Improving Electric Affordability Through Changes to Maine's Standard Offer Service

Estimating standard offer service cost savings from using a block-and-spot energy procurement approach over 2016–2025

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AUTHORS

Caroline Resor
Elise Ashley
Pat Knight
Anthony Star
Angela Zeng

Synapse Energy Economics, Inc.

485 Massachusetts Avenue, Suite 3
Cambridge, Massachusetts 02139

617.661.3248 | www.synapse-energy.com

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EXECUTIVE SUMMARY

In Maine and most other New England states, residential and small business customers can choose the entity that supplies their electricity. When customers do not choose an electricity supplier, they are enrolled in the default standard offer service (SOS). In this report, Synapse Energy Economics (Synapse) explores how an alternative to the approach the Maine Public Utilities Commission (MPUC) currently uses to procure SOS could provide savings for customers. During a time of rising electricity prices, exploring every promising option to make electricity more affordable is essential to providing relief to Maine ratepayers.

In Spring 2026, Synapse published an analysis, *Overcharged in New England,* describing the prices charged to residential SOS customers in restructured New England states over the period 2016 through 2025. In that analysis, we isolated the cost components of SOS, including energy, capacity, renewable portfolio standard costs, and other charges, and we compared those "market costs of supply" components to what SOS customers have paid over this 10-year period. In Maine, we found that SOS customers combined paid an average of $7 million per month more for their electric supply than the cost to supply it based on the wholesale price of electricity. This delta, or "premium," equates to $960 million over 10 years and reflects the amount that suppliers of SOS embed into their prices to manage a range of uncertainties and offer a set rate for an annual period. We found that the historical premium was surprisingly large in Maine and in the five other New England states we studied.

We found that a block-and-spot approach to the MPUC's standard offer service for Central Maine Power could have offered **savings of $743 million or 18 percent** relative to what residential and small business customers paid from 2016 through 2025.

These savings translate to average savings of nearly **$11 per customer per month** or $136 per year.

We also found that a block-and-spot approach could have **lowered month-to-month volatility of the supply component of bills by 23 percent**.

In Maine, as in most other states with competitive supply, SOS is procured through taking bids where the winning suppliers commit ahead of time to supplying the exact amount of electricity demanded at a set price for a future period of time, regardless of changes in usage by customers, or changes to the underlying wholesale (or other) costs of electricity. This is called full-requirements service. While any procurement involving contracting for prices ahead of time will include some risk premium to mitigate unknowns, full-requirements procurements are particularly prone to high premiums.

Another option in use in other jurisdictions, the block-and-spot approach, is one in which suppliers commit ahead of time to providing energy in blocks of fixed amounts (in MWh) at a set price for a future period of time. Since the quantity of MWh is known in advance, the price is simpler and less risky to estimate. Spot market purchases and sales are then used to balance underages and overages between the blocks and the actual instantaneous load. An SOS provider (e.g., a utility, a utility commission, or some other entity) serving as the purchasing entity sets a price for SOS for a set period (e.g., 12 months), and then during a subsequent time period, reconciles any over- or under-charges through an adjustment charge on customer bills.

The key difference between procurement approaches:
In both approaches, energy is supplied at a set price during a future time period.

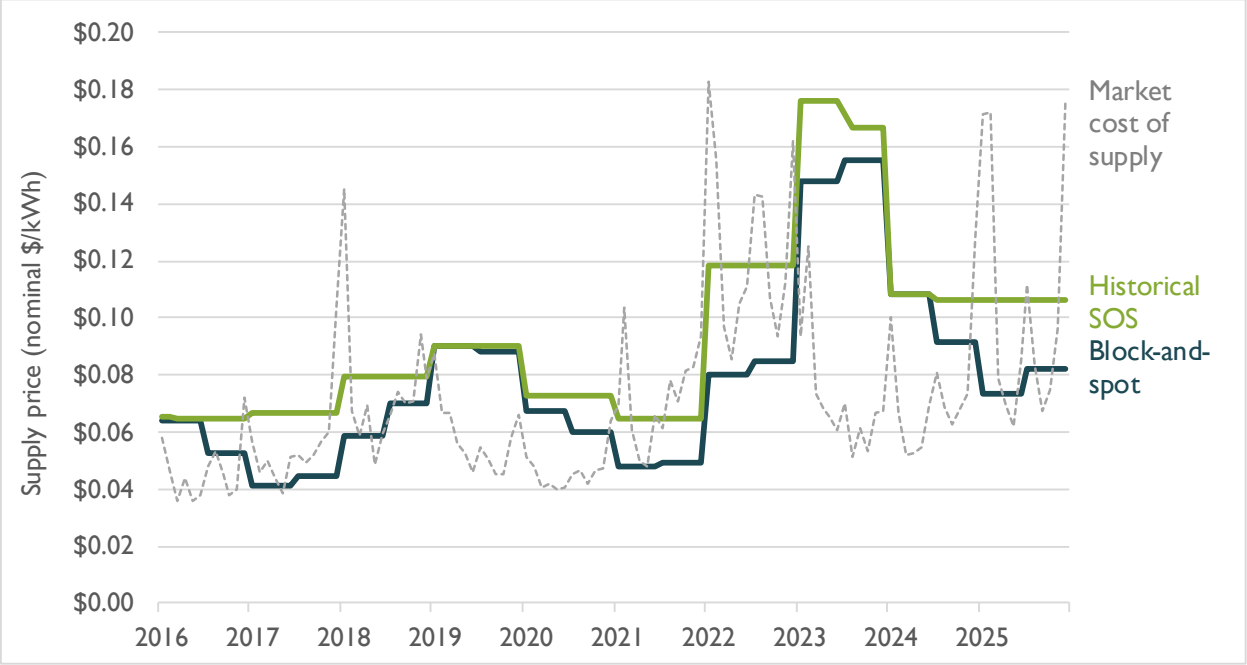
- **Full-requirements service:** Commitment to supplying 100 percent of hourly load
- **Block-and-spot approach:** Commitment to supplying energy in blocks of fixed amounts, rather than exactly meeting hourly load. Remaining supply is bought/sold from the spot market

In this analysis, we compared the historical 2016–2025 costs of the MPUC's full-requirements SOS for Central Maine Power (CMP), the estimated market costs of supply, and a set of counterfactual block-and-spot scenarios. We sought to quantify what cost savings, if any, SOS customers would have experienced under a block-and-spot approach compared to historical SOS. We focused on the MPUC's SOS for CMP as CMP serves approximately 80 percent of Maine's residential and small business customers. We believe that an analysis of Versant's Bangor Hydro District service territory would yield similar results.

We found that block-and-spot procurements can lead to cost savings relative to full-requirements procurement. The primary scenario discussed in this analysis—in which an SOS provider purchased 50 percent of estimated average monthly load as blocks through competitive procurements and the remainder on the spot market (see Figure 1)—produced $743 million in savings over 10 years. This is equal to savings of 18 percent, relative to what SOS customers collectively paid over 2016 through 2025, and translates into average savings of $11 per customer per month. In fact, we found that all block-and-spot scenarios examined saved money relative to historical SOS, with savings ranging from $396 million to $791 million. Higher savings are possible in scenarios that utilize even more spot market purchases by deferring procurements with historically high prices, using a price threshold design.

Also, we found that block-and-spot scenarios had lower month-to-month volatility than historical SOS by 23 percent within the supply portion of the bill. This occurred due to lower rates that translate into lower bills. Our analysis demonstrates that block-and-spot procurements would have likely saved hundreds of millions of dollars for Maine ratepayers over the past 10 years. We note that different approaches to block-and-spot procurement would have produced different levels of savings but that all of our scenarios offered savings compared to historical SOS. We recommend decision-makers thoughtfully devise a block-and-spot approach that considers historical data and incorporates future-looking trends to reduce costs for Maine ratepayers.

Figure 1. Estimated monthly standard offer service rate under a block-and-spot approach, 2016–2025



1. INTRODUCTION

In restructured states such as Maine, residential and small business customers can choose the entity that supplies their electricity.[1] When customers do not choose an electricity supplier, they are enrolled in the default standard offer service (SOS).[2] Customers can instead choose to buy their electricity from a competitive electricity suppliers, although the issue of the high prices charged by those competitive electricity suppliers has been well documented.[3] Meanwhile, the question of whether SOS—the electricity choice used by 91 percent of Maine residential and small business customers—could be lower deserves further scrutiny.[4]

In this report Synapse Energy Economics (Synapse) explores how an alternative to the approach the Maine Public Utilities Commission (MPUC) currently uses to procure SOS could provide savings to customers. The alternative explored here could be a vital tool for alleviating Maine ratepayers' electricity cost burdens during this time of rising electricity prices.

1.1. Recent analysis of standard offer service in New England

In Spring 2026, Synapse published an analysis, *Overcharged in New England,* describing the prices charged to residential SOS customers in restructured New England states over the period 2016 through 2025.[5] In that analysis, we isolated the cost components of SOS, including energy, capacity, renewable portfolio standard (RPS), and other charges, and we compared those "market costs of supply" components to what SOS customers have paid over this 10-year period. For the five New England states with situations similar to Maine's, we found that SOS customers collectively paid an average of $66 million per month or $8.6 billion over 10 years more for their electric supply than the cost to supply it

1 Restructured states have competitive supply but regulated monopoly delivery. Other states and regions with a similar procurement framework include Connecticut, Delaware, District of Columbia, Illinois, Massachusetts, Maryland, Ohio, Pennsylvania, New Hampshire, New Jersey, New York, and Rhode Island. This report focuses on the supply of electricity only, and not the costs associated with the delivery of electricity (which remains a regulated service).

2 For the purposes of this analysis, we focus on residential customers, and we refer to this type of service as residential standard offer service (SOS). We note that in Maine, SOS includes small commercial customers too. We note that other states use different terminology such as basic service, default service, service of last resort, or standard service.

3 See for example, "Is Maine's CEP-Served Residential Retail Electric Supply Market Affordable? (2026 Update)." Maine Electric Ratepayer Advisory Council, January 27, 2026. Available at: https://www.maine.gov/meopa/sites/maine.gov.meopa/files/inline-files/2026_ERAC_CEP_Report_20260127.pdf. Other states have published similar reports.

4 Percentages are based on competitive electricity providers migration statistics from MPUC. This dataset includes residential and small business customers for Central Maine Power, Versant Bangor Hydro District, and Versant Maine Public District. See: "Standard Offer Migration Statistics." Maine Public Utilities Commission. Available at: https://www.maine.gov/mpuc/sites/maine.gov.mpuc/files/inline-files/Standard%20Offer%20Migration%20Stats_0.xlsx

5 Overcharged in New England. Synapse Energy Economics. July 2026. Available at: https://www.synapse-energy.com/overcharged-new-england.

based on the wholesale price of electricity. That delta can be called a retail premium, risk premium, or simply, premium, and it reflects the amount that suppliers who bid to serve SOS embed into their prices to manage a range of uncertainties and offer a set rate for an annual period. We found that the historical premium was surprisingly large.

For Maine specifically, we found that SOS customers collectively paid an average of $7 million per month greater than the market cost of supply, or $960 million over 10 years. That is a per-household premium of $12 per customer per month. The median premium was 36 percent above the cost of supply. This premium equates to 9 percent of a typical total monthly customer electric bill of $130.[6]

In Maine, as in most other restructured states, SOS is procured through taking bids where the winning suppliers commit ahead of time to supplying the exact amount of electricity demanded at a set price for a period of time, regardless of changes in usage by customers, or changes to the underlying wholesale (or other) costs of electricity. This is called full-requirements service. While any procurement process involving contracting for prices ahead of time will likely include some sort of risk premium to mitigate future unknowns, full-requirements procurements have a number of characteristics that make them particularly prone to high premiums.

First, in the full-requirements model, bidders are exposed to risks related to customer usage (which can be impacted by weather, economic conditions, and customers switching to or from competitive electricity suppliers) and future fuel costs (which are also impacted by weather, economic, and geopolitical factors).

Second, managing the delivery of electricity under a full-requirements contract is highly complex and the number of entities capable of doing so can be limited. At the same time, procurement processes require a high level of competition to keep premiums low. As a result, lack of competition during the procurement of SOS products can result in higher-priced bids.

Alternative approaches to procurement

During Synapse's 2026 investigation of premiums over the past 10 years, we also looked at whether there exist any procurement process changes that could reduce the premium and make SOS more affordable without creating undue risk to customers. In particular, we considered an option in use in other jurisdictions, the block-and-spot approach, which combines the strategies of electricity block purchases, spot purchases, and reconciliation.

6 All values in this paragraph were developed by Synapse in its July 2026 Overcharged in New England report (available at https://www.synapse-energy.com/sites/default/files/Overcharged%20in%20New%20England%2025-099_0.pdf, see page 20). $130 refers to the weighted average monthly bill paid by SOS customers in all three of Maine's EDCs from 2016 through 2025, based on data from EIA Form 861.

A **block-and-spot approach** is one in which energy is procured in blocks of fixed amounts (in MWh) at fixed prices. Since the quantity of MWh is known in advance, the price is simpler and less risky to estimate. Spot market purchases and sales are then used to balance underages and overages between the blocks and the actual instantaneous load. An SOS provider (e.g., a utility, a utility commission, or some other entity) serving as the purchasing entity sets a price for SOS for a set period (e.g., 12 months), and then during a subsequent time period, reconciles any over- or under-charges through an adjustment charge.

We noted that alternative approaches such as block-and-spot appeared to be gaining in interest among restructured states in New England. While Massachusetts, Maine, Rhode Island, and Connecticut all generally use full-requirements contracts approaches, PUCs and state legislatures in some of these states have been starting to express interest in increasing procurement from the spot market. For example, in New Hampshire, the PUC directed utilities to purchase 50 percent of load on the spot market in 2025, while purchasing the rest of load using the full-requirements model.[7] New York and Illinois make use of block-and-spot purchases, as do some municipal utilities in Massachusetts and utilities in Vermont.[8]

1.2. Standard offer service in Maine

In 2025, around 760,000, or 91 percent, of residential and small commercial customers of investor-owned utilities in Maine were enrolled in SOS.[9] Maine has two main electric distribution companies, Central Maine Power (CMP) and Versant Power Bangor Hydro, that serve SOS customers.[10] MPUC procures SOS using an annual competitive bidding process and a full-requirements contracts approach.

Under this process, competitive electricity suppliers submit bids to meet 100 percent of load for a given performance period (currently one year). The selected suppliers are responsible for serving load during 100 percent of hours at a pre-determined fixed price. This responsibility carries substantial risk because suppliers cannot predict instantaneous load, customer-switching, or real-time market prices.[11]

7 NH PUC DE 24-046. Order No. 28,129 Approving Modifications to Energy Service Procurement. April 15, 2025. Available at https://www.puc.nh.gov/VirtualFileRoom/ShowDocument.aspx?DocumentId=b7e85002-4c05-4a40-90f8-a3bbedb4bad5.

8 Exeter Associates. 2024. Solicitation and Procurement of Default Electric Service in New Hampshire. Prepared for the New Hampshire Department of Energy. Available at: https://www.energy.nh.gov/sites/g/files/ehbemt551/files/inlinedocuments/sonh/inv-2023-001-doe-final-report.pdf.

9 "Standard Offer Migration Statistics." Maine Public Utilities Commission. Available at: https://www.maine.gov/mpuc/sites/maine.gov.mpuc/files/inline-files/Standard%20Offer%20Migration%20Stats_0.xlsx

10 We did not evaluate the PUC's SOS for the Maine Public District in this analysis because the service territory is not within the ISO New England wholesale market.

11 Additionally, suppliers cannot hedge prices over periods longer than a year because they may not win the contract to provide standard offer service the following year.

1.3. Illinois' approach to procurement

In contrast to the full-requirements contract procurement approach used in Maine, Illinois uses the block-and-spot approach for acquiring electricity for eligible retail customers (the Illinois equivalent of SOS). A state agency, the Illinois Power Agency (IPA), conducts procurements on behalf of the state's three investor-owned utilities: ComEd, Ameren Illinois, and MidAmerican Energy. Illinois adopted this approach through legislation in 2007 in response to a procurement controversy in 2006.[12] In the mid-2010s, suppliers pushed for Illinois to change to the full-requirements contracts model, but the IPA determined that the cost of the risk premiums suppliers would add to bids would exceed the value to customers. The Illinois Commerce Commission agreed with the IPA and Illinois continues to use the block-and-spot approach.[13]

The IPA's approach to block-and-spot procurement has several key features:

- **Blocks:** The IPA procures electricity in 25-MW blocks up to 100 percent of the average forecasted monthly on-peak and off-peak load.[14] The IPA determines the quantity of blocks to be procured through an annual planning process.
- **Timing:** The IPA runs procurements twice a year (typically April and September) with a price ceiling to screen out uneconomic bids. Procurements often have a dozen or more winning bidders representing owners of generation, energy marketers, and energy trading firms.
- **Energy only:** The procurements are for a set quantity of MWh of electricity for each period (e.g., on- or off-peak hours for a given month). Capacity is either procured directly from the regional transmission organization capacity auctions (ComEd and MidAmerican) or through a combination of capacity auction pass-throughs and a separate hedging process (Ameren Illinois). Similarly, ancillary and other services are not part of the procurement and are a pass-through cost. RPS compliance costs are a separate line item from electricity supply.
- **Laddering**: The IPA ladders procurements over a series of five to six events prior to the delivery period to smooth out changes in market conditions, meaning IPA is not buying all of the electricity for a month at the same time.
- **Spot market purchases**: Actual usage of electricity ends up differing from the quantity of purchased blocks since no load forecast can anticipate exact instantaneous load, which depends on weather and other factors. Thus, the utilities buy and sell residual amounts of electricity in the spot markets to true-up the differences between procured blocks and actual load.
- **Reconciliation**: Utilities include a monthly "Purchased Electricity Adjustment" in customer bills to reconcile the customer's bill with the final costs to supply the energy. The spot market costs procured in one month are reconciled with customers in another month, with a four-month lag.

12 The Illinois Power Agency Act (20 ILCS 3855) was enacted through Public Act 59-0482, effective August 28, 2007.

13 See Final Order approving the 2015 Illinois Power Agency Procurement Plan at 112-114. ICC Docket No. 14-0588, December 14, 2015. Available at: https://icc.illinois.gov/downloads/public/edocket/393476.pdf.

14 In peak summer months, IPA procures up to 106 percent of monthly on-peak load.

2. METHODS

In this analysis, we compared the actual historical costs of full-requirements service in CMP territory, the estimated market costs of supply, and a set of counterfactual block-and-spot scenarios.[15] In this analysis, we focus on the MPUC's SOS for CMP, as CMP serves approximately 80 percent of Maine's residential and small business customers.[16]

2.1. Block-and-spot procurement design

First, we constructed a set of counterfactual scenarios for 2016–2025 in which the MPUC procured SOS for CMP using a block-and-spot approach. For each year within the study period, we simulated block purchases of electricity in three procurements of equal weights, bought six months apart. The final procurement occurred in November before the start of a 12-month service period in January. We wanted the approach to be simple yet incorporate laddering—the tool of having multiple opportunities to procure energy for the same delivery period—to diversify the energy purchase dates.

Using Maine procurement data to quantify energy blocks

Maine does not publish a load forecast as part of the data provided to bidders for the procurement events. Given this, we developed an approach to weather-normalize the historical load data for use as a load forecast. This approach used historical actual hourly load shapes from the Maine procurement website from each of the three years prior to each procurement (the most recent years of available data) to develop an average on- and off-peak monthly load forecast for each service year in the study period.[17]

We then set up three different options for the percentage of estimated monthly on- and off-peak load to be met by block purchases.

- **50 percent of estimated average monthly load:** Assumes that the blocks purchased would need to total 50 percent of the estimated average monthly load and that the other 50 percent would be purchased on the spot market.

15 This analysis relies on the same methodology for calculating actual historical rates and the market cost of supply that is documented in Synapse's Overcharged in Massachusetts report. Specifically, see Table 2. Overcharged: Suppliers' Retail Premiums are Inflating Massachusetts Electric Bills. Synapse Energy Economics. January 2026. Available at: https://www.synapse-energy.com/sites/default/files/Overcharged%20-%20Suppliers%27%20Retail%20Premiums%20are%20Inflating%20Massachusetts%20Electric%20Bills%2025-121.pdf.

16 This analysis focuses on CMP's "small" class, which includes residential and small commercial customers. While the analysis was limited to CMP, we believe that an analysis of the Versant Power Bangor Hydro service territory would yield similar results.

17 "Standard Offer Migration Statistics." Maine Public Utilities Commission. Available at: https://www.maine.gov/mpuc/sites/maine.gov.mpuc/files/inline-files/Standard%20Offer%20Migration%20Stats_0.xlsx.

- **75 percent of estimated average monthly load:** Assumes that the blocks purchased would need to total 75 percent of the average monthly load, with the remainder purchased on the spot market.
- **100 percent of estimated average monthly load:** Assumes that the blocks purchased would need to total 100 percent of the estimated average monthly load with only the difference between estimated average monthly load and actual instantaneous load purchased on the spot market.

For all scenarios, we used the same load forecast and assumed that each block would be 25 MW.[18] As a result, each scenario varies by the number of blocks and magnitude of spot purchases needed in each procurement.

Applying futures prices data to estimate block costs

Next, we calculated the price of each set of blocks. We acquired historical energy futures price data from OTC Holdings' EOXLive platform.[19] For each procurement event date (e.g., one day in Fall 2016), we used the futures prices that would have been available on that day *for the future delivery year* (e.g., 2017) to set the block price. For example, the purchase of blocks for 2017 would have occurred over three procurements of equal weights. One-third of the blocks needed for 2017 would have been purchased in Fall 2015; after the procurement in Spring 2016, two-thirds would have been acquired; and after the final procurement in Fall 2016, all the blocks needed for 2017 would have been purchased.

Table 1. Illustrative block procurement schedule for a subset of modeled years

	Schedule for Procuring On-Peak and Off-Peak Load for Calendar Year					
Procurement Event	**2016**	**2017**	**2018**	**2019**	**2020**	**…**
Fall 2014	One-third					
Spring 2015	Two-thirds					
Fall 2015	All	One-third				
Spring 2016		Two-thirds				
Fall 2016		All	One-third			
Spring 2017			Two-thirds			
Fall 2017			All	One-third		
Spring 2018				Two-thirds		
Fall 2018				All	One-third	
Spring 2019					Two-thirds	
…						

18 25-MW blocks are the quantity used in Illinois. See: "Energy Procurement Plans." Illinois Power Agency. Available at: https://ipa.illinois.gov/energy-procurement/prior-approved-plans.html.

19 Power Forward Curves. EOXLive. Available at: https://www.eoxlive.com/market-data/power-forward-curves/. Individual futures datapoints are confidential. This analysis presents aggregated data and derived results only.

Using Maine procurement data and ISO New England wholesale price data to estimate spot costs

For the spot portion of the total price, we developed a "proxy" cost for each year based on the hedged price of energy. This price is charged to consumers as spot costs are incurred, allowing the SOS provider the opportunity to offset incurred costs with customer revenues in each month. In order to do this, we compared the MWh of the block purchases for each hour with the actual load for each hour (available in the next year's data from the Maine procurement website) to determine how much would have been bought or sold on the spot market.[20] These costs are then aggregated by month, and compared to the revenue collected via the proxy price during that same time period.

Because the proxy price represents a guess at what future electricity prices are, there is always a discrepancy between what is collected from customers and what is incurred from spot purchases. We developed a simple method to spread out spot market costs to reduce the ratepayer bill impacts of potentially volatile spot purchase prices. For each half-year (e.g., January through June 2017) we summed the total amount of spot purchases and sales and divided this dollar quantity by the sum of the forecasted sales for the same period in the next year (e.g., January through June 2018) to create a $/kWh spot rate adjustment.[21] We included the spot rate adjustment in customer rates in the following year's reconciliation period (e.g., January through June 2018). We then performed this operation again in order to further resolve discrepancies in the following period (e.g., January though June 2019).[22]

This structure allows the SOS provider to recoup the bulk of spot market purchases in the year in which they are incurred, with reconciliation in the next one to two years further limiting monthly volatility in customer rates.[23] This method also produces a single spot rate charged to customers throughout a six-month period, with most years seeing relatively consistent supply prices across all 12 calendar months.

Factoring in non-energy components

To determine the price comparable to the SOS rate, we combined the block-and-spot costs with other costs embedded in SOS rates (e.g., capacity, RPS, other miscellaneous costs). Our estimates of these costs are based on data published by ISO New England and MPUC. Because these observed costs may change monthly, and because an SOS provider may wish to set stable prices for these cost categories in

20 In cases when the purchased blocks were above actual load for a given hour, we assumed that excess energy could be sold on the spot market. To estimate the revenues from these sales, we multiplied the difference by the actual hourly wholesale price from ISO New England to simulate selling. See Energy, Load, and Demand Reports. ISO New England. Available at: https://www.iso-ne.com/isoexpress/web/reports/load-and-demand/-/tree/zone-info/. We note that this most typically occurs in the scenario where blocks are purchased equivalent to 100 percent of estimated average monthly load.

21 Note that the "adder" could be positive or negative. Additionally, we assumed no borrowing costs or interest earned on spot market purchases.

22 For the purposes of this analysis, we end at two reconciliations, as this resolves the majority of any discrepancies.

23 We note that in the 120 months studied, the proxy price leads to an over-collection in revenue, relative to actual spot costs, in 73 percent of months. This is in part due to the fact that futures prices tend to be higher than actual energy prices. (For more on this, see the call-out box on the next page "Comparing premiums between New England and Illinois.") As a result, this means that in most months, the SOS provider would have actually been collecting more money than required for spot market purchases, necessitating a reconciliation for both overcollection and interest in a later period.

advance, we utilized the same method described above for spot energy prices. For each non-energy category, we set a proxy dollar-per-kWh price (based on the previous year's costs) that remains static throughout a year. This price then allows revenue to be collected from consumers monthly, offsetting the costs incurred by the SOS provider. Any differences between incurred costs and revenue collected through the proxy prices are then reconciled in the next year, with a second reconciliation step modeled after that. As with the spot energy approach, this method produces stable prices for a 12-month period.

Applying IPA data to calibrate bid prices and futures prices using a futures price adjustment

This analysis used futures prices as a proxy for bids that would have been received for blocks of electricity. To calibrate prices, we compared historical Illinois average winning bid prices published by the IPA (which lists a price for each month on-peak and off-peak) against futures price data from the bid dates to quantify a historical adjustment between block prices and futures prices (a futures price adjustment).[24] We calculated that in Illinois the historical adjustment was 1.45 percent over the ten-year period from 2016 through 2025 (i.e., the average winning bid price for blocks was 1.45 percent higher than the comparable futures price). We then applied this adjustment to futures prices for the energy block prices in our Maine analysis.[25]

Combining these ingredients, we were then able to estimate what the SOS customer rate would have been under a block-and-spot approach in Maine. We compared this rate to the historical rates under the full-requirements approach. Figure 2 shows the resulting estimated new total rate, broken out by supply component. It also compares the new rate against the historical monthly rate. Under the block-and-spot approach, the new rate is lower than the historical SOS rate in 90 percent of months over the study period (108 out of 120 months). In the 12 different months when the block-and spot approach produces a rate that exceeds the historical SOS rate, it only ever exceeds the historical SOS rate by 0.1 percent.

Comparing premiums between New England and Illinois

The median premium observed for Maine in Synapse's *Overcharged in New England* report was 36 percent, which represents the difference in the SOS price and a price based on wholesale prices. While it was outside of the scope of this report to develop a comparable premium estimate for Illinois over the same time period using the block-and-spot approach, a 2017 study by the Citizens Utility Board and the Environmental Defense Fund found that, "ComEd customers on the utility's default, flat-rate supply price as a whole paid, on average, over 13 percent more than they would have on real-time pricing."[26] This finding demonstrates that even the block-and-spot procurement approach contains a level of premium compared to wholesale prices due to setting prices ahead of

24 Illinois procurement results available on the IPA website at: https://ipa.illinois.gov/energy-procurement/procurement-results.html and https://ipa.illinois.gov/energy-procurement/prior-approved-plans.html.

25 We assume that spot electricity purchases costs, capacity costs, and all other costs are a direct pass-through and do not incur a premium. We also note that an SOS provider may incur some administrative costs related to managing the procurement that have not been accounted for in this analysis.

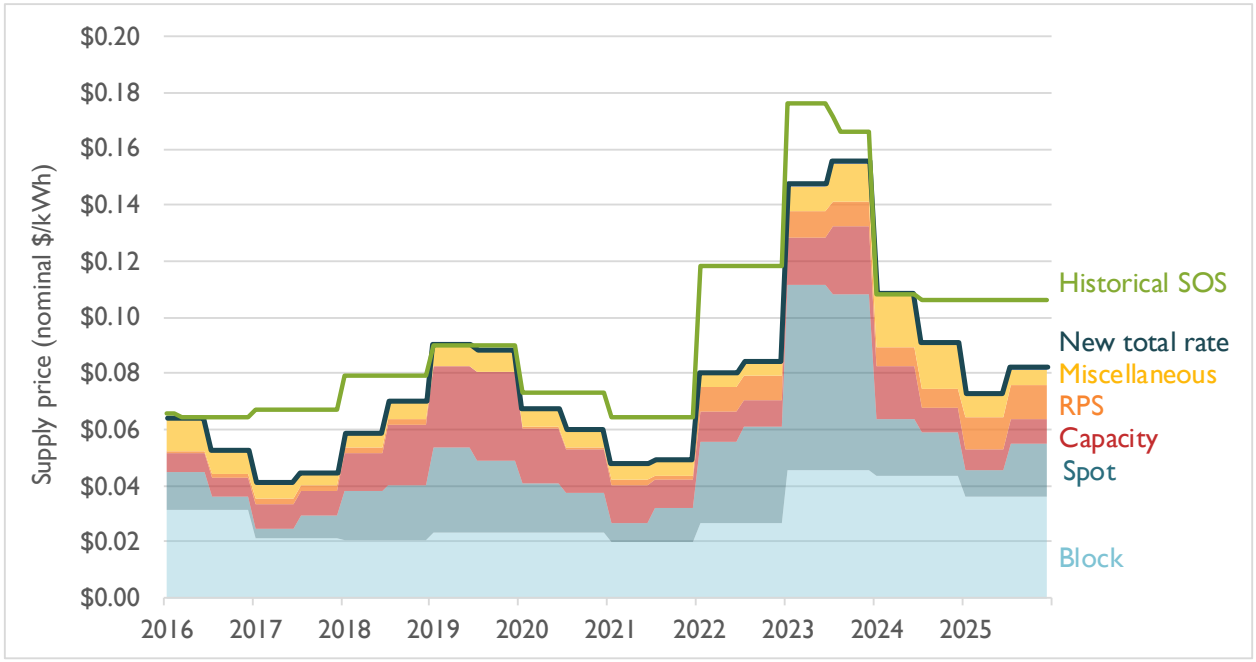
26 "Citizens Utility Board and Environmental Defense Fund. The Costs and Benefits of Real-Time Pricing: An empirical investigation into consumer bills using hourly energy data and prices." November 14, 2017. Available at: https://citizensutilityboard.org/wp-content/uploads/2017/11/20171114_FinalRealTimePricingWhitepaper.pdf.

time. The premium observed comparing Illinois flat-rate supply and real-time pricing is the difference between the procured price of electricity through the block-and-spot approach and the actual wholesale market price and that premium is different from the small adjustment made in the modeling for this report to calibrate futures prices and block prices.

However, we note that Illinois has a mature, competitive block procurement process, so by using the Illinois futures price adjustment of 1.45 percent in our Maine analysis, we are assuming the Maine block-and-spot market is competitive. It is plausible that in the early years of a block procurement approach in Maine the difference between futures prices and winning bid prices could be higher.

We also note that a comparison of 10 years of futures energy prices in Maine reveals that there is a statistical bias pushing settled energy prices lower than futures prices. In particular, we note that 2–14 months before a delivery date, the median futures price for on-peak energy is 9–15 percent higher than the settled energy price, with similar results for the off-peak period, suggesting that a price premium is baked into the futures prices themselves. This is not unexpected, as futures prices are the market's estimate at a given point in time about where prices will settle in the future and are not, in fact, actual future energy prices. Rather, futures prices represent what it would cost to have contracts for buying and selling future energy. Thus, some amount of uncertainty is baked into the pricing of futures. However, the observation that futures prices typically decline as they get closer to the delivery month suggests that there may be a theoretical floor for premiums, assuming that the prices resulting from procurements of blocks are largely correlated with futures pricing.

Figure 2. Estimated standard offer service rate under block-and-spot approach, by component, 2016–2025



2.2. Price threshold sensitivity design

When you buy a house, a key decision to make is when you lock in the interest rate for your mortgage. That decision locks you into a future cost stream for your mortgage which could be different depending on the day you choose. Procuring blocks of electricity is a similar decision. Electricity futures prices for a given delivery period may be different on one purchase date versus another. We conducted a sensitivity to test whether a simple maximum price threshold for block purchases could lead to lower costs overall.

In this sensitivity, we set up a price threshold that, when reached, triggered the SOS provider to not purchase blocks in a given procurement and instead either purchase the energy at the next procurement event or purchase it on the spot market. We set the price threshold to trigger an alternative procurement method whenever the futures price for a given procurement, for a given supply month, was within the top 5 percent of prices for that supply month seen within the last year.

3. FINDINGS

We found that block-and-spot procurements can lead to cost savings relative to full-requirements procurement, with the level of savings varying based on the assumed parameters.

3.1. Block-and-spot procurement leads to cost savings

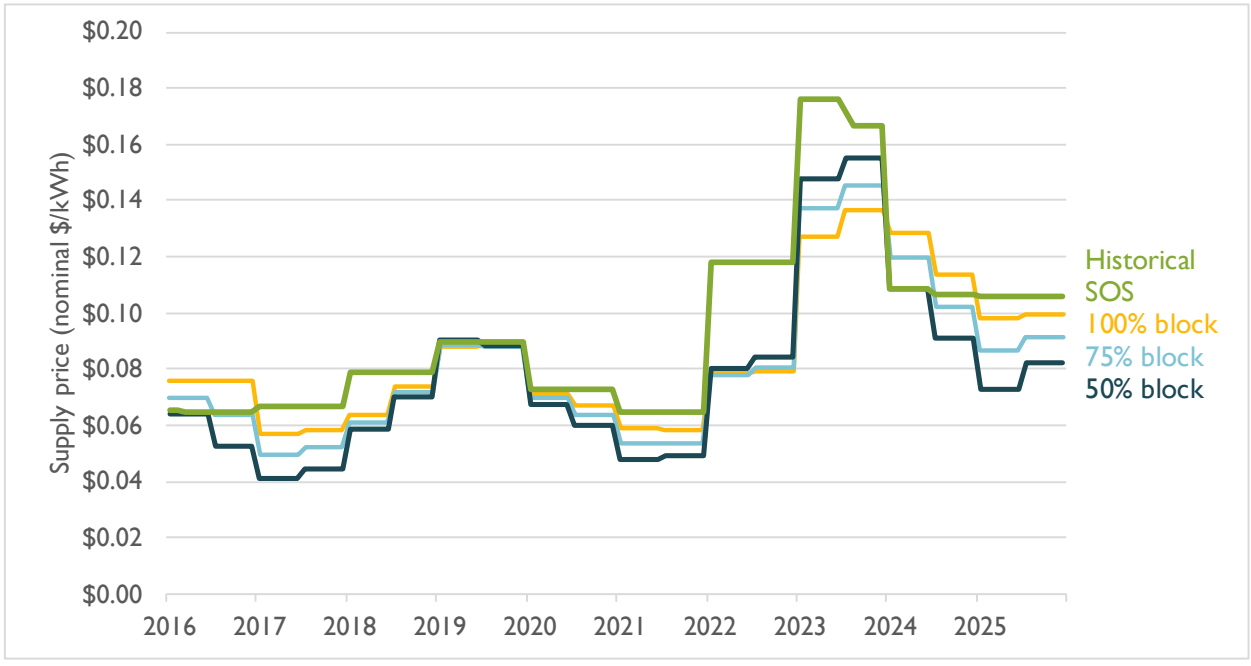
We found that a 50-percent block-and-spot procurement would have offered $743 million in savings over the 10 years from 2016 through 2025 (see Table 2). This is savings of 18 percent, relative to what SOS customers paid over that period. This translates to average savings of $11 per customer per month. Of the three primary scenarios analyzed (50 percent hedged, 75 percent hedged, and 100 percent hedged), the 50-percent option yields the highest level of savings. Across all three, SOS customers would have saved at least $426 million, or 10 percent, compared to what customers paid historically. Figure 3 shows the resulting monthly rate for each scenario, relative to the historical SOS rate.

Table 2. Savings in primary block-and-spot procurement scenarios compared to historical standard offer service

Percent blocks	Total ten-year savings	Average savings per customer per month	Percent savings
50 percent	$743 million	$11	18%
75 percent	$584 million	$9	14%
100 percent	$426 million	$6	10%

Note: All costs are presented in 2025 dollars and are shown over 2016-2025.

Figure 3. Estimated monthly standard offer service rate under primary block-and-spot approaches, by scenario, 2016-2025



3.2. Deferring procurements can yield even larger savings

When assessing the sensitivities with deferred procurements based on price thresholds, we found a wider range of results. In particular, we found that savings could be as high as $791 million, in a case where procurements that trigger a price threshold result in energy being bought using the spot market (see Table 3). The scenario with the lowest savings was the 100-percent hedged scenario where the deferred energy was procured at the next procurement, although that scenario still offers $396 million in savings, or $6 per customer per month, or savings of 9 percent.

Table 3. Savings in all block-and-spot procurement scenarios compared to historical standard offer service, 2016 through 2025

Procurements allowed to be deferred?	Percent blocks	Total ten-year savings	Average savings per customer per month	Percent savings
No (see Table 2)	50 percent	$743 million	$11	18%
	75 percent	$584 million	$9	14%
	100 percent	$426 million	$6	10%
Yes, deferred to spot market	50 percent	$791 million	$12	19%
	75 percent	$5648 million	$10	15%
	100 percent	$508 million	$8	12%
Yes, deferred to next procurement	50 percent	$740 million	$11	17%
	75 percent	$568 million	$9	13%
	100 percent	$396 million	$6	9%

Note: All costs are presented in 2025 dollars and are shown over 2016-2025.

3.3. Block-and-spot procurement also offers lower bill volatility

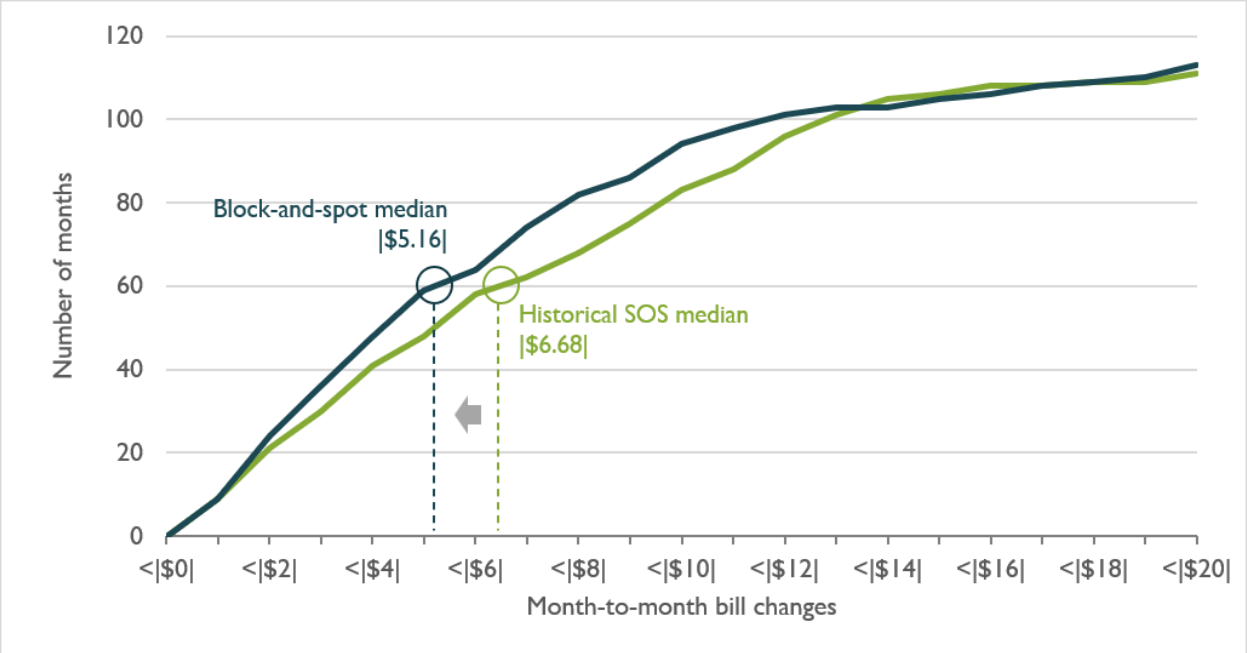
We ran a bill volatility analysis on each of the scenarios. To measure volatility, we focused on the effective bills paid by customers in each month.[27] The supply portion of customer bills is a function of two components: (a) customer usage (which is not assumed to vary across any scenarios) and (b) the supply rate (which changes in every scenario, including historical SOS). Change in the electricity rate is frequently used to assess volatility but is a poor metric for quantifying the impact on residential and small business customers. This is because customers do not pay rates; they pay bills (e.g., the rate times electricity usage). In addition, comparing percent changes across scenarios may be misleading in situations when rates are generally lower in one of the two scenarios.[28]

27 As with the rest of this whitepaper, this analysis is concerned with the supply portion of customer bills and does not include any assumptions about the delivery portion of customer bills.

28 For example, consider a situation where a supply rate is 15 cents per kWh, then increases 13 percent to 17 cents per kWh. Next, consider a rate changing from 10 cents per kWh to 12 cents per kWh. This second case has a 20 percent increase, despite the cent-per-kWh change being identical to the first case, and despite the customer paying less for electricity both before and after the rate change in the second case.

When analyzing the absolute value difference in month-to-month bill changes across scenarios, we found that because rates are generally lower than historical SOS in all block-and-spot scenarios, we observe smaller differences in month-to-month bills. In particular, we observe that in the 50-percent hedged, no deferred procurement scenario, half of all monthly bill changes are $5.16 or smaller, a $1.53 reduction compared to the same metric for historical SOS (see Figure 4).

Figure 4. Month-to-month bill changes in historical SOS compared to block-and-spot



Notes: Data points are shown as absolute values (e.g., |10|), representing months where consumers experience either increases or decreases in bills. The "block-and-spot" approach shown here is the scenario with 50 percent of energy hedged, with no procurement deferment allowed. This figure does not show the months with bill changes larger than $20 per month. About 93 percent of all months have bill changes smaller than $20 per month.

4. DISCUSSION

Synapse finds that switching away from full-requirements procurement and towards a block-and-spot approach would likely be cost effective. However, we do not conclude that MPUC should implement one of the exact procurement designs reflected in our modeled scenarios—more detailed analysis is needed to define a specific procurement plan.

Our analysis demonstrates that block-and-spot procurements would have likely saved hundreds of millions of dollars for Maine ratepayers over the past 10 years, relative to the full-requirements procurement approach currently in place. Our findings illustrate that switching away from full-requirements procurement is prudent. Looking forward, there are a few market changes that could make switching away from full-requirements procurement even more appealing.

Market changes that may inform Maine's approach to procurement

- **Capacity market changes**: Starting with the 2028/2029 delivery year ISO New England will be changing from a three-year forward capacity auction to a prompt year capacity auction, with the first auction scheduled for May 2028. Under the current market design the price of capacity is set well in advance of the delivery period and thus known to bidders in standard offer service procurements. Bidders should be able to price capacity into their bids with little risk. However, once the prompt capacity market design is implemented, bidders will not know the price of capacity ahead of time. As a result, having capacity as part of a procurement process as it is in a full-requirements model, rather than a pass-through cost as we model here, could increase the risk premiums even further.[29]
- **Day-Ahead Ancillary Services Initiative**: In 2025, ISO New England implemented the Day-Ahead Ancillary Services Initiative ("DASI") which changed how ancillary services are priced, and in 2026 the DASI market has seen significant volatility. While ongoing adjustments to DASI may reduce that volatility, the level of volatility and the value of asking bidders to manage that risk should be considered if the full-requirements approach stays in place. On the other hand, if electricity procurement is unbundled under a block-and-spot approach, volatility in the DASI price could have an impact on customers and it may be worth considering proactively implementing approaches to evening out how those costs are passed along to customers, such as the 12-month proxy price approach we modeled here.
- **Impacts of New England Clean Energy Connect:** The New England Clean Energy Connect (NECEC) transmission line came online in early 2026. Preliminary results suggest that the line is helping lower prices in Maine, particularly in peak hours. In other words, NECEC is reducing volatility in spot market prices in Maine compared to the past and to the rest of New England. One argument for a full-requirements procurement is that it creates price stability by asking suppliers to take on energy market volatility risk (and charging a

29 Under the current process in Maine, procurements are held in November for energy to be delivered the subsequent calendar year. Without a change in process, bidders will only know the price of capacity to embed in their bids for January through May, and they will have to take on the risk of uncertainty of the price of capacity for June through December.

premium for doing so). If the Maine electricity market has become less volatile, then the value of asking suppliers to manage volatility has decreased. A caveat is that NECEC has been in operation for less than a year, and this initial observation of its market impacts may change.

- **Renewable portfolio standard reform:** The current full-requirements procurement approach includes a requirement for bidders to supply renewable energy certificates (RECs) for compliance with the RPS. As Maine considers how to update the RPS and potentially implement different approaches to procuring new clean energy resources, it may be worth considering if it will continue to make sense for RECs to be part of electricity procurements or if RPS compliance obligations should be managed separately.

However, this analysis should not be used to select a *specific* procurement plan. Our analysis found that the scenario hedging just 50 percent of average energy through blocks led to the highest level of savings, but we note that all of the approaches to block-and-spot procurement that we studied would have produced savings, and there may yet be still other approaches that would yield even greater savings. As a result, we are not necessarily recommending that this—a 50 percent hedging strategy with blocks procured uniformly through each 12-month period—is the only or best solution for Maine.[30] Instead, we suggest good procurement planning that accounts for historical data and future-looking trends to devise the best procurement strategy for Maine ratepayers.

In addition, we note that switching procurement approaches is a major change, and savings might not accrue immediately. The range of participants in past Maine procurements has been limited and new entrants may not be familiar with or immediately aware of the new market opportunities in Maine with regard to block-and-spot procurements. It may take time for bidders to learn about and start participating in block procurements in Maine. As a result, initial procurements may not be fully competitive, and the results may not fully reflect the value of competitive bidding. However, ultimately, one value of the block-and-spot procurement approach is that the concept of blocks is a standard electric industry concept that is well known by a wide range of potential participants in competitive procurements. Another reason why a switch in procurement processes cannot guarantee savings right away is that New England energy markets are volatile and have been more volatile in recent years. Because the market fluctuates, any savings resulting from procurement changes will likely only accumulate over the span of several years.

In general, we find that moving away from full-requirements procurement could offer meaningful savings to Maine SOS customers. We recommend that policymakers define a new procurement method and stick to it, while also building in flexibility and reviewing it periodically to achieve the right balance of affordable and stable SOS rates.

30 For example, a more sophisticated block-and-spot procurement plan could vary the percentage of energy to hedge through block purchases between on-peak and off-peak periods in different months of the year.