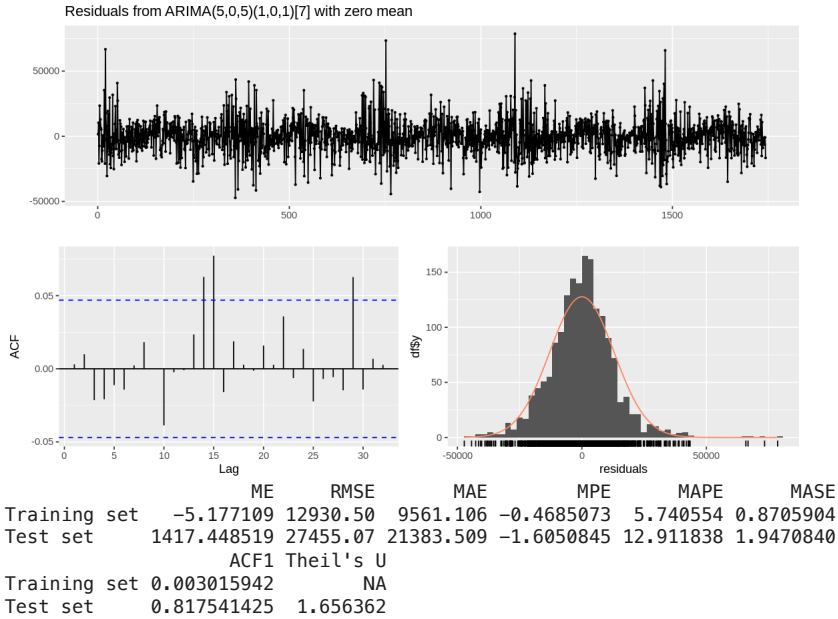```
========================
 Duke Energy Progress East
========================
AICc: 37983.91

    Ljung–Box test

data: Residuals from ARIMA(5,0,5)(1,0,1)[7] with zero mean
Q* = 23.995, df = 3, p-value = 2.504e-05

Model df: 12.   Total lags used: 15
```
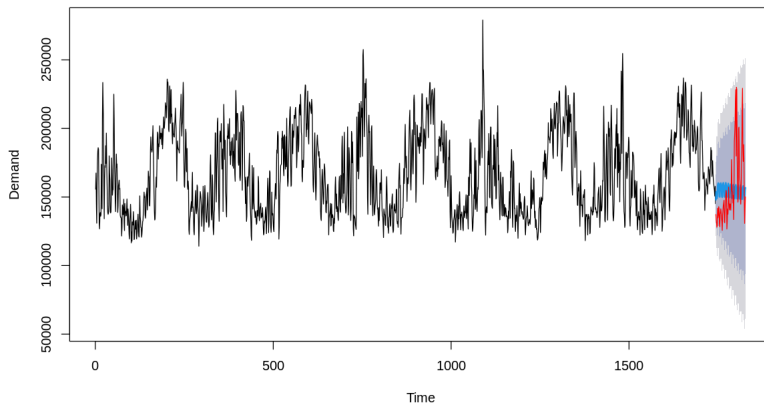
Residuals from ARIMA(5,0,5)(1,0,1)[7] with zero mean



```
                     ME   RMSE   MAE   MPE   MAPE   MASE
Training set   -5.177109 12930.50 9561.106 -0.4685073 5.740554 0.8705904
Test set   1417.448519 27455.07 21383.509 -1.6050845 12.911838 1.9470840
                   ACF1 Theil's U
Training set 0.003015942   NA
Test set   0.817541425 1.656362

========================
 Duke Energy Carolinas
========================
AICc: 39022.9
```
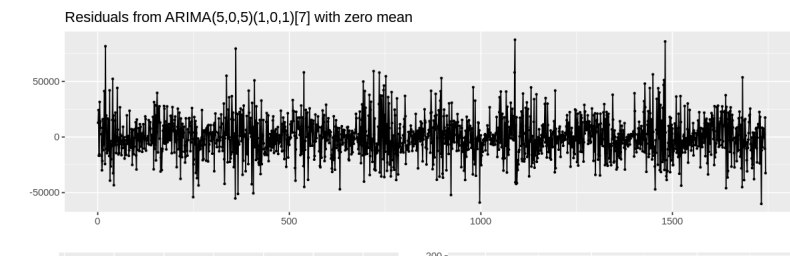
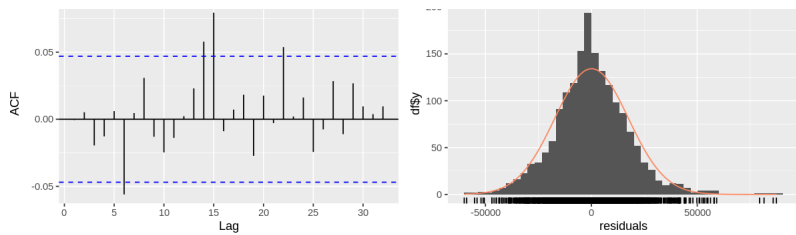**SARIMA Forecast - Duke Energy Progress East**



```
    Ljung–Box test

data:  Residuals from ARIMA(5,0,5)(1,0,1)[7] with zero mean
Q* = 27.897, df = 3, p-value = 3.817e-06

Model df: 12.    Total lags used: 15
```

Residuals from ARIMA(5,0,5)(1,0,1)[7] with zero mean

```
                   ME      RMSE       MAE       MPE     MAPE      MASE
Training set   120.1516 17357.07 12990.54 -0.2462708 4.466751 0.7982107
Test set      9440.2314 36872.42 26513.06  2.0302586 8.942869 1.6291083
                    ACF1 Theil's U
Training set -0.0005611581          NA
Test set      0.8172089366   1.568993
```
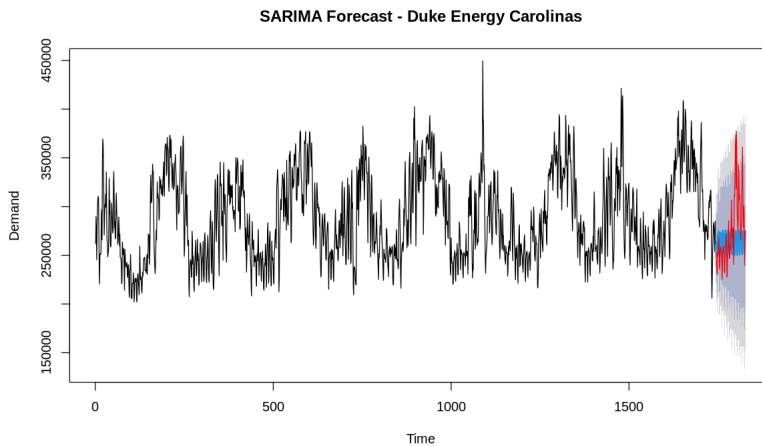
```
=======================
 New York Independent System Operator
=======================
AICc: 39944.83
```

SARIMA Forecast - Duke Energy Carolinas


```
    Ljung-Box test

data:  Residuals from ARIMA(3,0,5)(0,0,1)[7] with zero mean
Q* = 87.162, df = 3, p-value < 2.2e-16

Model df: 9.    Total lags used: 12
```
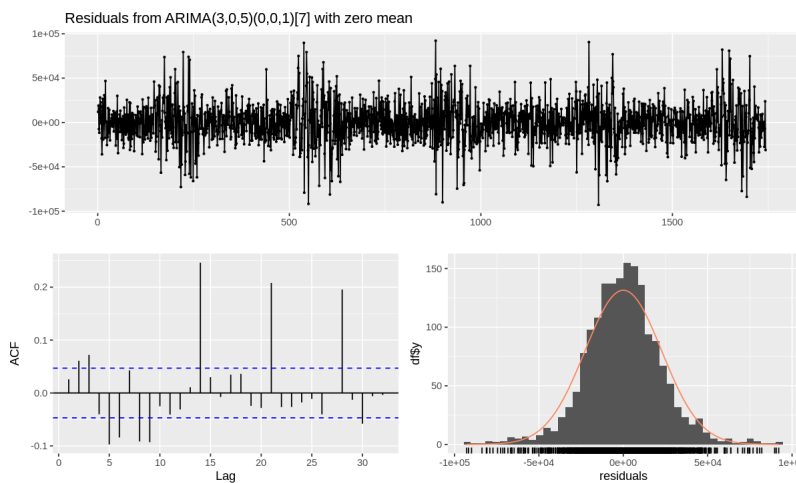
Residuals from ARIMA(3,0,5)(0,0,1)[7] with zero mean


```
                   ME      RMSE       MAE        MPE     MAPE      MASE
Training set   35.64738 22734.58 17052.03 -0.2140261 4.074694 0.8932028
Test set    34573.11544 50713.43 38998.65  8.0288427 9.343549 2.0427898
                  ACF1 Theil's U
Training set 0.02579414          NA
Test set     0.87188678   2.567435
```
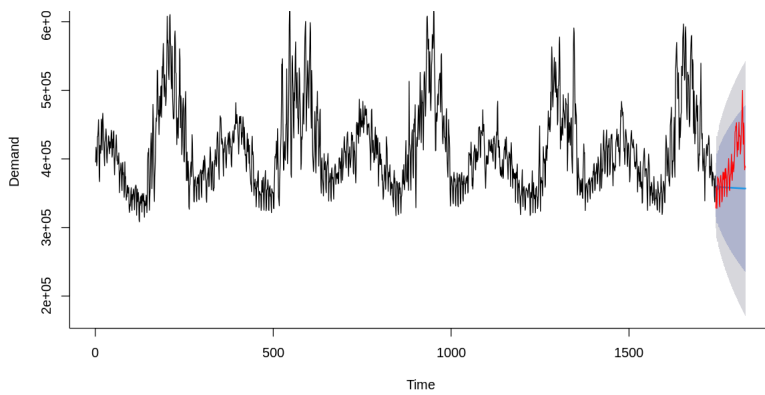
```
=======================
 PJM Interconnection, LLC
=======================
AICc: 45295.63
```
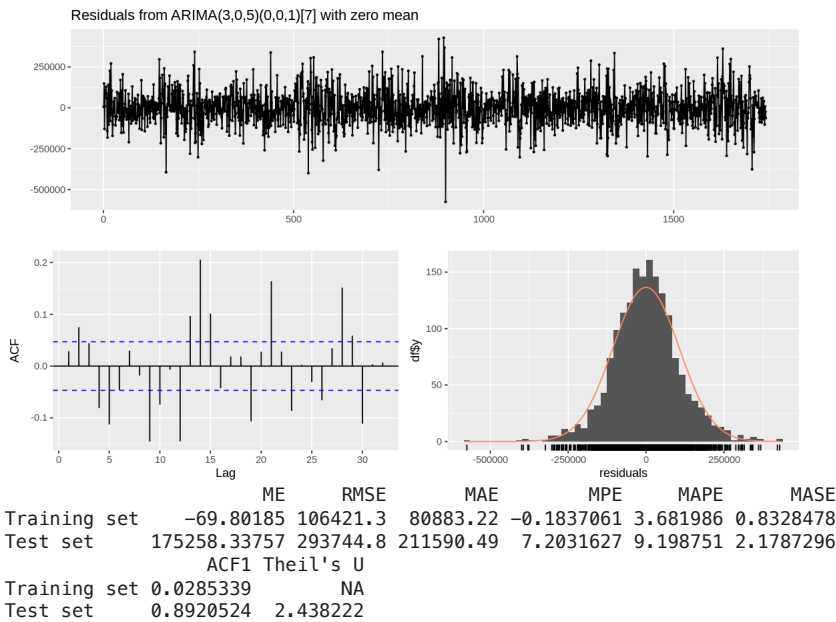
SARIMA Forecast - New York Independent System Operator

```
    Ljung–Box test

data:  Residuals from ARIMA(3,0,5)(0,0,1)[7] with zero mean
Q* = 138.25, df = 3, p–value < 2.2e–16

Model df: 9.    Total lags used: 12
```


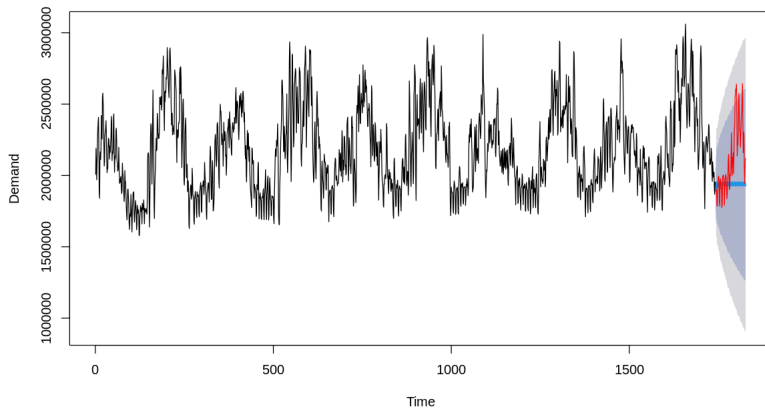Residuals from ARIMA(3,0,5)(0,0,1)[7] with zero mean

	ME	RMSE	MAE	MPE	MAPE	MASE
Training set	−69.80185	106421.3	80883.22	−0.1837061	3.681986	0.8328478
Test set	175258.33757	293744.8	211590.49	7.2031627	9.198751	2.1787296

	ACF1	Theil's U
Training set	0.0285339	NA
Test set	0.8920524	2.438222

```
=======================
 Southern Company Services, Inc. — Trans
=======================
AICc: 41291.19
```
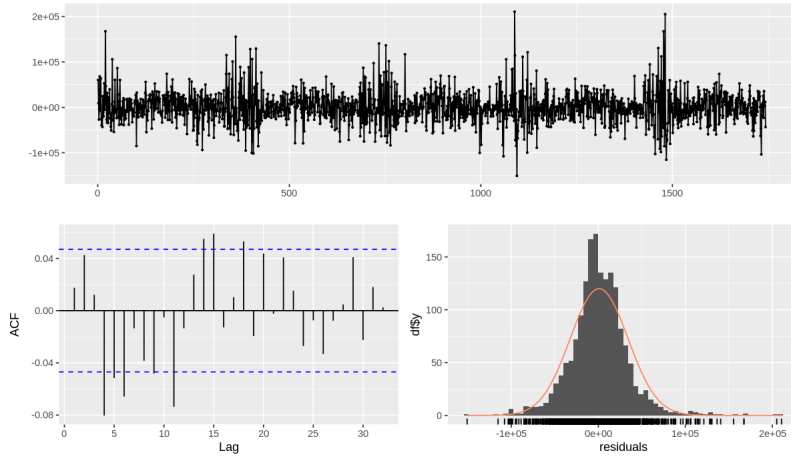
SARIMA Forecast - PJM Interconnection, LLC


```
    Ljung–Box test

data:  Residuals from ARIMA(3,0,5)(1,0,1)[7] with zero mean
Q* = 45.683, df = 3, p–value = 6.625e–10

Model df: 10.    Total lags used: 13
```

Residuals from ARIMA(3,0,5)(1,0,1)[7] with zero mean

	ME	RMSE	MAE	MPE	MAPE	MASE
Training set	907.0793	33248.97	23789.97	-0.08889728	3.693557	0.789313
Test set	-24860.4874	66978.03	59107.72	-5.13680382	9.836723	1.961099

	ACF1	Theil's U
Training set	0.01756217	NA
Test set	0.75534149	1.597815

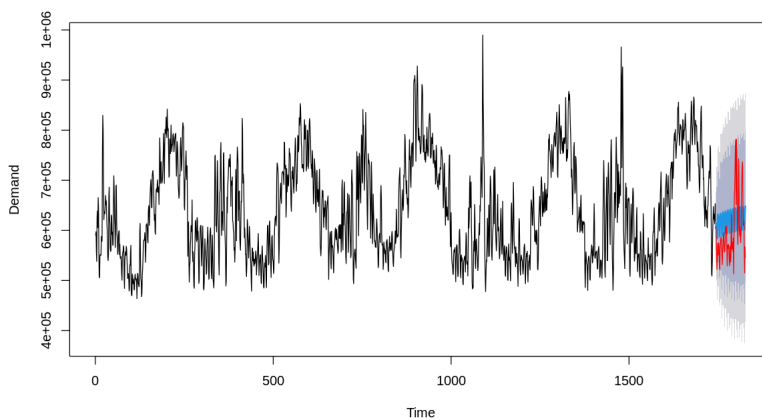```
=====================
 Tennessee Valley Authority
=====================
AICc: 40464.96
```

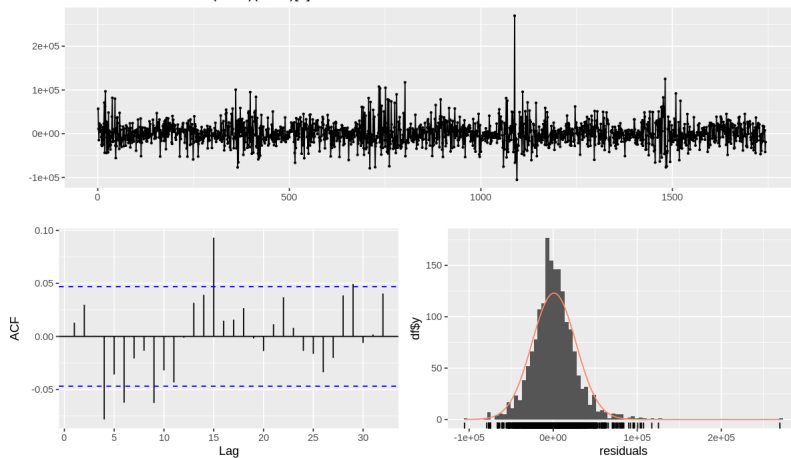**SARIMA Forecast - Southern Company Services, Inc. - Trans**


```
    Ljung-Box test

data:  Residuals from ARIMA(3,0,5)(1,0,1)[7] with zero mean
Q* = 36.513, df = 3, p-value = 5.834e-08

Model df: 10.   Total lags used: 13
```

Residuals from ARIMA(3,0,5)(1,0,1)[7] with zero mean

	ME	RMSE	MAE	MPE	MAPE	MASE
Training set	965.1861	26197.04	18938.30	-0.07835568	4.238515	0.8345897
Test set	-10661.3746	53117.52	45027.79	-3.96530684	10.521831	1.9843248