. 5: Socioeconomics](#), Transcontinental Gas Pipe Line Company, L.L.C., Docket No. CP25-10, Accession No. 20241029-5076, October 2025, pages 5-1–5-3.

<sup>12</sup> [Basic Information about NO2](#), United States Environmental Protection Agency, July 2024.

<sup>13</sup> [Volatile Organic Compounds](#), American Lung Association, accessed January 2025.

<sup>14</sup> [Health Effects of Ozone Pollution](#), United States Environmental Protection Agency, April 2024.

<sup>15</sup> George Thurston, Sc.D., In the Matter of the Proposed Lambert Compressor Station 13, pages 34–35, April 2021.

<sup>16</sup> Analysis with EPA’s EJScreen shows that both compressor stations are located in block groups that exceed the 80th percentile for ozone and particulate matter (PM2.5), and the 70th percentile for toxic releases to the air. See the methodology section for details and Figure 2.

<sup>17</sup> Additionally, Compressor Station 150 is less than a mile from a block group with an EJ index in the 88th percentile for PM2.5, 85th percentile for ozone, and 81st percentile for toxic releases to the air, compared to the rest of the state. EPA’s EJ index values combine demographic factors with a single environmental factor into a cumulative indicator value for a given census block group. A higher value generally indicates higher percentages of people of color/low-income and a higher amount of whichever pollutant is being evaluated. EPA calculates this figure by multiplying the environmental indicator percentile for a census block group by the demographic indicator for the same census block group. [EJ and Supplemental Indexes in EJScreen](#), Environmental Protection Agency, July 2024, accessed January 2025.

Health burdens in the area are also high: Compressor Station 150 is located in a census tract that is in the 76th percentile nationally for cancer rates, meaning this census tract has higher cancer rates than 76% of the rest of the country.<sup>18</sup> Compressor Station 155 is in a census tract in the 67th percentile for people with disabilities and the 80th percentile for cancer rates, nationally – meaning this tract has more people with disabilities than 67% of the country and higher cancer rates than 80% of the country.<sup>19</sup> As the National Association for the Advancement of Colored People (NAACP) and Clean Air Task Force point out, “polluting facilities have often been sited in or near African American communities” that already face serious health risks from toxic pollution.<sup>20</sup>



While Transco concedes that if SSEP is built, “increased emissions may affect local air quality within EJ communities near Compressor Stations 150 and 155,” neither Resource Report 9 (Air and Noise Quality) nor Resource Report 5 (Socioeconomics) submitted to FERC supports Transco’s conclusion that “the changes to air quality are not expected to represent an adverse and disproportionate impact.”<sup>21</sup> Given

the pre-existing burdens of both pollution and disease in the communities near Compressor Stations 150 and 155, the increase in air pollution from SSEP would further harm human health.

In the past, FERC has recognized that “certain project effects [may be] significant specific to communities with environmental justice concerns” and that “consider[ation of] potential direct, indirect, and cumulative effects on communities ... is crucial to ensure that FERC understands the nature and severity of the potential effects of a proposed project and recognizes potential differences in risk and exposure to communities.”<sup>22</sup> However, FERC

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<sup>18</sup> The CDC’s Environmental Justice Index (EJI) “scores census tracts using a percentile ranking which represents the proportion of tracts that experience cumulative impacts of environmental burden and injustice equal to or lower than a tract of interest. For example, an EJI ranking of 0.85 signifies that 85% of tracts in the nation likely experience less severe cumulative impacts on health and well-being than the tract of interest, and that 15% of tracts in the nation likely experience more severe cumulative impacts from environmental burden.” [EJI Explorer](#), U.S. Centers for Disease Control and Prevention’s Agency for Toxic Substances and Disease Registry, December 2024.

<sup>19</sup> Census tracts are Census-designated geographic subdivisions of a county that typically have a population of about 1,200-8,000 people. [Glossary](#), United States Census Bureau, April 2022.

<sup>20</sup> [Fumes Across the Fence-Line](#), NAACP and Clean Air Task Force, November 2017, page 6.

<sup>21</sup> [Resource Report 5](#), page 5-44.

<sup>22</sup> [Public Participation in FERC’s Environmental Justice Review Process](#), Federal Energy Regulatory Commission, January 2025.

recently removed references to EJ from its website, even going so far as to take down links to previously published press releases on its EJ initiatives.<sup>23</sup> Absent a comprehensive EJ analysis by FERC, it is even more crucial for North Carolina regulators to rigorously analyze and account for the proposed project's harmful impacts on local residents.



Transco's SSEP is just one of many gas expansion projects proposed in the region.<sup>24</sup> A recent report from the Institute for Energy Economics and Financial Analysis (IEEFA) showed that the proposed gas plant and pipeline buildout in the Southeast, including SSEP, is largely due to projected demand from new data centers. Given that utilities earn a profit on the infrastructure they build, there is a strong incentive to overbuild, which likely would ultimately be paid for by captive

ratepayers.<sup>25</sup> IEEFA concluded that "Southeast utilities may be planning for more data center load growth than is likely to materialize."<sup>26</sup> Another recent report analyzed industry forecasts for data center electricity demand and similarly found that "the cost of investments in new generating capacity could be passed off to taxpayers and utility customers if demand for electricity is overestimated."<sup>27</sup> Without proactive protections, consumers and ratepayers could end up subsidizing a massive gas buildout in the Southeast, all on the shaky assumption that the data center industry will continue to increase demand, and do so rapidly.

This potential overbuild means that SSEP and its community, EJ, and climate impacts are avoidable. This project is one of many proposed to be built in the Southeast in the near future, which, if permitted and built, would facilitate more dirty, dangerous fossil fuel expansion and exacerbate harms in already overburdened communities. Regulators must take a holistic look at the fossil fuel projects that utilities and midstream infrastructure companies are rushing to build and thoroughly assess if all of this is needed, or in the public's best interest.

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<sup>23</sup> George Weykamp and Maya Weber, [New FERC chair reflects on staffing challenges, independence in interview](#), S&P Global, January 2025.

<sup>24</sup> Other proposed pipelines in the region include the Cumberland Pipeline, Kosci Junction, Mississippi Crossing, MVP Southgate, Ridgeline Expansion, and South System Expansion 4. For more, see: [Gas Plants, Pipelines, and Export Terminals](#), Sierra Club, accessed February 2025.

<sup>25</sup> Cathy Kunkel, [Data Centers Drive Buildout of Gas Power Plants and Pipelines in the Southeast](#), Institute for Energy Economics and Financial Analysis, January 2025, page 13.

<sup>26</sup> Ibid, page 15.

<sup>27</sup> Quentin Good, Johanna Neumann, Abe Scarr, and R.J. Cross, [Big data centers, big problems: The surging environmental and consumer costs of AI, crypto and big data](#), Environment America Research & Policy Center, U.S. PIRG Education Fund, and Frontier Group, January 2025, page 5.

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## Communities Around SSEP Already Suffer from Poor Air Quality

Transco proposes to site new gas infrastructure in areas that already have some of the highest levels of PM<sub>2.5</sub> pollution in North Carolina (see **Figures 2 and 3**); the company ignores this in its EJ analysis.<sup>28</sup> In its report discussing pre-existing air quality around the proposed SSEP, Transco looked at PM<sub>2.5</sub> levels at one air monitor near each of Compressor Stations 150 and 155, which both show PM<sub>2.5</sub> levels in the 98th percentile.<sup>29</sup> After modeling emissions that would be generated by the existing plus proposed compressor units at those stations, Transco concluded that the proposed SSEP expansions would not raise air pollutant levels to the point where they would violate the Clean Air Act's National Ambient Air Quality Standards (NAAQS).<sup>30</sup> As Sierra Club and the Southern Environmental Law Center pointed out in scoping comments on SSEP, an area's compliance with the NAAQS is not an appropriate indicator of impacts to local public health.<sup>31</sup> The U.S. Environmental Protection Agency (EPA), Congress, and courts have recognized that criteria pollutants may cause harm at levels below the NAAQS and may have disproportionate adverse effects on those living closest to the source of pollution.<sup>32</sup> In short, compliance with the Clean Air Act does not ensure protection from the harmful effects of constructing and operating new polluting facilities in communities.

**Figures 2 and 3** demonstrate the dirty air that communities around the proposed SSEP are already forced to breathe. These maps focus on a similar geographic scope that Transco assessed in its EJ analysis in Resource Report 5: Transco looked at all block groups crossed by the pipeline loops or in a 20-kilometer (12.4-mile) radius around Compressor Stations 150 and 155.<sup>33</sup> Here, we added all block groups in a 0.7-mile evacuation zone around

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<sup>28</sup> [Resource Report 5](#), pages 5-43-5-44.

<sup>29</sup> Averaged over a 24-hour period. [Resource Report No. 9: Air and Noise Quality](#), Transcontinental Gas Pipe Line Company, L.L.C., Docket No. CP25-10, Accession No. 20241029-5076, October 2025, pages 9-9-9-10.

<sup>30</sup> *Ibid*, pages 9-38-9-44.

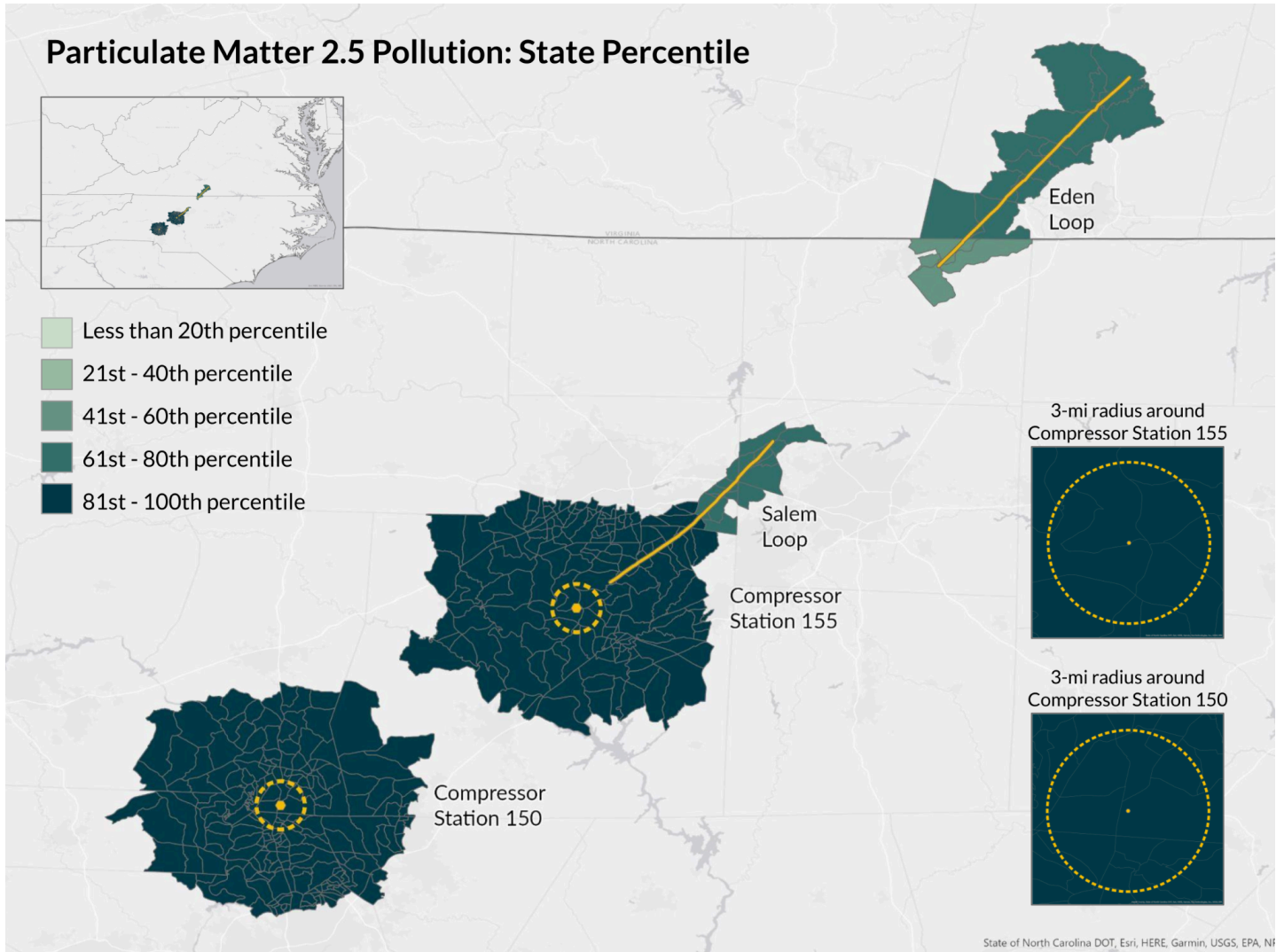
<sup>31</sup> [Comments of Southern Environmental Law Center et al. re the Southeast Supply Enhancement Project](#), Southern Environmental Law Center and Sierra Club et al., Docket No. PF24-2, Accession No. 20240705-5097, July 2024, pages 28-29.

<sup>32</sup> See *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 92-93 (4th Cir. 2020) (By relying on state and national air quality standards, the Board "failed to grapple with the likelihood that those living closest to the Compressor Station . . . will be affected more than those living in other parts of the same county. . . [T]he Board's failure to consider the disproportionate impact on those closest to the Compressor Station resulted in a flawed analysis."); *LaFleur v. Whitman*, 300 F.3d 256, 270 (2d Cir. 2002) ("Congress has recognized that there are potentially adverse [e]ffects from air pollution at levels below the NAAQS"); EPA, External Civil Rights Compliance Office, Toolkit 12-13 (2017) ("The fact that the area is designated as in attainment with the NAAQS and that the recent permitting record shows that emissions from the facility would not cause a violation of the NAAQS would be insufficient by themselves to find that no adverse impacts are occurring for purposes of Title VI and other federal civil rights laws.").

<sup>33</sup> Transco states that "[t]he 20-kilometer threshold for defining the EJ analysis area around Compressor Stations 150 and 155 were selected pursuant to FERC guidance for facilities that are major sources of air emissions." [Resource Report 5](#), page 5-35.

the pipeline loops.<sup>34</sup> Block groups are U.S. Census-designated geographic subdivisions of census tracts that typically contain 600–3,000 people.<sup>35</sup>

**Figure 2**



Sierra Club analysis of data from EPA's EJScreen

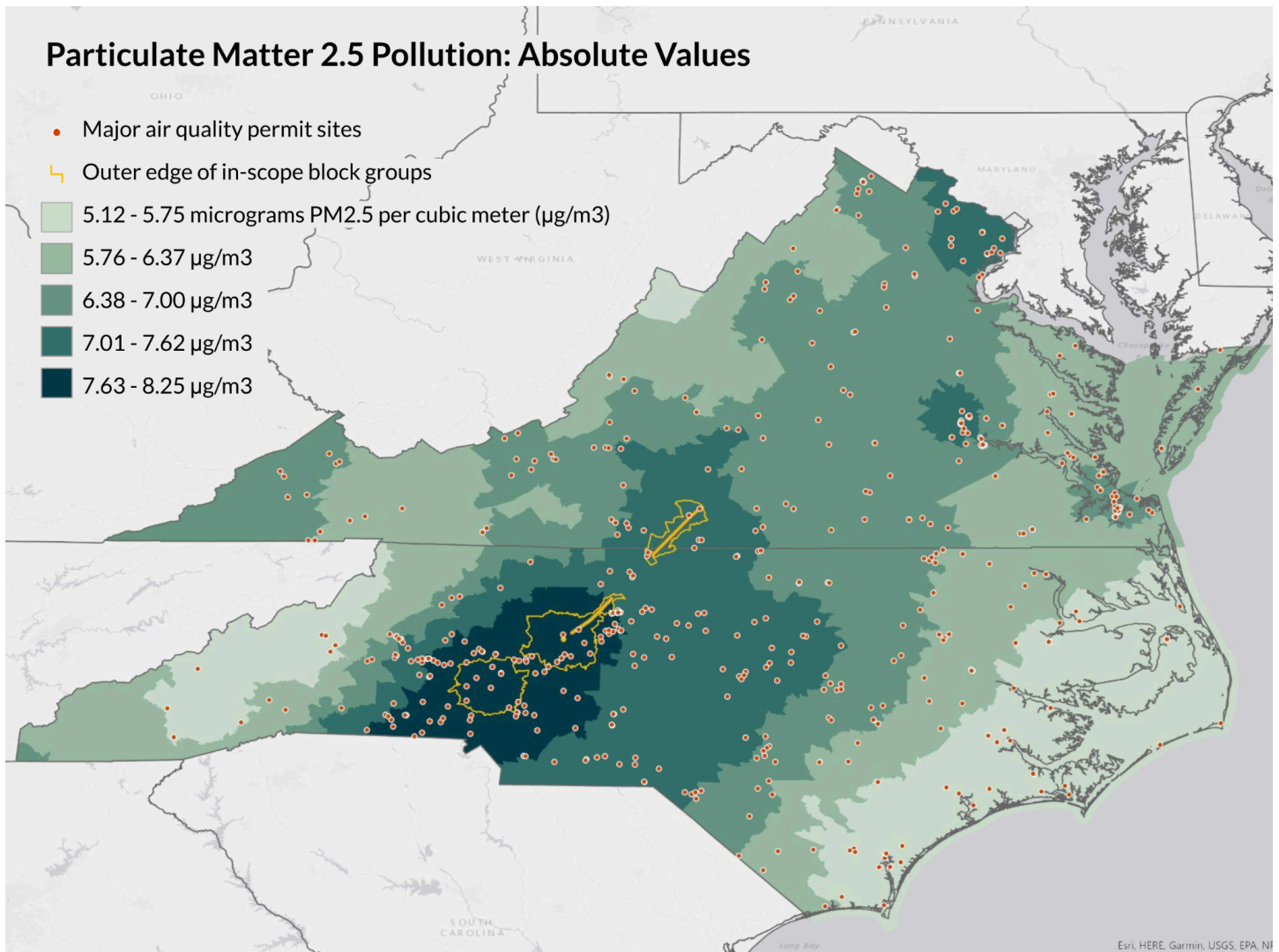
All of the block groups within a 12.4-mile radius of both Compressor Stations 150 and 155 are above the 80th percentile statewide for PM2.5 pollution – amounting to 630,000 people, or 1.3 times the population of Raleigh. In fact, all of the block groups within a 3-mile radius of these compressor stations already have worse PM2.5

<sup>34</sup> Calculated using 42-inch diameter and 1480 psi. Mark J. Stephens, Keith Leewis, Daron K. Moore, [A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines](#), *The American Society of Mechanical Engineers*, February 2009, pages 759–767. This does not take into account the fact that SSEP proposes siting the pipelines alongside existing high-pressure pipe, which could enlarge the size of the blast zone.

<sup>35</sup> [Glossary](#), United States Census Bureau, April 2022.

pollution than 97% of the state.<sup>36</sup> In other words, communities that already live within harm's way of polluting facilities, including Transco's compressor stations, would be exposed to even more air pollution if new gas-fired compressor units were added. In addition, more than half of the block groups impacted by the Salem Loop are above the 80th percentile for PM2.5 pollution, and all are above the 60th percentile, as compared to the rest of the state.

**Figure 3**



Sierra Club analysis of data from EPA's EJScreen, North Carolina Department of Environmental Quality, and Virginia Department of Environmental Quality

<sup>36</sup> In addition to showing block groups in the 20-kilometer (12.4-mile) radius, in this report we also use insets to show the block groups within a smaller 3-mile radius.

**Figure 3** shows the absolute values of PM2.5 pollution across Virginia and North Carolina, rather than percentiles, emphasizing how the proposed SSEP infrastructure – and in particular, the new gas-fired compressor units – would worsen air quality in a corridor that already experiences some of the highest levels of PM2.5 pollution across the two states. The red dots show existing facilities that require Title V permits as mandated by the Clean Air Act because they are major sources of air pollution, highlighting the cumulative impact of polluting facilities near the proposed SSEP infrastructure. In addition to Transco’s Compressor Station 150, there are 18 other existing facilities that are major sources of air pollution in the block groups around SSEP (that is, within the yellow outlines shown in Figure 3), including four fossil fuel-fired power plants and three solid waste disposal sites. In fact, Transco’s latest assessment shows that Compressor Station 155 would go from a “minor” source of air pollution to a Title V source due to SSEP.<sup>37</sup> Additionally, there are two public schools, a daycare, and a surgical center within a mile of Compressor Station 150.<sup>38</sup>

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## Regulators Must Take a Nuanced Approach to Assessing Community and EJ Impacts

In its analysis submitted to FERC, Transco defines EJ communities as block groups that meet certain thresholds of minority (hereafter referred to as people of color, or POC) and/or low-income populations.<sup>39</sup> As an initial matter, this limited definition fails to fully account for the added potential harm of SSEP on nearby communities.

Income and race are not the only metrics that regulators should take into consideration when analyzing the community and health impacts of this proposal. Other relevant metrics include the share of the population with disabilities, asthma rates, cancer rates, EJ indices,<sup>40</sup> and social vulnerability indices. Social vulnerability is quantified by the U.S. Centers for Disease Control and Prevention using multiple demographic and socioeconomic datapoints to “describe[] susceptibility to harm from disasters, emergencies, or other adverse events.”<sup>41</sup> Duke University Professor Ryan Emanuel, Ph.D. submitted comments to FERC on SSEP showing that counties with high levels of social vulnerability are already home to denser networks of gas pipelines.<sup>42</sup> Regulators must analyze and

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<sup>37</sup> [Transcontinental Gas Pipe Line Company, LLC submits supplemental information to the application for Certificate of Public Convenience and Necessity re the Southeast Supply Enhancement Project](#), Transcontinental Gas Pipe Line Company, L.L.C., FERC Docket CP25-10, Accession No. 20250328-5273, March 2025, Supplemental Information, page 19.

<sup>38</sup> [Transcontinental Gas Pipe Line Company, LLC submits response to FERC's 02/06/2025 environmental information request re the Southeast Supply Enhancement Project](#), FERC Docket CP25-10, Accession No. 20250226-5090, February 2025, Attachment 39, page 122.

<sup>39</sup> [Resource Report 5](#), page 5-35.

<sup>40</sup> See note 17.

<sup>41</sup> [Comments of Ryan E. Emanuel, Ph.D. re the Transco Southeast Supply Enhancement Project](#), Ryan E. Emanuel, Docket No. PF24-2, Accession No. 20241028-5068, October 2024.

<sup>42</sup> *Ibid.*

account for the multiple ways in which communities near the proposed SSEP are vulnerable to the increased environmental and health burdens posed by the project.

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## Identifying EJ Communities Around SSEP Pipelines and Gas Compressor Units

In Resource Report 5, Transco compares census data at the block group level to certain income and racial thresholds in order to identify whether, in its view, each affected block group should be designated as an EJ community. While we provide a response to that approach in Figure 6, **Figures 4 and 5** look at income and race demographic data, showing gradated rather than binary data. By focusing on the yes/no question of whether each block group meets a certain threshold, Transco’s approach obscures the block groups that have levels of low-income or POC populations that are close to, but don’t exceed, its thresholds for being considered an EJ community.<sup>43</sup> The gradated approach better demonstrates where SSEP would be sited in relation to low-income and POC residents.

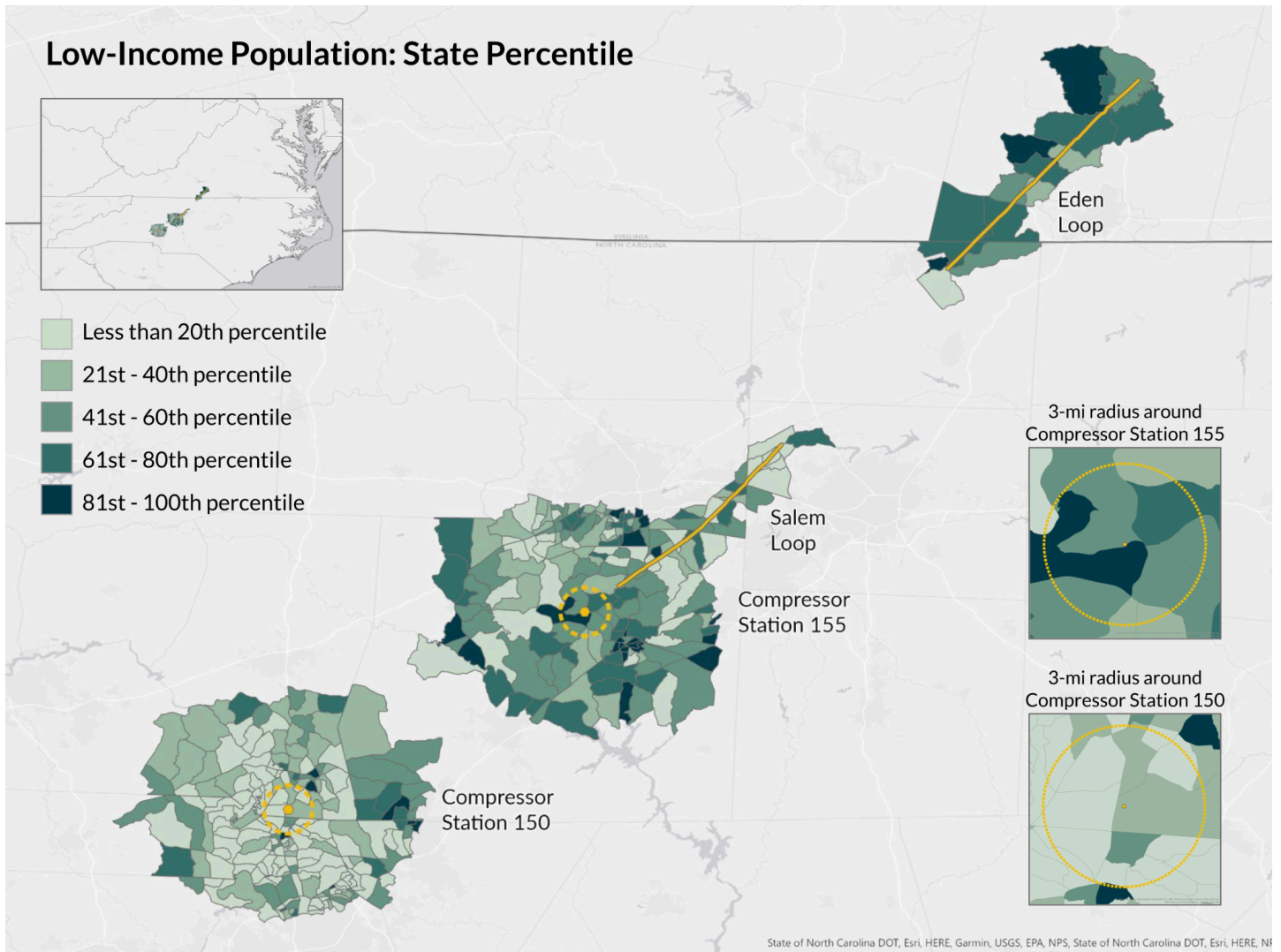


*Dr. Crystal Cavalier-Keck of 7 Directions of Service speaks at a rally*

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<sup>43</sup> Appendix 5A of Resource Report 5 publishes in tabular format the total racial minority percentage and low-income percentage for each impacted block group; however, the analysis in the body of Resource Report 5 tabulates how many block groups fall into each category.

**Figure 4**



*Sierra Club analysis of data from EPA's EJScreen*

In its analysis, Transco defines a low-income person as someone whose household makes less than the Federal Poverty Level – which in 2022 was \$14,880 for an individual or \$29,950 for a family of four.<sup>44</sup> **Figure 4** maps low-income population levels using the EPA EJScreen definition of low-income: individuals whose household income is less than two times the Federal Poverty Level.<sup>45</sup> That means someone would be considered low-income if their one-person household made less than \$29,760 in a year, or if their family of four made less than \$59,900.

<sup>44</sup> [Resource Report 5](#), page 5-35; [Poverty Thresholds](#), United States Census Bureau, January 2025.

<sup>45</sup> [EJScreen Map Descriptions](#), United States Environmental Protection Agency, December 2024.



The official poverty level is quite low, and many studies consider people making up to twice that amount to be low-income.<sup>46</sup>

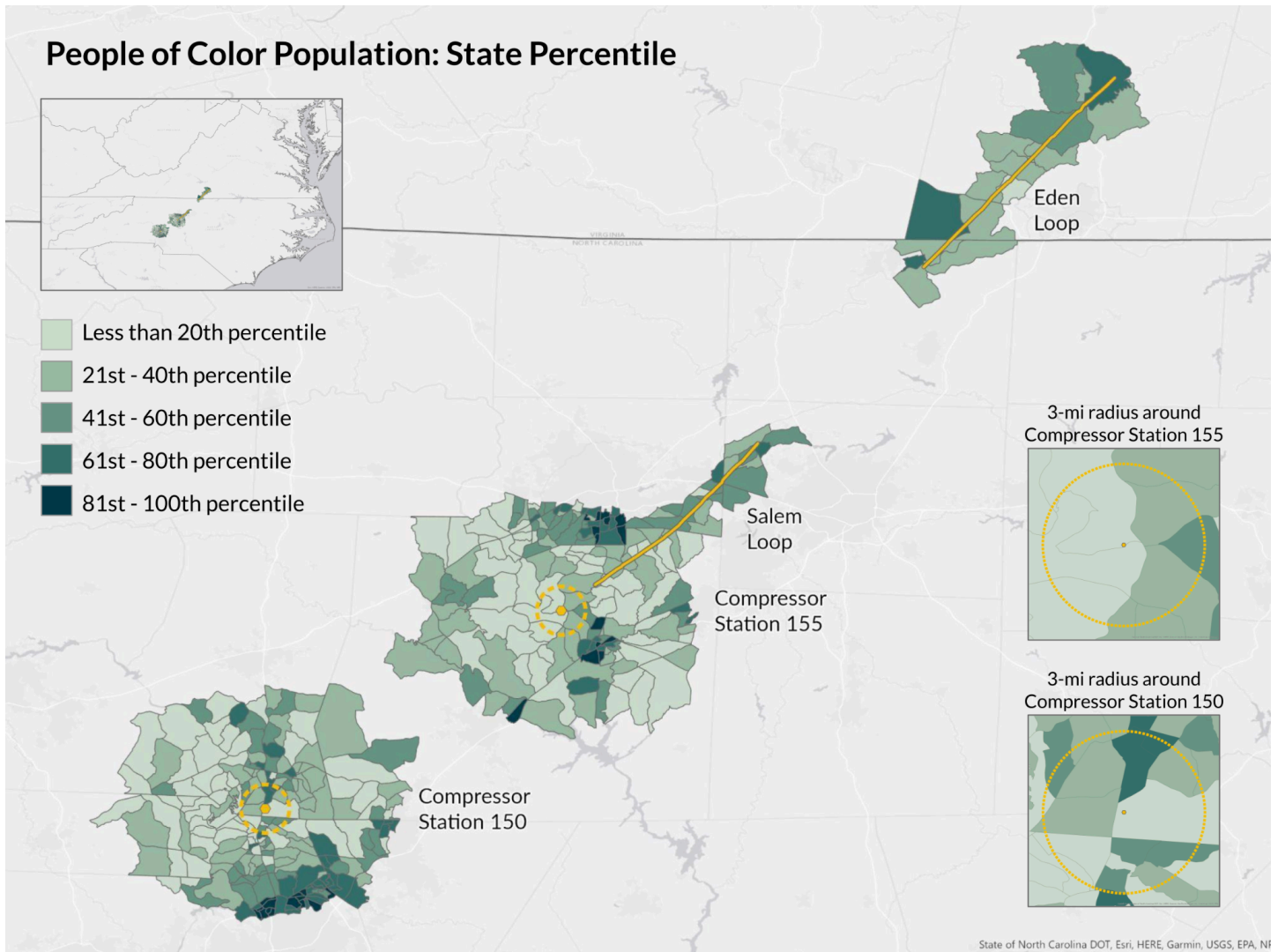
The Eden Loop and Compressor Station 155 in particular would impact low-income communities, looking at the proportion of households making less than two times the Federal Poverty Level (see **Figure 4**). Of the block groups crossed by or in the evacuation zone of the Eden Loop, 63% have populations above the 60th percentile statewide for low-income population levels – meaning, nearly two-thirds of the block groups around

the Eden Loop have a higher share of low-income households than 60% of the state. For Compressor Station 155, one-third of block groups within the 12.4-mile radius have a higher share of low-income households than 60% of the state, with one in five of the block groups within a 3-mile radius exceeding that threshold. In fact, Compressor Station 155 is just across the street from a block group in the 84th percentile for its low-income population level. In total, there are approximately 158,000 low-income people in the block groups impacted by the proposed SSEP pipeline loops and gas-fired compressor units – nearly as many people as live in all of Davidson County, North Carolina, where the southern half of the Salem Loop and the Compressor Station 155 expansion are proposed to be built.

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<sup>46</sup> [EJScreen Technical Documentation for Version 2.3](#), U.S. Environmental Protection Agency, July 2024, page 8.

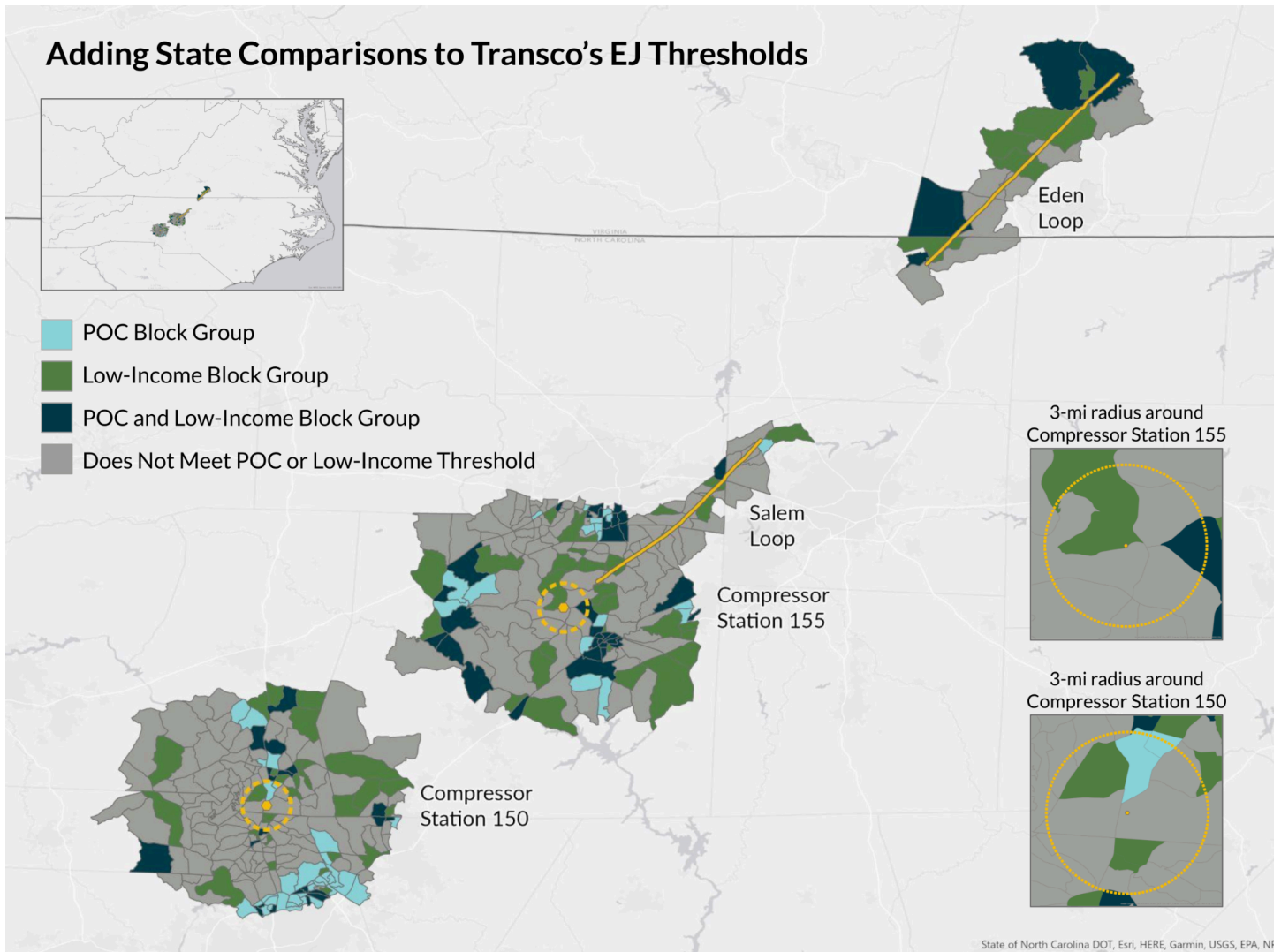
**Figure 5**



*Sierra Club analysis of data from EPA's EJScreen*

There are concentrated pockets of POC populations in the 12.4-mile radius of impacted block groups around both compressor stations, with 25% of block groups around Compressor Station 150 and 22% of those around Compressor Station 155 above the 60th percentile statewide for people of color population levels. In addition, one in every five block groups around the Eden Loop is above the 60th percentile in the state. In total, there are approximately 192,000 people of color living in the block groups impacted by the proposed SSEP pipeline loops and gas-fired compressor units.

**Figure 6**



*Sierra Club analysis of data from Transco's Resource Report 5 and U.S. Census American Community Survey*

Transco's EJ assessment identifies which of the block groups around the proposed SSEP infrastructure meet its thresholds to be categorized as EJ communities (i.e., low-income communities, POC communities, or both low-income and POC communities). Transco defines low-income block groups as those where the percent of households with an income at or below the Federal Poverty Level is greater than that of the county in which the block group is located.<sup>47</sup> Transco's definition of POC block groups includes those where either: "(a) the aggregate minority population of the block groups in the affected area exceeds 50 percent; or (b) the aggregate minority

<sup>47</sup> [Resource Report 5](#), page 5-35. The official poverty level is quite low, and many studies consider people making up to twice that amount to be low-income. [EJScreen Technical Documentation for Version 2.3](#), U.S. Environmental Protection Agency, July 2024, page 8.

population in the block group affected is 10 percent higher than the aggregate minority population percentage in the county in which the block group is located.”<sup>48</sup> By comparing each block group only to county levels of low-income and POC populations, Transco’s approach fails to identify EJ populations in block groups located within counties with high low-income or high POC populations throughout.

Comparing each block group to both the county and state demographics better indicates block groups with high levels of low-income and/or POC populations. In its definition of Underserved Communities, the North Carolina Department of Environmental Quality takes this approach, comparing its criteria for a block group to both county and state levels.<sup>49</sup> **Figure 6** identifies low-income block groups as those where the percent of households with income at or below the Federal Poverty Level is greater than that of the county or state in which the block group is located, and maps POC block groups where either (a) the aggregate minority population of the block groups in the affected area exceeds 50 percent; or (b) the aggregate minority population in the block group affected is 10 percent higher than the aggregate minority population percentage in the county or state in which the block group is located. Adding state levels as a comparison in Transco’s definition results in a 10% increase in the EJ population around SSEP, including identification of the block group in which Compressor Station 155 is located as a low-income community. An even more comprehensive approach would be not only to use the state as a comparison, but also to use the EPA’s definition of low-income, looking at households making up to twice the Federal Poverty Level.

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## SSEP is Incompatible with North Carolina’s Equity and Climate Goals

There are numerous executive orders in North Carolina that lay out how state advisory boards and agencies should consider EJ in permitting. In October 2023, then-Governor Cooper signed Executive Order (EO) 292, *Advancing Environmental Justice for North Carolina*.<sup>50</sup> This EO requires cabinet agencies to “incorporate EJ considerations into their policies and programs,” “ensure meaningful opportunities for the public to participate in policy actions and agency programs making on matters of importance to impacted communities,” and “consider public health impacts in their permitting, policy actions, and agency programs to the furthest extent permissible by law.” Additionally, EO 246, *North Carolina’s Transformation to a Clean, Equitable Economy*, states that the Governor’s Office should receive guidance on EJ issues from the Governor’s Environmental Justice Advisory Council.

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<sup>48</sup> [Resource Report 5](#), page 5-35.

<sup>49</sup> [Community Mapping System Glossary of Terms and Definitions](#), North Carolina Department of Environmental Quality, January 2022.

<sup>50</sup> [Executive Order No. 292](#), Governor Roy Cooper of North Carolina, October 2023.

EO 246 also lays out clear climate goals for North Carolina: to reduce statewide greenhouse gas emissions 50% below 2005 levels by 2030 and down to net-zero emissions by 2050 at the latest.<sup>51</sup> In addition, in 2021, Governor Cooper signed Session Law 2021-165, which enacted a statutory requirement to achieve a 70% reduction in emissions of carbon dioxide emitted in the state from electric generating facilities owned or operated by electric public utilities from 2005 levels by 2030 and to reach carbon neutrality by 2050.<sup>52</sup> Although the North Carolina Utilities Commission has provisionally extended Duke Energy’s deadline for compliance with the 2030 requirement, Duke – the primary electric utility in the state – is still required to “pursue all reasonable steps to achieve the Interim Target by the earliest possible date,” and the statute’s ultimate requirement of carbon neutrality by the year 2050 remains firmly in place.<sup>53</sup>

Transco estimates that under a full-burn scenario, the downstream emissions of SSEP would amount to 30.95 million metric tons of carbon dioxide-equivalent (MMT CO<sub>2</sub>e) per year.<sup>54</sup> The portion of SSEP’s capacity slated for Duke Energy would generate 19.38 MMT CO<sub>2</sub>e per year of emissions once combusted – more than 70% of what NCDEQ projected would be the total emissions from all electricity generation in the state by 2030, just five years from now.<sup>55</sup> In fact, **under the state’s climate goals, emissions from the portion of SSEP gas combusted in-state could use up 26% of North Carolina’s total carbon budget and 78% of the electric sector’s carbon budget in 2030.**<sup>56</sup> Using the EPA estimates for the social cost of carbon, the full-burn downstream emissions from SSEP would create more than \$122 billion worth of damages over the next twenty years.<sup>57</sup>

In a letter to FERC, Governor Cooper stated that the state’s electric generation emissions reduction requirements mean that “any newly constructed natural gas fueled electricity generation units will be forced to retire before the end of their useful lives, leading to sunk costs that will be charged to North Carolina’s ratepayers”<sup>58</sup> – emphasizing that not only are gas pipeline projects that are designed to serve new gas-fired power plants incompatible with the state’s climate goals, but that implementation of those goals alongside approval of new gas projects will create stranded assets that harm ratepayers.

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<sup>51</sup> [Executive Order No. 246](#), Governor Roy Cooper of North Carolina, January 2022.

<sup>52</sup> [Clean Energy Plan](#), North Carolina Department of Environmental Quality, accessed February 2025; [Comments of North Carolina State Governor Roy Cooper in Opposition to the Extension of the Certificate of Public Convenience and Necessity for the Mountain Valley Pipeline Southgate Project](#), FERC Docket CP19-4, Accession No. 20230724-5191, July 2023.

<sup>53</sup> [SSEP Need for EIS Organization Comment](#), page 11.

<sup>54</sup> [Resource Report 9](#), page 9-51.

<sup>55</sup> [SSEP Need for EIS Organization Comment](#), page 10.

<sup>56</sup> [North Carolina Greenhouse Gas Inventory \(1990 – 2050\)](#), North Carolina Department of Environmental Quality Division of Air Quality, January 2024, page 4. A 70% reduction below 2005 levels by 2030 of emissions from electricity generation and use means a carbon budget of 24.80 MMT CO<sub>2</sub>e for that sector in 2030.

<sup>57</sup> [SSEP Need for EIS Organization Comment](#), pages 12–13.

<sup>58</sup> [Comments of North Carolina State Governor Roy Cooper in Opposition to the Extension of the Certificate of Public Convenience and Necessity for the Mountain Valley Pipeline Southgate Project](#), FERC Docket CP19-4, Accession No. 20230724-5191, July 2023.

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## Conclusion

Existing and proposed gas pipelines and compressor units threaten local communities with air pollution, explosion risk, environmental damage, and more. Environmental justice assessments of proposed infrastructure must look at potential effects on communities that may be more vulnerable to these impacts due to factors such as existing environmental burdens, systemic racism, and/or inequitable access to social services. Regulators cannot ignore – as Transco did – the fact that **PM2.5 pollution is already high in the communities where Transco proposes to build SSEP.**

In addition to threatening local communities near the proposed infrastructure, **SSEP is incompatible with North Carolina’s legislatively mandated climate goals.** The project would mean locking in emissions from new methane gas infrastructure and climate catastrophe, and forcing ratepayers to deal with stranded assets when unnecessary gas infrastructure is retired early.



Notwithstanding all the potential harm caused by this project, in January 2025, FERC issued a formal notice indicating that it plans to prepare an Environmental Assessment for SSEP, instead of a more robust Environmental Impact Statement. FERC also indicated it would provide only a 30-day public comment period, which is expected to fall over the Thanksgiving holiday.<sup>59</sup> In other words, FERC anticipates conducting a less thorough review and providing less time for public input than it has afforded other, smaller projects in the past.<sup>60</sup> This decision means that **proactive measures from state regulators and elected**

**officials are even more necessary** to prevent an overbuild of dirty and dangerous fossil fuel infrastructure that threatens the health of nearby communities, including already overburdened environmental justice communities.

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<sup>59</sup> [Notice of Schedule for the Preparation of an Environmental Assessment for the Southeast Supply Enhancement Project](#), FERC Docket CP25-10, Accession No. 20250122-3067, January 2025.

<sup>60</sup> For a list of project proposals for which FERC issued environmental impact statements, see: [SSEP Need for EIS Organization Comment](#), pages 16–20. Most of these projects had comment periods that lasted longer than 30 days, as evidenced in their respective FERC dockets.

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## Recommendations

### North Carolina Governor Stein should:

1. Request that the Governor’s Environmental Justice Advisory Council evaluate the proposed project and provide recommendations to the Governor’s staff and the Department of Environmental Quality regarding permitting, public engagement, and other decision-making.
2. Recommend that state decision makers critically assess the stated “need” for the project and the project’s impacts on communities and environmental resources, including cumulative impacts given other projects proposed for the region.
3. Conduct a report to critically assess the stated “need” for the project as well as the project’s impacts on communities and ratepayers, and explore how North Carolina can better leverage flexibility, so that new large loads can be interconnected more quickly, while reducing the need for additional power plants and transmission lines.<sup>61</sup>

### North Carolina Attorney General Jackson should:

1. Comment in the FERC docket with questions and concerns about the proposed project’s impacts on North Carolinians, including ratepayers.

### North Carolina Department of Environmental Quality should:

1. Complete an Environmental Justice report for each permitting decision related to SSEP.
2. Complete a thorough assessment of local ambient air quality and community health in neighborhoods surrounding Compressor Stations 150 and 155, to assess the health impacts of increased air pollution on local residents.
3. Ask Transco for a detailed description of electrification alternatives for both proposed gas-powered compressor stations, and require Best Available Control Technology (BACT) for the compressor stations.
4. Ask FERC to prepare an Environmental Impact Statement, given the cumulative impacts and significant environmental threats posed by the project.

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<sup>61</sup> Tyler H. Norris, Tim Profeta, Dalia Patino-Echeverri, and Adam Cowie-Haskell, [Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads in US Power Systems](#), Nicholas Institute for Energy, Environment & Sustainability, Duke University, 2025.

5. Conduct a rigorous and robust review of Transco's application for water quality permits for SSEP, to protect North Carolina's streams, rivers, and wetlands.
6. Carefully evaluate Transco's compliance with critical buffer rules that protect two watersheds supplying drinking water for nearly one million North Carolinians.<sup>62</sup>

**Virginia Department of Environmental Quality (VADEQ) should:**

1. Conduct a rigorous review of all potential surface water and groundwater drinking water impacts from construction and operation of the pipeline and related facilities.

**Local municipalities impacted by Transco's proposed SSEP should:**

1. Ask NCDEQ and FERC to require BACT for the proposed compressor stations.
2. Ask FERC to prepare an Environmental Impact Statement, given the cumulative impacts and significant environmental threats posed by the project.

**The Federal Energy Regulatory Commission should:**

1. Prepare an Environmental Impact Statement for the proposed project that considers alternatives and mitigation measures, including the no-action alternative as well as less harmful approaches like electric-driven motors for the compressor stations, given the significant environmental impacts that the project could have on communities and the environment.
2. Require Transco to install electric-driven motors at Compressor Stations 150 and 155 instead of gas-powered compressor units, given Transco is planning to install electric-driven motors at all other proposed compressor station expansions in SSEP.
3. Take a hard look at the project's cumulative impacts given the multiple proposed gas infrastructure projects proposed in the Southeast alongside existing infrastructure.

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<sup>62</sup> 15A N.C. Admin. Code 2B.0720-0724 and 15A N.C. Admin Code 2B.0262-0267.

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## Methodology and Data Sources

This analysis used EPA's EJScreen as a useful tool for accessing demographic and pollution data for a given geography. EJScreen data used in this project were downloaded from January 3-15, 2025. On February 5, 2025 the Trump administration's EPA removed EJScreen from its website.<sup>63</sup> At the time of publication, some of the links in this methodology explanation do not work because of this attack on environmental justice initiatives.

This report is based on the EJ analysis that Transco submitted to FERC in Resource Report 5 in October 2024. In late March 2025, Transco proposed "minor Project reroutes and workspace adjustments," including reroutes of small segments of both pipeline loops. (SSEP's pipeline expansions are called pipeline "loops" because they are largely sited alongside existing pipeline routes). This slightly shifted the census block groups impacted, going from 373 block groups in scope around the pipeline loops and Compressor Stations 150 and 155, to 372 such block groups. In addition, Transco's original EJ analysis sourced data from the U.S. Census Bureau American Community Survey (ACS) 5-year estimates ending in 2022, while the March 2025 update sourced data from the ACS 5-year estimates ending in 2023. In the original Resource Report 5, Transco identified 156 of the 373 block groups as meeting its low-income and/or POC thresholds in order to be identified as an EJ community; in the update, 169 of 372 block groups meet these criteria.<sup>64</sup> This report's analysis is based on the block groups identified in, and the ACS 2022 data used in, the original Resource Report 5. This aligns the analysis with EJScreen which, before it was taken down, also sourced data from the ACS 5-year estimates ending in 2022. Block group shapefiles are from the U.S. Census Bureau's 2022 files.<sup>65</sup>

Low-income, POC, and PM2.5 state percentiles at the block group level are from EPA's EJScreen version 2.3 as of August 6, 2024.<sup>66</sup> EJScreen defines people of color as individuals who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. EJScreen defines low-income people as those whose annual household income is less than two times the Federal Poverty Level (as a fraction of individuals for whom the ratio was determined). Transco defines low-income people as those whose annual household income is less than the Federal Poverty Level.

In Figure 5, North Carolina air quality permit sites are from the North Carolina Department of Environmental Quality.<sup>67</sup> Only sites with a status of "Title V" are shown. Virginia air quality permit sites are from the Virginia

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<sup>63</sup> [EPA Removes EJScreen from its Website](#), Environmental Data & Governance Initiative, February 2025.

<sup>64</sup> [Transcontinental Gas Pipe Line Company, LLC submits supplemental information to the application for Certificate of Public Convenience and Necessity re the Southeast Supply Enhancement Project](#), FERC Docket CP25-10, Accession No. 20250328-5273, March 2025.

<sup>65</sup> [TIGER/Line Shapefiles](#), United States Census Bureau, as of October 9, 2024.

<sup>66</sup> [Download EJScreen Data](#), United States Environmental Protection Agency, as of August 6, 2024.

<sup>67</sup> [AQ Facility Map](#), North Carolina Department of Environmental Quality, as of January 8, 2025.

Department of Environmental Quality.<sup>68</sup> Only sites with a federal classification of “Major/Potential Major” are shown.

Figure 6 starts with the same approach that Transco takes when classifying block groups, as detailed in Appendix A of Transco’s Resource Report 5.<sup>69</sup> However, we add a) all block groups within a 0.7-mile evacuation zone of the pipeline loops, and b) state levels of low-income and POC populations as a comparison, along with county levels. This figure uses Transco’s definition of low-income individuals to identify low-income block groups, where low-income individuals are those whose annual income is less than the Federal Poverty Level.<sup>70</sup> As previously stated, Transco’s definition of low-income is much more narrow than many other analyses, including in Figure 2, where a low-income person is defined as someone making up to two times the Federal Poverty Level.

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## Acknowledgements

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<sup>68</sup> [Active Air Sites](#), Virginia Department of Environmental Quality, as of November 25, 2024.

<sup>69</sup> [Resource Report 5](#), Appendix 5B, pages 24–43.

<sup>70</sup> *Ibid*, page 5-35.