

Introduction

This page provides an overview of the REC Index pricing structure and inputs for calculations using data from the NYISERDA Agreement, NYISO, and NYGATS.

Sample Calculation of Index Invoice

Contract Data:

Installed Capacity	100 MW	a
Bid Quantity Percentage	95%	b
Incremental Upgrade Percentage	100%	c
Index REC Strike Price	\$60.00 /MWh	d
Seasonal UCAP Production Factor	0.2000	e

Market Data for Month:

	Jun-19	
Applicable Zone	A	West
Reference Energy Price for Zone	\$26.76 /MWh	f (rounded to \$0.01)
Reference UCAP Price for Zone	\$1.80 /kW-mo	g (rounded to \$0.01)

Project Data for Month:

Total RECs	18,676	h
Tier 1 RECs Transferred to NYISERDA	17,742	i

Calculations:

Quantity Obligation	17,742 RECs	$j = h * b * c$ (rounded down)
Reference Capacity Price	\$1.93 /MWh	$k = (g * e * a * 1000) / h$ (rounded to \$0.01)

Payment Information

Net Price	\$31.31 /MWh	$l = d - f - k$
Invoice Amount	\$555,502.02	$m = l * i$

Part 1: Reference Energy Price for Zone

Click **learn more...** below to open and follow the steps to generate the **Reference Energy Price for Zone** report from NYISO. The Reference Energy Price is the simple average of the hourly zonal LBMPs for the applicable month.

1

Access the [NYISO Custom Report](#) (click) or enter the following URL in your browser: https://www.nyiso.com/custom-reports?report=dam_lbmp_zonal (also accessible by navigating to the NYISO homepage > Markets > Energy Market & Operational Data > Custom Reports).

2

Within the Custom Report page, select **Day Ahead Market/LBMP** and **Zonal** from the **Select Report** drop-downs.

The screenshot shows the New York ISO website's 'Custom Reports' page. On the left is a sidebar menu with options like 'Real-Time Dashboard', 'System Conditions', 'Energy Market & Operational Data', 'Pricing Data', 'Power Grid Data', 'Load Data', 'Reports & Info', 'Postings by Date', 'Custom Reports' (highlighted), 'Ancillary Services', 'Installed Capacity Market (ICAP)', 'Transmission Congestion Contracts (TCC)', 'Distributed Energy Resources (DER)', and 'Market Access Login'. The main content area is titled 'Select report' and contains two dropdown menus: 'Day-Ahead Market LBMP' and 'Zonal'. Below these is a section titled 'Day-Ahead Market LBMP - Zonal' which is divided into three columns: 'Choose Zone(s)', 'Zone(s) Added', and 'Choose Options'. The 'Choose Zone(s)' column contains a list of zones with checkboxes: CAPITL, CENTRL, DUNWOD, GENESE, H Q, HUD VL, LONGIL, MHK VL, MILLWD, and N.Y.C. The 'Zone(s) Added' column is currently empty. The 'Choose Options' column contains fields for 'Start Date' (05/10/2022), 'End Date' (05/10/2022), 'Version' (Latest selected, with options for Versioned and All), and 'Format' (CSV selected, with options for HTML and PDF). A green 'GENERATE REPORT' button is at the bottom right of the options section.

3

Next, select the applicable zone(s) under the **Choose Zone(s)** section.

This screenshot is similar to the previous one, but now the 'Choose Zone(s)' column has a green highlight box around the entire list of zones, indicating that all zones (CAPITL, CENTRL, DUNWOD, GENESE, H Q, HUD VL, LONGIL, MHK VL, MILLWD, and N.Y.C.) have been selected. The other elements of the page remain the same.

4

Under **Choose Options**:

- Input **Start** and **End** dates for the month (ex. 01/01/2021 - 01/31/2021)
- Select **Latest** for **Version**
- Select **CSV** (comma separated values) for **Format**

The screenshot shows the New York ISO Markets page. On the left is a sidebar with navigation links. The main content area has a 'Select report' section with dropdowns for 'Day-Ahead Market LBMP' and 'Zonal'. Below this is a form titled 'Day-Ahead Market LBMP - Zonal' with three columns: 'Choose Zone(s)', 'Zone(s) Added', and 'Choose Options'. The 'Choose Options' column contains date pickers for 'Start Date' and 'End Date', a 'Version' dropdown, a 'Format' dropdown, and a 'GENERATE REPORT' button. The 'Start Date' and 'End Date' are both set to 01/01/2022 and 01/31/2022. The 'Version' is set to 'Latest'. The 'Format' is set to 'CSV'.

5

Then click the **Generate Report** button to generate a report.

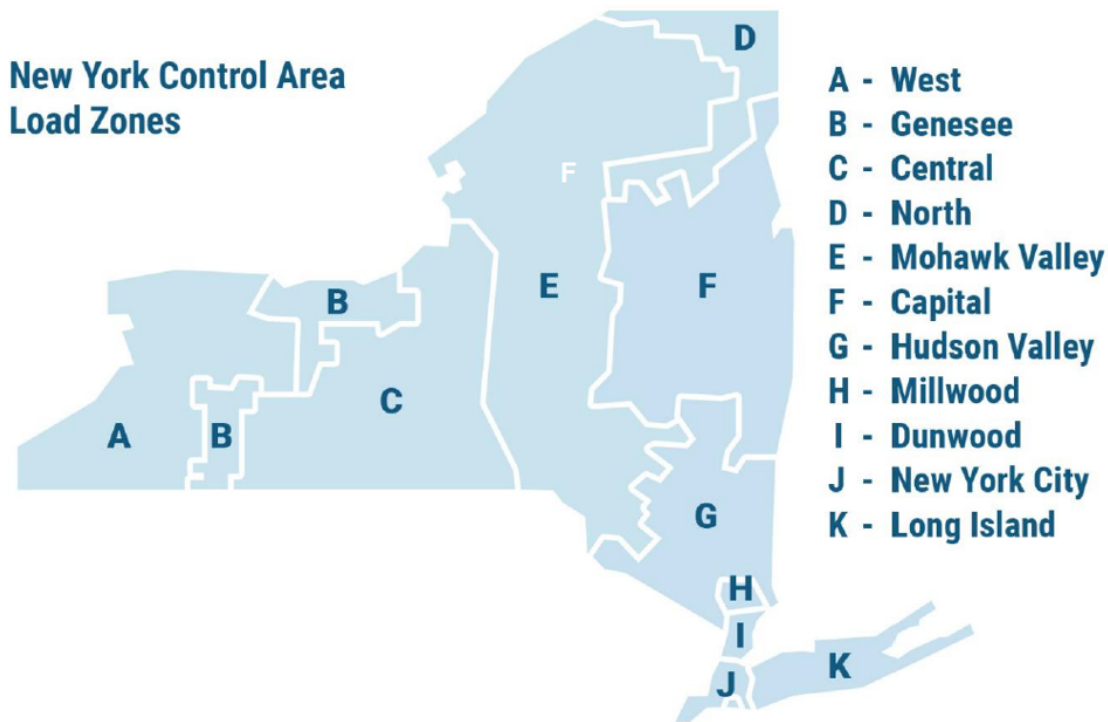
This screenshot is similar to the previous one, but the 'Start Date' and 'End Date' are now set to 05/10/2022. The 'Version' remains 'Latest' and the 'Format' remains 'CSV'. The 'GENERATE REPORT' button is still highlighted.

6

Calculate the **Reference Energy Price** by averaging the hourly **LBMPs** from the generated report.

Part 2: Reference UCAP Price for Zone

Click **learn more...** to open and follow the steps to determine the **Reference UCAP Price for Zone** from NYISO. The NYSERDA Agreement will specify the **Zone** to be used.



Source: NYISO

1

Access the [NYISO Spot Auction Summary](#) (click) or enter the following URL into your browser: [Installed Capacity - View Spot Auction Summary \(nyiso.com\)](#) (also accessible by navigating to the NYISO homepage > Markets > Installed Capacity Data > Monthly Auction Summary).

2

Select the applicable **Season** and **Auction month/Year** from the drop-down, then click the **Display** button (e.g., for May 2022 Settlement, select Season: Summer 2022 and Auction Month/Year: May/2022).

3

The Reference UCAP Price is the **Price (\$/kW-Month)** for the applicable project location.

Table 1: NYSERDA Agreement Applicable Zone and NYISO Spot Auction Summary Results

NYSERDA Agreement Applicable Zone	NYISO Spot Summary Results for UCAP
Zone A-F	NYCA - The NYCA Auction Result is used for Zones A-F because this output is the Market Clearing Price for Rest of State (ROS). The last entry in the Auction Results (ROS Price Paid by Bidders) is the weighted average of ROS, HQ, IESO, NE, and PJM Market Clearing Prices. These definitions are stated in the ICAP Automated Market System User's Guide
Zone G-I	G-I Locality
Zone J	NYC

 Installed Capacity View Spot Auction Summary	
Auction • Mitigation • Load Forecast • Calendar • Rights • Upload/Download	
Season: Summer 2023	Months: Aug/2023 Display
View Spot Auction Summary	
Summer 2023 Capability Period 08/2023 Spot Market Auction Results - UCAP Posted Date: 07/28/2023 10:02 AM	
G-I Locality	08/2023
Awarded Deficiency (MW)	2,431.6
Awarded Excess (MW)	1,073,500
% Excess Above Requirement	8.57
Price (\$/kW-M)	\$6.01
LI	
Awarded Deficiency (MW)	132.4
Awarded Excess (MW)	633,400
% Excess Above Requirement	12.78
Price (\$/kW-M)	\$6.01
NYC	
Awarded Deficiency (MW)	3,988.3
Awarded Excess (MW)	237,500
% Excess Above Requirement	2.63
Price (\$/kW-M)	\$19.46
NYCA	
Awarded Deficiency (MW)	6,539.6
Awarded Excess (MW)	1,489,600
% Excess Above Requirement	4.31
Price (\$/kW-M)	\$6.01
HO	
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