Pattern-based monte carlo simulation for AMR electricty load analysis

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***Abstract*—This paper proposes customer behavior analysis for pattern analysis of AMR electricity customer.**

In this paper univaraite models for short-term load forecasting based on customer's pattern behavior analysis and probabilistic monte carlo simulation are proposed. The proposed method were compared with that of other models based on ARIMA, exponential smoothing and neural networks. Application examples confirm valuable properties of the proposed approaches and their high accuracy.

***Index Terms*—Autometic meter reading, confidence interval**

I. Introduction

Here is introduction. In a revolutionary change in enegy section transform the traditional unidirectional electricty grid replaced by bidirectional or smart grid (SG). As a results of increasing in number of Intelligent Electronic Devices (IEDs) in the power system, especailly metering field. Consequently, there are repidly jump in enormous data volume in power system for storage, mining, sharing and visualization [1]. The advance meter read (AMR) with 15-min read intervals has also been develop to replacve the traditional managtic once a month readin meters. The AMR reads 96 data per day and carries out 288- data per month, which means that 2880 times customer data are fed to utility.

II. Literature reviews

Here is Literature reviews.

III. Problem Formulation

Here is Problem formulation.

A. Data collection

where the data comes from: PEA total number of AMR customer: duration: 2 years???

B. Pattern formulation using confidence interval

Use quantile at 0 to 1 with 0.05 step.

C. Probability distribution constuction

D. Monte carlo simulation

E. Find cost and load factor

IV. Result and discussion

Here is results.

PEA, AIT, NEU

V. Conclusion

Here is Conclusion.

The major contribution of this work is to propose new simulation univariate monte carlo simulation models based on pattern of customer behavior analysis.

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VI. References

References

[1] Depuru SSSR, Wang L, Devabhaktuni V. Smart meters for power grid: challenges, issues, advantages and status. Renew Sustain Energy Rev 2011;15(6):273642.