INVESTMENT OPPORTUNITIES in Central Asia Power Sector

ITA ITALIAN TRADE AGENCY ICE – AGENZIA

Business Mission to Kazakhstan

IFC | International Finance Corporation
WORLD BANK GROUP

Almaty - Kazakhstan
September 5, 2017

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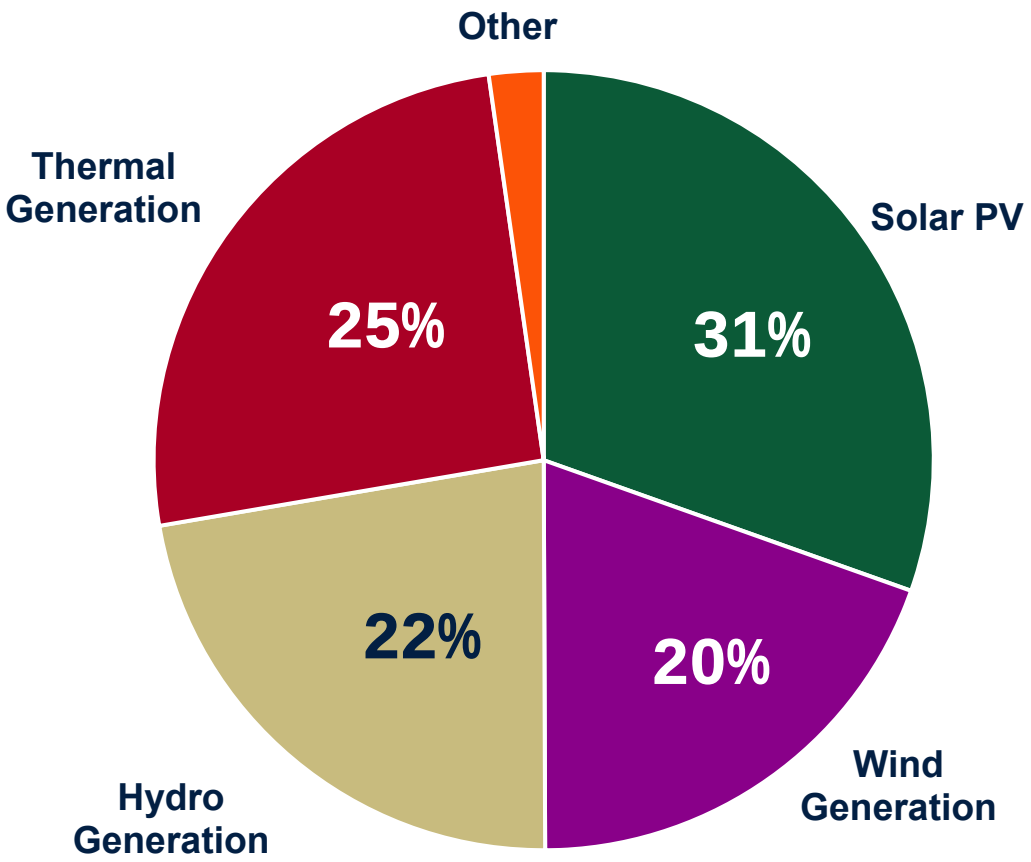
IBRD	IDA	IFC	MIGA	ICSID
International Bank for Reconstruction and Development	International Development Association	**International Finance Corporation**	Multilateral Investment Guarantee Agency	International Centre for Settlement of Investment Disputes
Loans to middle-income and credit-worthy low-income country governments	Interest-free loans and grants to governments of poorest countries	**Solutions in Private Sector development**	Guarantees of foreign direct investment's non-commercial risks	Conciliation and arbitration of investment disputes

- IFC is the private sector lending arm of the World Bank Group.
- IFC is the largest global development institution focused exclusively on the Private Sector in developing countries.
- S&P / Moody's AAA rating.
- Offers a full range of products from Advisory Services to Debt Financing.
- Commitments in FY2015 of approximately US $10.6 billion + US $7.1 billion mobilized.
- Advisory Program of US$1.2 billion.

IFC FY2015 Highlights	
Portfolio	US $50.4 billion
Committed (FY15)	US $17.7 billion
Mobilized (FY15)	US $7.1 billion
# of Companies	2,033
# of Countries	>100

March 2008 to March 2017
IFC closed and disbursed 28 projects in 15 countries. Total capacity of 3.0 GW. Total Project Cost of US$5.84 billion.

IFC - FY2015 Investment in Emerging Markets



Commitment Activity:
US$2.7 billion invested

16%
Europe & Central Asia

Committed Portfolio:
US$5.7 billion

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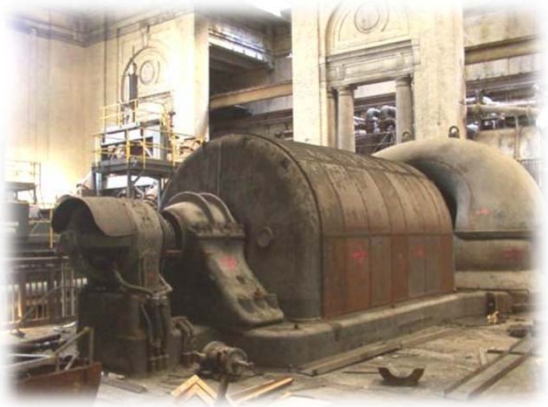
The Power Sector in Central Asia

- Central Asian Republics enjoy abundant energy resources.
- During the Soviet period, the electricity and transboundary water utilization systems were designed on a regional basis.
- The power sector in Central Asia is controlled by each State.



Major problem: **Inefficiency**.

- Existing assets are obsolete and highly depreciated.
- Significant investment is required: T&D and generation.
- Greenfield or rehabilitation: large investment will be needed.

Slump in commodity prices + Rising debt-service obligations.

Public financing is not a sustainable economic strategy.
Countries need to consider non-public financing modalities.

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Source: University of Texas

The Power Sector in Central Asia

Infrastructure ownership

	Transmission		Generation		Distribution	
	Gov.	PP	Gov.	PP	Gov.	PP
Kazakhstan	X	X	X	X	X	X
Kyrgyzstan	X		X	X	X	
Tajikistan	X		X	X	X	
Uzbekistan	X		X		X	

PP = partially private

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Source: University of Texas

POWER SECTOR / Where we see potential opportunities?

Kazakhstan

- Power Transmission (concessions)
- Conventional generation (partnerships, greenfield)
- Electricity Distribution (privatization)
- Renewables (solar PV, wind, small hydro)

Kyrgyzstan

- Large hydro (development, rehabilitation)
- Renewables (small hydro)

Tajikistan

- Small hydro for off-grid supply.

Uzbekistan

- Estimated US$8.4 billion needed by 2020*.
- No clear signals.

(*) Based on CAREC Power Sector Master Plan, ADB, Feb. 2012 and WB estimates.

Key Challenges

- Weak investment climate.
- Incomplete, unrefined regulatory framework.
- Power sector heavily regulated and dominated by state-owned enterprises.

KAZAKHSTAN – Power Sector

Generation - Highlights

- The Electricity Law was ratified in 2004 (market liberalization).
- Sellers: the generators (mainly private);
  Buyers: regional electricity companies, and some large industries connected to the transmission system. There is no competition in the electricity retail market.
- For conventional generation there is a price cap.
- The Law was amended in 2012: generators are required to reinvest 100% of their profits into new infrastructure development or upgrades.
- Generation assets are owned by private companies and the SOE Samruk Energy (40% of total capacity and 25% of energy production).
- ERG is the second largest GenCo: 17% of total energy generation.
- About 89% of generation is thermal. Samruk-Energy owns 35% of the coal mined.

KAZAKHSTAN – Power Sector

Transmission - Highlights

- **KEGOC** (Kazakhstan Electric Grid Operating Company) is the national Transmission System Operator.
- Since 2014 IPO, Samruk-Kazyna National Welfare Fund holds 90% of KEGOC's shares. Minority shareholders own 10%.

Distribution - Highlights

- 21 regional distribution companies (REC).
- Mostly privatized (local investors). Some are currently being offered for sale.
- Electricity is sold to end-users by 20 Energy Supply Organizations (ESOs) which pay a fee to KEGOC and the REC for transmission and distribution costs.

KAZAKHSTAN – Renewables

Highlights

- 2009 → was approved the Law on RE support.
- 2013 → "Concept of transition to a Green Economy".

Adopted Targets

	2020	2020	2030	2050
RES	3%	3% (?)	10%	50%
Wind	1,787 MW	933 MW		
Solar PV	713.5 MW	467 MW		
SHPP	539 MW	290 MW		
Biogas	15.05 MW	10 MW		

106 projects

- 2013 → New Law on RE Support + introduction of FIT + Establishment of the FSC (RE off-taker).

KAZAKHSTAN – Renewables

Approved FIT

TECHNOLOGY	FIT KZT/kWh*	Indexation to CPI
Wind Power Plants	22.68	26.31
Wind Power Plant "Astana EXPO - 2017" of 100 MW	59.7	69.25
Solar PV	34.61	40.15
Solar PV using local modules (Kaz PV), up to 37MW	70.00	81.20
Small hydro	16.71	19.38
Biogas	32.23	37.38

(*) without VAT.

- Annual indexation of approved FIT subject to changes in the exchange rate of the national currency against foreign currencies.

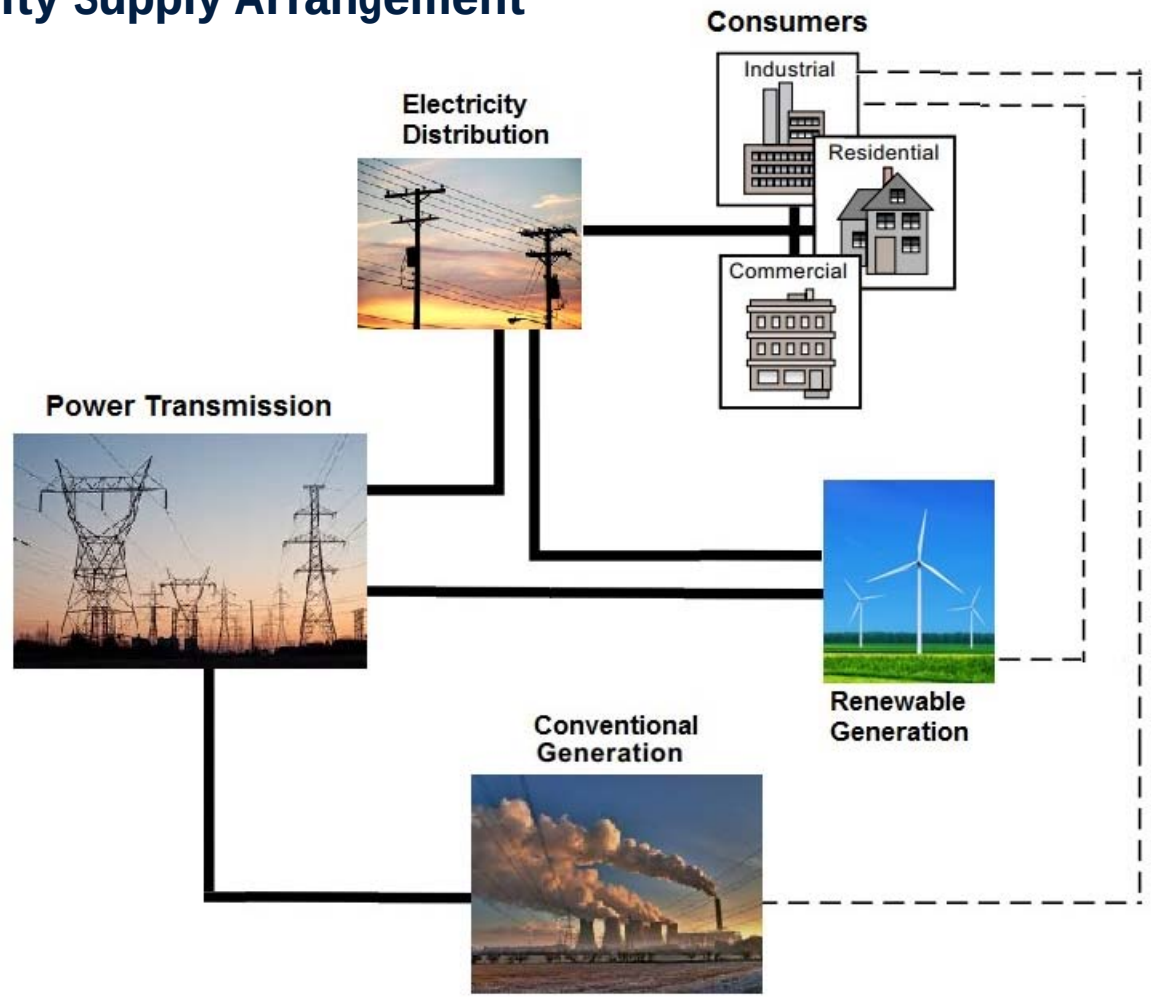
$$T_{t+1} = T_t * (1 + 0{,}7 * \frac{(\text{ИПЦ}_t - 100\%)}{100\%} + 0{,}3 * \frac{USD_{t+1} - USD_t}{USD_t})$$

KAZAKHSTAN – Renewables

- The FSC has obligation to buy all generated power from the RE plant using a standard PPA (15 years).
- A reserve fund is operating since Jan. 2017 to cover cash shortfalls of the FSC to cover delayed payments).
  → A surcharge of 3% to conventional generator (purchasers of RE)
- There are about 50 RE projects in operation. Total installed capacity = 300 MW.
- About 29 small plants sell to themselves or to others thru bilateral contracts.
- This 2017 year the FSC expects to pay about **US$40** million to buy RE electricity.
- Transmission companies are required to provide free access to the grid.
- In case of limited capacity of the TS, transmission operators are obliged to give preference to power generated by RE plants.
- RES plants are not subject to licensing and do not pay transmission charges.

KAZAKHSTAN – Renewables

Electricity Supply Arrangement



Under the bilateral Agreements.

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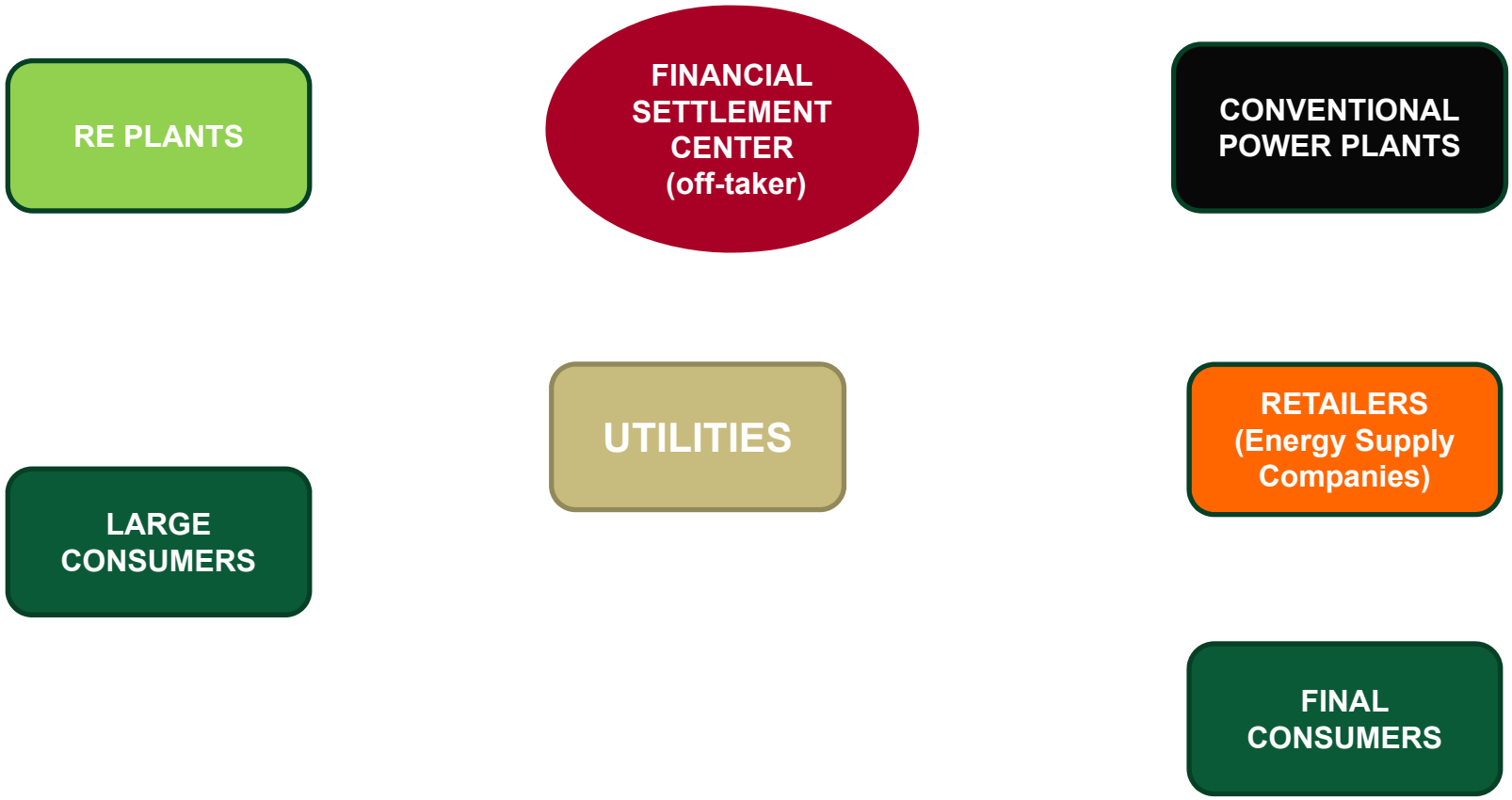
KAZAKHSTAN – Renewables

RE project development cycle

Choice of site	Land use permit allocation	Grid connection	Project preparation	Signing PPA
▪ Plan for development of RES until 2020 (Gov decree of 25 Jan 2013 № 43 art.5) – states promising RE sites in KZ's regions ▪ The Plan will be updated in 2014 (by introducing amendments to the Government Decree)	▪ Local authorities ("*akimats*" allocate land use permits in accordance with the RE plan and the Land code	▪ Determine the nearest grid connection point (according to Regulation) ▪ Develop and have approved a grid connection scheme (according to the grid code) ▪ Get the "technical conditions" (grid connection agreement) from the grid owner (regional grid Co or KEGOC)	▪ Development of *feasibility study* or the *project design documentation* ▪ *Feasibility study* or the *project design documentation passes through* State expertise	▪ Application to MoE ▪ MoE includes the project in the RE list ▪ Settlement Center signs PPA with RES plants from the MoE's RE list ▪ Length of PPA: 15 years + preparation period ▪ Preparation period – no more than 3 yrs (construction permit – no later than in 12 months, commissioning – no later than 36 months since the signature of PPA)

KAZAKHSTAN – Renewables

Support mechanism for grid-connected projects



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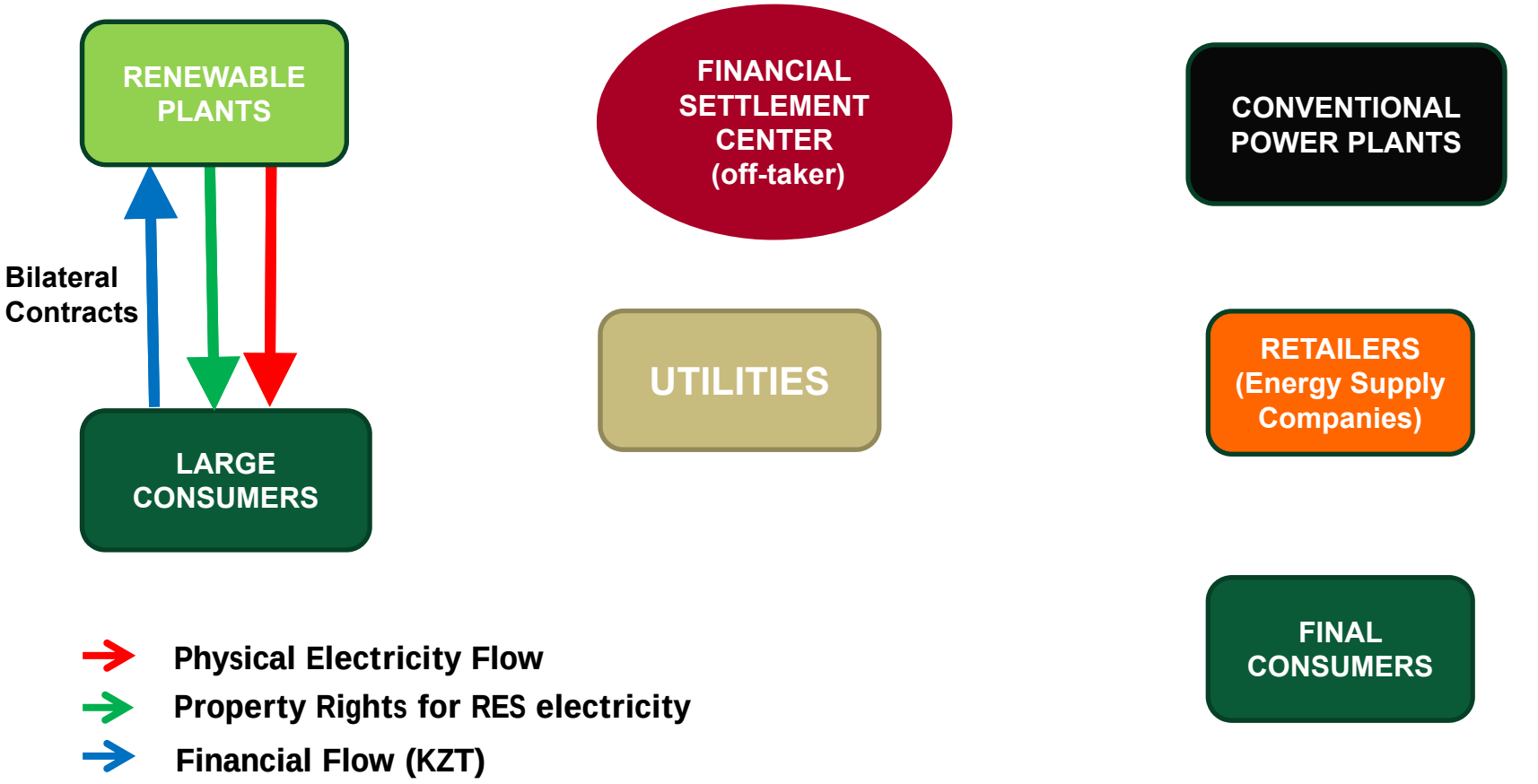

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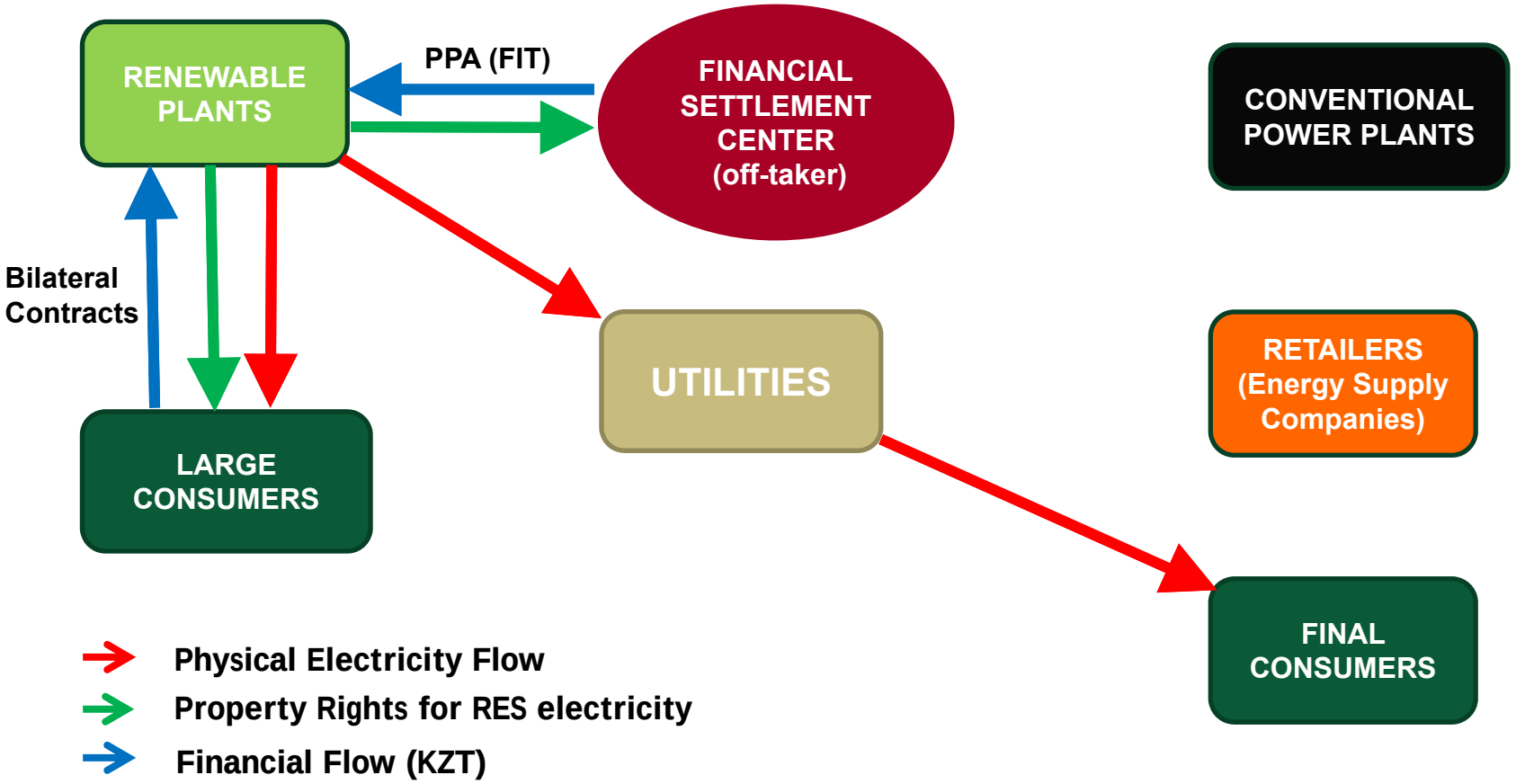

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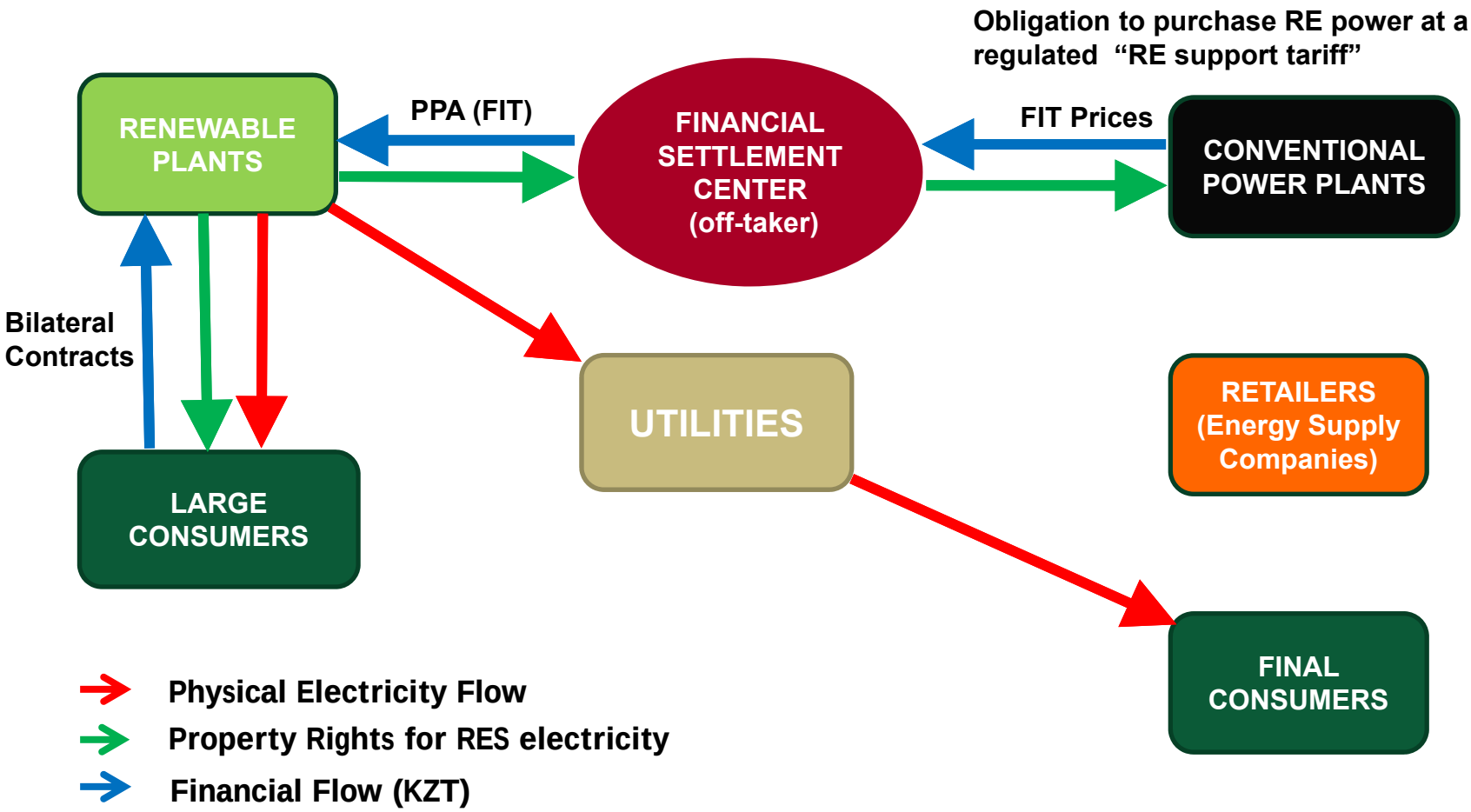

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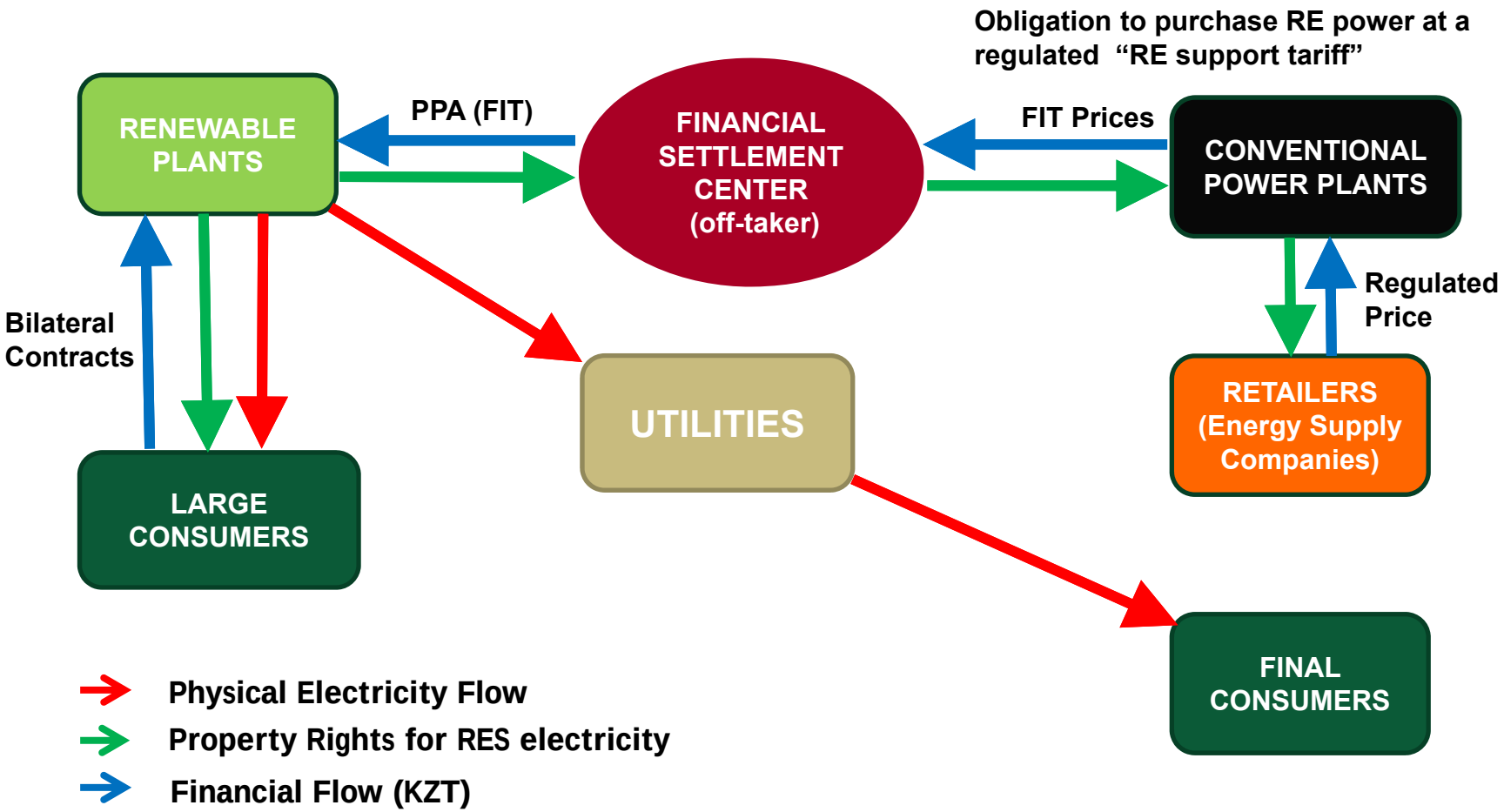

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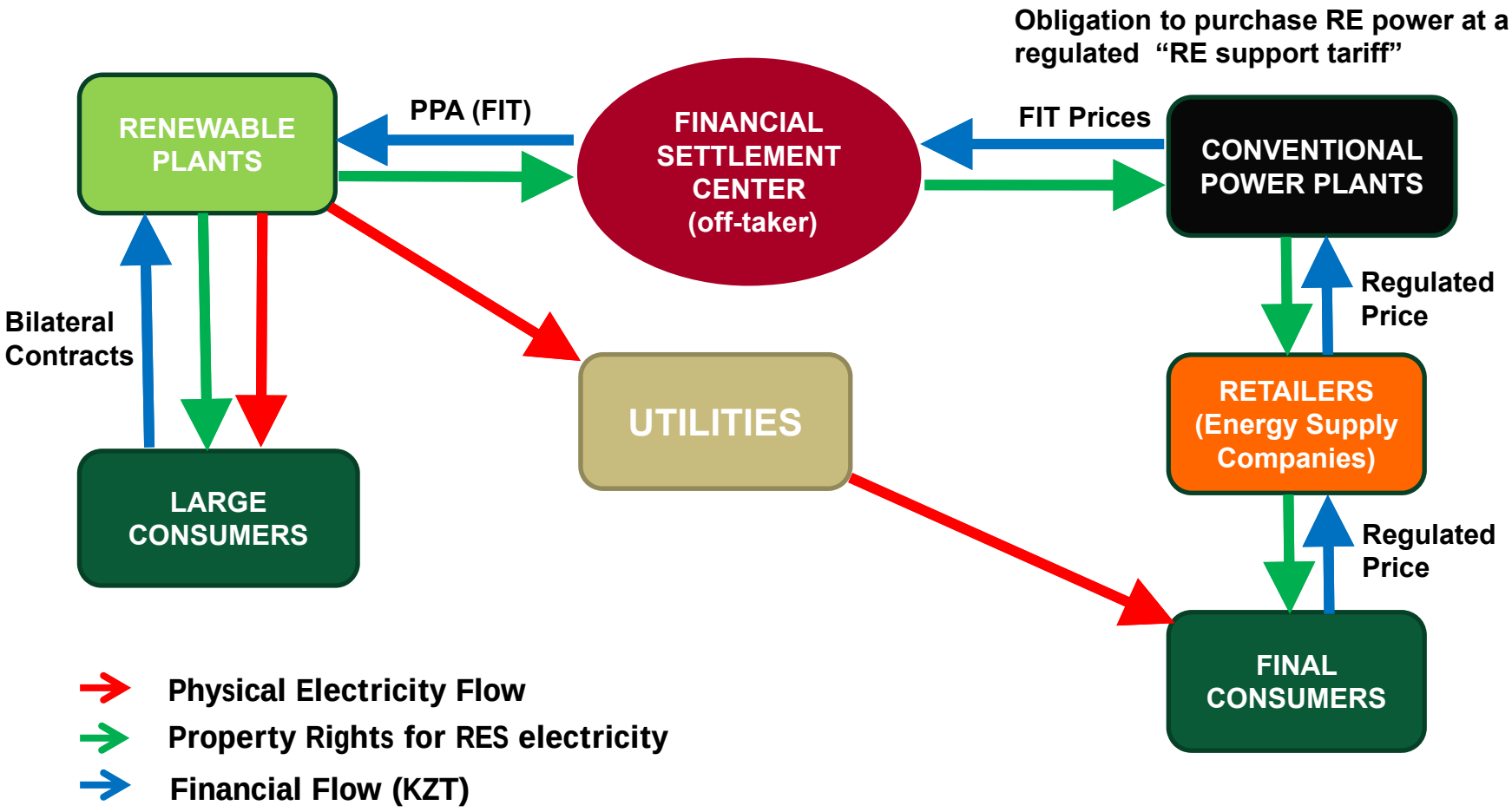

KAZAKHSTAN – Renewables

Ongoing Transition to an Auction Mechanism

- All projects with a signed PPA will be in the Siting Plan. For all other projects there will be auctions/tenders.
- Auction mechanism/procedure is under preparation. Expected launch mid 2018.
- How will Auctions be structured?

KAZAKHSTAN – Renewables

Main Challenges/risks and Possible Solutions.

- *Currency risk: Tenge volatility and inadequate indexation.*
- *Connection prototype contract considering the characteristics of RES.*
- *Integration of RES. The Law forces KEGOC to issue Technical Conditions.*
- *Contractual structure of the PPA – its bankability. Lack of guarantees.*
- *Sustainability of the support mechanism.*
- *Concerns regarding the rule of law.*

Market Entry.

- New projects.
- Existing projects: → Project owner with no experience.
  → Not enough funds to develop the projects.
  → Insufficient preparation (studies).

IFC FINANCING

Loans	▪ Project and Corporate financing ▪ On-lending through intermediary institutions
Equity	▪ Direct equity investments ▪ Private equity funds
Trade Finance And Supply Chain	▪ Guarantee of trade-related payment obligations of approved financial institutions
Syndications	▪ Capital mobilization to serve developmental needs ▪ Over 60 co-financiers: banks, funds, DFIs
Derivative and Structured Finance	▪ Derivative products to hedge interest rate, currency, or commodity-price exposures of IFC clients
Blended Finance	▪ Augmenting IFC resources with donor funds

IFC FINANCING - Project Cycle

EARLY STAGE	APPRAISAL	FINAL NEGOTIATION	PORTFOLIO SUPERVISION
▪ Discuss project. ▪ Agree on product(s) and main terms. ▪ Early decision from IFC management.	▪ Due diligence & site visit, assessing: ✓ Business operations & potential ✓ Financial & economic soundness ✓ Environmental & Social (E&S) aspects ✓ Risks & opportunities ▪ Public disclosure.	▪ Finalize term sheet with client. ▪ Board consideration and approval. ▪ Crafting and signing legal documents.	▪ Bi-annual reporting on financial, E&S, and development impact indicators.

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IFC FINANCING - Financial Products

- Corporate and JV
- Typically 5-15% shareholding (not to exceed 20% of total equity)
- Long-term investor, typically 6-8 year holding period
- Not just financial investor, adding to shareholder value
- Usually no seat on board
- InfraVentures (early equity investments)

- Subordinated loans
- Income participating loans
- Convertibles
- Other hybrid instruments

- Senior Debt (corporate finance, project finance)
- Fixed/floating rates, US$, Euro and local currencies available
- Commercial rates, repayment tailored to project/company needs
- Long maturities: 8-20 years, appropriate grace periods
- Range of security packages suited to project/country
- Mobilization of funds from other lenders and investors, through co-financings, syndications, underwritings and guarantees

IFC FINANCING – Project Finance

- IFC's investment size on its own account is set by the following criteria:

Greenfield with total cost < $50 million	up to 35% of project cost
Greenfield with total cost > $50 million	up to 25% of project cost
Expansion or Rehabilitation	up to 50% of project cost

- IFC can deliver the following complements to its own debt investment:

B Loans	Syndicated loans where IFC is lender of record, typically with funds provided by international commercial bank.
Parallel Loans	IFC can mobilize parallel lenders, typically DFI or local lenders

- IFC is able to work alongside co-lenders as part of lender group.
- IFC's equity investment typically do not exceed 20% of total share capital.

Financing of Renewable Energy Projects

Key characteristics of RE projects development

- High project development and investment costs.
- Capital intensive.
- Particular risk profile and uncertainty.
- Very long exposure period to risks.

RE projects financing structures:

Corporate Financing → Loan to an economic subject to develop a project.

Project Financing → Loan based on project's risks and future cash flows.
Revenue is generated from a PPA with an off-taker.

Non recourse

Needs a **robust** contractual structure

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Financing of Renewable Energy Projects

What makes a project bankable

Financial institutions only lend money when they have a reasonable degree of confidence that they will be repaid.

- **Commercially sound: good resource, reliability of data, secured grid connection.**
  - **Economically sound: sustainable debt/equity ratio, etc.**
    - **Technically sound: demonstrated expertise, uses best practices, good design, etc.**
      - **Strong sponsor (developer, EPC contractor) with track record / financial strength.**
      - **Well structured off-take agreements: PPA: price, term, guarantee.**
    - **Creditworthiness of the off-taker.**
  - **Meets E&S requirements (international standards).**
- **Obtaining all necessary permits, licenses, authorizations, etc.**

Key Takeaways

- The ongoing privatization may offer new investment opportunities for energy companies.
- This is a challenging and evolving market.
- The RE market is not mature, and this could be a good thing, because as it matures it will be harder for outsiders to come in.
- The country has a target to develop 1,700 MW of RE by 2020, and very little has been deployed. There is an increasing need for investment.
- Inevitably, KZ will need to improve the investment climate by removing barriers in order to attract foreign private investment.
- There are a number of potentially good projects that need experienced developers and solid sponsors.
- Financing from IFI and Development Banks is becoming increasingly available.

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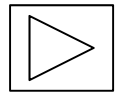
Age of existing capacity

	Kazakhstan	Kyrgyzstan	Tajikistan	Uzbekistan
< 10 years	11%	4%	14%	7%
11-20 years	11%	9%	0%	5%
21-30 years	33%	23%	12%	13%
>30 years	44%	64%	74%	75%



Source: Fichtner (2012) 2-15