

New Weather and Climate Services Opportunities

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I am defining "my industry" for discussion purposes to include both the North American railroads and their principle customers; e.g., electric utilities, international grain trading companies. Weather affects both the demand for rail services and the ability of the railroads to operate effectively.

On the demand side, the primary commodities driven by weather are grain and coal for electric generation.

The grain market is controlled on a worldwide basis by local weather conditions. The old diction "rain makes grain" captures much of the essential relationship between local grain production and local weather. In fact, the timing and intensity of rain matters, as do hurricanes, hailstorms, etc.

Because the world's grain markets are fully interdependent the great grain trading companies, such as Cargill, have heavily invested in weather science and forecasting for decades. Similarly, most grain producers are important consumers of weather services.

These actors buy forecasting services because they can take actions to take advantage of accurate forecasts. New weather services should focus on more timely and accurate forecasts.

Almost any improved accuracy in weather predictions has value to these actors.

The demand for coal burned to generate electricity is driven by heat, humidity and wind. In particular, weather drives the peak demand for power. The costs of power blackouts or brownouts are enormous, and so weather forecasting that more accurately enables utility planners to establish electricity demand is potentially very valuable. The practice until now has been to keep large coal stockpiles at generating plants. Deregulation of electricity production

should induce producers to reduce coal stockpiles in line with more accurate weather forecasts.

The volatile spot market for electricity observed in California, if it continues, should create a big demand for weather forecasting by all sellers and big buyers in that state. Obviously, any weather event that influences weather over the next several days will move the spot price of electricity.

Ironically, the railroads themselves are more interested in long-term climate forecasts than in weather forecasts. That is because there is little they can do to take advantage of short-term weather events

accurately forecasted. Hurricanes and brutal winter storms handicap operations, but they tend to come every year at different times and places. You can build a snow shed or two and train your people to respond, but generally available weather forecasts seem to fill the bill.

The burning issues for railroads are the degree of and the public policy response to global climate change. If the United States were, for example, to actually implement the Kyoto Protocol in its present form, we would virtually eliminate the transportation of coal in the Western United States.

Factors which could enhance the use of weather products:

Most of the factors which would stimulate the demand for weather forecasts are various government policies. Freer world trade of grain would create demand for more accurate weather forecasts over all the world's grain growing regions.

Deregulation of electricity in various regions of the U.S. could create volatile spot markets for electricity that would in turn create potentially large markets for short-to medium-term weather forecasts.

Many investment decisions involving the infrastructure of the railroads, grain companies, and electric power producers depend a great deal on potential world climate change and what the world's government will do about it.