

Independent Load Forecast

MISO Planning Advisory
Committee

October 14, 2015

Draft Results

- While these results have been shared with stakeholders, they are subject to revision based on stakeholder comments, which are due October 20
- Revised EE/DR/DG adjustments are expected to be provided by October 20 as well, which will affect the “net” forecasts

Additional Scope for 2015

- Improve modeling of energy efficiency, demand response, and distributed generation
- Model multiple weather stations in the state econometric models
- Develop confidence intervals that capture uncertainty around the macroeconomic variables
- Conversion of the energy forecasts to peak forecasts
- Incorporate the new local resource zone (LRZ 10)

EE/DR/DG Adjustments

- Last year, adjustments were made at the state level
 - based on state mandates, supplemented with discussions with individual state experts
- This year, net forecasts are determined using adjustments at the LRZ level
 - the economic potential from the AEG study was input to EGEAS; the amount selected by EGEAS is used here

Multiple Weather Stations

- We developed virtual weather stations using population-weighted CDD and HDD from multiple weather stations within the states
- Each state is divided into regions along county lines and a representative weather station is chosen for each region
- The CDD and HDD for a given year are determined using the population of each region and the CDD and HDD of the region's weather station

Confidence Intervals

- Last year, we used statistical bands of the state econometric model to determine low and high forecasts
 - in essence, this assumes there is no uncertainty in the projections of the model drivers and that all uncertainty stems from the model error
- This year, we estimated confidence intervals based on the historical variance of the drivers
 - except weather variables since the forecasts are for normal weather

Energy to Peak Conversion

- Last year, we used the 10 highest load hours by season to determine the relationship between annual energy, temperature, and summer/winter peaks
- This year, we developed models based on significantly more hours (~400)

Other Changes

- Electricity and natural gas price projections
 - IHS Global Insight no longer provides state specific projections, so we developed them based on EIA's Annual Energy Outlook
 - the results were discussed with OMS earlier
- State models
 - Kentucky adjustment for the Paducah Gaseous Diffusion Plant closure
 - Louisiana forecast is driven off growth in manufacturing GSP

LRZ-level Results: 2016-25 CAGR

LRZ	1	2	3	4	5	6	7	8	9	10
Gross Energy	1.63	1.45	1.56	0.63	0.97	1.18	0.88	1.00	1.88	1.76
Net Energy	1.46	1.32	1.10	0.28	0.57	0.96	0.75	0.84	1.80	1.68
Net Peak	1.25	1.24	0.84	0.16	0.45	0.80	0.67	0.60	1.72	1.65

Notes

CAGR – compound annual growth rate (%)

Gross – prior to adjustments for energy efficiency, demand response, and distributed generation

Net – after adjustments for energy efficiency, demand response, and distributed generation

EE/DR/DG adjustments are expected to be revised prior to being finalized

MISO-level Results: CAGR

	Last year (2015-2024)	This year (2016-2025)
Gross Energy	1.42	1.33
Net Energy	0.87	1.13
Gross Summer Peak	1.42	1.30
Net Summer Peak	0.86	0.96
Gross Winter Peak	1.41	1.32
Net Winter Peak	0.86	0.91

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Next Steps

- Stakeholder comments due October 20
- Final EE/DR/DG adjustments due October 20
- Report due November 2

Contact Information

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