

Analysis potential benefit of energy cost the chiller plant operation engaging with tariff scheme

ABSTRACT

Engagement with new tariff scheme, Enhanced Time of Use (EToU) after switching from old tariff scheme, Time of Use (ToU) for chiller plant operation may be not promising a significant benefit for consumer in term of techno-economic value or even getting worse. This uncertainty condition make consumers doubt to switch onto latter. Therefore this study is focusing to analyze and looking potential benefit of energy cost the chiller's plant operation when engaging with the new tariff scheme EToU rather than ToU. Consumer's potential benefit appear for this study when switching from ToU to EToU tariff scheme for chiller plant operation through shifting the chiller's plant operation from peak to mid-peak hour while maintaining discharging operation of thermal energy storage (TES). This could benefit both consumer's on demand and utility on supply side respectively. Consumer may experience lower energy cost charged by utility. While utility could minimize the investment cost to install and maintain power system infrastructure in order to meet energy demand as well. However, further comprehensive study on this paper is also discussed for looking the more significant benefit to reduce energy cost of chiller's operation when engaging with EToU tariff scheme.

Keyword: Enhancement Time of Use (EToU); Time of Use (ToU); Tariff scheme; Chiller's plant operation