



Evaluating the Petroleum Contracts of Kurdistan Region in the Surveying and Applying the Deloitte Data (A Comparative Review)

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<http://dx.doi.org/10.18415/ijmmu.v8i7.2885>

Abstract

A production sharing contract has been chosen by the Kurdistan Regional Government as supposedly the most appropriate contract model for the oil and gas resources of the Kurdistan Region, among several other forms of contract. In general, in terms of royalty, cost recovery, and sharing the residual sales as negotiated, the Kurdish model is similar to its foreign model, although the proportions are most likely to differ. The model of the Region specified 10 percent for the Royalty: Up to 45 percent for cost recovery, often between 7-9 percent of the company's share of the profit in the agreement. Investigating Deloitte reports and then comparing the 2017 to 2019 data shows the unstable output with a fair boost and stability at the later date as for 2017. A large contribution from the Kirkuk oil fields to the production of the overall region is noted until 16 Oct 2017. Around one-third of the revenues of oil went to the production oil companies, although as agreed for cost recovery, it is still less than 40 percent. The payment of the companies of Oil production could be explained as a collective sum between 9% of the profit oil and 25-28% of the sales oil's gross values! The cost recovery payment could not have been funded in the contract, which explains the region's claim about the debts of the companies, in its agreed manner.

Keywords: *Oil; Petroleum Contract; Kurdistan Regional Government; Production Sharing Contracts; Deloitte*

Introduction

In general, in the process of the petroleum industry, at least four different forms of petroleum fiscal systems and contracts are recognized and are essentially negotiated between petroleum companies and Host Government (Producing countries). The concession petroleum fiscal system is the oldest type of concession in which the Oil Company has exclusive rights to carry out almost all petroleum operations, such as prospecting, exploring, developing, producing, marketing, exporting, and sailing of oil for a fixed

period of time for oil or other extracted resources from a given region (Mpuon, J. A., Eyo, E. E., & Kajang, J. L. 2020). Joint Venture is the second type of petroleum fiscal system and contracts forms. It is an arrangement between two or more parties relating to the discovery, drilling, production, and operation of assets jointly owned. Many businesses can take partners for large-scale oil projects involving high-risk investments (Vikas, V., & Bansal, R. (2019).

The service type is a part of the contractual fiscal system that began to emerge in the political economy of several major oil or natural gas producing nations in the late 1980s and early 1990s. In order to conduct a carefully delimited operation, the host governments (producing country) sign the service contract with foreign oil and gas companies. That is why, in general, the companies of oil and gas do not have any share in the production of oil and gas revenues. All costs and risks are sharing between the host government and the producing oil company, it depends on the essence, agreements, and terms of the service contract between the two parties, whether it is a pure service contract or a risk service contract (Cameron, A., & Gohar, R, 1966).

Currently, the most common petroleum arrangement between host governments or petroleum-producing country or their NOC, and oil companies (or group of companies) is the production sharing contract (Anon., 2016). The concept of PSC was known in Latin America in the early fifties of the last century, but the first PSC model was used in Indonesia in the current form in 1960, and then widely used in third world countries (Dag, H 2012). Thus, the first modern production sharing contract was signed in 1966 between the Association of Public-Safety Communications Officials (APCO) and Permian oil company which was Indonesia's national oil company (Dunnington, H. V, 1958).

The oil producer company is responsible for much of the financial situation of search and production, and the country in which oil is produced will bear some financial costs, according to this contract. Moreover, the oil company should pay taxes to the host government, sometimes a government that coordinates the company and does not receive taxes from the company (Saad, Y., & Schultz, M. H, 1986). As mentioned, the oil producer company is responsible for the initial cost and all Risks, while oil production between the two parties is shared in the contract according to the percentage they have agreed on before (Le Billon, P, 2005).

In general, income is divided between Host Government and the oil producer company at a rate of about 80 percent for the Host government and 20 percent for Oil producer Company (K.Bindemann, 2018). Therefore, when there are any changes in the international oil price or production rate, the company's share of profit or production may be affected (Machmud, T. N, 2000). This research aims to investigate the Kurdistan Region's production sharing contract model to determine how to design and work correctly or not. To achieve this, the data from the Deloitte report for 2017 and 2019 are used and compared, and then implement the rules and conditions of the above contract of those data, so first, both international and Kurdish PSC models are recognized, the data of the Deloitte Reports will be presented in detail, and finally, after a detailed discussion of the data, the related numbers will be applied on the conditions in the REGION's PSC (Ndi, G, 2018).

Implementing of Production Sharing Contract Model in Kurdistan Region

The production Sharing contract is a standard model and it is implemented in the Kurdistan Region, and it has been signed and implemented with the big companies since 2005 and has continued to this day. The Kurdistan Regional Government will be divided into two periods: the first is the initial Exploration and the second period is development. The first period of the search was divided into two subperiods; the initial Exploration period must be five years and this initial period can be extended to seven years, and it cannot be extended for more than a while (Sahroini, N., & Firman, A, 2018)

The company's abandonment of the exploration area is carried out step by step, starting with the abandonment at the end of the initial period of 25 percent of the area under exploration, and the company should then give up another 25 percent of the remaining area at the end of each renewable period. Kurdistan regional government and the company will discuss and settle on the exploration terms and commitments. The oil company should terminate all exploration drilling processes during these exploration times (low, p. 16).

The second period, which is the period of development, is normally the oil-producing company that seeks to find oil resources that should be for 20 years. The contractor has the right to extend five years, in addition to the standard royalty in the KRG's production sharing contracts, which should be 10% of the oil produced, which may be different based on the risks involved in exploration and production. Thus, the rate may rise to 10%, if there is a low rate of trade risk on oil production, the Royalty rate can be reduced to less than 10% if oil production decreases in the oil field or oil prices decline in the international market (low, 2007, p. 17). But according to the Iraqi Kurdistan Region's oil and gas law, No. 22 of 2007, after the deduction of the Royalty, the price of cost recovery will be reduced, which is basically 45% of the crude oil produced and 60% for natural gas (low, 2007, p. 17). Depending on the amount and nature of the risk involved, this rate may increase or decrease to more or less than 45% and 60%, respectively (Song, H., & Gao, X. 2018).

Research Objectives

- 1- To understand oil revenues, oil expenditures and analysing Deloitte reports
2. To compare oil revenues between the years of 2017 and 2019.
3. To reveal the impact of the Events of October 16, 2017, on the oil revenues of the Kurdistan Region.

Data Collection and Methodology

The type of data used in this study is Secondary Data. Deloitte's reports are being used, Deloitte is a well-known international company, selected by the Regional Council for Oil and Gas Affairs (RCOGA) of the Kurdistan Regional Government in Iraq to review oil production, exports, local consumption, and revenues. Reports from 2017, in which two reports are included, the first report covers from January 1 to June 30, 2017, and the second report from July 1 to December 31 (January 31, 2017). The company also covered four reports in 2019, the first between January 1 and March 31, and the second between April 1 and June 30, and the third report, between July 1 and September 30, the last report includes between October 1 st and December 31, and these four reports have been published by Deloitte Company and these reports are used as the main source of this research (Deloitte, 2018).

The study has used several data groups, including the total export and consumption of Kurdistan region's oil internally (total oil production) such as crude oil exports to the pipeline (Kurdistan Regional Government and Kurdistan oil company participation), crude oil exports by truck from a Kurdistan Region field to outside the region, Delivering crude oil to refineries inside Kurdistan belonging to the Ministry of Natural Resources, selling to refineries in Kurdistan, exchange of crude oil to Diesel, as well as a heavy fuel oil for the use in Kurdistan Regional Governments power factories, local sales. Also, based on the data about analyzing the sale of pipelines and trucks exported as net oil was raised by customers (summary after the movement of the store and removing the content of water), the value of gross revenues of crude oil sold, the average price of each barrel that is obtained for the oil sold. And finally, it uses data on financial crude oil such as the general value of crude oil sold (pipeline and truck exports), net movement in the balance of customer accounts (by excluding prepayments), that money Payments made to oil producers by or instead of the KRG, the interests and other charges of customers,

the payments made to the Ministry of Finance for oil security expenditures, will not balance the cash that the KRG has made for that period Sold.

This study shows and analyses Deloitte's data on Kurdistan Region's oil production, exports, local consumptions, sales, and financial flow for both 2017 and 2019. Then compares and analyses the 2017 and 2019 data. The 2017 reports are in two reports, each report for six months, the first half of the year, and the second half of the year has been published. But in 2019, a report was published every three months, four times, four different reports for 2019, and finally a study on a production sharing contract that is useful and suitable for the KRG.

Results

Exporting and using the Kurdistan region's oil, the region's oil products with NOC, Havana, and Bay Hassan for the whole of 2017 was nearly 200 million barrels. 110 million for the first half and 90 million for the second half of that year. 175 million of the total 200 million barrels have been exported through the pipeline and nearly 10 million barrels of crude oil have been exported in a Kurdistan Region field for the whole of 2017. In the first half of that year, 95 million barrels have been exported through the pipeline compared to 81 million to half Second, as crude oil carrier exports are relatively equal to both in 2017, and about 186 million barrels of 200 million barrels of oil under the region's control are exported by both pipelines and trucks. The remaining barrels of oil, which is around 14 million barrels, will be allocated for different purposes and facilities, including crude oil under the contracts of refineries and crude oil allocated to oil producers, sales, and local exchanges, in part barrels of crude oil handed over to the refinery. The refineries of the Ministry of Natural Resources, have been sold in part to private sector refineries and exchange crude oil to diesel and heavy fuel oil for use in KRG electricity factories and local sales.

The average of gross revenues of crude oil sold for the whole of 2017 is about 7.9 billion US dollars, about 3.9 billion dollars sold to the pipeline in the first half of the year 2017, and about 3.6 billion in the second half of that year, the average price of the oil pipeline exported per barrel in the first half was about 41 dollars, and in the second half, it was 44.5 dollars. Also, the value of the crude oil sold at the truck account throughout 2017 is about 312.8 million and around 107 million, in the first half of the year 2017 and 205 million in the second half of the same year (Deloitte, 2018). While the average price per barrel has been obtained for oil is Exports in the first half were about \$ 25.4 and \$ 39.8 for the second half in that year about \$ 1.2 billion and \$ 7.9 billion made for oil producers instead of the KRG for the entire year 2017 that paid 568 million in the first half of 2017 and paid 624 million in the second half of the same year. The total oil exports and consumption for the whole of 2019 are about 170.9 million barrels, 41 million for the first three months, 43 million for the second three months, and 42 million for the third three months, the fourth three months of oil exports and use 44 million barrels (Deloitte, 2020). About 159.5 million barrels of 170.9 million barrels were exported to pipelines and about 1.9 million barrels of crude oil sold to refineries and other local sales for the whole of 2019 in the first quarter and about 3. 8 million barrels were exported through the pipeline, however, the number of barrels exported in the second three months of that year was about 40 million barrels, as oil exports through the pipeline to the third and fourth three months are relatively equal to the second quarter around 40 million barrels. About 740,000 barrels were sold to other local refineries and sellers in the first three months, while in the second three months it was about 451,000 barrels and 368,000 barrels for the third three months compared to 374,000 to the final three months with about 8.7 million barrels for the MNR refineries (Ministry of Natural Resources) that were Refined for the whole of 2019. The average gross revenue of crude oil sold throughout 2019 is about 8.4 billion dollars; about 4.3 billion dollars, the value of oil sold in pipelines for the first six months of the year 2017, with the average price for one barrel during that period was around 54 dollars, in addition to that, 55.5 million dollars was the value of crude oil from the local sales and sales of crude oil made for refineries inside the Kurdistan Region and about \$ 4.1 billion in oil prices sold by

pipelines in the second half of the year 2019 with an average price of 50.8 dollars, despite the fact that \$ 33.2 million in domestic sales and sales were given to refineries. The KRG's oil producer money in the first half of the year 2019 is about 1.4 billion and for the second half is about 1.1 billion, one of the points of benefit, and 2019 oil exports to trucks, which have a rate of less than 1%.

Discussion

According to Deloitte reports (both reports about the first six months and the second six months of 2017), the Kurdistan Regional Government has exported about 200 million barrels of oil for the entire year 2017, here, two points should be noted, the first is that nearly half of the crude oil has participated in the NOC, Havana and Bay Hassan fields. The second has not remained under the control of the Kurdistan Regional Government since October 16. Since then, since October 16, 2017, nearly half of Kurdistan's oil production and exports have decreased, according to which the total oil exported and user of the Kurdistan region for the first six months of 2017 was about 110 million barrels (Deloitte, 2018), while for the second six months the total number of users and exports is about 90 million barrels (Deloitte, 2018) here we can note that the second half of the decline in oil production and exports is about 20 million barrels compared to the first half of 2017.

Deloitte's first report for the first six months of 2017, between January 1 and June 3, and the second report for the second six months of the same year, between July 1 and December 31, was prepared. NOC, Havana, and Bay Hassan farms have also produced nearly half of the oil produced until October 16, when they were released from the regional government, so the export and consumption of Kurdistan Region's oil lost half from October 16 to December 31. This means that the decline in oil consumption and exports from 110 million barrels in the first six months to just 90 million to six months has directly cut off the National Oil Company, Havana, and Bay Hassan in the Kurdistan Region.

110,000 (first six months total oil production) - 90,000 (second six months total oil production) = 20,000 (the shortage in the second half)

$(110,000/6)/2 = 9.16$ million (the NOC, Havana, and Bai Hassan contribution for one month)

$2.4 * 9.16 = 21.984$ (Total NOC, Havana, and Bai Hassan lost contribution)

It seems that the result of the estimated participation around half of the region's oil production by NOC and other Kirkuk fields is practically true as little as in the second half of 2017 nearly equal to cutting half of the total production for the period from October 16 to December 13. The revenue selected by the Kurdistan Regional Government in 2017 was about 7.9 billion dollars due to the sale of oil. Most of the revenue selected from oil exports has been exported through the pipeline, and the revenues of oil sold by pipelines have increased compared to the price of oil sold by trucks. The value of oil in the first half of 2017 is about 4 billion dollars, while in the second half it is about 3.8 dollars. In the second half of 2017, about 215 million dollars were low, due to Kirkuk's oil cut on October 16 for the KRG.

The amount of money given to oil producers to produce oil instead of the KRG in the first half of 2017 is about 568 million dollars, and in the same year, about \$624 million has been paid to the companies for the same purpose for the second half. Although the total oil revenue in the second half of that year is lower than in the first half of that year, (Deloitte, 2018). Deloitte's reports did not give any detailed explanation of the extra money in the second half that they had transferred more oil prices in the second half than in the first half of the same year the total amount of money the KRG has paid oil producers is about \$1.2 billion for the entire year 2017, more than the Kurdistan regional government's finance ministry for oil security and for stabilizing arbitrage and other purposes.

According to Deloitte reports, the Kurdistan Regional Government produced about 170.9 million barrels of oil in 2019, an important note here that most of the Kurdistan region's oil exports were through

the pipeline this year, and oil was exported through the Middle Sea/ port of Jayhan after it passed through the Turkish country. The region's oil has sent a small amount of oil to the world's markets through tankers. The region's total crude oil exports for the first half of 2019 are around 84.3 million barrels, but for the second half, the total use and export total was around 86.5 million barrels. The region's small increase in oil production in the second half of 2019 was the reason for the completion of two oil wells in early August, which led to an increase of 2.2 million barrels in total oil exports and use for that period.

The total value of crude oil sold with condensate, which for the first six months of 2019 was about 4.3 billion dollars, was about 4.1 billion dollars for the second six months of the same year, not much different from the revenues of crude oil summaries between the two. The above period for 2019 is related to the first six months and the second six months of 2019, as the number of barrels of oil produced is not more different in these two periods, and the average crude oil price has been very stable throughout 2019. The total amount of money for the KRG remains for 2019 is about 2.5 billion, but most of the oil revenues are paid to large companies such as TPC, KPC, and TPIC.

In 2017, the KRG's total oil production was not stable, compared to 2019, when oil production and prices were very stable. In figure number 1, the instability of oil production for 2017 has been explained, which has been related to some events, the most important of which are the participation of NOC, Havana, and Bay Hassan, and then the separation from oil production in the Kurdistan Region, as well as Another reason is that the Kurdistan oil sector was not taken into care in 2017, as the KRG was unable to pay enough for oil production companies as a result, companies could not serve the government's oil sector as needed. The Kurdistan region is worth mentioning that oil prices have not settled during 2017.

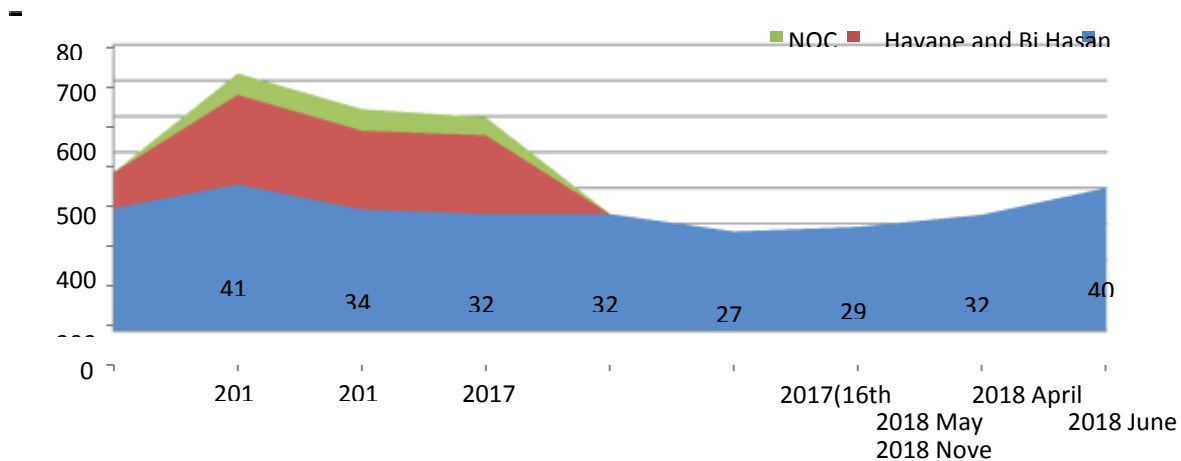


Fig. 1 Demonstrates the gradual decline in the KRI oil production (Jaafar, 2019)

Oil exports by truck increased in 2017 compared to 2019, as shown in figure number 2. The main reason was that the oil produced in Atrush and Shaykhan fields was transported to Turkey by truck because the fields were not yet connected to the Kurdistan Pipeline in 2017, but in 2019 the two were transferred to Turkey by pipeline as the field was also connected to the Kurdistan Oil Pipeline, in addition to the large number of crude oils transported by trucks in 2017 from the Khor Mor field, but it was reduced in 2019.

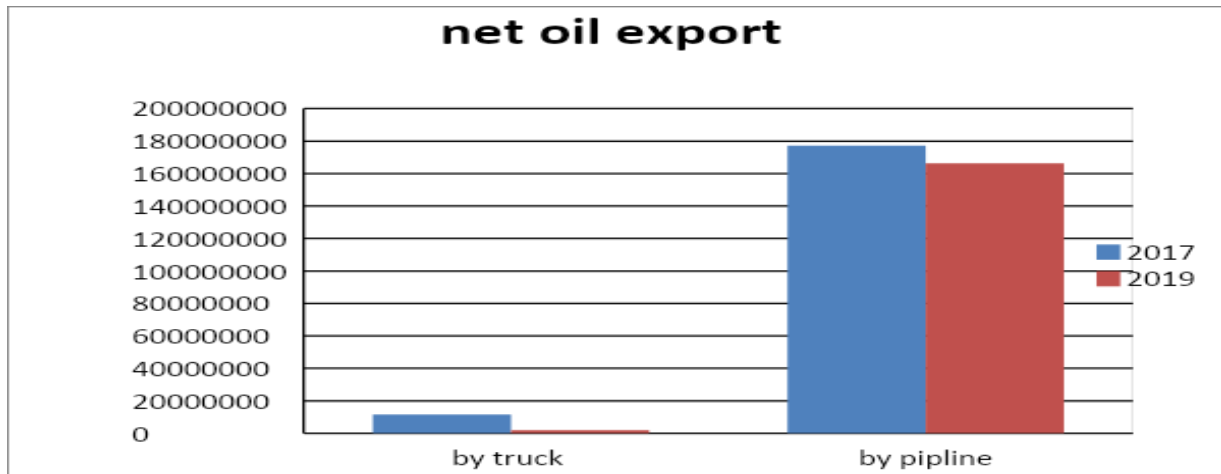


Fig. 2 Explaining differences between oil export by pipeline and truck in 2017 and 2019

In general, oil prices increased in 2019, but oil prices were very low in 2017, for some reason, political lying down, including tightening economic sanctions on Iran and limiting Iran's oil exports, and another factor in reducing Saudi oil exports by Aramco company due to damages caused by targeting Saudi oil fields. Oil production in the Areas of Taqtaq and Shewashok was also a good oil production in two good-quality fields that increase the price of Kurdish oil.

Applying the Deloitte Data on the PSC Terms

According to this figure 3, 10% of total oil produces for royalty and 45% could be for cost recovery. Sharing the total profit oil between the KRG and the oil and gas companies' procedure is in the form: 91% for KRG and 9% for companies. As shown in Figure 3.

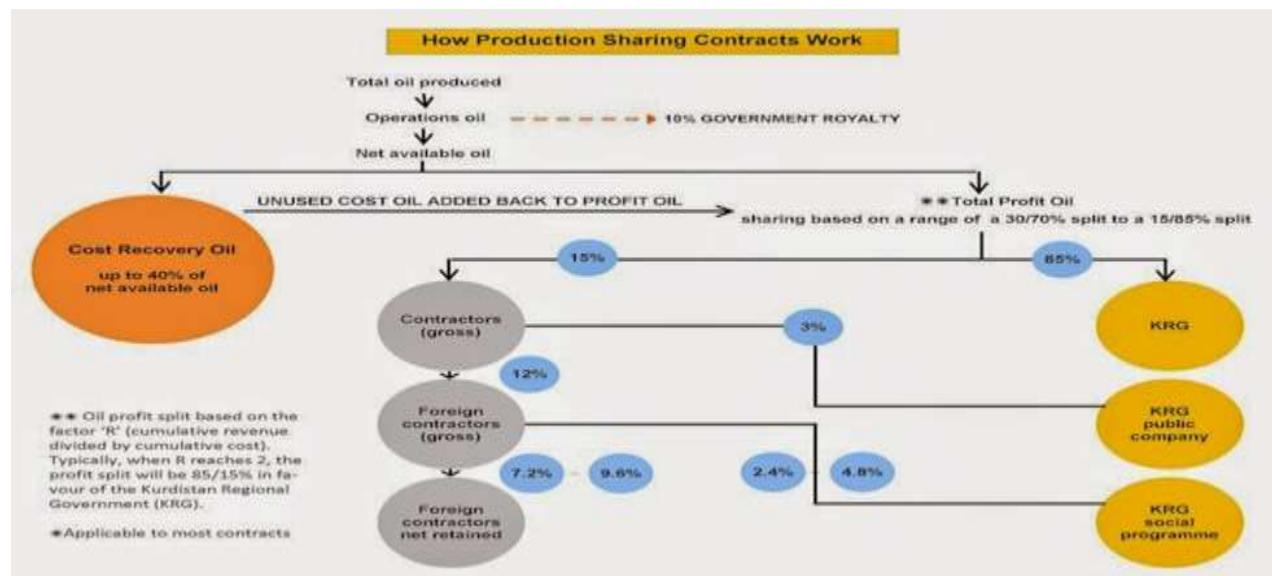


Fig. 3 How PSC work

Now we are applying 8.5 billion gross values of crude oil in 2019 on the PSC terms

Royalty (%10): $8.5 \text{ billion} * 0.10 = 850 \text{ million}$

$8.5 \text{ billion} - 850 \text{ million} = 7.650 \text{ billion}$ (net available oil after the deduction royalty)

Supposed Cost recovery (%25): $7.650 \text{ billion} * 0.25 = 1.9 \text{ billion}$

$7.650 \text{ billion} - 1.9 \text{ billion} = 5.750 \text{ billion}$ (total profit oil)

Payment to the company (Company share is %9) = $5.750 * 0.09 = 517.5 \text{ million}$

$1.9 \text{ billion} + 517.5 \text{ million} = 2.417 \text{ billion}$ (payment paid to companies for whole 2019)

$8.5 \text{ billion} - 2.417 \text{ billion} = 6.083 \text{ billion}$ (gross value for KRG).

KRG gross value for 2019 is 6.083 billion, but in reality, net profit revenue for KRG is around 4.4 billion and this difference related to that large part of the money went to payment that KRG paid to the Turkish company, pipeline, security cost, tariffs, and other parts

According to the KRG contract which is a production sharing contract 10% out of total oil is produced for royalty. After paying royalty we achieved net oil available, 40% of net available oil for cost recovery, and this rate may be increased or decreased according to risk and value, 91% of total profit oil goes to KRG and 9% goes to the company.

Conclusion

Production sharing contract in Kurdistan locale terms is isolated in this frame as 10% for Royalty, 40% for the total cost operation, 91% for the KRG benefit, 9% for the benefits of the company. In reality, fetched recuperation may be less than 40% in that inquire about the rate for fetched recuperation is 25% for 2019. In 2017 oil generation in KRG had installable way and a part of changes compared to 2019 that was steady, usually related to a few comes about which is the most vital is confining NOC, Havana and Bai Hassan field in KRG and oil sector. For this investigation, we utilize Deloitte reports which are covered tow reports in 2017, and 2019 secured forward to report. There's a parcel of information counting Deloitte report but we centered on adding up to send out and expended, net esteem and installment for oil maker. KRG fundamental trade in 2017 was a pipeline, so trading oil by pipeline comparing to the truck was higher whereas the cost for each barrel of oil was more than trading oil by truck. Net esteem for to begin with half of 2017 was more than moment half within the same year.

References

- Abraham, M. M. k., 2006. *arthapedia*. [Online] Available at: [http://www.arthapedia.in/index.php?title=Production_Sharing_Contract_\(PSC\)](http://www.arthapedia.in/index.php?title=Production_Sharing_Contract_(PSC)).
- Alkadiri, R. (2010). Oil and the Question of Federalism in Iraq. *International Affairs*, 86(6), 1315-1328.
- Anon., 2007. *Albpetrol sh.a.*. [Online] Available at: <https://www.resourcecontracts.org/contract/ocds-591adf-2543839071/download/pdf>.
- Anon., 2016. *Petrolume contract Models*. [Online] Available at: <https://irglobal.com/article/petroleum-contract-models-0f76>.
- Anon., 2020. *petroleum royalty*. [Online] Available at: <https://www.dmp.wa.gov.au/Petroleum/Royalties-1578.aspx>. [Accessed 25 March 2020].

- Bindeman, K., 1999. *oxford institute for energy studies*. [Online] Available at: <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2010/11/WPM25ProductionSharingAgreementsAnEconomicAnalysis-KBindemann-1999.pdf>.
- Cameron, A., & Gohar, R. (1966). Theoretical and experimental studies of the oil film in lubricated point contact. *Proceedings of the Royal Society of London. Series A. Mathematical and Physical Sciences*, 291(1427), 520-536.
- Deloitte, 2018. [Online] Available at: https://eiti.org/files/documents/krg_mnr_oil_production_export_consumption_and_revenue_report_h1_2017.pdf [Accessed 13 January 2018].
- Deloitte, 2018. *Deloitte*, s.l.: s.n.
- Deloitte, 2020. s.l.: s.n.
- Dunnington, H. V. (1958). Generation, migration, accumulation, and dissipation of oil in northern Iraq: Middle East.
- Le Billon, P. (2005). Corruption, reconstruction, and oil governance in Iraq. *Third World Quarterly*, 26(4-5), 685-703.
- Machmud, T. N. (2000). *The Indonesian production sharing contract: an investor's perspective*. Kluwer Law International BV.
- Mpuon, J. A., Eyo, E. E., & Kajang, J. L. (2020). Supply chain planning and business performance of Nigeria oil and gas industry. *International Journal of Development and Management Review*, 15(1), 297-314.
- Ndi, G. (2018). Act 919 of 2016 and its contribution to the governance of the upstream petroleum industry in Ghana. *Journal of Energy & Natural Resources Law*, 36(1), 5-31.
- Obiad, A. J., & Al-Sultan, A. A. (2020, February). CWWQI on the Evaluation of Effluent Wastewater from Al-Dora Refinery WWTP. In *IOP Conference Series: Materials Science and Engineering* (Vol. 737, No. 1, p. 012167). IOP Publishing.
- Saad, Y., & Schultz, M. H. (1986). GMRES: A generalized minimal residual algorithm for solving nonsymmetric linear systems. *SIAM Journal on scientific and statistical computing*, 7(3), 856-869.
- Sahroini, N., & Firman, A. (2018). Innovation in Operations and Project Development Strategy at PHE ONWJ to Sustain the Business in Implementing Gross Split Production Sharing Contract. *Jurnal Manajemen Bisnis*, 9(1), 1-24.
- Song, H., & Gao, X. (2018). Green supply chain game model and analysis under revenue-sharing contract. *Journal of Cleaner Production*, 170, 183-192.
- Vikas, V., & Bansal, R. (2019). Efficiency evaluation of Indian oil and gas sector: data envelopment analysis. *International Journal of Emerging Markets*.

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