

Energy Projects Amendment

Introduction

This document, which was recommended for approval by the Surry County Planning Commission on February 3, 2023 and adopted by the Board of Supervisors on April 6, 2023, serves as a supplement to the Energy Policies outlined in the Surry County 2040 Comprehensive Plan, adopted September 3, 2020. This amendment adds clarity to any recommendations in the original section on Page 48. If there is any perceived conflict between the objective and strategies on Page 48 and this amendment, the amendment will supersede the original text. The amendment will be used as guidance in amending local ordinances and in consideration of energy project applications.

Background

At the outset of this Comprehensive Plan Amendment process, Surry County had received many applications for energy projects, especially utility-scale solar developments. The County realized a need for more in-depth evaluation and clear guidance for review of energy project applications, to the benefit of both the County and potential applicants. This amendment was created with the benefit of public input, research, and quantitative geographic analysis, to provide the needed guidance.

The most recent update to Virginia's Energy Plan was released by Governor Youngkin on October 3, 2022, during the revision process for this Comprehensive Plan Amendment. This 2022 Virginia Energy Plan recommends the Commonwealth make strategic investments in emerging energy technologies. The policies outlined in this Comprehensive Plan Amendment are reflective of the state of energy technology and the energy industry at the time of adoption. As innovative energy technologies, such as small modular nuclear reactors (SMRs), emerge and progress, the County will assess its energy policies and make updates as needed.

How to use this document

This document provides guidance on the siting of new energy projects in Surry County within the context of the original plan language, community engagement, and the state of energy projects at the time of writing.

Updated language for Objective 5 of the Future Land Use Goals in the 2040 Comprehensive Plan (on Page 48) is shown below:

Objective 5: When assessing potential energy projects, Surry County should balance the benefits of renewable energy, the interests of property owners, and the best interest of the County as a whole, including the impacts to natural, agricultural, and cultural resources.

Strategy 1: The County will support the installation of distributed energy facilities where considered appropriate and set clear standards for the permitting process for such facilities.

- The County will allow distributed energy facilities by right in residential, commercial, industrial, and mixed-use zoning districts.
- The County will consider the use of automated permitting programs, such as Solar APP+ from the National Renewable Energy Laboratory (NREL), to streamline the permitting process for distributed energy facilities.

Strategy 2: The County supports preserving the agricultural character of Surry and limiting the sum of all project site areas for community-scale energy facilities and utility-scale energy facilities (see Definitions on Page 8 of this amendment) to no more than 10% of developable land within the County, or 15,278 acres in total.

Strategy 3: The County will consider applications for new *utility-scale energy facilities* and *community-scale energy facilities*, provided that they meet the following criteria:

- The project site is not located in Residential Corridors or Residential Investment Areas (reference Future Land Use Map on Page 43 of adopted 2040 Comprehensive Plan).
 - The project site must be screened from view of Residential Corridors, Residential Investment Areas, and Towns within Surry County.
- The center of the project site, defined as the centroid of energy-generating or energy storage equipment, is within 1 mile of existing high-voltage electric transmission lines.
 - Community-scale energy facilities, which are connected directly to the electric distribution grid, will not be subject to the aforementioned proximity to high-voltage electric transmission lines.
- No part of the project site is within 0.5 miles of historic sites.
- No part of the facility is in any historic or otherwise significant viewshed in the County, as determined by staff.
 - Staff will select nearby sites from which renderings of the project site will be submitted by the developer, at the developer's expense. These renderings will be reviewed by staff during a pre-application meeting.
- No part of the facility is within 750 feet of the property lines for any place of worship or cemetery.
- The project site incorporates contiguous, unfenced, undisturbed natural areas to serve as wildlife passage corridors.
- The project site utilizes best practices to maintain biodiversity and soil quality.
- The project site is screened by vegetation that will prevent the facility from being seen from residential, commercial, or mixed-use areas.
 - Vegetation used for screening is to be mature enough to effectively screen the site by the time the facility is operational.
 - A screening and landscaping plan is submitted by the developer, to include a care, maintenance, and replacement plan during the course of the facility's life.
 - The screening landscaping plan includes native plants and pollinator habitat, and does not incorporate pesticide use. The use of herbicides should be overseen by certified professionals to limit air, water, and soil pollution.
 - The screening and landscaping plan prioritizes the preservation of existing trees over 6" caliper on the perimeter of the site.
- Any noise-generating equipment installed with sound dampening equipment and/or located a minimum of 750 feet away from any adjacent residential, commercial, or mixed-use parcels to eliminate noise impacts to neighboring uses.
- The project site complies with or exceeds erosion and sediment control requirements.
- The project site is a minimum of 0.5 miles from any existing community-scale or utility-scale energy project sites.

Strategy 4: The County will require conformance with Virginia Stormwater Management Program (VSMP) regulations. For utility-scale and community-scale solar photovoltaic energy projects, solar panels will be considered unconnected impervious surfaces in water quantity and water quality calculations, as outlined below.

- **Water Quantity:** Solar panels are to be considered unconnected impervious areas when performing post-development water quantity calculations using the hydrologic methods specified in the Virginia Stormwater Management Program Regulation, 9VAC25-870-72. Current information regarding the application of unconnected impervious areas can be found in Chapter 9 (Hydrologic Soil-Cover Complexes), Part 630 (Hydrology) of the Natural Resource Conservation Service’s National Engineering Handbook.
- **Water Quality:** Solar panels are to be considered impervious areas when performing post-development water quality calculations using the Virginia Runoff Reduction Method (VRRM). To account for the disconnection of the solar panels from the overall drainage system, the area of the solar panels may be entered into the applicable “Simple Disconnection” stormwater best management practices section of the VRRM compliance spreadsheet (i.e., 2a – Simple Disconnection to A/B Soils or 2b – Simple Disconnection to C/D Soils).

Strategy 5: The County will support the use of agrivoltaics to enhance the long-term viability of land used for energy projects and supplement crop yields.

Strategy 6: The County will continue to advocate for increased financial benefit from additional solar facilities.

- The County should join an advocacy organization to advocate with surrounding localities for favorable community benefits from the development of solar energy facilities.

Strategy 7: The County will adopt a formal approval process for utility-scale energy facilities that consists of key elements, such as:

- Negotiation of a siting agreement (§ 15.2-2316.7 of the Code of Virginia), with a recommendation from the Planning Commission to the Board of Supervisors
- A determination that the project is in substantial accord with the Comprehensive Plan (§ 15.2-2232) is included in the discussion and negotiation of a siting agreement.
- Land use approval for the utility-scale energy facility

Strategy 8: The County will strengthen its requirements for solar facility decommissioning to ensure the safe disposal of materials and effective transition of land for future use.

Strategy 9: The County will amend the Solar Ordinance adopted in 2018 (Sec. 4-607 of the County’s Zoning Ordinance) to reflect the policies outlined in this amendment.

- The amendment to the Solar Ordinance may include the establishment of a zoning district for utility-scale solar facilities.

Community Engagement for the Amendment

Energy projects can have significant impacts on a community, both positive and negative. As such, it is essential that the Comprehensive Plan Amendment reflects the needs and priorities of Surry County residents. The County solicited public input on energy projects through two focus groups, an open house, and a survey (181 responses). Several key findings from the focus groups and the open house are highlighted below:

- There is significant concern over the effects of energy projects, especially utility-scale solar projects, on the county.
- Key impacts of concern are the loss of farmland and timberland, the loss of historic character/agricultural character, the displacement of wildlife, and flooding/stormwater runoff. The loss of historic and agricultural character subsequently negatively impacts tourism, which is a key part of the local economy.
- Utility-scale solar projects do not bring many jobs to the community, especially when compared to nuclear energy plants. Jobs to install solar energy facilities are temporary and rarely draw from local skilled labor.
- Recent utility-scale solar projects have brought better community benefits, but early projects had severe impacts with regard to stormwater runoff, traffic, wildlife passage, and variance from site plans.
- New regulations allowing additional revenue sharing for utility-scale solar energy projects have helped mitigate some of the impacts to localities, but there is still concern that the drawbacks outweigh the benefits.
- Distributed solar (rooftop solar on individual structures) is generally well accepted by community members, but there is a general consensus that Surry County already has enough utility-scale solar projects.

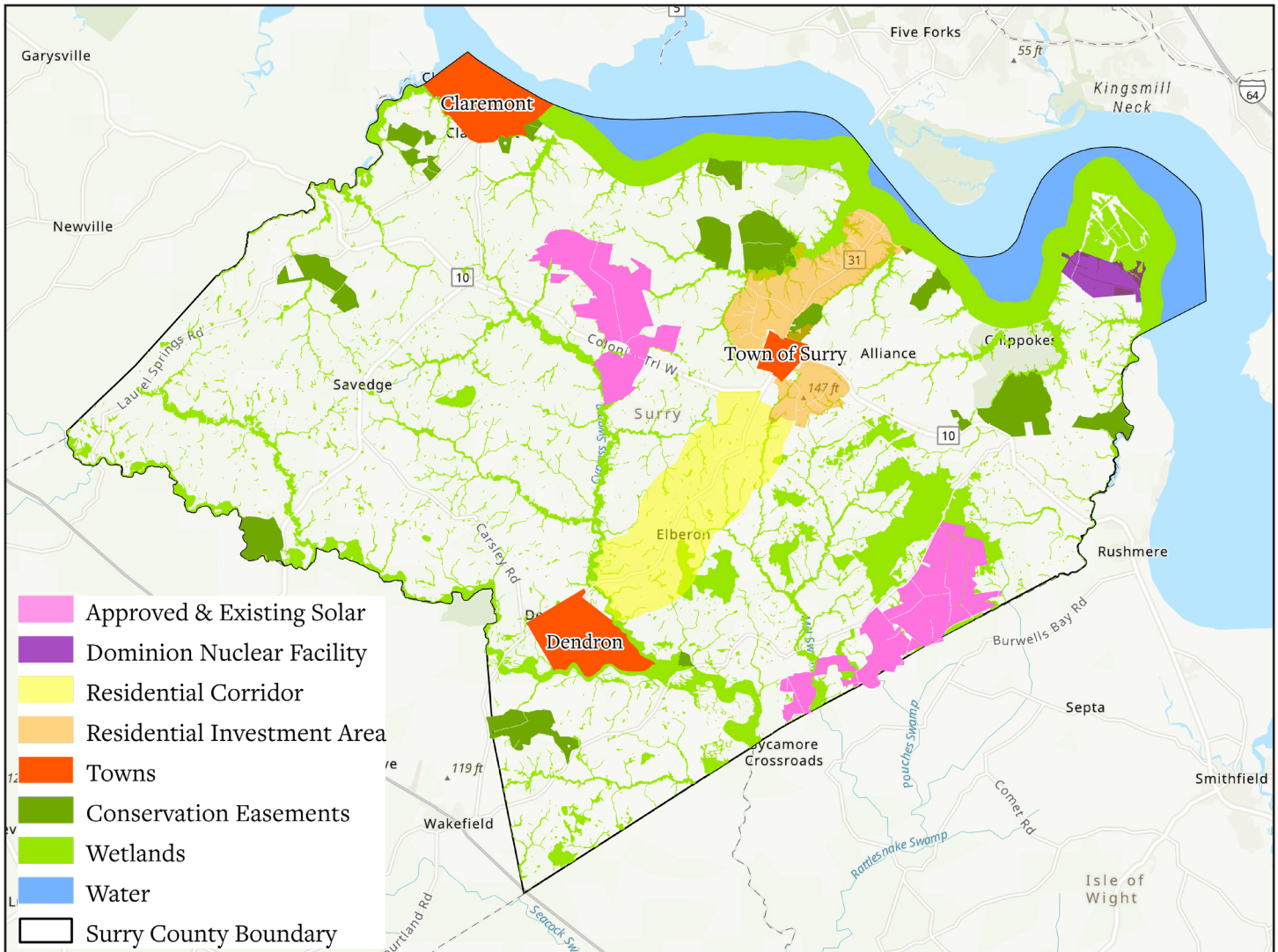
Responses to the survey on energy projects are summarized below:

- 72% of respondents are “concerned about the effects on the county by solar energy projects.”
- 17% of respondents believe “energy projects will help Surry economically.”
- 83% of respondents are “concerned over the displacement of wildlife” as a result of energy projects.
- 80% of respondents are “concerned over the loss of farmland and forested land” as a result of energy projects, from the perspectives of hunters and environmentalists, alike.
- 67% of respondents are “concerned over the loss of historic character or agricultural character” as a result of energy projects.
- 50% of respondents believe the County’s management of energy projects is “poor and needs immediate attention.”
- 45% of respondents believe “increased benefits to the community” would improve energy projects.
- 70% of respondents believe energy projects “should be limited to a very small percentage” of land in the county.
- 77% of respondents believe that energy projects are inappropriate “within view of historic properties or in historic viewsheds.”
- 76% of respondents believe that energy projects are inappropriate “within a certain distance of residential areas.”

State of Energy Projects in Surry as of the Writing of this Amendment

To inform this amendment, GIS analysis was conducted so that decisions can be made on quantitative, rather than subjective or experiential information. To begin the analysis, the Residential Corridor and Residential Investment Area, as defined by the Comprehensive Plan, were added to a map along with Towns, and existing and approved solar sites. The amount of existing “developable land” was calculated by removing water and wetlands. The figures below help frame the amount of land in Surry County that is already dedicated to energy projects as a proportion of all developable land.

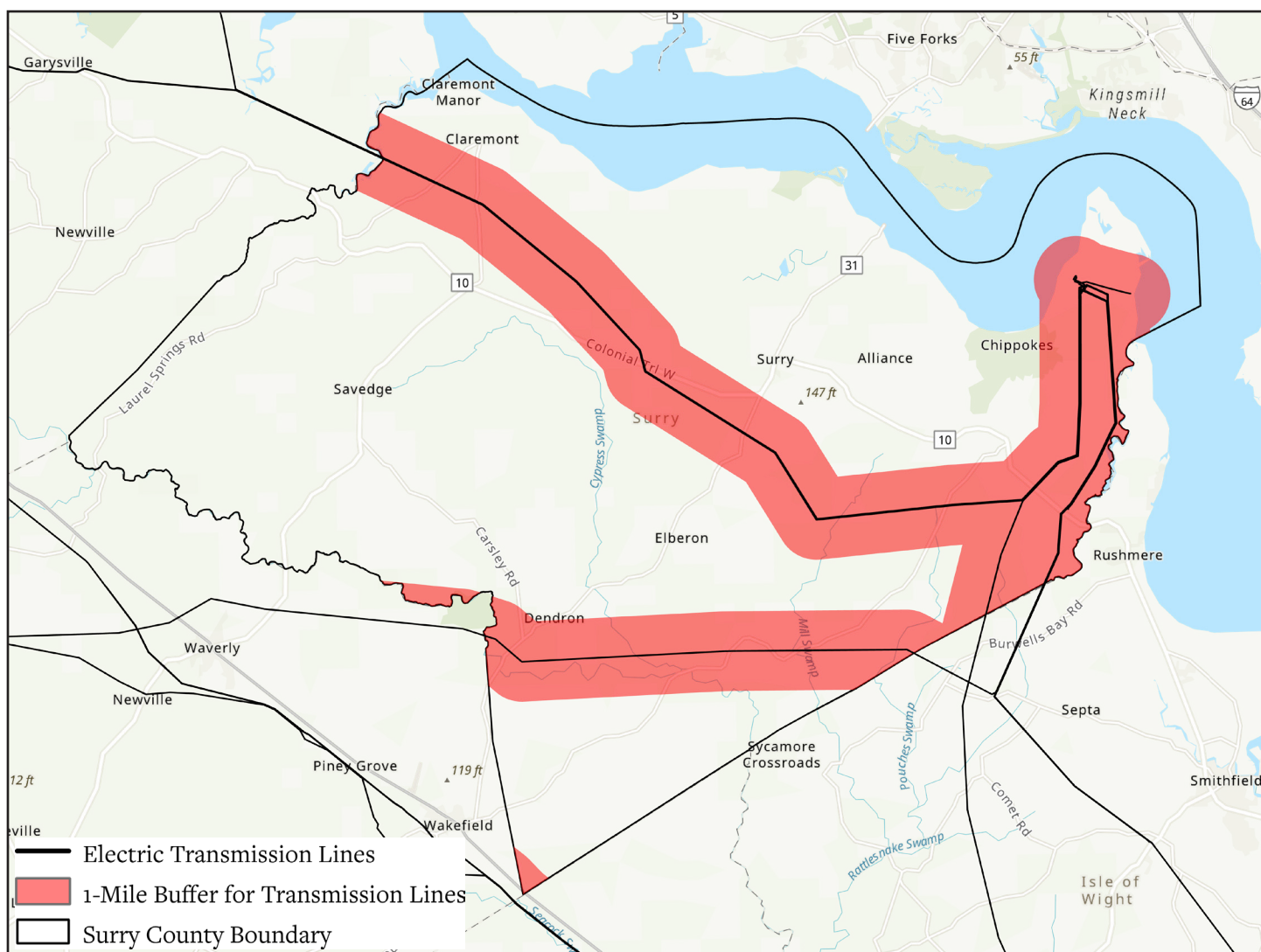
- Surry County makes up 198,051 acres in total (as calculated in GIS). When removing areas that are water or wetlands, the County has 152,780 acres of developable land.
- At the inception of this Comprehensive Plan amendment process, three utility-scale solar projects have been built or approved for construction in Surry County, totaling 8,260 acres, or 5.41% of developable land.
- The Dominion Nuclear Plant takes up 1,003 acres, or 0.66% of developable land.



Proximity to High-Voltage Transmission Lines

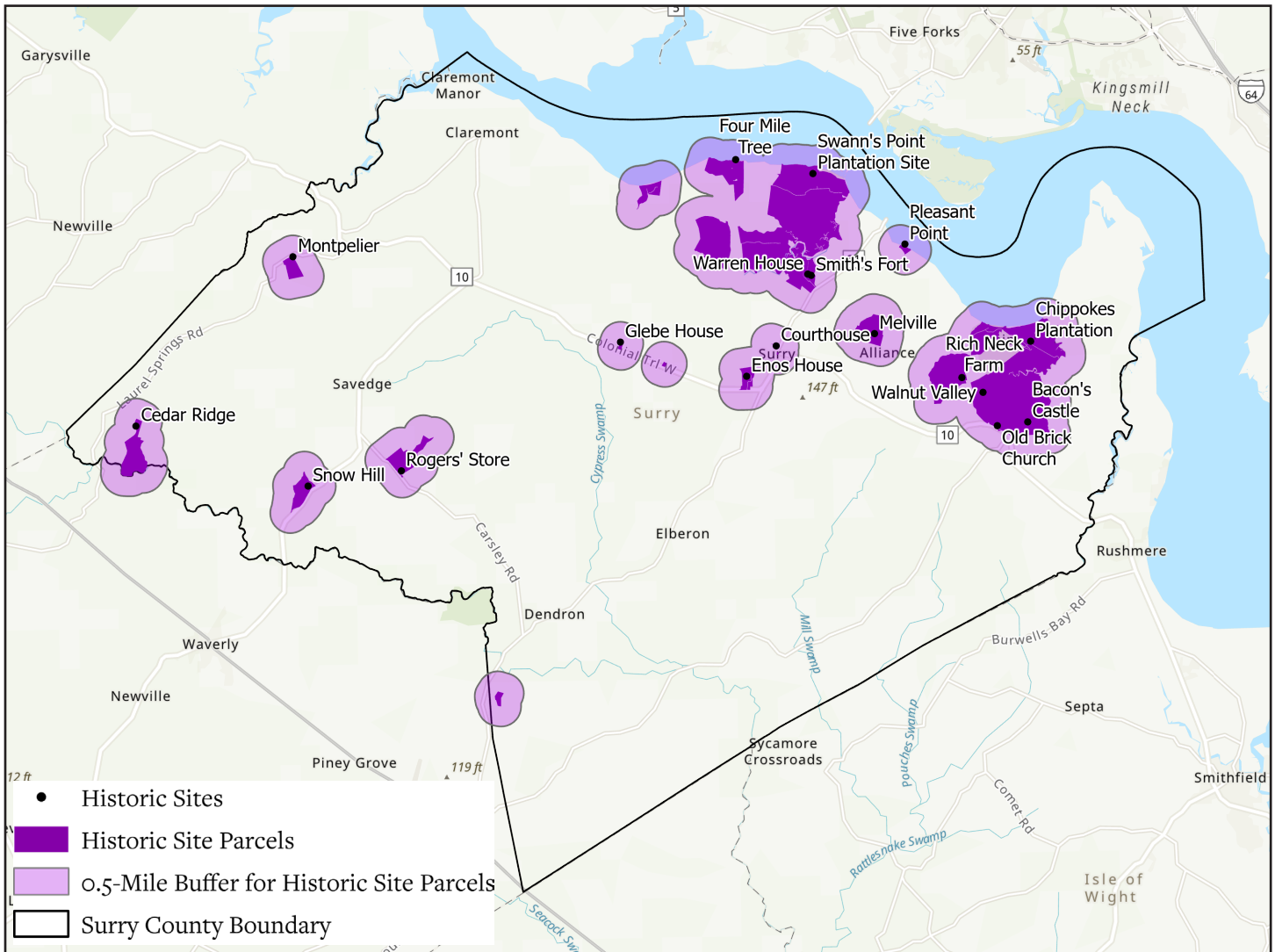
Utility-scale energy facilities are able to send electricity to other areas and/or receive electricity from other areas efficiently using high-voltage transmission lines. Building new transmission line infrastructure can cause significant disruption to the land, ecosystems, and people near the construction area. To minimize these disruptions, new utility-scale energy facilities should be located as close to existing transmission lines as possible.

As stated in Strategy 3 of this amendment, new utility-scale energy facilities should be sited such that the centroid of energy-generating or energy storage equipment is within 1 mile of existing high-voltage electrical transmission lines. The map below shows existing transmission lines with 1-mile buffers for visualization.



Historic Properties

Another key concern over energy projects in Surry County is the potential impacts to historic properties, particularly views from, of, and on the way to these sites. To gain perspective on the impacts existing and proposed energy projects have on these lands, historic properties identified by the National Register of Historic Places, the Virginia Landmarks Register, and the Surry County Local Historic Overlay District are mapped below. For the purpose of visualization, historic properties are shown with buffers of 0.5-miles and 1-mile beyond the property lines.



Precedent Policies

Language and policies for this amendment were informed by precedents set by other localities in the Commonwealth of Virginia. These precedents include acreage limits on the amount of land dedicated to energy projects in a locality, maximum distances from electric transmission lines, project size limitations, and guidelines for the preservation of agricultural land and wildlife corridors. Through the amendment process, these precedents were assessed for applicability in Surry County and modified to be appropriate for the local context, as informed by public engagement and consultations with the Planning Commission.

Definitions

Community-scale energy facility: An energy generation or energy storage facility with a rated capacity greater than 1 MWac (megawatts alternating current) and no greater than 5 MWac. Community-energy facilities do not require connections to high voltage transmission lines. Community-scale energy facilities include “shared solar” facilities, as defined in § 56-594.3 of the Code of Virginia.

Developable land: Land in Surry County where large-scale development may be feasible. Developable land excludes waterways and wetlands within the County boundaries.

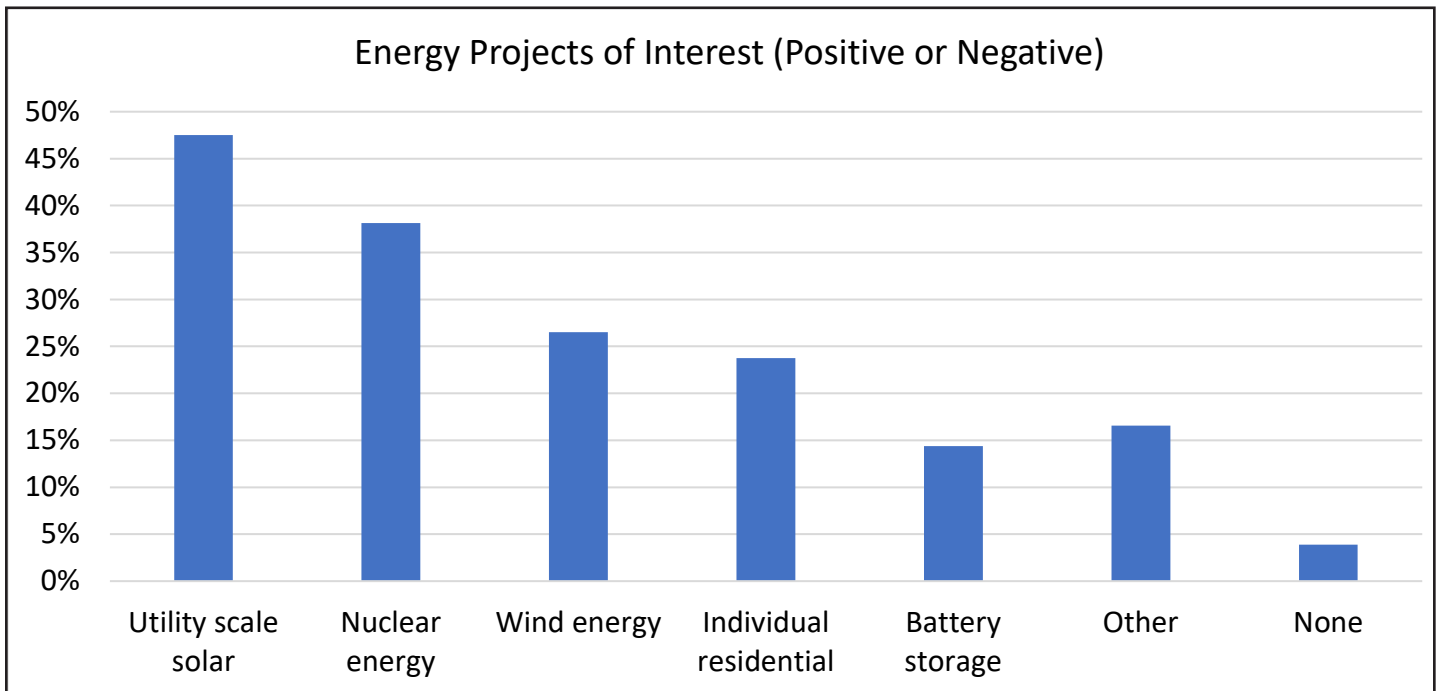
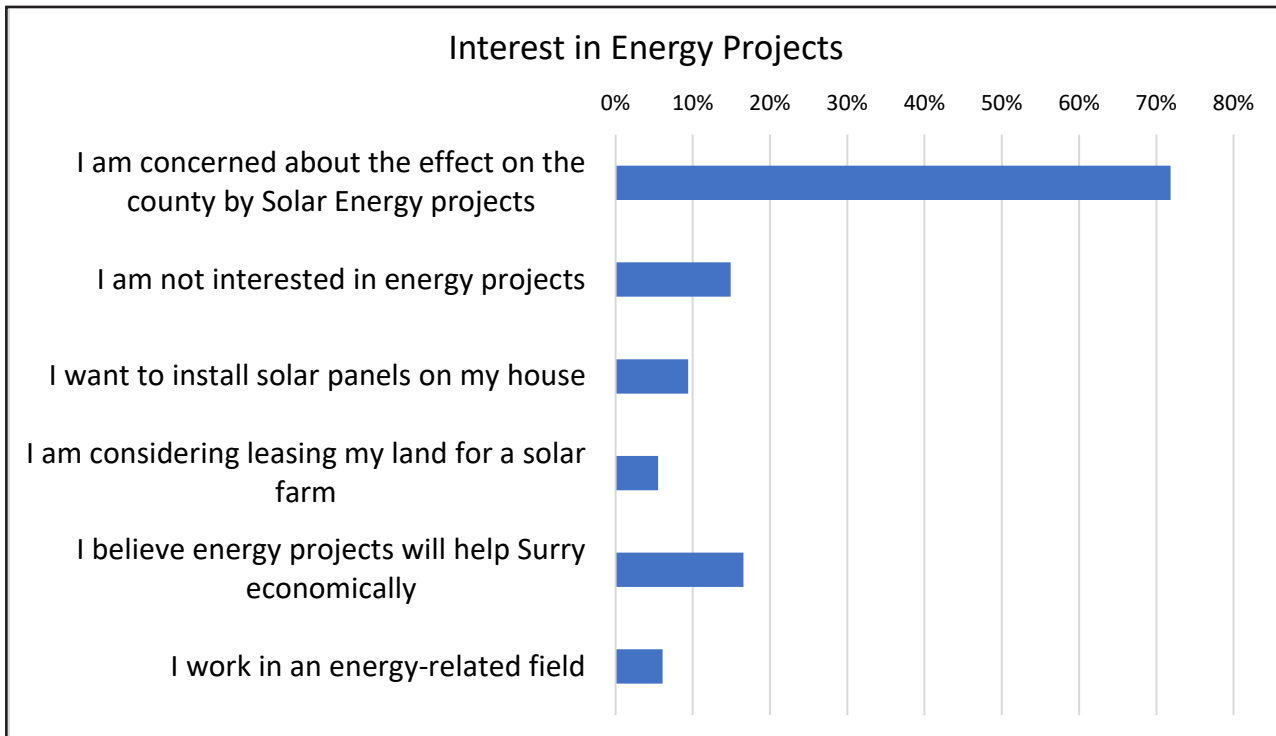
Distributed energy facility: An energy generation or energy storage facility with a rated capacity less than 1 MWac. Distributed energy facilities are used to meet energy demands on-site and include rooftop and ground-mounted photovoltaic arrays on residential, commercial, and institutional properties.

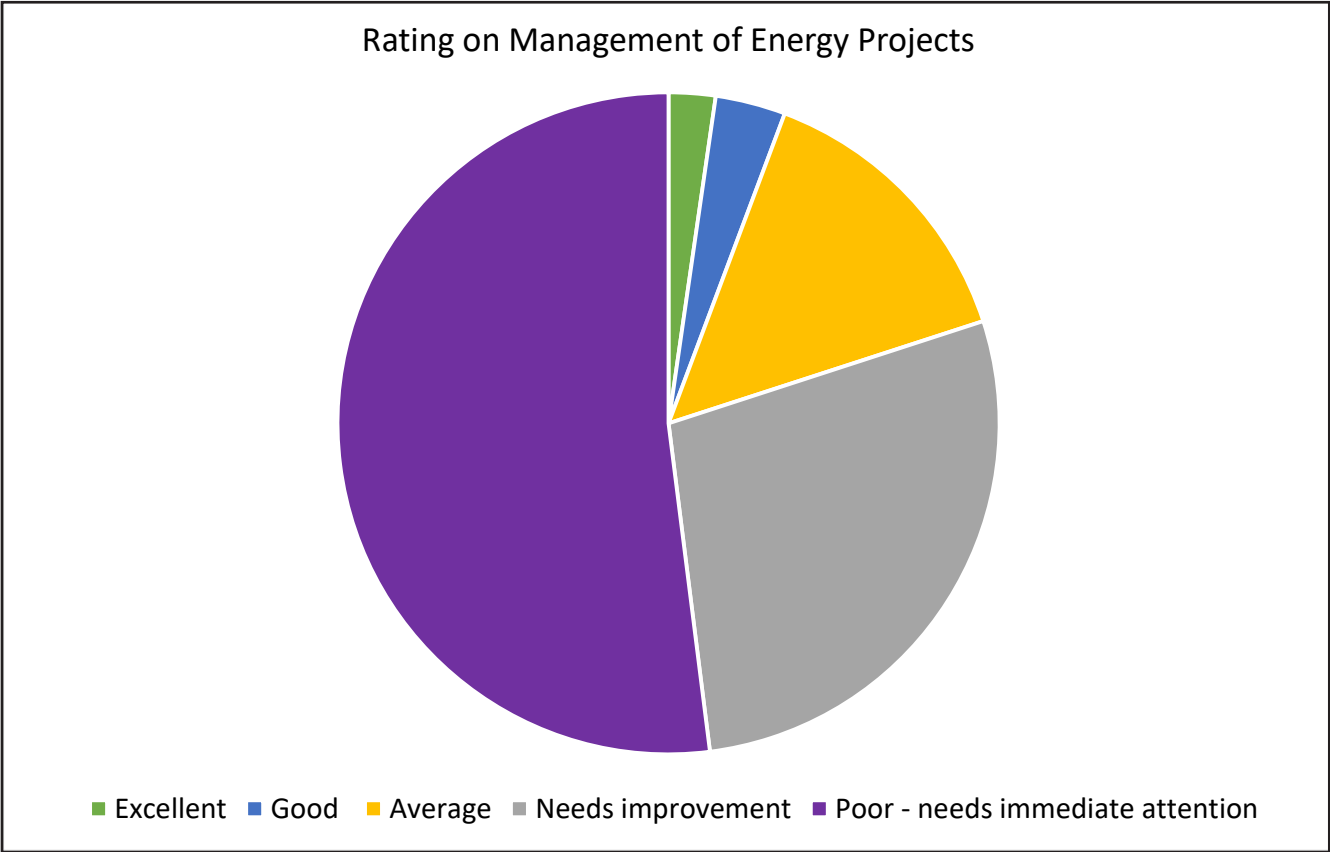
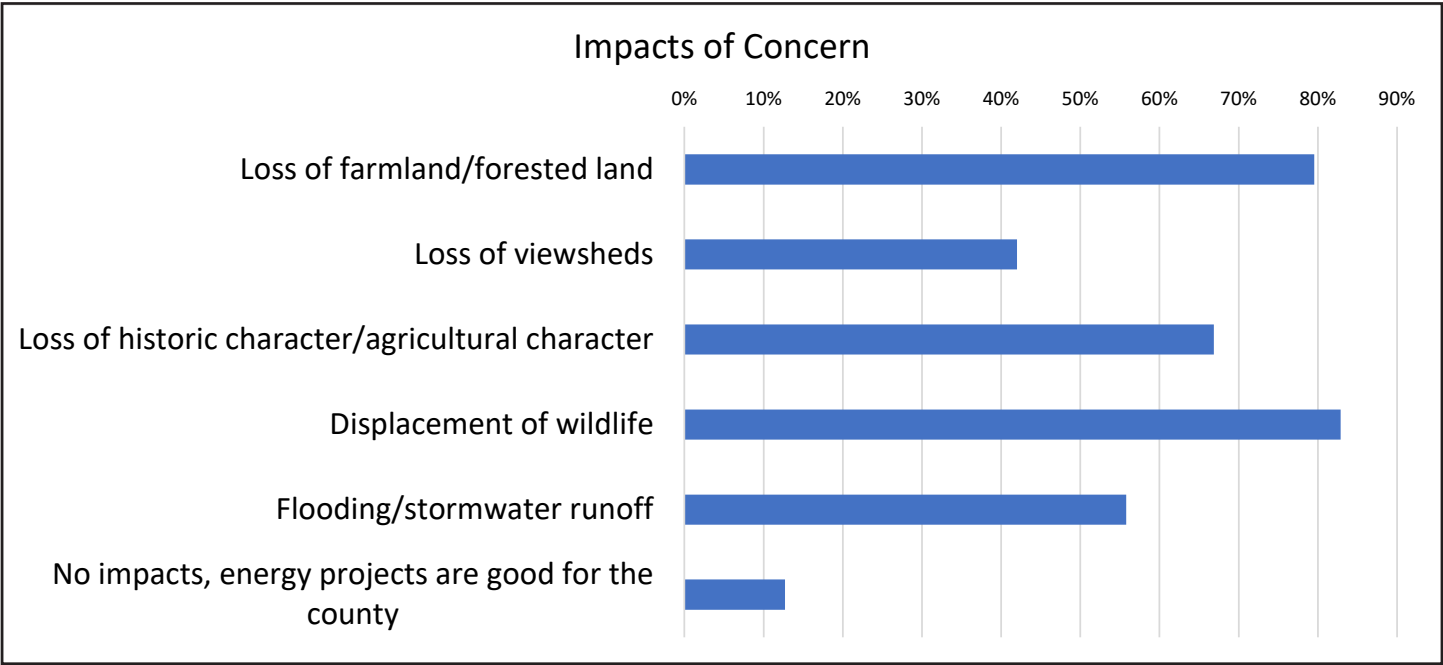
Historic site: A structure identified on the National Register of Historic Places, the Virginia Landmarks Register, or the Surry County Local Historic Overlay District, including the entirety of the parcel(s) on which the structure is located.

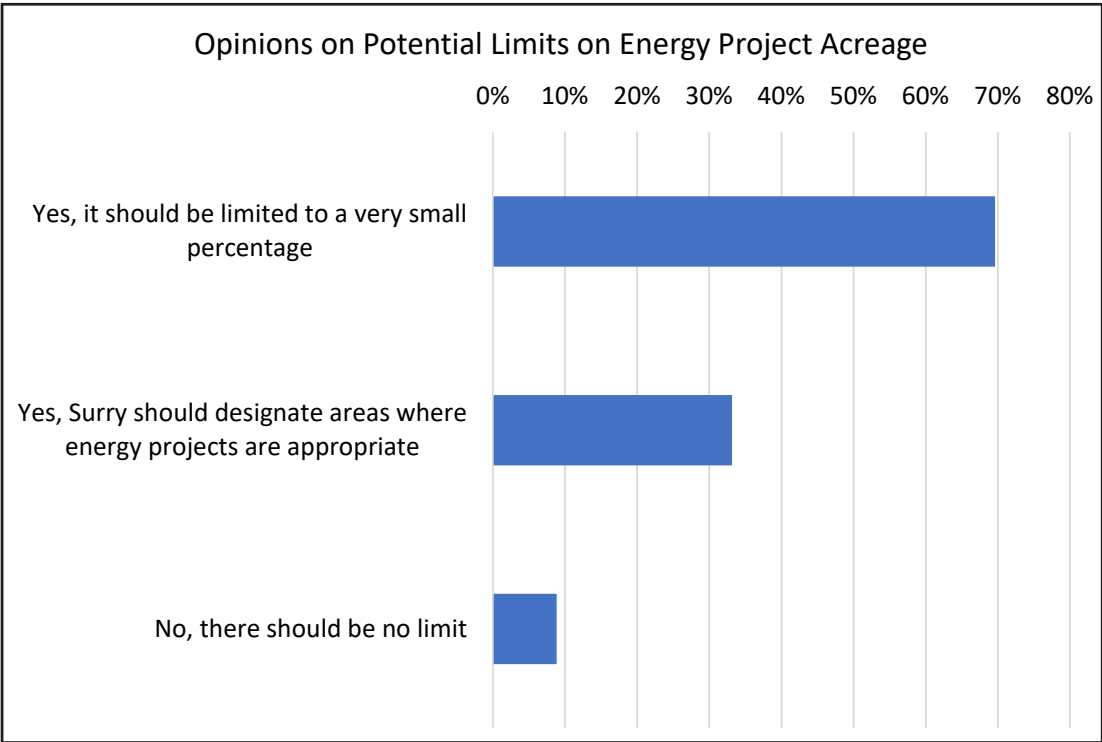
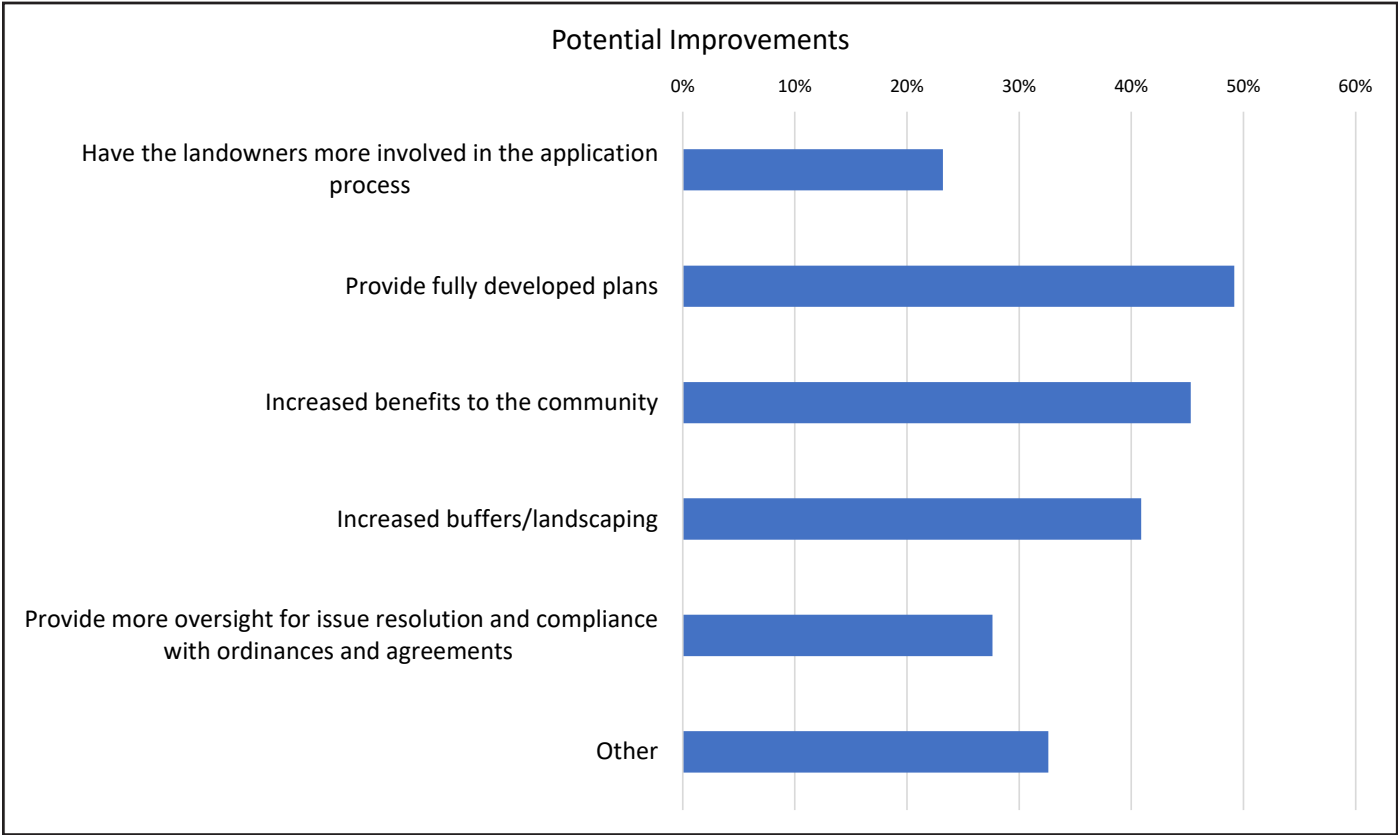
Project site: The entirety of the parcels on which an energy facility will be installed.

Utility-scale energy facility: An energy generation or energy storage facility with a rated capacity greater than 5 MWac.

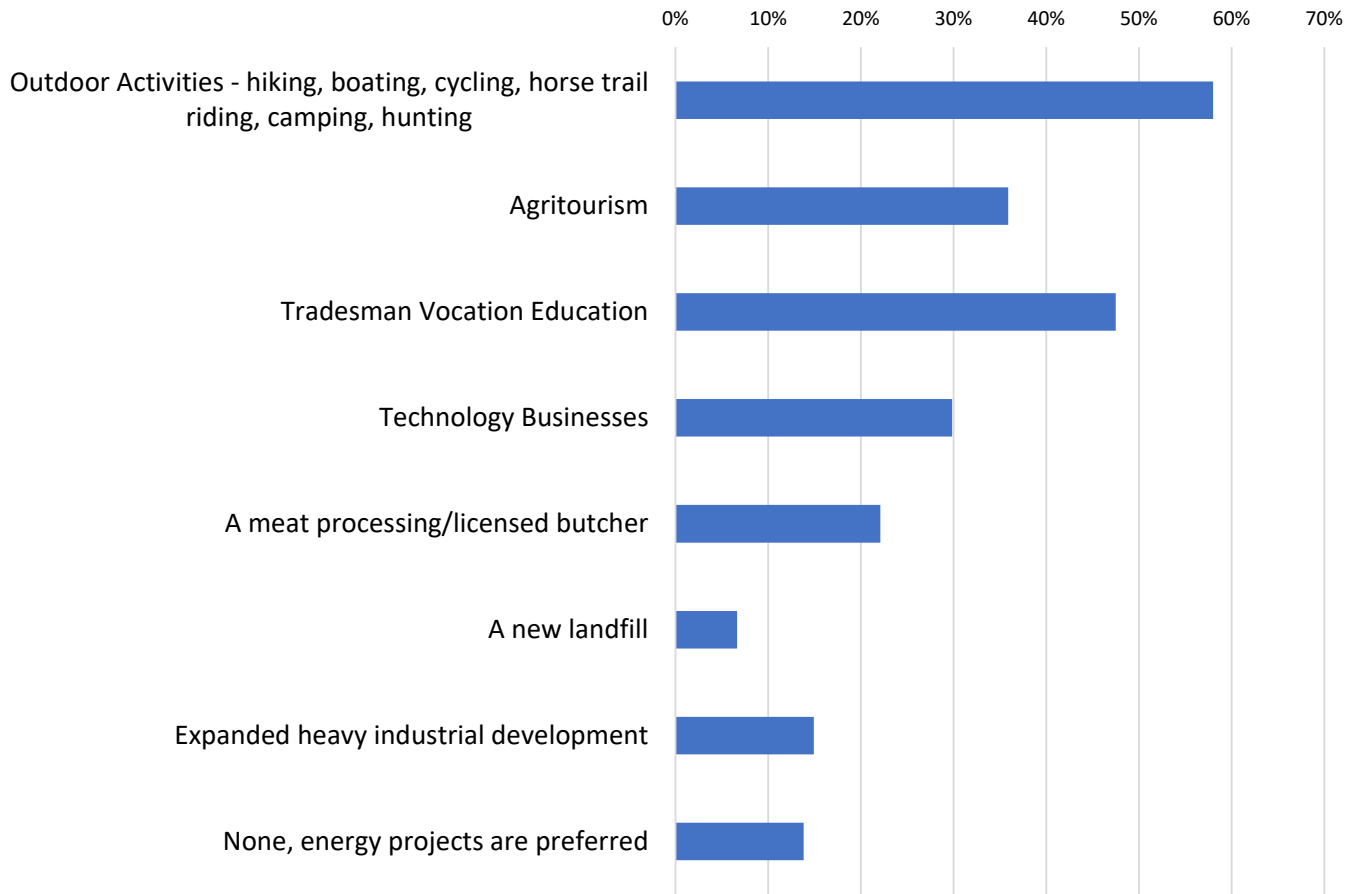
Survey Results



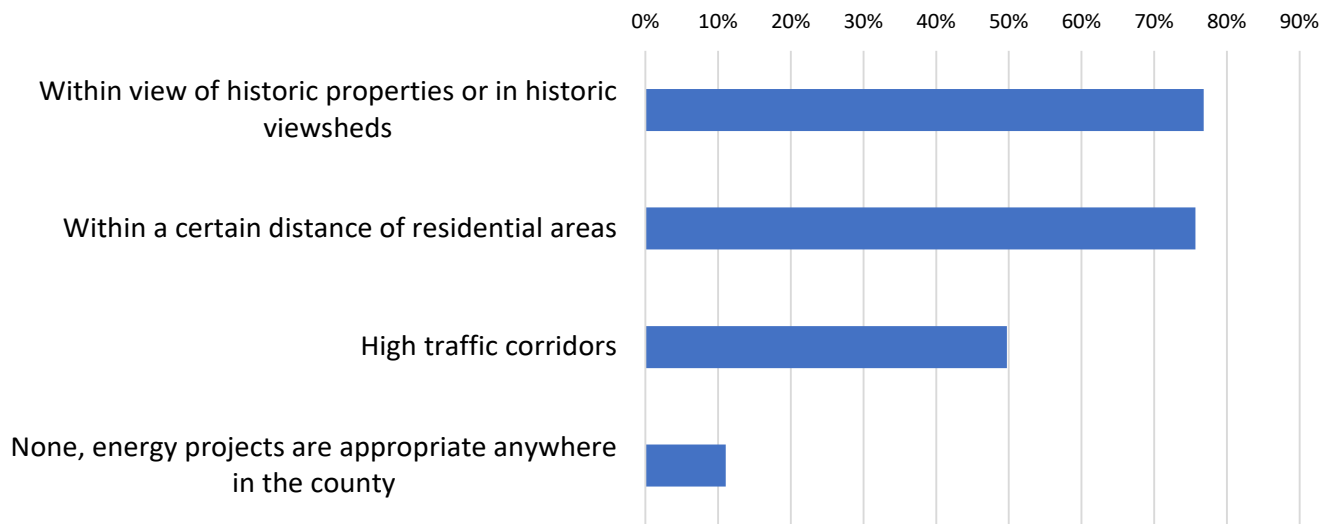




Preferred Economic Development (Instead of Energy Projects)



Areas Inappropriate for Energy Projects



Highlighted “other” responses from the survey:

Several questions on the survey allowed respondents to provide open ended responses under the “other” selection. Some of these responses are listed below. Full survey responses are available upon request.

2. What type of energy projects interest you most (whether your interest be positive or negative)?

- Energy related projects in residential neighborhoods
- Negative on solar or pig manure plans
- I would rather see businesses brought to the county versus energy projects. We can not even get a grocery store in town after money has been given for it
- Taking over our country Atmosphere and the effect the panels have on the grounds when they're broken how they're disposed of and how all the traffic is tearing our roads up
- I am against the Aling RNG methane line and conditioning facility project. It is going to destroy a peaceful community. Along with endangered wildlife and habitat.
- Methane
- Biofuels
- Undecided. Wouldn't want one next to me but think landowners should be able to do what they want. Maybe require setbacks?
- We already have nuclear and solar energy projects in Surry County. We do not need to add more of these types of projects.
- The amount of solar fields having negative impact on others moving into County

3. What impacts are most concerning about energy projects?

- Dangerous truck traffic, destroyed roads
- I am more interested in seeing solar use “already forested” plots of land no new deforesting.
- Increased radiation, removing farmland
- That the past projects have not positively impacted the community.
- Pollutants from the material that makes up the solar panels once they are no longer in use.
- The current runoff from one project has destroyed a place I used to fish for fun. Now the water is brown and cloudy in the stream and swamp.
- Noise, air and water pollution. Destruction of endangered animal habitats
- Negative impact on tourism and population growth

5. What could be done to improve energy projects?

- Consider and have regard for environmental effect, from toxicity of panels to existing means of controlling undergrowth. Force developers to fix roads. Don't consume our once-beautiful county with deforestation that's not beneficial to the citizens.
- Place a limit on allowable projects.
- Limit the number of sites
- Take the solar farms down so we can have our farmland and hunting properties back. Leave it up to the home owner if they want solar installed on THEIR PROPERTY
- This is for #6 surry county should not be able to limit the percentage of owners land they want to have solar installed on. That's too much over stepping in small government.
- Tax credits by local government
- Consider the current way of life of surry residents and how these projects affect our way of life. Vast majority of current residents of surry county including myself think these proposed projects are negatively affecting the land and wildlife
- Install solar farms in transmission line right of way. Leave the farm land alone.
- Get the opinion on the potential project from the people that will be affected by it before the planning Commission pass it through.
- Stop stripping away the character of our county by planting solar panels everywhere. Nobody lives here or moved here to stare at this destruction of nature. If one appears by me, I'm about to be at every meeting, ready to chat.