Kazem Zare, Mohsen Parsa Moghaddam, and Mohammad Kazem Sheikh El Eslami, 2010, Electricity procurement for large consumers based on Information Gap Decision Theory, *Energy Policy,* vol. 38, pp.234–242.

Abstract In the competitive electricity market, consumers seek strategies to meet their electricity needs at minimum cost and risk. This paper provides a technique based on Information Gap Decision Theory (IGDT) to assess different procurement strategies for large consumers. Supply sources include bilateral contracts, a limited self-generating facility, and the pool. It is considered that the pool price is uncertain and its volatility around the estimated value is modeled using an IGDT model. The proposed method does not minimize the procurement cost but assesses the risk aversion or risk-taking nature of some procurement strategies with regard to the minimum cost. Using this method, the robustness of experiencing costs higher than the expected one is optimized and the related strategy is determined. The proposed method deals with optimizing the opportunities to take advantage of low procurement costs or low pool prices. A case study is used to illustrate the proposed technique.

Keywords Energy procurement, Information Gap Decision Theory (IGDT), Large consumer.