

LOUDOUN CLIMATE PROJECT NETWORK

Loudoun 2019 General Plan Sustainability	Comment
<p>SUS Policy 8: Promote sustainability efforts throughout the County. * Strategy 8.1. Support sustainability practices within the Loudoun County Government.</p>	<ol style="list-style-type: none"> 1. Municipal buildings should be upgraded to include the most current International Energy Efficiency Conservation Code. 2. The County fleets should stop buying internal combustion engine vehicles and buy electric vehicles instead. 3. Use Metropolitan Washington 2030 Climate and Energy Action Plan, (https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/) to develop a plan for Loudoun to target reducing greenhouse gas emission that is 50% below 2005 levels by 2030. 4. Develop a Sustainability Plan for Loudoun County
<p>* Strategy 8.2. Support energy efficient practices for all in Loudoun County</p>	<ol style="list-style-type: none"> 1. Require energy benchmarking, auditing, and upgrade requirements for municipal and commercial buildings. 2. Use district energy systems (DES) to utilize waste heat from data centers. 3. Require Information Technology companies with corporate sustainability goals to implement their goals in Loudoun facilities.
<p>* Strategy 8.3. Support sustainable economic practices within Loudoun County to strengthen economic growth and innovation.</p>	<p>To attract businesses with corporate sustainability goals, Loudoun can become by developing a Climate Action Plan to transition Loudoun to 100% renewable sources of energy by 2035 via innovative tools such as Community Choice Aggregation.</p>
<p>SUS Policy 9: Encourage sustainable development practices, including long-term water conservation, green building principles, sustainable site design, renewable energy, preservation and adaptive re-use of historic structures, and integrated energy management planning. * Strategy 9.4. Promote green building standards and green building.</p>	<ol style="list-style-type: none"> 1. Exempt or partially exempt energy efficient buildings from local property taxes like programs in Charlottesville and Roanoke, VA. 2. Implement the Moorefield Station Integrated Energy Management Plan. Update it if necessary.

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The Loudoun County 2019 General Plan,

<https://www.loudoun.gov/DocumentCenter/View/152285/General-Plan---Combined-with-small-maps-bookmarked>, includes two new Sustainability Policies beginning on p. 206:

1. SUS Policy 8: Promote sustainability efforts throughout the County
2. SUS Policy 9: Encourage sustainable development practices, including long-term water conservation, green building principles, sustainable site design, renewable energy, preservation and adaptive re-use of historic structures, and integrated energy management planning.

There are 8 Strategies and 25 Actions to facilitate these two policies.

In 2020 through the Loudoun County Preservation and Conservation Coalition, LCPCCC, submission, <https://loudouncoalition.org/wp-content/uploads/2020/04/EH-audit-LCPCCC-AUDIT-INPUT-3-20-2020-DRAFT.pdf>, I made multiple & referenced recommendations for each of the 8 Strategies and each of the 25 Actions adopted in the Loudoun County 2019 General Plan. Regrettably, the draft Zoning Ordinance currently under review is devoid of any ordinances to implement Loudoun County 2019 General Plan SUS Policies 8 & 9.

The draft Zoning Ordinance must include at least a few ordinances to implement the Sustainability Policies because we know that Loudoun County:

- hosts the greatest global concentration of data centers, which consume enough energy to power nearly five times the number of homes in Loudoun County.¹
- uses electricity that is generated by over 60% greenhouse gas emitting fossil fuels.²
- increased its greenhouse gas emissions by 56% from 2005 to 2018 in stark contrast to a 13% reduction from the Metropolitan Washington region during the same time period.³
- promotes expanding roads while statistics show that transportation in Virginia produces over half the Commonwealth's carbon dioxide emissions of which 37% is from personal vehicles.⁴
- is experiencing an accelerated loss of farmland, threatening agricultural viability.⁵
- lost an estimated 13 acres of wetlands, 20,000 feet of streams annually and an average of five acres of forest daily.⁶
- has over 15,000 individual and community wells that serve rural residents.⁷
- has a growing population.
- daily makes land use decisions that impact climate change, resilience, and sustainability.

Therefore, Loudoun County is urged to adopt ordinances to implement the new Sustainability Policies in the current comprehensive plan. While the term “sustainability” is used 58 times in Loudoun County 2019 General Plan, it is used only a couple times in the Zoning Ordinance.

Footnotes:

1. According to the article, <https://www.bizjournals.com/washington/news/2019/03/12/the-stunning-demand-for-power-from-loudoun-county.html>, Dominion Energy states that a typical data center consumes “about the same amount of power as 7,500 residential

households.” Today, there are over 100 data centers in Loudoun County, using enough energy to power 750,000 homes.

2. <https://www.eia.gov/state/data.php?sid=VA>
3. Steve Walz’s presentation in Loudoun County Climate Action Webinar, <https://vimeo.com/466563236>
4. Lena Lewis, The Nature Conservancy, January 2021 <https://tinyurl.com/dk9c3zdk>,
5. <https://loudounnow.com/2019/04/18/county-leaders-celebrate-but-loudoun-farmland-disappearing-quickly/>
6. Loudoun County Stream Assessment: Results Report. Versar Inc and Biohabitats Inc. 2009
7. Natural, Environmental and Cultural Resources Report, Loudoun County Building and Development, 2009

Below are five General Plan 2019 Policy/Issue areas for which recommendations were made in the LCPCC 2020 submission. It is extremely important that the recommendations below be developed into draft Zoning Ordinance regulations. Then, as soon as possible, all recommendations for the two new Sustainability Policies, eight strategies, and 25 actions be reflected in Loudoun’s Zoning Ordinance.

General Plan 2019 Policy or Issue Area	Issue Description / Recommendations
<p>SUS Policy 8: Promote sustainability efforts throughout the County.</p> <p>* Strategy 8.1. Support sustainability practices within the Loudoun County Government.</p> <p> Action B. Continue to evaluate... energy demands of government buildings...Transport. Needs... develop plans for energy efficiency</p>	<p>Recommendations/Resources:</p> <p>BUILDINGS</p> <ul style="list-style-type: none"> • San Francisco Municipal Green Building Code, Environment Code Chapter 7, San Francisco. https://dev.sfenvironment.org/fil/article/policy/environment-code-chapter-7-san-francisco-green-building-code SEC. 705. LEED CERTIFICATION REQUIREMENTS FOR MUNICIPAL CONSTRUCTION PROJECTS. http://sf-ca.elaws.us/code/enco_ch7_sec705 SEC. 706. LOCALLY REQUIRED MEASURES FOR MUNICIPAL CONSTRUCTION PROJECTS. http://sf-ca.elaws.us/code/enco_ch7_sec706 <p>ENERGY</p> <ul style="list-style-type: none"> • CA Net Zero Energy Action Plan, 2017 draft. https://perma.cc/9GM4-QHX6 • Arlington County Compliance with VA Energy Conservation Code, https://www.arlingtonva.us/Government/Programs/Building/Codes-Ordinances/Energy-Conservation • Virginia Energy Conservation Code, https://up.codes/viewer/virginia/va-energy-conservation-code-2018 as amended with International Energy Conservation Code 2018. • CA 2022 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Applies to new construction of, and additions and alterations to, residential and nonresidential buildings. A vital pillar of Ca’s climate action plan. <p>TRANSPORTATION</p> <ul style="list-style-type: none"> • Virginia HB 585 Comprehensive plan; certain localities to promote

	<p>transit-oriented development. https://lis.virginia.gov/cgi-bin/legp604.exe?201+sum+HB585</p> <ul style="list-style-type: none"> • General Plan Guidelines: 2017 Update. CA Governor’s Office of Planning and Research. http://opr.ca.gov/planning/general-plan/guidelines.html Appendix A, Example Model Goals, Objectives, and Policies and Programs, Circulation, Transportation Planning https://opr.ca.gov/docs/OPR_Appendix_A_final.pdf • Transit-Oriented Development, Minnesota Model Ordinance. http://www.crplanning.com/ordinances/tod.pdf • Bloomington, MN Code of Ordinances, https://perma.cc/B3PS-7JNL Chicago Zoning Ordinance and Land Use Ordinance, 17-3-0400 Bulk and density standards. Chicago, IL, Zoning Code §§ 17-3-0403-B (2018); 17-10-0102-B (2018).
<p>Action G. Continue to monitor the efforts of MWCOG</p>	<p>Recommendations/Resources:</p> <p>As a participating member of the MWCOG and all policy boards, Loudoun is urged to review recommendations and select appropriate ones to implement. Metropolitan Washington 2030 Climate and Energy Action Plan, https://www.mwco.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/</p>
<p>Action L. Develop a Sustainability Plan...to balance economic development, social well-being, and environmental health.</p>	<p>Recommendations/Resources: Prioritize developing Loudoun’s Sustainability Plan.</p> <ul style="list-style-type: none"> • General Plan Guidelines: 2017 Update. CA Governor’s Office of Planning and Research. http://opr.ca.gov/planning/general-plan/guidelines.html Appendix A, Example Model Goals, Objectives, and Policies and Programs, Land-Use Planning, Design for Sustainability and Stability https://opr.ca.gov/docs/OPR_Appendix_A_final.pdf • Sustainability Planning, Hampton Roads, VA. https://www.hrpdcva.gov/departments/planning/sustainability-planning/ • RVA Green, 2050. Equitable climate action for a healthy and resilient Richmond. https://www.rvagreen2050.com/ • A Community Plan for a Sustainable Future, VA Beach. https://www.vbgov.com/government/departments/planning/green/Documents/Virginia%20Beach%20Sustainability%20Plan.pdf • Community Energy Plan, an element of Arlington County’s Comprehensive Plan, adopted 9/19. https://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/13/2019/10/Final-CEP-CLEAN-003.pdf
<p>* Strategy 8.2. Support energy efficient practices for all in Loudoun County Action A. Evaluate the energy demands of residential and non-residential buildings, including data centers as well as transportation needs and develop plans for energy efficiency.</p>	<p>Recommendations/Resources:</p> <p>Energy Benchmarking, auditing, and upgrade requirements:</p> <ul style="list-style-type: none"> • City of Atlanta, Code of Ordinances, Article J. Energy & Water, https://library.municode.com/ga/atlanta/codes/code_of_ordinances?nodeId=PTIIICOORANDECO_PT8COHUDE_CH2BURE_ARTJENWA <p>Buildings:</p> <ul style="list-style-type: none"> • Arlington County Compliance with VA Energy Conservation Code, https://www.arlingtonva.us/Government/Programs/Building/Codes-Ordinances/Energy-Conservation • Virginia Energy Conservation Code, https://up.codes/viewer/virginia/va-energy-conservation-code-2018 as amended with International Energy Conservation Code 2018. <p>Data Centers:</p> <ul style="list-style-type: none"> • District energy systems (DES), provide heating and cooling to buildings that

	<p>are connected to and powered by localized utility plants.[1] Loudoun's CES references district energy in conjunction with data centers. St. Paul, MN has a district energy ordinance: Saint Paul, Minn., Code of Ordinances, App. F §§ 1,2, 5-6 (2007), http://stpaul-mn.elaws.us/code/coor_ptii_ap_apxf</p> <ul style="list-style-type: none"> • Work cooperatively with data center industry to support increased use of renewable energy generated electricity <p>Transportation</p> <ul style="list-style-type: none"> • Transit Oriented Development. VA HB 585: Comprehensive plan; certain localities to promote transit-oriented development. Amended to make it optional. https://lis.virginia.gov/cgi-bin/legp604.exe?201+sum+HB585 signed by Gov. Northam & effective 7/1/20 • Parking for hybrid and electric vehicles, charging station. Jersey City, NJ, Code of Ordinances § 332-28.1 (2017), https://library.municode.com/nj/jersey_city/codes/code_of_ordinances?nodeId=CH332VETR_ARTIIIPASTST_S332-28.1PAELPLHYVE * EV charging examples & language for definitions, permitted land use, required EV parking capacity & minimum parking requirements. https://betterenergy.org/blog/reducing-transportation-emissions-through-better-zoning/ • Charlottesville, VA. Green Building Incentives and Rebates, https://charlottesville.org/724/Green-Incentives-Rebates EV Charging Station Mini-Grant Program – for Charlottesville Commercial/Non-Residential Properties. https://charlottesville.org/765/EV-Charger-Mini-Grant
<p>Strategy 8.3. Support sustainable economic practices within Loudoun County to strengthen economic growth and innovation.</p>	<p>Recommendations:</p> <ul style="list-style-type: none"> *To attract businesses with corporate sustainability goals such as Loudoun's technology corporations, develop a Climate Action Plan to transition Loudoun to 100% renewable sources of energy by 2035. * General Plan Guidelines: 2017 Update. CA Governor's Office of Planning and Research. http://opr.ca.gov/planning/general-plan/guidelines.html Appendix A, Example Model Goals, Objectives, and Policies and Programs, Economic Development https://opr.ca.gov/docs/OPR_Appendix_A_final.pdf
<p>Strategy 9.4. Promote green building standards and green building.</p>	<p>Recommendations/Resources:</p> <ul style="list-style-type: none"> * VA DEQ. https://www.deq.virginia.gov/Programs/PollutionPrevention/VirginiaInformation/SourceforEnergy/FinancialIncentives.aspx Energy Efficient Buildings Tax Exemption (Code of VA §58.1-3221.2) Potential Applicants: Business, Industry, and Residents This statute allows any county, city, or town to exempt or partially exempt energy efficient buildings from local property taxes. Eligible buildings are those that: Localities offering exemptions: Charlottesville, Roanoke * Arlington County Green Building Incentive. https://www.arlingtonva.us/Government/Programs/Sustainability-and-Environment/Energy/Green-Building