## An LDI Training Program

# UPSTREAM OIL & GAS COMMERCIAL, ECONOMICS & PORTFOLIO MANAGEMENT

***PSC Fiscal Systems, Taxation, Project Economics, Risk Analysis & Strategic Portfolio Decisions***

***by***

***Dr. A. Rinto Pudyantoro, MM., Ak., CA.***

### Target Participants:

Business Development, Corporate Planning, Finance, Commercial, Economics, Legal, Tax, Portfolio Management, Investment, and Management.

### 1. TRAINING BACKGROUND

Upstream oil and gas investment decisions require an integrated understanding of contractual arrangements, fiscal and taxation regimes, project economics, risk, and corporate portfolio considerations.

A technically attractive petroleum discovery does not automatically represent an economically attractive investment. Project value is influenced by the applicable PSC fiscal terms, taxation, cost structure, production profile, oil and gas prices, financing considerations, project risks, and the strategic position of the asset within the company's overall portfolio.

This three-day training is designed to provide participants with an integrated framework for understanding **PSC Cost Recovery and PSC Gross Split**, evaluating their taxation, legal and financial implications, conducting **project economic evaluation and risk analysis**, and translating project-level economics into **business development, corporate planning, and portfolio management decisions**.

### 2. TRAINING OBJECTIVES

Upon completion of the training, participants are expected to be able to:

1. Understand the fundamental structure and commercial principles of **PSC Cost Recovery and PSC Gross Split**.
2. Compare the economics and risk allocation under Cost Recovery and Gross Split PSCs.
3. Understand the key **taxation, legal, accounting, and financial aspects** affecting PSC economics.

4. Construct and interpret an upstream oil and gas **project cash-flow model**.
5. Apply key economic indicators including **NPV, IRR, Payback Period, Profitability Index and Government Take**.
6. Perform **sensitivity, scenario, break-even and risk analyses**.
7. Evaluate upstream investment opportunities from both **project and corporate perspectives**.
8. Understand the role of project economics in **Business Development and Corporate Planning**.
9. Apply portfolio management concepts to rank and prioritize upstream oil and gas assets and investment opportunities.
10. Develop recommendations for **investment, acquisition, divestment, farm-in/farm-out, and portfolio optimization decisions**.

## 3. TRAINING STRUCTURE

### DAY 1 — PSC, TAXATION, LEGAL & FINANCIAL FRAMEWORK
### From Contract Structure to Contractor Economics

Fokus hari pertama adalah memahami **“rules of the game”** sebelum melakukan perhitungan keekonomian.

**Module 1 — Upstream Oil & Gas Business Framework**
- Oil & gas upstream business characteristics
- Exploration–Development–Production lifecycle
- Upstream investment characteristics
- Risk, capital intensity and long-term investment
- Government–Contractor relationship
- Petroleum fiscal system and PSC concept

**Module 2 — PSC Cost Recovery**
- Fundamental concept of Cost Recovery PSC
- Revenue and lifting
- First Tranche Petroleum (FTP)
- Cost recovery mechanism
- Recoverable vs non-recoverable costs
- Investment Credit, where applicable
- Equity to be Split
- Contractor and Government share
- Domestic Market Obligation
- Taxation
- Government Take vs Contractor Take
- PSC Cost Recovery cash-flow structure

**Module 3 — PSC Gross Split**
- Philosophy and evolution of Gross Split PSC
- Base Split
- Variable and progressive components
- Contractor economics
- Cost treatment
- Tax implications
- Government and Contractor Take
- Risk allocation
- Cash-flow structure

**Module 4 — Cost Recovery vs Gross Split**

Perbandingan dari perspektif:

| **Aspect** | **Cost Recovery** | **Gross Split** |
|---|---|---|
| Cost mechanism | Cost recovery | Contractor bears costs |
| Revenue sharing | After fiscal mechanism | Gross production split |
| Cost efficiency incentive | Moderate/regulated | Strong |
| Contractor cost risk | Shared through recovery mechanism | Higher contractor exposure |
| Government revenue | Fiscal structure dependent | Direct production share + tax |
| Economics | Cost-recovery driven | Margin-driven |
| Main commercial issue | Recoverability & entitlement | Split & cost competitiveness |

**Module 5 — Taxation, Legal & Financial Aspects**
- PSC as contractual and fiscal framework
- Key contractual rights and obligations
- Income tax principles
- VAT and indirect taxes
- Withholding taxes
- Tax deductibility
- Depreciation
- Abandonment and Site Restoration (ASR)
- Financial reporting implications
- Funding and financing considerations
- PSC term and remaining economic life
- Legal and fiscal risks

**4. DAY 2 — PROJECT ECONOMIC EVALUATION & RISK ANALYSIS**
**From Project Cash Flow to Investment Decision**

Hari kedua dibuat lebih **hands-on**, sehingga peserta tidak hanya memahami konsep tetapi dapat membaca dan membangun logika model ekonomi.

**Module 6 — Fundamentals of Petroleum Economics**

- Economic evaluation principles
- Time Value of Money
- Nominal vs real cash flow
- Discount rate
- Inflation
- Oil and gas price assumptions
- Exchange rate
- Economic limit

**Module 7 — Building the Project Cash Flow**

**Production → Revenue → CAPEX/OPEX → PSC Fiscal Terms → Tax → Contractor Cash Flow → Economic Indicators**

Pembahasan:

- Production profile
- Oil/gas price assumptions
- Gross revenue
- Exploration expenditure
- Development CAPEX
- Production OPEX
- Abandonment expenditure
- Fiscal entitlement
- Tax
- Contractor net cash flow

**Module 8 — Economic Indicators**

- Net Present Value (NPV)
- Internal Rate of Return (IRR)
- Payback Period
- Profitability Index
- Discounted cash flow
- Government Take
- Contractor Take
- Economic Limit
- Break-even Price

## 5. DAY 3 — BUSINESS DEVELOPMENT, CORPORATE PLANNING & PORTFOLIO MANAGEMENT

**From Project Economics to Corporate Investment Strategy**
Hari ketiga mengangkat analisis dari **single project** menjadi **corporate portfolio decision**.

**Module 9 — Business Development in Upstream Oil & Gas**

- Role of Business Development
- Organic vs inorganic growth
- Exploration opportunity
- Acquisition
- Farm-in / Farm-out
- Asset acquisition
- Divestment
- Opportunity screening
- Due diligence
- Commercial evaluation
- Investment decision process

**Module 10 — Corporate Planning**

- Corporate strategy and upstream investment
- Strategic objectives
- Production and reserve targets
- Revenue and cash-flow planning
- CAPEX allocation
- Long-term business planning
- Corporate constraints
- Strategic fit

**Module 11— Portfolio Management**
Konsep utama:
**Corporate Strategy→ Opportunity Screening→Project Economics→Risk Assessment → Portfolio Ranking→Capital Allocation→ Portfolio Optimization**

Pembahasan:

- Project vs portfolio perspective
- Portfolio value
- Risk-return balance
- Production profile
- Reserve replacement
- Cash-flow profile
- Geographic exposure
- Fiscal exposure
- Exploration vs producing assets
- Capital constraints

**Module 12 — Portfolio Analysis & Optimization**
**Portfolio Mapping: Return and Risk**

Portfolio mapping evaluates and compares projects or assets based on two key dimensions: **Expected Return** and **Risk**.

**Return** reflects the economic attractiveness of an investment, typically measured through NPV, IRR, profitability, or cash flow generation. **Risk** represents the uncertainties that may affect the achievement of those returns, including geological, production, cost, schedule, market, fiscal, and regulatory risks.

Projects are positioned within a **Risk–Return Matrix**:

- **High Return – Low Risk:** Prioritize and accelerate
- **High Return – High Risk:** Invest selectively and mitigate risk
- **Low Return – Low Risk:** Maintain for stability and cash flow
- **Low Return – High Risk:** Reassess, defer, farm-out, or divest

The objective is to achieve an **optimal balance between return and risk**, supporting project ranking, capital allocation, and portfolio optimization.

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## *Your Course Leader*

Dr. A. Rinto Pudyantoro is a expert in the upstream oil and gas sector with over 31 years of professional experience. His career includes key roles at Vico Indonesia (10 years), BP Indonesia (4 years), and strategic positions at BP Migas and SKK Migas, where he served as Senior Manager for Revenue Accounting, Taxation, and Head of Papua-Maluku operations. Before retiring, he led the Program and Communications Division of SKK Migas.

He is the author of several books on oil and gas economics and policy, including *A to Z Bisnis Hulu Migas* (2012), *Proyek Hulu Migas: Analisis dan Evaluasi PetroEkonomi* (2014), *Dialog Tanya Jawab Migas* (2015), *Bisnis Hulu Migas* (2019), and *Kebijakan Perpajakan: Optimalisasi Insentif & Keseimbangan Fiskal* (2019, with the Fiscal Policy Agency), among others.

Dr. Rinto holds a bachelor's degree in Accounting from Gadjah Mada University (UGM), a master’s in International Finance from IBII Jakarta, and a Ph.D. in Resource Economics from IPB University. He currently serves as a senior lecturer and Chairman of the Center for Business and Economics of Petroleum and Energy Studies (C-BEPES) at Pertamina University. Since 2005, he has actively led training programs in resource economics, petroleum economics, fiscal and regional economics, PSC accounting, project economics, budgeting, and international petroleum accounting.

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