NORTHERN IRAQ & TURKEY: FROM THE VIEW OF ENERGY POLITICS

by Oğuzhan Akyener and Burak Kayael

"Northern Iraq, with the popular name Kurdish Region, by having an estimated 40 billion bbl oil and 8 tcm gas reserves (according to OPEC reports), is a strategic region for Turkey."

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INTRODUCTION

Northern Iraq, with the popular name Kurdish Region, by having an estimated 40 billion bbl oil and 8 tcm gas reserves (according to OPEC reports), is a strategic region for Turkey. In addition to oil and gas reserves, other key factors such as historical background, terrorism, ethnical properties, existing disputes with the central Iraqi government, Iran and other countries' strategies in the region affect the positioning of Kurdish Regional Government (KRG) in Turkish foreign affairs.

In the last decade, new Turkish strategy on improving the social, commercial and political relationships with the KRG made Turkey the most important strategic partner for the Kurds in Northern Iraq. Hence, by neglecting the illegal or unofficial revenue items, sale of oil and gas resources is the vital element for KRG budget. In addition to this fact, by surpassing the Central Iraqi Government (CIG), today the only way for KRG to sell her produced oil to the markets is going through Turkey, via the new built KRG pipeline or via trucks.

As a result of the partnership, today, KRG is exporting around 600 mb/d oil from Ceyhan port of Turkey. Furthermore, many Turkish companies (mostly on construction and food services) are continuing their businesses in KRG governed areas. By estimating the increasing export volumes of oil and by completing the related infrastructures in the upcoming years, gas volumes will result in a stronger KRG and more solid relations with Turkey. However, situation of Syria, and other effects such as Iran's influence in the region, continuing disputes of KRG with CIG, terrorism and ethnical risks for Turkey may change and challenge all the scenarios that have been written. That is why all the items mentioned above also have to be taken into consideration while estimating the future partnerships and interactions between the partners.

As described above, oil and gas resources are the vital elements for KRG and her relations with Turkey. In addition, possible cheaper gas import potential for Turkey from KRG can be important in the future. That is why, in this study, current position of Turkey in Kurdistan will be specified and future possibilities will be analyzed after making an overview of KRG, Iraq and the oil and gas market in Kurdish Region.

HISTORICAL BACKGROUND

Iraq is more important to Turkey than being just a neighbor in the South East with a 331 km long border. It owns 150 billion barrels of proven oil reserves, which brought the rank of being the world's fifth oil rich country. This rank makes Iraq a high potential trading partner for Turkey. Although the relationships between two countries are undulating according to the due time, historical background, other strategic items and mutual economic advantages force both countries having strong interrelations.

It is a known fact that social and cultural relationships between Turks and Iraqis have been continuing since the Ottoman Empire conquered the Arabic Peninsula and ruled the area for over 400 years. Although, in the mid-1920's, newly founded Turkish Republic claimed that the area known as Kurdish Region today should be ruled by her because of historical, social and cultural relationships. League of Western Nations decided that this area to be ruled by Great Britain. Iraq gained its independency in 1932 and was ruled by monarchy and republican governments respectively. Kurdish society in Northern Iraq struggled for independency from Iraq but could only gathered autonomous administration after the first Gulf War. Today, Kurdish Regional Government, which is officially a part of the federal government in Bagdad, governs the region and Kurds have some economic and political rights in Iraqi constitution. However, there are important conflicts with the two governments, which seem impossible to resolve. Main conflicts between the central government and the KRG are territorial conflicts (in Kirkuk, Ninawa, Salahaddin and Diyala Provinces) and the right of KRG to sign independent oil/gas exploration and export contracts. Hence, both of these two items are vitally and commercially strategic that makes it hard to find peaceful solutions.

CURRENT STATUS IN KURDISH REGION AND IRAQ

Iraq's unity is no more valid through its all legal territory. This is caused mainly by sectarian and/or ethnical differences among Iraqi people and impotency of CIG. After the fall of the dictator, Saddam Hussein, by US military intervention, an authority gap had occurred in Iraq. Certain terrorist groups like ISIS filled that gap in some regions. Today ISIS is controlling almost 1/4 of Iraq's legal territory and hold the control over important oil and gas reserves and facilities, including some of both KRG's and CIG's areas. Chaos environment created by ISIS deepened the abyss between KRG and CIG, especially for land and income shared between both parties. KRG seized some areas including Kirkuk city, whose legal status should be determined with a plebiscite according to Iraqi constitution, and started selling the oil that KRG had been producing without central government's approval.

As the Iraq's economy shrank 6.4% in 2014, oil and gas sales and the economy created by the sales become more vital for both KRG and the central government. Despite Iraq has 8.8% of world's proven oil reserves it has a share of only 3.8% worldwide production. As hydrocarbons are Iraq's first income source, oil and gas will be surely number one topic for Iraq-KRG relations especially with the fight against ISIS.

Already stretched relations between Iraq and KRG became more inextricable with the budget crisis. Despite KRG has 17% budget share according to Iraqi constitution, central Iraqi government is delaying or canceling the payments showing budgetary problems as reason. KRG announced that it will market its own production to compensate budget deficit. In addition, federal Iraqi government and KRG agreed on December 3 that KRG will supply 250,000 b/d oil to federal government and will facilitate the export of an additional 300,000 b/d from the fields in Kirkuk operated by the North Oil Company (NOC).

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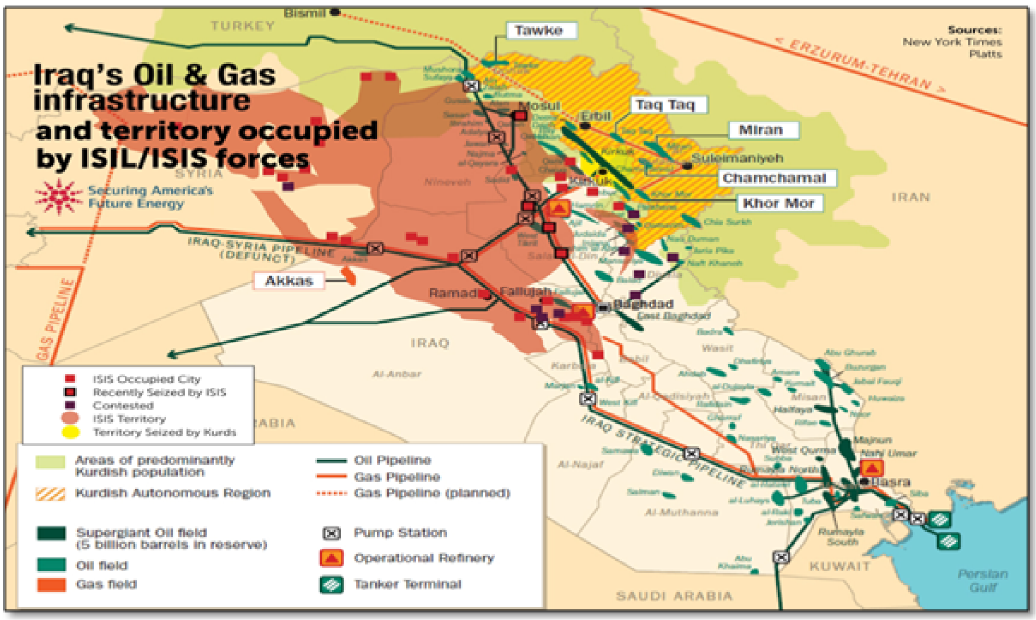
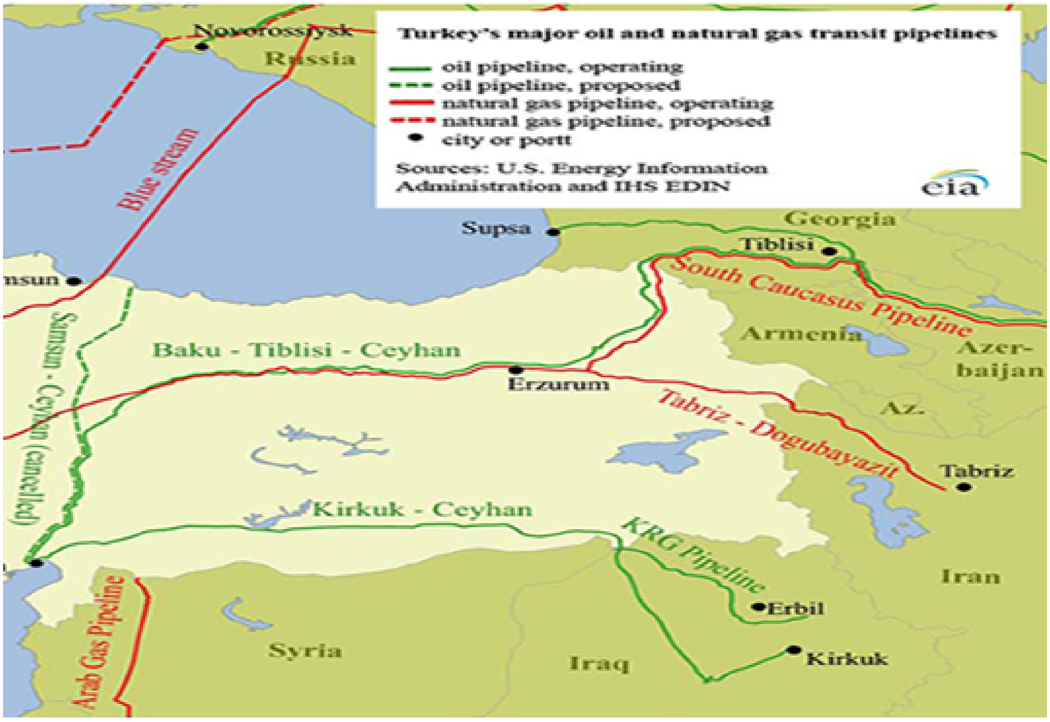


Map 1: Oil/gas fields and latest authority situation in Iraq.[1]



Map 2: KRG & Kirkuk-Ceyhan pipelines.[2]

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Federal government will share the 17% of the total crude sales budget in return. However, this agreement has not activated yet.

KRG started selling her produced oil directly to international markets in 2013 and almost stopped crude oil sales to SOMO (State Organization for Marketing of Oil/Iraqi NOC). According to KRG Ministry of Natural Resources' production reports, oil amount

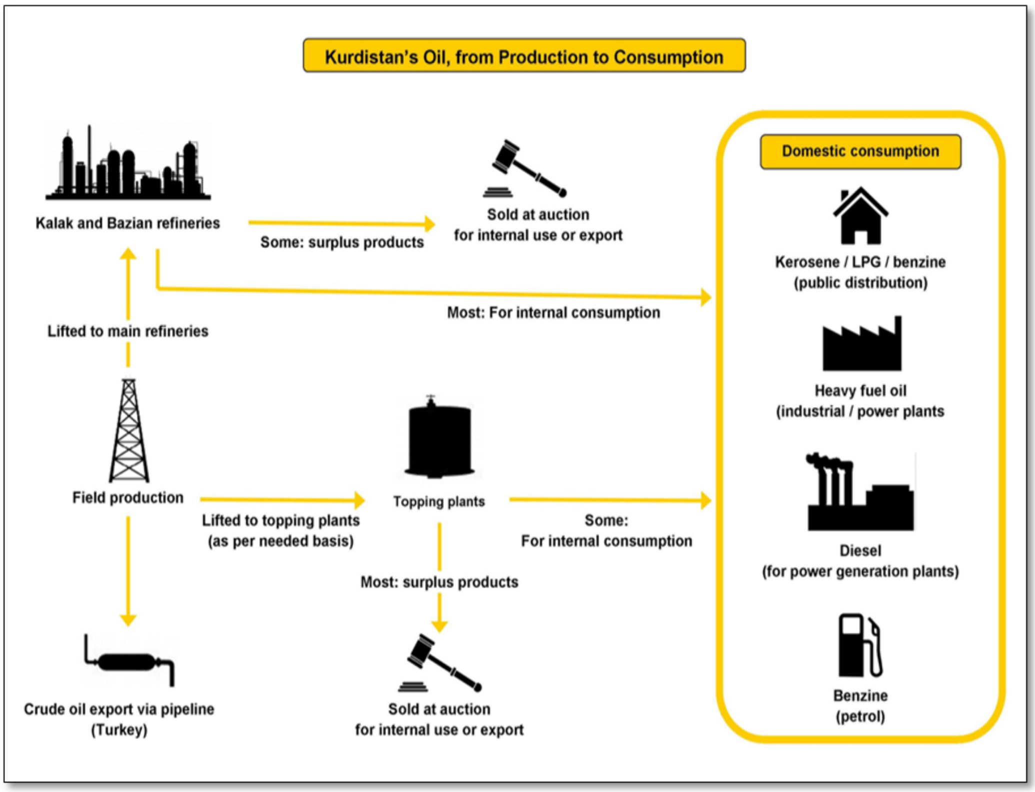

Figure 1: Oil production and marketing process in Kurdish Region.[3]

exported via SOMO decreased from 24.5 million barrels/year (2012) to 8.5 thousand (2013). The massive difference was directed to local refineries, KRG pipeline ending in Ceyhan/Turkey and trucks mainly heading to Turkey.

Iraqi central government sued KRG in USA and some other countries to cease crude oil trade without their control. Despite it had been ceased for a while, hence the KRG Ministry of Natural Resources taken their ships away from Texas and relinquished waiting for sale, the existing lawsuit in the due court in Texas naturally lapsed. However, KRG announced that there remains no legal obstacle to market and sell its own produced oil as the court in Texas dismissed the lawsuit of the central government. This misleading propaganda eased KRG's oil marketing process and paying its debts to IOCs acting in Kurdish Region.

According to some international news agencies, main customers for Kurdish oil are Israel and China. During April – September 2015, KRG exported around 500-600 thousand barrels of oil daily via KRG pipeline and Kirkuk-Ceyhan (Turkey section) pipeline system ending in Ceyhan/Turkey, as shown in Map 2. Pipeline performance, which is sometime halted by sabotages and hot-tap attempts, are the main causes that affect the export amount.

It will be beneficial to explain how oil industry is working in Kurdish Region before stepping into Turkey's energy politics in the area. KRG is using Production Sharing Contract (PSC) system to make agreements with International Oil Companies (IOC). Under PSC arrangements, the exploration and production (E&P) companies bear the financial risk until such time a discovery is made. If there is no discovery made, the E&P companies recover no cost. However, if a discovery is made and the field begins to produce, the company is permitted to use the money from produced oil to recover capital and operational expenditures, known as "Cost Oil". The remaining money is known as "Profit Oil", and is split between the government and the company, typically at a rate of about 85% for the government, 15% for the company. The government's share gets closer to 90% according to the due agreements in the Kurdish Region. This mechanism is summarized in the Figure 2.

According to KRG Ministry of Natural Resources, 50 billion barrels of (proved) oil (almost 1/3 of total Iraqi reserves) is available in their region. KRG is planning to boost daily production to 1 million barrel in the first step and to 2 million in 2019 with the help of 45 companies from 30 countries. Some of

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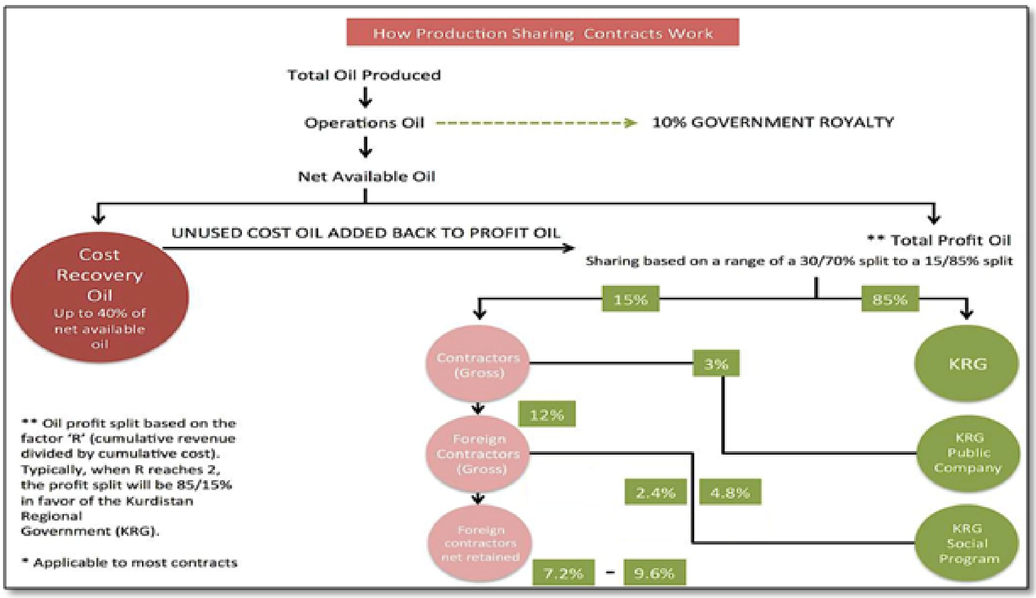

Figure 2: How PSCs work in Kurdish Region (85/15 percentage example).[3]

Oil Field	Discovery Time	Production (b/d)	Reserves (mmbbl)	Operator	Summary Info
Taq Taq	1961	150,000	541	TTOPCO	Production is planned to reach 200,000 b/d (26-46°API). Completed development program in field. Production is directed to Khurmala and then KRG pipeline.
Tawke	2006	160,000	680	DNO	Production is planned to reach 200,000 b/d (24-27°API). Production is directed to KRG pipeline.
Shaikan	2009	43,700	300	Gulf Keystone	Current production is carried with trucks to Habur (17-36°API). Production is planned to reach 250,000 b/d. Planned pipeline to connect field to KRG pipeline.
Demir Dagh	1960	11,000	200	ORYX	Production is planned to reach 40,000 b/d (23-40°API). Current production is transferred with trucks to Habur.
Kirkuk	1927	300,000	8,700	KAR & North Oil Co.	One of the supergiant oil fields in the world.
Khabbaz	1976	29,000	2,000	North Oil Co.	Reserve: 2,000 mmbo & 3 tcf. Production is directed to KRG pipeline. Field very close to Kirkuk city and has very high potential. Field is out of KRG's license system
Jambur	1929	36,000	3,000	North Oil Co.	Production is directed to KRG pipeline. Field very close to Kirkuk city and has very high potential. Field is out of KRG's license system
Khurmala	1950	150,000	N/A	KEPCO	Production is planned to reach 190,000 b/d (34°API). Production is directed to KRG pipeline. Field is 30 km away from Erbil city. Next to field there exists one of the main metering stations of KRG pipeline system (next one on Turkey-Kurdistan border). Gas pipeline is planned to connect field to 1,500 MW Erbil gas power station. Another 1,200 MW gas power station (Khurmala) is planned.
Sargala	2011	6,500	300	Western Zagros	Current production is transferred with trucks to Habur (32-43°API).
Ain Zalah	1936	2,000	100	North Oil Co.	Oil production is directed to Iraq-Turkey pipeline.
Chia Surkh	1903	N/A	250	Genel Energy	Current production is transferred with trucks to Khurmala.

Table 1: Current Kurdish Region oil production and due fields.

Gas Field	Discovery Time	Production (mmcf/d)	Reserves (bcf)	Operator	Summary Info
Khurmala	1950	100	N/A	KEPCO	One of the biggest oil/gas fields in Iraq. Gas production is planned to be directed to Erbil gas power station.
Jambur	1929	120	9,000	North Oil Co.	Gas production is directed to Taza gas power station (belongs to CIG).
Kirkuk	1927	N/A	2,700	KAR & North Oil Co.	One of the supergiant oil fields in the world.
Khor Mor	1928	340	N/A	Pearl Petroleum	Gas production is directed to Chemchemal gas power station.

Table 2: Current Kurdish Region gas production and due fields.

Type (Oil/ Gas)	Discovery Time	Est. Oil Reserves (mmbbl)	Est. Gas Reserves (bcf)	Operator	Summary Info
Peshkabir	2012	32	N/A	DNO	Not producing now.
Summail	2011	N/A	300	DNO	Minor gas production exists.
Simrit	2011	157	N/A	Hunt Oil	Not producing now.
Barda Rash	2009	247	N/A	Afren	Not producing now.
Benenan	2007	70	N/A	DNO	Not producing now.
Topkhana	2011	N/A	1,700	Repsol	Not producing now.
Pulkhana	1956	113	N/A	Turkish Energy Co.	Not producing now.
Shakal	2009	45	N/A	Gazprom Neft	Not producing now.
Kurdamir	2010	600	2,250	Repsol	Not producing now. Oil pipeline is planned to Chemchemal refinery and gas pipeline is planned to Bazian power plant.
Miran	2009	30	4,300	Genel Energy	Not producing now. One of the main gas resources for Turkey-KRG gas agreement.
Bina Bawi	2006	17	7,100	Genel Energy	Not producing now. One of the main gas resources for Turkey-KRG gas agreement.
Bijeel	2010	41	N/A	Kalegran	Not producing now.
Chiya Khere	2011	300	N/A	TAQA	Production is planned to start by mid-2016.
Sheikh Adi	2012	152	N/A	Gulf Keystone	Not producing now.
Ber Bahr	2013	23	N/A	Genel Energy	Not producing now.

Table 3: Current Kurdish Region discoveries.

the companies are mentioned as ExxonMobil (USA), Chevron (USA), Gazprom (Russia), Repsol (Spain), Total (France), Gulf Keystone (USA, UAE, and Kuwait), OMV (Austria), Marathon Oil (USA) Turkish Energy Company (Turkey) and Genel Energy (Turkey).

KURDISH REGION UPSTREAM MARKET OVERVIEW

In this chapter, before giving the current situation of Turkish – Kurdish Region relations and analyzing the future expectations, Kurdish Region upstream market is overviewed in the cases of existing oil & gas production fields, newly discovered fields and due infrastructures related to the market.

OIL PRODUCING FIELDS

From the basis of oil producing fields, current oil production in Kurdish Region and summary information about the due fields are given in Table 1.

GAS PRODUCING FIELDS

Current gas producing fields and summary information regarding the due fields are given in Table 2.

DISCOVERIES

Summary of the discoveries in Kurdish Region is presented on Table 3.

INFRASTRUCTURES

PIPELINES

Pipeline related information is listed in Table 4.

REFINERIES

Current and planned refinery capacities are given in Table 5.

POWER PLANTS

Outlook of power plants is displayed in Table 6.

E&P COMPANIES IN THE UPSTREAM MARKET OF KURDISH REGION

Giving the summary of the current ongoing activities of the E&P companies in the upstream market will be beneficial to understand the situation of the whole market. Below is the explanation of main ongoing upstream activities in Kurdistan:

- Gulf Keystone Petroleum Co. is willing to sell its 20% share in Akri-Bijeel Block. The potential of the block was tested by Bijeel-1 well with a combined flow test of two production intervals bringing ~3.700 b/d of 13°API.
- Tigris i Sverige Co. is looking for farm-in partners for their project in Salahaddin Province. The project is in exploration phase which includes 70 km 2D seismic

Name	From	To	Type (Oil/ Gas)	Situation (Active, Planned, Underconstr.)	Diameter	Capacity
ITP	Kirkuk/ Iraq	Ceyhan/ Turkey	Oil	Active in Turkey side, idle in Iraq	40” 46”	500,000 b/d 1,000,000 b/d
	Taq-Taq	Khurmala	Oil	Active	20”	200,000 b/d
KRG	Khurmala	Habur	Oil	Active	36”	720,000 b/d
	Kor-Mor	Chemchemal	Gas	Active	24”	350 mmscf/d
	Tawke	Habur	Oil	Active		100,000 b/d
	Khurmala	Habur	Gas	Planned	Indefinite	Indefinite
	Summail	Duhok Power Plant	Gas	Active		
	Khurmala	Erbil Power Plant	Gas	Planned	Indefinite	Indefinite

Table 4: Current Kurdish Region pipelines.

Name	Const. Time	Capacity
Erbil Refinery	1st Phase: 2009 2nd Phase: 2011 3rd Phase: 2014	185,000 b/d
Bazian Refinery	1st Phase: 2010 2nd Phase: 2012 3rd Phase: 2017	34,000 b/d (50,000 b/d to be added in 2017)
Tawke Refinery	N/A	5,000 b/d

Table 5: Current Kurdish Region refineries.

and one exploration well, which should be completed before September 2018. Tigris i Sverige Co. has 60% share while Salahaddin Governorate has 40%.

- Repsol SA informed KRG that it wants to relinquish from Piramagrun and Qala Dze blocks. Company completed 915 km and 139 km 2D seismic in the mentioned fields respectively. Repsol also drilled Binari Servan-1, a dry well in Qala Dze field. Other partners are Maersk Oil and KRG with 40% and 20% share respectively.
- Western Zagros is planning to transfer the operatorship of Garmian block to Gazprom Neft. The field consists of two oil fields, Sarqala and Mil Qasim. Western Zagros and Gazprom Neft have 40% share while KRG only has 20%.
- Chevron continues its 2D seismic project in Qara Dagh block, where the operations were suspended in August 2014.
- Gazprom Neft continues its 2D seismic studies in Halabja block where it has 80% share. The total amount of completed 2D seismic lines is expected to be around 870 km by the end of 2015. Gazprom Neft's partner is KRG with 20% share.
- Genel Energy announced that it acquired 36% share of OMV in Bina Bawi field for a price of total 150 million $. By doing so Genel Energy now has 80% share in the block while KRG has 20%.
- Genel Energy has completed 160 sq km 3D seismic in Ber Bahr block where the company spudded the exploration well Ber Bahr-1 in 2011 and explore oil. An appraisal well, Ber Bahr-2 is planned to be drilled in 2016. Genel Energy's partners are Gulf Keystone (40%) and KRG (20%).
- Genel Energy is planning to drill Ber Bahr-2 well to identify water-oil contact in the field. Ber Bahr-1 well was successfully tested and flowed 2.100 b/d 15°API oil and commerciality of field was proven. Gulf Keystone (40%) and KRG (20%) are accompanying Genel Energy in the field.
- Genel Energy sold its 20% share in Chia Surkh block and handed over operatorship to Petoil. Petoil is planning to spud Chia Surkh-12 appraisal well by Q1 2016. Genel Energy will keep 40% share in block with Petoil at 40% and the KRG at 20%.
- Hunt Oil is planning to spud appraisal well Jebel Simrit-5 in Q1 2016. The well is in Ain Sifni block. Afren PLC and KRG have both 20% share in the block.
- ExxonMobil has plugged and abandoned its well Maseif-1 in the Pirmam block. The well was spudded in August 2013 and continued until August 2014, when it was suspended. Well testing operations started in early 2015 and seemed to end negatively. ExxonMobil also temporarily suspended Al Qush-1 well in Al Qush block which was spudded in February 2014. ExxonMobil's partners are Turkish Energy Company (20%) and KRG (20%) in both blocks.
- Gazprom completed drilling two exploration wells, Shakal-2 and Shakal-3, in Shakal block, where the company holds 80% share. No test results released about

Name	Const. Time	Capacity
Erbil Gas Power Station	1st & 2nd Phase: 2008 3rd Phase: 2012	1,500 MW
Khurmala Gas Power Station	1st Phase: 2013 2nd Phase: 2015	1,000 MW
Suleimaniah Gas Power Station	1st Phase: 2010 2nd Phase: 2012 3rd Phase: 2014	1,500 MW
Duhok Gas Power Station	1st Phase: 2010 2nd Phase: 2013 3rd Phase: 2016	1,000 (500 MW to be added in 2016)

Table 6: Current Kurdish Region power plants.

the mentioned wells. The other shareholder in block is KRG with 20% share.

- Korea National Oil Corp. successfully completed and tested its well Massoyi-1 in Sangaw South block, where they have 32% share. Company is planning to spud a new well Massoyi-2.
- Marathon Oil has completed its drilling activity in Mirawa-2 well and temporarily suspended the well to produce in the future. Company also tested Mirawa-1 well in 2013 and the result was positive with 11,000 b/d production. Marathon has 45% of block while Total has 35% and KRG has 20% share.
- Oil Search Ltd. has abandoned its two appraisal wells Taza-2 and Taza-3 because of excessive water flow during well test. Company suspended Taza-1ST2 well as a possible oil producer in 2013. Il Search has 60% share with partners Total (20%) and KRG (20%).
- Hunt Oil temporarily suspended well Maqlub-1 for well testing. Logging, cuttings and gas data has shown hydrocarbon presence. Afren PLC and KRG have both 20% share in the block.
- Kalegran Ltd., which is subsidiary of MOL, finished testing of appraisal well Bijeel-4 and Bijeel-6 in Akri-Bijeel block. Block wells ended with non-movable hydrocarbons in Jurassic age formations. The field was known with discovery in Bijeel-1 well with around 3,000 b/d production. Company continues drilling well Bijeel-10, another appraisal well in the field.
- Western Zagras has suspended well testing operation in Hasira-1 well existing in Garmian block. The flow test was ended due to influx of reservoir formation debris. The preliminary test results were showing 40°API without H2S.
- DNO is planning to drill an appraisal well Peshkabir-2 in Tawke block. Peshkabir-1 well was proven to have oil in 2012. DNO, Genel Energy and KRG have 55%, 25% and 20% share respectively.
- OP Hawler Kurdistan Ltd. is planning to drill appraisal well Zey Gawra-2 in Hawler block. Company announced a successful oil discovery in Zey Gawra-1 well. The well was flowed at full open choke and recovered around 4.800 b/d oil. OP Hawler has 65% share in Hawler block while KRG has 20% and Korea NOC has 15%.
- Abu Dhabi National Energy Co (TAQA) announced test results from Chiya Kere-8 well at Atrush block. Test results show 4.200 b/d 24°API oil and 4.200 b/d 26°API oil from two different formations. TAQA has 39,9% share while KRG, General Exploration Partners and Marathon Oil have 25%, 20,1% and 15% respectively.
- DNO doubles its production capacity in Tawke field by building a 44 km long 24” pipeline ending in Fishkhabour export facility. Field produced ~160,000 b/d oil in 2015, while it was ~90,000 b/d

in 2014.

- Gulf Keystone announced that oil production capacity in Shaikan field has increased up to 40,000 b/d and total commercial production has exceeded 15 mmbo. Company plans to increase field's production capacity to 150,000 b/d by 2016 and 250,000 b/d by 2018. Gulf Keystone is also planning to commence sour gas injection project in the field.
- TTOPCO completed development-drilling program at Taq Taq field. Taq Taq 14-28 (total 15 wells) were drilled and completed between 2011 and 2015. The oil production increased up to 150,000 b/d. The structure was proven to bear oil in 1978 by INOC. The field was awarded to Genel Energy in 2002 and Addax Petroleum farmed in to PSC and formed TTOPCO.

TURKEY'S POSITION IN KURDISH REGION

Initially, it has to be mentioned that, Turkey does not have a stable political position, from the window of CIG, for Kurdish Region in the last decade. Iraq's political unity is an important strategic item for Turkish foreign politics. That is why; Turkey holds her position to encourage CIG's Iraq unity policies. As a result of this position, Turkey states that she will not let KRG to be split from the central government. However, on the other side, with her permission of the KRG's oil export route through her boundaries, without the permission of CIG, Turkey make KRG to gain commercial independency and give her an opportunity to conciliate CIG.

By the help of such permission, Turkey took advantage of KRG to pacify terrorist sources in Kurdish Region and continued the Kurdish evolution processes in Turkey. In addition, Turkey also increased her commercial interactions with Kurdish Region, a kind of gain – gain situation.

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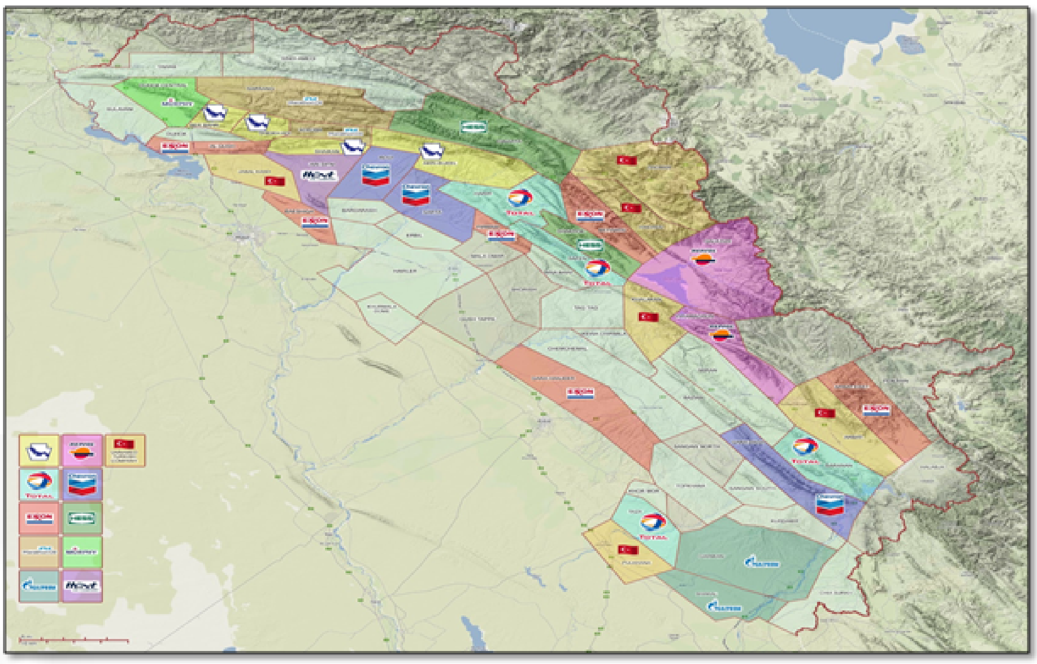
From the sight of oil markets, Turkish National Oil Company (TPAO) has four assets in the CIG's territories, Turkish Energy Ministry (TEM) tried to follow a gingerly route in her steps in Kurdish Region (blacklisting policy for the E&P companies working in Kurdish Region is continuing to be applied by the central government). However, discourses of the authoritative of TEM were contradictory by comparing the governmental statements. TEM assured the central government all the time and mentioned she would not let KRG to follow independent strategies without central government approval but the actions tak-



Map 3: Major oil companies and licenses in Kurdish Region (Turkish flag refers to TEC).[4]

en and the results were different. As a result of these conflicts, TPAO was dropped out after winning the tender of block 9, where Kuwait Energy was awarded to explore the oil and is going to start oil production soon. In addition, Turkish Energy Company (TEC)'s attempts in the Kurdish Region resulted with unsuccessful gains without any privileges as just exploration blocks open to any company.

In the other way, two Turkish nongovernmental companies Genel Energy and Petoil have also existed in the region since early 2000's. Then, state owned TEC also bought some licenses in 2012 and 2013. TEC has thirteen, Genel Energy has seven, and Petoil has one PSC partnerships in Kurdish Region.

Genel Energy was the first company to invest in Kurdish Region. They started working in Kurdish Region by signing PSC for Taq Taq field in 2002. Petoil followed them by entering the region in 2003. Both used the flexibility of being private companies for signing contracts with KRG while TEM is still being confused about governmental investing in upstream market Kurdish Region. In 2013, Turkish Energy Company signed seven PSCs to consolidate good relations between Turkey and KRG. Following that, Turkish Energy Company farmed in to six ExxonMobil (exploration) licenses, increasing its share and partnership in Kurdish Region's energy industry. Turkish flag in Map 3 shows the current EPSA (exploration & production) licenses of TEC in Kurdish Region.

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Beyond these oil/gas licenses, Turkey has a very important role in Kurdish Region. The newly build pipeline (in 2013) from Kurdistan to Turkey, also involving in the disputes on intra-Iraq politics, is the main role player in oil exports to international markets and buyers. This pipeline, with a capacity of 720 mb/d & 36" diameter, which is planned to be expanded up to 1 million b/d capacity, is carrying over 600 thousand barrels of oil daily to Ceyhan and fueling Kurdish Region's economy continuously. As legal obstructions around the world are dismissed, it is now easier and more suitable for KRG to build an independent economy based on hydrocarbons. Turkey will be surely one of KRG's prior customers for oil and possible future gas exports.

Another major milestone in Turkey-Kurdish Region relationship is "Turkey-KRG Gas Sales Agreement", which was signed in November 2013. According to this agreement; KRG wishes to provide Turkey with an initial 4 bcma of gas in 2018 and this volume is estimated to extend up to 10 bcma by 2020. However, in order to make coherent analysis, Kurdish Region consumption, gas production profile, and central government's role on doability of such an export policy are the key determining factors. By the way, currently while Iraq is importing an average 8 bcma gas from Iran -with such a high price of 400 USD/1000 m^3- and this volume is agreed to be increased up to 11.5 bcma, it will not be politically and commercially possible to supply such gas volumes from Kurdish Region to Turkey, by a cheap price. Secondly, gas export to Turkey can only be possible if only Genel Energy's planned gas production (from Miran, Dohuk and Bina Bawi fields, which are undeveloped) and due infrastructures are successfully completed. However, in the near future this option also seems to be difficult to compromise under current conditions because of increasing political instability in Kurdistan, ISIS effect, low oil prices, conflicts with CIG, and due gas fields being undeveloped. 2 – 4 bcma of gas export to Turkey may only be possible after Turkey and KRG overcomes difficult milestones. And this volume is expected to be maximum 4 bcma after 2020's, which will be able to be sold in Turkish gas market, but not to be exported to EU.

From another view, for all companies, it may be more economic and politically encouraged option to produce electricity from the produced gas, if new power plants constructed in Kurdistan, and meet the huge electricity demand in Iraq.

Moreover, Map 4 shows the gas fields and due infrastructures of Kurdish Region. As it can be observed from Map 4, in the current situation, produced gas in Kurdish Region is utilized in Erbil, Dohuk and Chemchemal power plants. Associated gas produced in Kirkuk field is transported to other power plants in the territories of CIG. One other clue that can be extracted from the map is that KRG is importing diesel to produce electricity. This situation states that KRG will upgrade the power plant as a gas utilizing power plant only and her gas demand will naturally increase. In addition to this clue, while average 1/6 of Erbil's electricity is supplied by these power plants and other portion is produced by personal diesel generators, future gas consumption of Kurdish Region is expected to be more than the existing estimations. This fact may be able to result in high gas consumption in Kurdish Region and no extra gas to supply in the future.

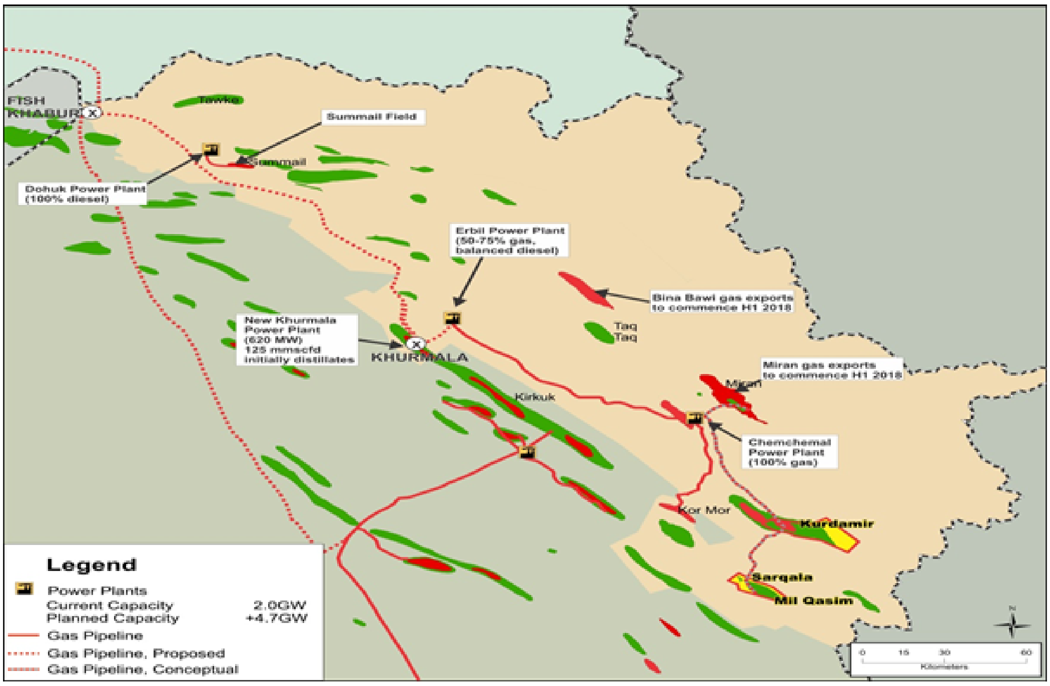
FUTURE POSSIBILITIES & ANALYSIS

As it can be understood from the information presented above, Turkey has changed the game rules by reverting her approach to the Kurdish Region. KRG frankly knows that Turkey is her only chance to be a part of the international energy market, which exactly means commercial independence of her. Global and regional political circumstances allow KRG to act independently to sell her resources and build an independent economy. Turkey stepped forward using her political and economic power and developed positive relations with KRG. This can be accepted as an advantage for the Turkish cabinet for future ventures.

Today, upstream market in Kurdish Region is suffering due to increasing political instability, ISIS effect, low oil prices, and the conflicts with the central government. Dropping oil prices halts upstream activities in the region, which ends with economic downfall for KRG. This may be the best time to make more upstream investments especially in the existing producing fields in the region (not in the unexplored areas). With such ventures, Turkey, with her own governmental structures, will become both the supplier and the demander in the game. Only with some private companies (like Genel Energy) which only have economic concerns for the investments, will not manage and rule the interchangeable games in Kurdish Region.

In addition to the upstream market, it may be a good choice to make investment in gas power plants in Kurdish Region as far as political and economic considerations are made for Turkish governmental and private companies. Hence, if gas production is expected to increase in the region and there is a lack of

"Produced gas in Kurdish Region is utilized in Erbil, Dohuk and Chemchemal power plants. Associated gas produced in Kirkuk field is transported to other power plants in the territories of CIG."



Map 4: Kurdish Region gas reserves.[5]

electricity production to meet the demand, such investments will be economic and encouraged by both KRG and CIG. In the worst case, Turkey shall also use her construction experience in the mid or downstream facilities in Kurdish Region. KRG plans to build 2 new refineries and 3 new gas power plants in the near future (within 5 years).

"Turkey shall also use her construction experience in the mid or downstream facilities in Kurdish Region as KRG plans to build 2 new refineries and 3 new gas power plants in the near future (within 5 years)."

All such new commercial ventures will increase the influence of Turkey in the region. And when these investments are in the energy market, they will be vital for the due governments.

In addition to the activities in Kurdish Region, Turkey also has to increase her commercial ventures in central Iraq. Besides, as her priority she has to maintain and support the political unity of Iraq. But a question has to be asked: "How can it be possible to be an active player in both central Iraq and Kurdish Region?". The answer seems cloudy! Turkey has to follow a strategic and diplomatic role in such relationships. By the way she also has to protect the rights of the Turkmen groups in Northern Iraq. The equation has many unknowns. But the new Turkey, who plans to be prevalent in the region, has to find the solution.

Most of these new commercial ventures in central Iraq will have to be in the oil and gas market. This means to be able to be accepted as an influential investor in Iraqi market, in addition to our relations with Kurdish Region, Turkey's performance in the current ongoing projects will be an important determiner. That is why; TPAO has to successfully complete her promises in the projects where she acts as the operator. Otherwise, relations might close the doors for future investments.

Furthermore, while giving the expectations about the pipeline politics in the region, today's one of the most popular paranoiac opinion, which is "Kurdish corridor through Syria", has to be clarified. It is thought that all the turbulence in Syria is for the Kurdish oil to be able to flow to Mediterranean through the northern Syria. This idea can be accepted as delusional since Kurdistan Region does not initially have such huge volumes of oil export potential. Then, there are not enough investors and a good environment to make rapid developments. In addition, oil has to be transported through the safest and economic route, which is the already existing KRG Pipeline through Turkey. KRG's unofficial support on the Kurdish groups in Syria has to be evaluated from the sight of regional politics. Of course, Barzani in the midterm might have dreamed about being the leader of the huge Kurdistan, including the Northern Syria, while the oil prices are high. However, he must have understood the international balances in the region are a bit different than it may seem. Therefore, a Kurdish government had better have the support of Turkish government to be able to survive among the wolves but on the other hand, Kurds should understand that Turkey would never allow a Kurdish Corridor to the Mediterranean. In addition to the greater Kurdish utopia, Kurdish Region's energy resources will not be enough to feed the utopic country. As a popular Turkish proverb: "There is only one gray donkey for the nine hungry wolves".

As a result, KRG needs Turkey and so Turkey, as the inheritor and the ex-governor of the region, has to increase her influence in the region, by mostly taking place in new ventures in the so-called energy games.

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