

EXAMEN : BACCALAURÉAT TECHNOLOGIQUE – SÉRIE STI2D	SESSION 2015
EPREUVE : Evaluation spécifique de Langue en section européenne	
<b>PHYSIQUE – CHIMIE en langue ANGLAISE</b>	
THEME : HABITAT	Sujet n°2

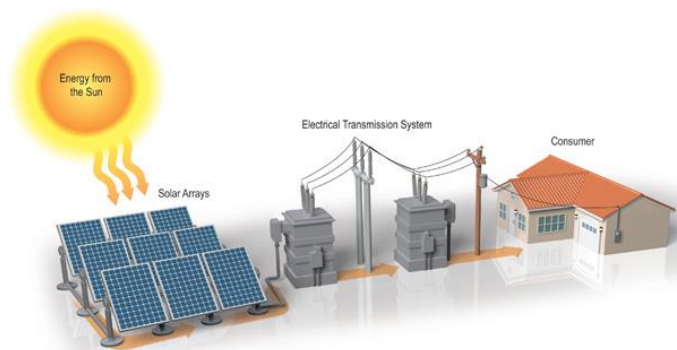
## How Solar Plants Work

There are two ways we can produce electricity from the sun:

- **Photovoltaic Electricity** – This method uses photovoltaic cells that absorb the direct sunlight just like the solar cells you see on some calculators.
- **Solar-Thermal Electricity** – This also uses a solar collector: it has a mirrored surface that reflects the sunlight onto a receiver that heats up a liquid. This heated liquid is used to make steam that produces electricity.

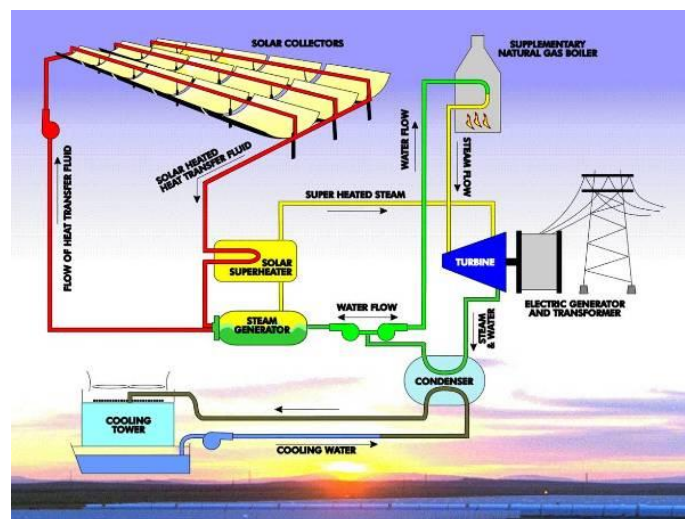
### Photovoltaic solar plants work like this:

As light hits the solar panels, the solar radiation is converted into direct current electricity (DC). The direct current flows from the panels and is converted into alternating current (AC) used by local electric utilities. Finally, the electricity travels through transformers, and the voltage is boosted for delivery onto the transmission lines so local electric utilities can distribute the electricity to homes and businesses.



### Solar-Thermal plants work like this:

Solar collectors capture and concentrate sunlight to heat a synthetic oil called therminol, which then heats water to create steam. The steam is piped to an onsite turbine-generator to produce electricity, which is then transmitted over power lines. On cloudy days, the plant has a supplementary natural gas boiler. The plant can burn natural gas to heat the water, creating steam to generate electricity.



[http://www.nexteraenergyresources.com/what/solar\\_works.shtml](http://www.nexteraenergyresources.com/what/solar_works.shtml)

Questions :

1. Present and comment on the document.
2. Do not forget to focus on the differences between photovoltaic plants and solar-thermal plants considering energy transfer.
3. Indicate some other types of renewable energy and state their main characteristics.