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Wind Energy for Waco

Wind energy is becoming an increasingly important resource which will provide renewable energy for years to come. The United States has proposed a goal to have 20 % of our energy from wind by the year 2030. This ambitious goal requires that the use of wind be expanded. This project seeks to examine the wind quality of Waco by continuing a wind survey currently being conducted in Waco at the Region 12 Educational Service Center. Wind energy in the Waco area is not considered feasible because of our perceived low average wind speed of 10 mph as measured at the Waco Regional Airport. There has never been a proper wind survey of the Waco area until this past summer. A 100 foot tall wind survey tower was erected in the summer of 2010 and is currently providing data by measuring wind speeds at three heights (50 feet, 75 feet and 100 feet) as well as wind direction. It is desired to continue the study for another year to get a better average indication of wind speed over the entire year. Mr. Richard Williams, President of Shell Wind Energy, suggest that Shell surveys their sites for a minimum of two years before they plan to install a wind turbine at a particular location. It is our desire to survey the Waco site for a minimum of two years to get a good indication of annual wind energy. The two years will provide a stronger basis from averaging the data over the two years. It would then be possible to use this annual data to predict power output from turbines that might be sited at this location. This will enable us to predict if wind energy in Waco is feasible and determine the possible payback period for such a wind turbine installation.