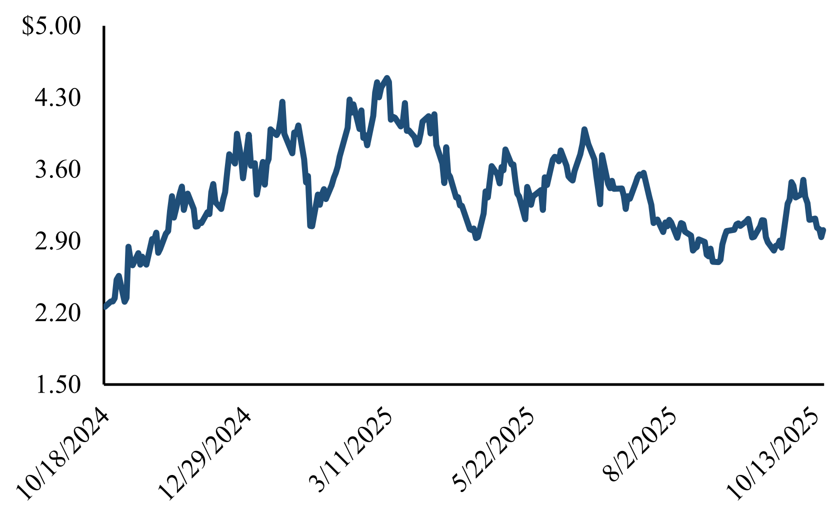
## Natural Gas | One-Year Price Chart




## Position Details

- Natural Gas | NGG6C
- Underlying Price: $3.36
- Bull Call Spread
- Expiration Date: January 27, 2026

## Energy Sector

**Analyst**
Will Cook
dwilliamcook12@gmail.com

**President**
Brandon Bayer
bayer1616@gmail.com

**Vice President**
Christian Ball
christianball8223@gmail.com

**Chief Investment Officer**
Cole Woolard
colewoolard05@gmail.com

# Table of Contents

I. Product & Position Overview

# Product & Position Overview

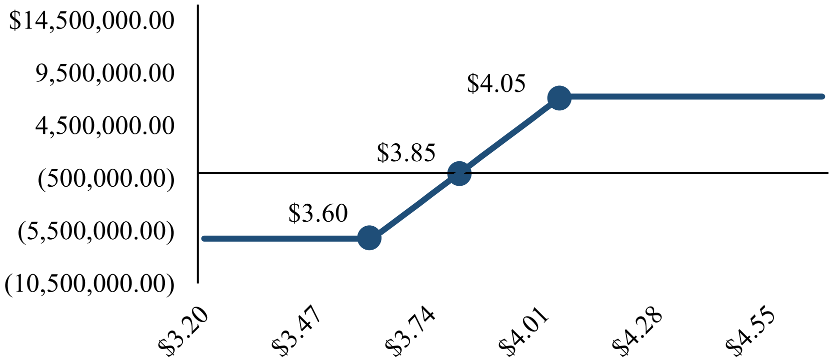
### Product Description

- **Natural Gas**
  - Natural Gas is a clean-burning fossil fuel that is made up primarily of methane and other hydrocarbons. It is a colorless, odorless, and highly flammable gas located underground
  - Natural Gas is primarily used for electricity generation, and residential and commercial heating helping fuel industrial growth and provide a clear alternative to coal for electricity production
  - The top producer of natural gas is the U.S., making up ~25.00% of global market share, with Russia and Iran following. These large players shape global supply and demand dynamics

### Trade Breakdown

- **Bull Call Spread**
  - This strategy is positioned to capitalize on bullish price movements in the underlying within the duration of the contract
- **Setup**
  - We Buy – 3.00 k OTM $3.60 Calls | NGG6C
  - We Sell – 3.00 k OTM $4.05 Calls | NGG6C
  - Max Profit: $7,260,000.00
  - Max Loss: ($6,240,000.00)
- **Expiration**
  - Date: January 27, 2026

### Payoff Diagram




### Exit Strategy & Potential Hedge Strategy

- **Bull Base & Bear Case**
  - **$3.60** / **$3.85** / **$4.05**
  - Breakeven – $3.81
- **Methodology**
  - The Sector seeks to benefit from a 20.54% upward price movement in the underlying asset by the date of expiration
- **Hedge Strategy**
  - The Sector will look to reverse trade to minimize potential losses in the event of bearish price movement in the underlying asset

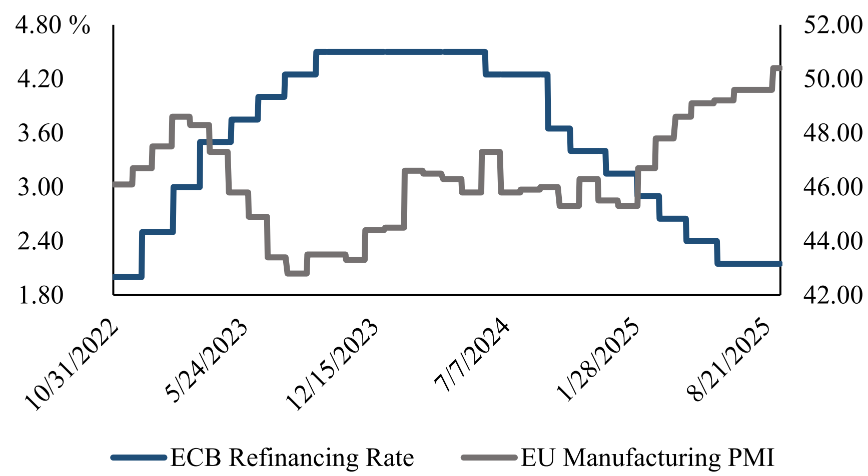
# II. Macroeconomic Thesis

# Macroeconomic Thesis

### Macroeconomic Summary

- **Cold Winter and Manufacturing Strength Fuel Demand Into Q12026**
  - The EIA is forecasting record demand through 2025 EOY and 1Q2026 due to increased residential heating demand and industrial demand as temperatures drop in coming winter months
    - La Niña conditions are present and expected to persist throughout February, bringing below average temperatures for most regions within the U.S.
  - U.S. Manufacturing PMI is forecasted to remain expansionary through the winter months, as firms are expected to rebuild inventories after inventory cuts in response to tariff uncertainty
- **Exports Strengthen as Europe Phases Out Russian Natural Gas**
  - The EIA expects U.S. LNG export capacity to rise by 5.00 Bcf/d, increasing total LNG exports through 1Q2026 as Plaquemines and Corpus Christi Stage 3 project expansions come online
    - By 2025 EOY 3.20 Bcf/d of the expected 5.00 Bcf/d rise in U.S. LNG exports is projected to become operational
  - The E.U.'s ban on new Russian gas contracts from May 17th, 2025, coupled with temporary storage measures for Russian Gas will likely shift firms towards increased U.S. gas imports
    - Impacted firms are expected to turn to U.S. natural gas imports, supporting the E.U.'s commitment to import $750.00 bn of U.S. energy by 2028
- **European Gas Storages Remain Undersupplied**
  - E.A. natural gas storage remains ~6.00% below the 5.00-year average, increasing price volatility to demand or supply changes
  - Eurozone Manufacturing PMI reached an expansionary 3.00-year high of 50.70, marking 8.00 consecutive months of steady growth, before pulling back slightly to 49.80 in September
  - Ongoing Russian strikes on Ukrainian energy infrastructure are intensifying supply pressures as regional tensions escalate
    - Storage levels remain ~40.00% of potential total supply, showing Ukraine's reliance on future natural gas imports

### ECB Refinancing Rate vs E.U. Manufacturing PMI | Three-Year Chart




### Market Pros & Cons

- AI-driven data center growth continues to boost natural gas consumption
- Reduced renewable energy output heightens reliance on natural gas
- U.S. natural gas inventories continue to build on robust injection activity
- Mexico's electricity demand softens amid slowing industrial activity

# III. Risk Analysis

# Risk Analysis

### Directional & Magnitude Risk

- **Delta Analysis**
  - The Delta value for this trade is 0.1290
  - For every $1.00 change in the price of the underlying asset, the strategy will gain or lose $0.1290 in value
  - The Delta is low due to the bull call spread having both strike prices far out of the money; profitability will require a strong upward movement in Natural Gas prices
- **Gamma Analysis**
  - The Gamma value for this trade is 0.0201 meaning delta changes by 0.0201 for every $1.00 change in the price of the underlying
  - The trade benefits from high gamma by increasing delta’s sensitivity to price, so delta adjusts fast as the underlying moves

### Time Risk

- **Theta Analysis**
  - The Theta value for this trade is (0.0005)
  - The trade experiences a loss of $0.0005 for every one-day change towards the expiration. Time decay accelerates in magnitude as the option moves closer to expiration, increasing Theta sensitivity
  - Theta is negative as time decay reduces the trade’s daily value, diminishing the chances of landing in the money. A (0.0005) theta suggests a gradual rate of time decay, slowly reducing the options premium as the contract expiration grows closer

### Implied Volatility Risk

- **Vega Analysis**
  - The trade has a Vega value of 0.0004
  - Implied volatility for this trade is 70.00%
  - For every 100.00 bps change in implied volatility, the contract’s value will gain or lose $0.0004
  - Vega is relatively low for this trade, illustrating how natural gas markets are not heavily reliant on volatility; rather, this trade depends on strong directional price movements

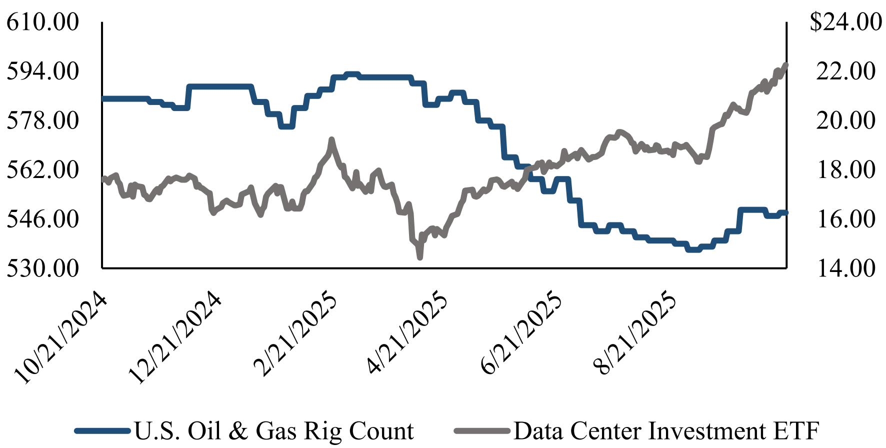
### Interest Rate Risk

- **Rho Analysis**
  - The Rho value for this trade is (0.0003)
  - For every 100.00 bps change in interest rates, the option strategy will gain or lose $0.0003 in value
  - The timeline of this trade will likely include 2.00 Federal Reserve meetings where the Sector expects ~50.00 bps of cuts. The outcome of these monetary policy meetings and any changes to the interest rate will play a small role in our profits

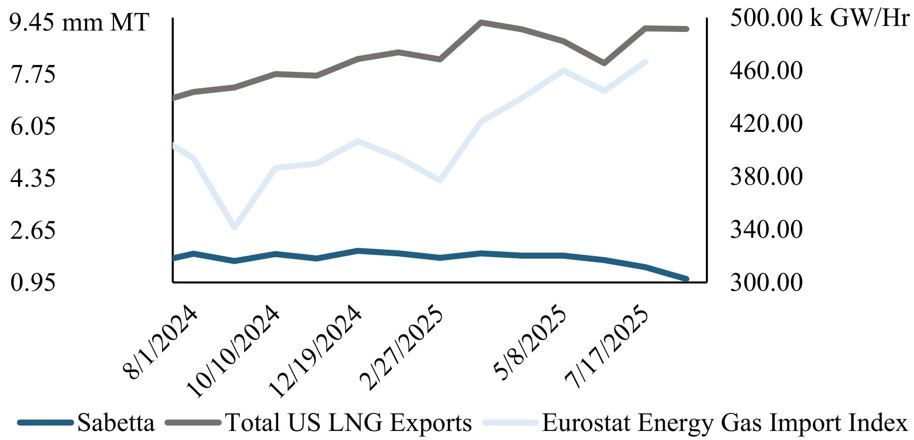
# IV. Technical Bias & Fair Value

# Technical Bias & Fair Value

**U.S. Oil & Gas Rig Count vs Data Center Investment ETF | One-Year Chart**




**Sabetta Exports vs U.S. LNG Exports vs E.U. Gas Imports | One Year Chart**




**Monte Carlo**

| Option | Long Call | Short Call |
|---|---|---|
| **Value** | $0.6469 | $0.4080 |

**Synopsis**

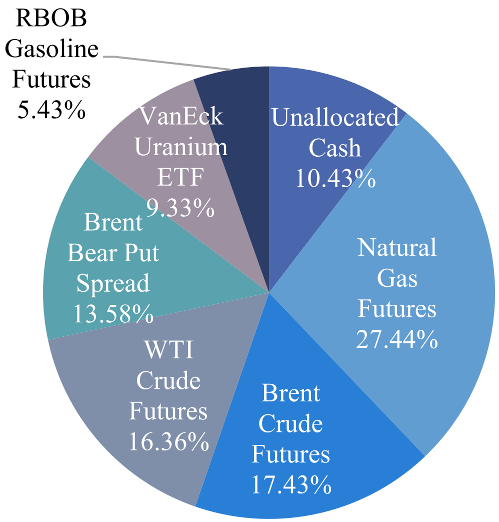
- The graph on the left highlights that data center investment has steadily increased over the past six months, pushing the index up over ~54.00%. Meanwhile, the total rig count of oil and gas has significantly declined during the same period. The divergence between declining energy supply and growing AI infrastructure is mounting pressure on energy storage. Natural gas consumption by data centers is expected to triple by 2030 adding ~6.00 Bcf/d, with ~1.00 Bcf/d by 2026, strengthening domestic gas demand

- The right graph illustrates a shift in European natural gas supply dynamics. U.S. LNG exports have risen in recent months, while the Sabetta export facility, Russia’s main terminal for E.U. exports, has seen a decline. Meanwhile, E.U. gas imports have risen significantly. This divergence between lowered Russian gas imports and rising U.S. LNG exports reflects E.U.’s shift away from Russian gas toward U.S. LNG. This transition signals strong future export demand for the U.S. as trade relations strengthen.

# V. Capital Allocation

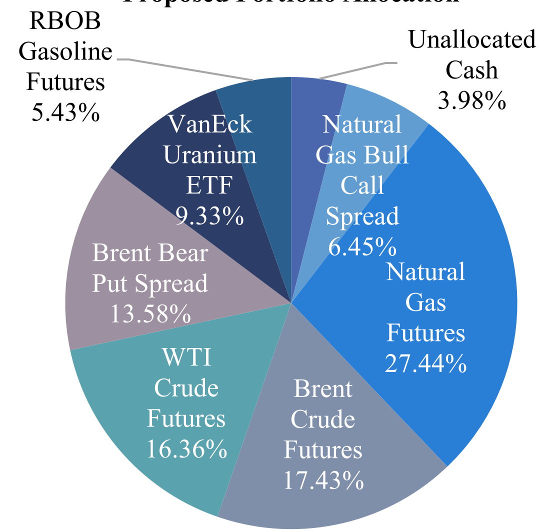
# Capital Allocation

**Current Portfolio Allocation**

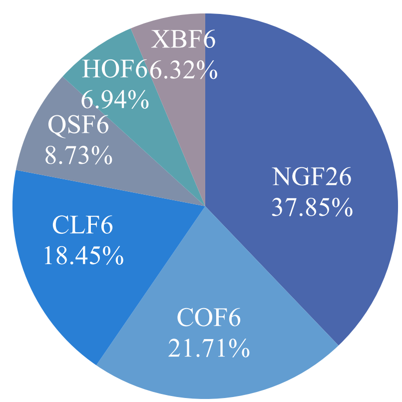



| Transaction Summary | | |
|---|---|---|
| | Position Change | |
| Ticker | Contracts | Allocation |
| Natural Gas Futures | 0 | $0.00 |
| Brent Crude Futures | 0 | $0.00 |
| WTI Crude Futures | 0 | $0.00 |
| Brent Bear Put Spread | 0 | $0.00 |
| VanEck Uranium ETF | 0 | $0.00 |
| RBOB Gasoline Futures | 0 | $0.00 |
| Natural Gas Bull Call Spread | +6000 | $6,240,000.00 |
| Allocation Change | | $6,240,000.00 |

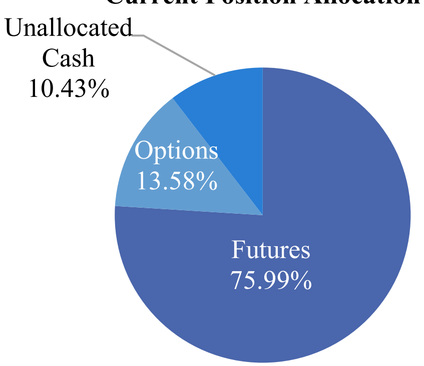
**Proposed Portfolio Allocation**




**Benchmark Allocation**




**Current Position Allocation**




**Proposed Position Allocation**