June 10, 2025

ZONING ORDINANCE AMENDMENT – LARGE-SCALE BATTERY ENERGY STORAGE SYSTEMS (BESS) PRELIMINARY DRAFT TEXT FOR DISCUSSION

BACKGROUND

On July 30, 2024, the Board of Supervisors (Board) approved the FY 2025-2026 Zoning Ordinance Work Program (ZOWP) which included Battery Energy Storage Systems (BESS) as a Priority 1 topic. BESS use rechargeable batteries to store energy from various sources, such as the electrical grid and renewable energy sources like solar or wind power, then provide that power back to a use or the grid when needed, such as during peak demand or when there is a power outage. BESS can help reduce energy waste and improve grid efficiency, which, over the long term, can translate into lower electricity rates for customers.

In addition to its benefits for the electrical grid, BESS also supports clean energy incentives and decarbonization goals. The 2020 Virginia Clean Economy Act set a renewable portfolio standard of 100 percent carbon-free energy by 2050 for its two largest investor-owned utilities, Dominion Energy and Appalachian Power. Most Fairfax County residents are served by Dominion Energy. The Act sets energy storage targets to be achieved by the end of 2035; Dominion's target is to construct or acquire 2,700 MW of energy storage capacity by 2035, including an additional mandate that at least 35% of the energy storage facilities be purchased from a private entity that sells its capacity to the utility.

To introduce the topic and share initial research findings, presentations were given to the Board's Land Use Policy Committee on January 28, 2025, and the Planning Commission's Infrastructure Committee on January 30, 2025. Presentations have also been provided to NVBIA/NAIOP, the Land Use Attorneys Work Group, and at two public community meetings in April. Staff also had early meetings with Dominion Energy and a private BESS developer during our research phase. Links to the committee and public presentations and other information are available on the Battery Energy Storage Systems Zoning Ordinance Amendment webpage.

This document provides an overview of potential options for consideration with relevant background information and draft text for an amendment to the Zoning Ordinance.

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CURRENT COUNTYWIDE REGULATIONS

A BESS would be considered a type of light utility facility under the Zoning Ordinance (subsection 4102.4.X), which includes facilities for the distribution or collection of utility services or products, rather than production of those products or services. Under current regulations, a BESS would be allowed in almost all zoning districts as follows:

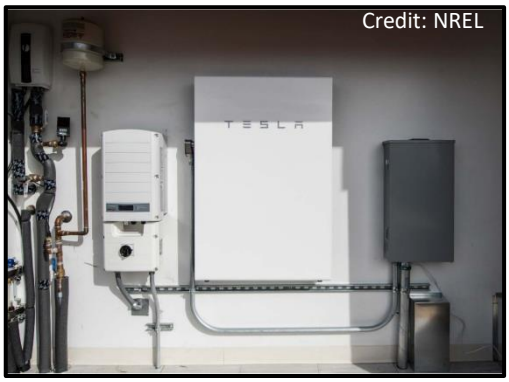
- By right: I-3, I-4, I-5, and I-6
- Special exception (SE): residential districts, commercial districts, I-2
- Development plan or SE: planned districts
- Not allowed: R-A, I-I, PCC

POTENTIAL ZONING ORDINANCE REVISIONS

BESS are an emerging component of energy system infrastructure. As a result, the number of local governments that specifically regulate BESS in their codes or ordinances is currently limited. Jurisdictional research for this Zoning Ordinance Amendment has included a review of Virginia jurisdictions that have incorporated standards specifically for BESS in their zoning ordinances, including Loudoun County, King George County, Hanover County, Prince George County, and the City of Virginia Beach. Other resources include Dominion Energy's Model Ordinance for BESS, New York Battery Energy Storage System Model Law, University of Michigan's Guide for Michigan Local Governments, American Clean Power, and the Pacific Northwest National Laboratory's Energy Storage in Local Zoning Ordinances. While BESS offer several benefits to communities, as noted above, their development often raises concerns related to safety, sound level, and visual impact. Zoning and safety standards can help communities address and mitigate these concerns. Using the information provided in the resources mentioned, as well as the use standards for other uses in the county's Zoning Ordinance, such as data centers and solar power facilities, the proposed permissions and standards are intended to address public safety and compatibility with surrounding uses.

Definition – Section 9103. Uses

Background - Principal and accessory use BESS: For zoning purposes, BESS can be either a principal use or an accessory use. BESS that are limited in size, and store power that is used solely by a home or business where the battery is located, are accessory to the property's principal use. These systems can vary in size, ranging from as small as a residential circuit breaker to as large as outdoor heating and cooling equipment. The systems may be mounted on the inside or outside walls of a building or housed in a ground-mounted, cabinet-style enclosure.



Accessory use (13.5 kWh)



Principal use (4 MWh)

BESS as a principal use could include systems that charge from and discharge directly into the electrical grid, that support a large-scale commercial use, and systems that are integrated with wholesale energy generation, such as solar and wind facilities. The review of zoning ordinances with BESS standards indicates that many jurisdictions use the threshold of 600 kWh to distinguish between accessory and principal use BESS. The 600 kWh threshold comes from the National Fire Protection Association's standard for energy storage, NFPA 855, which requires additional safety standards, such as hazard mitigation analysis and fire and explosion testing, when a BESS site has a maximum stored energy greater than 600 kWh. Staff research has also found other thresholds, including the American Clean Energy Model Ordinance which requires zoning standards for when a system has a capacity of equal to or greater than 1,000 kilowatts (or one megawatt). King County, Washington requires zoning review for a principal use BESS with a capacity of more than two megawatts.[1] An example of a larger threshold is Dominion Energy's Model Ordinance for BESS which proposes zoning standards when a BESS has a maximum stored energy greater than 10 MWh. Staff is continuing to review information about the accessory use of BESS by facilities such as hospitals and data centers.

Watt hours versus Watts

A watt hour refers to the total amount of energy that a system can store.

1,000 kWh = 1 MWh

A watt is a unit of power. It is how much energy is produced or used at any point in time (rate of energy).

1 MW = 1,000 KW

Staff proposal: A BESS would be part of the electrical distribution system and would be considered a Light Utility Facility use in the Zoning Ordinance. Staff is proposing a revision to the Light Utility Facility definition to include "large-scale battery energy storage systems" and to add a new definition for "Battery energy storage system, Large-Scale" that would define it as a system with a maximum stored energy greater than 600 kWh ***[>600 kWh - 10 MWh]***. Those systems with a maximum stored energy of 600 kWh ***[600 kWh - 10 MWh]*** or less would be considered accessory. Accessory BESS would be subject to the same standards as other accessory uses and structures and would be required to be located on a site with a principal use, subject to the accessory location regulations including setbacks based on height and zoning district.

[1] The American Clean Energy Model Ordinance and King County thresholds use units of watts, instead of watt hours. See explanation of watt hours versus watts in the blue box. The watt hours for a facility will be represented with a larger number than the watt rating.

Permissions and Use-Specific Standards – Subsection 4102.4.X. Utility Facility, Light

Background – Safety, noise, and environmental considerations: While large-scale BESS offers significant electric grid and community benefits, it can also pose safety, auditory, visual, and environmental impacts on the community. The requirements proposed in the draft text are intended to ensure that BESS are built and located to be compatible with surrounding uses and protect public safety.

Public safety

The most used battery chemistry for BESS is the lithium-ion battery. The safety of lithium-ion BESS is a common concern, especially given reports of BESS fires that have drawn public attention in other parts of the country. However, these incidents have also driven the industry to improve its understanding of the issues and develop more robust mitigation measures, codes, standards, and considerations for site design. Local governments have also enhanced safety by requiring detailed safety plans and reports during project approval and involving local emergency response officials in fire and emergency response planning.

Noise

The operation of BESS involves noise generated by inverters, ventilation systems, and transformers. Based on a noise study report provided to the county by an acoustical consultant, the large container units associated with BESS, and their accompanying cooling fans and condensing units, can produce noise levels exceeding 90 dBA at the source. In addition, power conversion devices, which convert direct current (DC) into alternating current (AC) for integration into the power grid, also contribute significantly to the overall noise and can exceed 80 dBA at the source. The county's Noise Ordinance provides the maximum allowed sound levels at the property boundary based on land use. The noise levels at the source provided in the consultant report exceed the maximum dBA allowed by the noise ordinance for all land uses (residential, commercial, mixed use, and industrial). Given the possibility that the noise generated by a BESS could exceed the maximum sound levels allowed under the Noise Ordinance and the many variables that affect sound propagation, appropriate setbacks and documentation (noise study) of any noise mitigation needed for a proposed BESS can provide assurance for noise concerns.

Setbacks

The use of setbacks can provide both a visual barrier and mitigate noise and safety impacts. A jurisdictional review of counties in Virginia with zoning standards for BESS and other resources, such as the county's use-specific standards for data centers (which have similar noise concerns as BESS) and Dominion Energy's Model Ordinance, provides the following range of setback requirements when adjacent to either non-residential or residential uses.

Jurisdiction	Adjacent to non-residential uses	Adjacent to residential uses
Loudoun County	50 feet	100 feet
King George County	100 feet	200 feet
Prince George County	Underlying zoning district requirements or 100 feet, whichever is greater	Underlying zoning district requirements or 100 feet, whichever is greater
Hanover County	Underlying zoning district	Underlying zoning district
City of Virginia Beach	100 feet	100 feet
Dominion Energy Model Ordinance	50 feet	100 feet
Fairfax Data Centers	Underlying zoning district	200 feet (building) 300 feet (equipment)
Fairfax County BESS Proposal	*100 feet **[50 to 300 feet]***	*200 feet **[50 to 300 feet]***

Decommissioning

Decommissioning is the process of removing the equipment and infrastructure associated with a project and restoring the land. Since lithium-ion batteries are considered hazardous waste, the project owner is responsible for managing them appropriately. A decommissioning plan details how the project equipment will be removed and the land restored after the BESS is no longer required or desired. Local governments often require financial security to guarantee the availability of funding to implement the plan; staff is continuing to review options relating to financial security. Other Virginia local government BESS zoning standards and the resources mentioned earlier in this paper, including Dominion Energy's Model Ordinance, were reviewed to help draft the decommissioning plan and other standards for this zoning amendment.

Staff's proposal on permissions: Based on the rapidly evolving nature of the technology, potential noise impacts, safety considerations, and a review of other local government zoning standards for BESS, staff is proposing the following for zoning district permissions:

- Large-scale battery energy storage systems would not be permitted in residential districts, the PDH, PRC, PRM, PCC, or the I-I district, unless co-located with a substation or solar power facility, through a special exception approval.
- A special exception would be required for BESS in all commercial districts, all industrial districts, and in the PDC and PTC districts.



Credit: Dominion Energy – Chesterfield County
(20 MW/80 MWh)

Staff's proposal on use-specific standards: Based on the background information indicated above, staff's proposal includes the following:

- **Setbacks:**
  - A minimum setback of 100 feet ***[50-300 feet]*** from all property lines.
  - A minimum setback of 200 feet ***[50-300 feet]*** from an abutting lot line of an R district or a property developed with a residential use.
- **Fencing:** A fence or wall that is an integral part of a large-scale BESS may exceed the maximum fence or wall height indicated in Table 4102 of subsection 4102.7.A(7), with a maximum height of eight feet. For example, in some districts, a fence or wall is limited to four feet in a front yard. Screening and barrier requirements are proposed for Table 5108.2, as noted in the next section.
- **Public water supply:** BESS will only be permitted where there is existing adequate public water supply for fire protection.
- **Emergency operations plan:** The proposed BESS must provide an Emergency Operations Plan that outlines procedures and requirements for the safe operation of the BESS, including how equipment and systems will be safely shut down under emergency conditions; procedures to follow in case of a fire; and information related to drills and training of local first responders, among other requirements.
- **Decommissioning:** An application for a proposed BESS must include a decommissioning plan, acceptable to the Board, which describes the timeline and manner in which the facility will be decommissioned and the site restored to a condition similar to its condition before the BESS was established.
- **Noise:** BESS would be subject to the Noise Ordinance, Chapter 108.1 of the county code. This is a separate chapter of the county code from the Zoning Ordinance. A noise study that demonstrates that the proposed location, design and operation of the BESS will comply with the Noise Ordinance would be a submission requirement in subsection 8101.3 for a Special Exception application. The noise study would ensure that any required noise mitigation is determined as part of the noise study and incorporated during the approval process of the substation, rather than as a potentially costly retrofit following a complaint after development.

Transitional Screening and Barriers – Table 5108.2

Background – landscaping: Large-scale BESS are typically housed in specially engineered containers that resemble shipping containers. These systems generally range between about eight to twelve feet in height. Large-scale BESS are considered a light utility facility and would need to meet the requirements in Table 5108.2 for "All Other Public, Institutional, and Community Uses" in subsection 5108.5.B, which requires Type 2 (35-foot wide) transitional screening and a six-foot high solid fence or wall for sites adjacent to residential uses. Currently, there are no screening or barrier requirements for sites adjacent to other uses.

Staff's proposal for transitional screening and barriers: Staff proposes requiring more intensive transitional screening for BESS. The proposal adds BESS to the Solar Power Facility row in Table 5108.2,

which requires Type 3 (50-foot wide) transitional screening and Barriers D or E (6-foot wall of brick or architectural block or sold wood or otherwise architecturally solid fence) adjacent to single-family uses and Type 2 (35-foot wide) transitional screening and Barriers D or E, adjacent to other residential uses. The draft text also adds a requirement for Type 1 (25-foot wide) transition screening for solar power facilities and BESS when adjacent to other public, institutional, and community uses, commercial uses, and craft beverage establishments, in addition to the existing Barrier requirements of D or E. The transitional screening and barrier requirements could be within the required setbacks.

OTHER CONSIDERATIONS FOR BESS

Stormwater

According to the Pacific Northwest National Laboratory, BESS do not emit gases or release pollutants into the air or waterways during normal operation, however there is the potential for a battery cell to rupture and vent flammable gases that can start a fire. The primary risk of local environmental contamination associated with battery storage systems is the use of water in fire suppression. The water could bind with the chemicals released during the fire and carry them into drainage systems, where they could contaminate watersheds. This risk supports an emerging consensus in the firefighting community that water suppression should be used sparingly on battery fires for exposure protection.

A recent report commissioned by American Clean Power and prepared by Fire & Risk Alliance, LLC, analyzed historical BESS fire incidents and their causes, conducted a review of the types of contaminants released, the extent of environmental impacts, and how advancements in safety regulations and technology have mitigated risks. Based on the reviewed cases of environmental sampling related to BESS fire events, no contaminant concentrations were found that would pose a public health concern or necessitate further remediation. This finding includes airborne contamination sampling conducted on-site, off-site, and within nearby communities, as well as relevant sampling of water from firefighting activities, automatic suppression system run-off, and groundwater testing. This report's findings does not include information from the large indoor BESS fire that occurred on January 16, 2025, involving a 1,000 MWh system at Moss Landing, California. At the time the report was drafted, the Moss Landing incident was still being investigated and the environmental impact was being monitored closely. Staff is continuing to review this topic.

NEXT STEPS

Presentations to the Board's Land Use Policy Committee (June 17) and the Planning Commission Infrastructure Committee (June 12) are scheduled. Community meetings are scheduled for July 21, 2025 at 12:00 PM, and July 22, 2025, at 7:00 PM. Information about those meetings is posted on the project webpage at: https://www.fairfaxcounty.gov/planning-development/zoning-ordinance/battery-energy-storage. Public hearings have not been scheduled at this time, but if authorized by the Board, hearings could be scheduled for the fall. Questions and comments can be directed to Jacqui Kamp, Senior Planner, at Jacqui.Kamp@fairfaxcounty.gov or 703-324-1314.

ATTACHMENT

1. Draft Zoning Ordinance text for Battery Energy Storage Systems (BESS)

DRAFT TEXT FOR DISCUSSION – BATTERY ENERGY STORAGE SYSTEMS - JUNE 10, 2025

In the revisions shown below, text to be deleted is identified with strike-through and text to be added is underlined. The footnotes are descriptive and will not be included in the Zoning Ordinance. Options for consideration are provided ***[in brackets, italics and bold]***. Where noted, the proposed changes are based on but does not presume the adoption of the proposed text (posted on March 28, 2025) as part of the pending electrical substation amendment. All other subsections not related to the pending electrical substations amendment are based on the adopted Zoning Ordinance in effect as of April 23, 2025.

INSTRUCTION: Revise the standards in subsection 4102.4.X for Utility Facility, Light, to include battery energy storage systems, as shown below.

4. Public, Institutional, and Community Uses

Community, Cultural, and Educational Facilities

X. Utility Facility, Light

Standards applicable to all light utility facilities:

(1) The permissions for light utility facilities are as shown in the table below.[1]

Light Utility Facility Permissions		
Zoning District	**Uses Permitted By Right**	**Uses Permitted By SE**
R-A	None	Telecommunication facilities Utility transmission facilities Water storage, control, and pumping facilities
All other R districts	None	All light utility facilities <u>except large-scale battery energy storage systems, unless co-located with an electrical substation or solar power facility</u>
Commercial districts	Telecommunication facilities	All other light utility facilities
I-I	None	Sewerage pumping facilities
I-2	Telecommunication facilities	All other light utility facilities
I-3 and I-4	Telecommunication facilities	All other light utility facilities

[1] The table is based on, but does not presume the adoption of, the proposed text as part of the pending electrical substation amendment. For clarity, only the additional edits are shown here as underlined.

Light Utility Facility Permissions		
Zoning District	**Uses Permitted By Right**	**Uses Permitted By SE**
I-5 and I-6	All light utility facilities, except for large-scale battery energy storage systems	Large-scale battery energy storage systems Modification of standards for all other light utility uses
P districts	None	All light utility facilities, except large-scale battery energy storage systems Large-scale battery energy storage systems: PDC, PTC; and PDH, PRC, PRM, and PCC if co-located with an electrical substation or solar power facility

Standards when permitted by special exception:

(6)[2] Large-scale battery energy storage systems

(a) It must be demonstrated that there is existing adequate public water supply for fire protection.

(b) Setbacks:

1. A minimum setback of 100 feet ***[50 to 300 feet]*** is required from all property lines.

2. A minimum setback of 200 feet ***[50 to 300 feet]*** is required from an abutting lot line of an R district or a property developed with a residential use.

(c) A fence or wall that is an integral part of a large-scale battery energy storage system may have a maximum height of eight feet.

(d) It must be demonstrated that the large-scale battery energy storage system has proper procedures and requirements in place for its safe operation, in accordance with subsection 8101.3.D(14)(e).

(e) It must be demonstrated that the large-scale battery energy storage system has a decommissioning plan in accordance with subsection 8100.7.F(5) and 8101.3.D(14)(e)3 and verified that the site will be restored to a condition similar to its condition before the battery energy storage system was established.

[2] The numbering within subsection 4102.4.X may be revised with a future draft based on the pending substation amendment.

INSTRUCTION: Revise subsection 4102.7.A(7) to add standard that battery energy storage systems may exceed the fence or wall height in Table 4102.4 with a maximum height of eight feet.

7. Accessory Uses

A. General Standards for Accessory Uses and Structures

(7) Fences and Walls

(b) Height

5. A fence or wall may exceed the maximum fence or wall height in Table 4102.4 above when it is an integral part of:

a. An electric substation;

b. A wireless facility; ~~or~~

c. Screening of equipment for a data center in accordance with subsection 4102.6.A(1)~~.~~; or

d. A large-scale battery energy storage system, which may have a maximum height of eight feet.

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INSTRUCTION: Revise Table 5108.2 to include large-scale battery energy storage system with solar power facility and revise the transitional screening and barrier requirements required for certain adjacent uses.

5. Transitional Screening and Barriers

TABLE 5108.2: Transitional Screening and Barrier Type Requirements

Numbers in individual cells represent transitional screening type required (1, 2, or 3)
Letters in individual cells represent barrier type required (A through E)

	Adjacent Use								
Use Classification	**Single-Family Dwelling, Attached and Detached**	**All Other Residential Uses**	**Solar Power Facility, Battery Energy Storage System, Large-scale**	**Utility Facility, Heavy**	**All Other Public, Institutional, and Community Uses**	**Vehicle Repair and Maintenance, Heavy**	**All Other Commercial Uses**	**Craft Beverage Establishment**	**All Other Industrial Uses**
Public, Institutional, and Community Uses									
Solar Power Facility, Battery Energy Storage System, Large-scale[3]	Type 3 Barrier D or E	Type 2 Barrier D or E	None	None	Type 1 Barrier D or E	None	Type 1 Barrier D or E	Type 1 Barrier D or E	None
Utility Facility, Heavy	Type 3 Barrier D or E	Type 3 Barrier D or E	None	None	Type 1 Barrier A, B, or C	None	Barrier D or E	Barrier D or E	None
All Other Public, Institutional, and Community Uses	Type 2 Barrier D or E	Type 2 Barrier D or E	None	None	None	None	None	None	None
All Other Industrial Uses	Type 3 Barrier D or E	Type 3 Barrier D or E	Barrier D or E	Barrier D or E	Type 1 Barrier D or E	Type 1 Barrier D or E	Type 1 Barrier A, B, or C	Type 1 Barrier D or E	None

[3] Large-scale battery energy storage systems are considered a light utility facility and would have to meet the requirements in Table 5108.2 for "All Other Public, Institutional, and Community Uses." Staff proposes requiring more intensive transitional screening types than those currently required for Light Utility Facility.

INSTRUCTION: Revise subsection 8101.3 to add special exception submission requirements for large-scale battery energy storage systems. New subsection 8101.3.D(14)(e) may be re-lettered based on the separately pending Zoning Ordinance amendment for electrical

3. Special Exceptions, Special Permits, and Variances

D. Additional or Modified Submission Requirements for Specific Special Exception Applications

The following are additional or modified submission requirements for special exception applications for:

(14) Light Utility Facility, Heavy Utility Facility, and Wireless Facility

(a) A map showing the utility system of which the proposed use will be an integral part, together with a written statement outlining the functional relationship of the proposed use to the utility system.

(b) A statement, prepared by a certified engineer, describing in detail the technical reasons for selecting the property as the location for the proposed facility and certifying that the proposed use will meet the performance standards of the district in which located.

(c) In complying with subsections (a) and (b) above, the applicant is not required to provide any proprietary, confidential, or other business information to justify the need for the project.

(d) An application for a landfill must also include a list of the types of debris and materials proposed to be deposited on the site.

(e) An application for a large-scale battery energy storage system must also include the following:

1. A noise study demonstrating that the operation of the battery energy storage system will comply with the Noise Ordinance, Chapter 108.1 of the County Code.

2. An emergency operations plan that contains the following:

a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.

b. Procedures for inspection and testing of associated alarms, interlocks, and controls.

c. Procedures to be followed in response to notifications of system alarms or out-of-range conditions that could signify potentially dangerous conditions, including shutting down equipment, summoning service or repair personnel, and providing agreed-upon notification to fire department personnel, if required.

d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions.

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e. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.

f. Procedures for handling energy storage system equipment damaged in a fire or other emergency event, including contact information for personnel qualified to safely remove damaged energy storage system equipment from the facility.

g. Procedures and schedules for conducting drills and training exercises for local first responders on the contents of the plan and appropriate response procedures.

3. A decommissioning plan that is certified by an engineer or contractor with demonstrated expertise in large-scale battery energy system removal, and contains the following:

a. The anticipated life of the project;

b. A narrative description of the activities to be accomplished, including who will perform that activity, and the timeline for complete physical removal of all components of the battery energy storage facility;

c. A description of mitigation procedures for the release of hazardous materials or other emergency events during the decommissioning process;

d. The estimated decommissioning cost in current dollars and a description of the methodology for determining such estimate;

e. The method of ensuring that funds will be available for decommissioning and restoration.

g. A listing of any contingencies for removing intact operational battery energy storage systems or individual components, and for removing a battery energy storage system that has been damaged by a fire or other event; and

h. In addition to the special exception plat requirements of subsection 8101.3.B, a plan for the restoration of the site, prepared by an engineer or surveyor licensed by the State.

INSTRUCTION: Revise subsection 9103 to add large-scale battery energy storage facilities to light utility facility definition and include a new definition for battery energy storage facility, large-

9103. Uses

4. Public Institutional and Community Uses

E. Utilities

Utility Facility, Light[4]

A structure or facility generally related to the distribution or collection of utility products or services, rather than the production of those products or services, that needs to be in or

[4] The definition is based on the proposed text as part of the pending electrical substation amendment. For clarity, only the additional edits are shown here as underlined.

near the neighborhood or near utility consumers. Examples of light utility facilities include water and sewage pump stations, telecommunication facilities, water storage facilities, large-scale battery energy storage systems, and electrical substations. This use does not include (1) ordinary distribution facilities for delivery of utilities to customers that are in the public right-of-way or in easements or strips of property owned in fee simple not more than 25 feet in width; or (2) transmission lines approved by the State Corporation Commission.

Battery energy storage system, Large-Scale

An energy storage facility consisting of rechargeable batteries typically enclosed in a physical container, capable of collecting and storing electrical energy from the grid or energy generation facility and then discharging that energy at a future time, with a maximum stored energy greater than 600 kWh[5] ***[600 kWh - 10 MWh]***. A battery energy storage system that has a total maximum stored energy of 600 kWh ***[600 kWh - 10 MWh]*** or less may be permitted as an accessory use.

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[5] The 600 kWh threshold comes from NFPA 855 Standard for the Installation of Stationary Energy Storage Systems which requires outdoor energy storage installation (lithium-ion batteries) that exceed 600 kWh of maximum stored energy, to provide a hazard mitigation analysis and fire and explosion testing. The maximum range of 10 MWh comes from Dominion Energy's Model Ordinance for BESS.