

## Crystal Substation Expansion Options

In order to upgrade the infrastructure, an expansion is required. The expansion must be in close proximity to the existing substation to connect to the equipment. Therefore, constructing the new building is not feasible in any location other than adjacent to the substation. Below are the four building expansion location options that Dominion Energy has considered for the new switchgear.

### **Option 1: Replacing the switchgear at its existing location.**

The first option considered was to install new switchgear inside the existing substation. However, the new switchgear dimensions are larger than the existing equipment and will not fit. In addition, fire safety codes designate distances between the switchgear and existing transformers, and without space, there will not be adequate access for construction, operation and, maintenance. Currently, there is not enough space around the enclosure to haul the cubicles and equipment in and out of it. Solutions have consisted of constructing a taller building to reduce the footprint; however, constructability is a challenge due to the locations of distribution circuits.

### **Option 2: Building the new switchgear toward the front (South Fern Street).**

The second option considered was constructing the switchgear toward the front of the substation, between the wall and the existing parking spots at South Fern Street. This option is not feasible because there are underground electric transmission lines and an underground oil containment vault below.

### **Option 3: Building the new switchgear toward the north**

The third option considered was constructing the switchgear to the north of the existing substation. Dominion Energy owns approximately 20 feet outside the northern wall. However, it does not provide sufficient space to install the new switchgear. Installing the switchgear at that location would encroach the neighbor's parking lot and driveway. Additionally, there are underground utilities in that location.

### **Option 4: Building the new switchgear toward the west (parcel owned by Arlington County)**

The fourth option considered was to expand onto the vacant parcel located to the west that is currently owned by Arlington County. Although Dominion Energy owns property south of the substation, it has been taken by South Hayes Street and city parking spots. Constructing the new switchgear on the Arlington County parcel allows the construction of the new switchgear before taking any outages on the distribution circuits. It will make it easier to route the new and existing distribution circuits. Additionally, it will free up space in the middle of the substation (existing switchgear location), providing greater clearance to access other critical equipment in the substation.

Dominion Energy is pursuing this option because it:

- Increases the reliability of electric service to customers in the area
- Improves safety and brings the substation up to current standards
- Has the least pre-construction challenges and minimum risk during construction which benefits both Dominion Energy and the community
- Will be suitable to build the distribution duct banks and route the circuits in the desired direction
- Does not interfere with our underground lines in the area, which supports both safety and reliability

**Land Exchange:**

Dominion Energy currently owns property at the intersection of South 18<sup>th</sup> Street and South Ives Street. This property is a vacant, retired substation. Dominion Energy is pursuing a land exchange agreement involving this property and the Arlington County property west of Crystal Substation.