



POWER

Cross-Cutting Advisory Solutions

OVERVIEW

IFC is a leading market and technical expert in the power sector. We work with companies, developers, governments, and industry associations to create new markets, identify investment opportunities, and improve the bankability of projects. We place an emphasis on renewable options, particularly solar and hydro, as well as improving power grids and regulatory frameworks. We are scaling-up activities in these core areas, and supporting the deployment of new and innovative technologies, such as energy storage, floating PV, and smart grids.

We focus on pre-investment activities, market entry support, and project preparation to manage market risks and complete due diligence. We are also building long-term sustainability in the sector, by improving the investment climate in the most challenging markets, assisting in the corporatization of State Owned Enterprises (SOEs), facilitating project financing, and boosting infrastructure investments.

We advise governments on how to:

- Remove policy and regulatory barriers to private sector participation
- Promote transparency and a level-playing field
- Build the capacity to engage and support private sector participation

We also advise key industry players on how to:

- Conduct market assessments and develop market entry strategies
- Scale project development and help sponsors navigate the local environment

In addition, we advise companies and developers on how to:

- Improve the bankability of their projects by providing project development support through technical feasibility studies, financial bankability assessments, project structuring, power sector and regulatory framework reviews, off-taker risk analysis, and all aspects of power purchase agreements
- Support power grid development, increased renewable grid integration, T&D loss reduction, and T&D efficiency improvement
- Provide targeted training to private investors, industry associations, financial institutions, and government organizations.

PROJECT EXAMPLES

KENYA: REDUCING ENERGY LOSSES

Kenya Power & Light Company (KPLC), Kenya's electrical power distribution company, owns and operates a transmission and distribution system with more than four million customers and one of the highest connection rates in Africa. In 2014 alone, a nationwide electrification drive connected one million new consumers. However, during that period, KPLC recorded nearly 18 percent overall transmission and distribution losses, exceeding a regulatory target of 14.7 percent, mostly due to improper design, irregular maintenance, theft, and unpaid or unissued bills.

KPLC approached IFC for help to address these losses. IFC conducted an extensive analysis of energy losses by geography, voltage, and consumer type. This showed that 38 percent of total losses were commercial, resulting in more than \$100 million in lost revenue per year. Twenty-five percent of losses were in the transmission network, and an additional 37 percent were technical losses in distribution network hardware. Recognizing that technical losses in network hardware require substantial investments and robust system implementation, we recommended a \$437 million investment program with short payback times, which would reduce total losses from 18 percent to 14.5 percent.

IFC's Energy and Water Advisory team continues to support KPLC in implementing a Loss Reduction program that aims to cut losses even further. This will produce substantial savings, strengthen the financial viability of KPLC, and lower end user tariffs.

INDIA: HARNESSING SOLAR POTENTIAL ONE ROOF AT A TIME

The state of Gujarat in western India enjoys over 300 sunny days per year, and possesses huge potential to generate solar power. Having successfully developed ground-mounted solar power plants, the state government was eager to use rooftop solar capacity to boost renewable energy supplies. However, the plan faced many technical, regulatory, and commercial challenges, so the government enlisted IFC's support to select the most appropriate technology, and develop a public-private partnership for two rooftop solar pilot projects.

IFC was appointed lead transaction advisor to execute the pilot projects, which would pave the way for large-scale solar power development. Besides providing transaction advice, IFC's role included technical, legislative, and analytical support. This included analyzing the technical options for solar panels, resolving connectivity issues, and determining maintenance requirements. IFC also recommended a transaction structure and managed the bidding process, including preparation of bidding documents and evaluation of bids.

The groundbreaking project attracted approximately \$12 million in private financing. The winning bidders, Azure Power and SunEdison, installed thousands of solar panels on Gujarat rooftops, generating 5 MW of power, while avoiding more than seven thousand metric tons of greenhouse gas emissions annually. In addition, installations on private residences generate income for property owners of \$0.05 for each unit of power produced. By aggregating rooftop installations, the state of Gujarat secured lower costs, faster project implementation, and reliable electricity supplies.

WESTERN BALKANS: DEVELOPING PARTNERSHIPS TO SCALE-UP RENEWABLE ENERGY

Our projects in the Western Balkans use a holistic strategy to grow the renewable energy market, lower costs, and reduce greenhouse gas emissions. We work with governments to improve the investment climate. We help energy companies strengthen project concepts, technical designs, and business plans, and enact good corporate practices. We help clients secure financing, and support local banks to boost internal capacity and process renewable energy loans. In addition, our business-to-business workshops and databases match international companies and local developers for joint ventures.

IFC's Balkans Renewable Energy Program supported projects and helped governments make market and regulatory improvements that mobilized \$1.1 billion of investment in 500 MW of renewable energy projects. These generate 2000 GWh/year and avoid 1.6 million tons of greenhouse gas emissions annually. IFC provided \$28 million in financing for these projects and mobilized another \$40 million. Projects worth approximately \$115 million are in the pipeline. After great success in the Western Balkans, IFC's program is being replicated in Nepal, with similar plans under development in East Asia Pacific and Sub-Saharan Africa.

ABOUT IFC

IFC, a member of the World Bank Group, is the largest global development institution focused on the private sector in emerging markets. Working with 2,000 businesses worldwide, we use our six decades of experience to create opportunity where it's needed most. In FY16, our long-term investments in developing countries rose to nearly \$19 billion, leveraging our capital, expertise and influence to help the private sector end extreme poverty and boost shared prosperity.

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Creating Markets, Creating Opportunities