

Fuel Forecast Development Status Report

Arvind Jaggi
Senior Economist, System & Resource Planning
New York Independent System Operator

ESPWG
10 Krey Blvd
Rensselaer, NY 12144
April 17, 2009

Methodology for Forecasting Fuel Prices

Start with EIA's most current national long-term annual fuel-price forecast

I. Prior to estimating congestion

Step 1. *Assess EIA's data against proprietary forecasts (e.g. CERA, ESAI) and market futures (e.g. NYMEX) and adjust figures to incorporate NY zonal bases as reflected in historic data.*

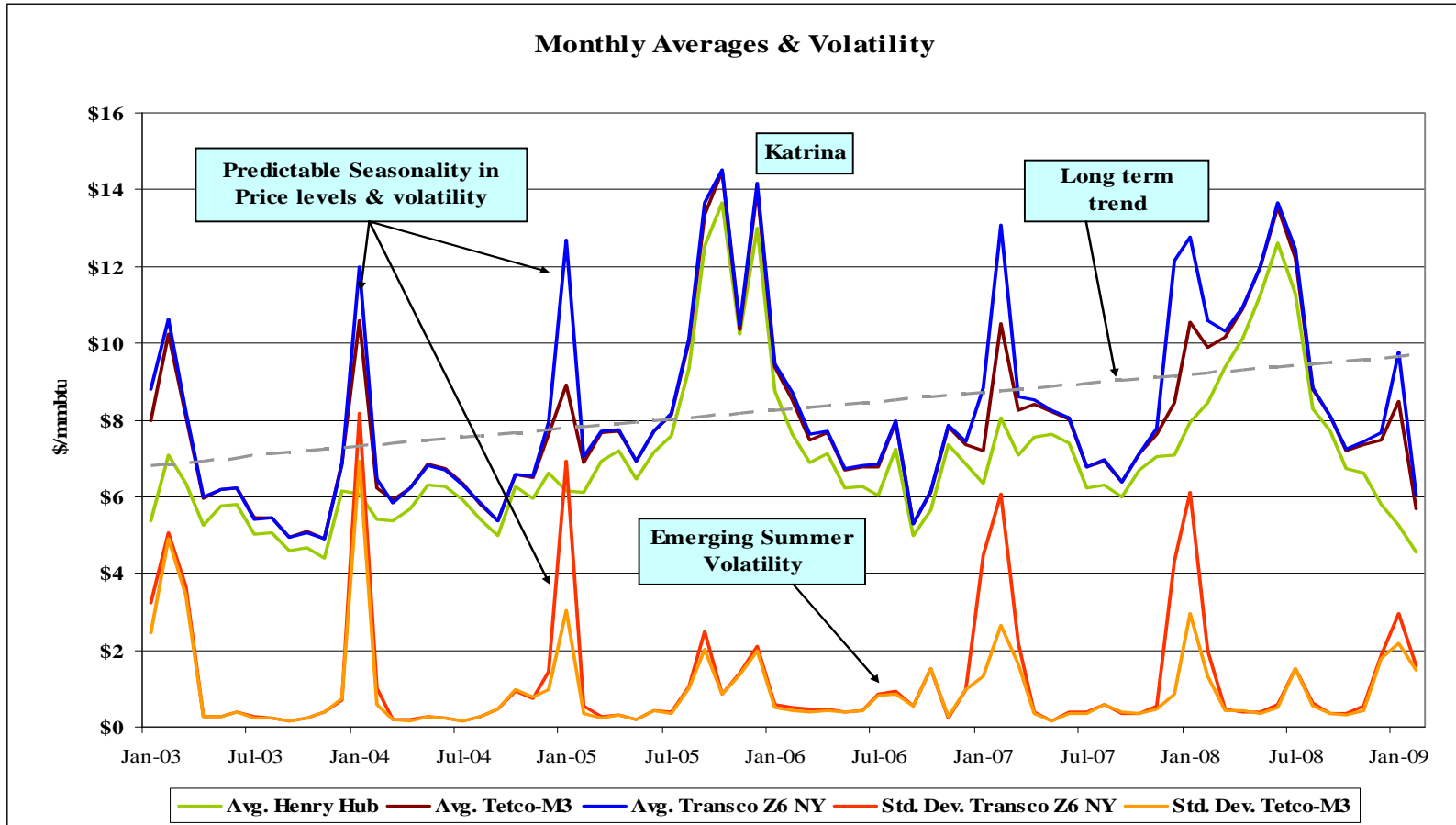
Step 2. *Incorporate seasonality by applying month-specific price factors based on historic data. For each fuel, the forecasted figures will reflect typical intra-year fluctuations in average monthly prices.*

Step 3. *Incorporate monthly volatility measures (Standard Deviation of daily prices) reflecting varying intra-year High-Low bands.*

II. Prior to evaluating solutions

Review updated data and re-forecast fuel prices using current information

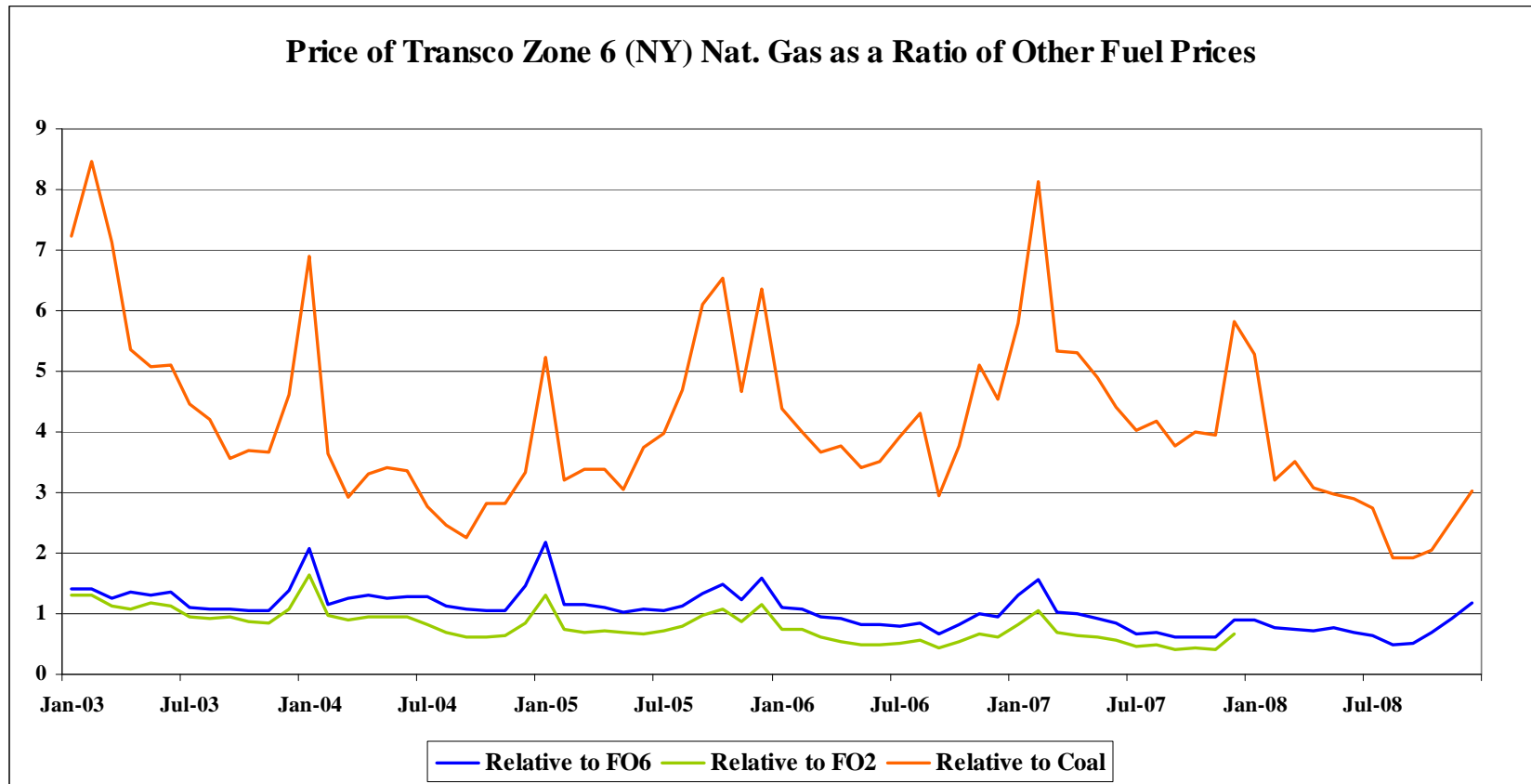
Historical Patterns of Nat. Gas Prices



Transco Zone 6 (NY) as representative price for Zones I – K
Tetco-M3 as proxy price for Zones A – H

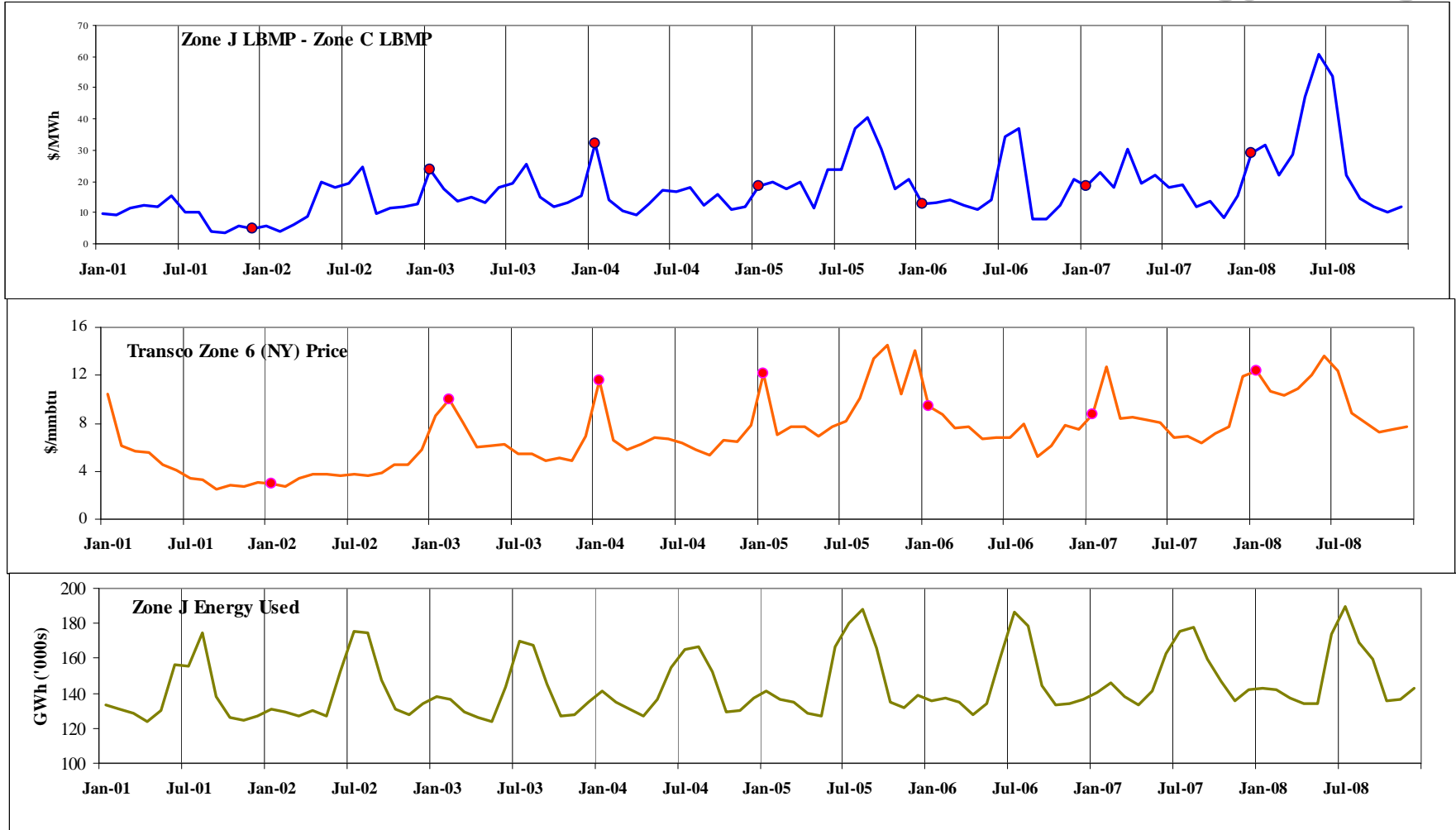
Draft – For Discussion Purposes Only

Historical Relative Fuel Prices



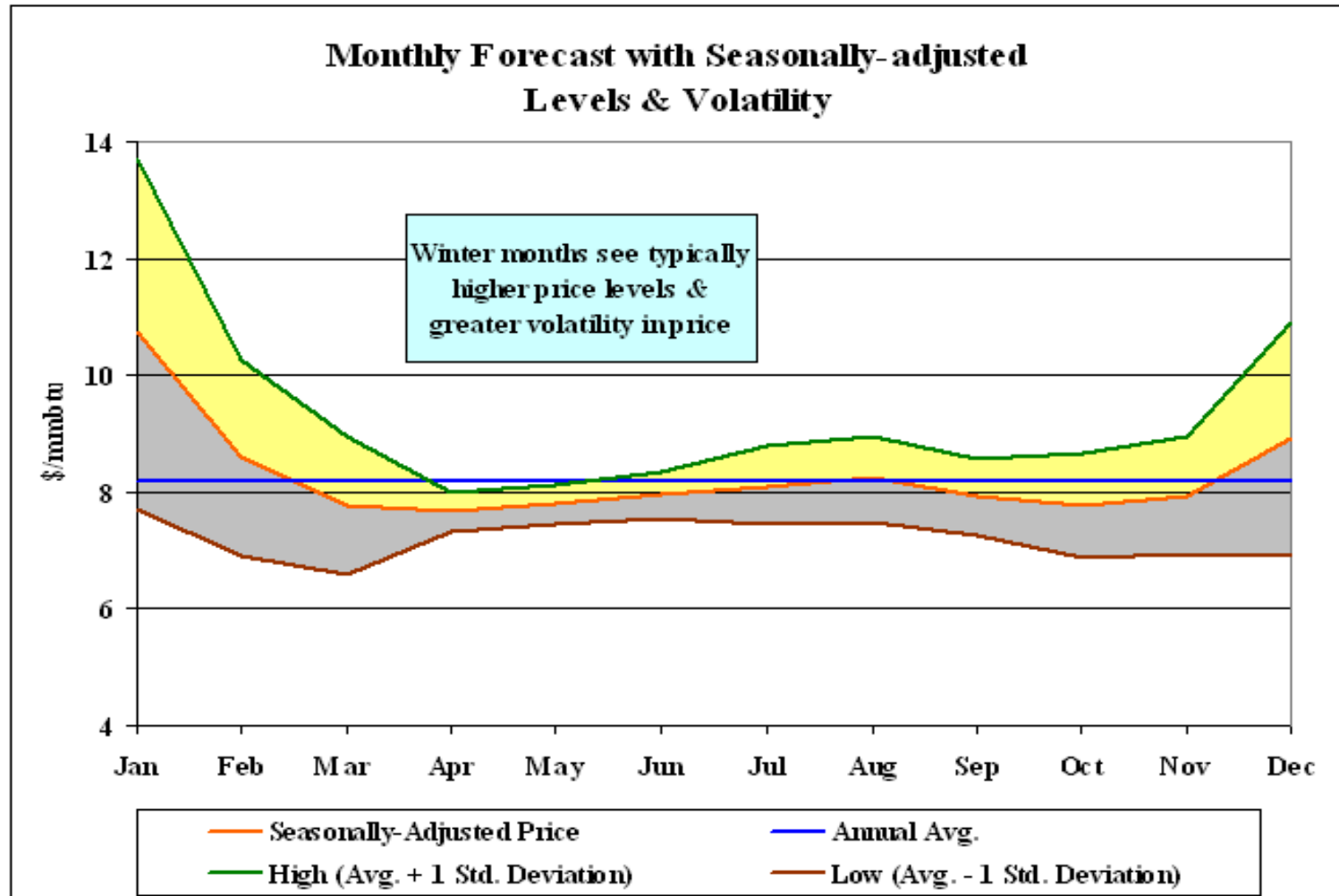
Nat. Gas more volatile than other fuels & getting relatively cheaper

Zone J's LBMP Differential, Gas Price, & Energy Usage

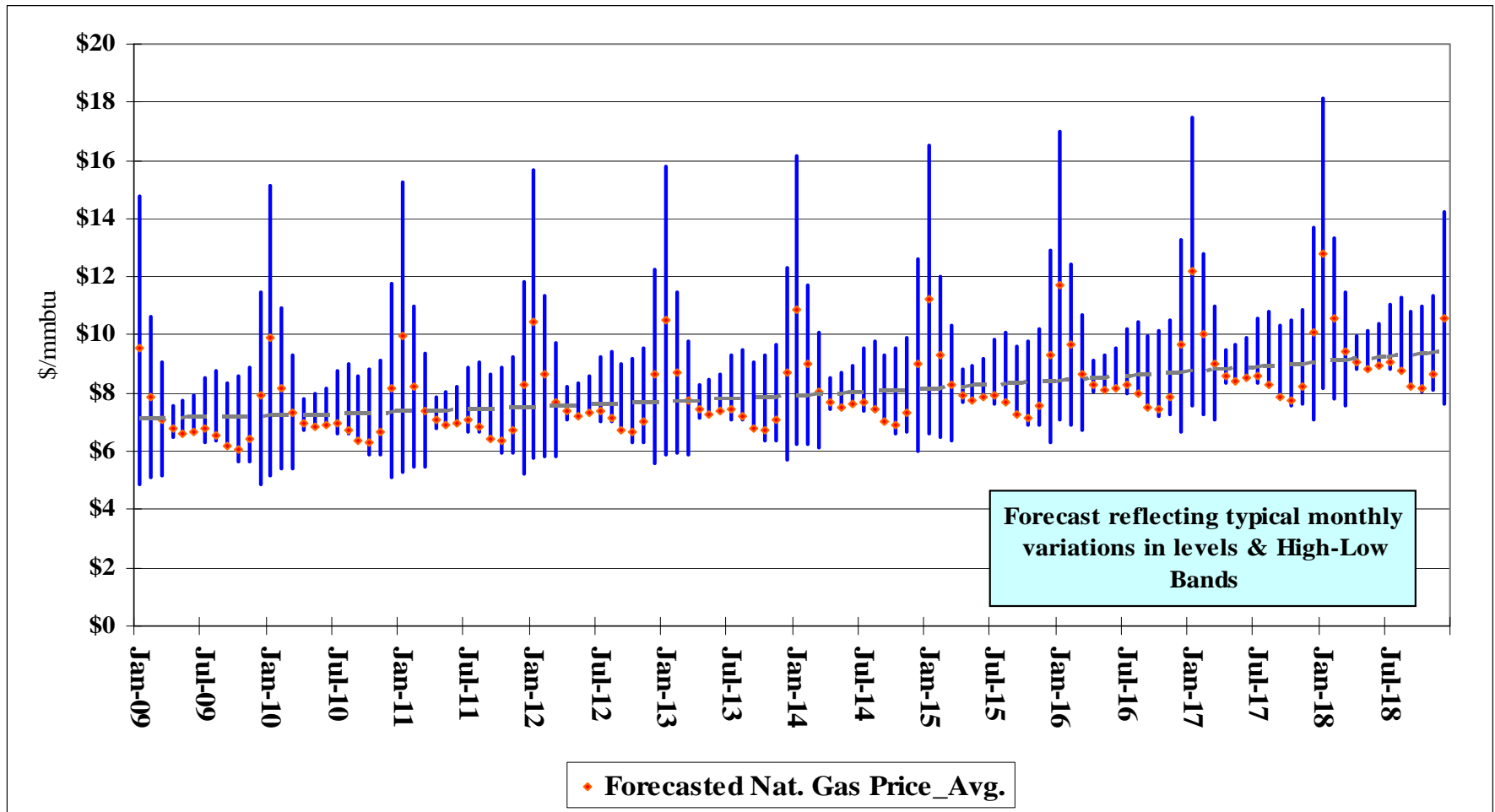


Zone J Price differential affected by fuel-cost (Winter) & energy usage (Summer)

Nat. Gas Price Forecast: An Example



Nat. Gas Price Forecast: An Example



Draft – For Discussion Purposes Only

The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and provides comprehensive reliability planning for the state's bulk electricity system.

www.nyiso.com