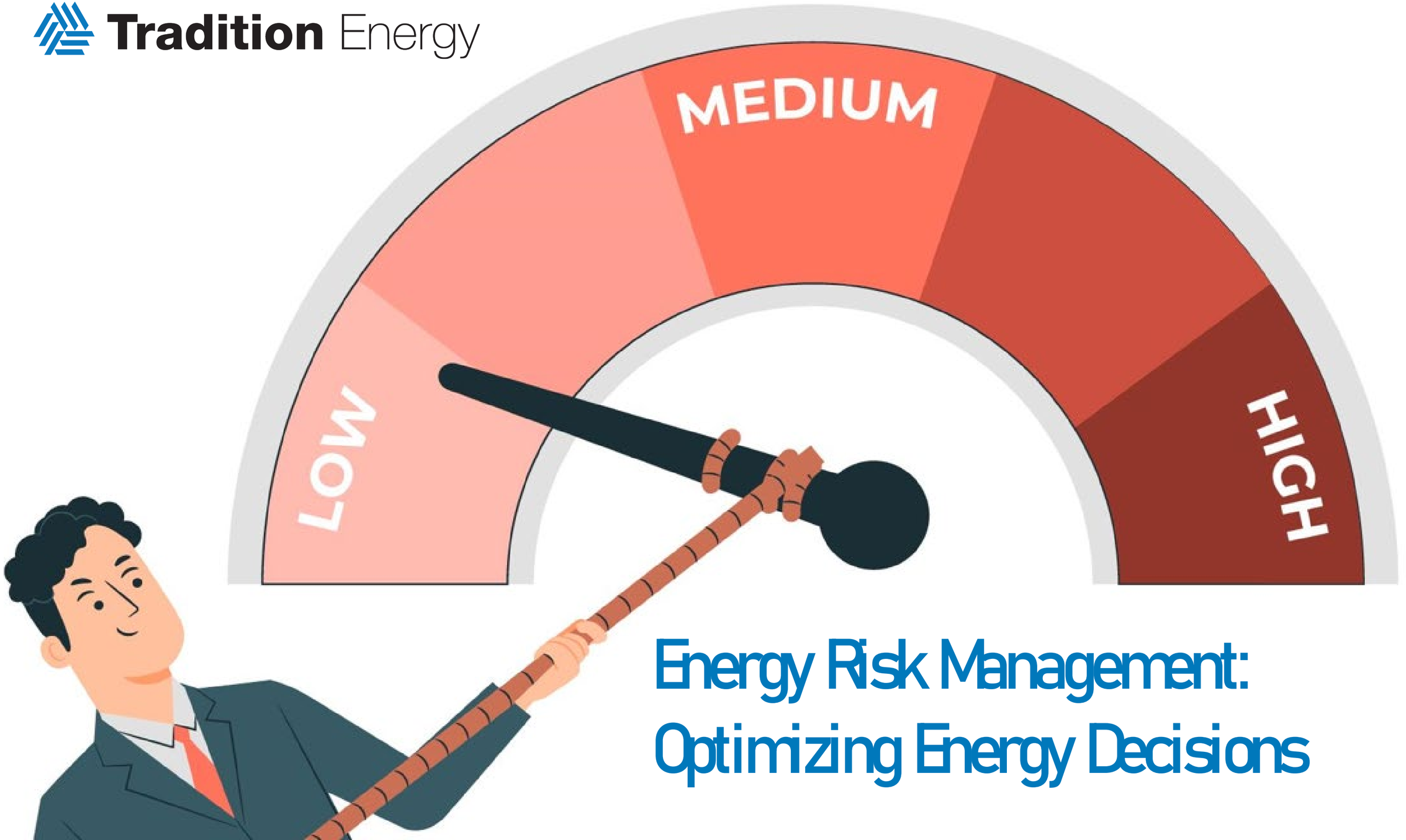
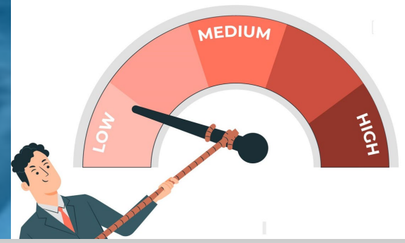
Tradition Energy



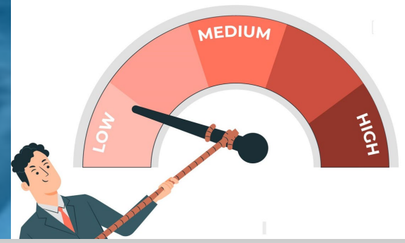
Energy Risk Management: Optimizing Energy Decisions

Today's Discussion



- What is risk management & why it is important
- The energy risk management process
- Benefits of various procurement strategies
- Constant assessment

Risk Management & It's Importance



- Knowing risk allows for better planning
- Bigger risk = larger potential cost impact
- How a cost change impacts your business
- Finding a balance between risk avoidance and opportunity cost

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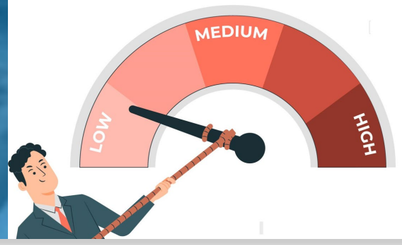
Process Overview



Release Forms & Invoices

Analyze Energy Usage & Confirm Contract Start Dates

Define Procurement & Sustainability Strategy

Evaluate Competitive Offers from Energy Suppliers & Sustainability Providers

Negotiate Agreement Terms

Monitor the Market & Refine Pricing

Sign Agreement

Client Services Support Begins

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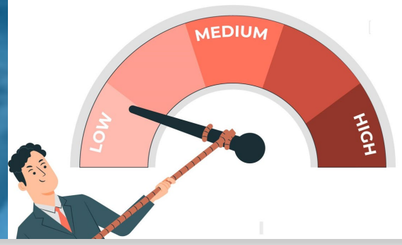
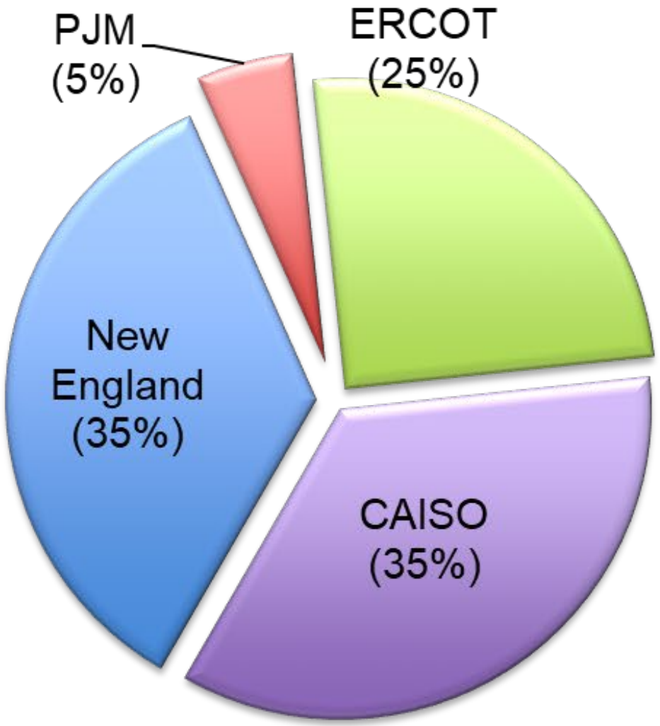
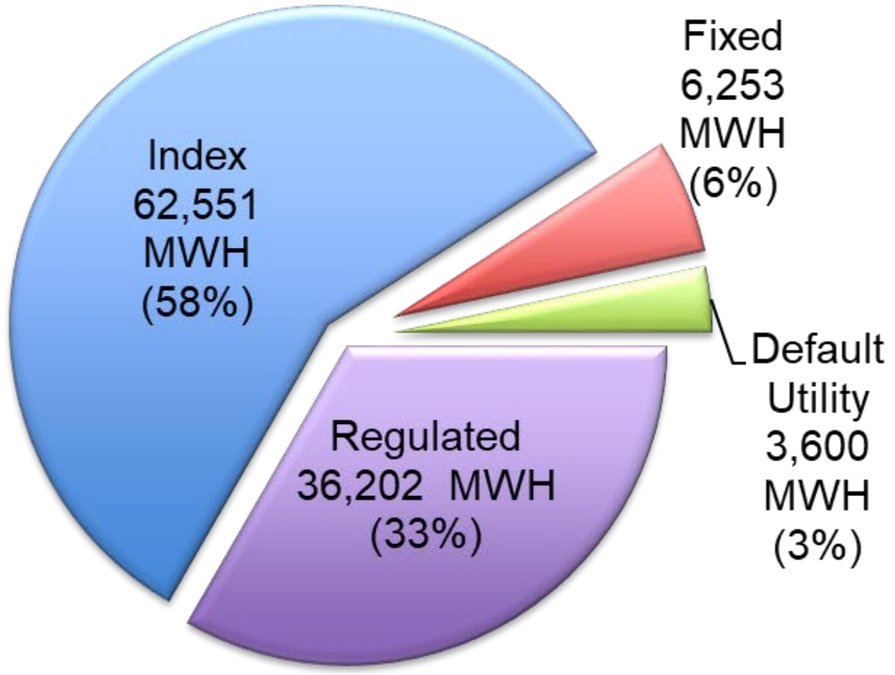
Portfolio Exposure Assessment

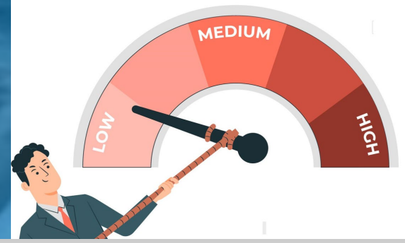






Understanding WHERE you have exposure is key to assessing possible strategies to mitigate risk.

Risk Management Process

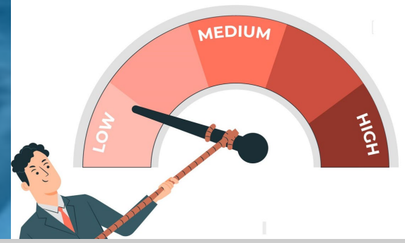


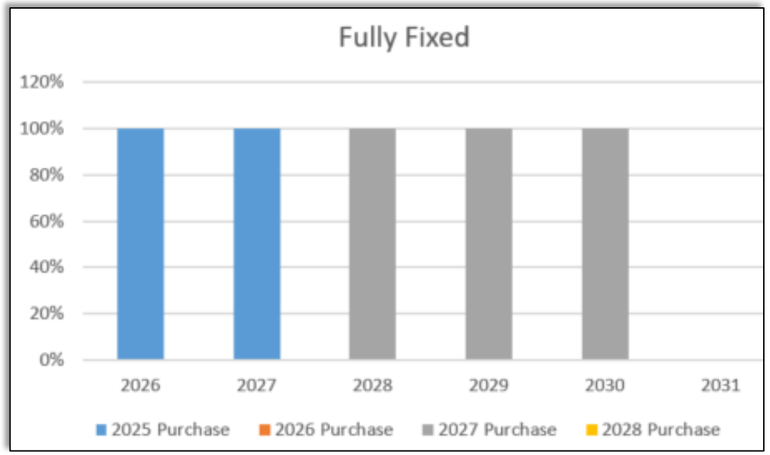
Establishing a Risk Profile

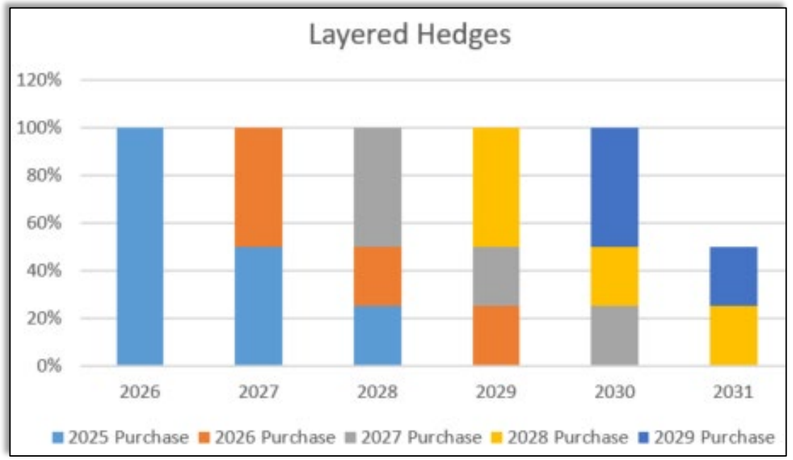
- Is there a corporate risk policy in place?
- Are there sustainability or carbon footprint reduction commitments?
- Are there corporate covenants regarding contract terms?
- Is budget certainty important?
- Is there a specific budget term (fiscal or planning year)?
- Can a business handle variation in costs from month to month?
- Is there operational flexibility around energy consumption?

Different facilities in different markets might have different responses.

Potential Strategies

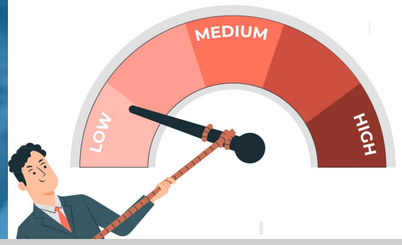




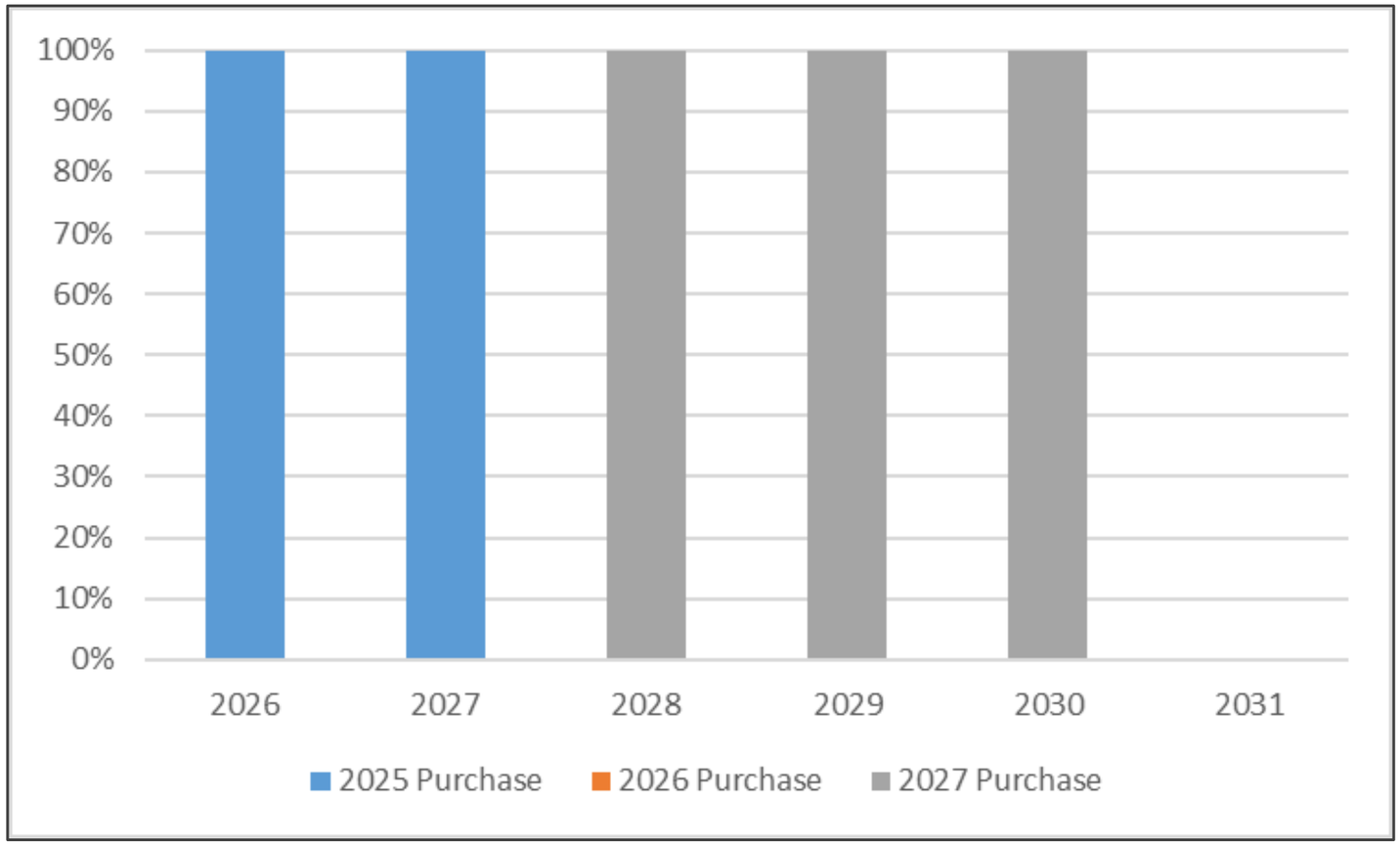


RISK TOLERANCE LEVELS

Risk Management Strategies



#1) Fully-Fixed Agreements



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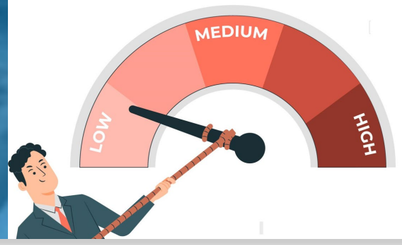
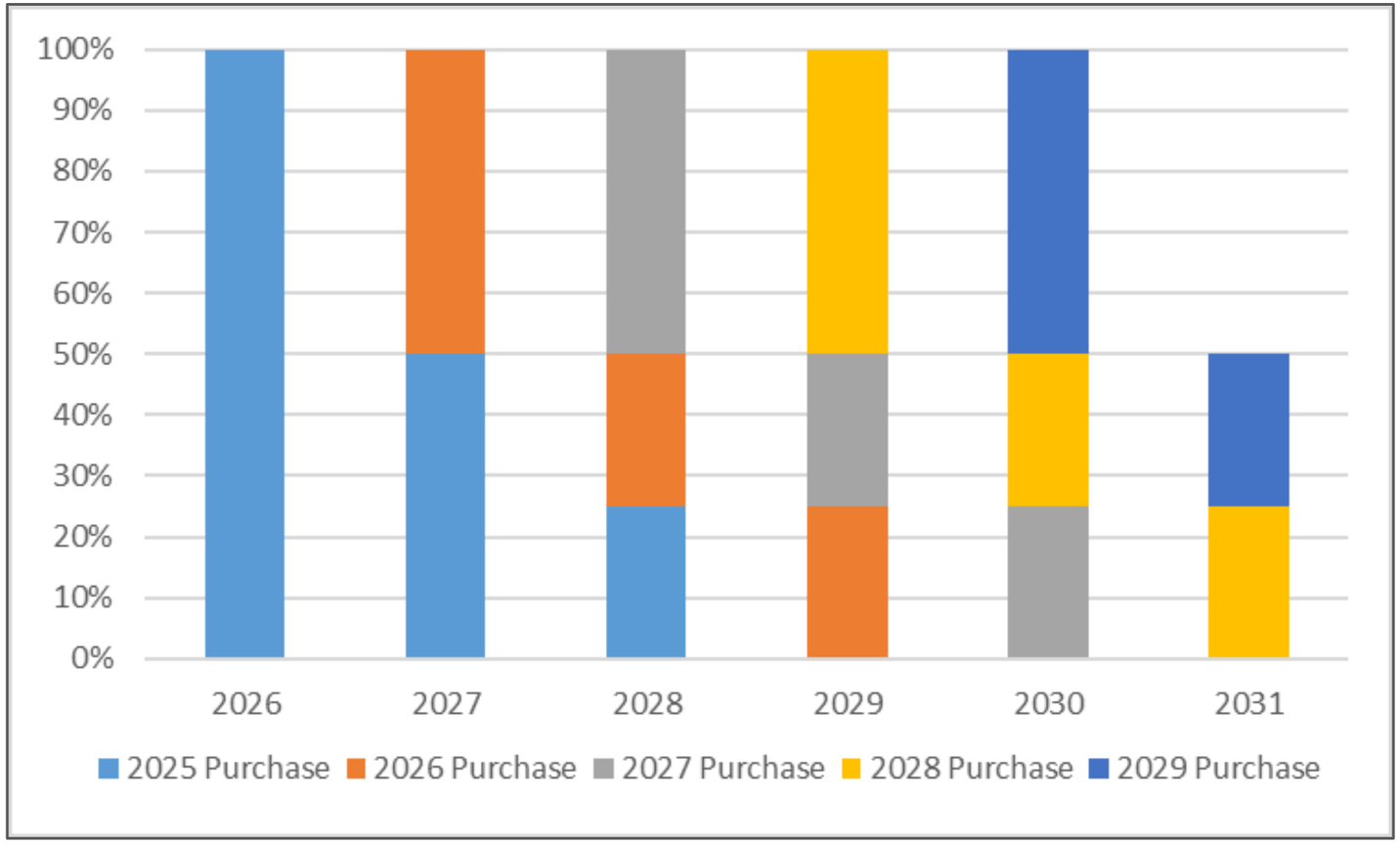
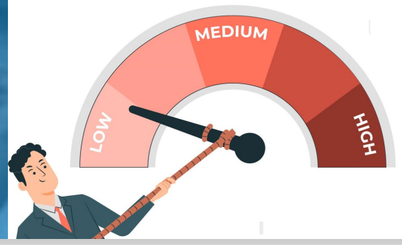
Risk Management Strategies



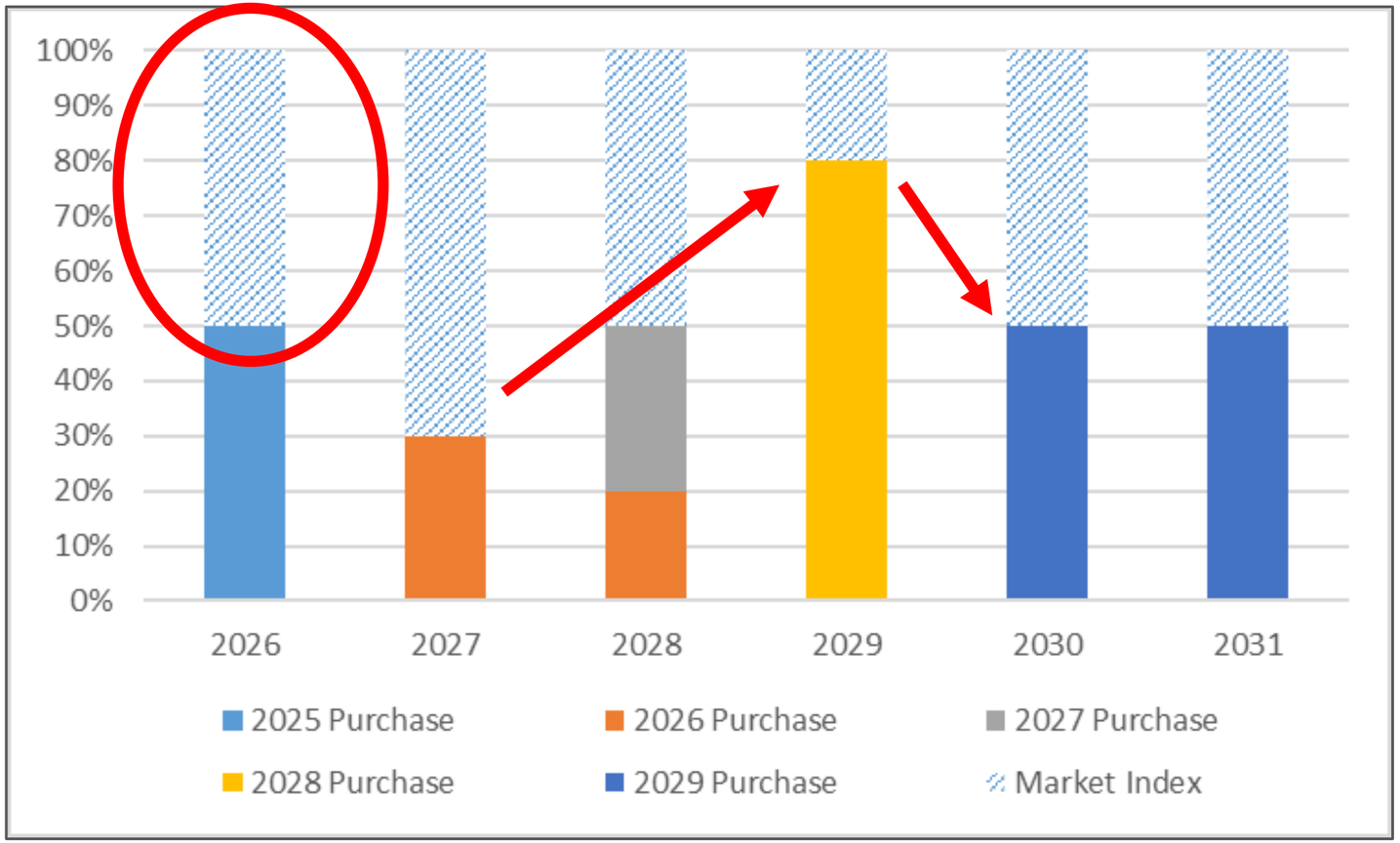
#2) Mechanical Layered Hedges



Risk Management Strategies



#3) Partial Hedges



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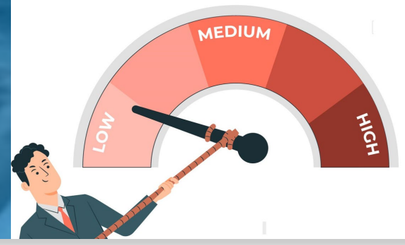
Risk Management Process (Cont.)

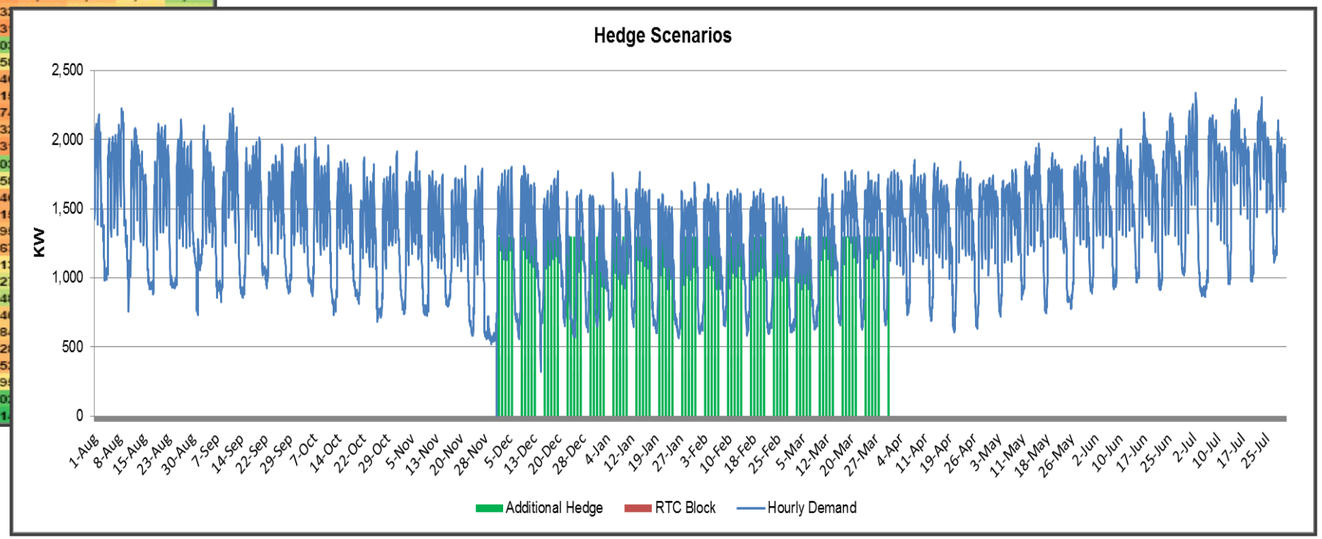


Exposure Analysis by Site

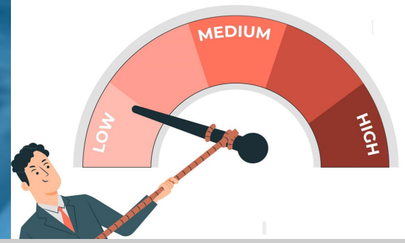
Assess current and future consumption patterns

- Allows for evaluation of products – do they fit a certain load shape?
- Load-shifting opportunities discussed

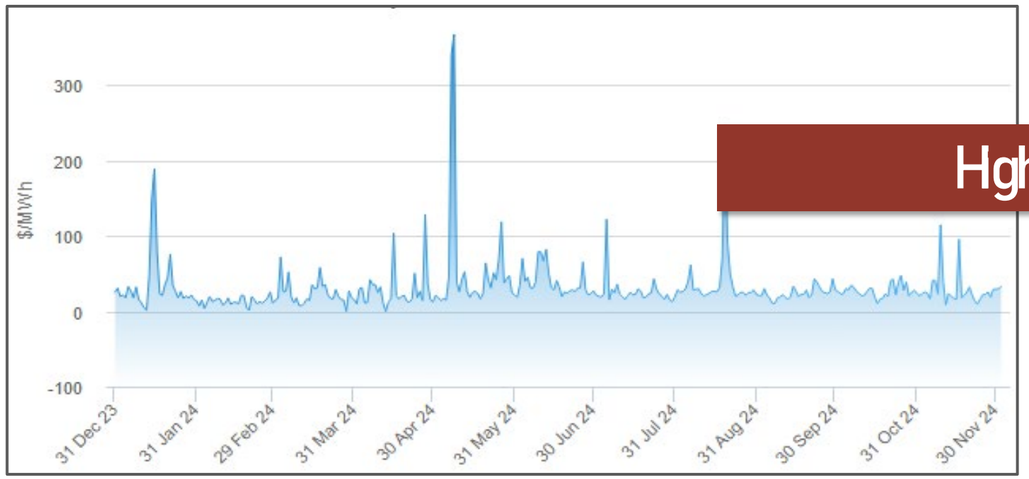
Date	HE 1	HE 2	HE 3	HE 4	HE 5	HE 6	HE 7	HE 8	HE 9	HE 10	HE 11	HE 12	HE 13	HE 14	HE 15	HE 16	HE 17	HE 18	HE 19	HE 20	HE 21	HE 22	HE 23	HE 24
8/1/2011	6,579	6,732	6,829	6,855	6,933	7,236	7,692	7,863	8,719	8,876	8,914	8,914	8,896	9,013	8,812	8,637	8,624	8,316	7,901	7,246	6,926	6,454	6,249	5,456
8/2/2011	5,813	6,107	6,076	7,149	7,421	7,537	7,897	8,121	8,738	8,906	9,019	9,072	9,034	8,962	8,924	8,890	8,870	9,020	8,329	7,215	7,059	6,743	6,539	6,282
8/3/2011	6,263	6,256	6,170	6,553	7,136	7,327	7,898	8,287	8,663	8,745	8,957	8,923	8,829	8,828	8,822	8,793	8,970	8,919	8,329	7,374	7,156	6,941	6,470	5,806
8/4/2011	5,941	6,098	6,033	6,963	7,542	7,774	8,046	8,256	8,889	9,106	9,223	9,255	8,866	9,064	9,057	8,945	8,757	8,573	8,360	7,13				
8/5/2011	5,642	5,678	5,575	6,222	7,905	7,574	7,846	8,202	8,563	8,698	8,728	8,859	9,107	9,159	9,191	9,215	9,193	9,107	8,592	7,43				
8/6/2011	5,882	5,840	5,569	5,448	5,484	5,512	5,486	5,438	5,673	5,943	5,927	5,835	5,936	5,866	5,832	5,705	5,627	5,675	5,615	5,70				
8/7/2011	5,281	5,350	5,357	5,332	5,337	5,374	5,341	5,324	5,498	5,646	5,711	6,325	6,367	6,400	6,396	6,358	6,368	6,279	6,225	6,25				
8/8/2011	6,579	6,732	6,829	6,855	6,933	7,236	7,692	7,863	8,719	8,876	8,914	8,914	8,896	9,013	8,812	8,637	8,624	8,316	7,901	7,24				
8/9/2011	5,813	6,107	6,076	7,149	7,421	7,537	7,897	8,121	8,738	8,906	9,019	9,072	9,034	8,962	8,924	8,890	8,870	9,020	8,329	7,21				
8/10/2011	6,263	6,256	6,170	6,553	7,136	7,327	7,898	8,287	8,663	8,745	8,957	8,923	8,829	8,828	8,822	8,793	8,970	8,919	8,329	7,37				
8/11/2011	5,941	6,098	6,033	6,963	7,542	7,774	8,046	8,256	8,889	9,106	9,223	9,255	8,866	9,064	9,057	8,945	8,757	8,573	8,360	7,13				
8/12/2011	5,642	5,678	5,575	6,222	7,905	7,574	7,846	8,202	8,563	8,698	8,728	8,859	9,107	9,159	9,191	9,215	9,193	9,107	8,592	7,43				
8/13/2011	5,882	5,840	5,569	5,448	5,484	5,512	5,486	5,438	5,673	5,943	5,927	5,835	5,936	5,866	5,832	5,705	5,627	5,675	5,615	5,70				
8/14/2011	5,281	5,350	5,357	5,332	5,337	5,374	5,341	5,324	5,498	5,646	5,711	6,325	6,367	6,400	6,396	6,358	6,368	6,279	6,225	6,25				
8/15/2011	6,579	6,732	6,829	6,855	6,933	7,236	7,692	7,863	8,719	8,876	8,914	8,914	8,896	9,013	8,812	8,637	8,624	8,316	7,901	7,24				
8/16/2011	5,813	6,107	6,076	7,149	7,421	7,537	7,897	8,121	8,738	8,906	9,019	9,072	9,034	8,962	8,924	8,890	8,870	9,020	8,329	7,21				
8/17/2011	5,812	5,798	6,064	7,158	7,564	7,543	7,984	8,366	8,863	9,005	8,910	9,112	9,002	8,868	8,863	8,764	8,713	8,616	7,940	6,99				
8/18/2011	6,038	5,924	5,745	6,050	7,233	7,370	7,674	7,870	8,130	8,398	8,401	8,514	8,726	8,752	8,840	8,878	8,905	8,762	8,382	7,16				
8/19/2011	5,839	5,809	5,711	6,954	7,429	7,239	7,635	8,001	8,309	8,384	8,441	8,651	8,809	8,720	8,639	8,574	8,596	8,379	7,674	6,41				
8/20/2011	5,740	5,711	5,447	5,356	5,413	5,465	5,529	5,618	5,847	5,854	5,840	5,839	5,860	5,864	6,099	6,922	6,522	6,442	6,230	6,12				
8/21/2011	5,502	5,652	5,646	5,617	5,679	5,728	5,712	5,784	6,191	6,259	6,107	6,072	6,118	6,177	6,209	6,226	6,159	6,012	5,925	5,94				
8/22/2011	7,466	7,572	7,530	7,388	7,229	7,354	7,678	7,973	8,356	8,632	8,439	8,562	8,525	8,503	8,537	8,429	8,429	8,329	7,823	6,84				
8/23/2011	5,788	5,776	5,742	6,177	6,893	6,896	7,393	7,803	8,132	8,304	8,402	8,421	8,361	8,260	8,303	8,294	8,259	8,178	7,670	6,78				
8/24/2011	5,694	5,706	5,818	6,423	6,930	6,851	7,322	7,692	8,224	8,421	8,514	8,587	8,739	8,704	8,647	8,603	8,585	8,465	8,049	7,02				
8/25/2011	5,858	5,909	5,861	6,166	7,444	7,595	8,094	8,392	8,698	8,793	8,719	8,726	8,715	8,622	8,658	8,559	8,455	8,461	8,170	7,05				
8/26/2011	5,538	5,566	5,854	7,316	7,567	7,498	7,885	8,174	8,680	8,872	8,709	8,856	8,915	8,837	8,739	8,687	8,642	8,498	8,167	6,39				
8/27/2011	5,873	5,813	5,603	5,547	5,587	5,627	5,688	5,767	6,217	6,868	6,480	6,247	6,127	6,123	6,162	6,191	5,530	5,410	5,355	5,40				
8/28/2011	5,446	5,589	5,576	5,589	5,557	5,553	5,521	5,452	5,473	5,427	5,298	5,298	5,235	5,228	5,207	5,174	5,171	5,191	5,180	5,21				

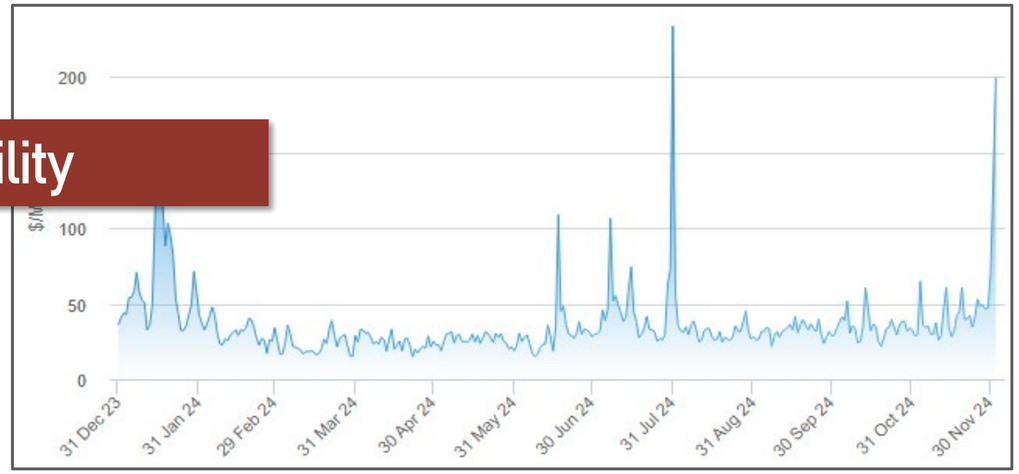


Risk Management Process (Cont.)

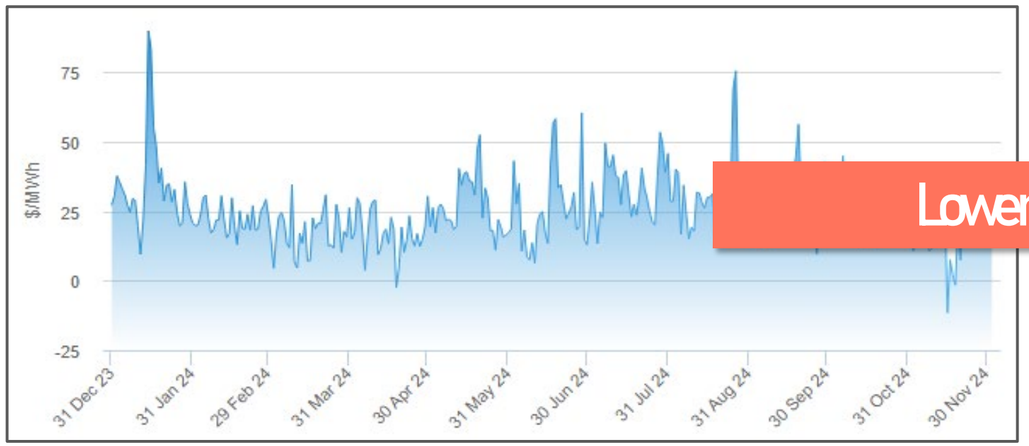


Assess the Regional Market

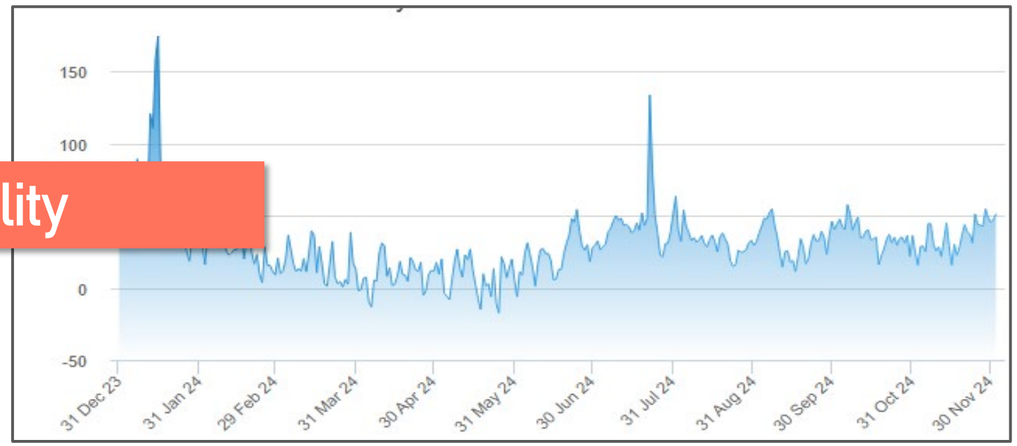




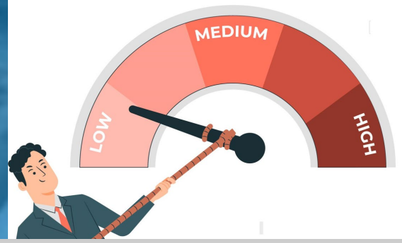
Hgh Volatility



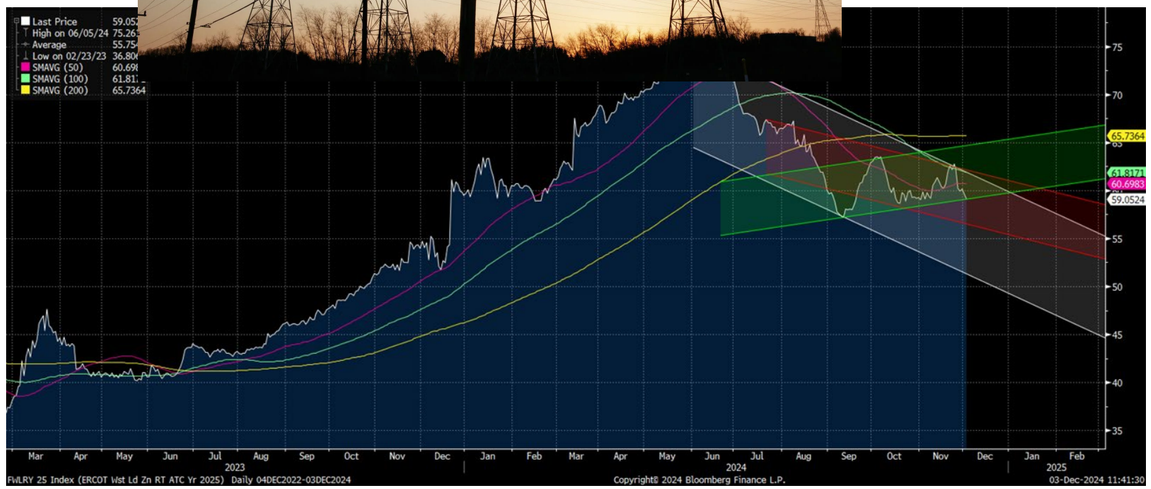
Lower Volatility

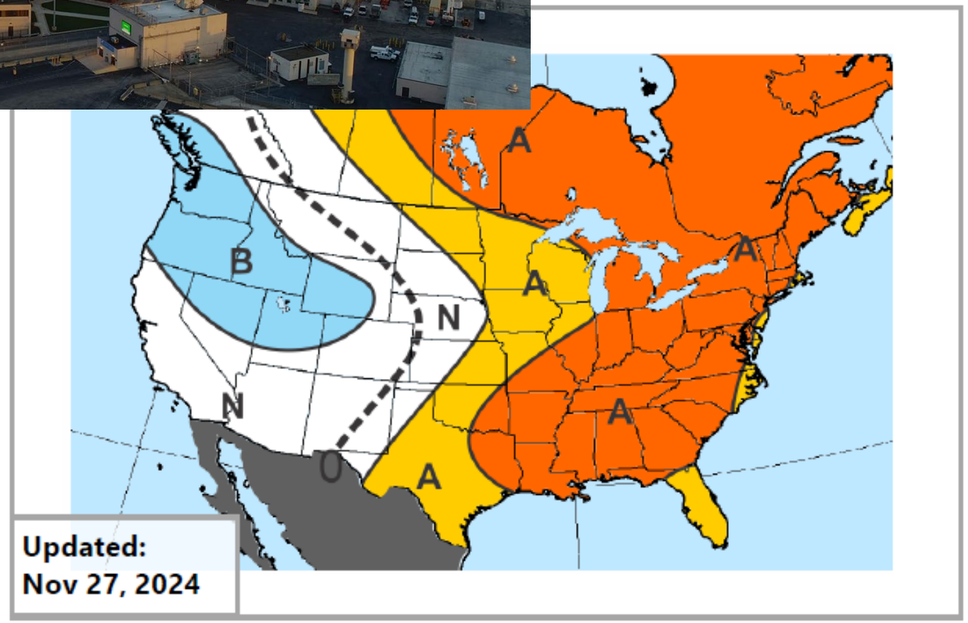


Risk Management Strategies



Decision Drivers





There are a lot of regional factors to consider.

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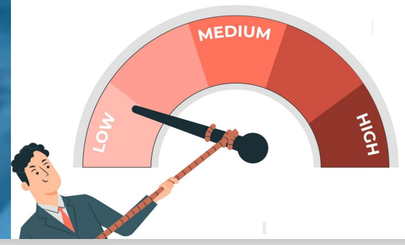
Go To Market: Strategy Implementation



Recommended Electricity Procurement Strategy

Compared to the Historical Utility Rate

Client Name - Site Name - City, State

Estimated Annual Electricity Usage*:	2,900,400	*kWh*
Est. Average Historical Utility Rate ($/kWh):	$ 0.10744	
Current Estimated Annual Spend:	$ 311,619	

Date Created: 7/20/2023

Supplier Price Comparison:

Recommended Term

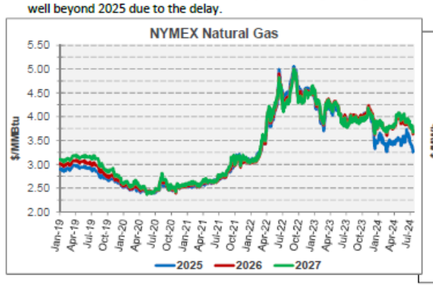
Term:	12 MONTHS	24 MONTHS	36 MONTHS	48 MONTHS	60 MONTHS
Product:	Fixed	Fixed	Fixed	Fixed	Fixed
Start Date:	Apr-25	Apr-25	Apr-25	Apr-23	Apr-23
Supplier:	Constellation	Constellation	Constellation	Constellation	Constellation
Rate ($/kWh):	0.11920	0.11770	0.11450	0.11920	0.11920
Annual Estimated Budget:	$ 345,728	$ 341,377	$ 332,096	$ 345,728	$ 345,728
Est. Annual Difference ($):	$ 34,109	$ 29,758	$ 20,477	$ 34,109	$ 34,109
Est. Annual Difference (%):	10.9%	9.5%	6.6%	10.9%	10.9%
Swing %/MAC:	Unbanded	Unbanded	Unbanded	Unbanded	Unbanded
Payment Terms:	Utility	Utility	Utility	Utility	Utility

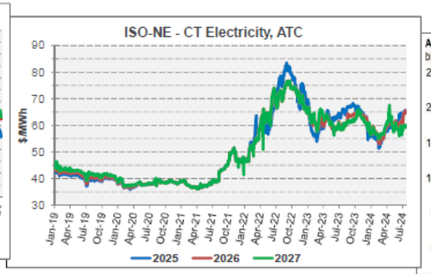
Recommendation:

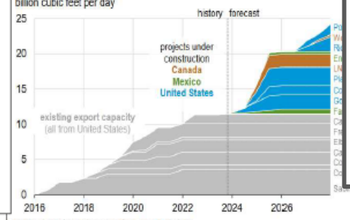
1. Based on the forward electricity market remaining just above all-time lows and a forward view of rising prices, Tradition recommends a 36 month fixed, all-in rate with Constellation to lock in budget certaint from future market volatility.

Rationale:

1. Natural Gas prices, which drive electricity prices in this region, are suppressed following an extraordinarily mild Winter 2022-2023, which was then followed by a mild Summer 2023. Forward markets anticip winter due to El Nino conditions in the eastern Pacific, but should the coming winter actually turn out less mild than expected, energy markets will likely rebound from their current lows.
2. Limited gas pipeline infrastructure supplying New England necessitates the need for liquefied natural gas (LNG) imports to meet winter gas and electricity demands. Global demand for LNG is at an all-time h countries constructing new import facilities to increase their use of the fuel in coming years. Since New England relies on globally-sourced LNG to meet peak winter demands, the increases in LNG prices are reflected in the price of both natural gas and electricity in the region.
3. There are growing concerns about the future of both the Mystic Generating station and the Everett LNG terminal just north of Boston. Current expectations are that the existing funding agreement with the which is key to regional reliability, will be extended beyond its scheduled expiration of May 31, 2024, and that a similar agreement will be reached to keep the LNG terminal open. Should either of those func to materialize, we anticipate uncertainty and prices for electricity in New England in late 2024 and all of 2025 to increase significantly and linger for several years.
4. The New England Clean Energy Connect, a 1,200 MW transmission line aiming to provide New England with hydroelectric energy from Canada, has recently had its suspension overturned after being suspen November 2021. This line is viewed as key to reducing the region's reliance on natural gas for electricity generation and limiting price volatility especially during cold winter months, but construction is expec well beyond 2025 due to the delay.





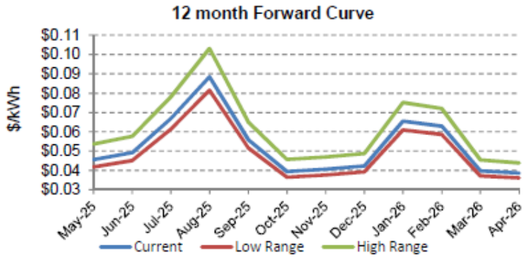


Tradition Energy

Budget Sensitivity Analysis - Sample

11/11/24

Evaluated Term	May 25 to Apr 29
Estimated Term Usage (kWh)	191,817,000
Current Forward Wholesale Market	$0.0499
Potential Range in the next 60 days: -8% to 18%	$0.0476 - $0.0549



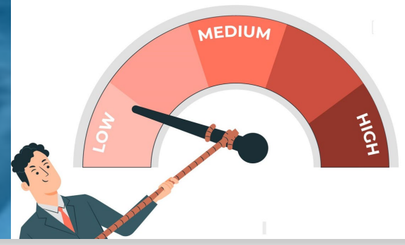
Budget Impact ($)

Likely Range

% of Volume Fixed	-8.4%	3 Standard Deviations	2 Standard Deviations	1 Standard Deviation	Base Case	1 Standard Deviation	2 Standard Deviations	3 Standard Deviations	17.7%
		<—Possible Market Decrease				Possible Market Increase —>			
0%	-$597,278	-$569,206	-$436,013	-$191,129	$0	$404,663	$923,137	$1,205,137	$1,264,572
25%	-$400,176	-$381,368	-$292,129	-$128,056	$0	$271,124	$618,502	$807,442	$847,263
50%	-$298,639	-$284,603	-$218,006	-$95,564	$0	$202,331	$461,569	$602,568	$632,286
75%	-$199,491	-$190,115	-$145,628	-$63,837	$0	$135,157	$308,328	$402,516	$422,367
100%	$0	$0	$0	$0	$0	$0	$0	$0	$0

Tradition Energy

Continued Assessment: Performance Analysis



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Tradition Energy													
2														
3														
4	Last Updated: 11/11/2024	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	FY 23/24
5														
6	SITE 1													
7	Forecast (MWh)	*20,435*	*21,822*	*20,365*	*19,662*	*19,852*	*18,457*	*19,222*	*19,138*	*20,045*	*19,543*	*20,011*	*20,455*	*239,007*
8	Actual (MWh)	20,632	21,890	21,540	19,750	19,750	19,240	19,250	19,010	19,375	-	-	-	181,037
9														
10	Total Block (MWh)	10,316	10,945	10,770	9,875	18,000	18,600	18,600	17,400	7,440	7,200	7,440	7,200	143,786
11	% of Block	50%	50%	50%	50%	91%	97%	97%	92%	37%	37%	37%	35%	60%
12														
13	Block Cost ($/MWh)	$ 38.45	$ 38.45	$ 38.45	$ 38.45	$ 96.53	$ 96.53	$ 96.53	$ 96.53	$ 83.21	$ 83.21	$ 83.21	$ 83.21	$ 70.3917
14	Adder ($/MWh)	$ 24.32	$ 24.32	$ 24.32	$ 24.32	$ 54.57	$ 54.57	$ 54.57	$ 54.57	$ 54.57	$ 54.57	$ 54.57	$ 54.57	$ 42.61
15	Total Block Cost ($/MWh)	$ 62.77	$ 62.77	$ 62.77	$ 62.77	$ 151.10	$ 151.10	$ 151.10	$ 151.10	$ 137.78	$ 137.78	$ 137.78	$ 137.78	$ 113.00
16	Market Cost ($/MWh)	$ 42.47	$ 33.13	$ 40.23	$ 33.18	$ 35.02	$ 32.82	$ 71.05	$ 34.32	$ 29.36	$ 31.33	$ 30.92	$ 36.70	$ 38.11283
17	Total Unhedged Cost ($/MWh)	$ 66.79	$ 57.45	$ 64.55	$ 57.50	$ 89.59	$ 87.39	$ 125.62	$ 88.89	$ 83.93	$ 85.90	$ 85.49	$ 91.27	$80.72122
18	Total Estimated Supply Cost ($/MWh)	**$ 64.78**	**$ 60.11**	**$ 63.66**	**$ 60.14**	**$ 145.65**	**$ 148.98**	**$ 150.24**	**$ 145.83**	**$ 103.99**	**$ 105.01**	**$ 104.93**	**$ 107.64**	**$ 103.72**
19														
20	08/16/21													
21	Block Size (MW/%)	50%	50%	50%	50%									
22	Block (MWh)	10,316	10,945	10,770	9,875									
23	Block Cost ($/MWh)	$ 38.45	$ 38.45	$ 38.45	$ 38.45									
24	Market on Sign Date ($/MWh)	$ 42.14	$ 41.80	$ 35.21	$ 36.20									
25	Difference to Current Market (%)	-1%	21%	-14%	8%									
26														
27	07/13/23													
28	Block Size (MW/%)					10								
29	Block (MWh)					7,200								
30	Block Cost ($/MWh)					$ 83.21	$							
31	Market on Sign Date ($/MWh)					$ 85.25	$							
32	Difference to Current Market (%)					59%								
33														
34	10/27/23													
35	Block Size (MW/%)					15	15	15	15					
36	Block (MWh)					10,800	11,160	11,160	10,440					
37	Block Cost ($/MWh)					$ 105.41	$ 105.41	$ 105.41	$ 105.41					
38	Market on Sign Date ($/MWh)					$ 88.49	$ 98.50	$ 120.45	$ 114.20					
39	Difference to Current Market (%)					60%	67%	41%	70%					
40														
41														
42	Average LMP ($/MWh)*	$ 42.47	$ 33.13	$ 40.23	$ 33.18	$ 35.02	$ 32.82	$ 71.05	$ 34.32	$ 29.36	$ 31.33	$ 30.92	$ 36.70	$ 38.11
43	Forward Market ($/MWh)**													$ -
44														
45	*Monthly arithmetic average Market LMP adjusted for losses.													
46	**Monthly forward strip for Market adjusted for losses.													

08/16/21				
Block Size (MW/%)	50%	50%	50%	50%
Block (MWh)	10,316	10,945	10,770	9,875
Block Cost ($/MWh)	$ 38.45	$ 38.45	$ 38.45	$ 38.45
Market on Sign Date ($/MWh)	$ 42.14	$ 41.80	$ 35.21	$ 36.20
Difference to Current Market (%)	-1%	21%	-14%	8%

Tradition Energy

A&M Energy Analytics (AMEN)

2025 Member Meeting

Energy Cost Optimization (ECO): Solutions

1. **Validate Invoice Accuracy**
2. **Optimize Distribution Costs**
3. **Leverage Energy Incentives**
4. **Improve Operational Performance**
5. **Diversify with Alternative Energy**

Energy Cost Optimization (ECO): Program

Free 2 Week Pre-Qualification

Members **Save an Average of 10-15%** on Energy Costs

1: Collect Data

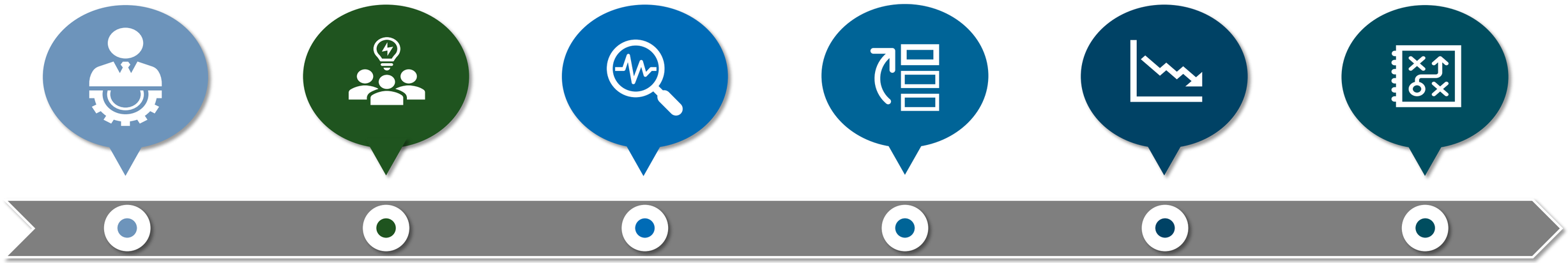
2: Organize & Review Data

3: Model Data

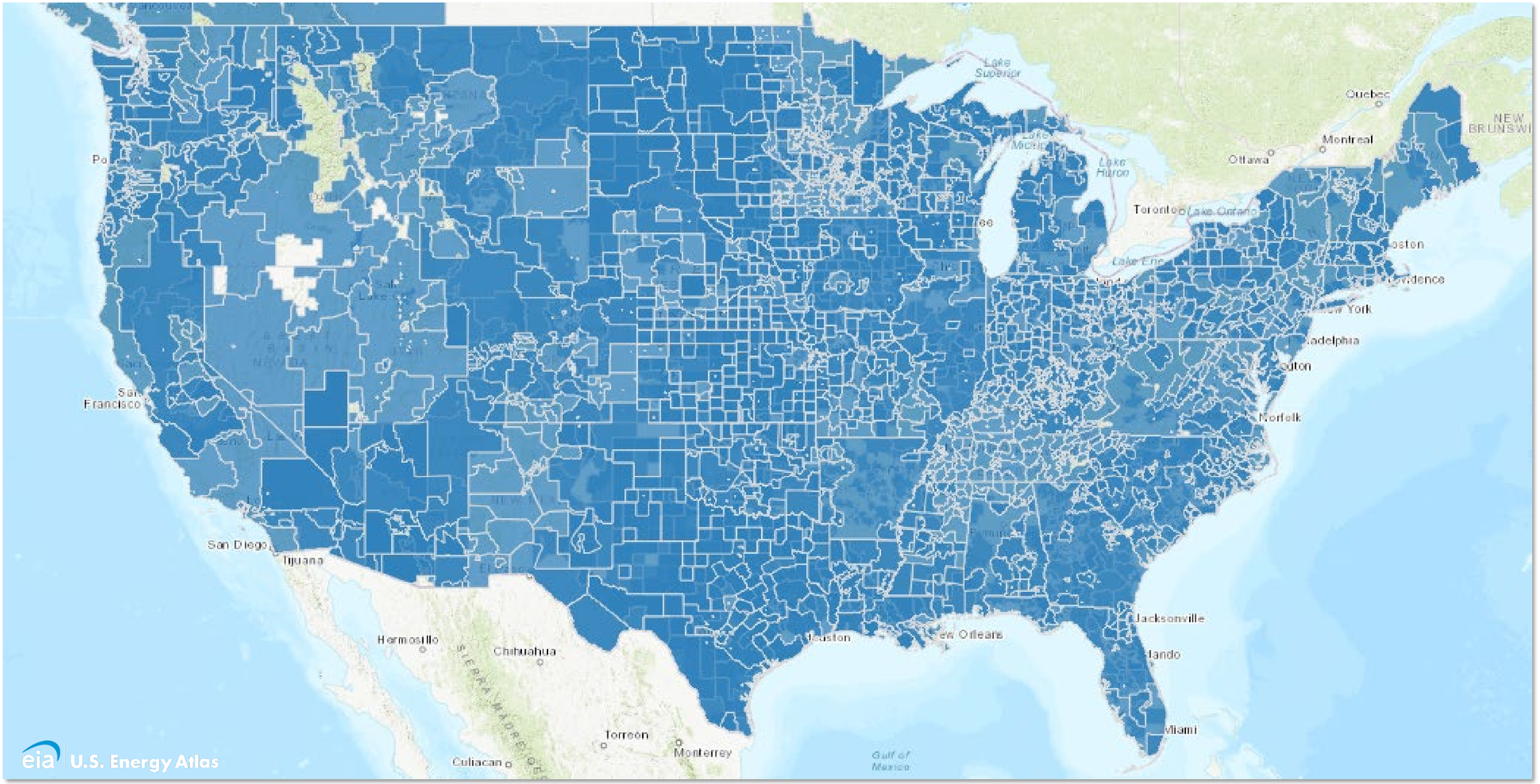
4: Prioritize Findings

5: Identify Funding Sources

6: Deliver Recommendations & Path Forward



Energy Landscape: ~3,000 Utilities and over 10,000 Distribution Rates in the U.S.



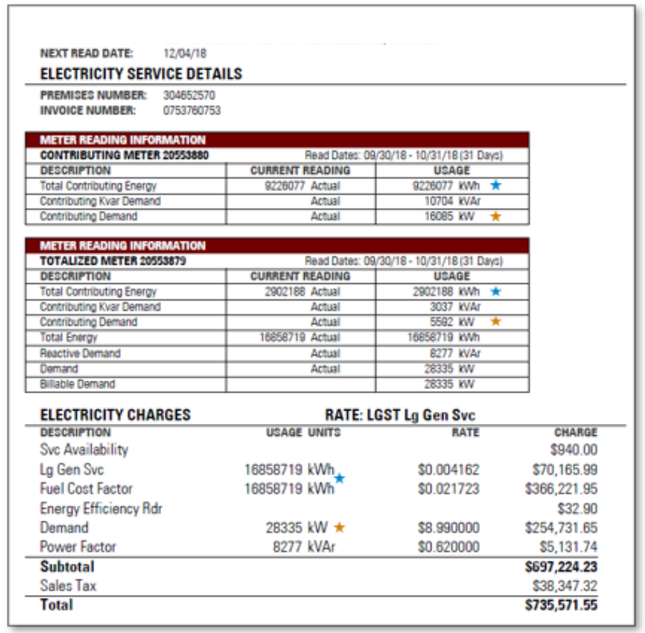
Validate Invoice Accuracy

Invoice Analysis: Billing Errors

Verifying the accuracy of meter readings against billed usage is another way to identify billing errors.

Utility Billing Error:

- Incorrect values for electricity usage (consumption, demand, and reactive demand) were used to calculate the billing charges that month.
  - Billed usage values were 40% higher than actual usage values from interval meter data. When corrected **savings were ~$193,000.**



NEXT READ DATE: 12/04/18

ELECTRICITY SERVICE DETAILS

PREMISES NUMBER: 304652570
INVOICE NUMBER: 0753760753

METER READING INFORMATION
CONTRIBUTING METER 20553880 Read Dates: 09/30/18 - 10/31/18 (31 Days)

DESCRIPTION	CURRENT READING	USAGE
Total Contributing Energy	9226077 Actual	9226077 kWh ★
Contributing Kvar Demand	Actual	10704 kVAr
Contributing Demand	Actual	16085 kW ★

METER READING INFORMATION
TOTALIZED METER 20553879 Read Dates: 09/30/18 - 10/31/18 (31 Days)

DESCRIPTION	CURRENT READING	USAGE
Total Contributing Energy	2902188 Actual	2902188 kWh ★
Contributing Kvar Demand	Actual	3037 kVAr
Contributing Demand	Actual	5592 kW ★
Total Energy	16858719 Actual	16858719 kWh
Reactive Demand	Actual	8277 kVAr
Demand	Actual	28335 kW
Billable Demand		28335 kW

ELECTRICITY CHARGES **RATE: LGST Lg Gen Svc**

DESCRIPTION	USAGE UNITS	RATE	CHARGE
Svc Availability			$940.00
Lg Gen Svc	16858719 kWh ★	$0.004162	$70,165.99
Fuel Cost Factor	16858719 kWh	$0.021723	$366,221.95
Energy Efficiency Rdr			$32.90
Demand	28335 kW ★	$8.990000	$254,731.65
Power Factor	8277 kVAr	$0.620000	$5,131.74
Subtotal			**$697,224.23**
Sales Tax			$38,347.32
Total			**$735,571.55**

Billing errors: ★ - Consumption, ★ - Demand

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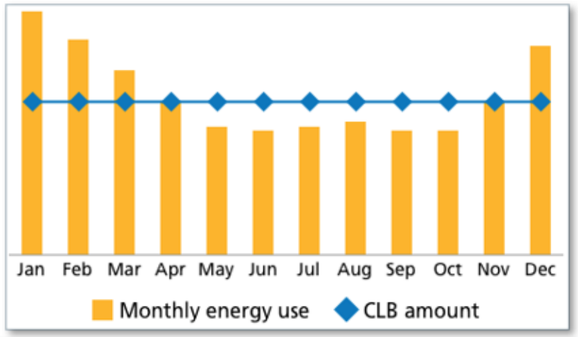
Optimize Distribution Costs

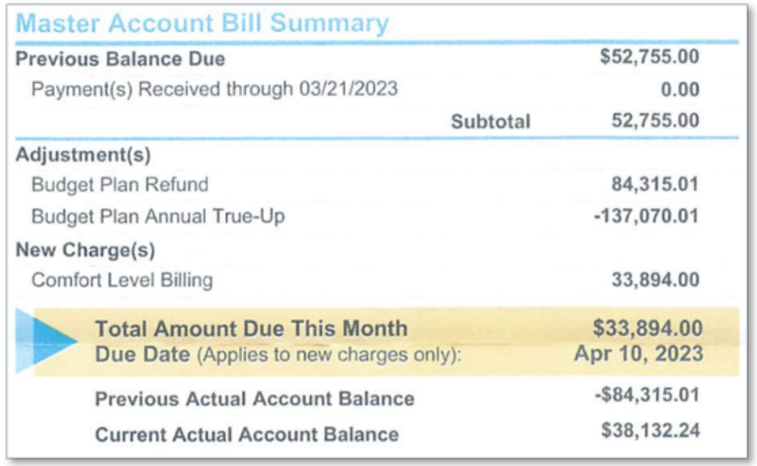
Rate Negotiation

Utility normalizes monthly energy charges leading to excessive liabilities and/or loans to the utility. Eliminating Comfort Level Billing will eliminate exposure caused by estimated charges. Additionally, a down payment/deposit may be on file with the utility, which can be secured to pay current invoices.

Risk Avoidance (Tax Liability / Billing Optimization) (in $K)					
Opportunity	Utility	Recurring Annual Savings		Next Steps	Estimated Timing to Implement
		Low	High		
Comfort Level Billing	Avista	($120)[1]	$100[1]	Contact local utility and eliminate Comfort Level Billing to avoid building liability or loaning funds to the Utility	0 to 1 month



If you have a current balance: We apply current energy prices to your energy usage over the past 12 months, then calculate an average. Next, we divide your current balance by 12. This 1/12th balance is added to the average and that total amount is your Comfort Level Billing plan amount. A down payment is required when enrolling with a balance.



Master Account Bill Summary

Previous Balance Due		$52,755.00
Payment(s) Received through 03/21/2023		0.00
	Subtotal	52,755.00
Adjustment(s)		
Budget Plan Refund		84,315.01
Budget Plan Annual True-Up		-137,070.01
New Charge(s)		
Comfort Level Billing		33,894.00
Total Amount Due This Month		$33,894.00
Due Date (Applies to new charges only):		Apr 10, 2023
Previous Actual Account Balance		-$84,315.01
Current Actual Account Balance		$38,132.24

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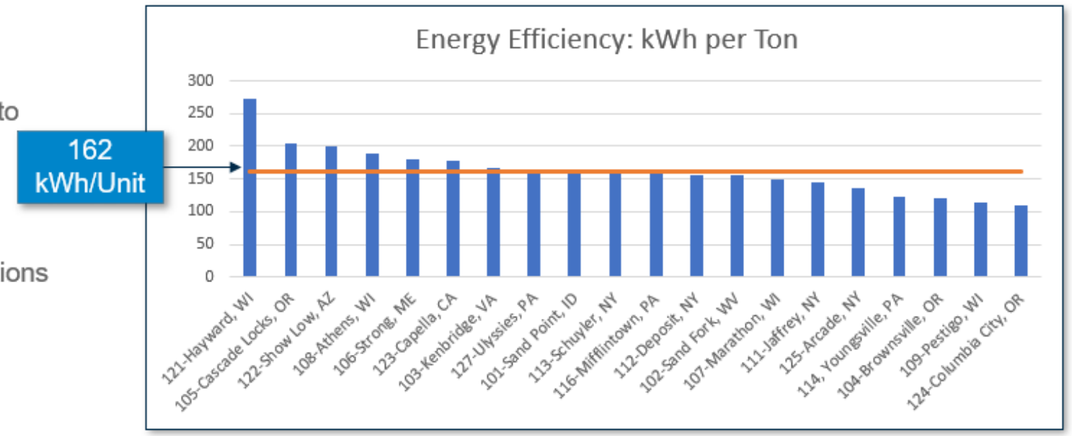
Leverage Energy Incentives

Energy Efficiency Study

Energy Efficiency improvements to bring the top six facilities down to average would yield $790k in Recurring Annual Cost Avoidance

Action Items:

- Compare production processes across plants to establish accurate benchmarking
- Analyze equipment lists for each facility
- Identify eligibility for energy efficiency rebates
- Perform Energy Audits
- Implement energy improvement recommendations
- Measure & Verify (M&V) savings
- Make adjustment/improvements as needed



Location	Energy per Ton			Cost of Energy		Annual Tons Produced	kWh vs. Average	Cost ($) vs. Average	Energy Efficiency Programs
	kWh	MMBtu (Gas)	MMBtu (Total)	$/kWh	$/MMBtu				
Facility 1	273	0.16	1.092	$0.09	$11.15	22,258	2,470,638	$216,354	EE Program 1
Facility 2	204	1.01	1.706	$0.06	$16.89	25,638	1,076,796	$66,847	
Facility 3	201	-	0.686	$0.12	-	29,041	1,132,599	$130,725	EE Program 2
Facility 4	188	0.05	0.692	$0.16	$10.17	9,662	251,212	$39,438	EE Program 3
Facility 5	180	-	0.614	$0.27	-	52,731	949,158	$253,520	EE Program 4
Facility 6	177	-	0.604	$0.22	-	24,766	371,490	$82,727	EE Program 5
Average:	**204**		**0.899**	**$0.15**		**Total:**	**6,251,893**	**$789,610**	

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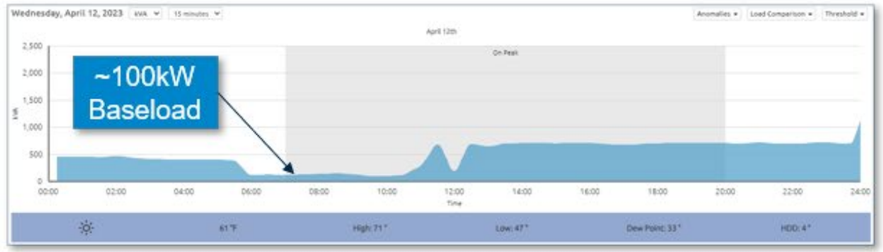
Improve Operational Performance

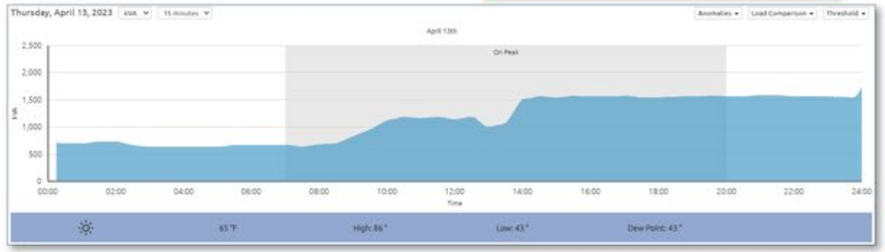
Baseload Study

Potential Causes for Baseload Inefficiencies:

- Inefficient Lighting
- Resistive Heating
- Equipment Scheduling
- Compressed Air Leaks

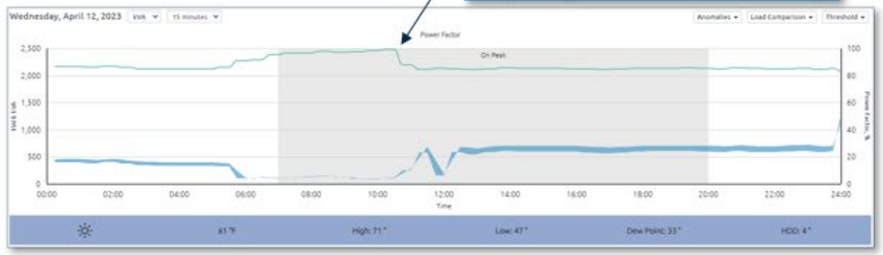
Up to 50% of LED upgrade costs can be covered by Utility Incentives

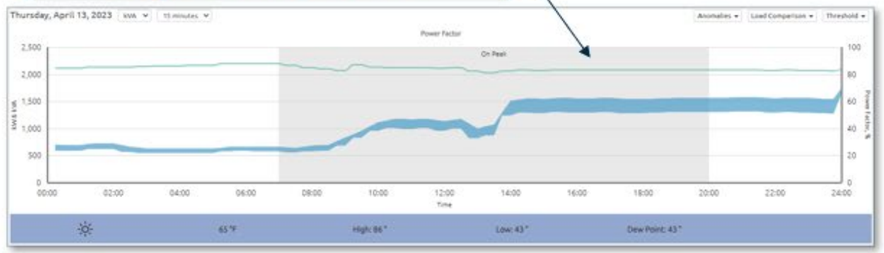




~100% PF Suggests Baseload is Incandescent Lighting or Resistive Heating

PF is ~84% During Production Hours Suggesting Motor Efficiency Upgrades are Beneficial





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Diversify with Renewable & Alternative Energy

California Solar Investment Overview:

Annual Usage: 132,000 kWh
Annual Electric Costs $40,500

Scenario	Solar Spec		Investment Analysis			
	System Size (kW)	Battery Size (kW)	Investment Required	IRR	Payback (Years)	Lifetime Savings *
Scenario 1	22	-	$23,300	48%	2.2	$503,400
Scenario 2	86	65	$95,671	42%	2.5	$1,999,000
Scenario 3	22	60	$29,918	32%	3.3	$478,800
Scenario 4	-	60	$6,000	146%	3.9	$25,211

Scenario 1: On-Site Solar
Scenario 2: On-Site Solar + Battery Storage of Solar Energy
Scenario 3: On-Site Solar + Battery Storage of Grid Energy
*Scenario 4: Battery Storage (Off Peak Charging)**
** Project length is 12 years for Scenario 4 vs 30 for other Scenarios*
***A TOU rate option was evaluated and turned out to be less attractive for solar*

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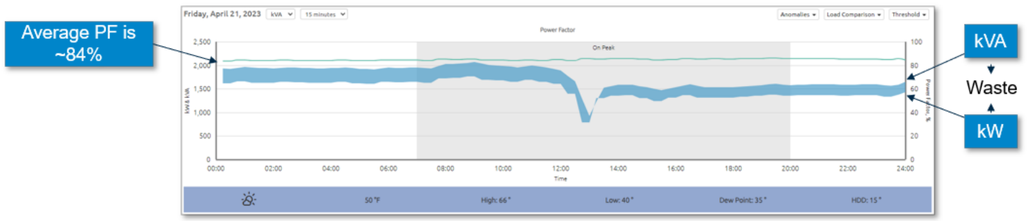
Power Factor Correction

Utilities often charge for poor power factor. Power factor correction equipment is available, and payback can often be achieved in under two years.



Power Factor Correction

- An estimated range of $45k to $60k in savings is available through Power Factor correction
  - Power Factor correction equipment (Capacitors) are estimated to cost between $40k to $70k investment. Cost estimates are based on the required kVAr size and similar projects implemented in the past year.
- Power Factor correction equipment typically has a useful life of >20 years and requires minimal maintenance
- **Next Steps: Contact a local provider to receive quotes for PF audit and/or turnkey installation**

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*Note, power factor capacitors typically have a useful life of 20+ years

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Key Takeaways & Contact Information

1) Supply strategies need to be right sized to your risk profile and energy needs
2) TE can assist in finding a balance between risk avoidance and opportunity cost
3) AMEN's ECO program focus on savings and alternative energy opportunities
4) Pre-Qualification in less than 2 weeks at no cost
5) Target engagements are self-funded through savings

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