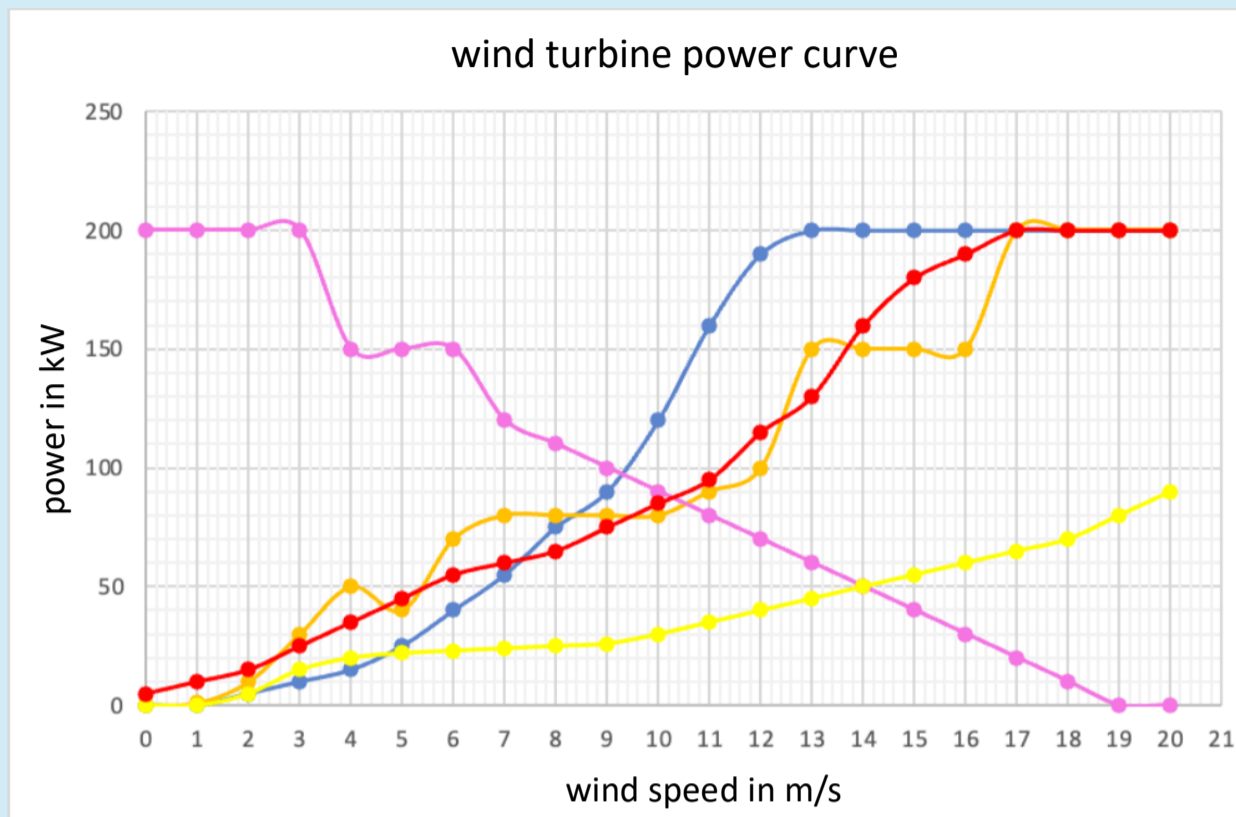


Part 2

Village of the Future

Regulate the power plant at the three relevant times on 18.12.2022, the day of the World Cup final. Energy sources include a wind turbine, photovoltaic modules and a biogas plant.

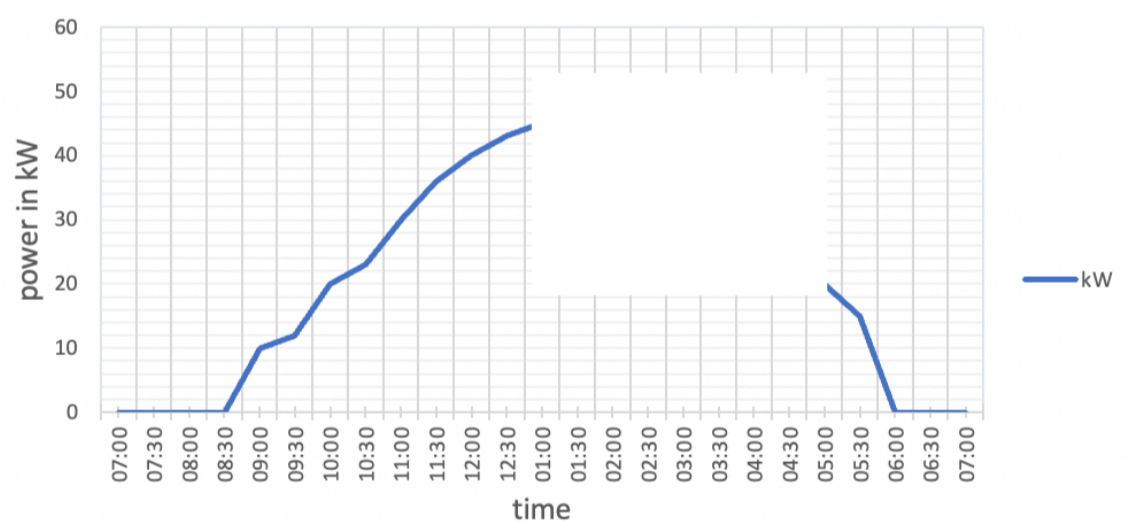


Red is the colour of danger, even in strong winds. Here, however, a red piece will help you.

Consider this!

The electricity demand must always be covered exactly. If there is too little power, individual devices cannot be used. If, on the other hand, there is too much power, this can result in devices breaking down. Regulation is carried out via the regulating power station.

expected yield of the PV system on 18/12/2022



Time of day	Game status	Power demand	kW
3:00 (pm)	Before the game	Less than usual: In preparation of the game, other activities like doing the laundry, washing dishes, Hoover the flat, starting the dishwasher, ... come to an end.	
4:00 (pm)	First half	The demand reduces even more. Most activities have ceased - only more TVs than usual are running.	
4:45 (pm)	Half time	The demand rises almost instantaneously. Lights i.e. in the bathrooms are turned on, fridges are opened, and meals are prepared.	
5:00 (pm)	Second half	The demand reduces significantly, because other activities have ceased.	
6:05 (pm)	End of extra time	There is a strong rise in the demand and from 6.15 on it is higher than usual. This is because in many households' meals are cooked simultaneously and other activities are resumed.	
7:00 (pm)	After the game	The demand is expected to peak, because all postponed activities are resumed at the same time.	

Hint:

Are you at loss right now? Then take another look at the video on the website.