COMPREHENSIVE ENERGY ROYALTY FUND OUTLINE



By Gene Soltero, CEO, Cimarron Capital, Inc. Dallas, TX, January 2025

Purpose of this outline: to provide enough information for a prospective fund sponsor (such as a family office, high net worth individual or private equity firm) to determine whether or not to consider developing, marketing and operating an energy royalty fund for the benefit of the sponsor and its clients.

Objective of the fund to simultaneously create:

- Current cash flow with monthly and quarterly distributions.
- Generational wealth from long-term assets with stable income streams.
- Subject matter expertise within investor entities.

Target investors.

- HNW individuals and family offices.
- Non-U.S. entities seeking U.S.-based hard assets that enjoy U.S. legal protections.

Executive team.

- Senior Board
 - Experienced energy industry former senior executive
 - Two or more senior executives from the sponsor.
- Senior management
 - CEO--petroleum engineer, 20+ years producing property acquisitions and management experience.
 - VP, Geology and Land, with extensive knowledge of the major U.S. sedimentary basins, as well as experience in lease negotiations.
 - VP, Energy Technology and Renewable Energy, with working knowledge of AI and Complexity Science.
 - CFO, a seasoned financial executive with experience and training across a broad spectrum of the energy sectors.

Overview of potential royalty investments in energy.

- Oil & gas direct mineral interests.
 - Income from leasing the drilling and production rights to others.
 - Signing bonus.
 - Delay rentals.
 - Production royalties.
 - Oil & gas royalty streams other than direct mineral interests.
 - Overriding royalties in leases and producing wells.
 - Carved-out royalties in downstream transportation, storage and processing agreements.
 - Carved-out royalties from non-fossil fuel energy providers.
 - Energy technology developers and licensors.
 - Nuclear energy mini-reactors
 - Wind energy rights holders.
 - Solar energy rights holders.

Understanding U.S. Oil & Gas Royalty Investments

• What are Oil & Gas Mineral Rights:

- **Legal Definition:** Ownership rights to subsurface mineral deposits, including oil, gas, and other hydrocarbons.
- Acquisition Process: Rights can be acquired through purchase, inheritance, or lease agreements.

• **Valuation Factors:** Reserve estimates, production history, potential for future drilling, distance from markets, quality differences and impurities removal.

• Ownership of Mineral Rights.

- The U.S. is the only country in the world where substantially all of the subsurface mineral rights under private lands originated with initial titles and grants of land.
- Ownership of mineral rights may vest concurrently with the surface or may be separated from surface ownership.
- Owners can sell, lease, inherit, donate or otherwise transfer the mineral rights separate from the surface.
- Mineral rights owners have the right to use "appropriate" portions of the surface for operations to extract and remove minerals, but are liable for damages to the surface.
- Legal Framework: Clear and enforceable contracts governed by U.S. Federal and state property laws.

• How are Royalty Interests derived from Mineral Rights?

- Royalty interests are created through lease agreements with operators.
- Mineral rights owners lease their oil & gas rights to operators in exchange for signing bonuses and royalties on production, where the royalties are usually expressed in a percentage of the amount of oil and gas produced at the wellhead.
- The terms of most leases allow the royalty owner to take his share of production and market it himself, but almost all royalty owners allow the operator to arrange the sale in connection with the sale of the operator's share of production.
- Operators cover the costs of exploration and production, while royalty owners receive a share of gross revenue, netted back to the wellhead, after deductions for transportation and marketing.
- Common leasehold royalty rates range from 12.5% to 25%.
- An operator can create additional overriding royalties from a given lease and assign such royalties to other entities or individuals. Such assignments are generally to employee pools and retirement programs as well as individual engineers, geologists, landmen and others who work on leased properties or trade in leases.

Understanding Royalty Interests Created from Energy Technology and Renewable Energy.

- Surface owners lease surface rights for wind turbines and solar panels. While most of these leases are for initial bonus consideration and monthly or annual rental payment, many leases include royalty payments based upon the amount of electricity generated and sold.
- Improvements in energy technology frequently are developed by smaller operators with limited financial resources. Investments in proven stage energy technology can result in contracted royalty streams from sales of services and equipment and/or improvements in production of fossil and renewable energy.

U.S. Oil & Gas Industry Landscape

Recent Production Levels and Supply-Demand Dynamics

- U.S. oil and gas production has reached historic highs.
 - Crude oil production exceeded 12 million barrels per day (2023).
 - Natural gas production surpassed 100 billion cubic feet daily.
- Export trends.
 - Significant portion of production dedicated to exports.
 - Increased demand for LNG from international markets, particularly Europe and Asia.
- Domestic consumption shifts.
 - Stabilized due to changing patterns and energy transition policies.

Impact of Global Oil Prices on U.S. Production and Exports

- Price fluctuations over five years:
 - 2019–2020: High prices encouraged production increases.
 - 2020: COVID-19 caused demand collapse and negative oil prices.
 - 2021 onward: Recovery driven by economic rebound and geopolitical tensions.
- Export growth:
 - LNG exports surged, bolstering the U.S.'s role in global markets.
 - European demand rose due to geopolitical shifts (e.g., diversification from Russian gas).

Industry Trend Shifts in Energy Consumption Patterns

- Transition from coal to natural gas for electricity.
 - Economic drivers.
 - Environmental drivers.
- Rise of renewables:
 - Solar energy.
 - Wind energy.
 - Sustained demand for oil in transportation.
 - Driven by industry.
 - Consumer needs.
 - Military.

Role of Technology in Boosting Production Efficiency

- Technological innovations:
 - Hydraulic fracturing, horizontal drilling, and Enhanced Oil Recovery (EOR).
- Digital tools:
 - AI-driven analytics for well performance and reservoir management.
- Impact:
 - Increased resource extraction from mature fields.
 - Sustained production despite price volatility.

Prior U.S. Supply Predictions vs. Observed Outcomes

- Early forecasts underestimated resilience and technological advances.
 - 1960s: "Peak oil" theory partially validated but offset by offshore drilling.
 - 1980s: Technological breakthroughs reversed declines.
 - 2000s: Shale revolution exceeded expectations.
- Recent trends:
 - Rapid recovery post-COVID-19.
 - Historical unpredictability highlighted by technology and geopolitical changes.

Current Range of Supply and Price Predictions

- Production forecasts:
 - Crude oil: 12–13 million barrels per day through 2025.
 - Natural gas: Continued steady growth.
- Price outlook:
 - \$70-\$90 per barrel, influenced by global supply chains and OPEC decisions.

Role of Predictive Analytics in the Sector

- Integration of machine learning and big data.
 - o Real-time analysis of wells, geopolitical factors, and market dynamics.
 - Workforce training.
- Benefits:
 - Enhanced production strategies and risk management.
 - Improved capital expenditure planning.

Regulatory Framework

- Federal vs. state-level regulations:
 - Federal oversight on environmental standards (e.g., Clean Air Act, Clean Water Act).

- State-specific rules for operations, e.g., fracking and water management.
- Environmental compliance:
 - Air quality, wastewater management, and land restoration mandates.
- ESG and technology:
 - Adoption of methane detection, carbon capture, and sustainability practices.

Tax Incentives for Oil & Gas Investment

- Intangible Drilling Cost (IDC) deduction, providing immediate financial benefits for exploration costs.
- Percentage depletion allowance, up to 15% of gross income deductible.
- Enhanced Oil Recovery (EOR) credits and infrastructure deductions.

Political Risks

- Domestic policy changes:
 - Federal leasing.
 - Emissions standards.
 - Carbon capture.
- International relations:
 - Geopolitical tensions impacting exports and trade.
 - Risks from sanctions.
 - Armed conflict.

U.S. Renewables Industry Landscape

Recent Production Levels and Supply-Demand Dynamics

- Growth trends:
 - Wind and solar now contribute over 20% of U.S. electricity generation.
 - Solar capacity increased 25% year-over-year.
- Stable contributors:
 - Hydropower remains consistent.
 - Emerging contributions from geothermal and biomass.
- Drivers of demand:
 - State-level clean energy mandates.
 - Corporate sustainability goals.
 - Consumer preference for green energy.
- Challenges: Supply intermittency necessitates energy storage investments.

Impact of Global Fossil Fuel Prices on Renewables

- Competitive positioning:
 - High oil and gas prices boost renewables' relative attractiveness.
 - Low natural gas prices can temporarily slow renewable adoption.
- Cost reductions: Solar PV and onshore wind are now competitive with fossil fuels.
- Stability advantage: Renewables offer insulation from geopolitical risks and market volatility.

Shifts in Renewable Energy Consumption Patterns

- Increasing adoption:
 - Corporations and municipalities setting 100% renewable energy targets.
 - Growth in residential solar driven by cost reductions and state incentives.
- New demand sources: Electric vehicle (EV) adoption increasing demand for renewable-powered charging.
- Energy transition: Utilities retiring coal and gas plants in favor of renewable and storage solutions.

Role of Technology in Enhancing Efficiency

- Technological advancements:
 - Bifacial solar panels and tracking systems increase energy capture.
 - Taller wind turbines and advanced blade designs improve efficiency.
- Energy storage innovations: Lithium-ion batteries enhance grid reliability.
- Digital tools: AI and blockchain for grid optimization and peer-to-peer trading.

Historical Predictions vs. Observed Outcomes

- 1960s predictions limited to hydropower; solar and wind considered impractical.
- 1980s advancements:
 - Early wind farm growth in California.
 - Modest growth due to high solar costs and limited federal support.
- 2000s breakthroughs:
 - Analysts underestimated cost reductions and demand growth.
 - Renewables exceeded 20% of electricity generation by 2020.
- Current projections:
 - Renewables expected to reach 35–45% of generation by 2030, contingent on policy support and grid modernization.

Role of Predictive Analytics in Renewables

- Applications:
 - Weather forecasting and production optimization.
 - Ideal site identification for new projects.
- Investment decisions: Improved risk-return assessments supporting renewable growth.

Major Oil Companies' Role in Renewables

- Contributions to stability: Increased adherence to regulations and operational standards.
- Investor opportunities:
 - Collaboration with experienced operators.
 - Diversification through mixed energy portfolios.
- Enhanced due diligence: Regulatory compliance and reporting by established players.

Regulatory Framework

- Federal vs. state roles:
 - Federal policies for large-scale projects (e.g., offshore wind).
 - State-level Renewable Portfolio Standards (RPS) drive adoption.
- Environmental compliance: Wildlife protection, water management, and land restoration mandates.
- ESG alignment: Emphasis on sustainability for regulatory and investor appeal.

Tax Incentives for Renewable Energy Investment

- Investment Tax Credit (ITC): Up to 30% of eligible costs.
- Production Tax Credit (PTC): Credits based on electricity generation.
- Accelerated depreciation and R&D grants.

Political Risks

- Policy uncertainty--potential changes to ITC/PTC timelines create investment variability.
- Supply chain dependencies: Solar panel and battery component imports vulnerable to geopolitical tensions.
- International relations--Tariffs and trade restrictions impact renewable project costs.

U.S. Energy Technology Landscape

Recent Advancements in Energy Technology

- Storage technologies:
 - Lithium-ion batteries with increased capacity and cost reductions.

- New advancements supporting renewable energy intermittency challenges.
- Smart grid technologies:
 - Advanced Metering Infrastructure (AMI) and Distributed Energy Resource Management Systems (DERMS).
 - Enhancements in energy distribution efficiency and demand response.
- Carbon capture and utilization (CCU): breakthroughs in CO₂ storage and conversion technologies.
- Grid integration: Improved systems for managing distributed generation and balancing loads.

Federal and State-Level Policies Driving Development

- Federal initiatives:
 - ARPA-E funding for early-stage, high-impact energy technologies.
 - Inflation Reduction Act provisions for emerging tech (e.g., hydrogen, advanced nuclear).
- State-level programs:
 - California's mandates for energy storage and EV infrastructure.
 - New York's "Reforming the Energy Vision" (REV) initiative for distributed energy.
- Commercialization support, including grants, subsidies, and pilot programs accelerating marketready technologies.

Environmental Regulations and Compliance Requirements

- Recycling mandates, including stricter policies for battery materials like lithium and cobalt.
- Standards for captured CO₂ levels and safe storage practices.
- Green hydrogen production compliance with water use and emissions criteria for electrolysis.
- ESG alignment--adopting environmentally sustainable practices for regulatory compliance and investor appeal.

Tax Incentives and Funding for Innovation

- Federal tax credits:
 - Expansion of the ITC to include battery storage and CCU projects.
 - New credits for hydrogen and biofuels under the Inflation Reduction Act.
- Funding initiatives:
 - ARPA-E grants for high-risk projects.
 - Loan Programs Office (LPO) support for commercialization.

• Venture capital partnerships--matching public funds to back startups in energy technology. **Political Risks and Policy Changes**

- Domestic policy fluctuations:
 - Administration priorities affecting funding, regulations, and incentives.
 - Bipartisan support for hydrogen offering potential stability.
 - U.S.-China tensions driving domestic investments in rare earths and semiconductors.
 - Risk of supply chain disruptions for energy technology components.

Breakthroughs from Universities and Venture Capital Incubators

- Battery storage innovations:
 - Stanford's lithium-metal batteries doubling energy density.
 - MIT's liquid metal batteries for grid-scale storage.
- Hydrogen production advancements:
 - Scalable electrolysis technologies for green hydrogen from Berkeley incubators.
 - Novel catalysts reducing energy input for hydrogen production.
- Carbon capture technologies:
 - University of Texas's efficient CO₂ capture membranes.
 - Conversion of CO₂ to carbon-neutral fuels at University of Wyoming.
- Advanced nuclear research:
 - NuScale Power's modular reactor designs.

• ACU's Natura MSR-1, the first liquid salt-fueled reactor licensed by the NRC.

Creating Energy Technology Royalties

- Intellectual property revenue streams: Licensing fees, technology adoption royalties, and product sales.
- Diversification benefits: Inflation-resistant returns aligned with technology adoption rates.
- Longevity: Sustained income through decades-long patent protections.

Benefits of Energy Technology Royalties

- Long-term revenue potential: Decades of royalty income from patent lifespans followed by trade secret protection.
- Sector diversification: Reduced reliance on volatile commodity prices.
- ESG appeal: Attracting institutional investors focused on sustainable returns.
- Monetization opportunities: Purchase of existing royalties from investors seeking liquidity.

Creating a Pipeline of Royalty Investment Opportunities

Oil & Gas Sector

- Sourcing royalty opportunities:
 - Building relationships in major producing regions (e.g., Permian Basin, Eagle Ford Shale).
 - Identifying new leaseholds, producing wells, or secondary recovery projects.
 - Collaboration with industry experts:
 - Partnerships with experienced operators to source high-quality assets.
 - Leveraging local knowledge for favorable terms.
- Expanding opportunities:
 - Working with mineral rights brokers.
 - Participating in auctions or private sales for direct acquisitions.

Renewables Sector

- Partnering with project developers:
 - Collaborating with solar, wind, and geothermal developers for royalty agreements.
 - Acquiring interests in land leases and infrastructure tied to energy production.
- Early-stage investments:
 - Securing royalties during permitting or construction phases.
 - Engaging with renewable energy funds and state-level programs for access.
- Monitoring incentives and policies:
 - Tracking Renewable Portfolio Standards (RPS) and federal incentives (e.g., ITC).
 - Identifying projects in emerging markets or incentivized areas.

Energy Technology Sector

- Early-stage technology investments:
 - Engaging with university research labs and venture capital incubators.
 - Acquiring IP or exclusive licensing agreements for emerging technologies.
- Targeting innovations:
 - Advanced battery storage, carbon capture, and hydrogen production.
 - New energy generation and storage technologies with commercialization potential.
- Strategic partnerships:
 - Collaborating with cleantech-focused venture capital firms and accelerators.
 - Accessing breakthrough developments for early royalty agreements.

Integrated Approach

- Diversification across energy segments:
 - Combining oil & gas, renewables, and energy technology investments.

- Balancing mature assets with emerging innovations.
- Ensuring resilience:
 - Aligning investments with market cycles and transitions.
 - Building a robust pipeline for consistent royalty generation.
- Strategic relationships:
 - Leveraging partnerships and conducting due diligence for high-quality acquisitions.

Monetization

Conversion of Fund Interests to Royalty Interests

- Direct ownership option:
 - Investors can convert fund interests into undivided royalty interests in invested assets.
 - Enables direct exposure to income-generating assets.
- Benefits:
 - Transparent, steady income streams from royalties.
 - Flexibility to retain or sell interests independently.

Oil & Gas Royalty Division Orders and Assignments

- Division order process:
 - Partitioning total royalty interest into fractional shares for investors.
 - Issuing division orders to formalize ownership and payment rights.
- Payment systems:
 - Operating companies manage production accounting and royalty disbursements.
 - Monthly payment cycles tied to production.

Renewable Energy Royalties

- Distribution methods:
 - Payments based on Power Purchase Agreements (PPAs) or production levels.
 - Operators use existing systems for landowner payments to distribute royalties.
- Revenue tracking:
 - Digital monitoring systems ensure accuracy and transparency.
 - Monthly or quarterly distributions aligned with energy output.

Energy Technology Royalties

- Complexity of revenue models: Licensing agreements, production outputs, or product sales.
- Revenue distribution:
 - Partitioning royalties based on investment agreements.
 - Payments structured monthly or quarterly, depending on technology usage cycles.
- Advanced accounting tools: Software for tracking and distributing complex royalty streams.

Summary of Monetization Benefits

- Regular income: Reliable, consistent cash flows from diversified royalties.
- Enhanced liquidity: Flexibility to sell or trade royalty interests.
- Simplified management: Well-established systems for accurate revenue distribution.

Developing Subject Matter Expertise Within Investor Entities

Access to Fund's Digital Files via Secure Data Room

- Comprehensive document access: Investment reports, lease agreements, technical analyses, and financial projections.
- Learning opportunities: Review of field reports, engineering assessments, and geological studies.
- Decision-making insights: Understanding due diligence and risk management processes.

Intern Nominations to Work with Fund Managers

- Practical experience: Interns participate in evaluating energy projects and financial modeling.
- Skills development: Exposure to asset management, strategic planning, and compliance measures.
- Long-term benefits: Strengthening investor relationships and transferring knowledge.

Regular Seminars and Presentations by Fund Management

- Educational sessions: Topics on market trends, regulations, and technological advancements.
- Interactive components: Case studies, Q&A sessions, and networking with industry experts.
- Strategic alignment: Improving transparency and informed decision-making.

Managing Royalty Interests Independently

- Direct involvement: Monitoring production reports and ensuring compliance with agreements.
- Revenue optimization: Negotiating with operators and implementing tax strategies.
- Knowledge application: Gaining expertise for improved management of other investments.

Summary of Expertise Development Opportunities

- Tailored engagement: Multiple levels of involvement for varying investor interests.
- Informed participation: Empowering investors with practical knowledge and strategic insights.