

In Poland, year-after-year there is an increase in electricity demand. Technical constraints and the necessity to shut down old plants cause the problems for the Electrical System: power shortages and difficulties with balancing supply and demand. Electric Power Efficiency is high on the political agenda, what is expressed in regulations. The proposition that can make the system secure is the control of consumption. Demand Side Management (DSM) is a method to control the demand for electricity. It consists in the modification of consumer demand of electricity through various methods used by the distributor. DSM is not a popular approach in Poland. There is a need for investigating demand side flexibility and the results of DSM programs.

The main objective of the study is to evaluate the value consumers put in the change of their habits connected with electricity use (e.g. shifting consumption in time) and the impact of social norms of this value. It will examine the impact of social norms on the willingness to accept (WTA) energy demand management programs: external control and sharing of information about electricity usage. The study will evaluate potential disutility associated with the introduction of DSM. It will be the first research about consumers' preferences toward DSM in Poland using the Choice Experiment (CE). It will open new field of studies: introduction of the social norms into the analysis of DSM potential. It will expand conclusions from the Theory of Planned Behaviour.

The Choice Experiment method will be applied to analyze household attitudes to DSM inspired contracts. The research group consisting of 1000 participants will assure the representativeness. In the CE, consumers will imagine the hypothetical situation of having an automated metering infrastructure in their houses. Households will be faced with hypothetical electricity contracts and their choices will reveal preferences for different attributes of the contracts. By econometric methods it is then possible to explicitly estimate the compensations needed to be "flexible" in different dimensions at the household level. The dimensions of flexibility considered in the contracts are related to the types of electricity use (domestic electricity), time of the day (morning/evening) and dissemination of information about the usage of electricity. The social norms questionnaire will make it possible to analyse the impact of social norms on consumers' choices about electricity usage.

DSM has many beneficial effects (both economic and environmental), including mitigating electrical system emergencies, increasing the reliability of the system and reducing the number of blackouts. Possible benefits can also include deferring high investments in generation, transmission and distribution networks. Demand Side mechanisms improve energy efficiency and help balance electricity supply and demand. The better understanding of consumers' preferences toward DSM programs is needed to implement them in the most effective way.

The innovative character of the study is that the CE will be used to investigate the potential of using demand side management in Polish households. The results of the study will support company control demand as well as help the government's plans with implementing smart meters in Poland. In the study, it will be possible to estimate a value on the disutility a household experiences, for instance, from not being able to use the washing machine, or disutility from a lower/higher indoor temperature during the peak hours and the utility/disutility associated with peer comparisons of electricity consumption. These values are highly policy relevant by showing how much money households need to change habits, for example, moving electricity use from peak load hours. For the first time the impact of social norms on preferences toward DSM mechanisms will be examined.