Unlocking Private Investment
A Roadmap to achieve Côte d’Ivoire’s 42 percent renewable energy target by 2030
Executive Summary
Countries around the world are working towards a low-carbon future. Since the adoption of the Paris Agreement in December 2015, 189 countries have submitted national plans that set clear goals to increase investment in renewable energy, energy efficiency, sustainable infrastructure, climate-smart agriculture, and more. Beyond setting the stage for bottom-up action, these Nationally Determined Contributions (NDCs) also opened up massive potential for investment—nearly $23 trillion according to the 2016 International Finance Corporation (IFC) Climate Investment Opportunities in Emerging Markets report. Much of this investment will need to come from the private sector. Governments—including Côte d’Ivoire—are increasingly interested in working with the private sector to unlock vital finance and develop innovative solutions.

Costs for renewable energy are rapidly decreasing and in certain cases can be less expensive than generating electricity from fossil fuels. This has helped to radically change the model of energy development and access around the globe, and a larger share of the energy mix is expected to be renewable in future. In regions like Sub-Saharan Africa where there is high interest in expanding infrastructure to improve access to energy, there is an opportunity to leapfrog traditional electrification approaches and develop new models that are cleaner, more efficient, and focused on customer and business needs.

There is significant opportunity for private sector investment to meet Côte d’Ivoire’s renewable energy goals

Côte d’Ivoire’s commitments are ambitious. The country’s NDC, released in 2016, set a target to reduce its greenhouse-gas emissions by 28 percent by 2030, including a target to generate 42 percent of electricity from renewable energy by 2030. As highlighted in the IFC Climate Investment Opportunities report, the country is focused on spurring economic growth and solidifying its role as an economic engine for West Africa.
The government recognizes the important role of private sector investment in expanding renewable energy penetration. Overall, Côte d’Ivoire’s 2016-2020 National Development Program aims to attract $32 million in private investment. The main drivers of sustained growth are expected to be both public and private investments in infrastructure, opening up significant opportunities for the energy and electricity sectors.

The Ministry of Petroleum, Energy and Renewable Energy Development is developing the overall strategy and policy framework for including renewables into the energy mix. The Société des Energies de Côte d’Ivoire (CI-Energies), a state-owned asset holding company, is moving this framework forward and has mapped technology-specific needs and is offering tenders to develop the projects that will contribute to NDC goals. Although Côte d’Ivoire has yet to increase its power generation capacity, it has made substantial progress in improving the existing transmission and distribution network and restoring the energy sector’s financial viability.

The Generation and Transmission Master Plan, Distribution Master Plan, and Grid Automation Master Plan support the government in defining investment selection criteria that can help meet both domestic and regional demand, and ensure secure supply. For example, although Côte d’Ivoire’s grid is extensive, it needs to increase its connections through densification. This is being addressed in part by the largest International Development Association (IDA) loan to the country ($325 million) in 2017. The loan aims to improve the transmission and distribution network to provide electricity access in 200 villages, and is complemented by additional concessional financing to support the government in consolidating the financial viability of the sector. These operations are critical to attract new private investors and achieve the government’s ambitious target of near-universal access to electricity by 2020.

The Electricity Code passed in 2014 is another piece of legislation that will harness the existing private sector interest and continue to push innovative projects such as small-scale grid-connected solar photovoltaic (PV) and biomass projects beyond proposals into implementation. However, it is important that the code continue to include renewable-specific objectives and policies to support the continued sale and delivery of electricity to the grid. Autorité Nationale de Régulation du Secteur de l’Électricité de Côte d’Ivoire (ANARÉ), the electricity regulator, is responsible for ensuring that the need for affordable tariffs for all is balanced with the need for the project promoter to profit from its investment.

Partnerships such as that between IFC and the Ministry of Petroleum, Energy and Renewable Energy Development are vital to contributing to the knowledge base that will pave the way for the private sector. Private companies will demonstrate interest once they understand the appropriate demands, incentives, and supporting mechanisms that allow an investment to provide appropriate risk-adjusted returns. Through the structured engagement process and this Roadmap, the private sector can gain this knowledge and use its strengths efficiently and effectively.

One area in which the Roadmap offers value is by identifying opportunities within the renewable energy sector. There are further opportunities for increased use of solar PV in both grid-connected and decentralized (distributed) applications, including off-grid and energy self-supply options. Developing grid-connected solar power via auctions and programs like the IFC’s Scaling Solar initiative may help to clarify the true price of solar development in the country. Significant hydroelectricity (hydro) assets have already been developed and will continue to grow. To date, agricultural companies have not seen a strong business case for biomass power projects, but new projects under development may change that perspective. The Biokala project will provide an important test case for utility-scale electricity production. Wind power is also a possibility with good potential that the government of Côte d’Ivoire is interested in exploring further.

The government has prioritized extension of the electricity grid as the primary means of increasing electricity access, and is working with development partners to implement this. However, further improvements to the grid to reduce losses and incorporate proper grid code are needed. Côte d’Ivoire’s energy mix is dominated by dispatchable generation sources (hydro and gas), so the grid is already capable of managing the addition of intermittent renewable energy sources. This capability will be improved through smart grid technologies, automation, and control systems.

Renewable energy also has a key role to play in energy access through decentralized solutions, including mini-grids and solar home systems. While these often have a lower initial cost than building the interconnected grid for distant sites, they can incur a higher cost per kilowatt hour (kWh) to generate electricity. In the case of mini-grids this is offset against advantages such as speed of deployment and end-user economic benefits,
savings on grid interconnection, and potentially some reduction in losses, but a subsidy may be required to ensure the government’s priority of matching grid-connected retail tariffs is achieved. In addition, separate industries can be connected using innovative business models: pay-as-you-go solar home systems increase financial inclusion, often include the sale of efficient appliances on credit, and build customers’ credit history, helping to attract investment.

As a major producer of agricultural products, Côte d’Ivoire has ample feedstock for biomass production. The challenge lies in securing a reliable supply of these feedstocks. The Roadmap offers several options for how this supply chain can become strong and dependable. For example, there are already plans to develop grid-tied biomass generation projects that can support the eventual development of a mechanism that aggregates supply, relieves the burden on individual agricultural entities, reduces upstream risk, and stabilizes prices.

**IFC supports Côte d’Ivoire’s bright future with an innovative partnership**

To chart a course towards achieving these targets, IFC partnered with the Ministry of Petroleum, Energy and Renewable Energy Development to develop a Roadmap for meeting the country’s renewable energy goals. This innovative approach is among the first of its kind, and Côte d’Ivoire is leading the way. The partnership strongly promotes the World Bank Group’s Maximizing Finance for Development (MFD) approach, which seeks to sustainably leverage the private sector to bolster scarce public resources. This approach helps achieve the dual goals of reducing poverty and boosting shared prosperity.

Through a series of structured public-private dialogues over the past 12 months, IFC and the Ministry of Petroleum, Energy and Renewable Energy Development have worked with stakeholders to identify key constraints and solutions that will help achieve Côte d’Ivoire’s NDC target of 42 percent renewable energy by 2030. The dialogues included international and local stakeholders, including government departments, banks, trade groups, civil society, and private businesses. Development partners included IFC, the World Bank, the AfDB, the Centre for Renewable Energy and Energy Efficiency, the European Investment Bank, the European Union (EU), the French Development Agency, GIZ, the Japan International Cooperation Agency, KfW (German development bank), the United States Agency for International Development (USAID), the United States Trade and Development Agency, and the West African Development Bank.

To date, IFC and the Ministry of Petroleum, Energy and Renewable Energy Development have engaged in three main activities as part of the Roadmap process (see Figure 1).

• A launch event from December 14–15, 2017 in Abidjan, attended by over 100 participants from electricity companies, regulators, government agencies, development partners, project developers, distributors, banks, investors, and other private companies.

**BOX 1**

**What is a roadmap?**

A roadmap is a specialized type of strategic plan that outlines activities an institution can undertake to achieve stated goals and outcomes. This is best understood as an evolving process of creating and implementing a strategy, and monitoring and updating it as necessary. “Roadmapping” engages and aligns diverse stakeholders in a common course of action while building relationships and generating solutions.

The process includes two types of activities (expert judgement and consensus, and data and analysis) and four phases (planning and preparation, visioning, roadmap development, and implementation and revision).
• A Working Group Workshop from February 27 to March 2, 2018, hosted by IFC, to get input from renewable energy stakeholders. Involved direct consultations on potential actions to be included in the Roadmap. Preliminary key solutions were identified in roundtables at that workshop. These solutions were verified in bilateral discussions with stakeholders before and after the workshop.

• From May 7–9, 2018, IFC hosted a second Working Group Workshop to validate the identified solutions, structure them effectively, and seek champions to drive them forward. The structured dialogues have included extensive bilateral discussions with the government and other actors.

Implementing the Roadmap will help Côte d’Ivoire unlock private investment

Côte d’Ivoire’s energy sector is growing, but there is a need to restore and improve its financial sustainability and solidify the private sector’s willingness to invest. This will require more sustainable levels of short-term debt to be contracted within the sector, and a plan to clear existing arrears must be agreed upon so the government can re-establish credibility in terms of timely payments. Finally, the effective management and application of the cashflow waterfall—the tiered structure of payments according to seniority, on which investors have historically relied, can be improved. Fortunately, strong government buy-in to the roadmapping process has contributed to the development
of a plan to move forward and reinvigorate the flow of private finance.

This Roadmap process has been strongly supported by the government of Côte d’Ivoire—a vital step in ensuring the longevity and success of the proposed solutions. There is a strong network of dedicated institutions and champions willing to set these solutions in motion, and this Roadmap provides a step-by-step process that includes activities to achieve stated goals and outcomes. IFC aims to continue its support by helping to implement the solutions in line with its understanding of global best practice to help create viable markets for renewable energy.

The road ahead

The roadmapping process generated several key recommendations, most importantly the need to expand existing tender processes across various energy technologies. Progress has been made in the biomass sector with recent tenders issued for cocoa and cotton and lessons can be learned for other technologies as well. Specifically, clarifying and simplifying the necessary procedures and requirements can improve competitiveness for potential investors. Feasibility studies and expanded resource availability reports can improve competitiveness as well, supporting the private sector’s understanding of investment potential.

Other recommendations to highlight include:

• When needed, develop or clarify government policies and frameworks for project design and implementation to ensure transparency and effectiveness.
• Institutionalize existing efforts to improve electricity grid access and resiliency.
• Leverage global lessons learned across all sectors to develop appropriate financing structures and incentives for multiple technologies while incorporating quality assurance processes for new products, such as solar home systems.

The main product of the Roadmap has been to engage a variety of stakeholders in consistent and constructive dialogue. The work done by project partners thus far has launched Côte d’Ivoire on a promising pathway towards meeting their 42 percent goal. To build on this success, the Roadmap recommends partnering with a local industry body and potential donors to jointly contribute to a broader private sector engagement platform. The platform could then serve as a bridge to the public sector and donor community to support ongoing development and implementation of clean energy solutions.