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[Less than one-fourth of projected fuel savings from wind on Falklands](#)

It is a simple concept that if wind energy is pushed into the electrical grid, then electricity from another source must be reduced. Wind industry promoters ignore the many factors that complicate the concept and claim that wind-generated electricity equals an equivalent reduction of the displaced source's fuel use.

They ignore the fuel used if a source is simply switched to standby, extra fuel used in ramping up and down in response to wind, and extra fuel burned when a plant operates at lower efficiency because of wind.

They also ignore the significant line loss in transporting wind energy from the remote locations where sprawling facilities are possible. And they ignore the likelihood that in large grid systems, the unpredictable and highly variable wind production is small enough to be simply ignored -- tolerated as a slight rise in line voltage -- especially in the remote areas where wind energy facilities are typically sited -- and allowed to dissipate as heat.

Skeptics point to these factors to try to explain the utter lack of data showing actual reductions of other fuels due to wind on the grid.

But at last -- with no help from wind promoters -- I have found some evidence of fuel savings in closed island system, where the effect of wind would be most clearly seen.

According to the [2007 issue 4 of *Wind Blatt*](#), the Enercon magazine for wind energy, three Enercon E-33/330 kW wind turbines were installed at Sand Bay on East Falkland (Islas Malvinas), where they were expected to provide 20% of the electricity and thus projected to reduce fuel use at the island's diesel-fired plant by 20%. The diesel plant was burning about 4,000,000 liters per year, or about 11,000 liters per day. It provided a maximum load of 3.2 MW in winter and a minimum load of 1.1 MW in summer, with a total annual production of 15,000 MWh (average load 1.7 MW).

In other cases, that's usually the last one reads about fuel savings, but in this case there is a brief follow-up report with actual data.

[According to the Falklands government](#), the wind turbines were officially opened June 29, 2007. On Sept. 20, 2007, they noted that the Sand Bay wind turbines were saving 800-1,000 liters of diesel fuel per day. Wind energy was providing 23% of the electricity at night and 13% during the day (an average of 18%).

But 900 liters is only 8.2% of the previous annual daily fuel use of 11,000 liters. And it is only 4.3% of the daily *winter* fuel use.

From this admittedly scant information, it appears that although these fast-responding diesel generators may generate 18% less electricity because of wind, they burn only 4-8% less fuel.

Using the winter estimates (the Falklands are in the southern hemisphere), that's a savings of less than one-fourth the amount projected.