

Three Essentials of the Electric Grid: Business Essentials

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Summer 2023 – Term 1

First Assignment:

Add yourself to the TWEN class page.

Videos

- <https://www.youtube.com/watch?v=nbPmsBmo03Y> (Grid 101)
- https://www.youtube.com/watch?time_continue=149&v=JwRTpWZReJk&feature=emb_title (Video – Smart Grid)
- <https://www.vermontpublic.org/local-news/2023-04-11/watch-can-you-take-an-entire-town-off-the-grid-a-vermont-utility-thinks-you-can> (VPR Microgrid)
- https://www.youtube.com/watch?v=7FsGpi_W9XI *** (NPV and Discounting)

Readings

- [https://en.wikipedia.org/wiki/Regional_transmission_organization_\(North_America\)](https://en.wikipedia.org/wiki/Regional_transmission_organization_(North_America)) (RTO and ISO Defined)
- <http://www.mresearch.com/pdfs/docket4185/NG11/doc5.pdf> (Avoided Cost)
- <https://www.nytimes.com/2023/02/23/climate/renewable-energy-us-electrical-grid.html> (NYT Grid Constraints)
- <https://www.profitwell.com/blog/discount-rate-formula> (Discounting and Net Present Value)
- https://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf (pages 1-10) LCOE and LACE

Reference Materials

- Instructor Provided Spreadsheet (Posted on TWEN)
- <https://www.eia.gov/electricity/generatorcosts/> (Reference Material on Construction Costs of Electricity Generation Resources)
- https://www.eia.gov/outlooks/aeo/assumptions/pdf/table_8.2.pdf (Reference Material on Total Costs of Electricity Generation Resources)
- <http://euanmearns.com/solar-pv-capacity-factors-in-the-us-the-eia-data/>