

SELECTION FOR CONSULTANTS BY THE WORLD BANK

REQUEST FOR EXPRESSIONS OF INTEREST

Electronic Submissions through World Bank Group eConsultant2

<https://wbgeconsult2.worldbank.org/wbgec/index.html>

ASSIGNMENT OVERVIEW

Assignment Title: Web Application for Visualization of Solar and Wind Measurement Data

Assignment Countries:

- World

ASSIGNMENT DESCRIPTION

A. INTRODUCTION

The World Bank and the International Finance Corporation (IFC), collectively the World Bank Group, are scaling up their operational lending and investments relating to renewable energy in response to growing client demand. In support of these efforts the Energy Sector Management Assistance Program (ESMAP) has an ongoing initiative on Renewable Energy Resource Mapping, under which a series of country projects are under implementation covering biomass, small hydro, solar and wind mapping. For the solar and wind mapping projects, ground-based measurement data is often commissioned to help improve and validate the modeling outputs, where budgets allow. This data is also an important component to long-term improvement of the Global Solar Atlas (which has been developed with ESMAP funding) and the Global Wind Atlas (a DTU Wind Energy resource, which ESMAP is seeking to partner with and improve).

The ground-based measurement data from a number of ESMAP-funded World Bank projects is already being uploaded to the recently-launched <http://energydata.info> platform. However, this CKAN-based open data repository has only very limited in-built tools for data visualization. In addition, the data visualization needs for solar and wind measurement data are somewhat specific, especially if they are to be useful to commercial developers, expert consultants, and researchers. ESMAP is therefore looking to provide a web-based application tailored for the visualization of solar and wind measurement data that would provide a complete overview of the time-series data from different countries and sites, and would allow for automatic plotting and analysis of the data through a simple and intuitive interface.

B. GENERAL SCOPE OF THE SERVICES

The envisaged scope of the assignment would be the development, and potentially hosting and management, of a web-based application for querying and visualizing publicly-available solar and wind time series measurement data. The delivered application would provide a simple and intuitive graphical user interface that would list all the sensor locations as markers on a map and, using a point & click method, would (i) display visualization of the time series as plots and in tabular form, (ii) display the sensor metadata, (iii) provide download access to the observation data for offline processing. The application should facilitate simultaneous comparison between more than one site and include fully featured graph panels with rich visualization and data aggregation options. The delivered web application would be capable of consuming data from different data sources (including

<http://energydata.info> and other public providers) and provide download options for those datasets. The types of visualizations should be tailored for solar and wind measurement data and provide the level of analysis and data aggregation suitable to both specialized and non-specialized users. Data and visualization sharing between users, and the embedding of tailored/saved visualizations in external websites, may also be considered. The web application would be based on open-source or commercial software and would be listed as an 'app' on <http://energydata.info>. Preference is likely to be given to solutions that offer long-term sustainability of the service provided, considering the inherent uncertainties over ESMAP funding beyond the current Business Plan. The objective is to launch an application with a long shelf-life, which can continue to operate with very low overheads and maintenance requirements, but with the potential for enhancement and expandability.

ESMAP is using this REOI to solicit ideas and obtain further information on what solutions might be available, and how this application could be commissioned at least cost. The budget for this activity is limited, and so the team is particularly interested in receiving proposals from vendors that can develop this application quickly and cheaply. ESMAP is open to co-branding on the app site, and would therefore encourage vendors to consider the benefits of association with the World Bank Group in putting together their offer, such as the promotion of related commercial services.

Full Terms of Reference (TOR) will be developed taking into account the responses received, and so guidance and feedback are strongly encouraged.

C. EXPRESSION OF INTEREST & INFORMATION

Consultant firms are invited to submit Expressions of Interest (EOI) for this selection, which shall include:

- Outline of the Vendor's core business and experience in carrying out the development of web applications that involve visualizations or display of time-series data;
- Summary description of the software to be used (commercial/open-source) and its underlying infrastructure;
- Summary description of the methodological approach for the development of the application, including the user interaction, visualization features, and specific features relevant to solar and wind developers and other specialist users;
- Details of key members of the Consultant's team and their experience in web development and energy sector issues;
- Description of any licensing requirements/restrictions or software ownership options;
- Details on the Vendor's size in terms of number of staff and annual turnover;
- Any comments that the Vendor has on the approach being proposed or methodological considerations that the ESMAP team should take into account.

D. FIRM PROFILE

It is anticipated that vendors responding to this REOI will be a firm, or a consortium of firms (with one firm nominated as the lead vendor).

E. SUBMISSION REQUIREMENTS

Interested vendors must provide information indicating that they are qualified to perform the services requested, referring to the guidance above. The EOI submission shall be in the form of a single attached PDF proposal, including any annexes. Please note that the total size of this PDF file should be less than 5MB. We require that vendors limit their EOI to a focused and tailored submission not to exceed 10 pages, exclusive of CVs and suggestions/comments on the proposed approach/methodology, which can

be included as annex material. EOI submissions that go beyond the 10 page limit WILL NOT BE REVIEWED beyond this point, which may negatively impact on the scoring that is given and the vendor's inclusion in the shortlist. The intention at this stage is to assess the suitability of each Vendor to be invited to the RFP stage, and so firms should focus on responding to the criteria outlined in Section C above, and should keep their EOI submissions concise and to the point.

F. NOTES

Following the completion of the EOI stage, a shortlist of eligible vendors will be invited to the RFP stage, which will include a full technical and financial evaluation. The highest scoring vendor will be offered a contract issued by The World Bank, with ESMAF as the responsible unit.

Interested vendors are hereby invited to submit expressions of interest.

Expressions of Interest of no more than 10 pages (excluding annexes) should be submitted as a single PDF attachment, in English, electronically through World Bank Group eConsultant2 (<https://wbgeconsult2.worldbank.org/wbgec/index.html>).