**ENERGY TRANSITION**

**ONE-DAY COURSE PROGRAM**

**June 10, 2025, Istanbul**

**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 green hydrogen. Hydrogen storage, transportation, distribution, and markets. Large hydrogen projects in development.

**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 in development. 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 required in petroleum land management and duration of petroleum contracts. Natural gas promotion. Reduction of energy emissions. R&D requirements.

**Petroleum Fiscal Terms for Energy Transition**

Required restructuring of petroleum fiscal terms to support energy transition. New royalty formula approaches. Role of surtaxes and hydrocarbon taxes. Necessary adjustments in IRR and R-factor scales. Different approaches to production sharing and state participation.

**Petroleum Energy Arrangements**

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