Data Files and description:

ERCOT_Data.dta – Contains data pertaining to units in the ERCOT region.
MISO_Data.dta – Contains data pertaining to units in the MISO region.
PJM_Data.dta – Contains data pertaining to units in the PJM region.
SPP_Data.dta – Contains data pertaining to units in the SPP region.
Wind_All.dta – Contains wind generation from each of the four regions analyzed.
Wind_Load_ERCOT.dta – Contains the wind-to-load ratio for ERCOT.
Wind_Load_MISO.dta – Contains the wind-to-load ratio for MISO.
Wind_Load_PJM.dta – Contains the wind-to-load ratio for PJM.
Wind_Load_SPP.dta – Contains the wind-to-load ratio for SPP.
Load_nerc_assessment.dta – Contains load by NERC sub-region.

Executable Files and Descriptions:
Quantile_Estimate.do – This program runs the quantile estimation for each region separately. The quantiles considered are at 0.5, 0.25, and 0.75. The file calls ERCOT_Data.dta, MISO_Data.dta, PJM_Data.dta, and SPP_Data.dta. The dependent variable considered, and the associated binary dependent, are set by assigning the global variables “yvar” and “yvar_binary”. To run the estimation for capacity factors, set “yvar” to “cf_day” and “yvar_binary” to “cf_binary”. To run the estimation for capacity factors, set “yvar” to “co2e_dayb” and “yvar_binary” to “co2e_binary”. The parameters for the quantile regression are outputted as “yvar_median.xls”, “yvar_25.xls”, and “yvar_75.xls”, which give the outputs from the 50^{th}, 25^{th}, and 75^{th} quantile runs respectively. Marginal responses are outputted as “yvar_Marg.xlsx”. This file gives the marginal responses for each quantile analyzed and for each region.

Heckman_Estimates.do – This program runs the Heckman 2-step (selection model) for each region separately. The dependent variables can be set as they are for “Quantile_Estimate.do”. The file calls ERCOT_Data.dta, MISO_Data.dta, PJM_Data.dta, and SPP_Data.dta data sets.The parameters from the estimation are outputted in “yvar_Heckman_parms.xls”. The marginal effects are outputted in “yvar_Heckman_Marg.xls”.

Heckman_Counterfactual_CF.do – This program calculates the counterfactual capacity factors displayed in Figure 6. The set up is the same as in “Heckman_Estimates.do”, except that the dependent variable is only capacity factor. The output that calculates counterfactual estimates is “Heckman_predict_YSeas_LL.xls”. The first column of this output for each region gives the estimate with base year 2008 and the second column gives the 2013 base-year estimates.

Quant_OutLoad_RnR.do – This program runs the quantile estimation for each region separately and adds to the specification load from regions outside the ISO as described in Fell and Kaffine (2017). The set up is the same as in “Quantile_Estimate.do”. The file calls an additional data file, “load_nerc_assessment.dta”. Parameter estimates are outputted to “yvar_50_OutLoad.xls”. Marginal effects are outputted to “yvar_Marg50_OutLoad_YS.xls”.

Quant_WindLoad_RnR.do – This program runs the quantile estimation for each region separately and adds to the specification load from regions outside the ISO as described in Fell and Kaffine (2017). The set up is the same as in “Quantile_Estimate.do”. The file calls an additional data files,

“Wind_Load_ERCOT.dta”, “Wind_Load_MISO.dta”, “Wind_Load_PJM.dta”, and “Wind_Load_SPP.dta”. Parameter estimates are outputted to “yvar_50_OutLoad.xls”. Marginal effects are outputted to “yvar_Marg50_OutLoad_YS.xls”.

Quant_OutWind_RnR.do – This program runs the quantile estimation for each region separately and adds to the specification wind from regions outside the ISO as described in Fell and Kaffine (2017). The set up is the same as in “Quantile_Estimate.do”. The file calls an additional data file “Wind_All.dta”. Parameter estimates are outputted to “yvar_median_WindOut_YS.xls”. Marginal effects are outputted to “yvar_Marg50_WindOut_YS.xls”.

Quant_4thOrder_RnR.do – This program runs the quantile estimation for each region separately using a 4^{th} order polynomial specification for wind generation and input price ratio. The set up is the same as in “Quantile_Estimate.do”. Parameter estimates are outputted to “yvar_median_4th.xls”. Marginal effect estimates are outputted to “yvar_marg50_4th.xls".

Quant_1stOrder_RnR.do – This program runs the quantile estimation for each region separately using a 1^{st} order polynomial specification for wind generation and input price ratio. The set up is the same as in “Quantile_Estimate.do”. Parameter estimates are outputted to “yvar_median_1st.xls”. Marginal effect estimates are outputted to “yvar_marg50_1st.xls".