

CARIS Fuel Price Forecast: 2017 Update

Arvind Jaggi

SENIOR ECONOMIST, ECONOMIC PLANNING, NYISO

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CARIS Fuel Price Forecast: 2017

As described in the CARIS Manual, long-term nominal price forecasts are based on

- EIA's latest Annual Energy Outlook* (national annual delivered price forecasts);
- Regional bases derived from EIA's Form 923 surveys reported in *Electric Power Monthly* (for Fuel Oils and Coal) and hub-based volume-weighted spot prices (for Natural Gas);
- Monthly seasonal factors estimated from daily spot prices – obtained from EIA (Fuel Oil #2 and Coal) and third-party/vendor sources (Natural Gas); and
- Normalized Weekly *spikes* for Natural Gas calculated off hub-based spot prices.

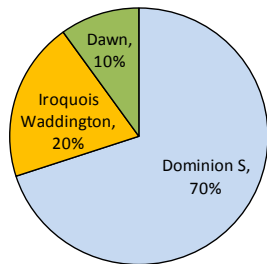
* EIA's Annual Energy Outlook (AEO) is published each year.

Revised Gas-price Forecasting Methodology

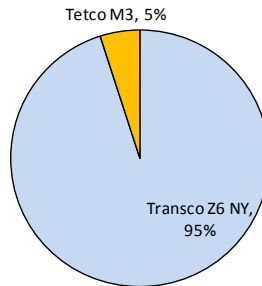
- At the ESPWG on Jun. 22, 2017 the NYISO presented a detailed description of a revised methodology for developing gas-price forecasts for the NYCA.
- The 2 proposed modifications are:
 - Replace single hubs by blends of multiple hubs to proxy regional gas prices;
 - Divide NYCA into 4 gas regions (as opposed to 3) based on the hubs/pipelines that dominate gas acquisition: Zones A-E, Zones F-I, Zone J, and Zone K.

Structures of Blended Prices

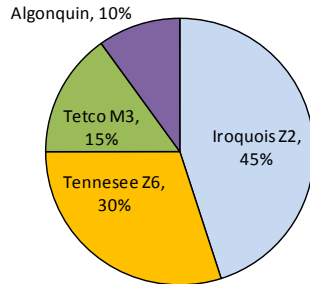
Zones A-E



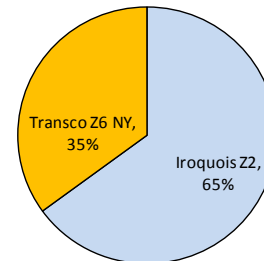
Zone J



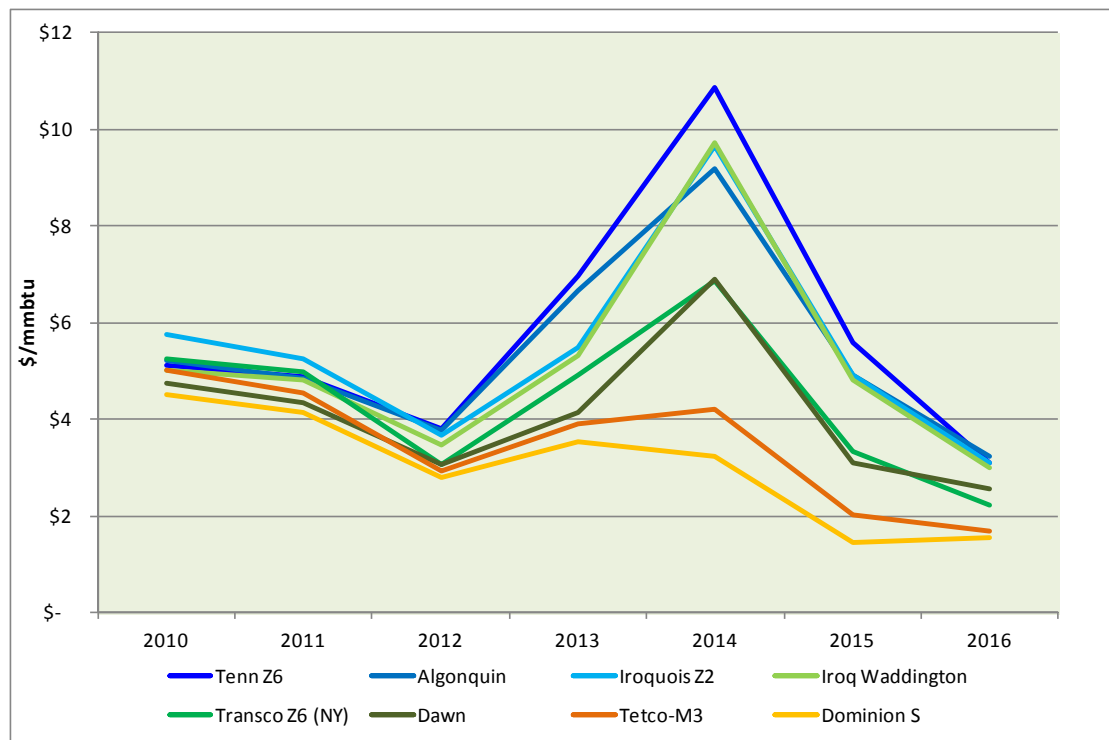
Zones F-I



Zone K

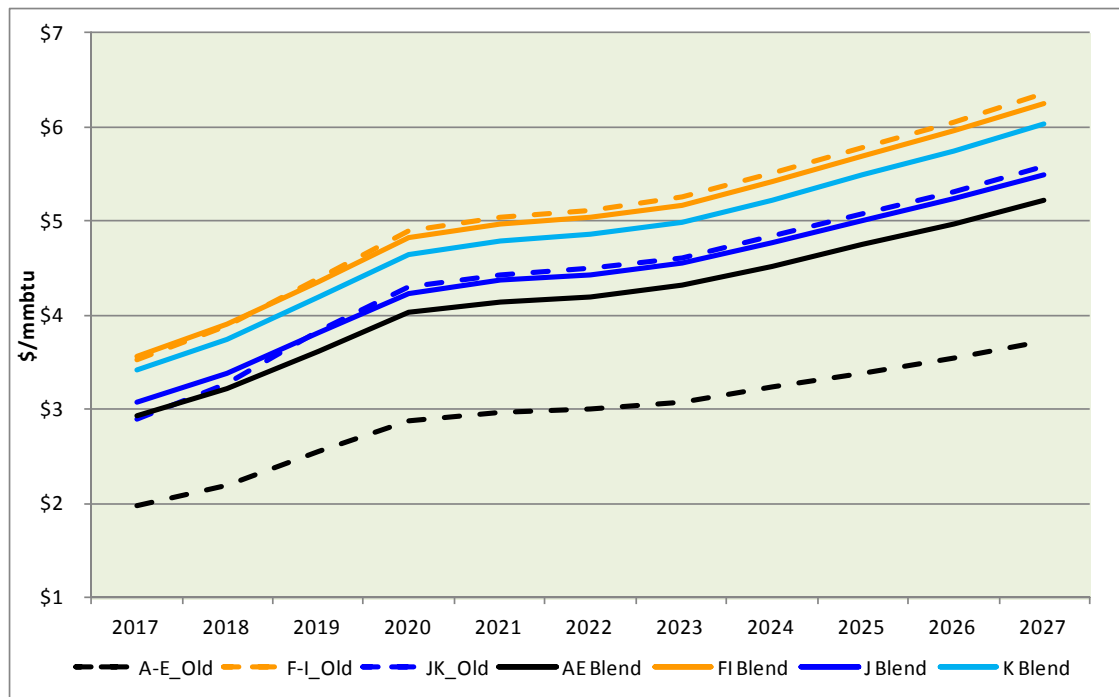


Hubs Used for Regional Blends



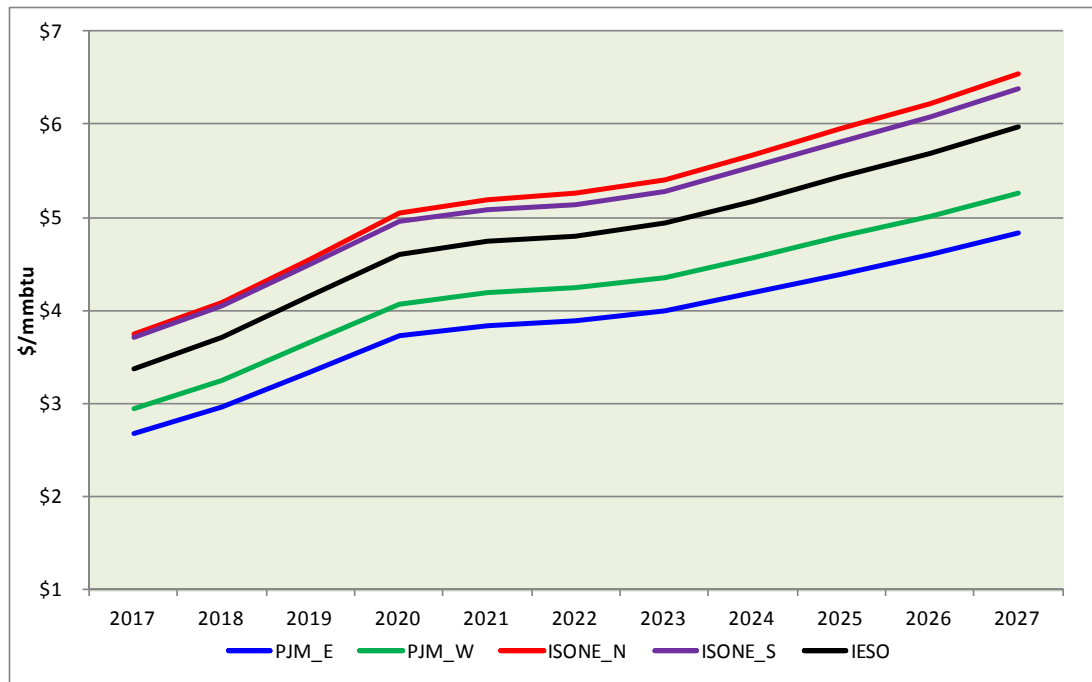
- *Graph displays annual volume-weighted spot prices.*
- *Barring the cold-weather induced increases during 2013-2015, all prices show similarly declining trends.*

NYCA Gas Price Forecasts



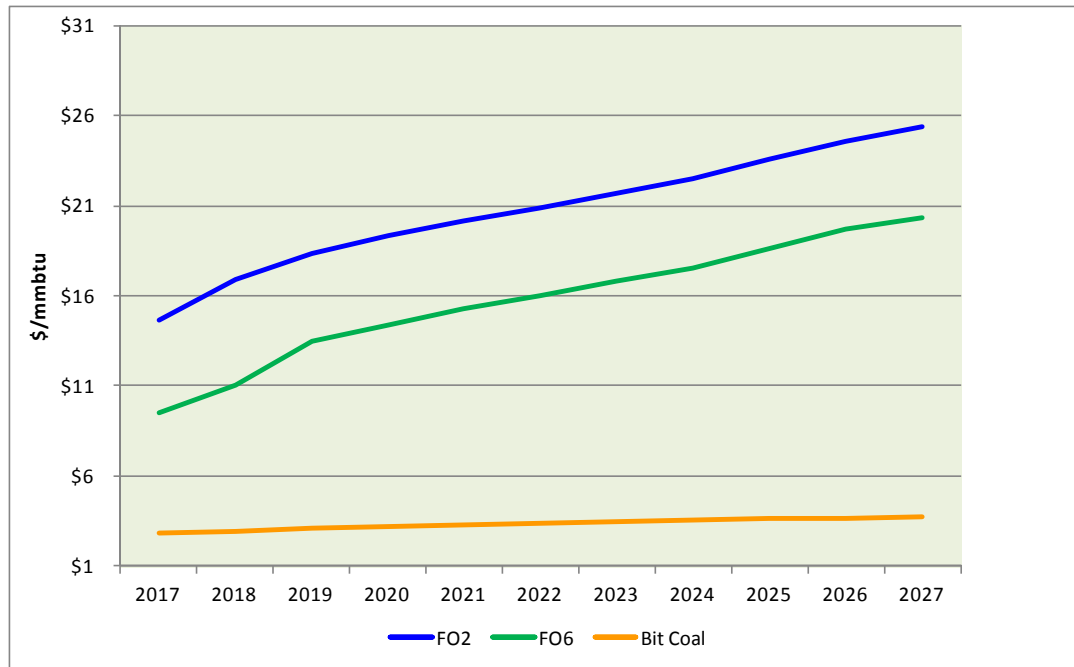
- *The blend for Zones A-E is significantly higher due to the inclusion of Iroquois Waddington.*
- *The blend for Zones F-I is ostensibly the same as the single-hub based forecast.*
- *Zone J's forecast shows a slight drop due to inclusion of Tetco-M3.*
- *Zone K's blend is higher due to majority share of Iroquois Z2.*

External Gas Price Forecasts



- *In general, the ISO-NE prices indicate relatively greater separation between them and the NYCA prices north of Zone J.*

NYCA Forecasts: Fuel Oils & Coal



- *Unlike previous CARIS cycles, this forecast reflects no difference between the Upstate and Downstate Fuel Oil prices.*
- *Both FO2 and FO6 are noticeably higher than last year's forecasts, with the latter showing relatively stronger recovery.*
- *The Coal price is relatively unchanged from last year.*

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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