SESSION: (C2) Research to operation (includes seamless prediction)

(C2-04)

TRANSFERRING SCIENCE TO PRACTICE: NEARLY TWO DECADES OF SEASONAL FORECASTING FOR WEATHER-SENSITIVE INDUSTRIES

Crawford, Todd

The Weather Company, an IBM Business

In 2000, a seasonal forecasting program was started at what was then WSI Corporation, in support of a new business line aimed at the recently-deregulated energy trading industry. A $500K investment was made in an Alpha computing cluster, which ran a 16-member ensemble of the NCAR CCM 3.6.6 climate model. From there, various statistical forecasting algorithms were developed to supplement the climate model forecasts. Over time, the CCM was abandoned in favor of the newer generation of climate models, including the ECMWF, CFS, and more recently the calibrated NMME suite, in support of twice-monthly seasonal forecasts for North America, Europe, and Asia. Further, statistical models have been refined based on the latest science and our experience.

More recently, as we have been acquired by IBM, we have added purely automated and gridded seasonal forecasts for the rest of the world, using a blend of NMME and ECMWF outputs. Finally, we are currently working towards our first formal attempt at probabilistic seasonal output since our initial failed attempt in 2000.

Along the way, there have been numerous successes, failures, and lessons learned, as the tricky task of translating seasonal weather information into a language and format easily digestible for not-always-rational energy traders has been a challenging experience. This talk will provide a practitioner's view of seasonal forecasting and some suggestions for what's ahead.