TOPIC #1: Is wind power an economical alternative to conventional energy?

Proponents of wind energy believe it is becoming more affordable, while opponents argue that it is still expensive and inefficient.

In your response, analyze the two articles taken from www.procon.org to determine which position is best supported. Use relevant and specific evidence from both articles to support your response.

Article 1

(1) As the size of the wind turbine generators has increased, cost per kilowatt hour (kWh) generated has decreased. Costs in 2008 were around 3.5 to 4 cents per kWh less expensive than coal, oil, nuclear, and most natural gas-fired generation.

(2) A 2002 report found that, over the last 20 years, the cost of electricity from utility-scale wind systems has dropped by more than 80%. In the early 1980s, when the first utility-scale turbines were installed, wind-generated electricity cost as much as 30 cents per kWh. Now, state-of-the-art wind power plants can generate electricity for less than 5 cents per kWh in many parts of the US, a price that is in a competitive range with many conventional energy technologies. The National Renewable Energy Laboratory (NREL) is working with the wind industry to develop a next generation of wind turbine technology. The products from this program are expected to generate electricity at prices competitive with natural gas turbines, the least expensive conventional power source.

(3) A May 2008 report stated that a simple comparison of the wind prices to recent wholesale prices throughout the US demonstrates that wind power prices have been competitive with wholesale power (conventional electricity) market prices over the past few years. Average prices have been at or below the low end of the wholesale power price range on a nationwide basis. In most regions, the average wind power price was below the range of average wholesale prices in 2007.

Article 2

(1) In a 2009 e-mail from the Chairman and CEO of the Institute for Energy Research, he stated that "Wind power is uneconomic to produce and more uneconomic to transmit. It is unreliable moment-to-moment (the intermittency problem). It is at its worst when it needs to be at its best (those hot summer days). Its aesthetics are bad. It attracts the worst political capitalists (the late Ken Lay, the current T. Boone Pickens). W.S. Jevons was right in 1865 when he concluded that wind power was unsuitable for the industrial age."

(2) In his 2008 book *Wind Chill: Why Wind Energy Will Not Fill the UK's Energy Gap*, the author wrote that "The Royal Academy of Engineering has calculated that wind energy is two-and-a-half times more expensive than other forms of electricity generation in the UK. Wind energy is expensive, inefficient, and not even particularly 'green.'"

(3) In the 2004 article "Wind Power: Red Not Green," the author wrote that "the price gap between wind and conventional power production is actually greater, since the federal government subsidizes wind power through a production tax credit of 18 cents per kWh. … Because wind is an intermittent resource, wind farms must rely on conventional power plants to back up their supply. Wind farms generate power only when the wind is blowing within a certain range of speed. When there is too little wind, the towers don't generate power; but when the wind is too strong, they must be shut down for fear of being blown down. And even when they function properly, wind farms' average output is less than 30 percent of their theoretical capacity."