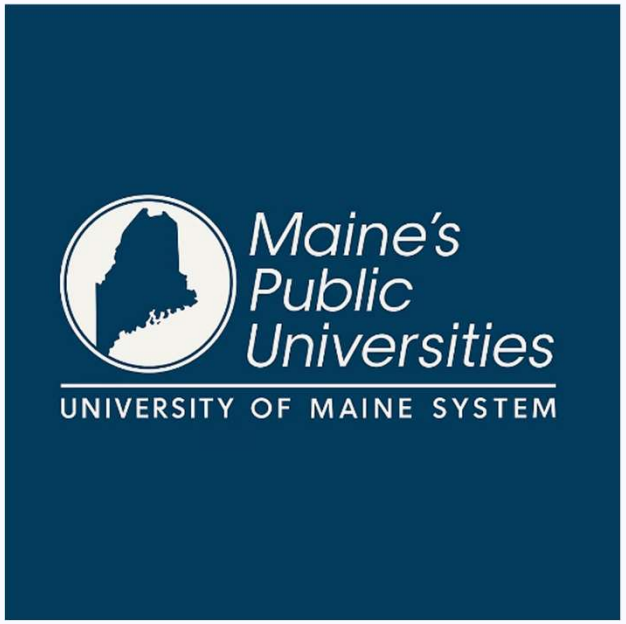


Energy Procurement Overview

UMS's Multi-Faceted Procurement Strategy

Strategic Planning

The process begins with early strategy discussions, typically starting in February, followed by stakeholder meetings to align priorities and goals.

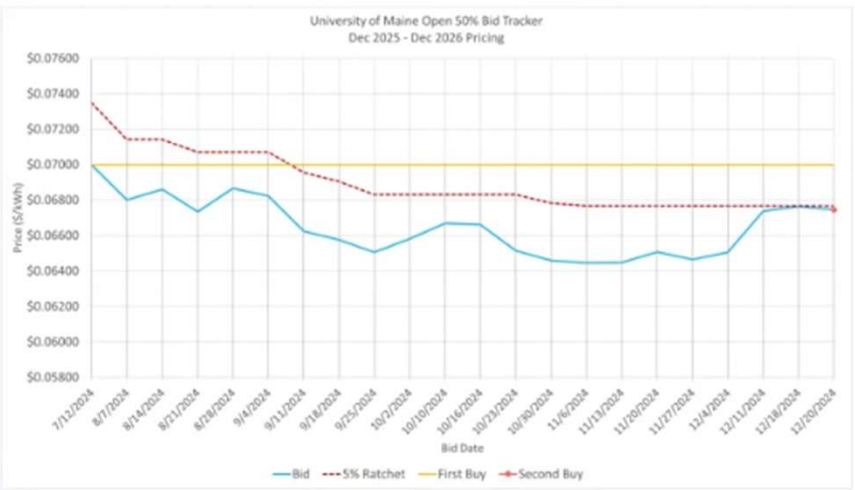
Market Analysis

Continuous monitoring of energy markets, including natural gas prices, LNG export capacity, and electricity pricing trends to inform decision-making.

Risk Management

Implementation of hedging strategies to protect against market volatility and secure predictable energy costs for budgeting purposes.

Electricity Procurement Approaches



Ratchet Strategy

UMaine employs a more dynamic "ratchet" approach:

- Set a baseline price with a 5% ceiling
- Monitor weekly market quotes
- Lower the price threshold if market moves down
- Lock in price if market begins to move up

Traditional Hedging Strategy

For some campuses, UMS implements a conventional hedging approach:

- Purchase electricity in scheduled tranches over time
- Secure fixed-price contracts for predetermined periods
- Spread purchases to average price exposure
- Maintain consistent budget predictability

Market Factors Influencing Energy Prices

Natural Gas Market Dynamics

Natural gas prices significantly impact costs. Key factors include:

- Storage levels relative to 5-year averages
- Production cuts and weather patterns
- LNG export capacity expansions (13 Bcf/d growth projected)

Electricity Market Trends

New England Power Pool (NEPOOL) electricity prices are affected by:

- Heating demand fluctuations
- Supply and demand balances

In New England, electricity generation is heavily dependent on natural gas. If regional gas prices rise more than the national average, it pushes up electricity prices in NEPOOL.

Note: NEPOOL is the regional electricity market framework that impacts how energy is priced and distributed in New England.

Transmission & Distribution Rate Changes

Utility rate structures impact total costs:

- CMP implemented significant transmission rate increases (37-54%) in January 2025
- Distribution revenue requirements increased 2.37%

Why Campuses Experience Different Rate Increases

Variations in energy rate changes across the System reflect differences in utility service territories, energy sources, and when contracts were secured:

Different Energy Sources

Campuses utilize different primary energy sources:

- UMaine and USM: Primarily electricity and natural gas
- Farmington and Fort Kent: Electricity and biomass
- Machias: Electricity and ULSHO (Ultra Low Sulfur Heating Oil)
- Presque Isle: Electricity and oil

Utility Service Territories

Campuses are served by different utilities:

- Central Maine Power (CMP) territory
- Versant Bangor Hydro territory
- Versant Maine Public District territory

Each utility has different transmission and distribution rates and rate increase schedules.

Procurement Timing

Energy contracts are secured at different times based on:

- Market conditions at time of procurement
- Different contract expiration dates
- Strategic decisions about when to lock in prices

Net Energy Billing: A Key Cost Reduction Strategy

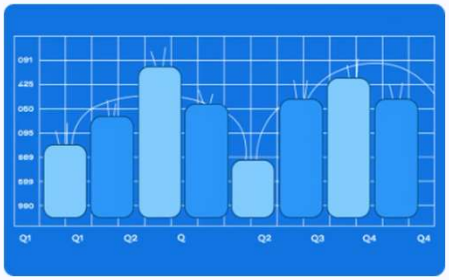
UMS participates in Maine's Net Energy Billing program, generating renewable energy credits that have saved $8,276,510 across all campuses.

Hydro Projects

Hydroelectric facilities in Damariscotta, York, Stillwater, and Medway generate renewable credits for UMS.

Solar PV Projects

More than 20 solar installations from developers like MEI, AES, Nexamp, and SunVest enhance the system's renewable portfolio.



Financial Benefits

The program has yielded $8.2M in savings, plus $1.5M in Renewable Energy Credits (RECs) revenue since 2021.

Campus Implementation

CES aggregates campus demand and secures shares in NEB projects to maximize system benefits.

Budget Impact and Financial Planning

System-Wide Budget Trends

System-wide energy budget decreased from FY24 to FY25 by $4.7M and remains stable for FY26. Total budget:

FY24: $32,415,593

FY25: $27,711,650

FY26: $27,883,515

Variable Campus Impacts

While some campuses show decreasing costs, others like Farmington (FY26: $1,650,366) and Fort Kent (FY26: $703,359) show increases, reflecting different energy sources and higher transmission & distribution costs.

Budget Performance

Historical data shows actual energy costs typically come in below budget, demonstrating effective procurement and conservative budgeting practices.

Energy Prices × Energy Usage = Energy Costs

While energy procurement strategies determine prices, total energy expenditures vary based on how, when, and why energy is used across campuses:

Energy Infrastructure & Load Profile

Central plants vs. distributed systems (e.g., building-specific boilers or heat pumps)

27/7 Operations (labs, research, steam plants) vs limited-use facilities

Campus Mission Differences

Research-intensive campuses have higher demand than commuter-focused institutions

Usage

Winter heating loads and summer cooling drive large fluctuations in monthly usage and cost, especially at campuses with steam plants or electric heating. In addition, prices may vary between day and night usage.

Future Considerations and Policy Impacts

Policy Changes

Tariffs on energy imports increasing natural gas and electricity prices

LNG Exports

Export capacity growth driving natural gas prices

Renewable Programs

Net Energy Billing credit rate adjustments

REC Markets

Price fluctuations impacting revenue streams

Powering campuses efficiently takes both strategy and stewardship.

- **UMS uses a multi-faceted supply-side strategy** to manage risk and control energy pricing across the System.
- **NEB participation has saved over $8.2M**, with additional revenue from Renewable Energy Credits (RECs).
- **Energy prices differ by campus** due to utility territories, energy sources, and timing of procurement.
- **Energy costs differ by campus** due to infrastructure, campus mission, and usage.