

## REQUEST FOR EXPRESSION OF INTEREST FOR SELECTION # 1269882

This Request for Expression of Interest is for a Firm Selection. Please log in as a valid Firm User if you wish to express interest in this selection.

### Selection Information

<b>Assignment Title</b>	Energy Efficient Data Centers
<b>Publication Date</b>	31-Jul-2020
<b>Expression of Interest Deadline</b>	03-Sep-2020 at 11:59:59 PM (Eastern Time – Washington D.C.)
<b>Language of Notice</b>	English

### Selection Notice

<b>Assignment Country</b>	KE - Kenya CI - Cote d'Ivoire NG - Nigeria ZA - South Africa
<b>Funding Sources</b>	The World Bank Group intends to finance the assignment/services under: BB - BANK BUDGET TF0B1242 - CMAW Upstream - INR TF0B1216 - FMTAAS Upstream - INR
<b>Individual/Firm</b>	The consultant will be a firm.

### Assignment Description

The objective of the assignment is to explore and assess the data center landscape, including the power needs, regulatory framework and competitive landscape in selected countries in Africa, considering both demand and supply factors, and opportunities and obstacles to develop the power solutions needed to serve the data centers. The assignment will involve desk research as well as extensive interview with key market players.

The scope of the study includes:

1) Internet ecosystem assessment including

- a) Adoption and usage in the market by estimating the size and potential of the domestic Internet market, including the number of Internet users, and the growth of usage. Specifically include government and enterprise usage and potential growth of those sectors.
- b) Assessment of infrastructure across the value chain including the submarine cable capacity coming into the country (for coastal countries), the terrestrial backbone connections to neighboring countries, and the backhaul within the country that can be used to connect the data center to the rest of the ecosystem. Evaluate the level of competition in the ownership of the infrastructure and the pricing.
- c) Review the last mile infrastructure, both fixed and mobile, to determine the availability of broadband in the country, the technology used, the level of competition, and the pricing.

2) Market identification and assessment of the main market players in each of five relevant segments for the selected countries:

- a) Datacenters including their size, Tier classification, and any available information about their customer base, pricing, available space, and future expansion plans.
- b) Assess the domestic presence of the major Content Delivery Networks, including independent, captive, and local players.
- c) Assess the presence of the major cloud providers, both international such as Amazon or Microsoft or local ones, including government cloud services, and expansion plans including building their own data centers or submarine capacity. Consider also data center demand among organizations, including enterprises, government, and education.
- d) Evaluate the role of Internet Exchange Points in the internet infrastructure of the country
- e) Conduct an in-depth analysis of the power demand requirements of the data center ecosystem compared with supply characteristics in the selected markets including grid reliability and the regulatory environment. Examine limitations to off-grid models including the environment for swap contracts or wheeling arrangements and transmission infrastructure bottlenecks in the studied markets. Examine procurement models and the corresponding costs on a per unit basis.

For each country assess data center needs, present a SWOT analysis, provide an estimation of the size of the market, an analysis of economic and technology trends, identify emerging business models and lessons learned.

3) Regulatory environment for

- a) Data center market including the main policies, laws and regulations necessary to attract the data center industry in the selected countries, Cybersecurity laws and policies and Intermediary liability and other content laws.
- b) The energy sector policy and regulatory factors impacting investment in data center including the existence or adequacy of wheeling provisions in the grid code, and licensing requirements, use of utility networks and sales of excess power to communities in mini-grid models.
- 4) Business Models: Identify and analyze the energy procurement business models prevalent in the industry and how they can respond to the different issues encountered in the different countries assessed.
- 5) Case studies: Provide case studies both from other more developed economies, and from success stories in emerging markets highlighting business models used in data centers to reduce power needs, including energy efficient technology and demand-side management; regulatory reforms that enabling increased power access to data centers and comment on the replicability of the various case studies.
- 6) Development Impact: Evaluate how improved/reliable power infrastructure and additional data centers can bring benefits to the local Internet ecosystem as well as the national power infrastructure.
- 7) Undertake a competitive landscape assessment of the key market players across the value chain including data center design consultants, energy solution providers and building efficiency experts.

#### Eligibility

The consulting firm must prove extensive knowledge and experience on the field of the Telecom, Media and Technology sector, Data Centers and Power sector.  
Consultants must be English speakers.

#### Qualification Criteria

1. Provide information showing that they have relevant experience related to TMT, Data Centers and the Power sector.
2. Provide information on the technical and managerial capabilities of the firm.
3. Provide information on their core business and years in business.
4. Provide information on the qualifications of key staff.

*\* - Mandatory*

*Shortlisted consultants will be invited to respond to a Request for Proposal. Contract awards will be made in accordance with the World Bank Group Procurement Policies and Procedures.*