

**REGIONAL**  
***A RENEWED PARADIGM FOR RENEWABLES***  
**A WHITE PAPER ON RENEWABLE ENERGY FOR THE GLOBAL GREEN GROWTH LATIN**  
**AMERICA AND THE CARIBBEAN REGIONAL FORUM - RG-T2281**

**TERMS OF REFERENCE**

**I. Background**

- 1.1 During the October 2012 Global Green Growth Forum (3GF) in Copenhagen, Luis Alberto Moreno, president of the Inter-American Development Bank (IDB), proposed a follow-up discussion on the topic of Energy and Climate under the joint auspices of the Government of Denmark and the IDB under the umbrella of the 3GF. The 3GFLAC Forum will be held in Bogota on June 18<sup>th</sup>, 2013 under the auspices of the IDB and the governments of Denmark and Colombia. It will be the first regional meeting of 3GF, and will aim to provide a platform for dialogue among high-level stakeholders, focused on making use of the substantial endowment for renewable energy to meet the region's growing energy demand.
- 1.2 There is today a broad understanding among decision-makers in Latin America and the Caribbean (LAC) about the multiple benefits of non-conventional renewable energy technologies (NCRETs)<sup>1</sup> for electricity generation: First, they are key in ensuring energy security -since they rely on locally available resources and they hedge against the risks of fossil fuel price volatility-; second, they are an essential ingredient of the fight against global climate change; third, when coupled with appropriate industrial policy measures, their deployment boosts local employment and can promote technology development; finally, renewables also bring additional local environmental benefits.
- 1.3 However, there is no clarity on how to accelerate the deployment of NCRETs. Decision-makers in LAC have doubts about the applicability in the region of the policy recipes successfully used in other countries (feed-in-tariffs or FITs; renewable portfolio standards or RPS). And the problems that Spain has faced with their FITs have only aggravated these perceptions.
- 1.4 By and large, the rules of the power sector in LAC and elsewhere were designed keeping fossil fuel-fired and large-hydro technologies in mind. Both in the countries with fully liberalized power markets and in those with state-owned monopolies, the rules of the game –either market rules or public procurement rules-, despite being in theory “technology-blind”, actually have intrinsic biases against NCRETs. In particular: (i) fossil fuel-fired generators are often allowed to pass through the fuel price volatility to the consumers, and (ii) the systems still follow a “base-load / peak load” rationale, and therefore reward technologies that offer these two conventional generation profiles.
- 1.5 Most of the countries that have undergone a rapid deployment of NCRETs have circumvented these biases by means of promotion policies that work “in the margins”

---

<sup>1</sup> For the purposes of this document, NCRETs include all renewable energy technologies except large-scale hydropower.

of the system, such as FITs, or RPS. However, many realize now that power markets require an overhaul.<sup>2</sup>

- 1.6 Designing the rules of the game for a new power sector paradigm that removes the intrinsic biases may require in particular:
  - Considering that the markets of fossil fuels will be in this century very different from those of the previous one,<sup>3</sup> and
  - Leaving behind the base-load / peak-load model, and embracing a new model, probably divided into inflexible and flexible technologies.<sup>4</sup>
- 1.7 Climate change increases the urgency to find solutions now, and offers excellent, additional reasons to make changes in the rules of the game of the power sector.

## **II. Consultancy objective**

- 2.1 Produce information that can be used to communicate to decision-makers in LAC the new thinking related to renewable energy policies, in order to allow them to find innovative, appropriate mechanisms to foster the deployment of NCRETs. This document will be the basis of a brief white paper to be delivered by IDB at the 3GFLAC Forum.

## **III. Reports / outputs**

- 3.1 The final document will: (i) be written in English; (ii) refer to the particular context of LAC countries; and (iii) be focused on the use of NCRET for power generation.
- 3.2 It will include the following sections: (i) executive summary; (ii) introduction, statement of the problem; (iii) the situation in LAC with regards to the deployment of renewable energy sources; (iv) sizing of the NCRET resource endowment, by source and region, based on readily available data, and comparison with world data; (v) economic and social analysis of large scale (>100 MW) renewable energy production (societal benefits and costs) by source and location; (vi) identification and sizing of generic regional and local barriers; (vii) identification of opportunities when developing renewable energy sources in a country; and (viii) discussion about the applicability in the LAC context of the different policy instruments.
- 3.3 The consultant should deliver reports as needed but they are not a condition for payment. Every report must be submitted to the Bank in one electronic file. Report should include cover, main document, and all annexes. (Zip files won't be accepted as final reports, due to regulations from the Records Management Section). The consultant will review existing literature and provide the estimates described above. A draft document will be prepared for review by IDB staff, on which basis a final document no longer than 20 pages plus annexes will be prepared.

---

<sup>2</sup> This is for example what the IEA-RETD RES-E-NEXT project aims to achieve (see <http://bit.ly/RESeNEXT>).

<sup>3</sup> See for example [Johnson et al., 2012](#), and [Benes et al., 2012](#).

<sup>4</sup> Inflexible technologies include intermittent renewables and other technologies that cannot be dispatched, such as some base-load technologies. Flexible and responsive technologies include demand-side measures, energy storage, and dispatchable technologies such as hydro. On this issue see for example [Dubbeling, 2012](#), and [Roberts, 2012](#).

#### **IV. Schedule of payment**

- 4.1 30 % upon signature of the contract;
- 4.2 70 % upon delivery of the final report.

#### **V. Coordination**

- 5.1 The consultant will be supervised by Claudio Alatorre, INE/CCS's Senior Climate Change Specialist.

#### **VI. Characteristics of the consultancy**

- 6.1 Consultancy Category & Modality: Individual International Consultant. Lump sum.
- 6.2 Contract Duration: Forty five (45) calendar days from the day the contract is signed.
- 6.3 Place(s) of work: Consultant's office.

#### **VII. Qualifications:**

- 7.1 At least 10 years of experience dealing with renewable energy policy or finance
- 7.2 Proven experience in writing concise clear policy analysis documents

#### **VIII. Bibliography**

- Benes, Jaromir; Marcelle Chauvet; Ondra Kamenik; Michael Kumhof; Douglas Laxton; Susanna Mursula; Jack Selody, 2012. *The Future of Oil: Geology versus Technology*. IMF Working Paper WP/12/109. <http://bit.ly/GversusT>
- Brown, Adam; Simon Müller, 2011. *Deploying Renewables 2011. Best and Future Policy Practice*. IEA. <http://bit.ly/DepRen>
- Cochran, Jaquelin; Lori Bird; Jenny Heeter; Douglas J. Arent, 2012. *Integrating Variable Renewable Energy in Electric Power Markets: Best Practices from International Experience*. NREL, JISEA, Clean Energy Solutions Center, Clean Energy Ministerial. <http://1.usa.gov/VFMMqP>
- Coviello, Manlio F.; Juan Gollán; Miguel Pérez, 2012. Las alianzas público-privadas en energías renovables en América Latina y el Caribe. ECLAC. <http://bit.ly/APPerALC>
- Dubbeling, Timon, 2012. *The end of the honeymoon period for renewables*. European Energy Review. <http://bit.ly/13fkisy>
- Glemarec, Yannick; Wilson Rickerson; Oliver Weissbein, 2012. *Transforming On-Grid Renewable Energy Markets. A Review of UNDP-GEF Support for Feed-in Tariffs and Related Price and Market-Access Instruments*. GEF, UNDP. <http://bit.ly/UndpGefFit>
- IEA-RETD; Rolf de Vos; Janet Sawin, 2012. *Renewable Energy Action on Deployment: READY. Policies for accelerated deployment of renewable energy*. IEA-RETD. <http://bit.ly/READY>
- IRENA, 2013. *IRENA REMAP 2030. Doubling the Global Share of Renewable Energy. A Roadmap to 2030. Working Paper*. <http://bit.ly/REMAP2030>

- Johnson, Victoria; Andrew Simms; Chris Skrebowski; Tony Greenham, 2012. *The economics of oil dependence: A glass ceiling to recovery. Why the oil industry today is like banking was in 2006*. NEF. <http://bit.ly/OilGlass>
- Martinot, Eric, et al., 2013. *Renewables. Global Future Report 2013*. REN21, ISEP. <http://bit.ly/GFR2013>
- Roberts, David, 2012. *Why Germany is phasing out nuclear power*. Grist. <http://bit.ly/XOPDxl>