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ADJUSTABLE LOAD POTENTIAL ASSESSMENT METHOD BASED ON KEY INDUSTRY SURVEY AND STATISTICAL (Paper 235)

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Introduction

Based on the analysis of the load characteristics of the sub-industry and extensive survey statistics, this paper intends to sort out the key factors affecting the adjustable potential of the demand side, analyze the load composition and adjustable characteristics of the sub-industry, then build a potential evaluation model based on the investigation and analysis of the sub-industry.

Methods

Firstly, typical user-adjustable load capacity analysis is performed.

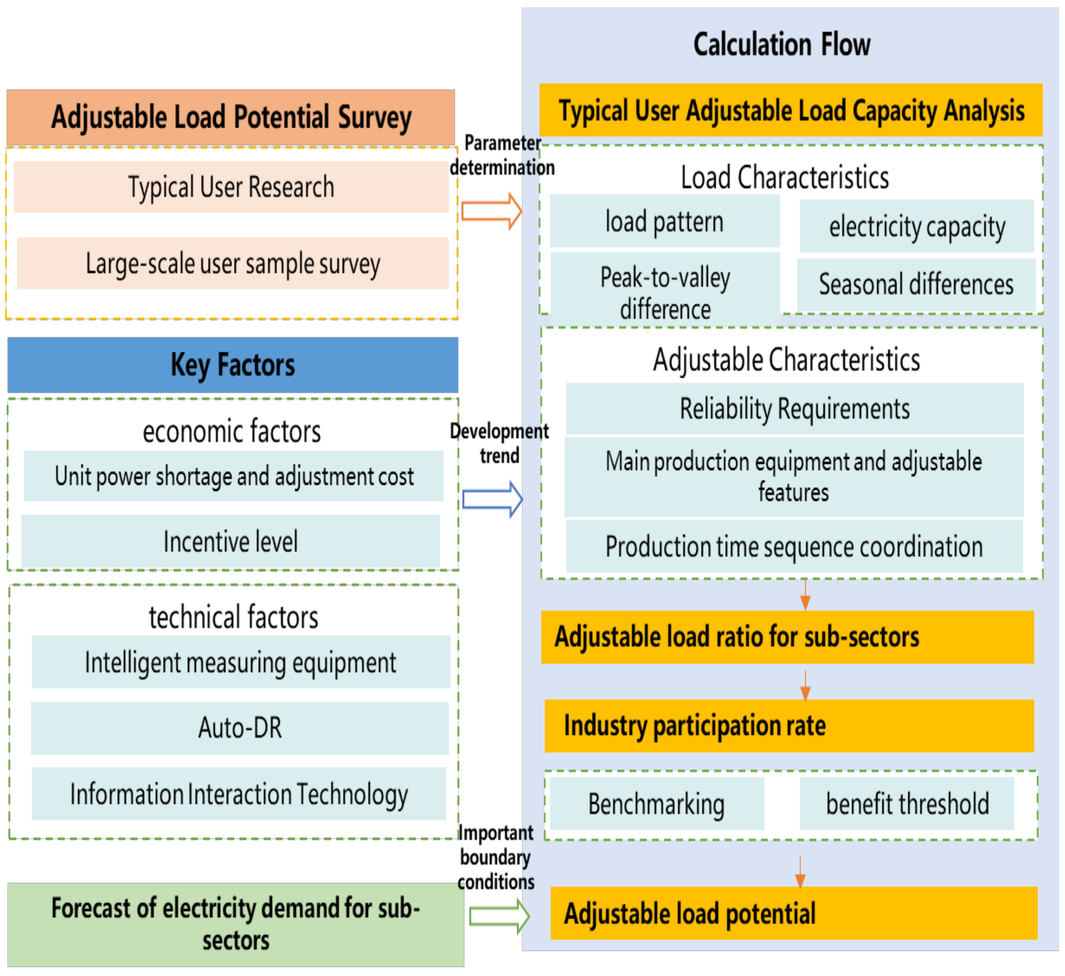
$$p_i = (\sum_{j=1}^{M} N_j \bullet e_j) \bullet \frac{C_b}{C_q} \bullet k_1 \bullet k_2 \bullet k_3 / P_{i,\max}$$

Secondly, analyze the adjustable load ratio and industry participation rate of sub-sectors.

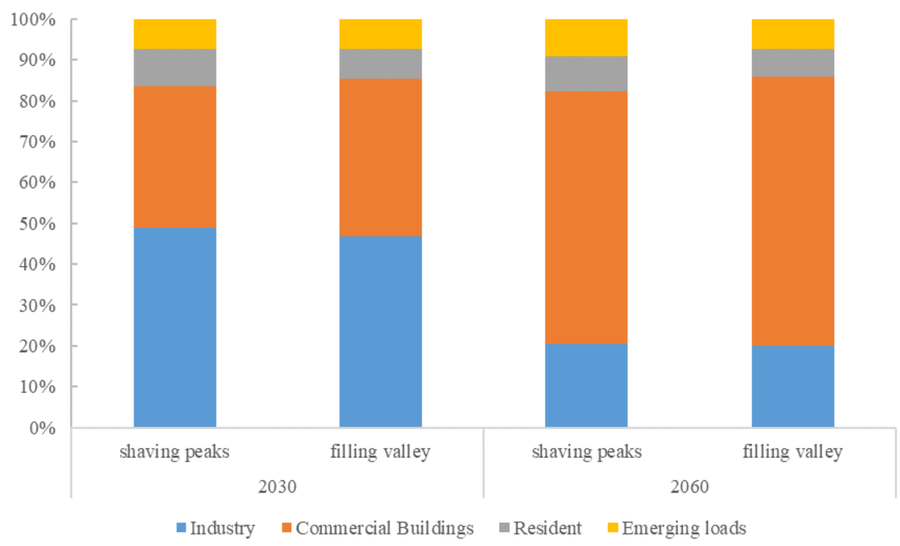
Thirdly, analyze the industry participation rate.

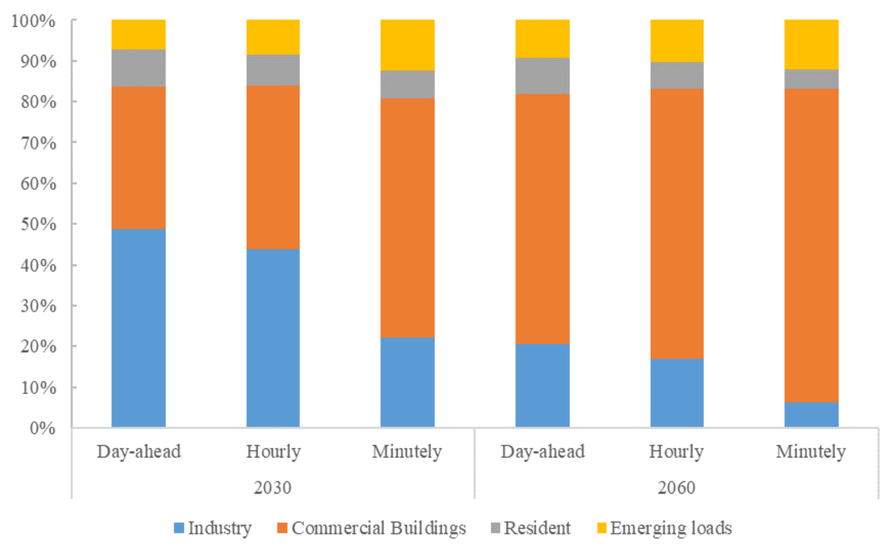
Finally, assess the area adjustable load potential.

$$P = \sum_{i=1}^{N} P'_{i,\max} \bullet p_i \bullet \beta_i$$



Results





The adjustable load potential of typical areas in 2030 and 2060 is calculated.

-The industrial field will always be an important part of the adjustable load due to its large proportion of electricity consumption, but its proportion in the total potential of the adjustable load will gradually decrease as the proportion of electricity consumption decreases.

- With the increase in the proportion of electricity consumption in the commercial field, the proportion of adjustable potential will continue to rise.

Conclusions

This paper constructs a potential evaluation model based on the subdivision industry survey and analysis. The case study indicates that industrial field will always be an important part of the adjustable load, while the proportion of adjustable potential in commercial field will continue to rise.