

Announcement

Visiting Research Fellow Programme (VRFP-2021)

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 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 2021 VRFP:

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) Short-Term Sectoral Oil Demand Forecast (SODF)

While many factors underpin oil demand, economic growth represents the single most important driver, together with prices and inventory levels. The objective of this project is to provide robust and accurate short-term models that captures oil demand dynamics and provide the demand analyst with different approaches to forecast short-term oil demand.

The project's aim is to estimate short-term crude oil consumption, real oil price and real GDP elasticities based on a sectoral approach. Therefore, for each of the identified regions, the model would define the sectoral demand and adopt the oil demand as well as the prices based on the weight given to each sector.

The project may use one of the listed below models, however, any time series or econometrics model that fit with the proposal objectives and data could be utilized:

- ADRL model: to capture the short term co-integration relation between the variables
- SVAR model: to capture the impact of a shock in any of the independent variables on the short-term oil demand results/findings
- A dynamic panel oil demand

The project will cover the following regions: OCED, OCED America, OCED Asia Pacific, OCED Europa, Africa, Latin America, Other Asia, Middle East and the world.

Due to their relative importance in global oil demand, the model would focus the following countries: USA, China and India.

Schedule

The project is planned to include four different phases:

The project data provided by DSD will be structured as a time series data on annual and quarterly basis following real GDP data. For the quarterly basis, the data period covered will start from 1Q93 up the most recent available quarterly data, while the annual data can go back as far as 1960. Updates would be necessary whenever new data is released. Meanwhile, the different real GDP as well as the real price assumption for the near term would also be taken into account to draw different scenarios that accommodate for any short-term changes such as the COVID-19 structural break.

Additional robust regression may be applied, such as replacing oil demand with product demand on a regional basis. Alternatively, adding some extra exogenous variables that capture weather or geopolitical effects or as control variables should also be possible.

2) Assessing the global and regional supply/demand balance for oil products (by category)

The objective of this study is to prepare an overall regional oil product supply/demand balance by product category and trace its evolution in recent years. The study aims to look at refinery output in terms of products produced and compare this with final end-user demand on an annual and regional basis. The difference between the observed supply and final demand then leads to the assessed total oil balance by product and will attempt to highlight and explain the changes observed in these balances in recent years

Score and Work Plan

In order to determine the regional supply/demand balance by category for oil products, it is necessary to assess refinery output in terms of oil products in all regions as well as end-user demand by products. The study will also evaluate the regional/domestic oil product final end demand in terms of the six categories. Data will be analysed on an annual basis in order to arrive at a global oil product balance by category.

The study will examine the balance by product in each region and therefore will identify the change in recent trade flows of oil products between major world regions. To this end, the findings will concentrate on the regional level.

Data Services Department

Introduction to the Data Services Department

The Data Services Department (DSD) is responsible for supporting the research activities in the Research Division through provision of statistical data management and analysis, software development, and documentation/references management services. The department is the central provider of reliable, timely, up-to-date data, documentation and information pertaining to the oil market in particular, and energy and related issues in general.

Research topics:

1) Big Data, Machine Learning and Artificial Intelligence in Oil and Gas Industry

The candidate seeks to identify and summarize the positive influence that the adoption of Big Data, Machine learning and Artificial Intelligence can have on the Petroleum and Petrochemical industry.

Exhaustive research will be carried out on the industry's engagement and adoption of the above-mentioned techniques in upstream, midstream and downstream operations to concisely summarize the varied applications and the potential benefits.

Specific Eligibility Requirements

A successful candidate for this position should have a genuine innovative interest in data and statistical related subject, IT development, data science and the oil market. He or she should further demonstrate computer-programming skills, such as R, JavaScript, Python, Hadoop, JQuery, CSS, HTML and Excel with VBA. Knowledge of database management systems such as SQL would be of advantage.

2) Assessing the methodologies of data in the JODI world oil database with specific focus on oil supply, oil demand and oil stocks

The study will focus on identifying key reporting methodology features in relation to reported JODI oil data for oil supply, oil demand and oil stocks. Ideally, the study will provide knowledge in country, petroleum product and flow wise differences between JODI and the OPEC methodology with the aim of maximizing the usage of the JODI oil database.

Specific Eligibility Requirements

The candidate is also expected to utilize basic statistical methods and time series analysis in identifying outliers and trends in JODI data.

Environmental Matters Unit

Introduction to the Environmental Matters Unit

Within the Research Division, the Environmental Matters Unit (EMU) is responsible for monitoring, analysing, reporting and advising on developments pertaining to the international debate on environmental matters affecting the energy sector. To this end, EMU's activities are client based and result oriented. EMU places emphasis on the needs of Member Countries with regard to policy research and analysis related to emerging challenges in the climate change/energy nexus.

Research topic:

1) The context of Article 6 of the Paris Agreement and their impacts on the energy sector and global energy mix

The Market approaches in the context of Article 6 of the Paris Agreement, with a focus on modalities for creation and exchange of mitigation outcomes among various stakeholders, could impact energy sector and global energy mix. Article 6 on market and non-market approaches has been under discussion in the framework of the Paris Agreement Work Program (PAWP). Nonetheless, due to the divergence of views among Parties to the UNFCCC on various dimensions of guidelines, modalities and procedures for the implementation of Article 6, this issue has become the major deferred and unresolved issue in the negotiation processes for the operationalization of the Paris Agreement. Parties could not agree on this critical issue during Katowice Climate Change Conference, as well as in the COP25 in Madrid, Spain, and will continue to be one of the major contentious issues that should be addressed in the UNFCCC negotiation processes leading to COP26 in Glasgow. The differences among Parties are mainly focused on technical requirements and transparency of mitigation actions, accounting of GHG inventories, addressing finance for adaptation actions; and environmental integrity of the actions by Parties in creation of mitigation outcomes, their transfer, as well as their use, in the context of Article 6.

Terms of Reference

Undoubtedly, the transparency for creation of mitigation outcomes in the context of Article 6 of the Paris Agreement will continue to be a contentious issue among Parties, in terms of accounting of GHG inventories of Parties and MRV of mitigation outcomes that could be transferred. Almost all developing countries would like to participate in creating mitigation outcomes from various sectors of their economies and their transfer in the context of Article 6 of the Paris Agreement. Nonetheless, the developed country Parties are questioning the transparency and MRV of mitigation actions, whereas, the capacity of developing countries and the need for flexibility for these countries should also be addressed. The institutional arrangements, policies and actions arising from market approaches in the context of the implementation of Article 6 of the Paris Agreement, will affect the energy sector with major impacts on global energy mix.

In order to address the various concerns of Parties, a real and factual assessment of the technical requirements, the modalities for transfer of mitigation outcomes, and the impacts of market approaches on energy sector, as well as the global energy mix shall be carried out.

A study on this important issue could address the following major areas:

- Technical requirements for market approaches;
- The modalities for transfer of credits and their registration;
- The impacts of market approaches on the energy sector and global energy mix.

PR & Information Department

Introduction to PR & Information Department

The Department is statutorily responsible for presenting OPEC's objectives, decisions and actions in their true and most desirable perspective, contributing to the awareness of governments, national and international institutions and companies, as well as the general public, about OPEC and its activities, while presenting the OPEC Secretariat as a professional institution in the field of energy market data, analyses and projections.

Research topics:

1) Upgrading the Bulletin

The OPEC Bulletin is an important outreach tool for OPEC, providing information on OPEC activities, but also allowing for more “soft” reporting, which puts a human face on Member Countries and provides some social and cultural information. What design elements should be updated? How can the look and feel of the magazine – from cover design, to layout, to font colour and style, to paper size/format – be updated so that it better reflects the profile and global role of the Organization? How can the content be improved? In other words, what aspects – from the leader/editorial, to feature articles, to SG diary articles – of the magazine's current content should be improved, modified, changed or removed? What other features or columns could be included? How can the Bulletin elicit contributions from non-Secretariat writers? How does it compare to other magazines of a similar calibre in look and content? How can the regular preparation, editing, and production of the magazine be improved or made more predictable? Or, alternatively, what are the current challenges to having a more regular, more dependable, more reliable production schedule?

Specific Eligibility Requirements

- University degree in graphic design and/or publishing preferred. Journalism degree also welcome, with an emphasis on writing for publications.
- Advanced degree (Master's) in similar or related fields would be useful but not required.
- Relevant work experience in editing, the preparation of manuscripts, magazine publishing, and layout and design.
- Knowledge or familiarity with economics, energy, and/or oil markets useful.
- Interest in public relations and media outreach useful.
- Proficiency in the use of Adobe InDesign (Adobe Photoshop potentially useful).
- Teamwork, initiative, creativity and professionalism are important traits in the candidate.

2) OPEC Design & Production in the 21st Century: On the Visual Display of Quantitative Information

Recent trends in academia, in the field of the social sciences and in the financial services industry demonstrate an ongoing move away from overloaded PowerPoint slides towards greater simplicity, less text, and more eye-catching visual designs and graphical displays – particularly for the presentation of quantitative information and statistical data. Given that much of the work and activities in which OPEC is involved relies on similar analytical presentations, it may be useful to the Organization and its staff to consider revamping the way they work with PowerPoint and the way they prepare their materials for public presentations (as well as for its written materials made available through the website and printed materials). The Summer Fellow could explore some of the tools being used in other fields to present quantitative information in visually appealing ways, could do an audit of all OPEC materials in order to identify areas or specific products that could be improved by incorporating visual displays and infographics, and could propose new ways of working with PRID's Design & Production Unit for the preparation, elaboration and production of such materials for the benefit of the Secretariat as a whole.

Specific Eligibility Requirements

- University degree in Design, Communications, Public Relations, Marketing or related field.
- Good communication and business presentation skills.
- Thorough knowledge of PowerPoint and Adobe Creative Suite
- Strong analytical and conception skills
- Knowledge of current tools for visualization