



OPEC Visiting Research Fellow Programme VRFP-2025

Announcement

Visiting Research Fellow Programme (VRFP-2025)

Objectives of the Visiting Research Fellow Programme

The Visiting Research Fellow Programme (VRFP) is an innovative approach to human capacity development and is designed to help professionals from OPEC Member Countries improve their expertise and technical skills in research in an array of energy-related issues. It does this by providing participants with the opportunity to become involved in the Secretariat's research operation through practical experience and 'learning by doing'.

Professional Benefits to Fellows

Participants in the VRFP benefit from being in the programme through:

- Involvement and close participation in the Secretariat's research programme and studies;
- Contributing to ongoing projects in the Secretariat's and strengthening of networks with Member Country professionals;
- Gaining experience at the Secretariat and deepening their knowledge of OPEC and understanding of its goals, priorities and activities;
- Opportunities to involve themselves in cutting-edge research and hands-on experience of policy issues in climate change and on a range of energy-related topics;
- Enhancing their professional experience through practical work assignments;
- Exposure to a rich international environment and interaction with researchers from OPEC Members and other countries;
- Broadening their career possibilities as a result of the experience and insights gained at OPEC.

General Eligibility Requirements

- The programme is open to applicants from Member Countries only. They must be nominated and supported by their respective OPEC Governors;
- Applicants should be professionals with a minimum of five years of relevant work experience;
- Applicants must be familiar with research methodology and should have a proven record of research experience;
- Participants are expected to be able to undertake the programme in English, which is the working language of the Secretariat;
- Applications must be submitted through the relevant Governor for OPEC.

Expected Outcome/Deliverables

- Participants in the programme will be involved directly in the research undertakings at the Secretariat and will contribute to them;
- Participants are required to deliver a report to the Secretariat on the findings of their research projects;
- Participants are required to make a presentation at the end of their assignments and to discuss their research findings with members of the Secretariat.

All intellectual property arising from research by the programme's participants belongs to the Secretariat. An intellectual property and confidentiality agreement will be signed before a successful participant is formally accepted into the programme.

Duration & Working Hours

The duration of the programme will be three up to six months. The Visiting Research Fellows are expected to observe the official working hours of the Secretariat.

Allowances, Accommodation, Travel and Insurance

Participants are required to have paid employment and to be able to fully support themselves financially while staying in Vienna, and they must provide adequate evidence of this through their nominating Governors before they can be admitted to the programme. The Secretariat will provide each participant with a monthly honorarium of €1,000 to assist with extra expenses.

However, the Secretariat will not cover any costs related to the accommodation or travel of participants or their dependents. Participants must arrange their own health/sickness insurance and provide evidence that they possess adequate health coverage before arriving in Vienna.

The Secretariat will not be responsible for any health or sickness claims stemming from the fellowship period. With regard to accident insurance at the workplace, the Secretariat will enroll participants in its accident insurance scheme for the duration of their stay in the programme at the Secretariat.

Application Evaluation Criterion

Candidates' professional merit and potential for successful research will be the main consideration when evaluating the applicants.

Application Procedure

Applicants are required to complete the application form, which includes writing an elaborate research proposal that should center on any of the topics listed below. Applicants are also requested to attach their latest Curriculum Vitae to the completed application form. The following are the research topics available in the different Departments/Office/Unit at the Secretariat for the 2025 VRFP:

Energy Studies Department

Introduction to the Energy Studies Department

The Department is responsible for monitoring, analyzing and forecasting world energy developments in the medium and long term and reporting thereon. It also monitors developments, and undertakes specific studies, on energy demand and production-related technology and the emerging implications for OPEC.

Research topics:

1) Energy needs of AI Data Centers

The rapid growth of AI technologies, combined with advancements in cloud computing and the Internet of Things (IoT), is driving unprecedented demand for computational power. AI data centers, which form the backbone for training and deploying AI models, are expanding rapidly worldwide to meet these needs. This expansion is resulting in a significant increase in energy consumption, particularly electricity demand, placing immense pressure on global energy systems.

The objective of this study is to analyze the energy consumption trends of AI data centers and provide their implications for energy infrastructure and electricity demand through 2050.

The report should address the following:

- Analysis of electricity demands in AI data centers, focusing on energy-intensive technologies like deep learning and high-performance computing.
- Assessment of the role of servers, CPUs, memory systems, and backup generators in driving energy consumption.
- Evaluation of broader impacts on energy systems, including grid stability and integration of renewables, with specific attention to hyperscale data centers.
- Exploration of economic and policy challenges, including necessary investments in energy infrastructure and efficiency technologies.
- Provision of insights on balancing AI data center energy demands with sustainable energy supply and grid stability.

Specific Eligibility Requirements

A successful candidate for this position should preferably have an advanced university degree (Master graduates or PhD candidates) in a relevant field to Energy, Economics, or Energy Policy. He or she should also have professional work experience in the energy industry. In addition, the candidate should possess at least a general understanding of data analysis tools and methodologies relevant to energy studies.

2) Recent developments in CCS, CCUS and other Negative Emission Technologies (NETs), and their implication on the future energy mix

Carbon Capture and Storage (CCS), Carbon Capture, Utilization and Storage (CCUS), and other Negative Emission Technologies (NETs) are of critical importance due to their potential to address the dual challenges of the energy accessibility/security/affordability and CO₂ emissions reduction.

The objective of this study is to provide an in-depth overview of recent developments in the NETs, exploring categories such as Bioenergy with Carbon Capture and Storage (BECCS), Direct Air Capture (DAC), and soil carbon sequestration, among others. It will explore

approaches like Circular Carbon Economy (CCE), which involves a wide range of these technologies.

Report should address the following:

- Examine technological advancements, enabling policies, and economic frameworks driving NETs innovations.
- Analyze NETs large-scale feasibility and integration in various sectors by providing long-term projections on the capacity and cost of these technologies.
- Assess the role of NETs in decarbonizing the energy sector; but also, other sectors such as steel, cement, and chemical industries.
- Assess implications of NETs for the future energy mix, and their contribution to global climate goals.
- Identify opportunities and challenges related to their large-scale deployment.

Specific Eligibility Requirements

A successful candidate for this position should preferably have an advanced university degree (Master graduates or PhD candidates) in a relevant field to Energy, Economics, or Energy Policy. He or she should also have professional work experience in the energy industry. In addition, the candidate should possess at least a general understanding of the technologies associated with the various energy value chains, with particular emphasis on low-carbon and negative-emission technologies.

Petroleum Studies Department

Introduction to the Petroleum Studies Department

Within the Research Division, the Petroleum Studies Department (PSD) is responsible for continuous monitoring of oil and product market developments in the short-term, and reporting thereon in a timely and precise manner to Member Countries. Its objective is to provide pertinent and reliable information and analyses in support of decision-making and policy-making in Member Countries, as well as to highlight the conditions under which the world oil markets are balanced.

PSD is also responsible for carrying out, on a continuous basis, research programmes and studies on short-term energy market issues. Its objective here is to make reports and ad hoc papers, highlighting particularly important issues available to Member Countries for their use and consideration.

A further area of responsibility is conducting a series of regular forecasts by elaborating on and analysing oil market scenarios. These findings will then be reported to Member Countries for information purposes, as well as in support of policy-making.

Research topics:

1) Estimating short term income and price elasticities for oil product demand of major oil consuming countries

The proposed study aims to build a model that estimates the short-run income and price elasticities of petroleum product demand in the US, Germany, Japan, China and India (based on data availability).

The report should address the following:

- Aid in developing customized models for each country (US, Germany, Japan, China, and India) to estimate short-run income and price elasticities for petroleum products based on available data.
- Contribute insights into country-specific consumer behaviour related to petroleum product demand, providing a nuanced understanding of how income and prices impact consumption patterns.
- Help to provide accurate estimates of short-run income and price elasticities, offering valuable information for forecasting.
- Compare and contrast the estimated elasticities across the selected countries, identifying any unique trends or common patterns in how demand responds to income and price changes.
- Offer data-driven insights that can support analyzing petroleum product demand.

Specific Eligibility Requirements

A successful candidate for this position should have an advanced university degree in economics, especially applied economics, applied energy economics (PhD is preferred), a genuine innovative interest in data science and the oil market. Expert knowledge in E-views and Excel is an absolute prerequisite. He or she should further demonstrate computer programming skills, such as R, Python, STATA, SAS. Knowledge of database management systems is also preferred.

2) Main changes, opportunities and challenges in the non-OECD refining sector

Refining systems are often impacted by developing dynamics, market conditions, economics, and mandates, prompting refinery operators to adopt measures to reduce financial risk or product losses.

The report should address the following:

- Identify the changes in refinery operations and economics,
- explore the opportunities and challenges related to technology,
- explore the opportunities and challenges related to product specifications,
- explore the opportunities and challenges related market needs,
- explore the opportunities and challenges related feedstock selection,
- any other relevant potential or necessary adjustments to be considered in main refining centers in the Non-OECD.

Specific Eligibility Requirements

The successful candidate for this study should be a chemical or petroleum engineer (Bachelor's degree) with vast experience in refining, processing, operations and economics.

Environmental Matters Department

Introduction to the Environmental Matters Department

The Environmental Matters Department (EMD) is responsible for undertaking studies on the environment, sustainable development, and relevant policies and actions at various levels. It also monitors developments of the United Nations and intergovernmental processes on climate change and sustainable development, such as the implementation of the Paris Agreement and other relevant environmental agreements, as well as the 2030 Agenda and its Sustainable Development Goals (SDG), particularly SDG7 focused on energy access for all, and their impacts on the energy sector as well as on OPEC Member Countries.

Research topics:

1) Evaluating the impacts of COP outcomes on oil-exporting economies: Risks, opportunities, and the engagement of OPEC member countries

The proposed study aims to examine the potential impacts of international climate agreements—particularly those under the United Nations Framework Convention on Climate Change (UNFCCC)—on the economies and livelihoods of oil-exporting countries, with a focus on OPEC Member Countries.

Report should address the following:

- Assess recent and upcoming UN Climate Change Conference of the Parties (COP) outcomes: Examine how the results of COP28 and COP29—and expectations for COP30 and beyond—may affect oil-exporting countries, emphasizing the negotiation items most relevant to OPEC Member Countries.
- Highlight how principles such as Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) and equity are upheld (or challenged) in the outcomes of these conferences, especially in relation to OPEC Member Countries' interests.
- Investigate potential risks and broader implications of key negotiation items for developing oil-producing countries, focusing on economic and livelihood impacts.
- Analyze positions and convergence/divergence and compare the stances of various negotiating blocs and countries under the relevant agenda items, pinpointing where they align or diverge from OPEC Member Countries' positions.
- Explore how OPEC Member Countries' negotiators have influenced past COP results through collaboration and advocacy, assessing strategies that have led to balanced outcomes.
- Highlight the importance of active participation, and underscore why consistent and robust engagement by OPEC Member Countries is critical for safeguarding their interests and contributing to balanced, equitable results in climate negotiations.
- Propose ways to maintain and strengthen collaborative efforts among OPEC Member Countries, ensuring that their economic interests align with global climate goals and remain protected in upcoming COP negotiations and beyond.

Specific Eligibility Requirements

A successful candidate for this position should possess an advanced university degree (Masters or PhD) in Energy Policy, Economics, Environmental Law, or International Relations, with a focus on climate negotiations. Additionally, the candidate should have professional experience in international climate negotiations, energy policy analysis, or related field.

Data Services Department

Introduction to the Data Services Department

The Data Services Department (DSD) is responsible for collecting, retrieving and providing statistical data as support to the research and analytical studies in the other RD Departments and other activities of the Secretariat. The Department thus has the responsibility to a central, timely provider of reliable up-to-date statistical data pertaining to oil markets in particular and energy markets and related issues in general.

Research topics:

1) Collection, validation, and analysis of sectoral GDP data for key countries and regions with specific emphasis on the oil industry

The study aims to collect, validate, standardize, and analyze sectoral GDP data and its evolution over time for key countries and regions from various national and international data sources. The research will examine how the oil sector contributes to the national economies of oil-producing countries and how the changes in the global oil industry might affect the trends in the sectoral GDP data of the oil-consuming countries. By investigating the relationship between sectoral GDP data and national oil sector and oil consumption, the study seeks to provide statistical insights into the long-term associations between domestic economies and oil industry. Furthermore, it will assess the accuracy of available data across various data sources and timelines.

The report should address the following:

- Contribute to the creation of a dataset covering the contribution of the oil sector and industry for key countries and regions.
- Conduct statistical analysis of historical trends and relationships of sectoral GDP data of both oil-producing and oil-consuming countries.
- Evaluate the association between domestic economies and economic growth and developments of the domestic oil industry.
- Compare and contrast the developments of the sectoral GDP data for oil-producing and oil-consuming countries.
- Enhance the economic databases at the OPEC Secretariat with data on sectoral GDP and the oil sector in particular.

Specific Eligibility Requirements

A successful candidate for this position should have a genuine interest in data collection and statistical related subjects, and the macroeconomics and oil markets in general. He or she would ideally further demonstrate data gathering skills. Knowledge of data systems such as Excel and SQL would be of advantage.

2) Review of World Non-Conventional Oil Production by Country.

Although non-conventional oil account for about 5-10% of total world oil supply and have strong growth potential, the main focus on statistical analysis is usually on data for crude oil and NGL production. Non-conventional oil includes synthetic crude oil from tar sands, oil shale, etc., liquids derived from coal liquefaction (CTL) and gas liquefaction (GTL),

hydrogen and emulsified oils (e.g. Orimulsion), and non-hydrocarbon compounds added to or blended with a product to modify fuel properties (octane, cetane, cold properties, etc.) e.g. alcohols (methanol, ethanol), ethers (such as MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether) or esters (e.g. rapeseed or dimethyl ester, etc.) and chemical compounds such as TML (tetramethyl lead) or TEL (tetraethyl lead) and detergents.

The study aims to comprehensively review and collect information on the production volumes of non-conventional oils by type and by country for the last 25 years. It should evaluate the availability and accuracy of various data sources, such as national information from ministries and statistical offices, company reports, media information, and from specialized research and consultancy companies.

The report should address the following:

- Enhance the oil supply database at the OPEC Secretariat with more granular data on historical non-conventional oil production by creating a new dataset covering non-conventional oil production by country and by type, whereby the currently available information could be a starting point of the review.
- Data should comprehensively cover annual production information since 2020.
- The unit of the collected data should be 1000 barrels per day; hence, the conversion of information, which is provided with a different unit, is crucial.
- As far as possible, background information (e.g., name, location, capacity of CTL/GTL plants) should be covered in a dedicated chapter of the report.

Specific Eligibility Requirements

A successful candidate for this position should have a genuine innovative interest in oil data and statistical related subjects, and the energy market in general. He or she would need strong data gathering and manipulation skills. The study will rely heavily on the utilization of MS Office, Excel, PowerPoint and Word.

3) Collection of historical oil trade data for Non-OECD countries

The aim of this study is to collect historical data on oil trade from official and non-official sources (statistical yearbooks, research entities, etc.) with an annual and monthly frequency and on a country level, with a special focus on Non-OECD countries. Furthermore, the collected data would be summarized and complement the existing database on the topic.

Specific Eligibility Requirements

A successful candidate for this position should have in-depth knowledge in the following areas: statistical methods and analysis; econometrics; database queries and data mining; relational databases, design principles; extraction and transformation tools; application software such as Excel, Access, Oracle, B20/20, PL/SQL; IT skills; oil industry operation; firm knowledge in the area of energy with specific expertise in the oil sector.

Information Technology Department

Introduction to the Information Technology Department (ITD)

The Department, established by the recommendation of the Secretariat during the 165th Meeting of the Board of Governors (BoG) in 2024, oversee all information and communications technology infrastructure (software and hardware), associated services and related tasks of the Secretariat, including planning, capacity building, quality assurance, information security, IT policies and their compliance. The ITD consists of two Sections — IT Applications Section and IT Services Section.

Research topics:

1) Development / Implementation of IT Service Catalogue

The study will research the best practices related to the analysis and formulation of IT Service Catalogue, aiming to apply them on the development of a tailor-made IT Service Catalogue for the Secretariat.

The report should address the following:

- A literature survey over best practices for IT Service Catalogue formulation
- A draft of the OPEC IT Service Catalogue.

Specific Eligibility Requirements

A successful candidate for this position should have a university degree (Master graduates or PhD candidates preferably) in a relevant field related to informatics, computer science. He or she should also have comprehensive knowledge of IT best practices and processes.

2) Development / Implementation of AI Chatbot for Service Desk

The study will research the AI latest trends in SLMs and LLMs for the development and implementation of a chatbot, targeting the creation of a solution for the IT Service Centre of the Secretariat.

The expected research outcomes, as follows:

- A report contentive of a literature survey of AI latest trends, specifically for SLMs and LLMs
- A functional prototype of a Chatbot solution for the IT Service Centre.

Specific Eligibility Requirements

A successful candidate for this position should have a university degree (Master graduates or PhD candidates preferably) in a relevant field related to informatics, computer science. He or she should also have comprehensive knowledge of IT best practices and processes.

3) IT Project Management Practice

The study will research the best practices related to IT Program / Project Management, directing the efforts to the implementation of the IT Project Management practices and the creation of the IT Project Office.

The report should address the following:

- A literature survey IT Project Management and IT Project Office best practices.
- A proposal for the organization and associated management processes of the IT Project Office.

Specific Eligibility Requirements

A successful candidate for this position should have a university degree (Master graduates or PhD candidates preferably) in a relevant field related to informatics, computer science. He or she should also have comprehensive knowledge of IT best practices and processes.



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