



TUTORIAL

Advanced Site

Characteristics

Google Earth (KML/KMZ) File

Medium Voltage Delivery Point Placement

CASE 1



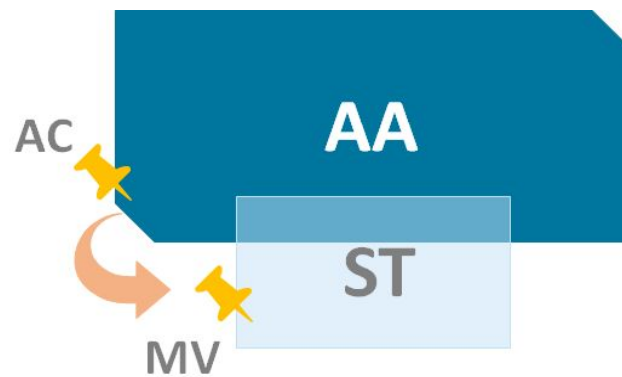
When no MV point is defined inside the available area AA, the medium voltage cables will go from the AC placemark to the MV switchgear placemark of the substation ST.

CASE 2



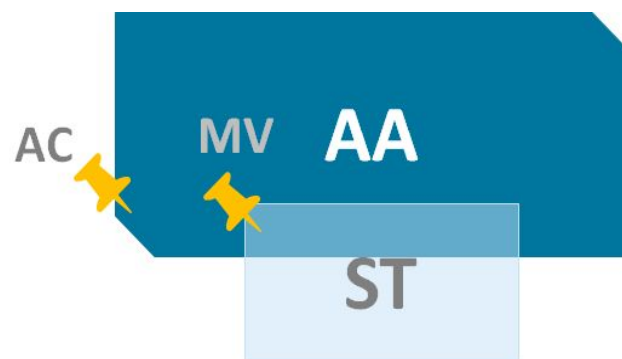
When the available area AA has an MV placemark placed inside it, this MV placemark acts as a medium voltage delivery point. In other words, the medium voltage cables go from this MV placemark to the MV placemark of the substation ST.

CASE 3



In the image above, we can see that the substation is partially inside the available area AA. Its MV switchgear point, however, is situated outside AA. In this case, the medium voltage cables will go from the AC placemark to the MV placemark of the substation.

CASE 4



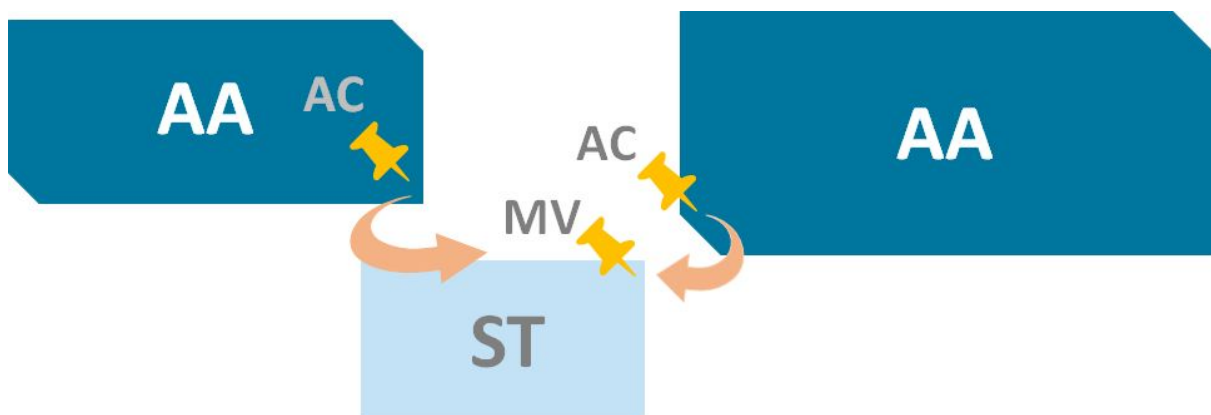
In the image above, we can see that the substation is partially inside the available area AA. Its MV switchgear point is also situated inside AA. In this case, the MV placemark is both the MV switchgear and the MV delivery point at the same time.

CASE 5



In the image above, we can see that the substation is completely inside the available area AA. Its MV switchgear point is thus also situated inside AA. In this case, the MV placemark is both the MV switchgear and the MV delivery point at the same time.

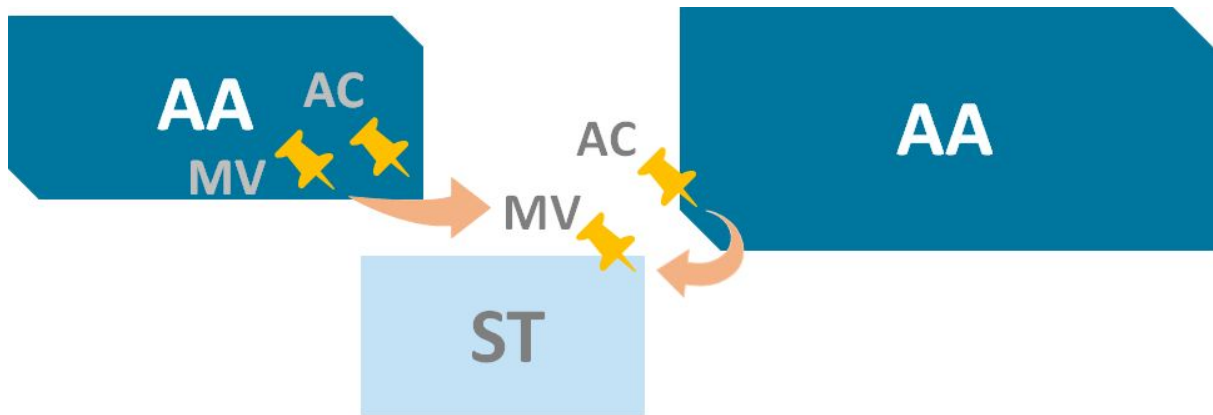
CASE 6



In the image above, the medium voltage cables of the area on the right go from its AC placemark to the MV placemark of the substation ST. Whereas, the medium voltage cables of the area on the left go from its AC placemark to MV.

This means that each available area AA is independent of the rest of available areas and has its own medium voltage cables.

CASE 7

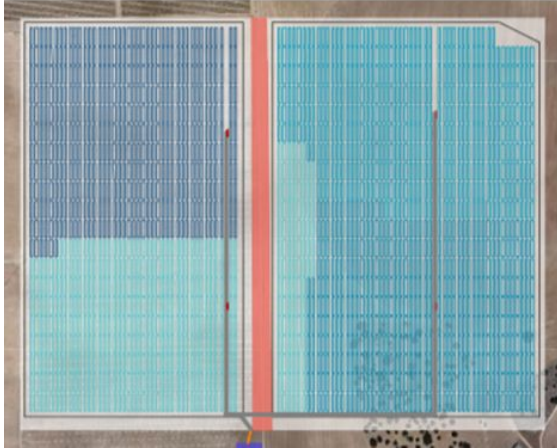


In the image above, the medium voltage cables of the area on the right go from its AC placemark to the MV placemark of the substation ST. Whereas, the medium voltage cables of the area on the left go from its MV placemark to the MV placemark of the substation ST.

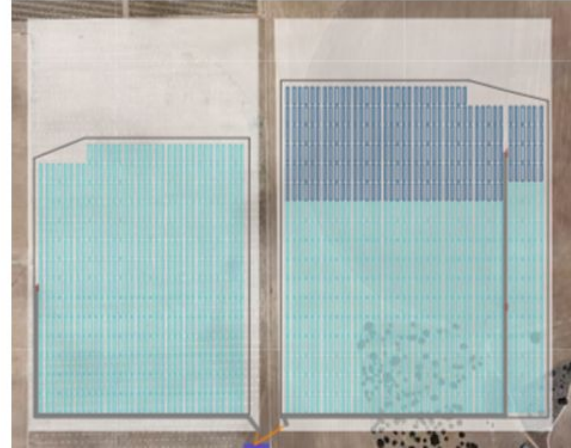
This means that each available area AA is independent of the rest of available areas and has its own medium voltage cables.

Using Restricted Areas Vs. Using Various Available Areas

28.7 MWac
34.6 MWdc



18.0 MWac
21.6 MWdc



When using one big available area with restricted areas to block any parts that we do not want rather than using various available areas, better use of the DC field can be achieved. As we can see in the PV plant on the left, the fill factor is much higher. This is achieved thanks to a certain characteristic of restricted areas (RA) which using various available areas (as in the image on the right) does not provide.

An available area (AA) divided by a restricted area (RA) can have a power station that connects to structures on both sides of the restricted area. In the case of various available areas, however, a power station can only connect to structures that are inside the same area. This is because restricted areas allow trenches, cables and streets to pass through it.