Terms of Reference

Consultancy Service to Conduct a Study on Decarbonizing the Transport Sector in the Arab Region
Decarbonizing the Transport Sector in Arab Region

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I. Overview

Scientists warn that greenhouse gas emissions must be steeply reduced by mid-century to avoid additional warming that will have genuinely catastrophic effects. In light of that, the task of transforming the technologies and systems that move people and goods around the globe seems imperative, however daunting. Global demand for passenger and freight transportation is increasing, driven by population and economic growth. As transportation demand has grown so too, the carbon emissions from the global transportation sector have been soaring too.

The transport sector is far from being on track to meet global climate targets for 2030 and 2050. Despite gains in energy efficiency, particularly in road transport, global energy demand in the transport sector has increased steadily over the past decade, due mostly to the growing number and size of vehicles on the world’s roads. The result has been a global rise in greenhouse gas (GHG) emissions from the transport sector, even as transport emissions in some regions have fallen. The sector as a whole accounted for nearly one-quarter of global energy-related GHG emissions in 2019. Even if all announced policy measures are implemented, the transport sector is expected to increase GHG emissions by 60% up to 2050, largely driven by increasing freight and non-urban transport. Road transport alone is estimated to represent at least 70% of GHG emissions from the sector by 2050 if no further measures are taken.

Energy demand for transport is growing much faster than any other sector, while transport still relies heavily on fossil fuels and has by far the lowest share of renewables among end-use sectors. Transport represents nearly a third of total final energy consumption, but only 3.7% of this was met by renewable sources. Road transport currently accounts for around three-quarters of global transport energy use.¹

In the Arab region, according to a study published in 2020 by IsDB, the expected growth in transport sector emissions is expected to increase between 100-200 percent by 2050. Algeria, Egypt, and Saudi Arabia are among the largest transport CO₂ emitters in the region by 2050. The study shows the middle-income countries will witness the transport sector highest emission rates that will gradually increase up to reach 2000 CO₂ Mt produced by the transport sector. At the same time, and according to the policies, plans and strategies announced in the Arab countries, it can be argued that transport sector is almost neglected. Cumulative efforts between authorities in charge of transport, environment and energy should be devoted to start concrete actions to decarbonize the transport sector.

II. Objective

This study aims to analyze the transport sector emissions base line and projections, supported by clear recommendation for future measures and actions. Therefore, a comprehensive study is requested to illustrate the basis of future action towards a decarbonized transportation sector in the Arab region.

III. Scope of Work

In line with the objective of the study, the following tasks are identified:

1. Task 1: Collect data on transport sector status in the Arab region and analyze the emissions of transport sector for the base year for all modes of transport (walking, cycling, public transport, private transport, shipping, aviation).

¹ Decarbonizing the Transport Sector with Renewables Requires Urgent Action, Hannah E. Murdock, November 2020
Decarbonizing the Transport Sector in Arab Region

2. Task 2: Identify key action areas for decarbonization of transport sector.

3. Task 3: Design appropriate and applicable indicators for transportation sector consumption in the Arab region, the expert may apply clustering approach for the 22 Arab countries, clustering may include:
   - High income countries (GCC)
   - Middle income countries
   - Low-income countries
   - Or aggregated by car ownership levels

4. Task 4: Prepare future socio-economic, demographic, and technological development of business as usual (BAU) scenario up to 2050.

5. Task 5: Prepare future socio-economic, demographic, and technological development of sustainable development (SD) scenario up to 2050.

6. Task 6: Identify recommended actions towards a decarbonized transportation sector in the Arab region including identify and collect real world good- and best practice examples from across Arab region and the world.

7. Task 7: Hold stakeholder consultation meeting(s).

8. Task 8: Prepare a data collection sheet for future monitoring of the indicators developed in task 3.

9. Task 9: Deliver final study report and scenario's database including source data and results tables and graphs in excel format.

These tasks, along with their respective deliverables, are explained in detail below.

IV. Detailed Description of Activities

The development of the study will cover the following main steps:

1. Inception Report
   The consultant/s will begin by preparing inception report describe the study outline, including specific objectives, geographic boundary of the study, expected outcomes, purpose and scope, methodology, quality assurance, time schedule and survey if necessary.

2. Collect Transport Data
   Literature review including:
   - Data collection on the volumes of public and private transport sector in the Arab Region, including but not limited to vehicle fleet, marine, and aviation data besides, disaggregated information for urban sector.
   - Share of transport sector in the energy mix in the Arab Region.
   - Transport sector emissions in the Arab region.
   - Review of existing plans and demographic data.
   - Other available official data additional national or regional references.

3. Identify Key Action Areas
Identify key action areas for decarbonization of transport based on Avoid-Shift-Improve paradigm and related action matrices for freight.

4. Indicator’s Design
The consultant/s should design a set of indicators that illustrate the energy consumption patterns of the transport sector, these indicators will take into consideration the classification of transportation sector by transportation means, fuel type and usage, plus by urban/non-urban usage.

5. Business-as-usual (BAU) scenario up to 2050.
The business-as-usual scenario assumes that no fundamental shifts will be occur in the transport sector in terms of the patterns of energy demand and various technology solutions compared to the current situation, and considering the plans already adopted/announced in different countries.
Based on collected data and information. The consultant/s will prepare future (BAU) scenario up to 2050 for transport sector consumption using proposed indicators, take into consideration, socio-economic, demographic, and technological development perspectives. The analysis should be performed using a recognized scenario modeling tool

6. Sustainable development (SD) scenario up to 2050.
The sustainable development scenario aims to draw a path to 2050 to decarbonize the transport sector in line with the Paris Agreement and the 2030 Agenda.
The consultant/s will prepare future Sustainable Development (SD) scenario to decarbonize transport sector in the Arab region up to 2050. The analysis should be performed using a recognized scenario modeling tool and will take into consideration socio-economic, demographic, and technological development perspectives and reflect the Avoid-Shift-Improve paradigm.

7. Running the model.
Extracting the results for the BAU and SD scenarios. Validation and evaluation of the results for both scenarios. Beside conduct sensitivity analysis for both scenarios. Furthermore, assessment of the impact of COVID-19 on the transportation sector.

8. Recommended actions toward.
Documentation and preparing the study report including the applicable actions and measures that illustrating the basis of future action towards a decarbonized transportation sector in the Arab region and provide an overview of relevant good and best practices in Arab region to guide policy and public debate.

9. Monitoring of the performance indicators
Prepare a monitoring policy for the performance indicators developed in Task 3 for the follow-up of the evolution of these indicators within the different Arab countries.

10. Stakeholder consultation.
Prepare power point presentation for the regional workshop, presenting the key findings of the study and collect the remarks and feedback from stakeholders.

11. Final study report
Integration of feedback form the stakeholders and preparation of the final study report together with scenario's database including source data and results tables and graphs in excel format.
V. Timeframe and Deliverables

The start of the assignment is planned 1st of June 2022. The final version of the study is expected to be submitted by 30 of September 2022.

The timeline for deliverables will be as follows:

<table>
<thead>
<tr>
<th>Deliverable/ output</th>
<th>Deadline</th>
<th>Review and approvals required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inception report and literature review</td>
<td>2 weeks after contract starts 15 June 2022</td>
<td>LAS and RCREEE</td>
</tr>
<tr>
<td>2. First draft of the study</td>
<td>9 weeks after contract starts 30 July 2022</td>
<td>LAS and RCREEE</td>
</tr>
<tr>
<td>3. Second draft of the study</td>
<td>13 weeks after contract starts 25 August 2022</td>
<td>LAS, GIZ and RCREEE</td>
</tr>
<tr>
<td>4. Regional workshop</td>
<td>16 weeks after contract starts 15 September 2022</td>
<td>Workshop evaluation</td>
</tr>
<tr>
<td>5. Final version</td>
<td>18 weeks after contract starts 30 September 2022</td>
<td>LAS, GIZ and RCREEE</td>
</tr>
</tbody>
</table>

VI. Qualifications of the consultant/s

The consultant/s can be a consulting firm or an independent consultant and is (are) expected to fulfil the following requirements:

- Advanced university degree in energy, energy planning, renewable engineering, or other energy relevant fields, as well as economics or policy development.
- In-depth knowledge of transportation sector including technical and financial issues of transport sector emissions base line and projections, along with socio-economic and technological development.
- At least 15 years of experience in transport sector including the modelling scenarios building, design strategies and policy deployment at international or regional level, preferably with further experience in the Arab region.
- In-depth knowledge in institutional, regulatory and legal frameworks for energy sector, including the legal drafting of policies and supporting measures, administrative procedures.
- Proven track record of delivering similar services.
- Excellent command of written and spoken in English.

The assignment must be conducted in close coordination with RCREEE and its partners that will ensure the monitoring and the supervision of the work progress. The consultant/s are responsible for the delivery of all contents based on the scope of work with respect to the reporting schedule.

VII. Contracting Party and Beneficiary

The expert will enter into a consultancy contract with RCREEE according to RCREEE's internal regulation and terms of contracting.
VIII. Payment and Deliverables

The payment will be provided to the consultant/s after successful completion of the tasks presented above and their approval by GIZ, LAS and RCREEE, and the provision of all deliverables.

Payment for the services described above will be made as follows:

- 30% of the total contract price after acceptance of the first draft of the study.
- 40% of the total contract price after conducting the second draft of the study.
- 30% of the total contract price after finalization the regional consultation workshop and submission the final version of the study.

IX. Working Languages:

English language.

X. Other terms and conditions

- RCREEE have the right to have all reports under this project redrafted by the consultant/s as many times as necessary to achieve an acceptable final version by the beneficiary. The project timeline indicated has to be strictly adhered to.
- The consultant/s shall acknowledge that RCREEE have proprietary rights of all reports, articles, and any other documents acquired, compiled or prepared in the performance of the Project, with the exception of those documents used in the project which have already been copyrighted.
- The consultant/s shall be under an obligation of confidentiality on all matters concerning the activities and all issues relating to its assignment in the Project. This confidentiality clause commits the consultant/s to respect the secrecy of all information, knowledge of which it may gain during the execution of its work, and to refrain from divulging to third parties or from using for personal/corporate gain or for that of a third party any document or item of information which would not otherwise have been made public, even after they have ceased to be of relevance to the aforementioned work. The consultant/s shall thus not make any statements publicly or to media regarding the assignment unless RCREEE has given its written permission to do so.
- This ToR shall be deemed to form an integral part of the contract.

XI. How to Apply

Interested Expert must submit the following documents/information to demonstrate their qualifications to procurement@rcreee.org with no later than Sunday, May 22, 2022 at 01:00pm (Cairo Time).

A. Technical Requirements:

- Provide a brief methodology on how they will approach and conduct the work.
- Personal CV including past experience in similar projects and at least 3 references
B. Financial Requirements:

The financial proposal shall specify a total lump sum amount, and payment terms shall be against the deliverables (i.e. whether payments fall in installments or upon completion of the entire agreement).

Price should inclusive of all costs, expenses, charges or fees that Expert may incur in connection with the performance of its obligations hereunder, including management, travel costs and all taxes, duties, levies, fees and other charges of any nature imposed by any authority or entity. Taxes, duties and other impositions on the Consultant are deemed included in the remuneration. Consultant agreed that RCREEE to deduct from any payment request presented in connection with this agreement any other allocation for duties or taxes. RCREEE will deduct the withholding tax and will transfer such deducted amount to the tax authorities.

Please consider the following:

- Criteria for Contract Award : Lowest Price Quote among technically responsive offers
- Currency of Proposal : Euro
- Payment Provisions of Local Firm / National Consultant: Payment will be affected by bank transfer in Egyptian Pounds based on the rate of day of transfer.
- Payment Provisions of Foreign Firm / Consultant: Payment will be affected by bank transfer in EUR.