



Introduction to Exercise 1 of Round Robin 1

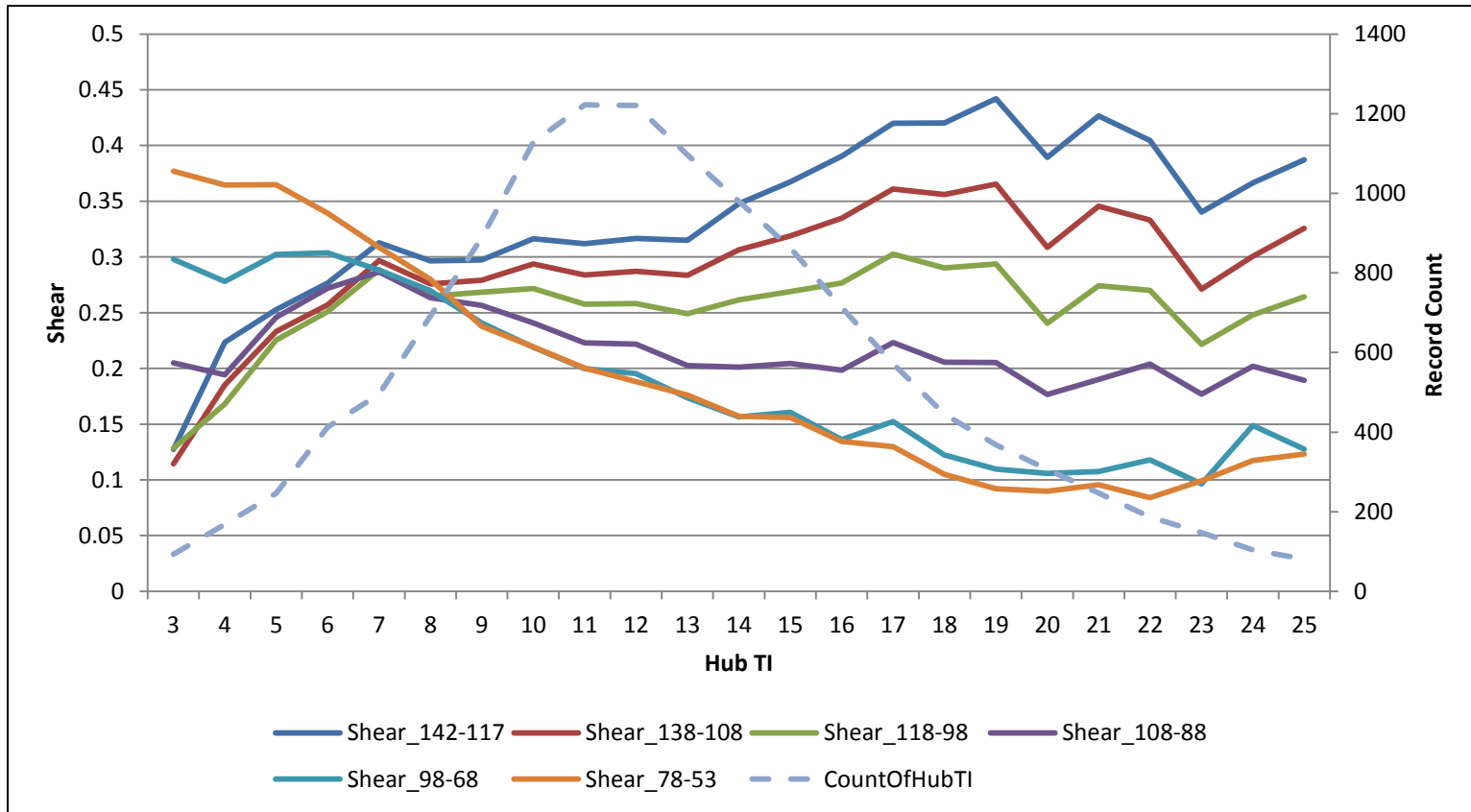
Anna Marsh
May 30, 2013



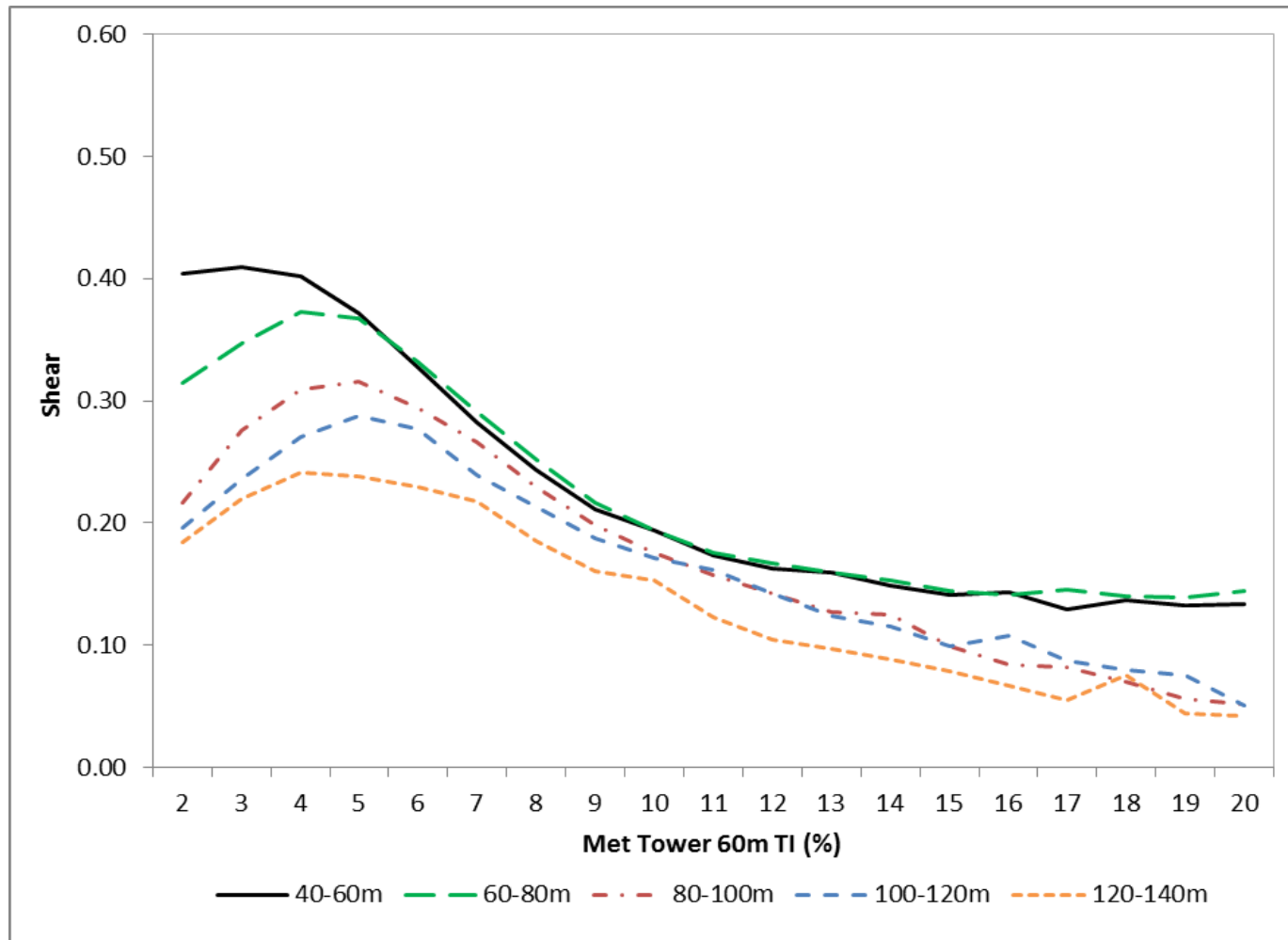
Exercise 1

- A mast, co-located Lidar and a nearby turbine assumed to have the same wind conditions at each.
- Task is to calculate:
 1. The long term energy yield at the turbine location based on hub height wind speed
 2. The corrected long term energy yield at the turbine location based on rotor equivalent wind speed (REWS)
- Assume different approaches have been taken
- Assume the power curve is representative of REWS?

Shear across the rotor

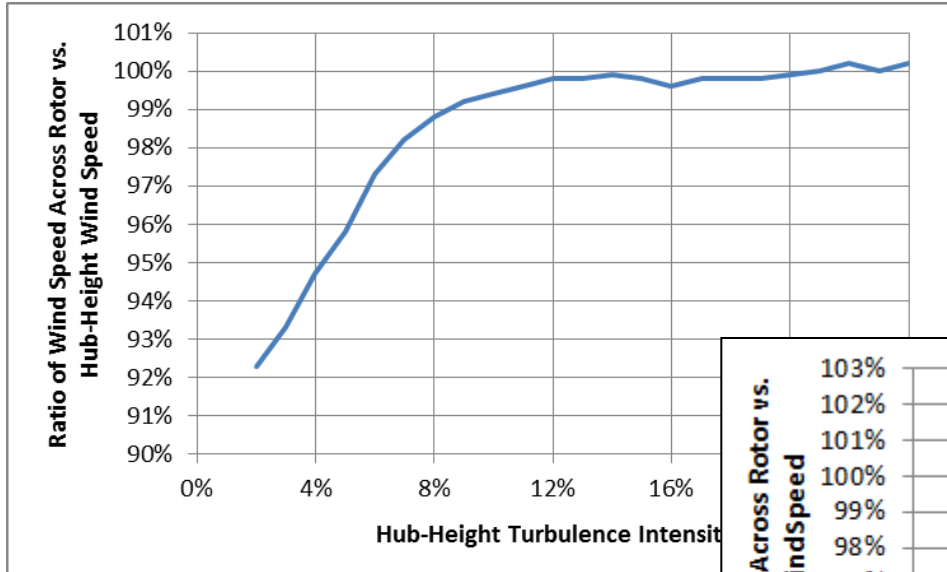


Shear across the rotor – Central US site

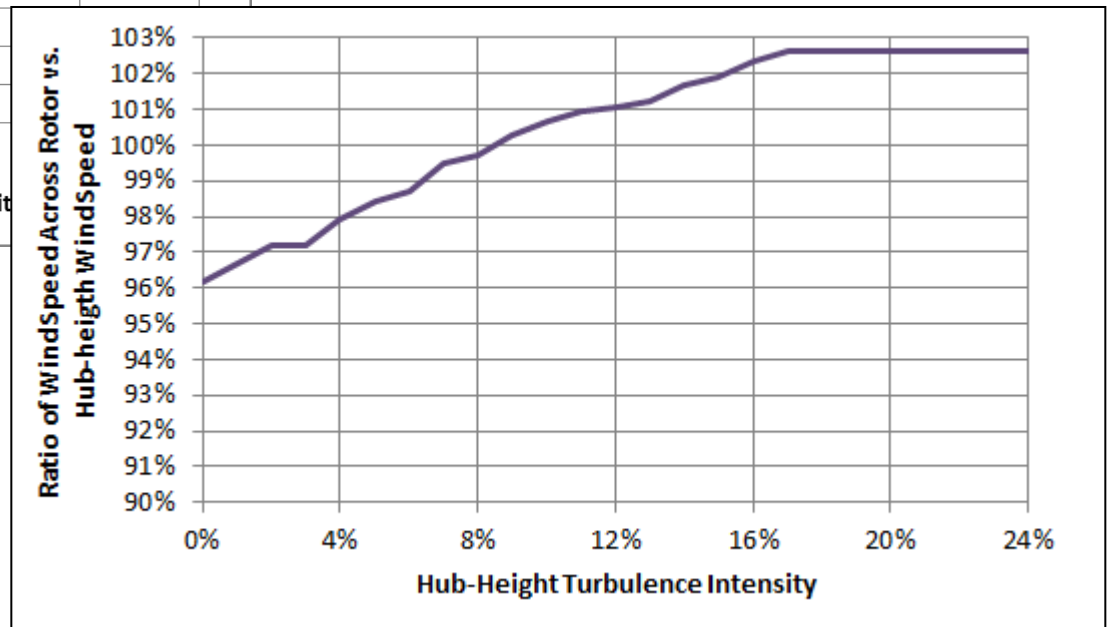


Rotor Equivalent Wind Speed

Example of a relationship for a site in Mid-West USA:



Relationship for this site:



www.dnvkema.com

