Regulation Market Issues

MRC

June 25, 2015

Howard Haas

Monitoring Analytics

Regulation: Efficient, least cost market design requirements

- **Market design intended to minimize the cost to provide regulation using two different products but clearing the resources in a single market requires:**
  - **An accurate marginal rate of substitution (marginal benefit factor) in the optimization**
  - **A single price (or a single two part price pair) for settlement**
  - **That the two products be defined, cleared and settled in equivalent units throughout**

Monitoring Analytics

Regulation: Efficient, least cost market design requirements

- **Market design intended to minimize the cost to provide regulation using two different products but clearing the resources in a single market requires:**
  - ~~An accurate marginal rate of substitution (marginal benefit factor) in the optimization~~
  - ~~A single price (or a single two part price pair) for settlement~~
  - ~~That the two products be defined, cleared and settled in equivalent units throughout~~

Monitoring Analytics

Current Design

- **Incorrectly defined marginal benefit factor function (MBF)**
    - Overvaluing RegD as a substitute for RegA
- **Incorrectly applying the MBF in the optimization**
    - Undercounting the contribution of RegD to total effective regulation
- **MBF not consistently used in pricing and settlement**
    - Assumes MBF in price but not settlement

Monitoring Analytics

Effect of Current Design

- **Purchasing too much RegD in many hours**
    - ○ **Negatively affecting the provision of regulation and reliability**
    - ○ **Procuring too little RegA.**

- **Incorrectly compensating RegD in all hours**
    - ○ **Sometimes too little (when MBF is >1)**
    - ○ **Sometimes too much (when MBF is <1)**
        - – Incentives to self schedule/price at $0.00
            - • Inefficient squeezing out of RegA
            - • Lowers regulation price per MW of RegA
        - – Long term investment signals incorrect for RegA and RegD

Monitoring Analytics

Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

Monitoring Analytics