

# 30-min Load/Wind/Solar Forecast Error

- Error was defined as **ACTUAL** minus **FORECAST**
- The data is shown for each combination of **Season** and **Time-of-Day Blocks**

**Seasons:**

Summer (Jun-Aug)

Fall (Sep-Nov)

Winter (Dec-Feb)

Spring (Mar-May)

**Time-of-Day Blocks:**

1 (2300-0200)

2 (0300-0600)

3 (0700-1000)

4 (1100-1400)

5 (1500-1800)

6 (1900-2200)



# 30-min Load Forecast Error (LFE)

Season	TBlock	Mean (MW)	StDev (MW)
Fall	1	-16.5	259.6
Fall	2	20.1	464.6
Fall	3	-34.1	389.5
Fall	4	-12.5	303.3
Fall	5	55.6	539.8
Fall	6	-32.1	550.6
Spring	1	-73.1	268.1
Spring	2	-53.3	441
Spring	3	56.8	415.7
Spring	4	24.7	298.8
Spring	5	-71.2	440.6
Spring	6	108.2	611.9
Summer	1	-14.4	277.7
Summer	2	-34.1	427.2
Summer	3	-45.5	429.5
Summer	4	-59	395.1
Summer	5	55.2	463.9
Summer	6	47.6	541
Winter	1	-39.4	331.9
Winter	2	-21.9	513.5
Winter	3	70.1	482
Winter	4	22.5	375.8
Winter	5	9.1	615.7
Winter	6	10.6	380.8

Error = Actual – Forecast

Therefore,

Positive errors indicate under-forecasting

Negative errors indicate over-forecasting

(2015-2017 data)

Season	TBlock	Mean (MW)	StDev (MW)
Fall	1	-121.8	210
Fall	2	-129.6	202.1
Fall	3	-130.7	222.2
Fall	4	-82.6	216.9
Fall	5	-119.9	220.8
Fall	6	-76.1	234.4
Spring	1	-104.6	238.9
Spring	2	-126.7	234.6
Spring	3	-120.8	245.8
Spring	4	-101.3	261.8
Spring	5	-103.5	236.3
Spring	6	-123.3	266.8
Summer	1	-59.7	204.8
Summer	2	-71.3	180.2
Summer	3	-100.5	180.4
Summer	4	-57	190.8
Summer	5	-69.7	189.4
Summer	6	-77.3	216.3
Winter	1	-176.6	256.7
Winter	2	-177.5	247.7
Winter	3	-160	253
Winter	4	-150.8	250.8
Winter	5	-154.4	275.8
Winter	6	-130.9	279.9

Error = Actual – Forecast

Therefore,

Positive errors indicate under-forecasting

Negative errors indicate over-forecasting

(2015-2017 data)

Season	TBlock	Mean (MW)	StDev (MW)
Fall	2	2.8	3.7
Fall	3	0.6	39
Fall	4	-29.2	46
Fall	5	-18.4	31.2
Fall	6	3.4	6.3
Spring	1	1.3	0.6
Spring	2	1.9	5.6
Spring	3	-3.8	33.5
Spring	4	-16	39.6
Spring	5	-18	36.6
Spring	6	3.2	4.8
Summer	2	-3.6	8.8
Summer	3	-3.2	30.1
Summer	4	-26	37.2
Summer	5	-32.4	33.7
Summer	6	-2.1	10.2
Winter	2	1.3	1.1
Winter	3	11.4	46.2
Winter	4	14.6	53.7
Winter	5	4.4	23.4

Error = Actual – Forecast

Therefore,

Positive errors indicate under-forecasting

Negative errors indicate over-forecasting

(2017 data)

The season – time of day block combinations not shown in the table did not have any solar output in 2017.