Con Edison's Central Air Conditioning Direct Load Control Program to the NYISO Small Customer Aggregation SCR Program
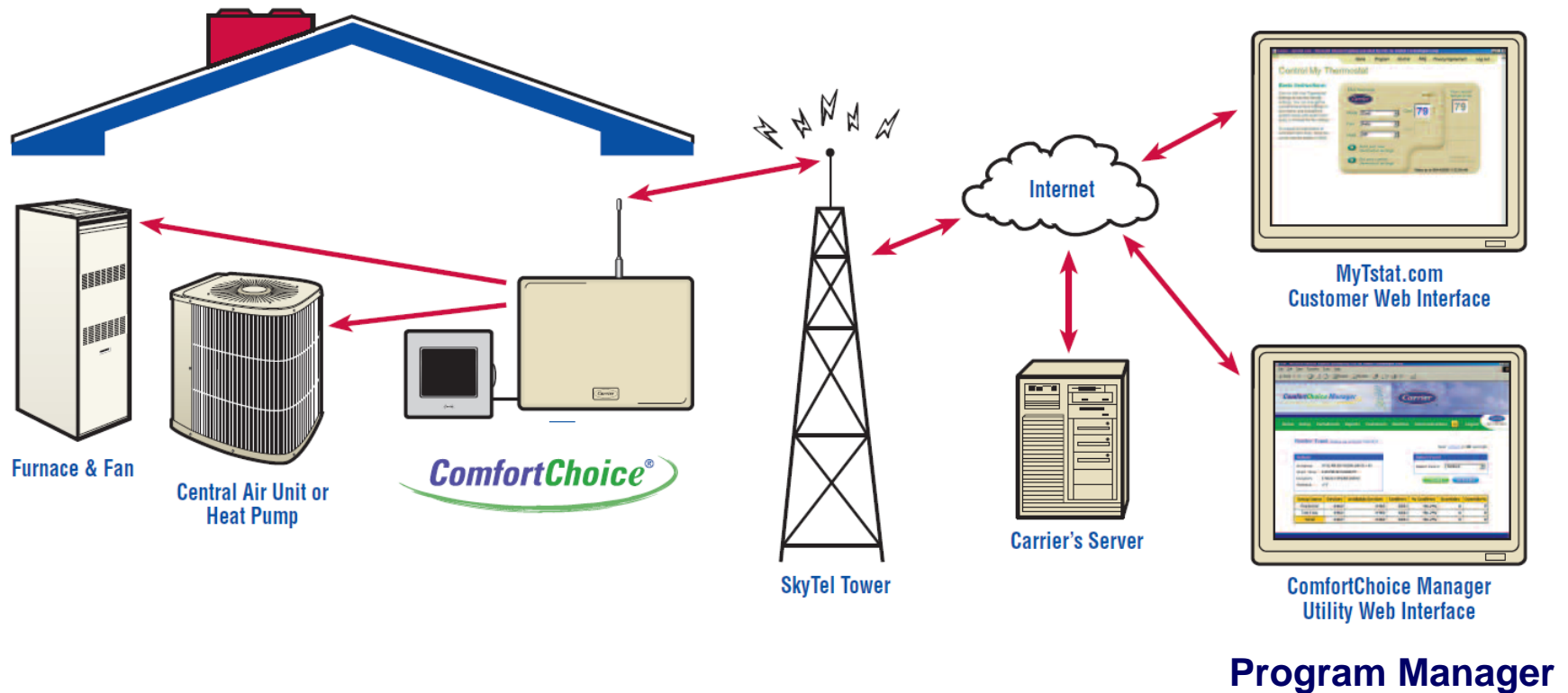
Elena Futoryan
October 2011

SCR Small Customer Aggregation Program Enrollment Levels

Active Customer Enrollment as of May 2011		
	Customer Participation	Registered SCR (MW)
Residential	21,027	18.1
Business	6,829	8.7
Total	27,856	26.8

Event Initiation

Furnace & Fan

Central Air Unit or Heat Pump

ComfortChoice®

SkyTel Tower

Internet

Carrier's Server

MyTstat.com Customer Web Interface

ComfortChoice Manager Utility Web Interface

Program Manager

ComfortChoice Management System

Load Management during Curtailment

- Signal sent via Skytel Advanced Messaging Network
- Curtailment is accomplished by cycling the compressor off for 30 continuous minutes per hour
- Confirmation response sent by thermostat back to server to provide utility real time verification of customer participation
- Thermostat also collects and sends back run time data which provides utility with exact HVAC minutes of operation for each unit

Measurement & Verification

- Event performance is measured against a baseline A/C usage from a prior non-event period with similar weather conditions
- Event performance is compared hourly against the baseline

Verification of Curtailment Event

July 21, 2011	Residential	hour14[1]	hour15	hour16	hour17	hour18
	NYC Zone J					
	Load reduction (MW)	13.34	14.3	14.39	14.51	12.12
	Westchester Zone I					
	Load reduction (MW)	8.81	10.02	10.73	11.36	10.20

[1] hour 14 is defined as 1:00 pm through 2:00 pm

July 21, 2011	Commercial	hour14	hour15	hour16	hour17	hour18
	NYC Zone J					
	Load reduction (MW)	8.06	6.74	6.44	7.41	6.04
	Westchester Zone I					
	Load reduction (MW)	1.59	1.35	1.43	1.68	1.35

July 22, 2011	Residential	hour13 (NYC Only)	hour14	hour15	hour16	hour18
	NYC Zone J					
	Load reduction (MW)	13.28	14.76	13.93	15.35	17.29
	Westchester Zone I					
	Load reduction (MW)		8.57	9.48	10.07	11.71

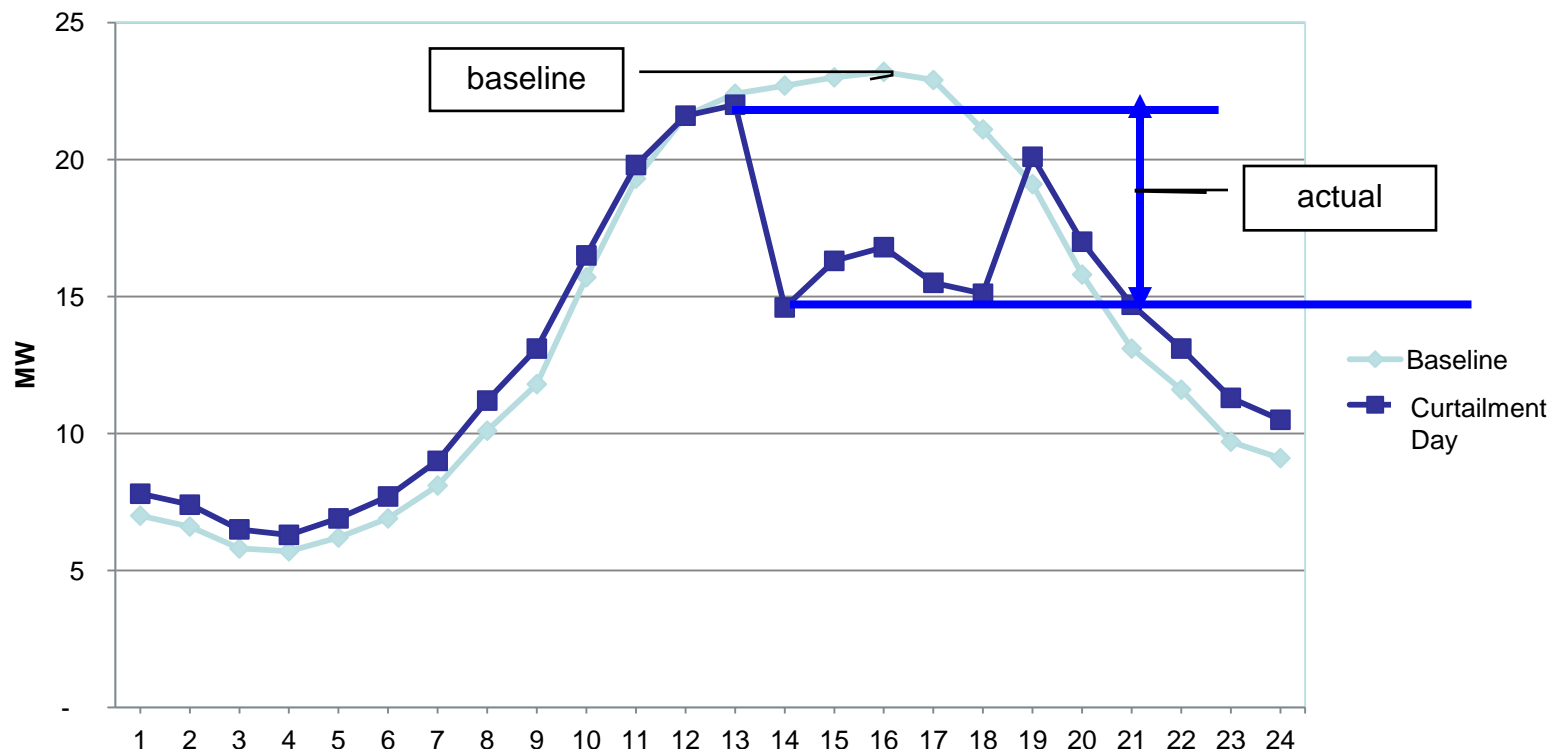| July 22, 2011	Commercial	hour13 (NYC Only)	hour14	hour15	hour16	hour18
	NYC Zone J					
	Load reduction (MW)	9.21	8.38	7.34	7.83	10.33
	Westchester Zone I					
	Load reduction (MW)		1.57	1.48	1.45	1.90

Curtailment Event

NYC Residential - July 21, 2011 Curtailment Day in MW
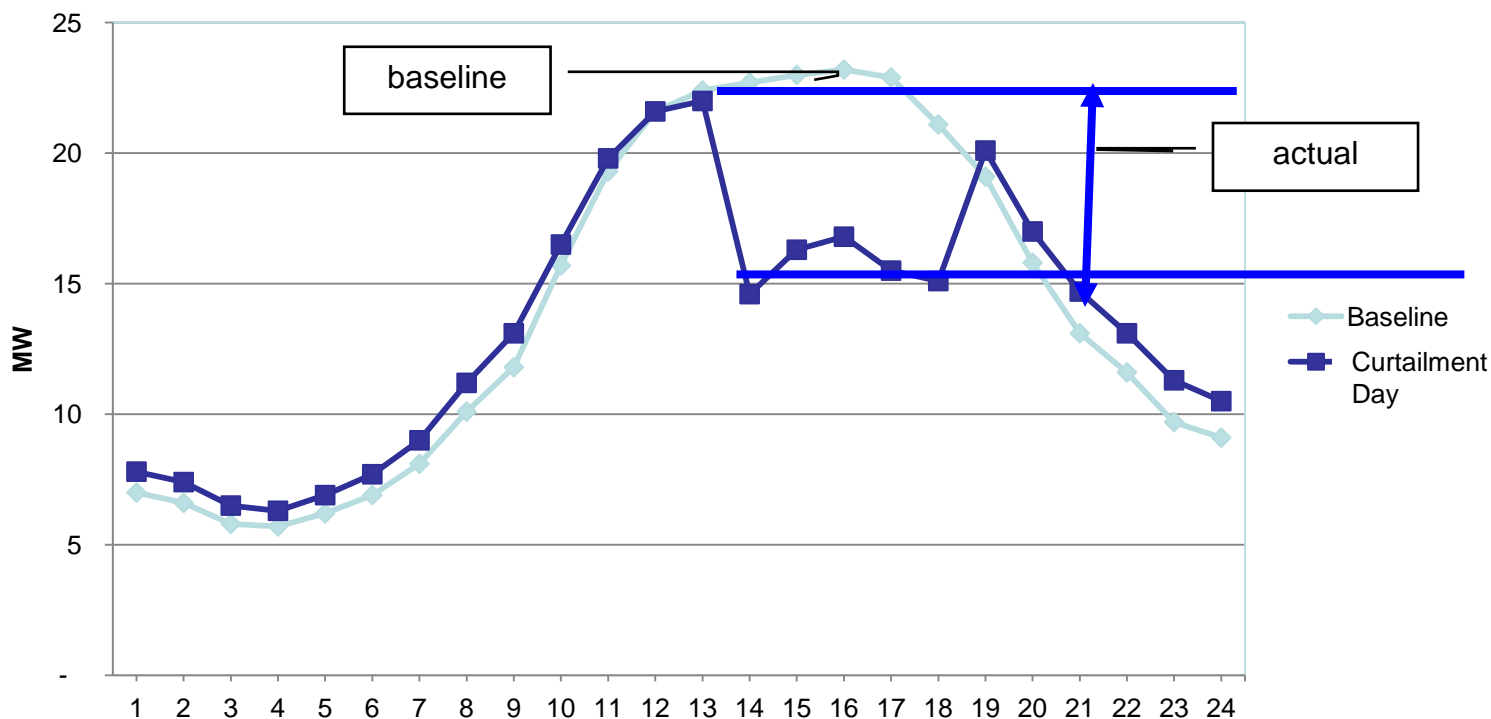
Curtailment Event

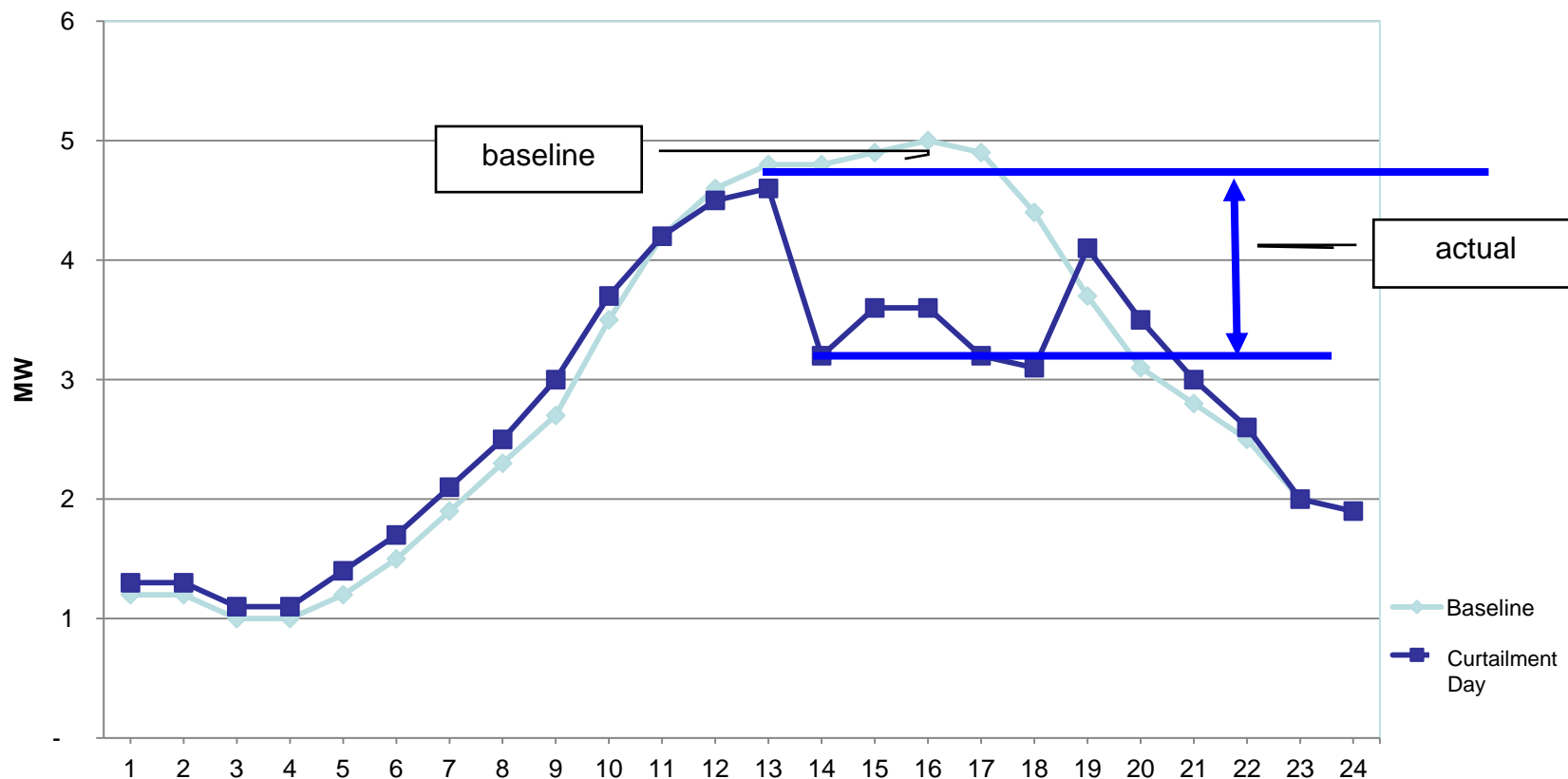**NYC Commercial - July 21, 2011 Curtailment Day in MW**

Curtailment Event

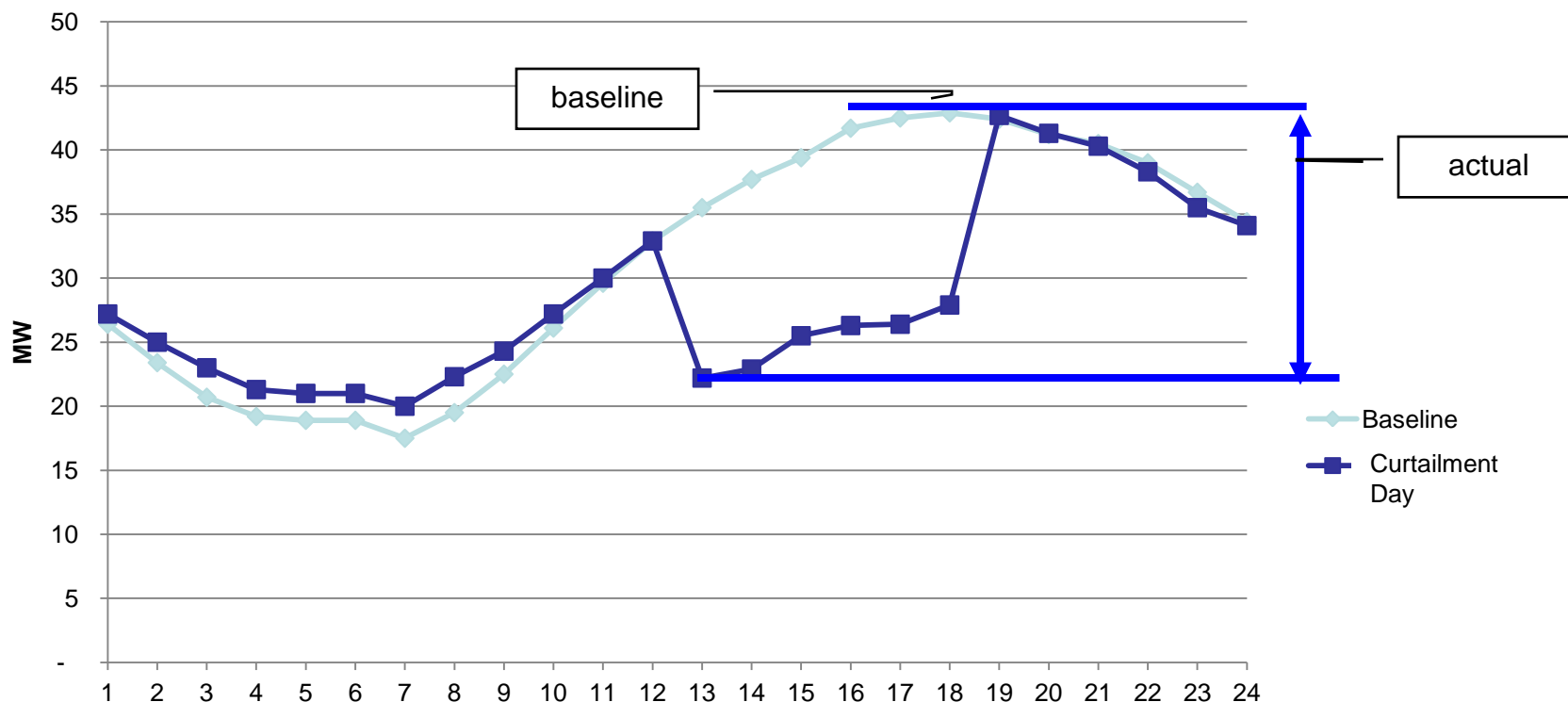**West Residential - July 21, 2011 Curtailment Day in MW**

Curtailment Event

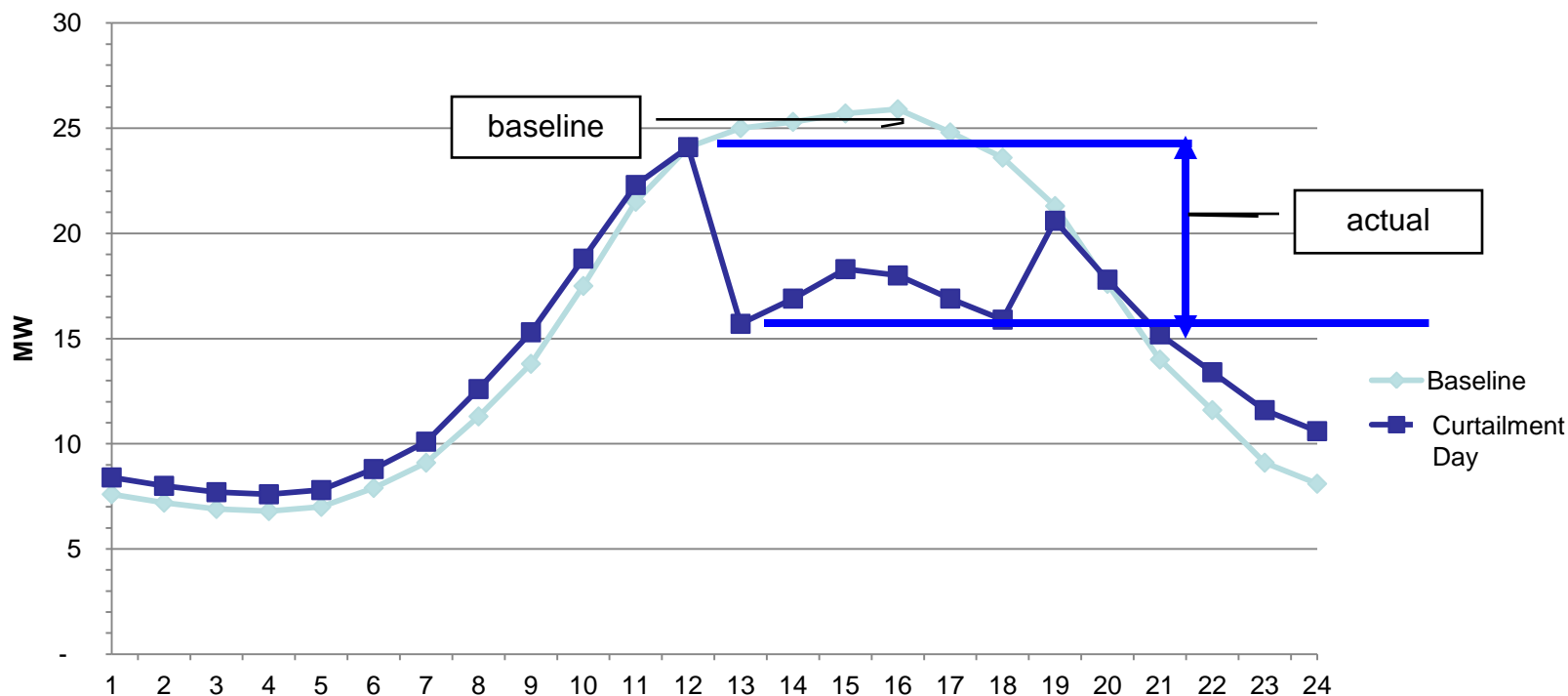**West Commercial - July 21, 2011 Curtailment Day in MW**

Curtailment Event

NYC Residential - July 22, 2011 Curtailment Day in MW
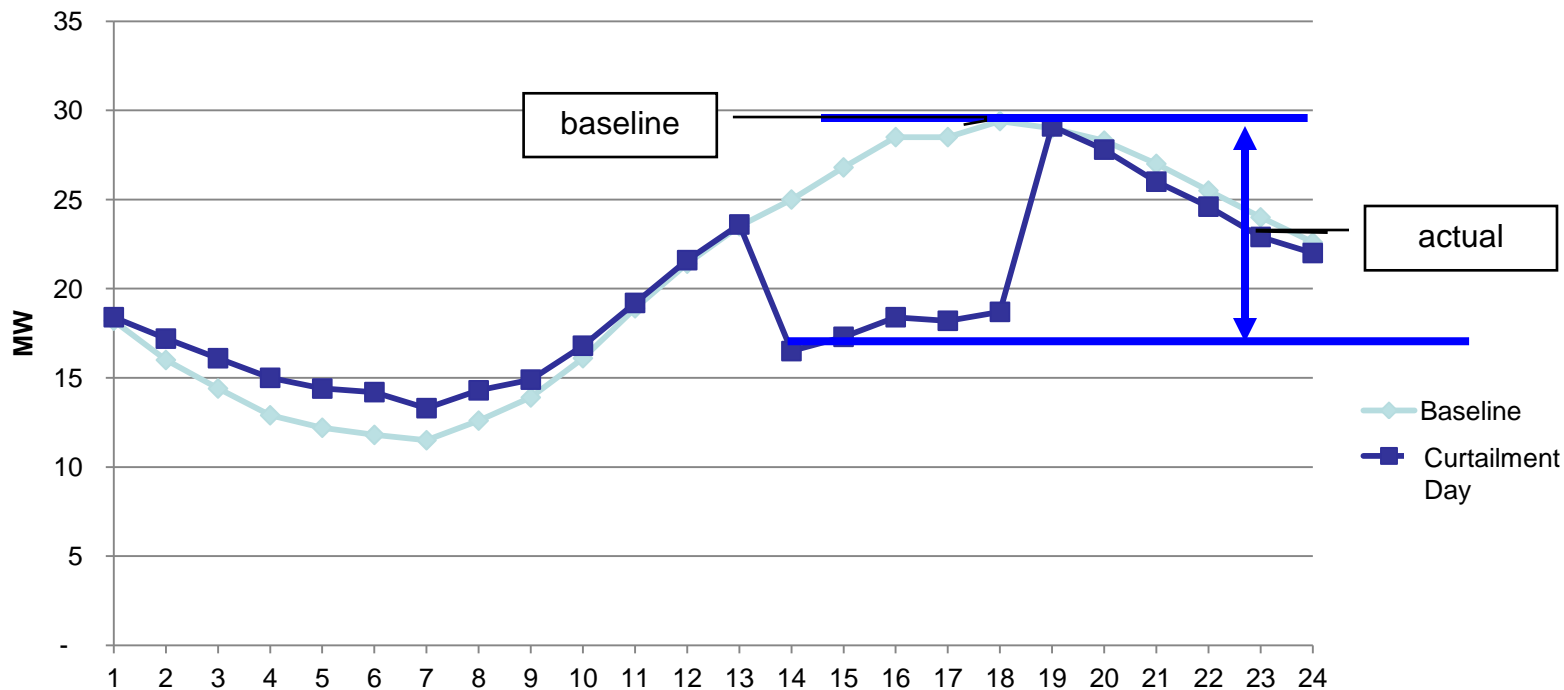
Curtailment Event

NYC Commercial - July 22, 2011 Curtailment Day in MW

Curtailment Event

West Residential - July 22, 2011 Curtailment Day in MW

Curtailment Event

West Commercial - July 22, 2011 Curtailment Day in MW