

- 1. SOLAR AREA
- 2. STRINGBOXES
- 3. INVERTER STATIONS
- 4. INTERNAL EVACUATION LINE
- 5. SUBSTATION (BOOSTER)
- 6. TRANSMISSION LINE
- 7. INTERCONNECTION POINT

			T 09-3-B	T 10-3-B									
			T 03-3-B	T 04-3-B	T 05-3-B	T 01-7-A	T 02-7-A		T 03-7-B	T 04-7-B	T 05-7-8		
<b>1</b>		-CIS 3	T 08-3-C	T 11-3-C	T 13-3-C	T 06-7-A	T 07-7-A	ECIS 7	T 08-7-C	T 09-7-8	T 10-7-B		
06-3-A	T 07-3-A	٦	T 01-3-A	T 14-3-C	T 15-3-C	T 12-7-A	T 11-7-C		T 13-7-C	T 14-7-C	T 15-7-C		
F 02-3-A	T 12-3-A	1	T 03-2-8	T 04-2-8	T 05-2-8	T 01-6-A	T 02-6-A		T 03-6-B	T 04-6-8	T 05-6-B		
01-2-A	T 02-2-A	mols 2	T 08-2-C	T 09-2-8	T 10-2-8	T 06-6-A	T 07-6-A	e CIS B	T 08-8-C	T 09-6-8	T 10-6-B		
06-2-A	T 07-2-A		T 13-2-C	T 14-2-C	T 15-2-C	T 12-8-A	T 11-6-C		T 13-6-C	T 14-6-C	T 15-6-C		
12-2- <b>A</b>	T 11-2-C		T 03-1-B	T 04-1-B	T 05-1-B	T 01-5-A	T 02-5-A		T 03-5-B	T 04-5-B	T 05-5-B		
			T 08-1-C	T 09-1-B	T 10-1-B	T 06-5-A	T 07-5-A	CIS 5	T 08-5-C	T 09-5-B	T 10-5-B		
			T 13-1-C	T 14-1-C	T 15-1-C	T 12-5-A	T 11-5-C		T 13-5-C	T 14-5-C	T 15-5-C		
			T 01-1-A	T 06-1-A	T 11-1-C	T 01-4-A	T 02-4-A		T 03-4-B	T 04-4-8	T 05–B		
		- - -	T 02-1-A	T 07-1-A	T 12-1-A	T 06-4-A	T 07-4-A	TCIS 4	T 08-4-C	T 09-4-8	T 10-4-B		
		Ĺ_,				T 12-4-A	T 11-4-C		T 13-4-C	T 14-4-C	T 15-4-C		



### MAP OF A PV SOLAR PLANT

**1. SOLAR AREA** 





### MAP OF A PV SOLAR PLANT



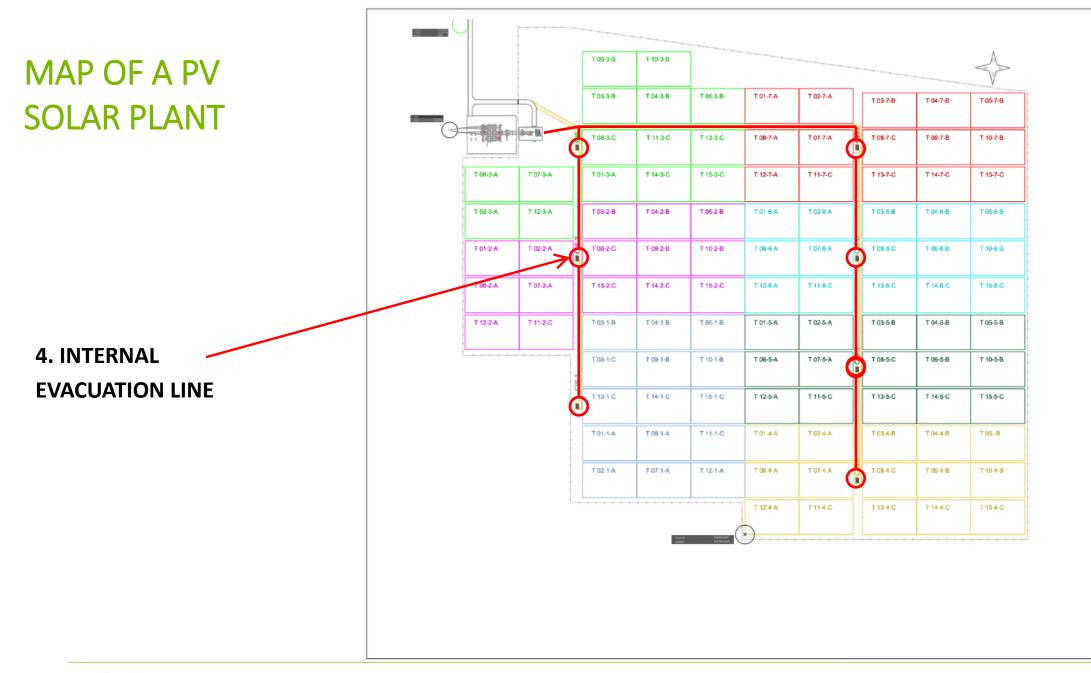
**2. STRINGBOXES** 



## MAP OF A PV SOLAR PLANT



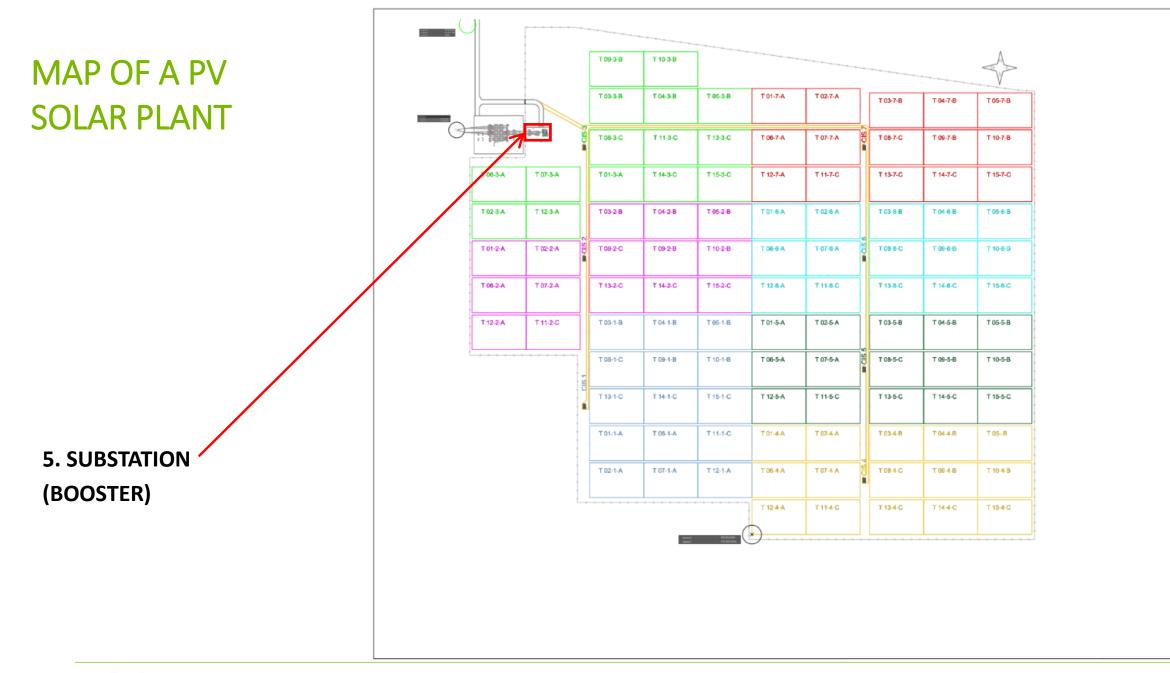
#### **3. INVERTER STATIONS**







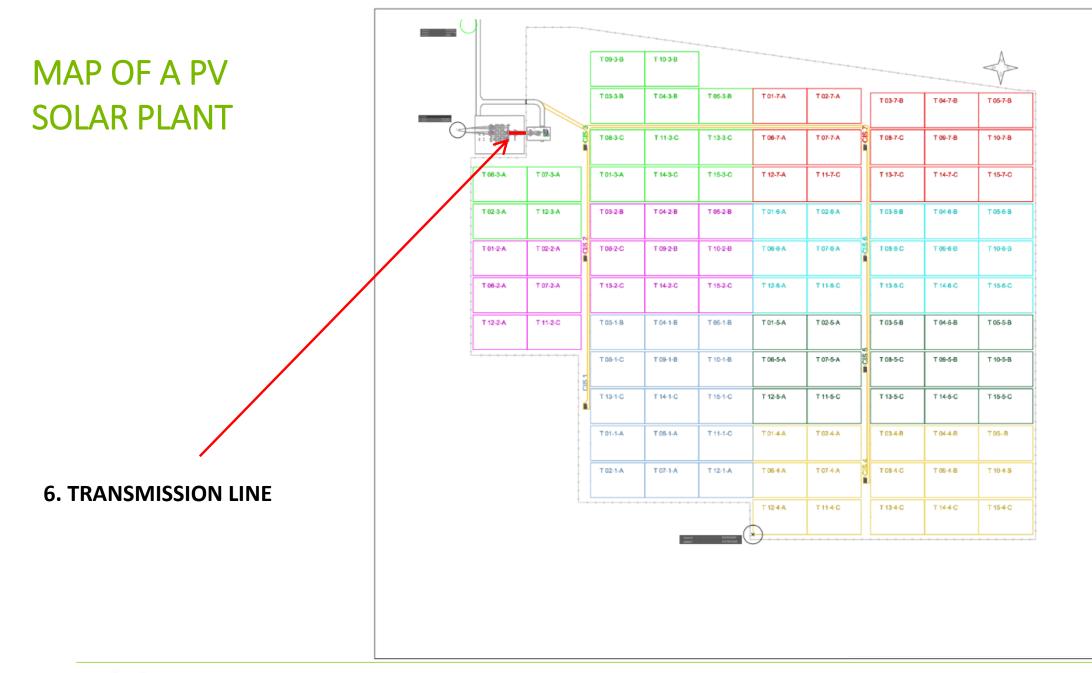
#### 4. INTERNAL EVACUATION LINE



### MAP OF A PV SOLAR PLANT



5. SUBSTATION (BOOSTER)



### MAP OF A PV SOLAR PLANT



**6. TRANSMISSION LINE** 

	- - -		T 09-3-B	093-B T 10-3-B								
			T 03-3-B	T 04-3-B	T 05-3-B	T 01-7-A	T 02-7-A		Т 03-7-В	T 04-7-8	TO	
			T 08-3-C	T 11-3-C	T 13-3-C	T 06-7-A	T 07-7-A	CIST	T 08-7-C	T 09-7-B	T1	
T 06-3-A	T 07-3-A	٦	T 01-3-A	T 14-3-C	T 15-3-C	T 12-7-A	T 11-7-C		T 13-7-C	T 14-7-C	T1	
T 02-3-A	T 12-3-A		T 03-2-B	T 04-2-B	T 05-2-B	T 01-6-A	T 02-6-A		T 03-6-B	T 04-6-B	то	
T 01-2-A	T 02-2-A	mods 2	T 08-2-C	T 09-2-8	T 10-2-B	T 06-6-A	T 07-6-A		T 08-8-C	T 09-6-8	Τ1	
T 06-2-A	T 07-2-A		T 13-2-C	T 14-2-C	T 15-2-C	T 12-8-A	T 11-8-C		T 13-8-C	T 14-6-C	T 15	
T 12-2-A	T 11-2-C		T 03-1-B	T 04-1-B	T 05-1-B	T 01-5-A	T 02-5-A		T 03-5-B	T 04-5-B	TO	
			T 08-1-C	T 09-1-B	T 10-1-B	T 06-5-A	T 07-5-A	CIS 5	T 08-5-C	T 09-5-8	T1	
		10 10 10 10 10 10 10 10 10 10 10 10 10 1	T 13-1-C	T 14-1-C	T 15-1-C	T 12-5-A	T 11-6-C		T 13-5-C	T 14-5-C	T1	
			T 01-1-A	T 08-1-A	T 11-1-C	T 01-4-A	T 02-4-A		T 03-4-B	T 04-4-8	T OS	
		•	T 02-1-A	T 07-1-A	T 12-1-A	T 06-4-A	T 07-4-A	-CIS 4	T 08-4-C	T 09-4-B	T 1(	
		L.,				T 12-4-A	T 11-4-C	1	T 13-4-C	T 14-4-C	т 1	

#### 7. INTERCONNECTION

POINT

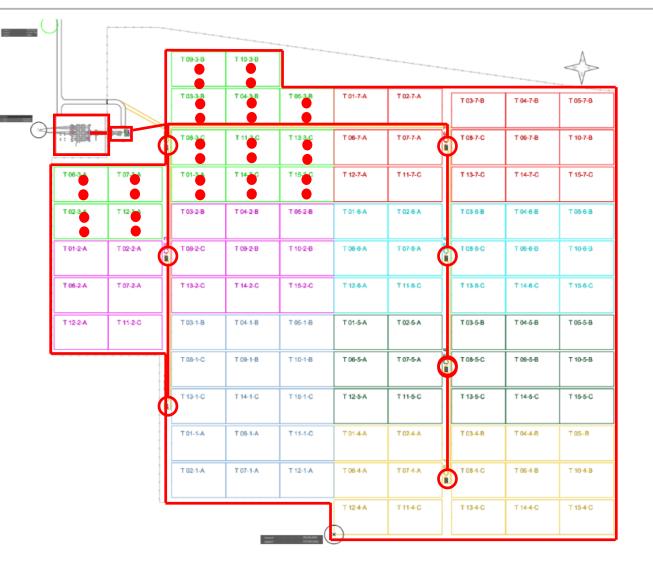
### MAP OF A PV SOLAR PLANT



7. INTERCONNECTION POINT

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- 1. SOLAR AREA
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#### **RELEVANT COMPONENTS OF A PV INSTALLATION**

# 2 Bester

#### **FIXED STRUCTURE**

#### SINGLE-AXIS TRACKING STRUCTURE

Simple: without mechanisms /Cheaper and easy O&M More complex mechanism / Expensive but more production



#### **RELEVANT COMPONENTS OF A PV INSTALLATION**

# Carl Bester

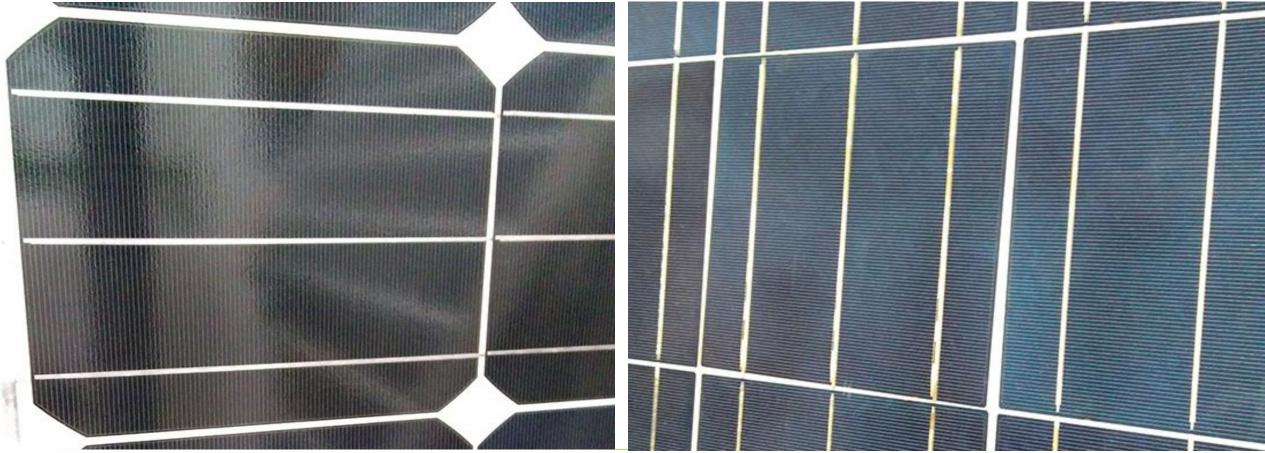
#### MONOCRYSTALLINE

- Slow manufacturing process (expensive), more efficient •
- Cold and fog conditions

#### POLYCRYSTALLINE

Quickly manufacturing process (cheaper), less efficient

• Hot and clean conditions



#### **RELEVANT COMPONENTS OF A PV INSTALLATION**

#### **CENTRAL INVERTERS**

- Concentration of electronic parts Electronic and Central transformer together
- Central Inverter units can convert more power per unit, but much more power
  is lost if one goes down.
- Central inverters are less expensive than string overall for large utility-scale installations because fewer are required per site.
- Fixing central inverters requires technical expertise.

#### **STRING INVERTER**

2 Bester

- Distributed equipment and Central transformer
- Better for availability: since string inverters are converting less power for fewer panels, if one string fails, the whole array's energy is not lost, just the power from that string.
- Fixing a string inverter, which is small and portable, can be done by any trained electrician.





C/ Boabdil, 4 - 2ª Planta. Edificio Vega 6 Parque Empresarial Vega del Rey 41900 Camas (Sevilla) Spain Phone (+34) 954 159 550 Fax (+34) 954 156 566 www.bester.energy