

IFC SUSTAINABLE ENERGY INVESTMENT AND ADVISORY ACTIVITIES IN CENTRAL ASIA

Patrick Avato

*Program Leader Clean Energy & Cities
Europe and Central Asia*



IFC

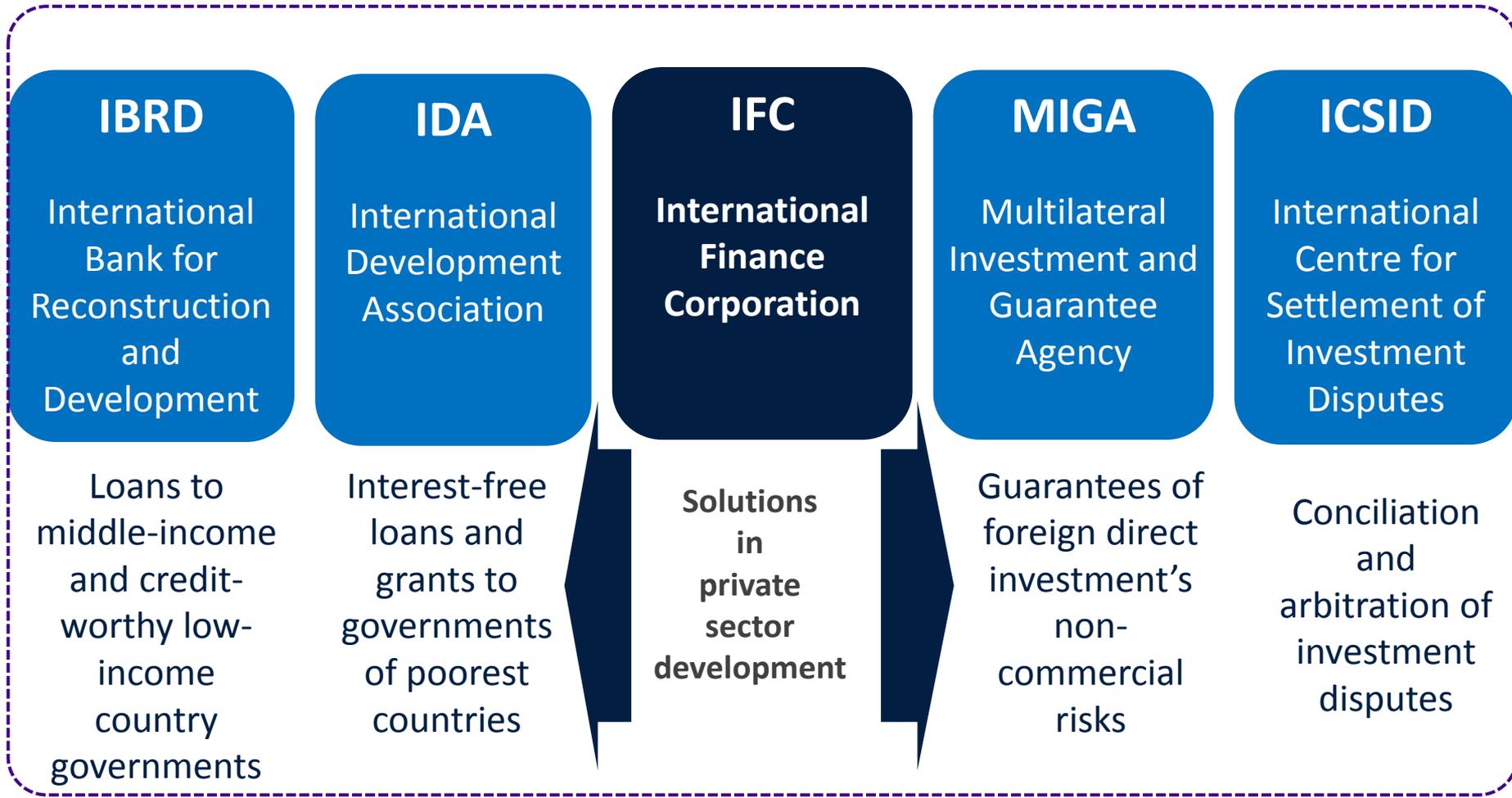
**International
Finance Corporation**

WORLD BANK GROUP

*Sustainable Energy In Central Asia:
Business Opportunities and Technology Transfer*

Brussels, November 6, 2014

IFC: A MEMBER OF THE WORLD BANK GROUP



IFC'S SERVICE OFFERING

Integrated Solutions, Increased Impact

INVESTMENT

- Loans
- Equity
- Trade finance
- Syndications
- Securitized finance
- Risk management
- Blended finance

\$51.7 bn portfolio (FY14)

ADVICE

- Firm-level advice
- PPP transaction advice
- In partnership w/World Bank, advice on broader market development and enabling environment for private sector

720 projects valued at \$1.1 bn (FY14)

IFC ASSET MANAGEMENT COMPANY

- Wholly owned subsidiary of IFC
- Private equity fund manager
- Invests third-party capital alongside IFC

\$6.4 bn under mgmt (FY14)

IFC IS A LEADING INVESTOR AND ADVISOR IN EMERGING POWER MARKETS

Investment

300 power investments in 65 countries since 1967:

- ✓ Generation: >30GW, of which >9GW in renewables
- ✓ Transmission/Distribution – reaching ~160 million customers
- ✓ Renewable energy start-ups
- ✓ Financial intermediaries (banks, PE funds) to increase access to finance

2/3 of infrastructure investment – climate friendly, mainly renewables

Advisory Solutions

Governments (national & sub-national)

- ✓ Policy advice: tariffs, permits, PPAs, etc.
- ✓ Structuring power sector PPP transactions

Developers, suppliers, distribution companies

- ✓ Market entry and project development support (technical, legal, bankability)
- ✓ Loss reduction and smart grid programs

Industrial energy users

- ✓ Energy efficiency and captive power supply

Financial Institutions

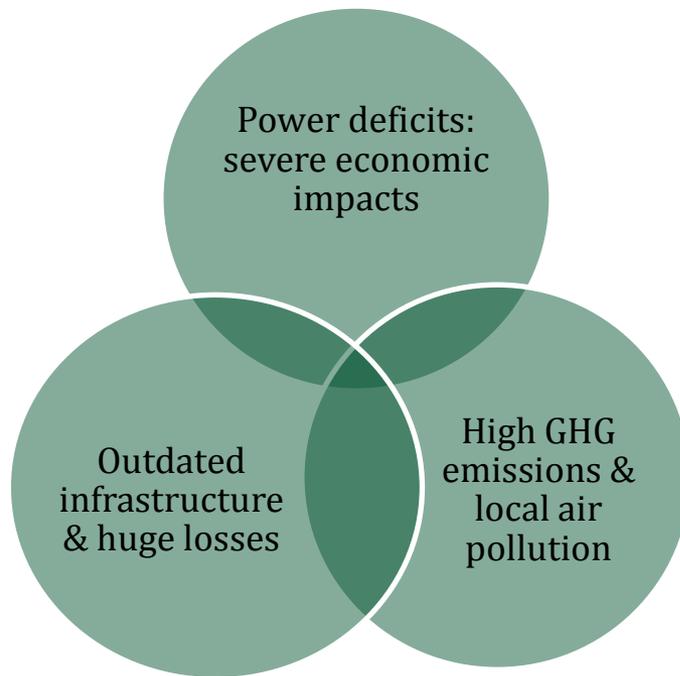
- ✓ Advisory to banks to facilitate sustainable energy finance

DIVERSE CLIENTS TRUST IFC AS A POWER SECTOR PARTNER

- **Global clients** are half of our business
 - ✓ Long-term partnerships with key clients
 - ✓ Partnering with renewable energy companies in emerging markets
- **“Local” clients** are becoming regional / global
 - ✓ Local power companies invest in their own country
 - ✓ Local power companies expand into other emerging markets
 - ✓ Local industrials expand into the power sector
 - ✓ Our local clients are becoming a larger share of our business as market reform increases opportunities for private investment in the power sector
- We work with **emerging renewable energy companies**
 - ✓ We have supported newly started local renewable energy firms, as they begin to build their first projects

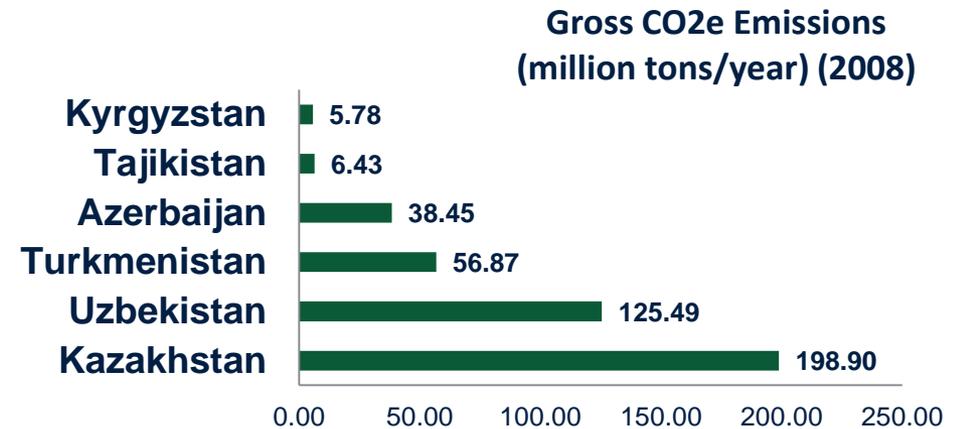


CENTRAL ASIA: KEY ENERGY SECTOR CHALLENGES



Urgent need to invest in energy infrastructure to:

- improve supply reliability
- reduce local air pollution and climate change impacts



OPPORTUNITIES FOR PRIVATE SECTOR

Energy sector challenges :

- ✓ Deteriorated infrastructure in urgent need of rehabilitation/replacement
 - ✓ In KZ: \$65b are required up to 2030
- ✓ Severe winter shortages in KY and TJ:
 - ✓ In TJ : 2,700 GWh or a quarter of winter electricity demand; in KY up to 2 months of winter consumption
 - ✓ Reasons: Collapse of CAPS; low hydropower output in winter; electricity used for heating
- ✓ Unreliable power supply : brake for economic development
 - ✓ estimated economic losses due to shortages: 3 % of GDP in TJ and 4.2% of GDP in KY
- ✓ Need for further power grid integration and expansion, esp. in KZ

Immediate Opportunities:

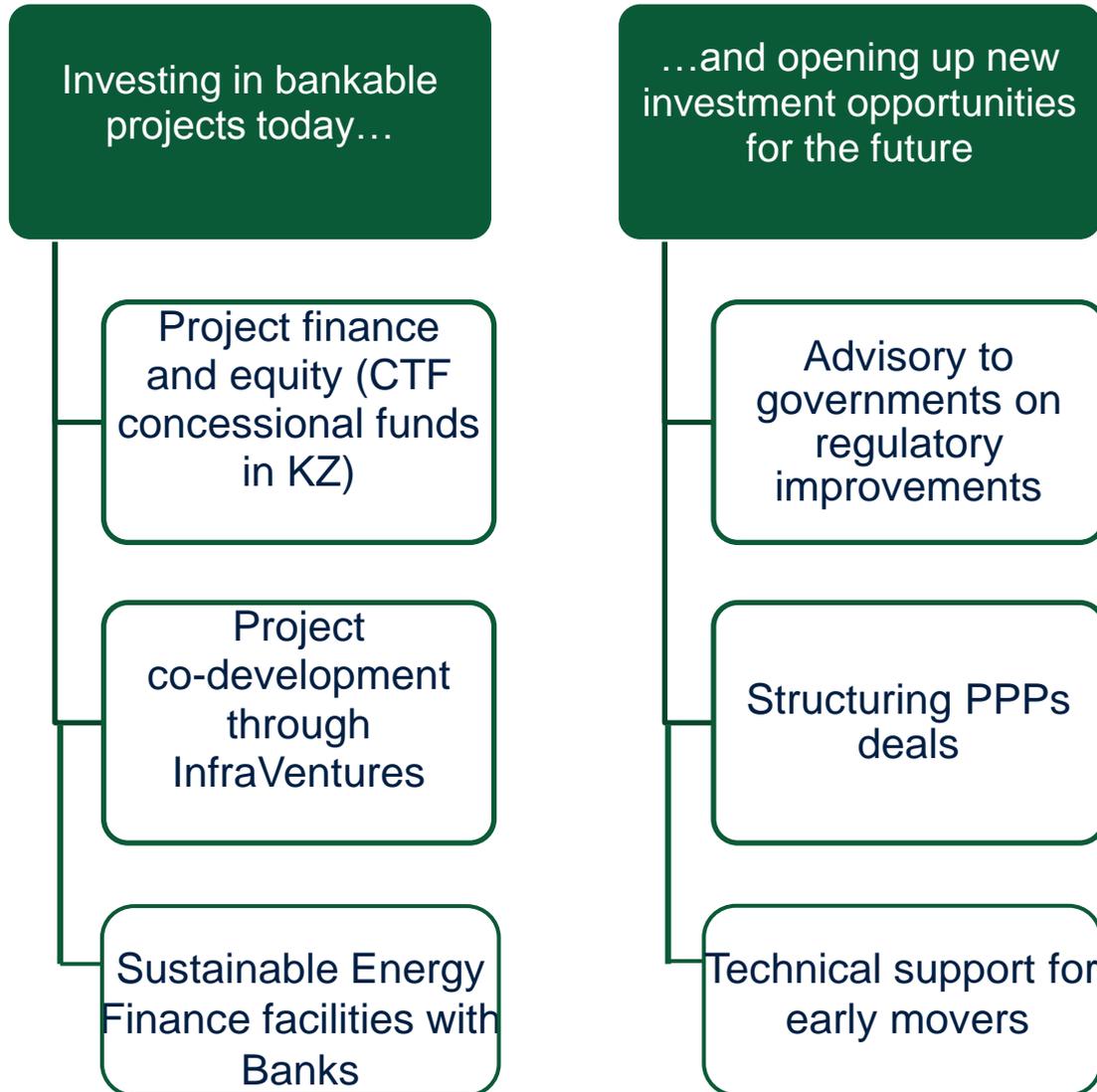
- ✓ T&D loss reduction, utilities modernization
- ✓ Municipal infrastructure projects
- ✓ Captive power solutions, particularly for remote locations (e.g. mining industry)
- ✓ Resource efficiency improvements in industry

Medium term Opportunities – once barriers are addressed:

- ✓ Grid-connected renewable energy in KZ:
 - ✓ Nascent support framework : feed-in tariffs and other incentives but some reg. issues to be resolved
- ✓ Energy efficiency across all sectors of economy
 - ✓ E.g. EE can cover 40% of TJ's deficit by 2016
- ✓ Replacing electric heating by other options:
 - ✓ solar water heating, biogas for heating and cooking, refurbishment of DH systems, etc.

IFC's technical assistance addresses the current challenges and translates existing opportunities into private-sector investments

IFC OFFERING: OVERVIEW



IFC PROJECT FINANCE: BASICS

DEBT: Long tenors +10-12 years

IFC may provide on its own account:

- ✓ If greenfield with total cost \geq \$50 million: Up to 25% of project cost
- ✓ If greenfield with total cost $<$ \$50 million: Up to 35% of project cost
- ✓ If expansion or rehabilitation: Up to 50% of project cost

IFC can mobilize other lenders:

- ✓ “B loans” – Syndicated loans where IFC is lender of record, with funds provided by international commercial banks
- ✓ Parallel loans – from other DFIs or local lenders

IFC is able to work alongside co-lenders as part of lender group

EQUITY: IFC can take equity positions up to 20% of total share capital

RISK MANAGEMENT SERVICES: Derivative products to hedge interest rate, currency, or commodity-price exposures of IFC clients

IFC AS PROJECT CO-DEVELOPER: INFRAVENTURES

- InfraVentures is a US\$150 million fund for infrastructure projects *in early stages of development*
- IFC can act as co-developer, bringing up to US\$8 million to use for project development expenses, in return for an equity option at financial close.
- IFC can help with all development activities leading up to financial close, including: liaising with public and private stakeholders, obtaining required permits, selecting and supervising project participants, negotiating financial and legal terms, and sourcing project's equity and debt financing.

Examples in the power sector:

- ✓ Hydro power plant in Mali
- ✓ Liquefied pressurized gas retail distribution in Kenya
- ✓ Hydro power plant Tajikistan
- ✓ Hydro power plants in Georgia
- ✓ Privatization of power projects in Vietnam

IFC'S CENTRAL ASIA & CAUCASUS ENERGY INFRASTRUCTURE PROGRAM

...attracts private investment to reduce supply-side losses and increase clean energy supply

Opening the market

Client: Governments

- **Streamline regulations** to attract investment
- **Develop strategies** to reduce T&D losses
- **Develop PPPs** to attract private capital and expertise to power and heat distribution, street lighting and generation assets
- **Structure Renewable Energy Concessions**

Supporting first movers

Client: Renewable energy developers

- **Support market entry** of international investors
- **Support project developers** with project identification, and development of bankable projects

Client: Large energy consumers

- **Identify energy efficiency gains** and alternative, localized energy supplies
- **Identify partners** to develop and manage localized energy supply/captive power

Client: Utilities

- **Loss reduction** audits and development of investment plans
- **Technical advice** on smart grid, demand-side management, grid strengthening

- Three-year advisory program with budget of ~\$3.6 m
- Regional implementation platform develops project in Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, Georgia, Azerbaijan and Armenia

Key takeaway messages

- ✓ IFC is a **leading investor in private sector** green energy and energy efficiency in emerging markets. We have invested in more than 9 GW of renewable energy capacity and have local presence 100+ countries.
- ✓ We are also a **major advisor** on sustainable energy:
 - ✓ Help **private sector** companies enter new markets, develop clean energy projects and improve resource efficiency.
 - ✓ Advise **governments** on structuring clean energy PPP deals and improving renewable energy and EE policies and regulations (in coordination with the World Bank).
 - ✓ Assist **regions and municipalities** in developing local sustainable energy solutions
 - ✓ Assist **banks** in setting up sustainable energy financing programs
- ✓ IFC is actively developing **sustainable energy in Central Asia** through regional Energy Infrastructure and Resource Efficiency programs which bring in resources and expertise from across the WBG
- ✓ Major **opportunities** include: resource efficiency and captive power, T&D loss reduction and municipal infrastructure projects, rehabilitation of thermal and hydro assets, grid-connected RE

ANNEX

IFC VIEW OF LOCAL REGULATORY FRAMEWORKS

- In many renewable energy projects **regulation is *the* key risk**
- Countries can offer various **incentives** (feed-in tariffs, tax credits, etc), establish renewable targets or create legislation (import duties, local content rules) to encourage the growth of a local renewable industry
- Assessment of **stability and predictability** of a country's regulatory framework is a key aspect of project appraisal
- IFC supports **competition and fair market access**; however, we understand that in the renewables sector, governments play a key role in influencing the market
- If **regulatory changes** arise, institutions like IFC and the World Bank can be **important stakeholders**

INDICATIVE APPROACH TO A WPP FINANCING

- **Debt sizing: debt sized off of a P90 wind resource, min DSCR of 1.3x; higher if other risks to be absorbed in DSCR: 60% to 70% leverage likely**
- **Completion risk mitigated through Sponsor guarantee; possibly project funds agreement**
- **RE framework structuring issues:**
 - ✓ Implications of Local Content Rules
 - ✓ Timing of FiT award (post construction)
 - ✓ Procedures for interconnection and recovery of transmission costs
 - ✓ Offtake risk
- **Typical structuring tools to address regulatory uncertainty:**
 - ✓ Debt sizing
 - ✓ Sponsor guarantee
 - ✓ Debt Service Reserve Account
 - ✓ Concessional financing to address specific risks
 - ✓ Political risk insurance