

1	Floatvoltaics				PV on water
2	Cleaning of PV systems				Techniques for large scale cleaning
3	Emergence of Perovskite Solar Cells				New materials
4	Tandem cells with silicon and perovskites				New device technology with very high efficiency
5	Graphene in PV?				Applications for PV
6	Climate change impact on PV: winter season				How will climate change affect PV systems energy production?
7	Maintenance strategies for large PV power plants				Issues: section monitoring, soiling, localized defects using drones etc
8	Were Portuguese feed-in tariffs that much better than in other countries?				Just recently, a proposal was made (and rejected) at the Portuguese parliament so that feed-in tariffs for renewable energy plants contractualized years ago would retroactively be reduced. The main argument was that these contracts showed a distorted relationship between profits and installed capacity (EDP Renováveis, one of the biggest clean energy players in Portugal, has 25% of its profits here while it only represents 13% of its worldwide installed capacity). However, this statement does not take into account when such capacity was installed and that has a significant impact on the required investment and, therefore, on the expected profits (in a feed-in tariff context). The students will try to get a better grasp on these findings by possibly taking into account the time of installation of renewable power plants and the quality of the resource at different countries.
9	PV Systems degradation				by Soiling effects, temperature, module failure
10	Technical and economic value of day-ahead PV forecasting				Day-ahead PV forecasting plays a big role in the energy market as producers must share their generation forecast with the grid operators so that they can plan how all the different sources should be managed in order to meet the load/demand with minimum cost. The students will get a light understanding of PV forecasting and will be able to understand and identify its technical and economic impacts.
11	Integrated PV and Solar modules				Since PV panel warm-up during operation can we use them as solar modules to heat up water as well?
12	PV in space applications				