

ELECTRICITY SECTOR REFORM POST-ISIS: LESSONS TO LEARN

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1.

Iraq Economy Post-ISIS

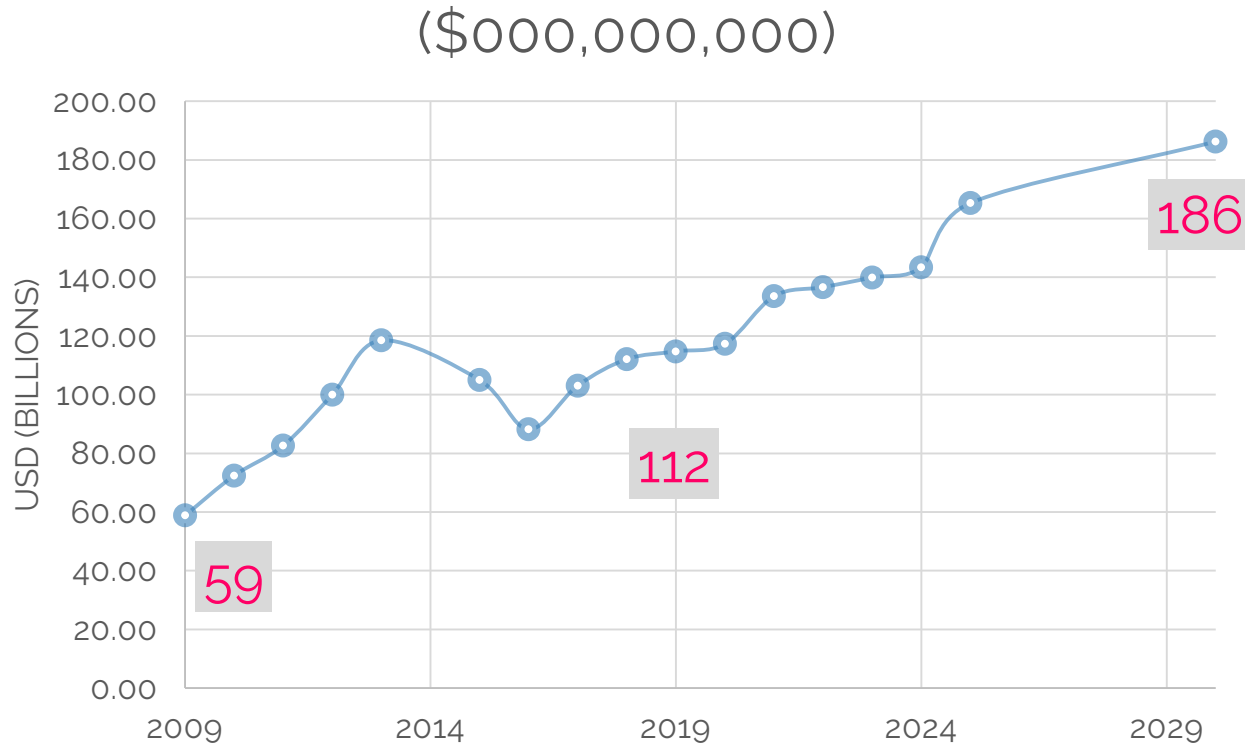
How federal budget looks like in 2017?

 **\$85,512,970,800**
Total budget.

 **\$67,114,316,290**
Total revenue.

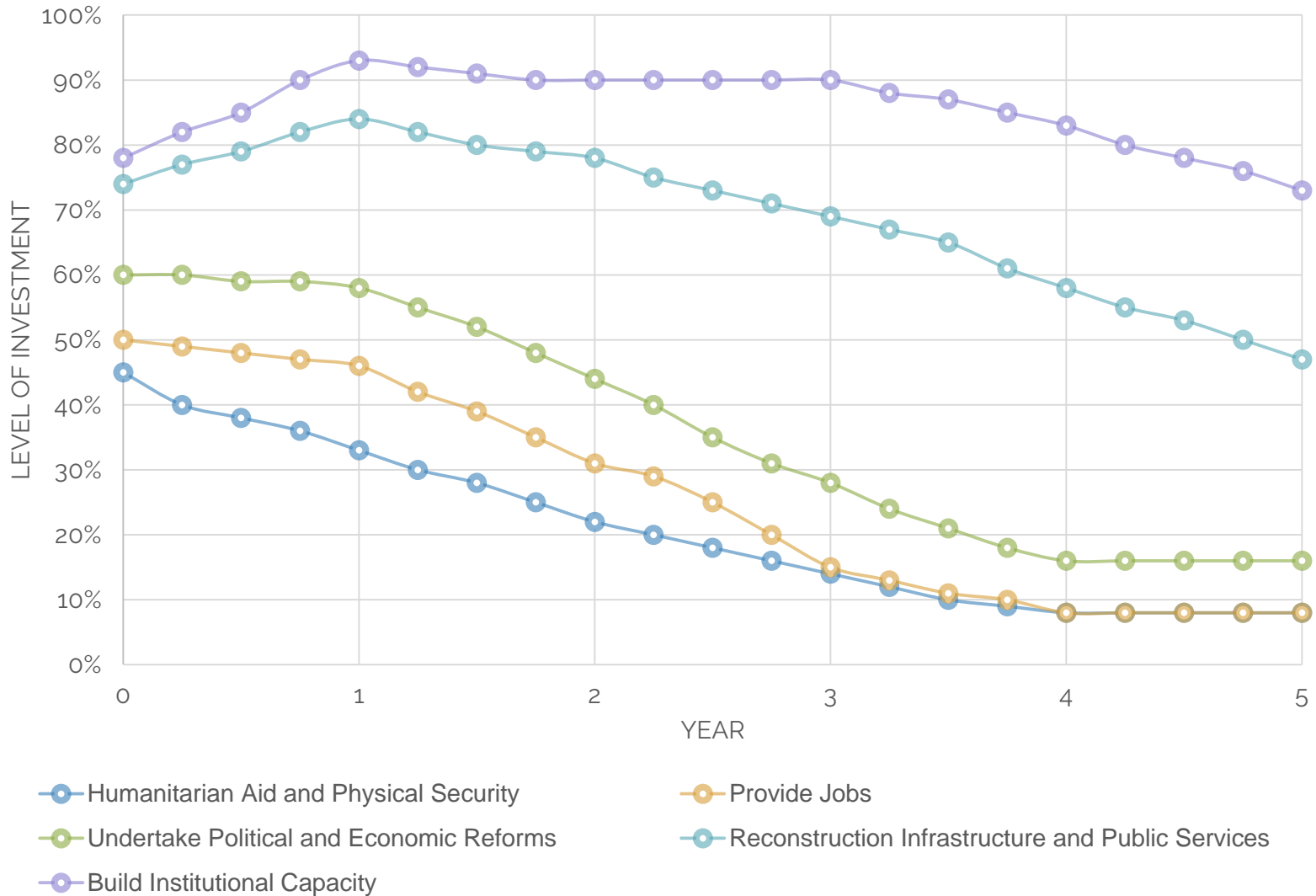
 **(\$18,398,654,500)**
Total deficit

How the federal budget will do?



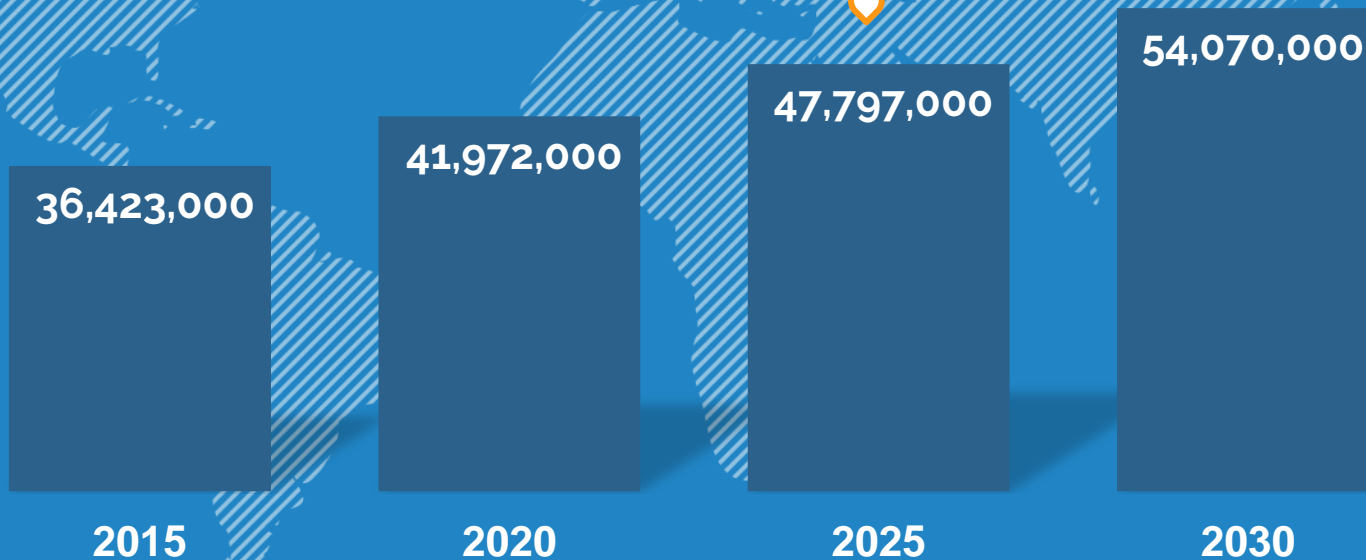
Looks positive! Good news for the electricity sector, BUT...

Reconstruction investment levels post-ISIS?

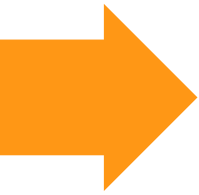


Iraq's "overpopulation" growth is high!

Iraq's Population will reach **54 millions** In 2030, (approximately 1 million every year) @ **2.8 – 3.2%** growth rate per annum.

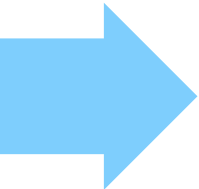


Housing and settlement needs



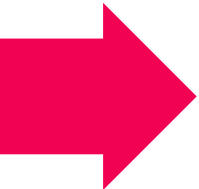
2.5m

New housing units are needed by 2016.



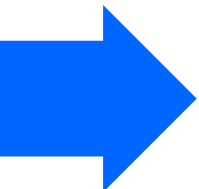
130,000

Total number of houses built.



1.3m

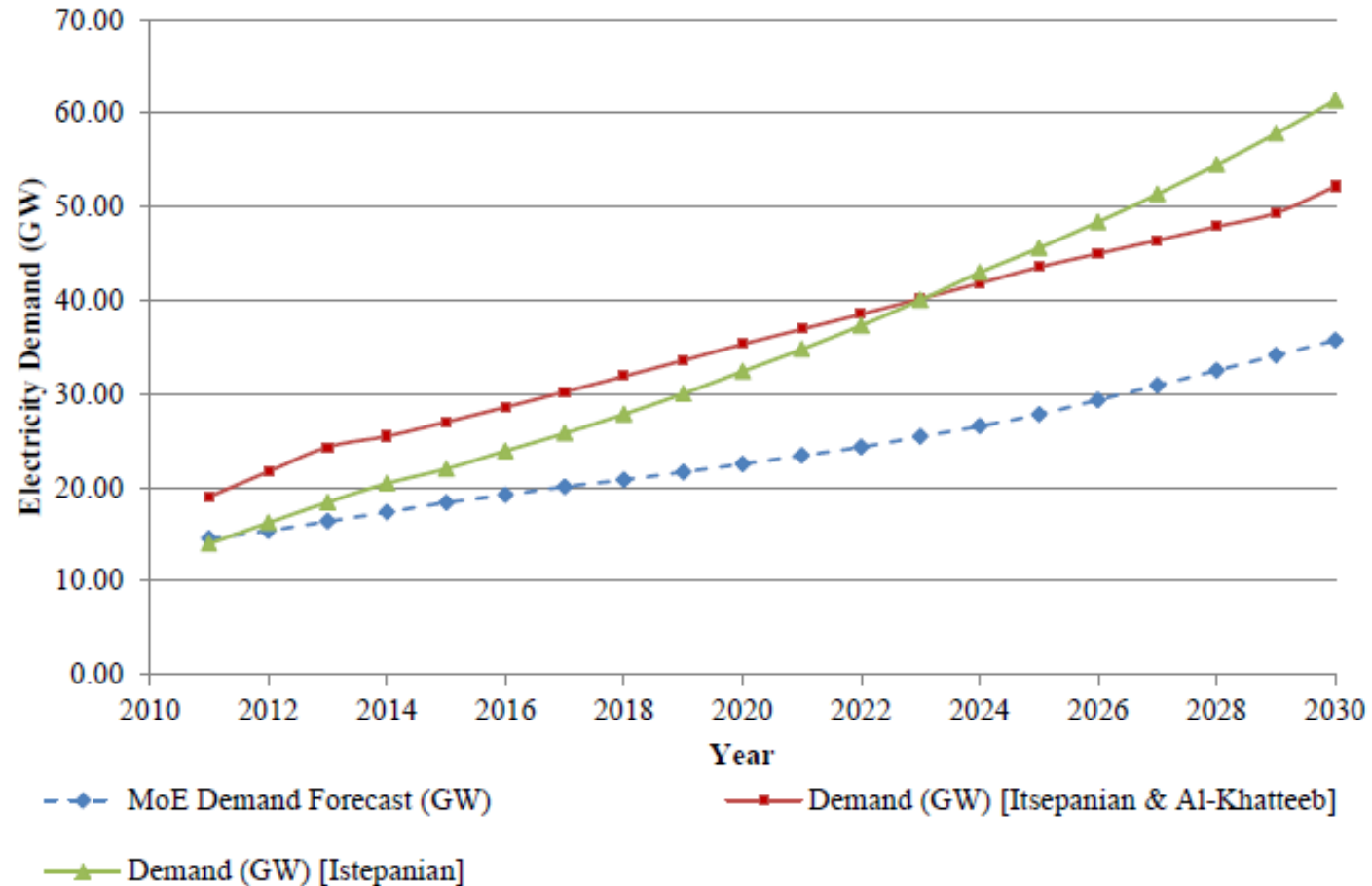
Iraqis have been confirmed displaced since 2014



10 - 15%

target housing investment of GDP.

Electricity Demand Forecast





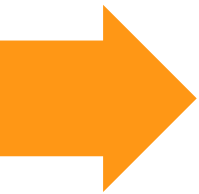
Innovative thinking to boost economic growth

Iraq needs new **vision** to promote its business
environment

2.

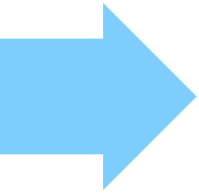
The Electricity Sector

There is a demand for every supply!



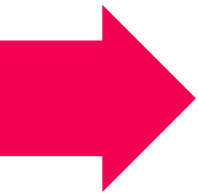
10,000MW

Actual Generation March 2017.



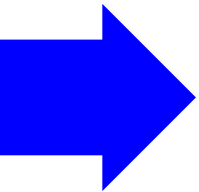
22,000MW

Demand (may be!).



16 hours

Electricity supply to normal households



54,094 MW

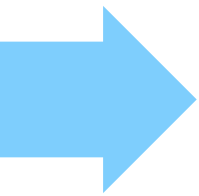
Demand forecast for 2030.

There is a demand for every supply!



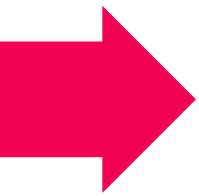
8,300 km

Total required length of 400kV transmission lines needed by 2020.



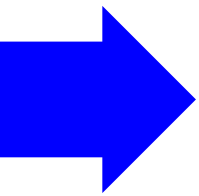
51

Total number of substations needed by 2020.



43,000 MVA

Total capacity required for substations transformers by 2020.



21

Number of locations for new substations between 2016 – 2020.

Current Challenges

Technical

- ▷ Rebuild damaged assets;
- ▷ Capacity shortage;
- ▷ Increasing demand;
- ▷ Reducing technical and non-technical losses;
- ▷ Rehabilitation of aging assets
- ▷ Enhancing reliability;
- ▷ Diversifying energy resources.

Economic

- ▷ Backlog investment;
- ▷ Mobilization of government funds;
- ▷ Poor financial performance;
- ▷ Attraction of private capital investment;
- ▷ Heavy subsidy;
- ▷ Non-cost reflective tariff;
- ▷ Security and terrorism;
- ▷ unsustainable fuel supply;
- ▷ Bloated workforce.

Iraq's natural gas

proven reserve = 3587.74 billion cubic meter.



NG facts and figures



12

Rank largest reserve in the world.



10

Natural gas fields (non-associated)



70%

of natural gas reserve is associated gas.



1,775km

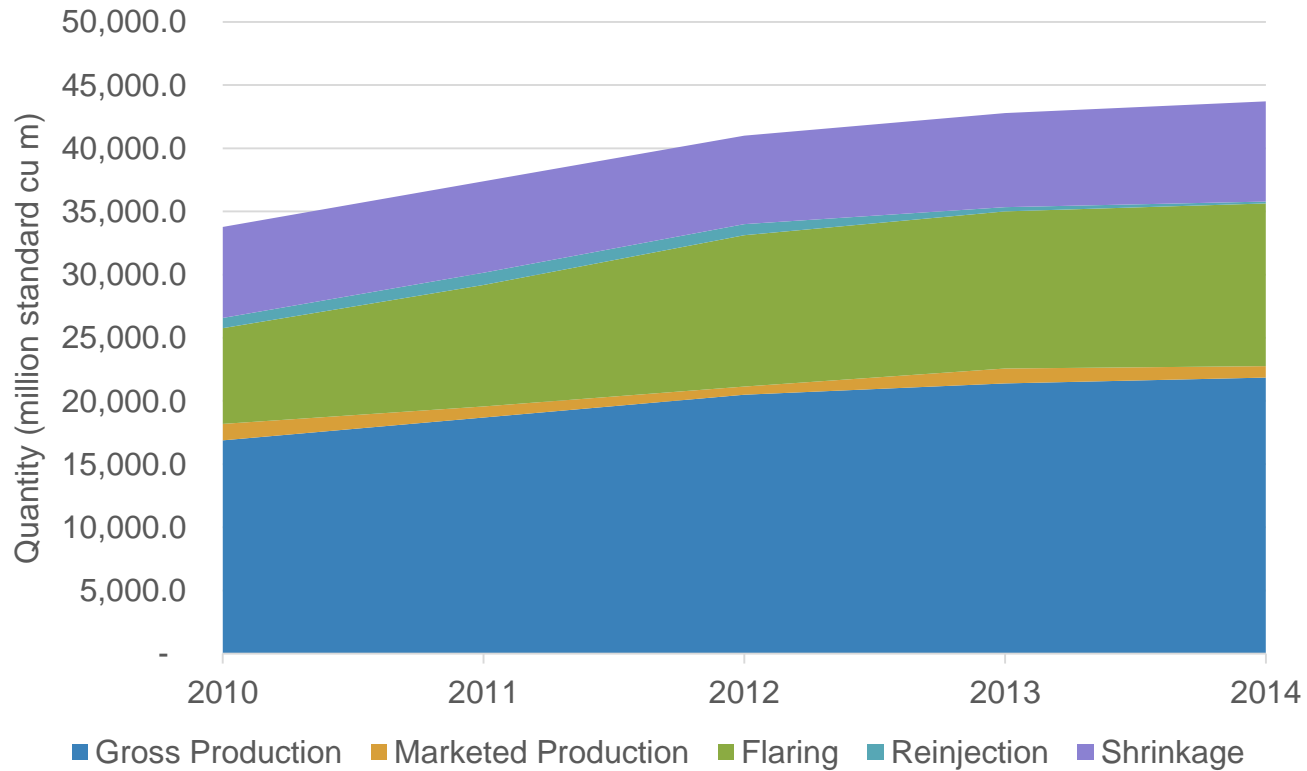
Total length of national gas pipelines

What's the problem then?

- ▷ Most gas pipelines were build in **80s**
- ▷ Much of trasportation facility is **unusable** due to successive conflicts.
- ▷ Operating **below** design capacity.
- ▷ Major **delays** in development of oil & gas fields and pipeline network.



Where's the problem then?



What about renewable energy?

- ▶ Iraq planned in 2012 to invest \$1.6 billion on renewable energy (solar and wind).
- ▶ Iraq needs to catch up with regional development (Saudi Arabia plans to produce 9.5 GW solar power by 2023, Iran renewable energy production capacity is predicted to reach 5,000 MW in the next five years).



3.

Reform is a must!

Electricity is important but at what price?



Access to **electricity** is of key importance in reconstruction efforts and economic growth post-ISIS.



Without foreign and private investment inflows, electricity sector will remain **vulnerable** while demand will keep rising.



The estimated cost for damages to the electricity sector due to war against ISIS = **\$4-5 billion**.



The government has to fund an estimated **\$90billion** on electricity sector by 2030 (\$7 – 8 billion per year).





It is the time for a major overhaul!

The current policies have failed to tackle the electricity shortage in the country since 2003.

Why reform is a must?

The short answer is: The government will be unable to secure sustainable fund in the next 15 years to catch up with the increasing demand for electricity.

Consultation

with key stakeholders
(Parliamentary committees,
Provincial councils and local
governments, etc.).

Reviewing

existing institutional set up,
relevant policies and laws,
past studies and
benchmarking experience
against other countries.



*Electricity reform needs to be broadly understood as a **complex**, **holistic** and **multidimensional process** for transform from in-conflict to post-conflict/peace economy encompassing efforts to simultaneously improve security, political stability, and socioeconomic development.*

Reform strategy



*The strategy should be based on **gradual** unbundling of the ministry owned directorates into independent generation, transmission and distribution companies with much emphasis of **private sector** participation in the entire supply chain with **exception** of transmission segment.*

Privatization or deregulation?

Privatization

- ▷ transfer of ownership from government to private.
- ▷ the repurchasing of all of a company's outstanding stock by employees or a private investor.
- ▷ Examples: BOOT, BOO, ROT, BTO, Joint Venture

Deregulation

- ▷ reduction or elimination of control by the government
- ▷ no government interference
- ▷ enacted to create competition
- ▷ different from liberalization.

Key activities of market reform



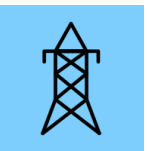
1. Obliging government directorates to operate according to commercial principles.



2. Restructuring of MOE's supply chain to enable the introduction of competition.



3. Development of economic regulation of the power market that is applied transparently by an agency that operates autonomously.



4. Corporatization of the unbundled electricity generators and distributors under dispersed ownership,

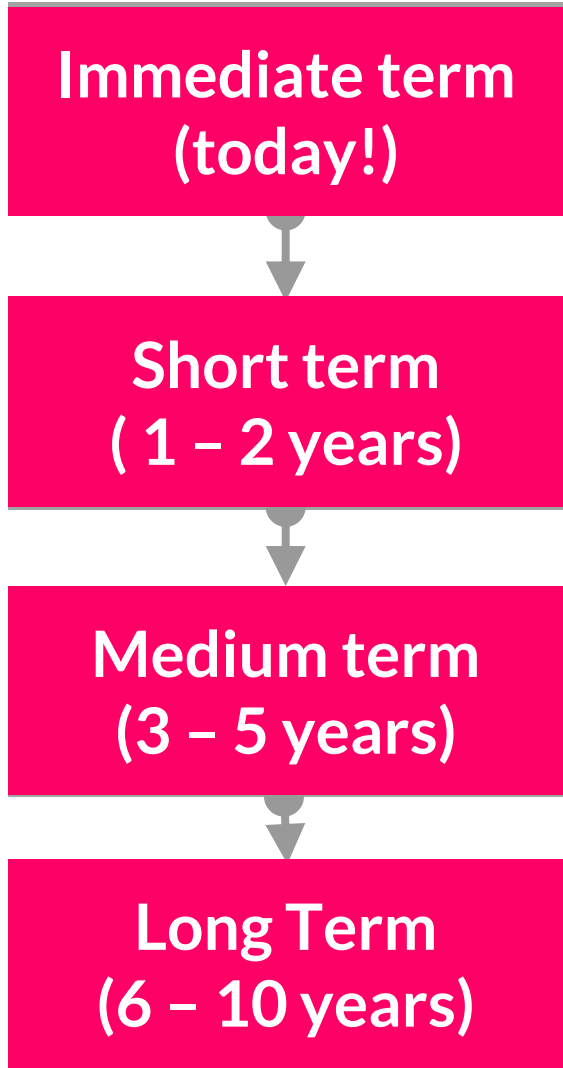


5. Development of competition in the generation and supply segments by development of power exchanges.



6. Focusing MOE's role on policy formation and execution.

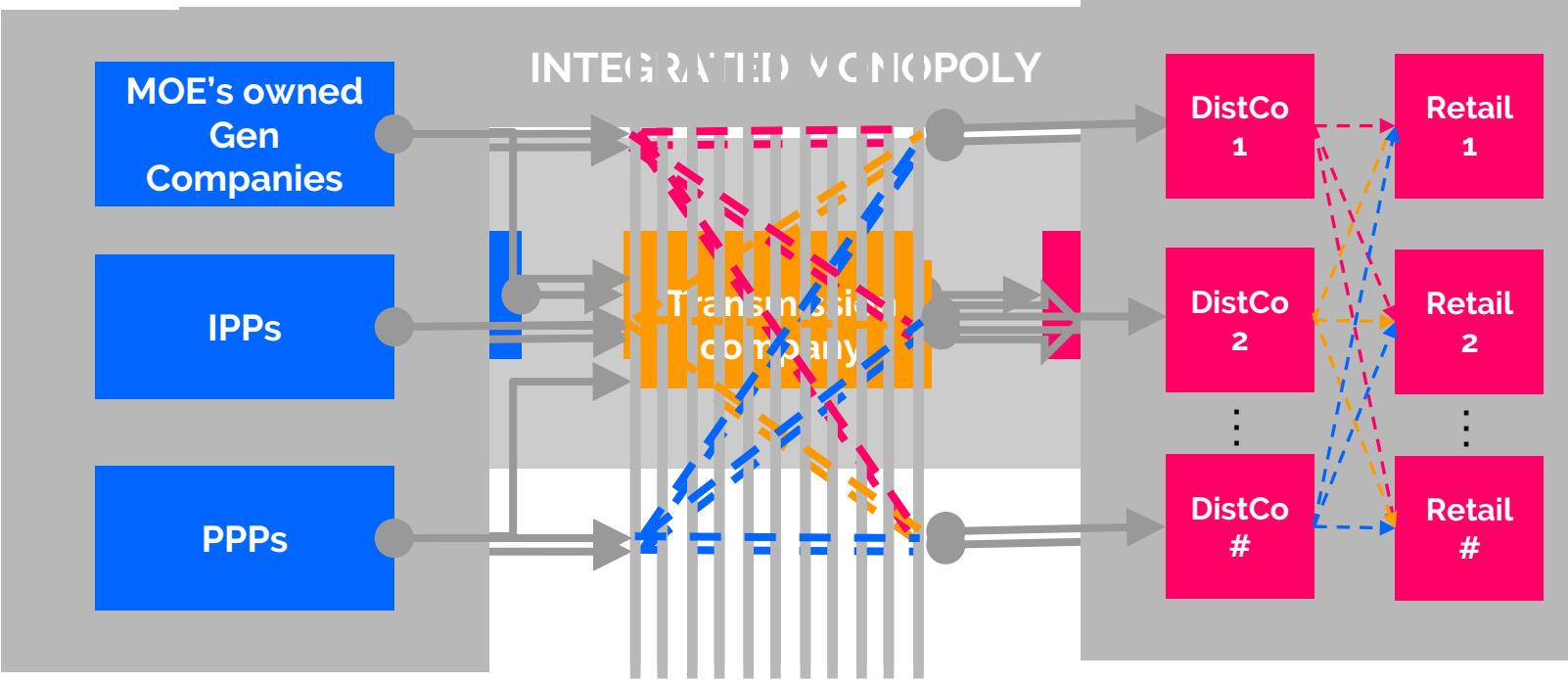
Roadmap to Reform



- ▷ the government should encourage the private sector to invest in the power sector (through joint ventures with several companies) the government should consider the privatization of the power sector in order to enhance efforts towards the power sector by mobilizing capital and pay investment through power purchase agreements only
- ▷ increasing the number of power generation plants and tailoring the power sector companies to be considered for listing at the Baghdad Stock Exchange.



Electricity sector restructuring timeline



10 - 10 years

Bottom line!

- ▷ **Ensuring** availability of adequate, reliable and affordable electricity supply.
- ▷ **Improving** business environment for private and foreign investments in generation and distribution;
- ▷ **Creating** an efficient and sustainable electricity market that supports the national development;
- ▷ **Promoting** financial and commercial viability of the electricity market;

Thank you Questions?

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