

CASE 1: All localities purchase exactly at their requirement :

This is an example where LSEs in each Locality purchases the exact requirements (there is no excess purchased in any Locality).

Assumptions

Load Zone	Load Forecast (MW)	LCR/IRM	EFORd
LI	5,500	0.99	0.05
NYC	11,500	0.83	0.05
GHIJ	12,500	0.88	0.05
NYCA	33,000	1.16	0.05

	LI	NYC	GHIJ	NYCA
ICAP Reference Points (\$/kW month)	\$ 10.00	\$ 19.00	\$ 14.00	\$ 9.00
Slope (\$/MW)	(0.0115)	(0.0130)	(0.0120)	(0.0025)

How the Auction Solves (in UCAP MW)

	K Locality Requirement	J Locality Requirement	GHIJ Locality Requirement	NYCA Requirement
Requirement (MW)	5,172.75	9,067.75	10,450.00	36,366.00
Amount to be purchased in the locality (MW)	5,172.75	9,067.75	1,382.25	20,743.25
Clearing Price (\$/kW-month)	\$ 10.00	\$ 19.00	\$ 14.00	\$ 9.00
Total Cost (price * UCAP MW) by Locality (Millions \$/ Month)	\$ 51.73	\$ 172.29	\$ 19.35	\$ 186.69
Total (Millions \$/Month)	\$ 430.06			

Balance Sheets for each of the loads

Assume there is a single load in NYC ("NYC Load"), and single load in LI ("LI Load"), a single load in GHI ("GHI Load") and a single load in zones A through F ("ROS Load"). Also assume all capacity is purchased in the spot market.

UCAP Requirements by load

Load (UCAP MW)	J Locality Requirement	K Locality Requirement	GHIJ Locality Requirement	NYCA Requirement
LI Load	none	5,172.75	none	6,061.00
NYC Load	9,067.75	none	9,614.00	12,673.00
GHI Load	none	none	836.00	1,102.00
ROS Load	none	none	none	16,530.00
Totals:	9,067.75	5,172.75	10,450.00	36,366.00

LI Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	5,172.75	0	5,173	5,173	\$ 10.00	\$ 51.73
J	none					
GHIJ	none					
NYCA	6,061	5,173	888	888	\$ 9.00	\$ 7.99
						\$ 59.72

NYC Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					
J	9,068	0	9,068	9,068	\$ 19.00	\$ 172.29
GHIJ	9,614	9,068	546	546	\$ 14.00	\$ 7.65
NYCA	12,673	9,614	3,059	3,059	\$ 9.00	\$ 27.53
						\$ 207.47

GHI Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					
J	none					
GHIJ	836	-	836	836	\$ 14.00	\$ 11.70
NYCA	1,102	836	266	266	\$ 9.00	\$ 2.39
						\$ 14.10

ROS Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	n/a	n/a	n/a	n/a		n/a
J	n/a	n/a	n/a	n/a		n/a
GHIJ	n/a	n/a	n/a	n/a		n/a
NYCA	16,530	-	16,530	16,530	\$ 9.00	\$ 148.77
						\$ 148.77

	Total MW purchased	Total Paid By Load (in Millions)
Summary		
K Load	6,061	\$ 59.72
J Load	12,673	\$ 207.47
GHI Load	1,102	\$ 14.10
ROS Load	16,530	\$ 148.77
	36,366	\$ 430.06

CASE 2: NYC Purchases 3% more than requirement

In this example the LSEs in Zone J purchase 3% more than the Zone J requirement. The excess over the Zone J requirement offsets the G-J Locality requirement for the Zone J LSE (for simplicity, we assume as single LSE in Zone J). Note that since Zone J clears more MW than the requirement, the clearing price is lower than in Case 1 (based on the slope of the Demand Curve). Changes from Case 1 are shown highlighted in blue.

Assumptions

Load Zone	Load Forecast (MW)	LCR/IRM	EFORd
LI	5,500	0.99	0.05
NYC	11,500	0.83	0.05
GHIJ	12,500	0.88	0.05
NYCA	33,000	1.16	0.05

	LI	NYC	GHIJ	NYCA
ICAP Reference Points (\$/kW month)	\$ 10.00	\$ 19.00	\$ 14.00	\$ 9.00
Slope (\$/MW)	\$ (0.0115)	\$ (0.0130)	\$ (0.0120)	\$ (0.0025)

How the Auction Solves (in UCAP MW)

	K Locality Requirement	J Locality Requirement	GHIJ Locality Requirement	NYCA Requirement
Requirement (MW)	5,172.75	9,067.75	10,450.00	36,366.00
Amount to be purchased in the locality (MW)	5,172.75	9,339.78	1,110.22	20,743.25
Clearing Price (\$/kW-month)	\$ 10.00	\$ 15.46	\$ 14.00	\$ 9.00
Total Cost (price * UCAP MW) by Locality (Millions \$/Month)	\$ 51.73	\$ 144.43	\$ 15.54	\$ 186.69
Total (Millions \$/Month)	\$ 398.39			

Balance Sheets for each of the loads

Assume there is a single load in NYC ("NYC Load"), and single load in LI ("LI Load"), a single load in GHI ("GHI Load") and a single load in zones A through F ("ROS Load"). Also assume all capacity is purchased in the spot market.

UCAP Requirements by load

Load (UCAP MW)	J Locality Requirement	K Locality Requirement	GHIJ Locality Requirement	NYCA Requirement
LI Load	none	5,172.75	none	6,061.00
NYC Load	9,067.75	none	9,614.00	12,673.00
GHI Load	none	none	836.00	1,102.00
ROS Load	none	none	none	16,530.00
Totals:	9,067.75	5,172.75	10,450.00	36,366.00

LI Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	5,172.75	0	5,173	5,173	\$ 10.00	\$ 51.73
J	none					
GHIJ	none					
NYCA	6,061	5,172.75	888.25	888.25	\$ 9.00	\$ 7.99
						\$ 59.72

NYC Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					
J	9,068	0.00	9067.75	9339.78	\$ 15.46	\$ 144.43
GHIJ	9,614	9339.78	274.22	274.22	\$ 14.00	\$ 3.84
NYCA	12,673	9614.00	3059.00	3059.00	\$ 9.00	\$ 27.53
						\$ 175.80

GHI Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					
J	none					
GHIJ	836	-	836.00	836.00	\$ 14.00	\$ 11.70
NYCA	1,102	836.00	266.00	266.00	\$ 9.00	\$ 2.39
						\$ 14.10

ROS Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					
J	none					
GHIJ	none					
NYCA	16,530	-	16,530.00	16,530.00	\$ 9.00	\$ 148.77
						\$ 148.77

	Total MW purchased	Total Paid By Load (in Millions)
Summary		
K Load	6,061	\$ 59.72
J Load	12,673	\$ 175.80
GHI Load	1,102	\$ 14.10
ROS Load	16,530	\$ 148.77
	36,366	\$ 398.39

CASE 3: NYC Purchases 7% more than requirement

In this example the LSEs in Zone J purchase 7% more than the requirement for Zone J. The excess over the Zone J requirement exceeds the G-J Locality requirement for the Zone J. That amount supplements the UCAP available for the G-J Locality requirement and in the cost allocation is identified in the example as a “STAR” (Spot Transfer Above Requirement) credit for the Zone J load. Note that since Zone J clears lower down the Demand Curve than in Case 2, the price is lower than in Case 2. Changes from Case 1 are shown highlighted in dark blue.

Assumptions

Load Zone	Load Forecast (MW)	LCR/IRM	EFORd
LI	5,500	0.99	0.05
NYC	11,500	0.83	0.05
GHIJ	12,500	0.88	0.05
NYCA	33,000	1.16	0.05

	LI	NYC	GHIJ	NYCA
ICAP Reference Points (\$/kW month)	\$ 10.00	\$ 19.00	\$ 14.00	\$ 9.00
Slope (\$/MW)	\$ (0.0115)	\$ (0.0130)	\$ (0.0120)	\$ (0.0025)

How the Auction Solves (in UCAP MW)

	K Locality Requirement	J Locality Requirement	GHIJ Locality Requirement	NYCA Requirement
Requirement (MW)	5,172.75	9,067.75	10,450.00	36,366.00
Amount to be purchased in the locality (MW)	5,172.75	9,702.49	747.51	20,743.25
Clearing Price (\$/kW-month)	\$ 10.00	\$ 14.00	\$ 14.00	\$ 9.00
Total Cost (price * UCAP MW) by Locality (Millions \$/Month)	\$ 51.73	\$ 135.83	\$ 10.47	\$ 186.69
Total (Millions \$/Month)	\$ 384.72			

**Note that J would have cleared lower than \$14 if it had not been part of GHIJ

Balance Sheets for each of the loads

Assume there is a single load in NYC ("NYC Load"), and single load in LI ("LI Load"), a single load in GHI ("GHI Load") and a single load in zones A through F ("ROS Load"). Also assume all capacity is purchased in the spot market.

UCAP Requirements by load

Load (UCAP MW)	K Locality Requirement	J Locality Requirement	GHIJ Locality Requirement	NYCA Requirement
LI Load	5,172.75	none	none	6,061.00
NYC Load	none	9,067.75	9,614.00	12,673.00
GHI Load	none	none	836.00	1,102.00
ROS Load	none	none	none	16,530.00
Totals:	5,172.75	9,067.75	10,450.00	36,366.00

LI Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	5,172.75	0.00	5172.75	5172.75	\$ 10.00	\$ 51.73
J	none					
GHIJ	none					
NYCA	6,061	5172.75	888.25	888.25	\$ 9.00	\$ 7.99
						\$ 59.72

NYC Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Spot Transfer Above Requirement ("STAR")	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA							
K	none						
J	9,068	0	9,067.75	9,702.49		\$ 14.00	\$ 135.83
GHIJ	9,614	9,614	none	none	88.49	\$ 14.00	\$ (1.24)
NYCA	12,673	9,614	3,059.00	3,059.00		\$ 9.00	\$ 27.53
							\$ 162.13

GHI Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					
J	none					
GHIJ	836	-	836.00	836.00	\$ 14.00	\$ 11.70
NYCA	1,102	836.00	266.00	266.00	\$ 9.00	\$ 2.39
						\$ 14.10

ROS Load's Purchases Explained:

	Requirement (MW)	How much already satisfied? (MW)	Remaining (MW)	Purchased (MW)	Price (\$/kW-month)	Total = Purchased * Price (in Millions of \$)
Locality/NYCA						
K	none					n/a
J	none					n/a
GHIJ	none					n/a
NYCA	16,530	-	16,530.00	16,530.00	\$ 9.00	\$ 148.77
						\$ 148.77

	Total MW purchased	Total Paid By Load (in Millions)
Summary		
K Load	6,061	\$ 59.72
J Load	12,673	\$ 162.13
GHI Load	1,102	\$ 14.10
ROS Load	16,530	\$ 148.77
	36,366	\$ 384.72