Technical Meeting No. 6 Presentation

Alternative Standard Service Procurement Constructs

Docket No. 17-12-03RE10

September 14, 2023

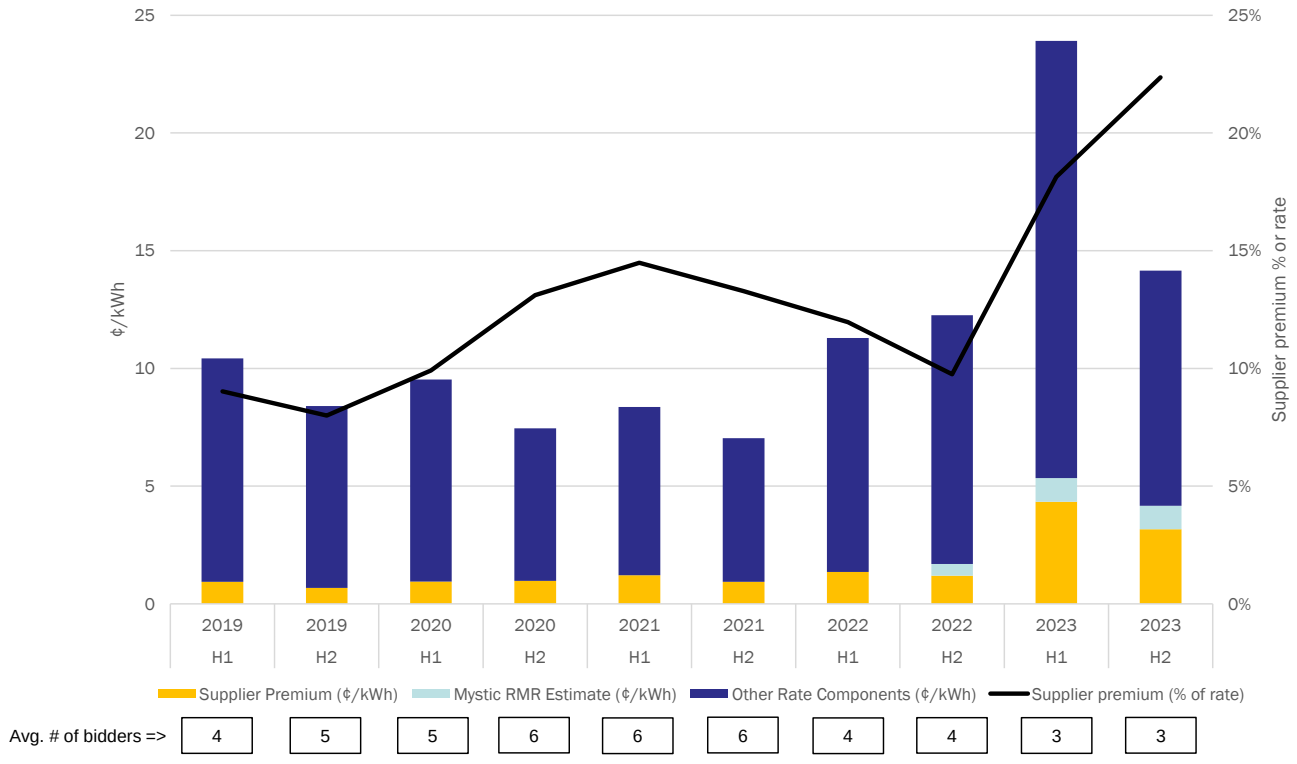
James Shuckerow

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Key Messages

- Retirements of baseload coal, oil and nuclear generation necessitate an over-reliance during winter on natural gas and LNG, contributing to high and volatile regional energy prices.
- Standard Service wholesale market suppliers have incorporated an increasingly higher profit/risk premium in their Standard Service bids in order to accept the load and price uncertainty.
- Alternative Standard Service Procurement Constructs include:
  - Using existing (and future) clean energy and renewable energy available under Power Purchase Agreements (PPAs) to serve Standard Service load.
  - Spot market procurements to self-supply.
- Estimating CL&P's Standard Service rate using these Alternative Standard Service Procurement Constructs would have resulted in lower cost for electric customers during the January – June 2023, as a high supply-cost period.
- The Alternative Standard Service Procurement Constructs eliminate the profit/risk premium paid to wholesale suppliers, but also shift the risk of customer migration and price uncertainty from wholesale market suppliers to electric customers.

Estimate of Wholesale Supplier Risk Premiums, 2019-23, as a percent of Standard Service rates



Standard Service Procurement Constructs

Characteristics	Wholesale Power Suppliers (existing method)	Clean Energy & Renewable PPAs Balanced with Spot Market	Spot Market Procurements to Self-Supply
Contract Duration	6-12 months	10-20 years	Day-ahead hourly purchases from ISO-NE
Supplier Profit/Risk Premium	1¢-4¢/kWh	Embedded in PPA price	-
Change in law?	No	Yes	No
Stakeholder Accepting Load/Price Risk	Suppliers	Customers, for amounts above or below PPAs	Customers

Backcasting: Estimating CL&P's Standard Service rate during January – June 2023

Cost Components (¢/kWh)	Wholesale Power Suppliers (existing method)	Millstone PPA + Residual Needs from Spot Market	Spot Market Procurements to Self-Supply
Energy	23.912	4.93	4.45
Supplier Profit/Risk Premium			0
Capacity		2	2
Ancillary Services		0.1	0.1
Mystic RMR		0.6	0.6
Renewable Portfolio Standard		1.2	1.2
Adjustments/Distribution line losses		0.19	0.18
Total (¢/kWh)	23.912	9.0	8.5
Cost to Customers ($)	$1 billion	$388 million	$367 million

Notes: Estimate that Millstone PPA covers 62% of Standard Service obligation. Distribution line losses = 2%.
Market-based procurement costs rely on preliminary ISO-NE data for January through June 2023.

Backcasting: Estimating CL&P's Standard Service rate during January – June 2022

Cost Components (¢/kWh)	Wholesale Power Suppliers (existing method)	Millstone PPA + Residual Needs from Spot Market	Spot Market Procurements to Self-Supply
Energy	11.292	7.45	9.76
Supplier Profit/Risk Premium			0
Capacity		2	2
Ancillary Services		0.1	0.1
Mystic RMR		0.1	0.1
Renewable Portfolio Standard		1.2	1.2
Adjustments/Distribution line losses		0.29	0.36
Total (¢/kWh)	11.292	11.14	13.52
Cost to Customers ($)	$584 million	$577 million	$699 million

Notes: Estimate that Millstone PPA covers 57% of Standard Service obligation. Distribution line losses = 2%.
Energy component using on DA LMPs from ISO-NE for January through June 2022 and estimates for other components

Backcasting: Estimating CL&P's Standard Service rate during January – June 2021

Cost Components (¢/kWh)	Wholesale Power Suppliers (existing method)	Millstone PPA + Residual Needs from Spot Market	Spot Market Procurements to Self-Supply
Energy	8.366	5.23	4.3
Supplier Profit/Risk Premium			0
Capacity		2.2	2.2
Ancillary Services		0.16	0.16
Mystic RMR		n/a	n/a
Renewable Portfolio Standard		1.2	1.2
Adjustments/Distribution line losses		0.29	0.26
Total (¢/kWh)	8.366	8.88	7.92
Cost to Customers ($)	$396 million	$420 million	$375 million

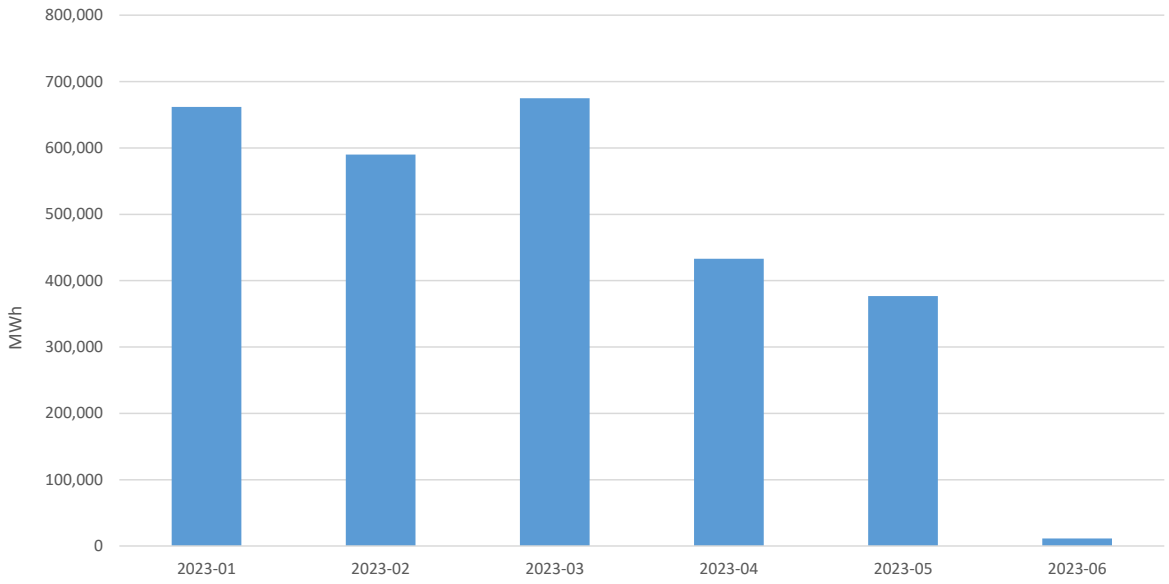
Notes: Estimate that Millstone PPA covers 73% of Standard Service obligation. Distribution line losses = 2%.
Energy component using on DA LMPs from ISO-NE for January through June 2021 and estimates for other components

Key Take-Aways

- Standard Service was designed to be an all-inclusive, premium service with wholesale suppliers whereby:
  - *Suppliers take on the risk of market price and load volatility*.
    - New England power markets are becoming highly volatile and risky with the retirement of base load units and a shortage of natural gas supply
    - High volatility and risk for suppliers increases the profit/premiums demanded by wholesale suppliers, translating into high prices for customers.
- Using Millstone and Seabrook fixed-price contracts to substitute for wholesale supply in a high supply-cost market will reduce costs for customers.
  - In a high-cost environment, the fixed-price contracts provide a lower cost supply, providing customers with substantial savings in periods where market dislocations, lack of market liquidity, global supply shortages, and/or extreme weather are causing volatility and risk *to increase for wholesale suppliers*.
  - Requires a limited change in law to allow the use of these contracts to supply Standard Service directly.
  - To the extent that Millstone and Seabrook are used for Standard Service, there will no corresponding credit or charge to the NBFMCC.
- Using the spot market to augment Millstone and Seabrook contracts will transfer some risk to customers.

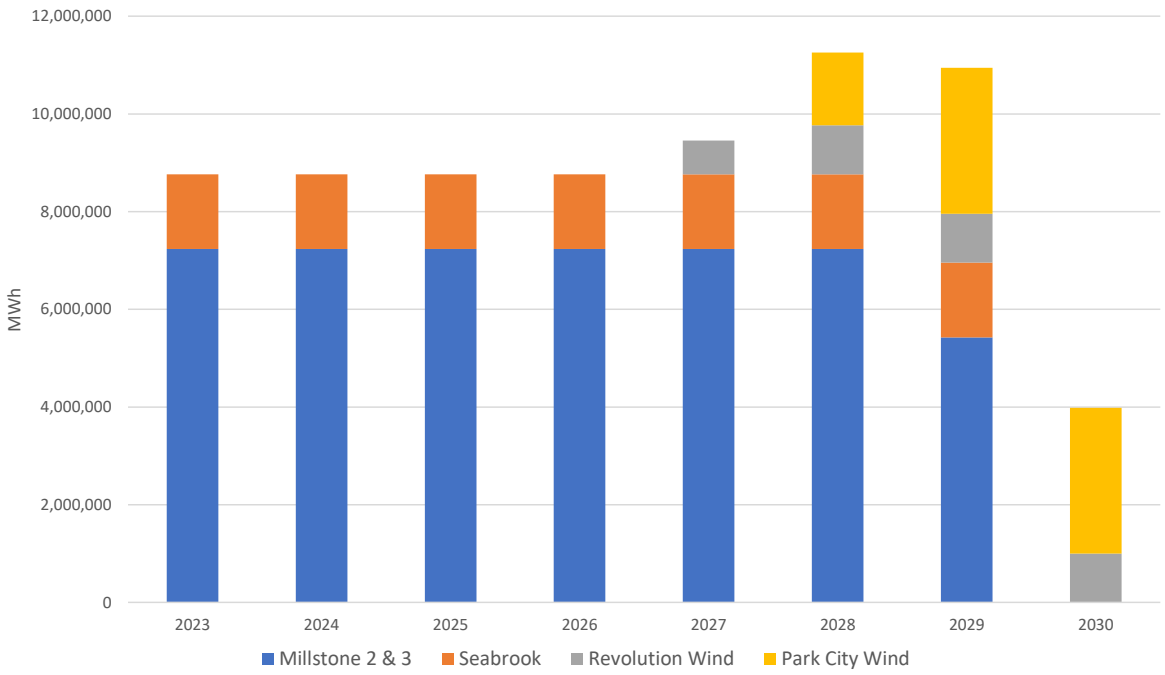
APPENDIX

CL&P's Share of Millstone Net Generation, 1H 2023



Note: Millstone Unit 2 went offline starting on April 6, 2023 and was back online on June 30, 2023. Millstone Unit 3 went offline starting on May 30, 2023 and was back online on June 29, 2023

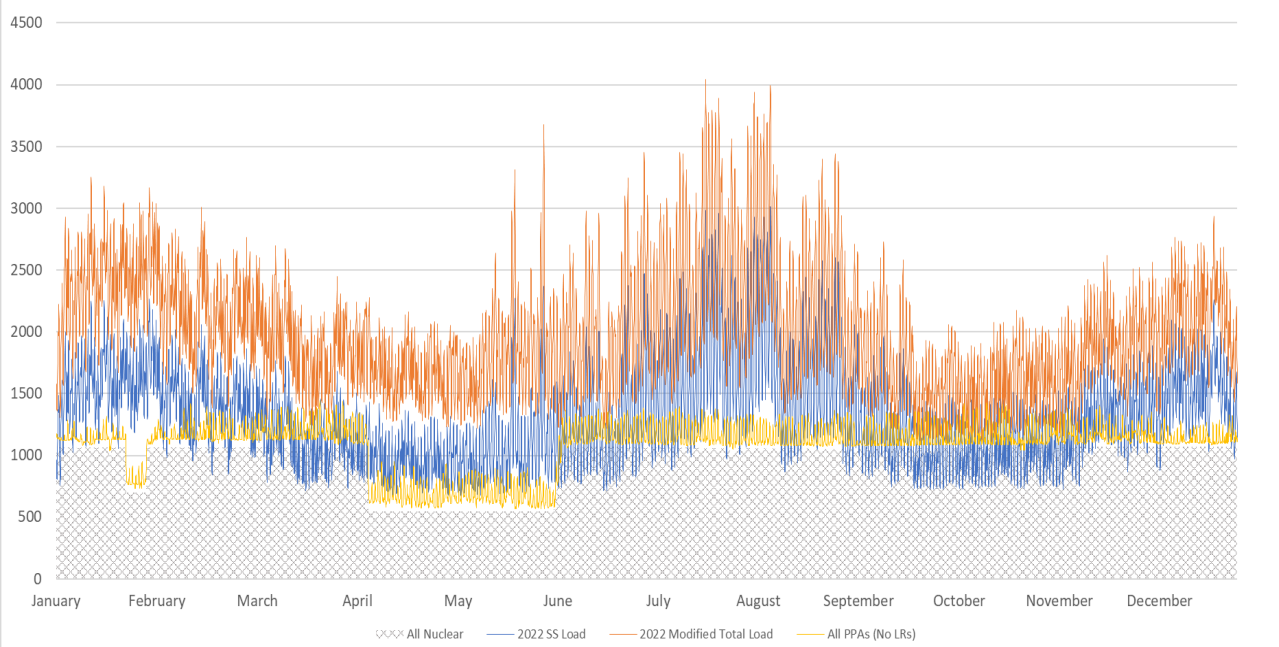
CL&P's expected purchases under PPA's, 2023-30



What Does This Mean?

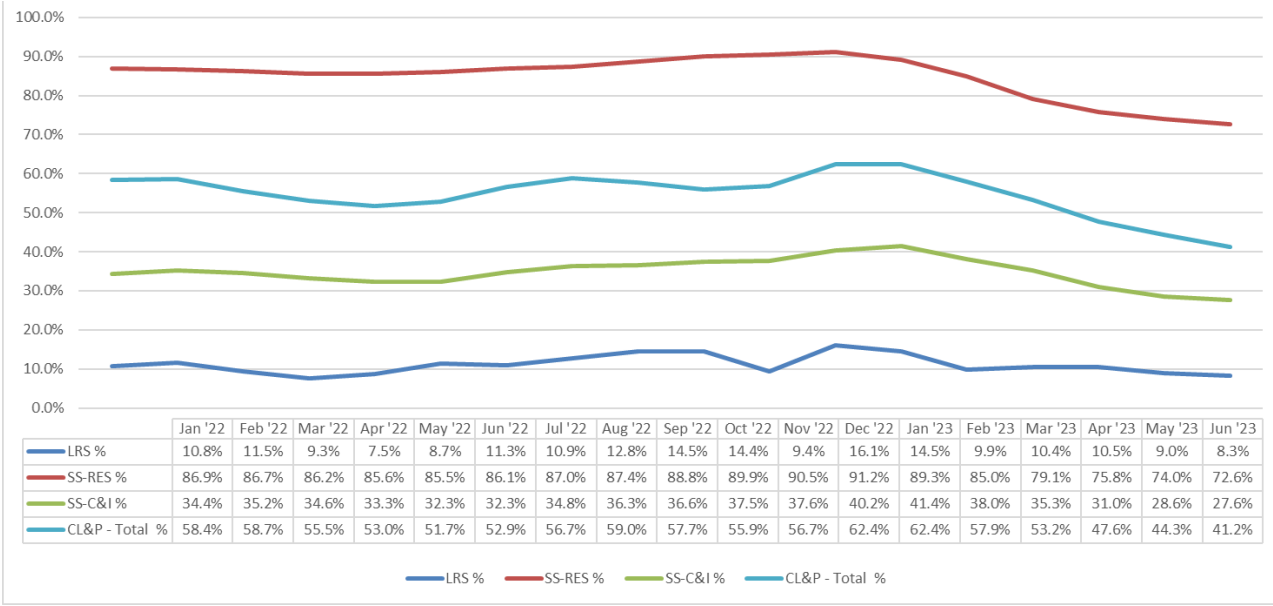
Events	Wholesale Power Suppliers (existing method)	Using Millstone and/or Spot Market
Large Outage (higher LMPs)	Price Stability. No impact to ratepayers because customers are paying embedded risk premium in fixed price	Customers pay higher costs
Winter Supply Constraints (higher LMPs)		Customers pay higher costs
Warm Winter (lower LMPs and lower demand)		Customers pay lower costs
Cold Winter (high LMPs and higher demand)		Customers pay higher costs
Customers Leave Standard Service		Customers pay higher costs
Customers Return to Standard Service		Increase reliance on spot market
Rate Reconciliation (True-Ups in subsequent rate periods)	Minimal	Could be substantial

2022 PPA Generation vs Standard Service & Total Load



Note: Excludes Last Resort Service

Percent of Load Served (Migration): January 2022 – June 2023



	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23
LRS %	10.8%	11.5%	9.3%	7.5%	8.7%	11.3%	10.9%	12.8%	14.5%	14.4%	9.4%	16.1%	14.5%	9.9%	10.4%	10.5%	9.0%	8.3%
SS-RES %	86.9%	86.7%	86.2%	85.6%	85.5%	86.1%	87.0%	87.4%	88.8%	89.9%	90.5%	91.2%	89.3%	85.0%	79.1%	75.8%	74.0%	72.6%
SS-C&I %	34.4%	35.2%	34.6%	33.3%	32.3%	32.3%	34.8%	36.3%	36.6%	37.5%	37.6%	40.2%	41.4%	38.0%	35.3%	31.0%	28.6%	27.6%
CL&P - Total %	58.4%	58.7%	55.5%	53.0%	51.7%	52.9%	56.7%	59.0%	57.7%	55.9%	56.7%	62.4%	62.4%	57.9%	53.2%	47.6%	44.3%	41.2%