

## Electricity Price Forecasting 2015

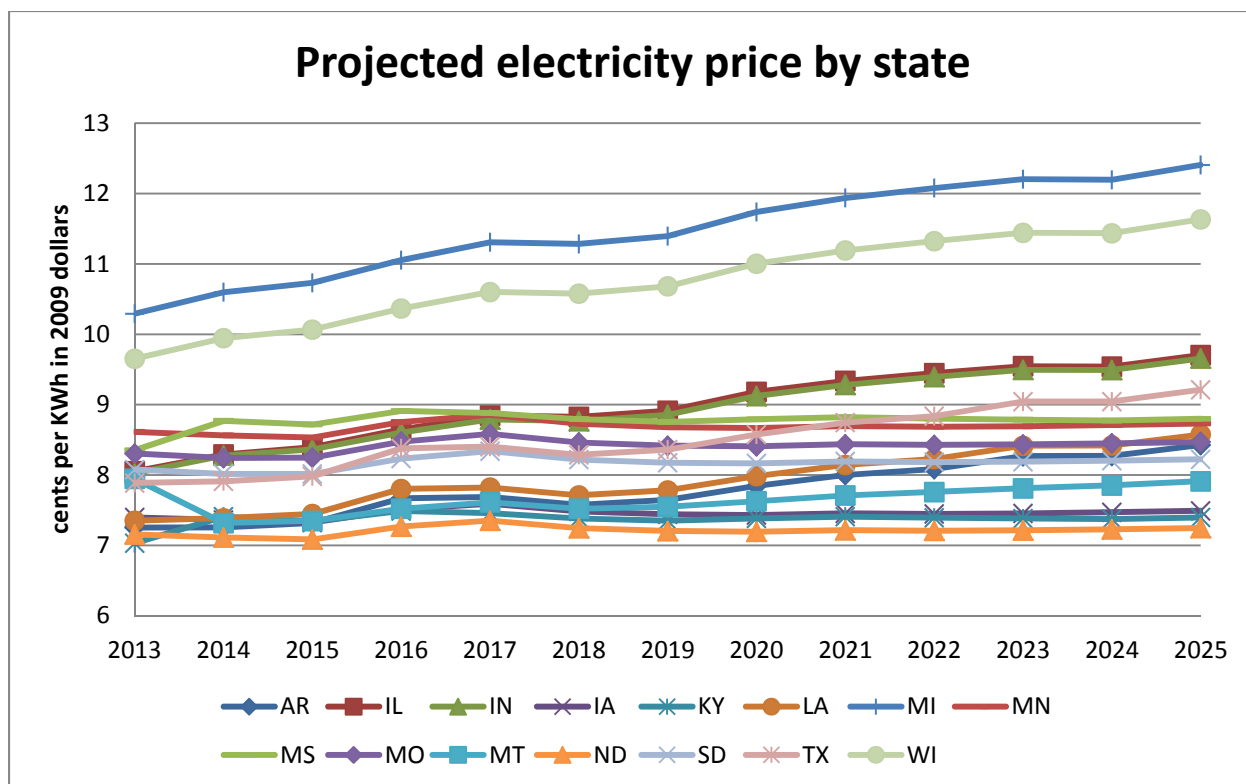
Forecast electricity prices by state were obtained from IHS Global Insight for SUFG's 2014 MISO Load Forecast. However, IHS Global Insight no longer provides these projections. Therefore, electricity price forecasts by census region from the Energy Information Administration (EIA) were used to drive state electricity price forecasts. Details are revealed in the following paragraph.

Annual electricity price forecasts by sector (residential, commercial, industrial and transportation) for the period of 2013-2025 were obtained from the EIA's Annual Energy Outlook 2015 (AEO 2015)<sup>1</sup> for the five census regions to which MISO states belong. The five census regions are East North Central (ENC), West North Central (WNC), East South Central (ESC), West South Central (WSC) and Mountain. Then state-specific electricity consumption shares by sector were applied to the corresponding regional electricity price forecasts by sector to calculate annual consumption-weighted average electricity prices for the period of 2013-2025 for each state. State-specific electricity consumption shares by sector were calculated based on annual retail sales of electricity by sector for each state<sup>2</sup> for the period from 2003 to 2014. In the case that consumption shares by sector are relatively stable over time based on historic data, they were averaged across the period of 2003-2014 and then were served as sectorial shares used for estimating the consumption-weighted average electricity prices. If apparent changes in sectorial shares were observed over time based on historic data, the averages across the most recent five years (2010-2014) were used. Annual consumption-weighted average electricity prices for each state estimated from EIA data drive the projection of electricity price by state.

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<sup>1</sup> Data retrieved on Apr 22<sup>nd</sup>, 2015 from: <http://www.eia.gov/beta/aeo/#/?id=3-AEO2015&cases=ref2015&region=1-4>.

<sup>2</sup> Data retrieved on May 20<sup>th</sup>, 2015 from: <http://www.eia.gov/electricity/data/browser/#/topic/5?agg=0,1&geo=vvvvvvvvvvvo&endsec=v&freq=M&start=200101&end=201402&ctype=linechart&ltype=pin&pin=&rse=0&maptype=0>.



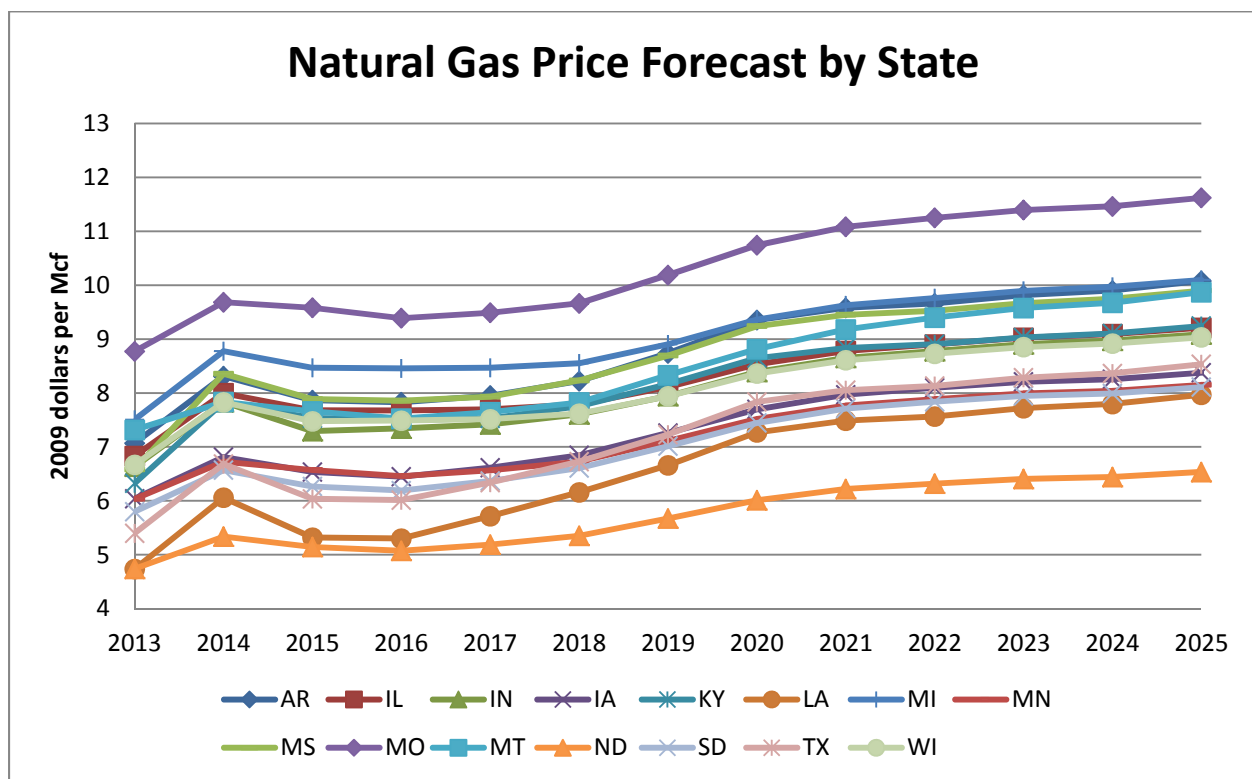
## Natural Gas Price Forecasting 2015

Forecast natural gas prices by state were obtained from IHS Global Insight for SUFG's 2014 MISO Load Forecast. Since the IHS Global Insight does not provide those projections anymore, a methodology similar to the one used to forecast electricity price for the 2015 MISO Load Forecast was applied to natural gas price forecasting.

Annual natural gas price forecasts by sector (residential, commercial, and industrial) for the period of 2013-2025 were obtained from the EIA's Annual Energy Outlook 2015 (AEO 2015)<sup>3</sup> for the five census regions to which MISO states belong. Then state-specific natural gas consumption shares by sector were applied to the corresponding regional natural gas price forecasts by sector to calculate annual consumption-weighted average natural gas prices for the period of 2013-2025 for each state.

<sup>3</sup> Data retrieved on Apr 22<sup>nd</sup>, 2015 from: <http://www.eia.gov/beta/aeo/#/?id=3-AEO2015&cases=ref2015&region=1-4>.

State-specific natural gas consumption shares by sector were estimated based on annual natural gas delivered to consumers by sector and state<sup>4</sup> for the period from 1997 to 2014. In the case that consumption shares by sector are relatively stable over time based on historic data, they were averaged across the period of 1997-2014 and then were served as sectorial shares used for estimating the consumption-weighted average natural gas prices. If apparent changes in sectorial shares were observed over time based on historic data, the averages across the period of 2010-2014 were used. Annual consumption-weighted average natural gas prices for each state estimated from EIA data drive the projection of natural gas price by state.



<sup>4</sup> Data retrieved on Apr 21<sup>st</sup>, 2015 from:  
[http://www.eia.gov/dnav/ng/ng\\_cons\\_sum\\_a\\_epg0\\_vcs\\_mmc\\_f\\_a.htm](http://www.eia.gov/dnav/ng/ng_cons_sum_a_epg0_vcs_mmc_f_a.htm).