

Risk Management Using Probability Forecast of Temperature

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Abstract

Remarkable progress of study on risk management using weather information has been made in recent days in United States and some other countries. In Japan, Tatehira (1999) showed the way to advanced use of weather information referring to western studies. In turn, requisites for the weather information will become to be clear. The purpose of this paper is a prescriptive modeling of risk management using the probabilistic forecast of temperature.

This study will illustrate the peak load control of electric power co-operation as an example. In this case, risk arises accompanied to the uncertainty of temperature forecast. Risk is quantified based on cost/loss model. It is assumed that decision making controls the size of reserved facilities for power generation. Decision making is assumed to be done using the probabilistic forecast of temperature. The part of cost/loss related to the uncertainty of temperature forecast is called *marginal loss* which is used as an index measuring the performance of decision making.

This case study will show the possibility of saving about 25% of *marginal loss*.



日本農業工学会第19回シンポジウム 「地球環境問題と農業生産環境の改善」の案内

主催：日本農業工学会

日時：2003年5月16日（金）13：00～16：30

会場：農業土木会館6階大会議室
（東京都港区新橋5-34-4）

講演：

1. リモートセンシングの最新技術と環境・農業分野への利用（東京大学 大政謙次）
2. 熱帯モンスーンにおける耕地の蒸発散・熱収支変

動と水資源・災害（東京農工大学 青木正敏）

3. 中国の環境問題としての砂漠化・黄砂の防止法と緑化技術の方向性（九州大学 真木太一）
4. 中央アジア灌漑農地の塩類集積による水土劣化と防止対策（鳥取大学 北村義信）

総合討論：司会（山口大学 早川誠而）

参加費：無料（資料代 1000円）

参加申込：当日受付