

6.1 AKTIVITI PERBINCANGAN

Sumber tenaga boleh baharu dan yang tidak boleh baharu Renewable and non-renewable energy sources

PBD
Kontekstual

Buku teks m/s 162

- 1 Kelaskan sumber-sumber tenaga dalam peta pokok di bawah. TP2

Classify the sources of energy in the tree map below.

Solar <i>Solar</i>	Gas asli <i>Natural gas</i>	Geoterma <i>Geothermal</i>	Petroleum <i>Petroleum</i>	Angin <i>Wind</i>	Biojisim <i>Biomass</i>
Diesel <i>Diesel</i>	Pasang surut <i>Tidal</i>	Arang batu <i>Coal</i>	Nuklear <i>Nuclear</i>	Ombak <i>Waves</i>	Hidro <i>Hydro</i>

i-THINK

Sumber tenaga/Sources of energy

Boleh baharu/Renewable

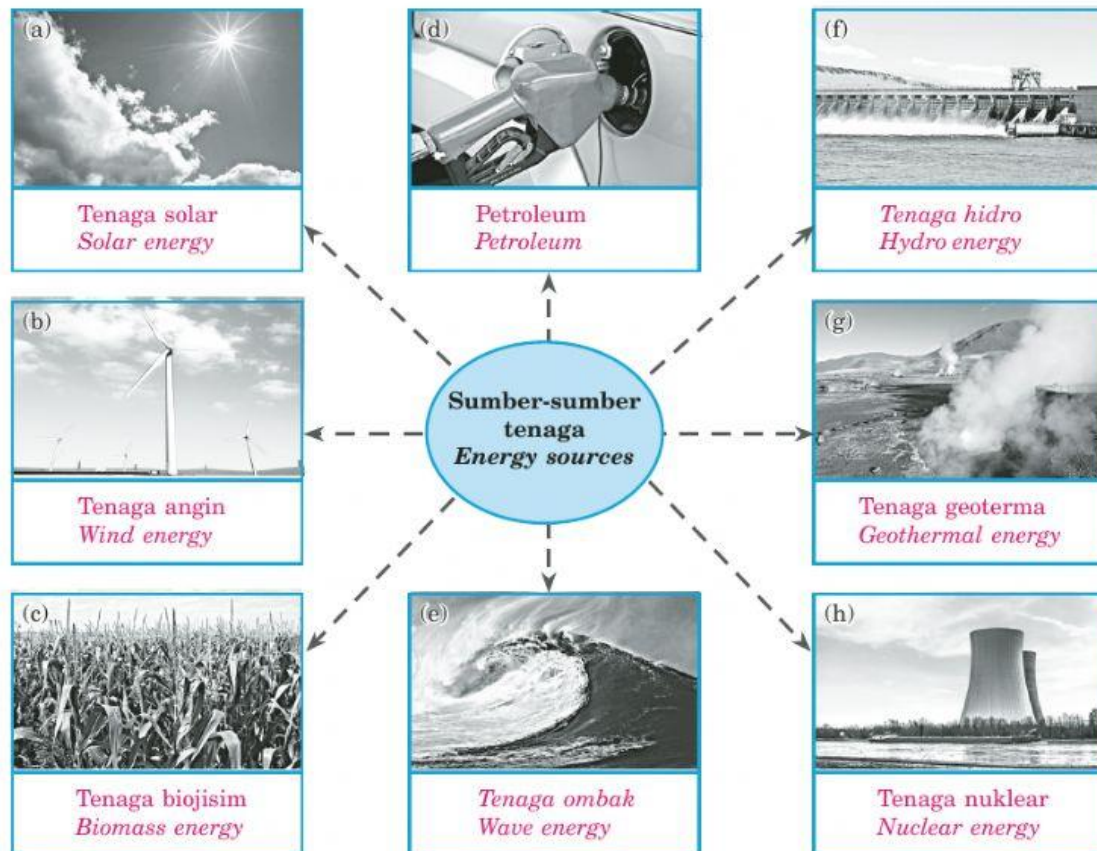
Tenaga	hidro	/	Hydro	energy
Tenaga	ombak	/	Wave	energy
Tenaga	solar	/	Solar	energy
Tenaga	pasang surut	/	Tidal	energy
Tenaga	angin	/	Wind	energy
Tenaga	biojisim	/	Biomass	energy
Tenaga	geoterma	/	Geothermal	energy

Tidak boleh baharu/Non renewable

Tenaga	nuklear	/	Nuclear	energy
Arang batu	Coal			
Gas asli	Natural gas			
Petroleum	Petroleum			
Diesel	Diesel			

- 2 Berdasarkan maklumat di 1, kenal pasti sumber-sumber tenaga. TP2

Based on the information in 1, identify the sources of energy.



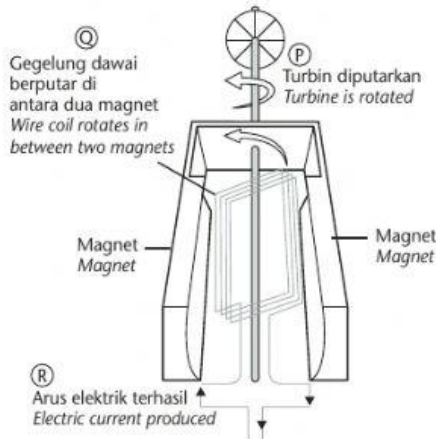
6.3 AKTIVITI PERBINCANGAN

Penjana tenaga elektrik The generation of electrical energy

PBD
STM

HEBAT Sains Modul 22 Buku teks m/s 166 – 168

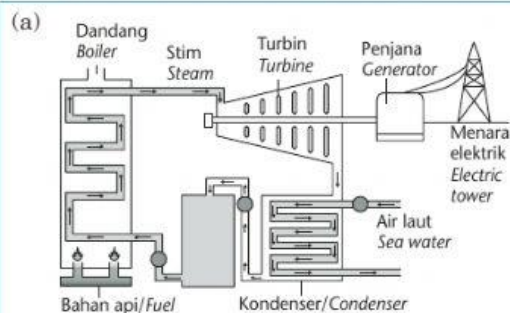
- 1 Pada amnya, semua penjana tenaga elektrik menggunakan prinsip penjana yang sama. Berdasarkan maklumat yang diberikan, lengkapkan ruang tentang penjana elektrik. **TP2**
Generally, all electrical energy generators use the same principle of generation. Based on the given information, complete the spaces about the generation of electricity.



Penjanaan elektrik/Generation of electricity

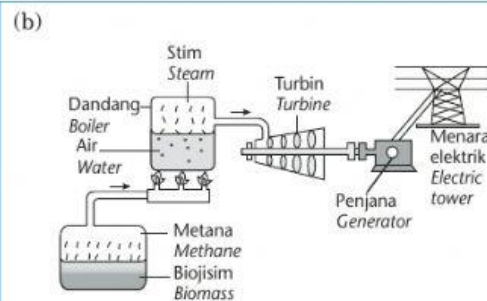
P: Turbin diputar./ _____ is rotatedQ: Turbin memutar gegelung dawai yang terletak di antara magnet dan memotong garis medan magnet. / The turbine turns the _____ placed in between a magnet and cut across the _____R: Arus elektrik terhasil.
_____ is produced.

- 2 Kenal pasti pelbagai jenis stesen jana kuasa. Kemudian, nyatakan perubahan tenaga yang berlaku. **TP2**
Identify the various types of power stations. Then, state the energy changes that take place.

Tenaga ombak
Wave
Biojisim
BiomassTenaga angin
Wind
Tenaga nuklear
Nuclear energyTenaga solar
Solar energy
Terma
ThermalHidroelektrik
HydroelectricStesen jana kuasa terma
_____ power station

Bahan api seperti petroleum, diesel, arang batu atau gas asli dibakar untuk mendidihkan air bagi menghasilkan stim untuk memutar turbin. Putaran turbin menggerakkan penjana yang menghasilkan tenaga elektrik.
Fuel such as petroleum, diesel, coal or natural gas is burnt to boil water to produce steam which rotates the turbine. The turbine rotates the generators to produce electrical energy.

Tenaga kimia → tenaga haba → tenaga kinetik → tenaga elektrik
_____ energy → _____ energy → _____ energy → _____ energy.

Stesen jana kuasa biojisim
_____ power station

Biojisim menghasilkan metana yang mendidihkan air menjadi stim untuk memutar turbin. Putaran turbin menggerakkan penjana untuk menghasilkan tenaga elektrik.
The biomass produces methane that boils water into steam to rotate the turbine. The turbine rotates the generators to produce electricity.