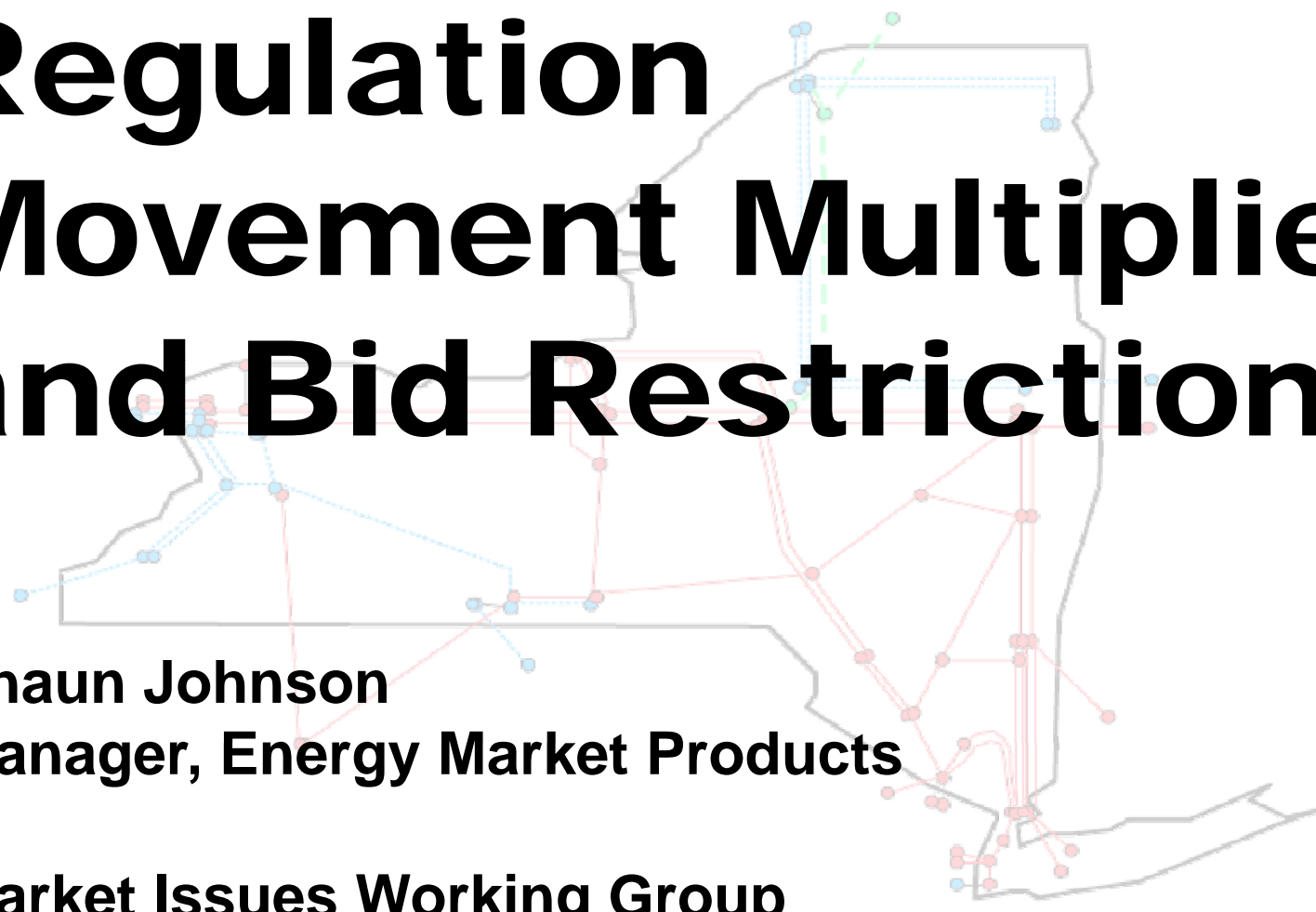


Regulation Movement Multiplier and Bid Restriction

A faint, light gray map of New York State serves as a background. Overlaid on the map is a network of transmission lines represented by thin, colored lines (blue, red, and green) connecting various nodes (small circles) across the state.

Shaun Johnson
Manager, Energy Market Products

Market Issues Working Group
July 19, 2012

Background

- ◆ **In response to FERC Order 755, in April, NYISO filed proposed enhancements to the regulation market to provide for distinct regulation capacity and regulation movement products**
- ◆ **As per the NYISO filing, the NYISO has committed, 60 days prior to the effective date, to specify the Regulation Movement Multiplier and the (Regulation Movement) Bid Restriction it proposes to apply**

Regulation Movement (RM)

- ◆ **The absolute value of the change in Energy or Demand Reduction over a six second interval, measured in MW, that a Regulation Service provider is instructed to deliver for the purpose of providing Regulation Service**

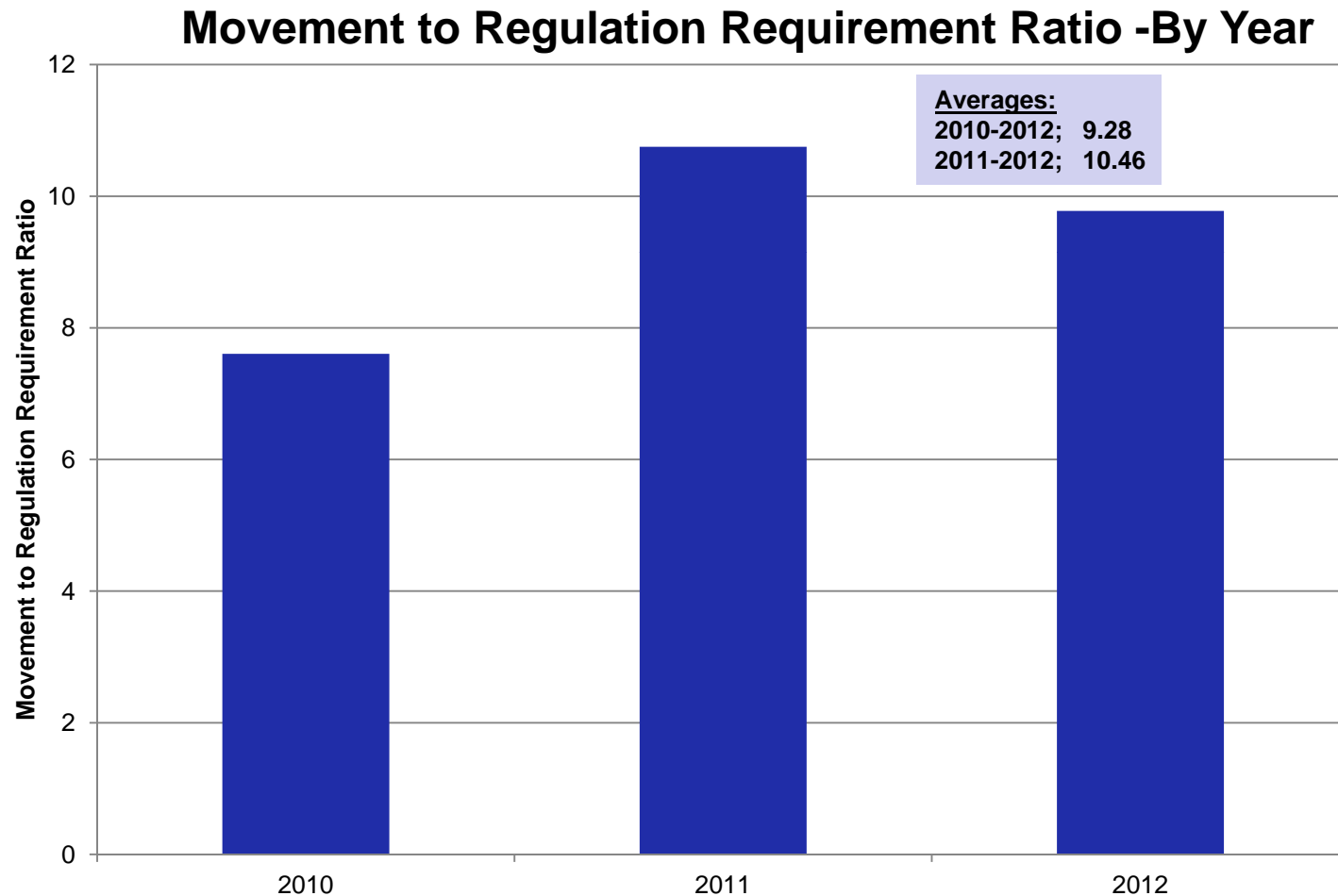
Regulation Movement Multiplier (RMM)

- ◆ **A factor, when multiplied by the Regulation Movement Bid price, that is used in scheduling Regulation Service providers**
- ◆ **Represents the historical relationship between the number of MW of Regulation Capacity that the ISO sought to maintain in each hour and the number of Regulation Movement MW instructed by AGC in each hour**
- ◆ **To be specified in MST 2.18 (Definitions)**

Historic RM Analysis

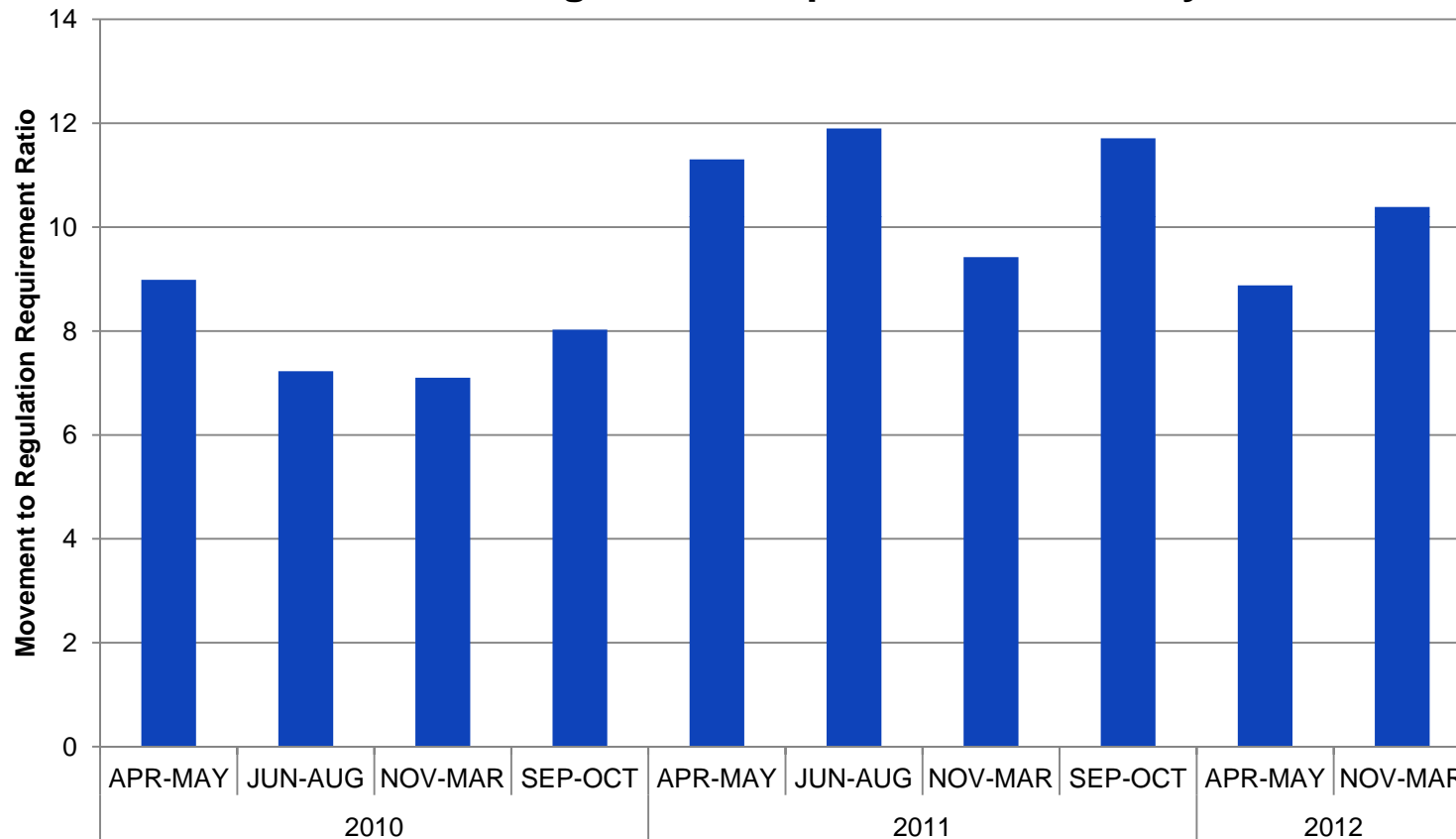
- ◆ **Period Analyzed: Jan 2010-May 2012**
- ◆ **Days excluded:**
 - *Daylight Savings transition days*
 - *8/22/2010 – data problems*

Movement to Regulation Requirement Ratio - By Year

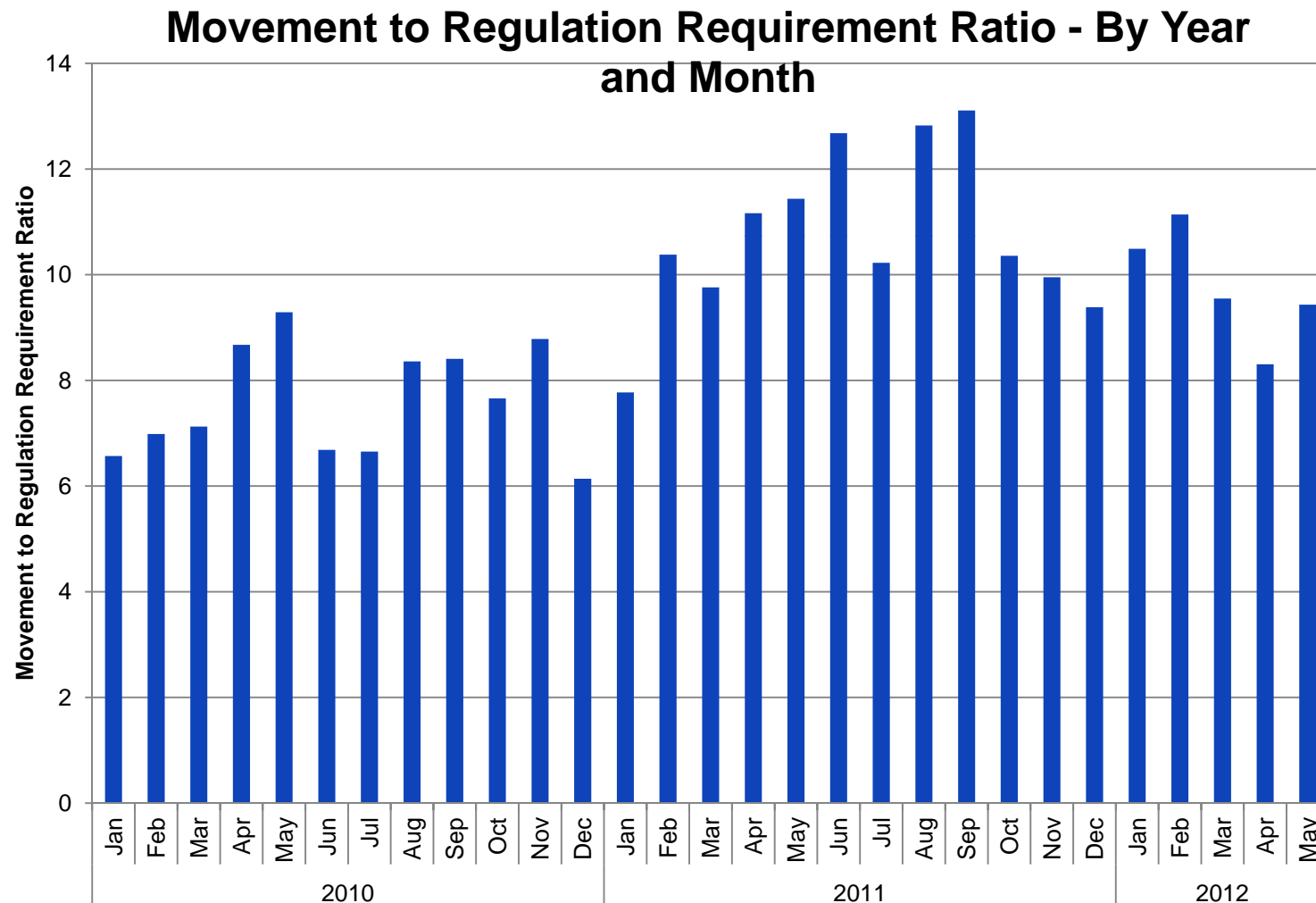


Movement to Regulation Requirement Ratio – Seasonally

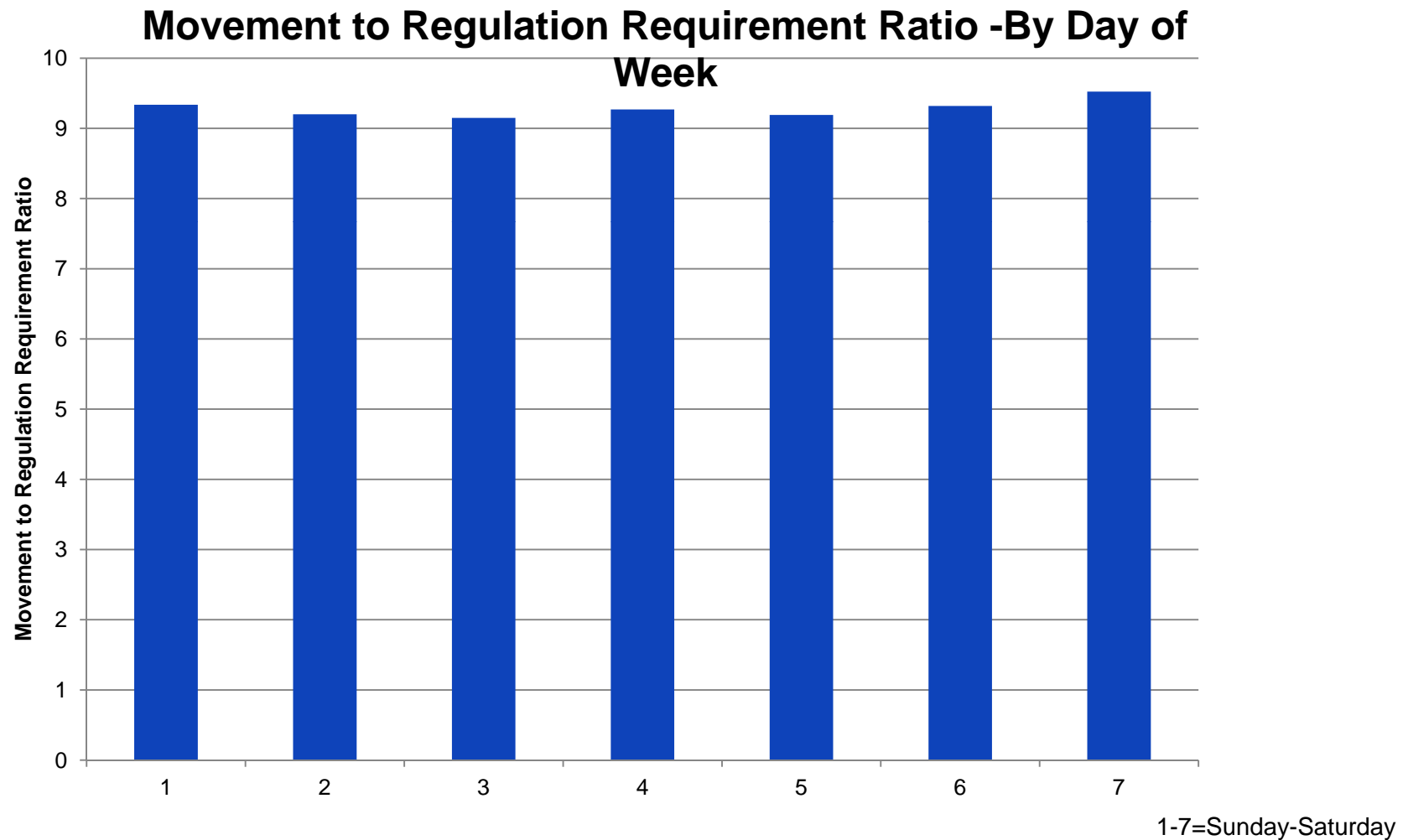
Movement to Regulation Requirement Ratio - By Season



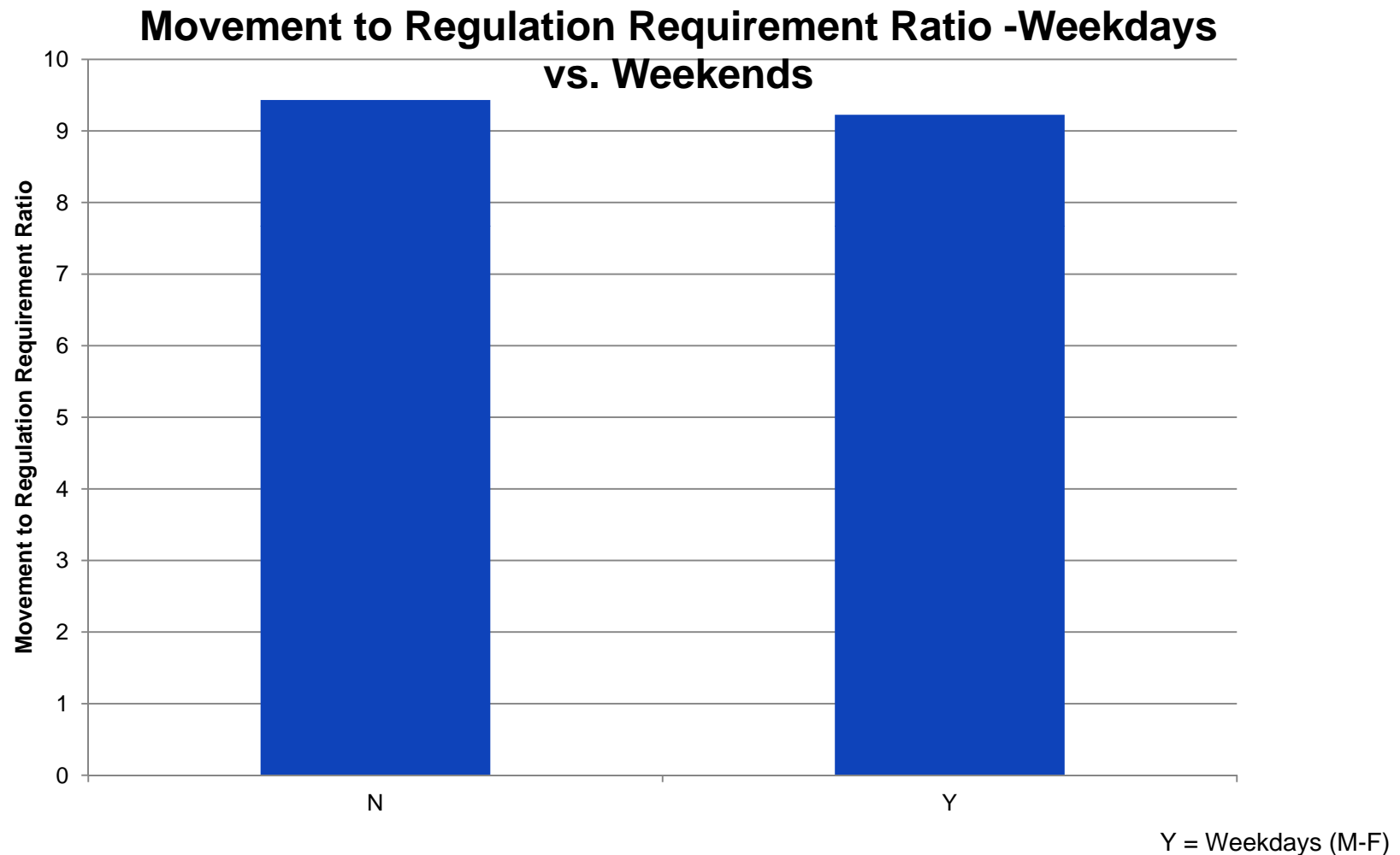
Movement to Regulation Requirement Ratio - By Year and Month



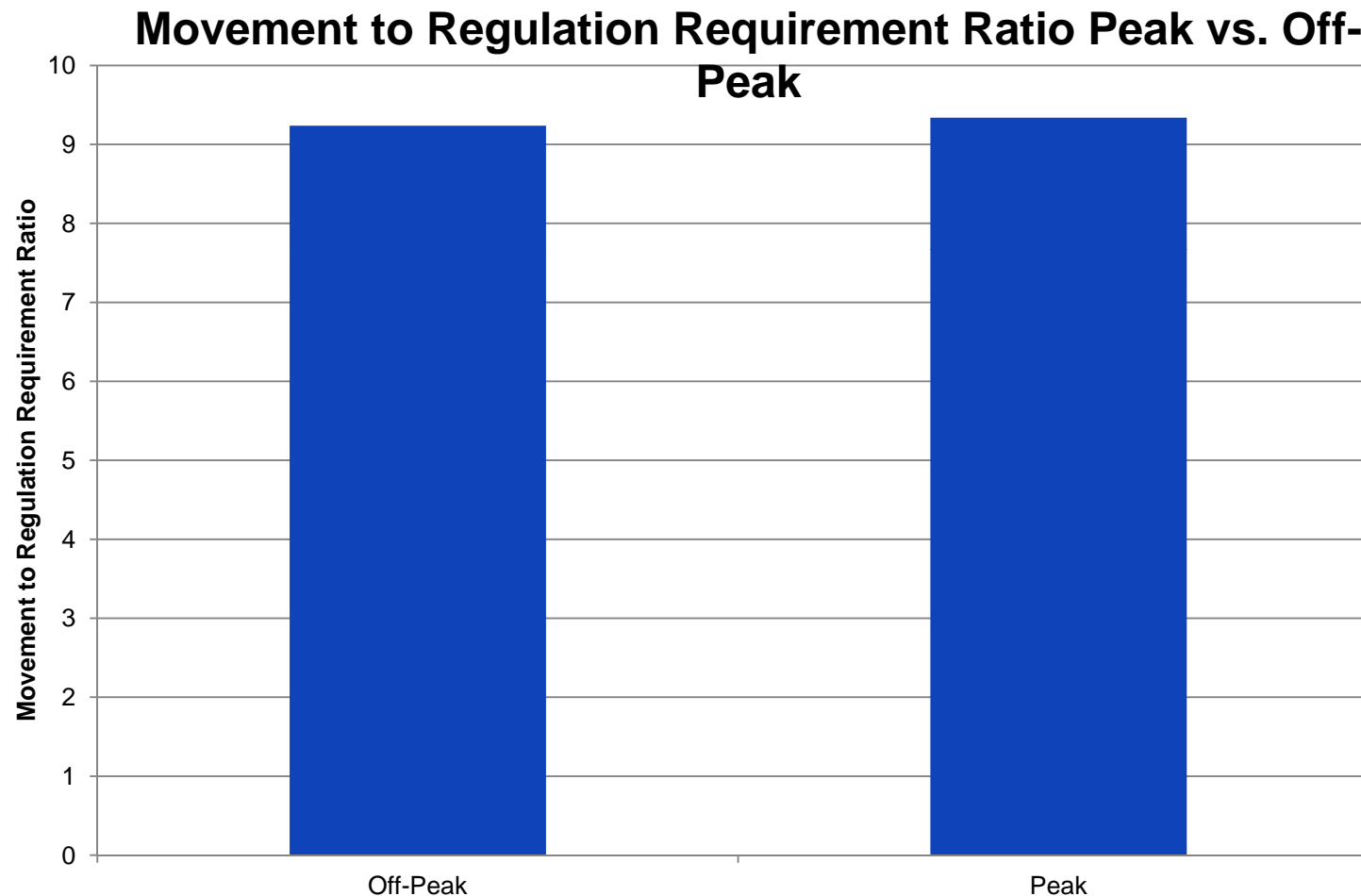
Movement to Regulation Requirement Ratio -By Day of Week



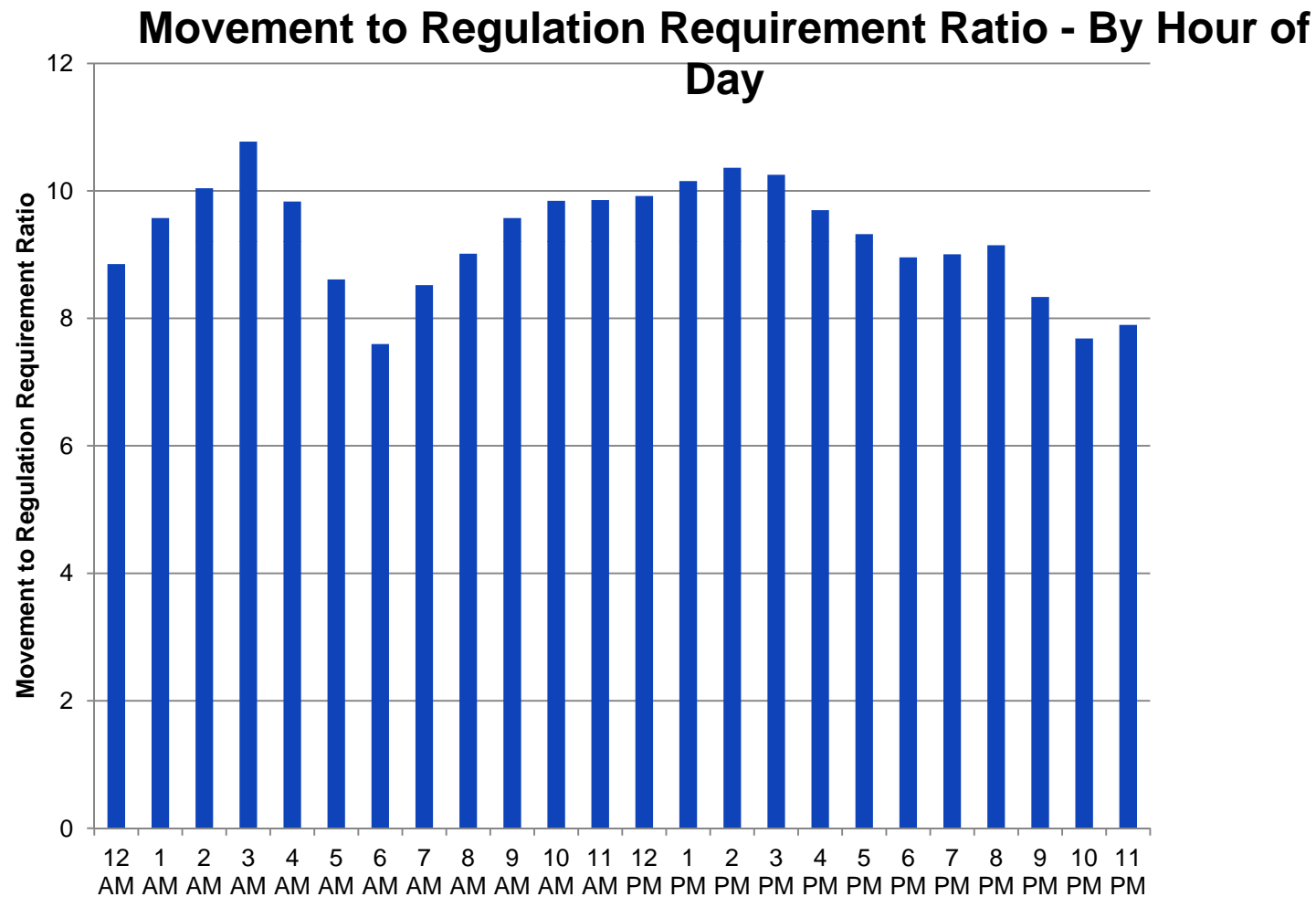
Movement to Regulation Requirement Ratio -Weekdays vs. Weekends



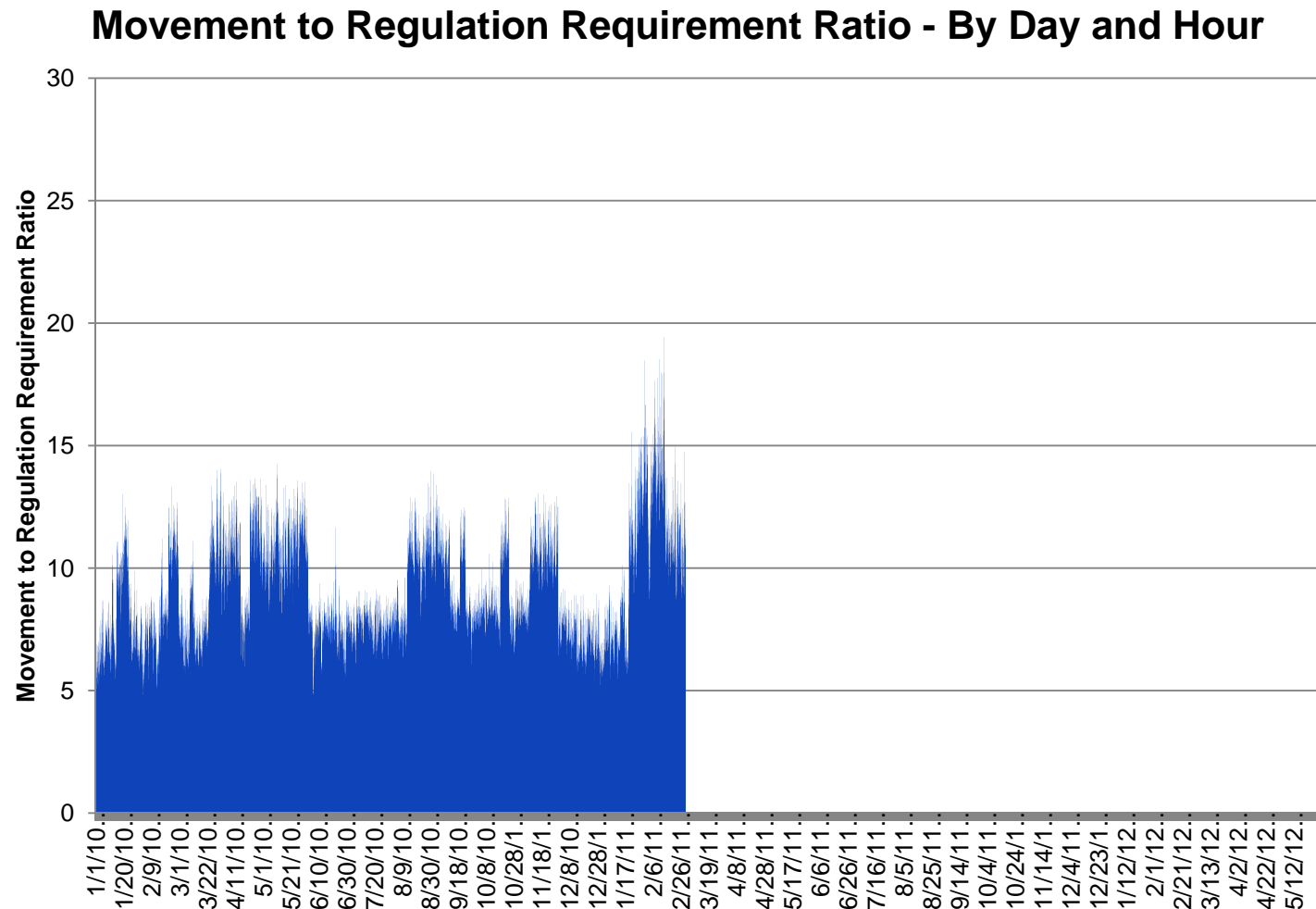
Movement to Regulation Requirement Ratio -Peak vs. Off-Peak



Movement to Regulation Requirement Ratio - By Hour of Day



Movement to Regulation Requirement Ratio - By Day and Hour



NYISO Proposal on RMM

- ◆ **Given this data, the NYISO sees no compelling reason to vary the RMM on a temporal basis.**
- ◆ **Based on the historical performance, the initial RMM value will be set to 10.**
- ◆ **The NYISO will continue to monitor and evaluate this value for potential adjustments.**

Regulation Movement Bid Restriction (RMBR)

- ◆ **Ensures that Suppliers have an opportunity to recover sufficient revenue to cover the historic costs of providing Regulation Movement**
- ◆ **Protects LSEs from unjustified increase in Regulation Service costs while the new market product matures**

Determining the RMBR

- ◆ **Quotient of the average annual fuel-adjusted Regulation Service revenue historically paid to Regulation Service providers divided by the amount of Regulation Movement typically realized based on historical experience**

RMBR Calculation Inputs

- ◆ **Historic annual Regulation costs**

2009	2010	2011
\$65M	\$52M	\$21M

- ◆ **Historic movement**

- *Average annual MWs of movement: ~17.5 million*

- ◆ **Fuel adjustment base value**

- *Most recent published 2013 Henry Hub natural gas futures price adjusted for Transco Z6 NY basis*
 - **Creates a fuel index base of \$4.49 for 2013**

Example of Fuel Indexing

Spot NG Price - TZ6	Total Reg Settlement	2013 Adj. NG Futures	Fuel Index Ratio	Fuel Adjusted Reg Cost
\$9.00	\$200,000.00	\$4.49	0.499	\$99,777.78

- ◆ **These adjusted daily totals for 2009-2011 were then summed (~\$129.8 million) and divided by the estimated amount of MWs moved over the time period (~52.5 million)**

RMBR Value Proposal

- ◆ **RMBR will be established at \$2.47/MW**
- ◆ **To be specified in MST Attachment F**

Next Steps

- ◆ **The NYISO will make a compliance filing to establish RMM and RMBR values in the Tariff 60 days prior to market implementation as it stated in its April Order 755 filing**
- ◆ **Filing targeted for mid-August**
- ◆ **Implementation of the software changes to meet Order 755 is still targeted for October 2012**
 - ***Market trials targeted for September 2012***

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



[*www.nyiso.com*](http://www.nyiso.com)