Oil and Gas Cost Management: Upstream Budgets, AFE Control and Refinery Benchmarking

23 August – 3 September 2027
Dubai - Five-star CBD venue



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Introduction:

Oil and gas cost management fails when field budgets are rolled forward, AFEs are approved without a stated estimate class and refinery cost per barrel is reported without knowing what drives it. Overruns then surface late, unit costs drift above peers and cuts made in a low price cycle remove the wrong activities. This Core Concept course trains cost controllers, planners and operations managers to build work programme and budget submissions, control AFEs, forecast at completion, track lifting cost and refinery cost drivers, and benchmark assets. Participants produce an Asset Budget, AFE Pack and Cost Reduction Plan.

Course Objectives:

- Structure upstream, midstream and refinery costs into coded cost breakdown and capex versus opex categories that planners and finance teams can both use
- Prepare an activity-driven work programme and budget WP&B and phase capital spend for drilling campaigns and facility projects
- Build, route and close out AFEs with an estimate class, contingency, commitment tracking and supplementary AFE triggers
- Forecast estimate at completion, explain price, volume and scope variances and report lifting cost, finding and development cost and unit cost KPIs
- Set refinery standard costs, analyse cost per barrel and quantify energy, catalyst, hydrogen and turnaround cost drivers
- Benchmark field and refinery costs against peer groups and convert cost gaps into a tracked cost reduction programme

Target Audience:

- Cost control staff who track field, drilling and refinery spend against budget and forecast outturn
- Planning staff who prepare annual activity plans, work programmes and capital phasing
- Finance business partners who challenge budget submissions and report unit cost performance to management
- Operations and asset managers who own field or refinery budgets and approve AFEs
- Refinery economics and performance staff who monitor cost per barrel and energy and catalyst consumption
- Drilling and projects controllers who prepare AFE estimates and close-out reports

Course Outline:

Day 1: Oil and Gas Cost Structure Across Upstream, Midstream and Refining

- Cost Breakdown Structure for Exploration, Development, Production and Abandonment Phases
- Midstream Pipeline, Storage and Gas Processing Cost Elements and Tariff Drivers
- Refinery Cost Base: Fixed Cash Cost, Variable Cash Cost and Crude Throughput
- Capex Versus Opex Classification Rules for Wells, Workovers and Facility Upgrades
- Cost Centre and Work Breakdown Structure Coding for a Producing Asset

Day 2: Work Programme and Budget WP&B Preparation

- Annual WP&B Cycle Calendar from Activity Plan to Operating Committee Approval
- Activity-Driven Opex Budget from Well Count, Production Profile and Manning Levels
- Capital Budget Phasing for Drilling Campaigns and Facility Projects
- Budget Assumption Book: Rig Day Rates, Chemicals, Logistics and Marine Unit Rates
- Budget Challenge Session Using Prior-Period Actuals and Activity Variances

Day 3: AFE Preparation, Approval and Control

- AFE Types: Exploration Well, Development Well, Workover and Facility AFEs
- AFE Estimate Build with AACE Estimate Classes, Accuracy Ranges and Contingency
- AFE Approval Thresholds, Delegation of Authority and Partner Consent Routing
- AFE Commitment Tracking, Accruals and Supplementary AFE Triggers
- AFE Close-Out Report and Well Cost Lessons-Learned Capture

Day 4: Cost Control, Forecasting and Upstream Unit Cost KPIs

- Monthly Cost Report Layout: Budget, Commitment, Actual and Forecast Columns
- Estimate at Completion EAC and Estimate to Complete Forecasting Methods
- Price, Volume and Scope Variance Analysis with a Corrective Action Log
- Lifting Cost per Barrel of Oil Equivalent and Operating Cost per Producing Well
- Finding and Development Cost per Barrel and Unit Capital Cost Tracking

Day 5: Cost Allocation and Week-One Upstream Case

- Shared Service Cost Allocation Keys Between Fields, Licences and Facilities
- Joint Operations Cost Sharing: Operator Overhead, Time Writing and Recharge Management
- Allocation Driver Selection: Production, Throughput, Headcount and Equipment Hours
- Guided Case: Upstream Asset Budget and Drilling AFE for a Case Field
- Peer Review of the Case Budget Against Unit Cost Targets

Day 6: Refinery Standard Costing and Cost per Barrel

- Refinery Cash Operating Cost per Barrel of Crude Processed
- Standard Cost Setting for Utilities, Chemicals and Catalysts per Unit Throughput
- Material Price, Usage and Yield Variances in Refinery Standard Costing
- Joint Product Costing with Relative Sales Value and Physical Units Methods
- Processing Unit Cost Centre Design for Crude, Conversion and Treating Units

Day 7: Refinery Energy, Catalyst and Turnaround Cost Drivers

- Refinery Energy Cost Model: Fuel Gas Balance, Steam, Power and Energy per Barrel
- Catalyst Life-Cycle Cost: Fill Cost, Cycle Length, Regeneration and Metals Recovery
- Hydrogen, Chemicals and Additives Consumption Cost Tracking
- Turnaround Cost Annualisation and Its Effect on Refinery Unit Cost
- Cost Governance Controls: Budget Owners, Spend Authorisation and Cost Risk Register

Day 8: Field and Refinery Cost Benchmarking

- Benchmarking Peer Group Selection by Field Type, Water Cut and Onshore or Offshore Setting
- Normalising Refinery Cost per Complexity-Weighted Barrel with the Nelson Complexity Index
- Upstream Opex Benchmark Metrics: Cost per Barrel, Cost per Well and Staff per Output
- Refinery Benchmark Metrics: Personnel, Maintenance and Energy Cost per Barrel
- Cost Gap Chart and Performance Gap Closure Targets

Day 9: Cost Reduction Programmes in a Low Price Environment

- Cash Breakeven per Barrel and Cost Reduction Target Setting
- Contract and Supplier Rate Renegotiation Levers for Rigs, Vessels and Well Services
- Well and Facility Rationalisation: Shut-In, Consolidation and Deferral Screens
- Cost Reduction Initiative Register, Savings Validation and Sustainment Reporting
- Communicating Cost Cuts to Operations Teams, Partners and Management

Day 10: Capstone: Asset Budget, AFE Pack and Cost Reduction Plan

- Case Field and Refinery Data Pack Review and Assumption Log
- Capstone Build: Asset Budget with Opex, Capex and Unit Cost Targets
- Capstone Build: AFE Pack with Estimate Class, Contingency and Approval Routing
- Capstone Build: Cost Reduction Plan with Benchmark Gaps and Savings Profile
- Capstone Presentation to a Mock Operating Committee and Cost Review Panel

Skills You Will Gain:

- Upstream Cost Breakdown Structuring
- Work Programme and Budget Preparation
- AFE Estimating and Control
- Cost Forecasting at Completion
- Unit Cost Performance Reporting
- Refinery Standard Costing
- Cost Benchmarking Analysis
- Cost Reduction Programme Management

Why Attend This Course:

- Return with an Asset Budget, AFE Pack and Cost Reduction Plan built on a case field and refinery and ready to adapt to your own asset
- Defend budget and AFE figures before operating committees with activity drivers, estimate classes and forecasts instead of last period's spend
- Explain why a field's lifting cost or a refinery's cost per barrel sits above peers and which drivers to act on first
- Compare cost practice with upstream, midstream and refining peers from operators, service companies and integrated energy groups

Conclusion:

Cost performance in oil and gas depends on budgets tied to activity, AFEs tied to estimate quality and unit costs that can be compared with peers. Week one covers upstream cost structure, WP&B preparation, AFE control, forecasting at completion, unit cost KPIs and cost allocation. Week two adds refinery standard costing, energy, catalyst and turnaround drivers, field and refinery benchmarking and cost reduction in a low price cycle. The final day produces an Asset Budget, AFE Pack and Cost Reduction Plan ready for management review.