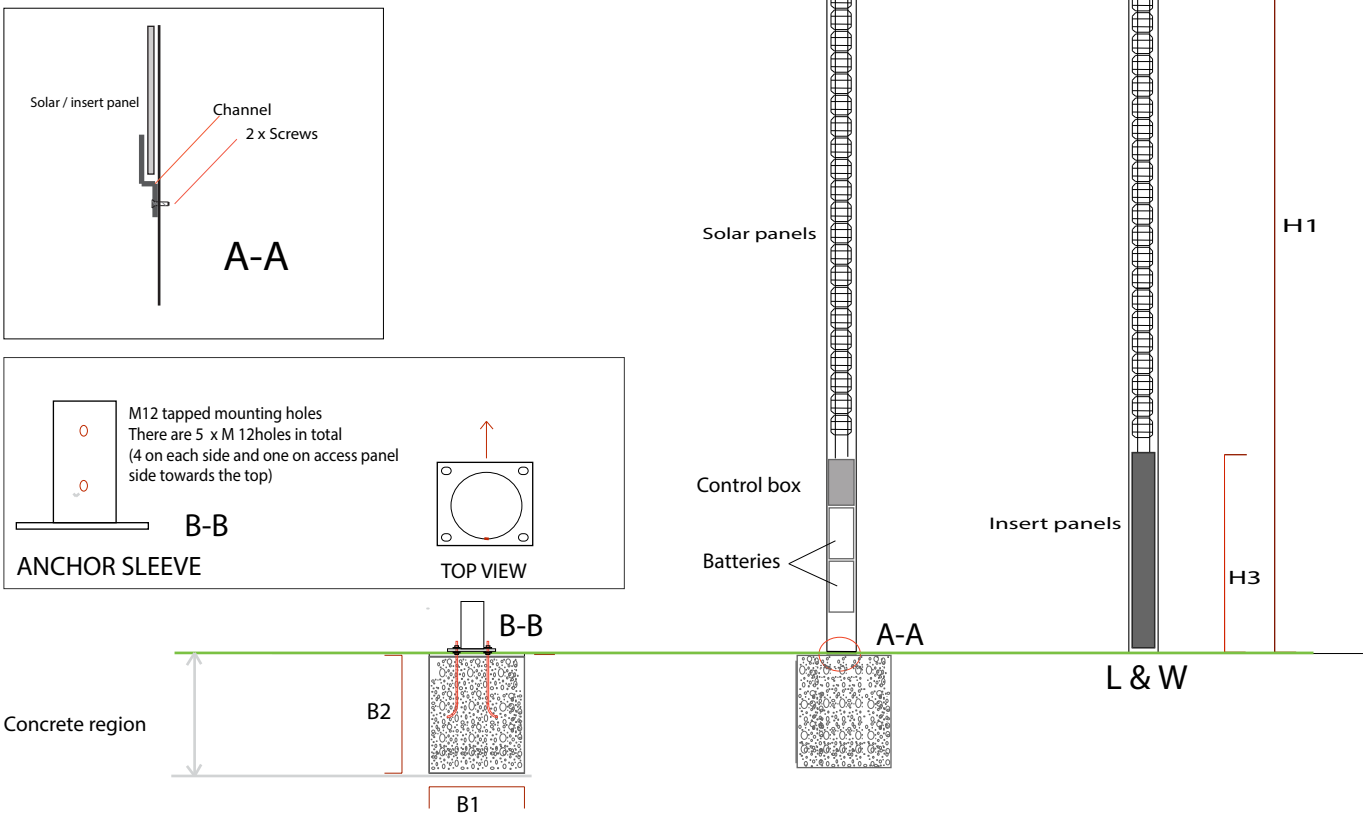
ARCHITECTURAL Anchor Base Install

NOTES
1.The side marked "access panel" faces south in the northern hemisphere and north in the southern hemisphere
This is also the side with the access panel to turn the system on at the circuit breaker (T30 torque drive required)
2. System will come complete with mount for product being powered " LOAD"
3. When feeding "LOAD" wire through pole be careful of solar panel wire inside the pole



Foundation details Direct Bury

SEE ARCHITECTURAL FOUNDATION DETAIL DATA SHEET

INSTALLATION DETAILS ANCHOR
1. Excavate hole as per geotechnical report and site specific foundation design (above sizes are indicative only and will vary depending on soil conditions
2. Pour concrete and set anchor bolts to fit supplied template (wait for concrete to cure)
3. The anchor sleeve has 4 x M12 holes located on the vertical round sleeve (2 holes on opposite sides). Mount the anchor sleeve so that 2 of these holes face the south direction
4. Mount anchor sleeve to anchor bolts and level the sleeve vertically

INSTALLATION DETAILS VERTAIC
1. Connect spigot adaptor to the pole with supplied screws (mount facing the direction required)
2. Connect LOAD to Spigot adaptor and feed wire through pole to terminate inside blue control box located behind the access panel (see notes above)
3. Remove coloured (non solar) insert panels on the side with the one single solar panel as well as the one direct opposite (do this by removing the 2 screws at the base (see fig A-A)
4. You will see 2 x M16 holes on each side- these holes line up with the M12 anchor sleeve tapped holes
5. Crane pole onto anchor sleeve (rotate pole so the single solar panel faces south)
6. Secure pole to the anchor sleeve using 4 x M12 screws that have a loctite coating (this is to stop vibration and will need heat to remove the bolts once they are set)
7. Open blue box and Turn circuit breaker to the on position to start system (system is now ready)

NOTES:
System needs to cycle so may not turn on the first night but will settle in the second night
Geotechnical report needs to be carried out to determine foundation (We need to know length in the ground when ordering a direct bury option)
See vertaic data sheet for pole L, W, H1,H2 and H3 details

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ARCHITECTURAL Anchor Base Install

PARTS

1 x Template

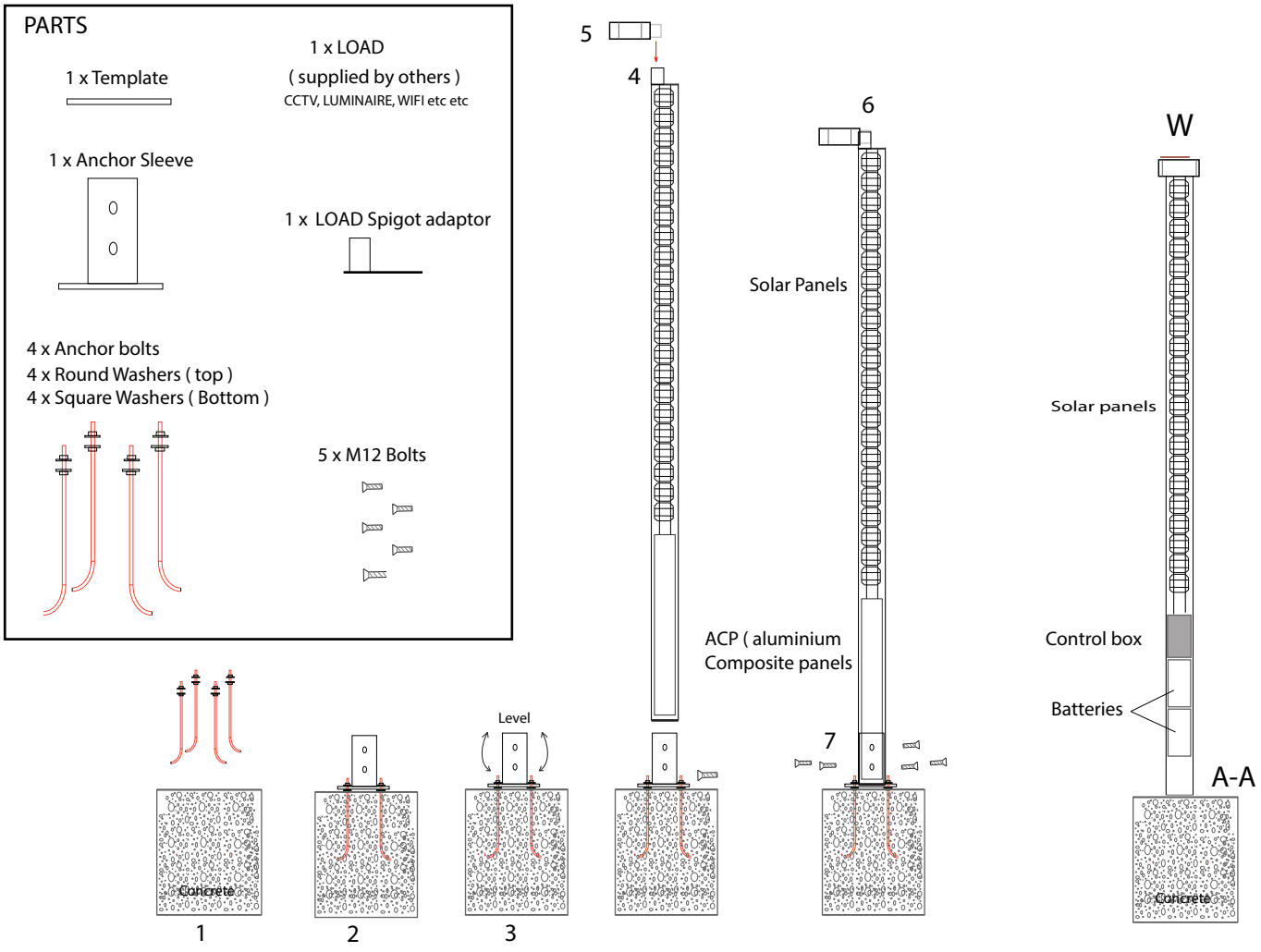
1 x LOAD
(supplied by others)
CCTV, LUMINAIRE, WIFI etc etc

1 x Anchor Sleeve

1 x LOAD Spigot adaptor

4 x Anchor bolts
4 x Round Washers (top)
4 x Square Washers (Bottom)

5 x M12 Bolts



1. Set Anchors into position
2. Fit Anchor Sleeve making sure 2 of the M12 tapped holes face south
3. Level round section of the Anchor Sleeve vertically by adjusting the nuts below and above the anchor sleeve (NOTE- do not level the base plate horizontally)
4. Fit off LOAD spigot making sure it faces the direction required
5. Mount LOAD and feed wire through the pole (be sure not to catch any of the solar panel cable as the wire is fed into the pole
6. Crane Architectural pole into position and rotate so that the access panel is located facing (south direction northern hemisphere or north southern hemisphere)
7. Use M12 Stainless bolts to lock pole into position (5 bolts in total) Apply loctite supplied

NOTES
1.The access panel to the control board needs to face away from the sun as mentioned in this document
(T30 torque drive required)
2. Load can be CCTV, LUMINAIRE, WIFI, HELP POINT as per the design
3. When feeding wire through pole be careful of solar panel wire inside the pole

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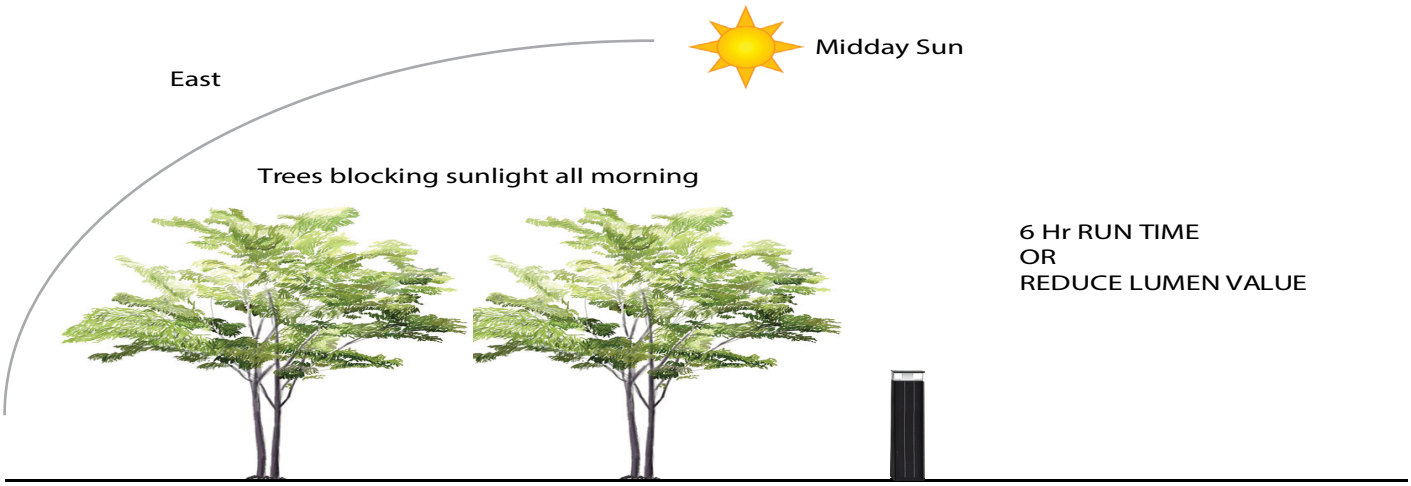
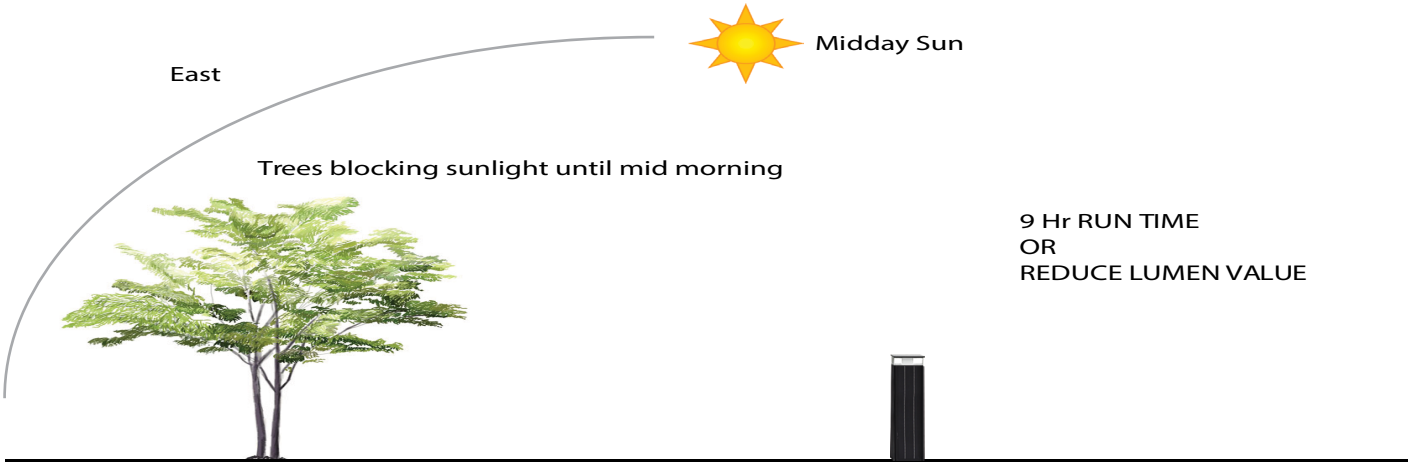
SOLAR Shadowing

When selecting solar power it is important to position the system to optimise sunlight exposure. Trees and buildings are a common issue for solar systems but there is always a solution. You can reduce run time or reduce wattage (Lumen value) of the system.

Below are some examples of shadowing and how to adjust the system to function in these situations. When reducing run time the system can always run all night (but you need to dim during the mid part of the night) you simply split the time so you receive full power during peak periods, reduce the lumen value during off peak periods and then increase 1 or 2 hours before dawn.





Valen Energy reserves the right to make changes at any time in order to supply the best product possible.

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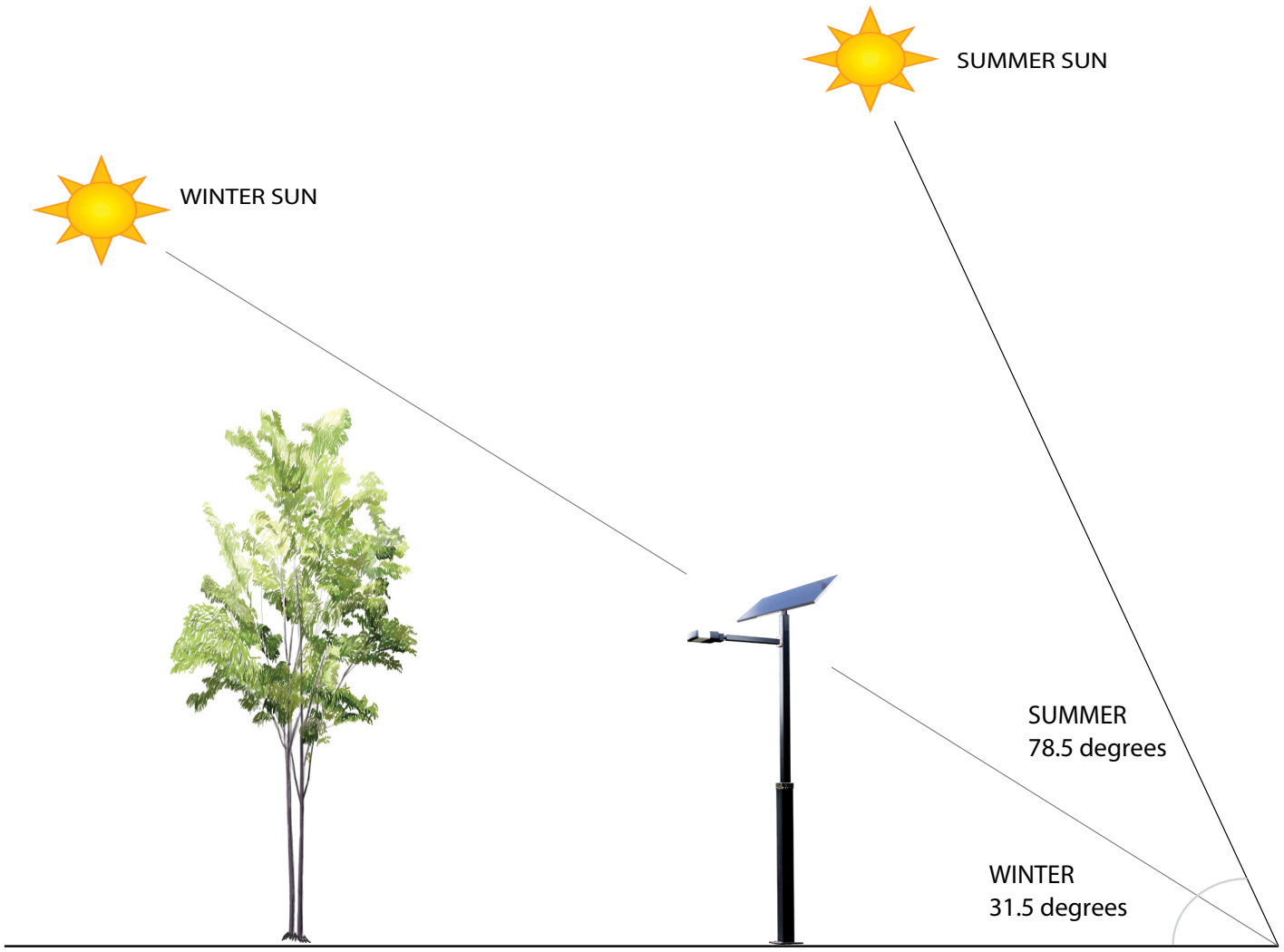
Solar Shadowing



Winter sun angle calculation

Santa Barbara latitude is 35oN

SUMMER- June 21 solar noon zenith angle = 35 - 23.5 = 11.5o (sun angle = 78.5o)

WINTER- Dec. 21 solar noon zenith angle = 35 - (-23.5) = 58.5o (sun angle = 31.5o)

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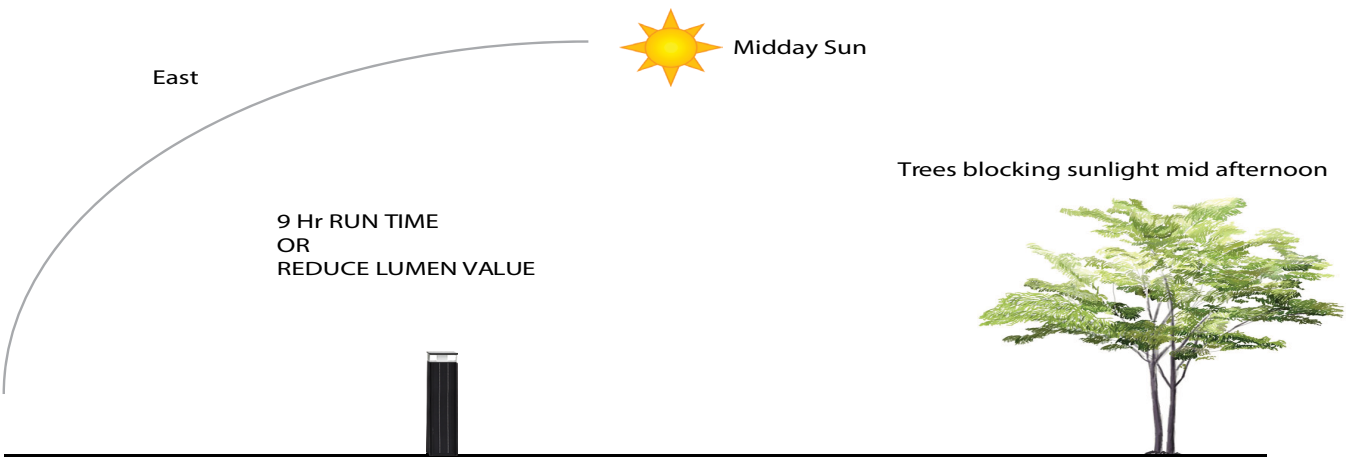
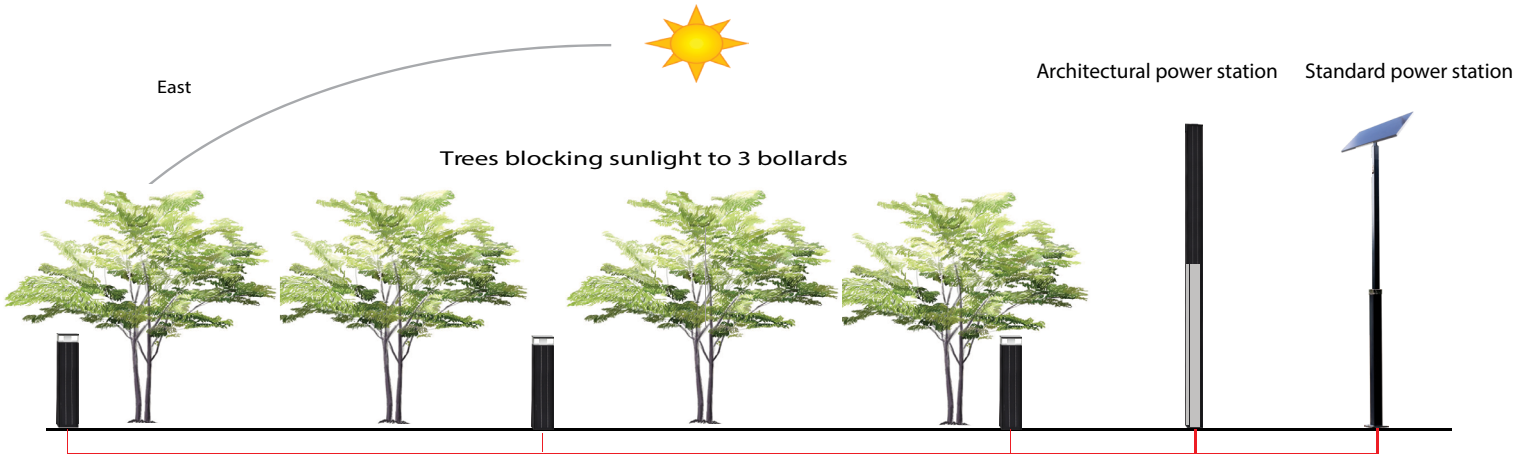
Solar Shadowing



If too many trees are present you can utilise the following solution

Solution Utilise either a standard or Architectural solar pole and locate it in full Sunlight and run ELV (extra low voltage) cabel underground. This type of cable does not need to be placed very deep (refer to local electrical laws



Low voltage cable is run in shallow underground conduit to power the lighting systems surrounded by trees

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