

Barclay, R.M.R., E.F. Baerwald, and J.C. Gruver. 2007. Variation in bat and bird fatalities at wind energy facilities: assessing the effects of rotor size and tower height. *Canadian Journal of Zoology* 85:381-387

Abstract: Wind energy is a rapidly growing sector of the alternative energy industry in North America, and larger, more productive turbines are being installed. However, there are concerns regarding bird and bat fatalities at wind turbines. To assess the influence of turbine size on bird and bat fatalities, we analyzed data from North American wind energy facilities. Diameter of the turbine rotor did not influence the rate of bird or bat fatality. The height of the turbine tower had no effect on bird fatalities per turbine, but bat fatalities increased exponentially with tower height. This suggests that migrating bats fly at lower altitudes than nocturnally migrating birds and that newer, larger turbines are reaching that airspace. Minimizing tower height may help minimize bat fatalities. In addition, while replacing older, smaller turbines with fewer larger ones may reduce bird fatalities per megawatt, it may result in increased numbers of bat fatalities.