ENERGY TRANSITION AND
WORLD OIL AND GAS FISCAL SYSTEMS

Course Content

The course consists of 2 days Energy Transition and 2.5 days World Oil and Gas Fiscal Systems

ENERGY TRANSITION

Renewable Energy Development

Possible breakthroughs in technologies of solar and wind and future cost projections. Developments in hydropower, ultra-deep geothermal, biomass and biofuels.

Energy Storage

Lithium-ion batteries, sodium-ion batteries, flow batteries, and other types of storage. Future costs of energy storage.

Hydrogen

Production of hydrogen based on fossil fuels and green hydrogen. Possible breakthroughs in technologies and future costs of hydrogen. Hydrogen storage, transportation, distribution, and markets. Large hydrogen projects.

Carbon Capture and Storage or Utilization

Carbon capture methods and metal-organic frameworks. Large CCS projects. Northern Lights Project. Bio Energy Carbon Capture and Storage. Exomad Green Project. Direct Air Capture. CO2 utilization.

Climate Change

Carbon neutrality commitments and proposals of the various countries.

Energy Supply and Demand

Penetration of low-cost renewables. Projected increases in energy storage. Electrification of transport. Renewables for cement, iron, and steel production. Large green ammonia projects. Green hydrogen for the transport sector.

Energy Forecasts

IEA scenarios. Energy forecasts and future oil and gas production. Forecasts of crude oil and natural gas prices.

Energy Transition – Companies

Roles and strategies of companies involved in energy transition: petroleum companies, power companies, and independent wind, solar and hydrogen producers. Future competitive framework for petroleum companies.

Government Policies

Maintaining and effective petroleum industry. Promotion of feedstock production. Carbon trading and carbon taxes. Elimination of subsidies and export duties. Changes in petroleum land management and duration of petroleum contracts. Natural gas promotion. Reduction of energy emissions. R&D requirements.

Petroleum Energy Arrangements

Development of comprehensive new upstream petroleum energy contracts. Incorporation of renewable energy in petroleum agreements. Petroleum energy package deals.

WORLD OIL AND GAS FISCAL SYSTEMS

General economic and exploration risk analysis

Profitability analysis: Calculation of Net Present Value, Internal Rate of Return, Profit to Investment Ratio, Payout Time and other indicators. Exploration risk analysis.

Government Take Analysis

General methodology of government revenue analysis. Government Take determination.

Main Oil and Gas Payments to Government

Royalties, Corporate Income Tax, Production Sharing, State Participation, Windfall Profit Taxes, Hydrocarbon Taxes, Brazil Special Participation, Additional Profits Tax, Petroleum Resource Rent Tax, sliding scales based on IRR, R-factor sliding scales and overview of progressive fiscal features.

General Taxes and Levies

Value Added Tax, Import Duties, Export Duties, Property Taxes and Carbon Taxes.

Service Fee Systems

Iraq Technical Service Contract and Iran Buy Back Contract.

Treatment of Abandonment Cost and Booking of Reserves

Alternative treatments of abandonment costs. Booking of Reserves

Incremental and differential analysis

Review of fiscal systems under incremental and differential analysis. Goldplating.

Petroleum Arrangements

Concession Systems. Production Sharing Contracts, Risk Service Contracts and Profit-Sharing Contracts.

Review of systems of Alberta, Norway, Egypt and China.

Nature of Government Take

Volume, Cost and Price Progressivity. Maximum Economic Recovery, Cost and Price Efficiency, Marginal Field Development, Geological Risk Sharing and Front-End Loading

Level of Government Take and Fiscal Stability

Level of Government Take, Competitiveness Rating, Rating of 697 different fiscal systems, Comparative Analysis. Fiscal Stability concepts.

Government Fiscal Policy Issues

Sharing of risks, Resource Policies, Economic Policies, Administrative Policies, Legal Framework and In-country Distribution of Government Take

Future Fiscal Terms

Required restructuring of petroleum fiscal terms. Royalty formula approaches. Role of surtaxes and hydrocarbon taxes. Adjustments in IRR and R-factor scales. New approaches to production sharing and state participation.