



Hedging Ethanol Production

A Systematic Approach to Stabilize Income

Robert Boslego

Expert in Energy Price Risk Management



Accredited Member

Strategic Partner

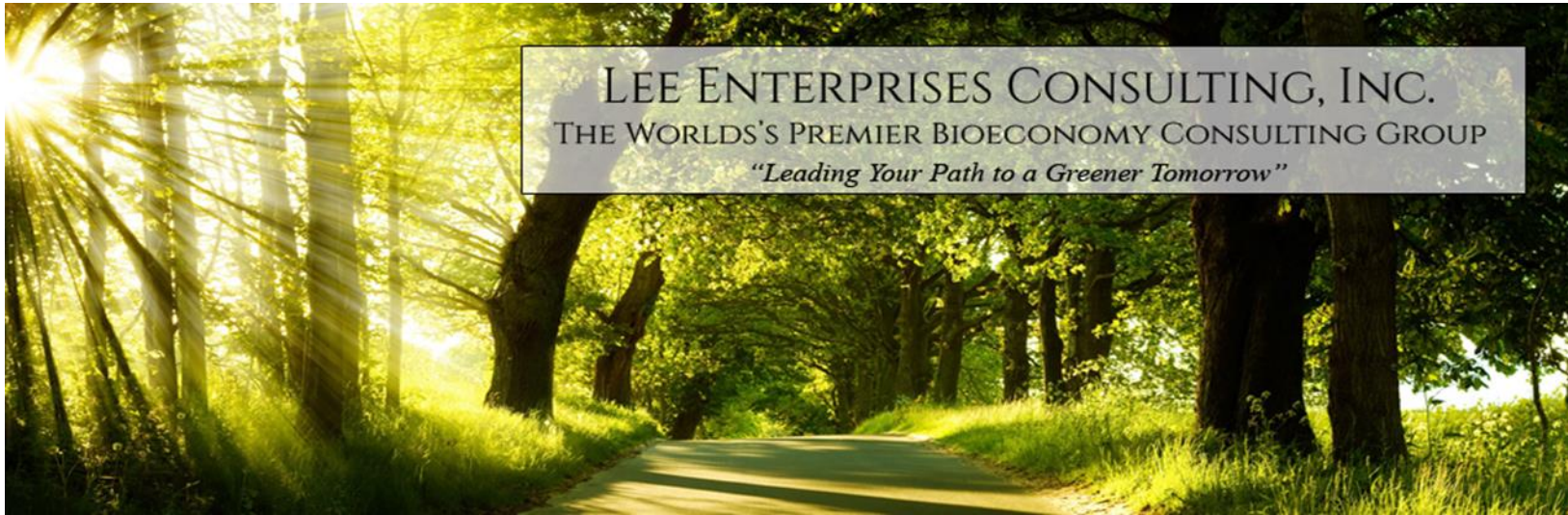


LEE ENTERPRISES
CONSULTING, INC.

Robert Boslego

Boslego Risk Services

- ▶ Extensive knowledge and experience in providing risk analysis and in developing hedging strategies and programs for corporations and hedge funds.
- ▶ Beginning in the early 1980s after NYMEX crude futures began, BRS began advising oil and gas companies on how to hedge their income.
- ▶ Clients include major oil companies such as Exxon, Mobil, Texaco, Chevron, Shell, and Phillips; national oil companies such as Agip, PDVSA, Total, Statoil, Pemex, and PetroCanada; major refiners such as Citgo, Marathon, Ashland and Hess; major end-users, such as Burlington-Northern Railroad, Canadian National Railway, United Airlines, and Delta Airlines; and large trading companies, such as Phibro, Enron, Vitol, Louis Dreyfus, and El Paso.
- ▶ Co-author *Energy Futures*, published in 1990 and 2000, and edited by the former president of the New York Mercantile Exchange (NYMEX).
- ▶ No conflict of interest as strictly an advisor.



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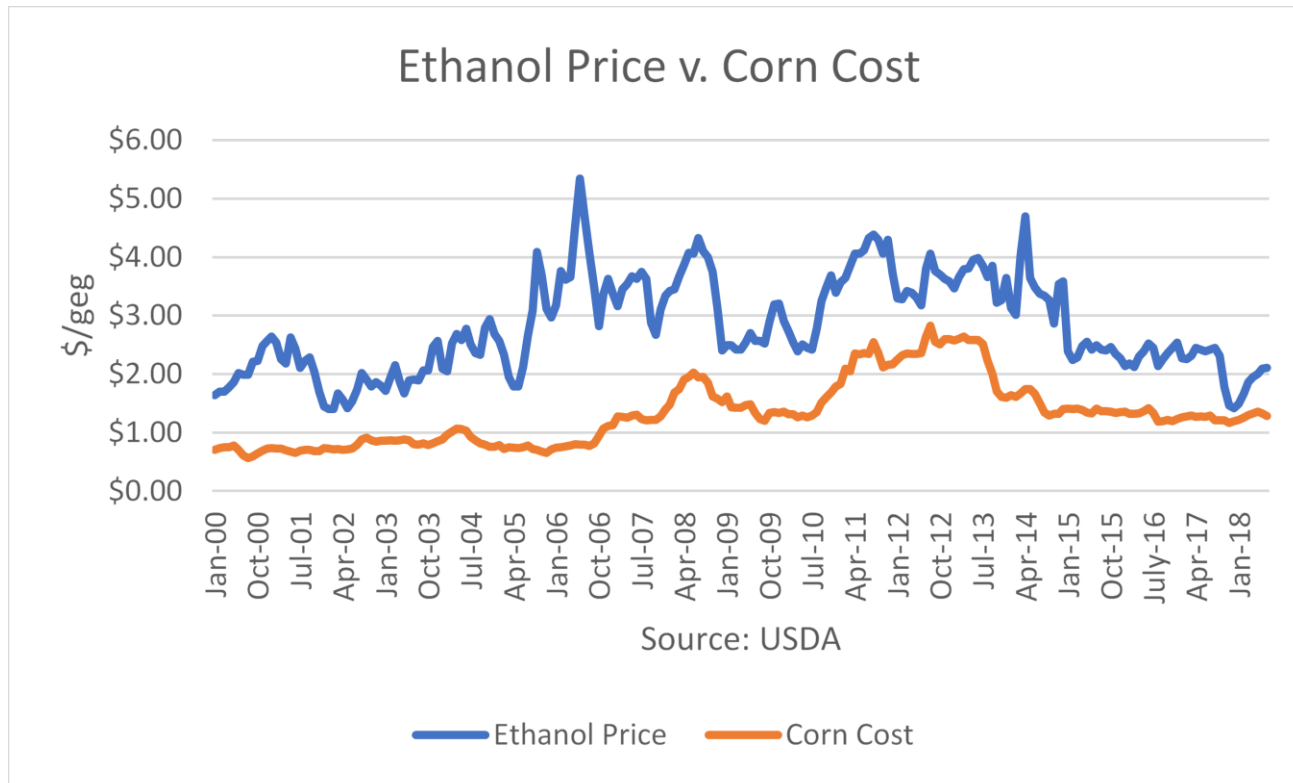
Expertise: World's largest bioeconomy consulting group - over 100 subject matter experts (SME's)- all areas of the bioeconomy.

Approach: Project interdisciplinary teams to meet exact needs of specific projects.

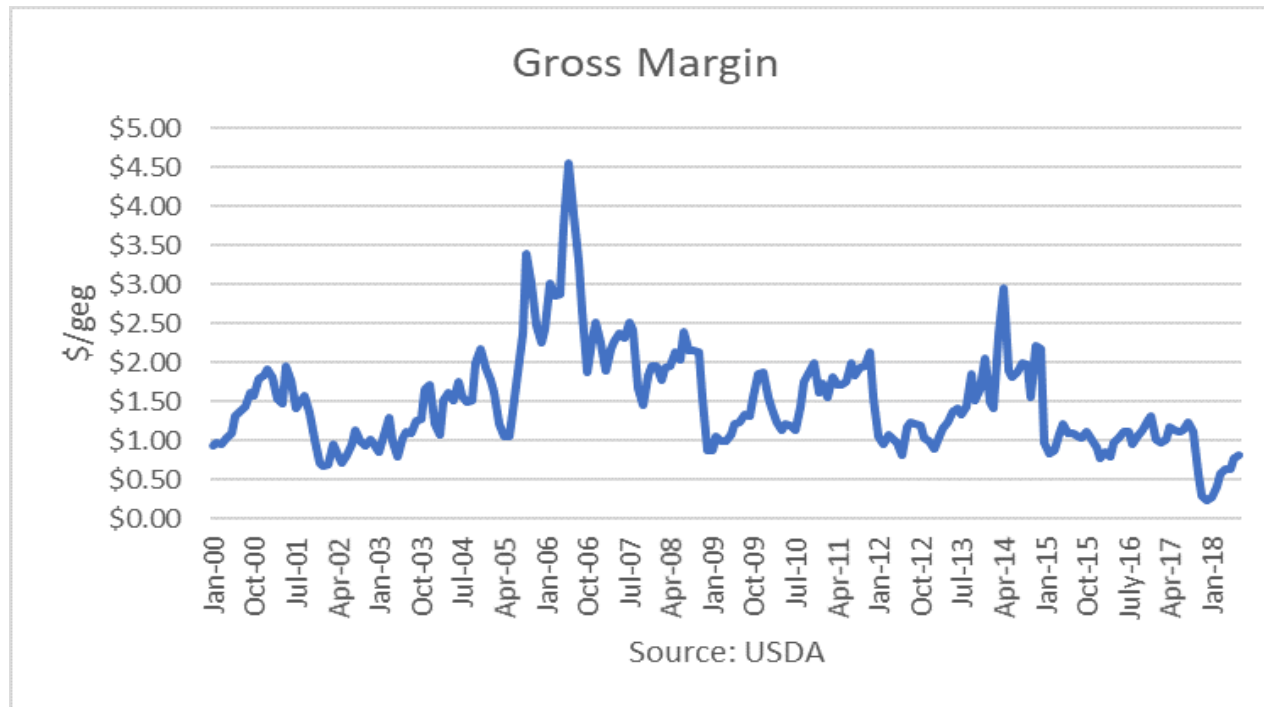
POC: Handle projects with one agreement and single point of contact.

Cost Advantage: Single POC = lower administrative costs = lower project cost.

Ethanol gross margin is a function of volatile corn costs and ethanol prices.



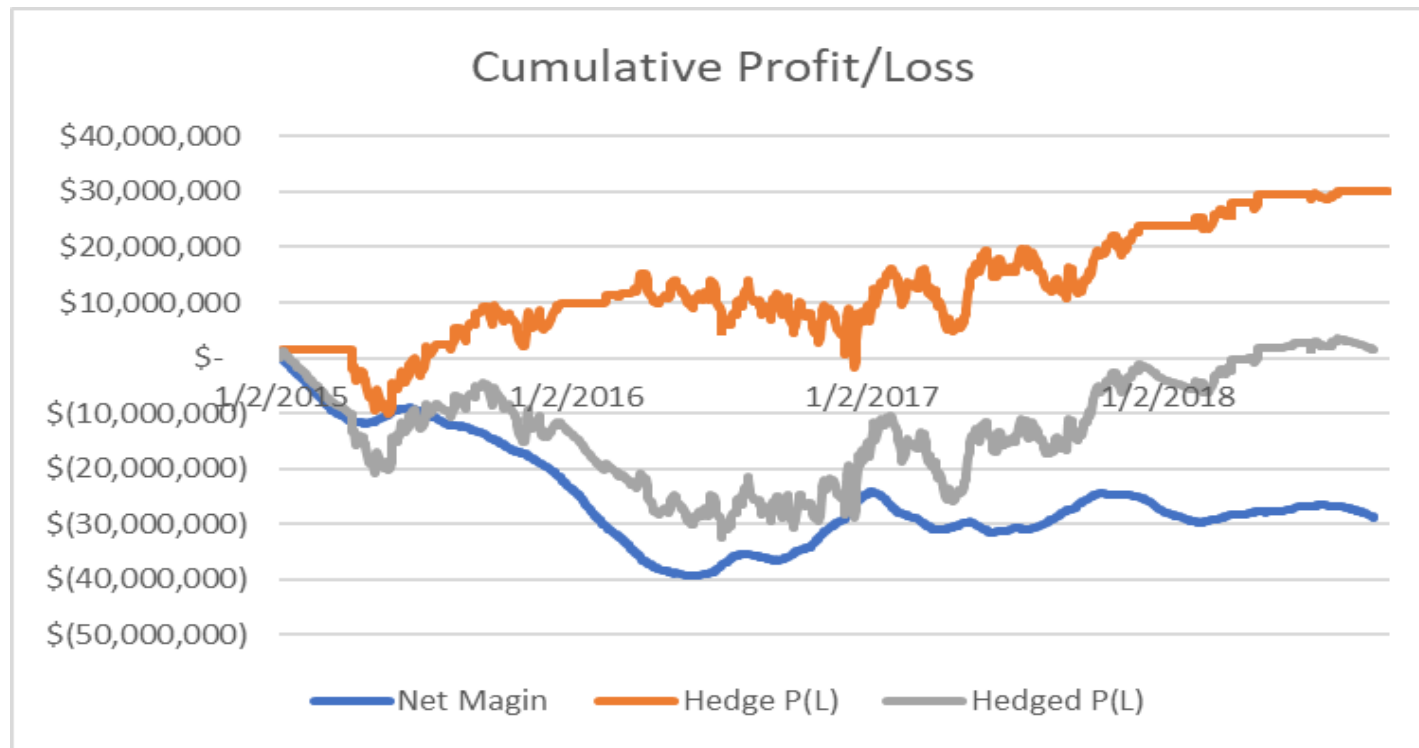
Risk management (hedging) strategies can reduce risk and increase income.



Six-Step Process to Create Strategies

- ▶ **Step 1: Define Objectives and Performance Criteria**
- ▶ **Step 2: Perform Unhedged Risk Analysis**
- ▶ **Step 3: Assess Risk Tolerances**
- ▶ **Step 4: Define Hedge Instruments and Strategies**
- ▶ **Step 5: Perform Hedged Risk Analysis**
- ▶ **Step 6: Compare Costs/Benefits/Risks of Hedged vs. Unhedged Strategies.**

Sample Hedging Simulation Results



Conclusions

- ▶ The gross margin for ethanol producers has been volatile historically because it is a function of the spread between prices in two different commodity markets, agricultural and energy. Moreover, this margin has dropped to low levels recently, squeezing profitability in this sector.
- ▶ Hedging ethanol margins can better enable producers to meet their budgets and goals. Attempting to hedge during a crisis or on an *ad hoc* basis could prove to be disastrous.
- ▶ Developing and simulating results from a systematic strategy can better enable management to make trade-offs between risk and return.
- ▶ It is wise to begin with a “pilot program” of hedging a portion of the volumes, as opposed to the total.



Robert Boslego
Boslego Risk Services
Boslego@Boslego.com
425.239.4951

Lee Enterprises Consulting
www.lee-enterprises.com
1+ 501 833-8511