



Lebanese Oil & Gas Initiative

المبادرة اللبنانية للنفط والغاز

The Saga Of Lebanese-Iraqi Oil Talks: An Opportunity To Understand How Lebanon's Public Energy Sector Operates

July, 2021

Commissioned by:

Lebanese Oil and Gas Initiative (LOGI)



Lebanese Oil & Gas Initiative

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Funded by:

International Republican Institute



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Executive Summary

As Lebanon struggles to purchase oil products for power generation, the current caretaker administration is turning to outdated solutions that continue to raise questions about their feasibility and efficacy, specifically when it comes to importing fuel oil from Iraq.

Since July 2020, Beirut and Baghdad have been holding talks over fuel oil supplies for Lebanon's power generation, knowing well that Lebanese power plants run on fuel of certain specifications which the Iraqi fuel oil does not meet. Despite attempts by Lebanese and Iraqi officials to explain how the deal will be executed, the topic has remained murky, causing misunderstandings and confusion amongst the various stakeholders – what type of oil-based fuels Lebanon can, and should use, and of what fuel specifications exactly?

Talks between the two countries over oil supplies took place also in 2008 amid rising international oil prices before the global economic crisis that year. But there were no results. Between 2008 and 2019, various solutions were proposed to reform Lebanon's energy sector, and reduce the oil imports bill, yet the successive governments continued to cling to stopgap solutions. The state-run Électricité du Liban (EDL—Electricity of Lebanon), meanwhile, has remained a major liability and a drag on public finances, given that the company continues to [rely on oil-based fuels](#) to generate power at a loss, and constantly requires government financial support. In 2012 alone, this support amounted to [\\$2.2 billion \(5.1 percent of GDP\)](#), according to the World Bank.

1

These include EDL registered and non EDL fuel imports.

According to figures published by the Lebanese Finance Ministry, it is estimated that between 2010 and 2020, Lebanon spent an average of \$4.5 billion annually on fuel imports¹. In the middle of the current financial crisis, blamed on mismanagement and corruption, the Central Bank was reportedly left with around [\\$15 billion in foreign reserves as of March 2021, a drop from over \\$30 billion prior to the crisis](#).

As Lebanon now is experiencing its worst financial woes, the current administration finds itself turning to Baghdad, once again, for oil supplies, despite the technical challenges. Among the key characteristics of fuel oil is the sulfur content. Based on the parameters of imported Heavy Fuel Oil (HFO) in Lebanon, shared by the General Directorate of Oil, the sulfur content needs to be 1% or less than 1%. The sulfur content in Iraqi fuel oil ranges between 3.5%-5%.

Notwithstanding the convolutions of the Lebanese-Iraqi oil talks, they serve as an opportunity to examine how Lebanon's public energy imports sector operates.

This report investigates the talks that have taken place so far between Lebanon and the Federal Government of Iraq since 2020, and examines related discussions on importing Iraqi fuel supplies with a focus on the following questions:

1. Why has Lebanon reached out to Iraq knowing that its fuel oil specifications do not meet the standards that are required in Lebanon?

2. How do such talks reveal that the relevant authorities have been undermining the importance of using fuel oil with the proper specifications?
3. If Iraqi fuel oil is unsuitable for Lebanon's power plants, why are Lebanon and Iraq still holding talks on this matter?
4. How is the current crisis being used to continue justifying the temporary solutions for the power sector?

The report also uses the Iraq-Lebanon oil talks to look at the Lebanese Government's oil imports for power generation in general, with a focus on two main products used at key public power plants run by EDL: gasoil (diesel) and fuel oil. Based on figures for 2020 shared by the General Directorate of Oil, most of the imported quantities of these two products are used for power generation, while the rest goes to the private sector², the Oil Installations, and industrialists. This report, however, focuses only on the volumes imported to be used by EDL—given that the talks with Iraq have focused on fuel oil for public power generation.

Given the temporary and sometimes controversial options the Lebanese State has embraced over the past decades to manage its fuel supplies for power generation, this report also addresses the following questions:

- a. Why has Lebanon's energy imports sector been suffering from controversies and corruption cases since at least 1994?
- b. Why does Lebanon remain highly dependent on oil products for power generation as the global power sector turns away from polluting petroleum products?

As the global power sector continues to shift to cleaner energy and move away from oil products such as fuel oil, Lebanon continues to lag behind. The current financial crisis is forcing the same authorities that failed to reform the energy sector to resort to inefficient and expensive solutions that would keep oil-based fuels—such as heavy fuel oil and gasoil—as key sources for power generation in the country.

In 2015, around [97 percent of Lebanon's power generation was from oil sources](#), according to data from the World Bank, while around 3.2 percent of global power production was from these same sources³.

Although it appears to be a daunting task to reform the energy sector in the middle of a financial crisis, there are certain measures that could be taken once the country begins to approach some level of fiscal stability. In the meantime, and if the current administration is forced to continue embracing poor options to keep the public power sector running, it must consider the following:

- a. The quality of the imported oil products with a particular attention to specifications, such as the sulfur content, for environmental and health reasons.
- b. The actual source of the imported petroleum products, and whether it is a suitable supplier.
- c. The quantity and price of the imported petroleum products.

2

The private sector is comprised of around 13 companies that also import other refined products, such as gasoline.

3

The author first came across this information in "A Question of Power: Electricity and the Wealth of Nations", by Robert Bryce, 2020.

This report relies on information obtained through various interviews with current and former Lebanese officials, as well as academics and oil industry sources. The author also perused the archives of the *Middle East Reporter* (MER) newsletter, the *Middle East Economic Survey* (MEES), official reports, in addition to other sources.

I. Lebanese-Iraqi Oil Talks: What Do They Entail, And Why Are They So Convoluted?

In July 2020, an Iraqi delegation headed by Iraqi Oil Minister, Ihsan Abdul Jabbar Ismaael, [visited Beirut](#) to discuss mutual cooperation, including the possibility of exporting fuel oil to Lebanon. Iraq, unlike Lebanon, is a key Middle Eastern oil producer—the second biggest producer in the Organization of the Petroleum Exporting Countries (OPEC). Despite the substantial difference between the two countries, both have one chronic problem in common: power outages. Both countries use oil-based fuels in their power mix; however, Lebanon unlike Iraq, does not utilize natural gas for power generation. These oil-based fuels include fuel oil—a sludgy and dark hydrocarbon that is obtained from crude oil⁴. Lebanon relies on imported fuel oil to run some of its power utilities, while Iraq has refineries with high fuel oil yield⁵. The Iraqi delegation tackled the mechanism of how to supply Lebanon with fuel oil with the relevant energy officials—while being fully aware that Iraqi fuel oil [does not match Lebanon’s needs](#). Not every oil producer or refiner exports the same grade of fuel oil, and key characteristics, such as viscosity and sulfur, vary.

Since July 2020, however, Lebanon’s talks with Iraq have undergone multiple changes and despite several attempts to explain how the deal will be carried out, the topic has remained vague, and continues to raise questions.

On June 2, 2021, the author sat down with Dany Samaha, an adviser to caretaker Energy Minister Raymond Ghajar, and discussed the talks between Beirut and Baghdad.

“It’s a contract with the government of Iraq to buy 500,000 tons (3,350,000 barrels) of heavy fuel oil annually with favorable payment conditions for the Lebanese government,” Samaha explained. This quantity amounts to around 25 percent of Lebanon’s annual requirements of fuel oil to run HFO-fired power plants only⁶.

A few days later, the Iraqi government announced that this quantity would be increased to 1 million tons of HFO. When the author inquired whether Iraqi fuel oil was suitable for Lebanese power plants, Samaha said: “This is what we are trying to figure out... We are still discussing, in a very positive way, the financing mechanism, the delivery mechanism, and the quality mechanism,” he added.

Around two weeks after the author’s interview with Samaha, caretaker Energy Minister Raymond Ghajar explained some aspects of the Iraq-Lebanon deal on a TV show broadcast on the Lebanese news channel MTV⁷. The key message was that Lebanon will not obtain Iraqi fuel oil because its specifications do not comply with the required standards of the country. Instead, once the Iraqi fuel oil is delivered at the Basrah port in southern Iraq, a company will be required to “swap” the quantity with a different product compatible with Lebanese standards, as Ghajar explained. For this reason, a “tender process” will be carried out. As for the payment, he said that the Central Bank of Iraq needs to make a request to open an escrow account at Lebanon’s Central Bank, with the payments being in “Lebanese dollars” (Lollars), which can only be spent in Lebanon.

4

Oil 101, by Morgan Downey, 2009.

5

Iraq Oil: industry evolution and short and medium-term prospects, by Ahmed Mehdi, The Oxford Institute for Energy Studies, October 2018 <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2018/10/Iraqi-Oil-industry-evolution-and-short-and-medium-term-prospects-WPM-79.pdf>.

6

Other power plants, such as the Deir Ammar and Zahrani, run on gasoil, and not heavy fuel oil.

7

Sar El Wa2et, June 17, 2021.

The author reviewed Ghajar's statements and shared it with some oil industry sources. The following details are worth highlighting:

Different oil products imply different prices. When Iraqi fuel oil is swapped, this does not imply that the same quantities of a different oil product will be received— be it gasoil or a different type of fuel oil. It is also worth noting that gasoil is typically more expensive than fuel oil. For example, according to figures shared by some Mideast Gulf oil traders, who spoke on condition of anonymity, the prices for 1% HFO (1% stands for the sulfur content) have recently ranged between \$440-\$460 per ton. Based on the characteristics of the HFO imported in Lebanon, the specified sulfur content should be 1% or less. Meanwhile, prices for 10ppm (parts per million) sulfur grade gasoil, on the other hand, have ranged between \$540-\$580 per ton this past May, according to the same sources. .

1. Based on the above, it is important to make sure that the quantity and quality of the final product is what Lebanon needs to produce the required amount of energy.
2. A Lebanese regulatory body is required to oversee the tender process. For this reason, any tender process should at least go through the Tender Board. (See section IV below).

Iraq's fuel oil is referred to as straight-run fuel oil (SRFO) because it is a product of the first and simplest separation facility in a refinery when crude oil is fed to it. If a refinery does not have units to crack the fuel into products that are of higher value, such as gasoline, the fuel oil can be sold to other complex refineries that can carry out this process⁸. Iraq's SRFO is usually destined to refiners in the Asia-Pacific. After the US sanctions were reimposed on Iran's oil industry in 2018, there were reports ([here](#) and [here](#)) that Iranian high sulfur fuel oil was being masked and reportedly exported as Iraqi fuel oil from the Persian Gulf. However, Iraq's State Organization for Marketing of Oil (SOMO) [said in November 2020](#) that it "shall reserve the right to take all legal actions against any company that may deal with bodies other than SOMO."

Based on available data from the oil market intelligence firm, *Kpler*, Lebanon did not receive any direct Iraqi fuel oil shipments over the past years. Meanwhile, and [despite some calls in 2020](#), and again this year, to import fuel supplies from Iran, US sanctions, as well as the political schism in Lebanon, have thus far rendered this option unfeasible. Additionally, Iranian high sulfur fuel oil (HSFO) would not be compatible with Lebanese standards due to its high sulfur content.

Up to 2020, the majority of Lebanon's fuel oil shipments used to originate from various [European countries and the United States](#). In 2019, and according to a [report by the Lebanese Finance Ministry](#), "the US ranked first in 2019 with a share of 9 percent of total imports of which 49 percent are minerals fuel and oil." Data from *Kpler* also shows the US as the top country from which Lebanon's fuel oil supplies originated between 2017 and 2020. Belgium was the second country, according to a source from a price reporting organization who spoke to the author on condition of anonymity.

8

Oil 101, by Morgan Downey, 2009.

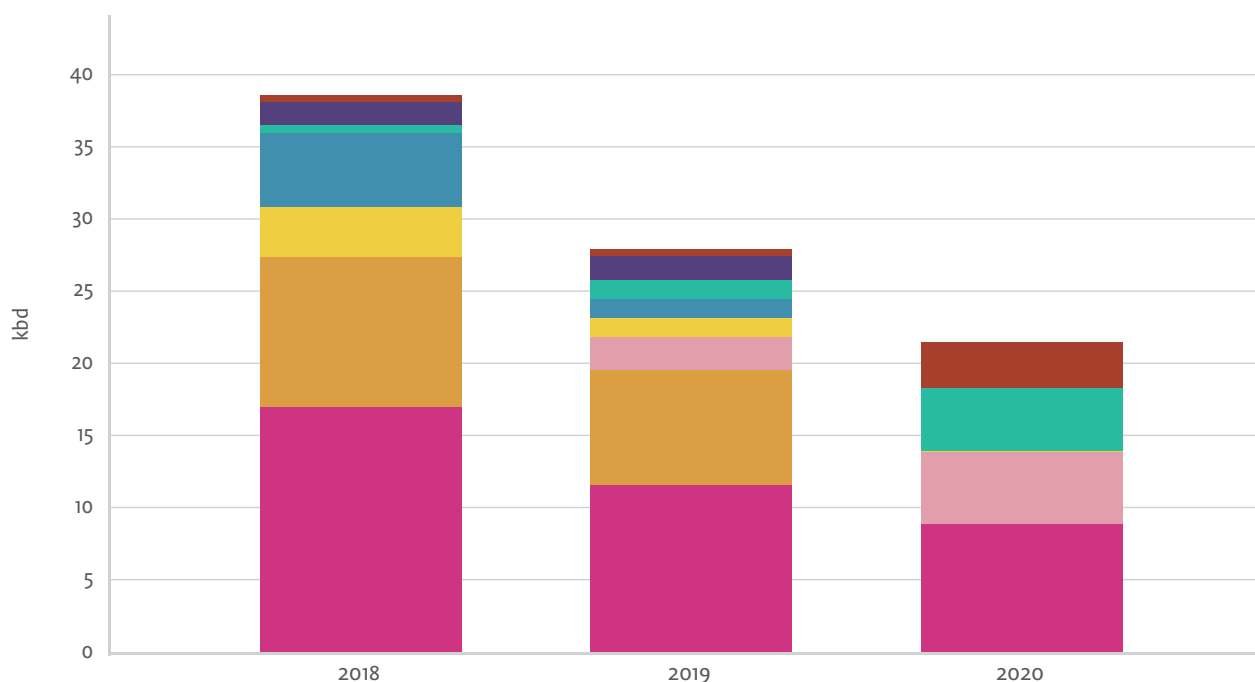


Figure 1

Key Origins
of Lebanon's
Estimated Fuel Oil
Imports, 2018-
2020 (Kpler, U.S.
Energy Information
Administration
(June 2021))

According to Kpler's data, in 2020, Lebanon imported an estimated average of 27,000 barrels per day (bpd) of fuel oil compared to around 35,000 bpd in 2019, and 41,000 bpd in 2018. So far this year, Lebanon's fuel oil imports during the first four months (January-April) averaged 24,000 bpd, a drop by 30 percent compared to the same period in 2018.

Figure 2

Lebanon's
Estimated Fuel Oil
Imports, 2018-2020
(Kpler)



Fuel oil⁹ is used at the old Jiyeh and Zouk power plants, both commissioned in 1970 and 1984 respectively, in addition to the reciprocating engines power plants (2017) also in Zouk and Jiyeh. Fuel oil is also used to run two power barges in these two areas.

9

There are two grades of fuel oil used in Lebanon, identified as Grade A and Grade B. The Grade A is used at the old Zouk and Jiyeh power plants (steam turbine), while the Grade B is used at the Jiyeh and Zouk reciprocating engines, according to the General Directorate of Oil.

Key Existing EDL Facilities	Fuel Type	Installed Capacity (MW)	Effective Capacity 2018 (MW)
Zouk 1 Thermal Power Plant	HFO	607	440
Jieh 1 Thermal Power Plant	HFO	343	180
Zouk 2 ICE Power Plant	HFO/NG	198	157
Jieh 2 ICE Power Plant	HFO/NG	78	63
Zahrani I CCPP	DO/NG	469	420
Deir Ammar I CCPP	DO/NG	464	430
Baalbeck Open Cycle GT	DO	64	57
Tyre Open Cycle GT	DO	72	56

Notes:

DO Diesel Oil
NG Natural Gas
HFO Heavy Fuel Oil

Table 1

Existing EDL Power Plants Running on Oil-based Fuels (Source: Ministry of Energy and Water, 2019)

II. Lessons Unlearned From Lebanese-Iraqi Oil Talks, 2001 And 2008

Last year was not the first time Lebanon has engaged in talks with Baghdad over oil supplies. Baghdad and Beirut have a history of energy cooperation which came to an end due to wars in both countries over the past decades.

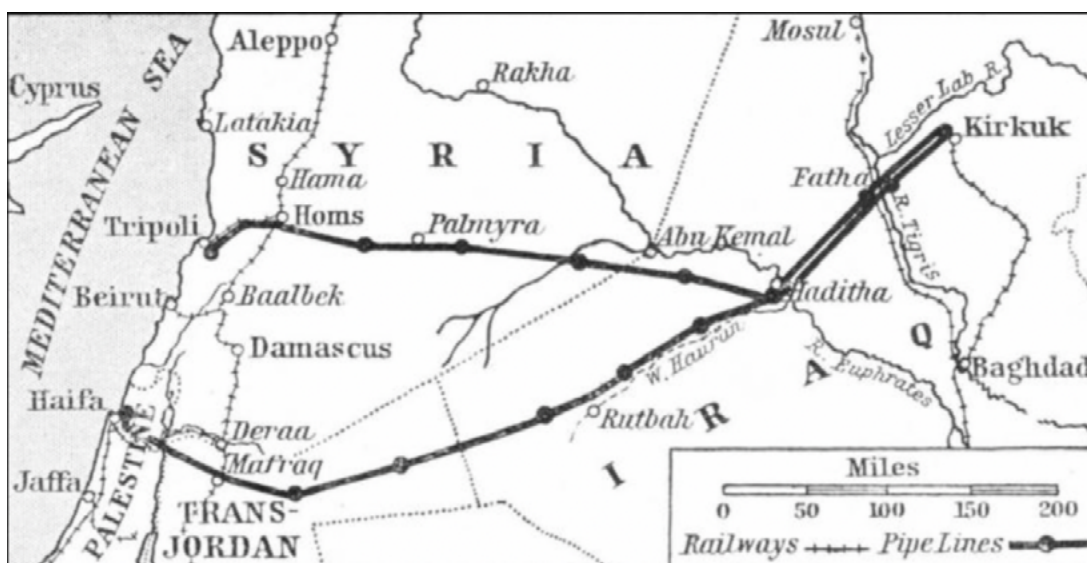
Lebanon used to receive crude oil from the Iraqi oil fields of Kirkuk via a pipeline that was constructed by the Iraq Petroleum Company (IPC) in the 1930s. The crude oil flowed through Syria to a refinery and terminal in Tripoli in northern Lebanon. However, the last time crude was exported through this pipeline was [in the early 1980s](#). Based on available information, the Tripoli refinery stopped operating in the 1990s, and supplies from Iraq never resumed to northern Lebanon.

Map 1

Kirkuk- Tripoli
Crude Oil Pipeline
(nonoperational).
This line was part
of the Kirkuk-Haifa
twin pipeline
(nonoperational)
which split at a
pump station close
to Haditha (in Al-
Anbar) with one line
carrying crude oil
to Tripoli (source of
information: "Iraq
and the Politics of
Oil: An Insider's
Perspective", by
Gary Vogler.

Source of map: Via
Oilprice.com

<https://oilprice.com/Energy-General/The-Most-Crucial-Pipeline-Of-The-Middle-East.html>.



After severing diplomatic ties in 1994 [following the killing of an Iraqi dissident in Lebanon](#), Baghdad and Beirut had taken steps to restore ties in 2001, with economic cooperation at the center of these discussions. Talks included the topic of [Iraq supplying Lebanon with crude oil at "preferential prices"](#), although Lebanon did not have operable refineries to refine the crude and obtain its needs of petroleum products. The pipeline that used to transport Iraqi crude oil to Lebanon's northern city of Tripoli was out of service ([MEES](#), Mon, 15 June 1998 - Volume: 41 Issue: 24). During that period, the Lebanese government was feeling the burden of imported oil products on its finances: In 2000, Lebanon's oil import bill hit \$1.1 billion compared to around \$805 million in 1999 ([MEES](#), Mon, 19 Mar 2001 - Volume: 44 Issue: 12).

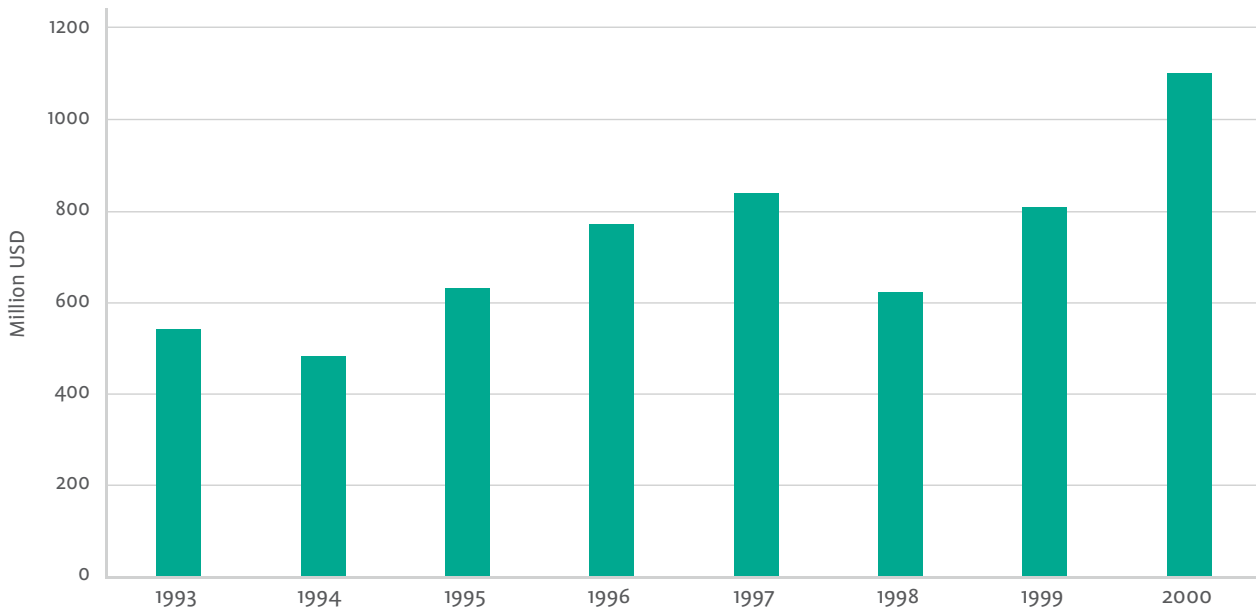


Figure 3

Lebanon's Estimated
Oil Import Bill,
1993-2000 (Official
data carried by MEES)

Based on available records, the talks in 2001 between Iraq and Lebanon for energy cooperation did not lead anywhere, and Lebanon's efforts to rehabilitate its oil infrastructure were not realized.

Then came the US invasion of Iraq.

After 2003, Lebanon held talks with countries, such as [Qatar](#) and Kuwait¹⁰ to rehabilitate at least one of its refineries or build a new one. A former director of the Tripoli Oil Installations had suggested different options to modernize and recommission the Tripoli refinery in northern Lebanon, calling it a "national necessity" ([MEES](#), Mon, 19 Mar 2001 - Volume: 44 Issue: 12). In 2006, the cost of building a new refinery was [estimated at around \\$2 billion](#), based on oil prices at the time. Plans, however, never materialized. Any such investment in Lebanon required political and fiscal stability. Instead, the refinery has remained inoperable since it broke down in 1992.

10

As-Safir
newspaper,
Thursday, October
20, 2005, Issue:
10227.

Article 1

(Former Lebanese
Prime Minister)
Fuad Siniora
discusses with
a Kuwaiti
delegation the
issue of upgrading
Lebanese
refineries, As
Safir newspaper,
October 20, 2005.



In the summer of 2008, global oil prices skyrocketed close to \$150/barrel, and Lebanon, which completely relies on refined products, was again feeling the burden on its budget.

“Had those prices remained like that for another 6 months, or one year, we would have suffered from the same conditions we are experiencing nowadays,” former Lebanese Energy Minister Alain Tabourian told the author on June 4, 2021. “Basically, we could no longer afford the energy bill we were faced with because of the structural set-up that we had at the time.” But then the global financial crisis happened, and oil prices nosedived to around \$40/barrel by December 2008 amid a global economic crisis.

“We had a narrow escape, as there was no way we could have sustained ourselves with oil at \$150/barrel,” Tabourian noted.

During that same period, at a time when Iraq’s crude oil production was declining, the Lebanese government approached Baghdad for the possibility of obtaining oil supplies “at preferential prices”. Lebanon was experiencing habitual power outages, and was searching for solutions to keep its power plants running while attempting to reduce its overall petroleum imports bill (*MEES, Mon, 25 Aug 2008 - Volume: 51 Issue: 34*). What happened is the following:

In August 2008, former Lebanese Prime Minister Fuad Siniora visited Baghdad where he met with his Iraqi counterpart at the time, Nouri al-Maliki. A report published by the Lebanese An Nahar newspaper on August 20, 2008 said the visit was to discuss “three subjects: bilateral ties, oil, and the issue of increasing bilateral trade ties.”

Iraq, however, was not able to supply Lebanon, or any other country, with refined products.

Article 2

(Former Lebanese Prime Minister)
Fuad Siniora visits Baghdad along with a ministerial delegation to discuss mutual cooperation, trade, and oil, An Nahar newspaper, August 20, 2008.

3 AN-NAHAR Mercredi 20 Août 2008

محليات سياسية

السنيورة ووفد وزاري إلى العراق
أبرز الملفات التعاون والتبادل والنفط

أصدر المكتب الإعلامي في رئاسة مجلس الوزراء أمس البيان الاتي: يتوجه رئيس مجلس الوزراء فؤاد السنيورة في اليومين المقبلين إلى بغداد في زيارة هي الأولى لمسؤول لبناني للعراق بعد قيام الحكم الجديد. ويحمل السنيورة معه ثلاثة ملفات هي العلاقات الثنائية بين البلدين والنفط وزيادة التبادل التجاري. ويرافقه وفد مؤلف من وزراء الخارجية فوزي صلوخ، والأعلام طارق متري، والمال محمد شطح، وشؤون التنمية الإدارية ابراهيم شمس الدين.

وفي نشاط السرايا امس استقبل السنيورة النائب صباح الاحدب وعرض معه التطورات وشؤوننا عائدة الى مدينة طرابلس. والتقى السنيورة وفدا من نقابة مستوردي المواد الغذائية برئاسة عادل ابي شاكور الذي اوضح ان النقابة عرضت لوضع القطاع. والمشاكل التي يعانيها ولا سيما اخراج المستوعبات من مرفأ بيروت.

واستقبل السنيورة النائبة الكندية من اصل لبناني ماري موراوي على رأس وفد اغترابي لبناني - كندي. كما استقبل وفدا

رئيس السنيورة مستقبلا النائبة الكندية ماري موراوي ووفدا اغترابيا في السرايا امس. (دالاتي ونمرا)

وشؤوننا وزارية، ولاسيما مسألة زيادة الاجور. وترأس السنيورة اجتماعا حضره: الامين العام للمجلس الاعلى للدفاع اللواء سعيد عيد، الامين العام للمنيعة العليا للاغاثة اللواء يحيى رعد، رئيس مجلس الانماء والاعمار نبيل الجسر والممثل المقيم للمصندوق الكويتي في لبنان محمد الصادقي على رأس وفد من الصندوق.

بعد الاجتماع تحدث الجسر فقال: “بناء على طلب من الرئيس السنيورة، تم الاجتماع اليوم مع مصدر قرارا والف فريق عمل يعقد اجتماعاته فطرابلس مع

شؤون لبنانية
دولة العلمانيين إلى انقراض!

أيا يكن حجم الجمة السلفية التي وقّع معها “حزب الله” وثيقة تفاهم أثارت ما أثارته من ضجة وصخب، فإن المضاعفات الأعمق من الحسابات السياسية للقوى التقليدية حيال هذه الظاهرة بدت غالبة تماما لا بل مهيمنة ومجموعة في مكان ما.

لقد أخضعت القوى التقليدية في فريق الغالبية والمعارضة تعاملها السياسي والإعلامي مع هذه الظاهرة لمعيار وحيد هو القياس المصلحي المباشر في توظيف مغزى هذه الوثيقة سلبا أو ايجابا في ارتدادها على “حزب الله” الخصم أو الحليف. وضمن هذا المعيار افاد هذا التطور تيار المستقبل في أثبات امرين، أولهما تورط “حزب الله” في إذكاء المناخ المذهبي عبر تحكيم سلاحه في بيروت، وثانيهما اظهار القدرة التمثيلية الساحقة لهذا التيار في الشارع السني بديل ادعاء كل الجهات السلفية المنقسمة على نفسها تظلها بغطاء “تيار المستقبل”.

وأفاد “التيار الوطني الحر” من التطور نفسه ليحاول تسليط الضوء على خطر السلاح الآتي من الشمال وتخفيف خطر السلاح الآتي من الجنوب، مع أن “التيار” يعاني في تحالفه مع “حزب الله” إشكاليات علمانيته “المعلقة”.

كما افاد “حزب الله” نفسه في انتزاع مناورة اعلامية ومعنوية، وا غير مضمونة الثبات، على ارض هشة، لإظهار قدرته على اجتذاد تحالفات غير تقليدية مع حركات اسلامية في الشارع السني رغم ما تركه تحكيمه للسلاح في بيروت والجبل.

قد لا تكون هذه الظاهرة في حجمها الواقعي من العيار الذ يستحق التمعن فيها طويلا لولا الطابع الدعائي والنفسي الذي خلفه في ابراز الجانب المقاتلي الديني الذي بات أحد المكونات المستج والمتمددة بقوة في الشارع المسلم في لبنان. فبين القوى حز اسلامية في الطائفة الشيعية وتيار سلفي متنام في لبنان؟ وا معه هو الى اين يتجه المجتمع السياسي المدني في لبنان؟ وا مسؤولية هذه القوى في حماية هذا المجتمع وعبره الدولة المدنية

Iraq was struggling to export crude oil in 2008, according to Gary Vogler, author of *Iraq and the Politics of Oil: An Insider's Perspective* (2017), and the country was importing refined products itself. “South Oil Company (the Iraqi state-owned Oil company) even reduced their crude oil flow to the Doura refinery just to try to maintain export volumes. Iraq was in no position to be exporting any oil products. They were importing a lot of light products¹¹ at the time,” Vogler said in response to a question from the author.

Based on the various reports the author reviewed from Reuters, *An-Nahar*, and *MEES*, it was unclear if Lebanon in 2008 was intending to import HFO or crude oil from Iraq. Irrespective, Baghdad was incapable of exporting any of the two to Lebanon, and more importantly, Lebanon did not have the means to refine crude oil because its old refineries, in Tripoli and Zahrani, were still inoperable. Products such as HFO, gasoline, and diesel are derived from crude oil—a liquid petroleum that has not been refined yet¹².

When Siniora visited Baghdad in 2008, Iraqi heavy fuel oil at that time was coming out of the refineries and was being “blended back into the crude oil export stream at the highest levels possible,” explained Vogler, a former senior oil consultant to U.S. forces in Iraq, who spent over six years working on Iraq’s oil sector along Iraqi officials. Like crude oil, straight-run fuel oil can be used as a feedstock for refineries. During that time, Iraq was blending it with crude oil for export.

“Any discussion by the leaders in 2008 about sending HFO to Beirut was probably just political rhetoric,” Vogler noted.

Lebanese media reported in August 2008 that Iraq was “willing to sell crude oil to Lebanon” at “preferential prices”, knowing that the infrastructure was unavailable for processing crude oil in Lebanon, and Iraq was struggling to pump its oil (*MEES Mon*, 25 Aug 2008 - Volume: 51 Issue: 34).

When the author reached out to the office of Siniora¹³ to ask if talks over Iraq supplying Lebanon with oil in 2008 were fruitful, the answer was: “During the visit, different subjects were discussed, in addition to bilateral relations. But no agreements were reached on the subject you referred to (supplying Lebanon with Iraqi oil).”

Years passed, and by 2019 Lebanon’s mineral fuel and oil imports bill had risen to around \$6 billion, according to figures published by the Finance Ministry. A year later, the country found itself in the middle of a financial crisis that has made it extremely difficult for the government to pay for oil-based fuels for power generation, namely gas oil and fuel oil. Between [2010](#) and [2019](#), the Ministry of Energy and Water, as well as international organizations, presented various solutions for Lebanon’s energy sector, and these included the reduction of fuel cost by using natural gas. None of these solutions were adopted, and energy imports have remained a burden on the state’s budget.

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Examples of light products include gasoline, jet fuel, and others.

12

Collins COBUILD
Key Words for
the Oil & Gas
Industry, 2013.

13

The author spoke to Arif al-Abid, an adviser to former Prime Minister Fuad Siniora.

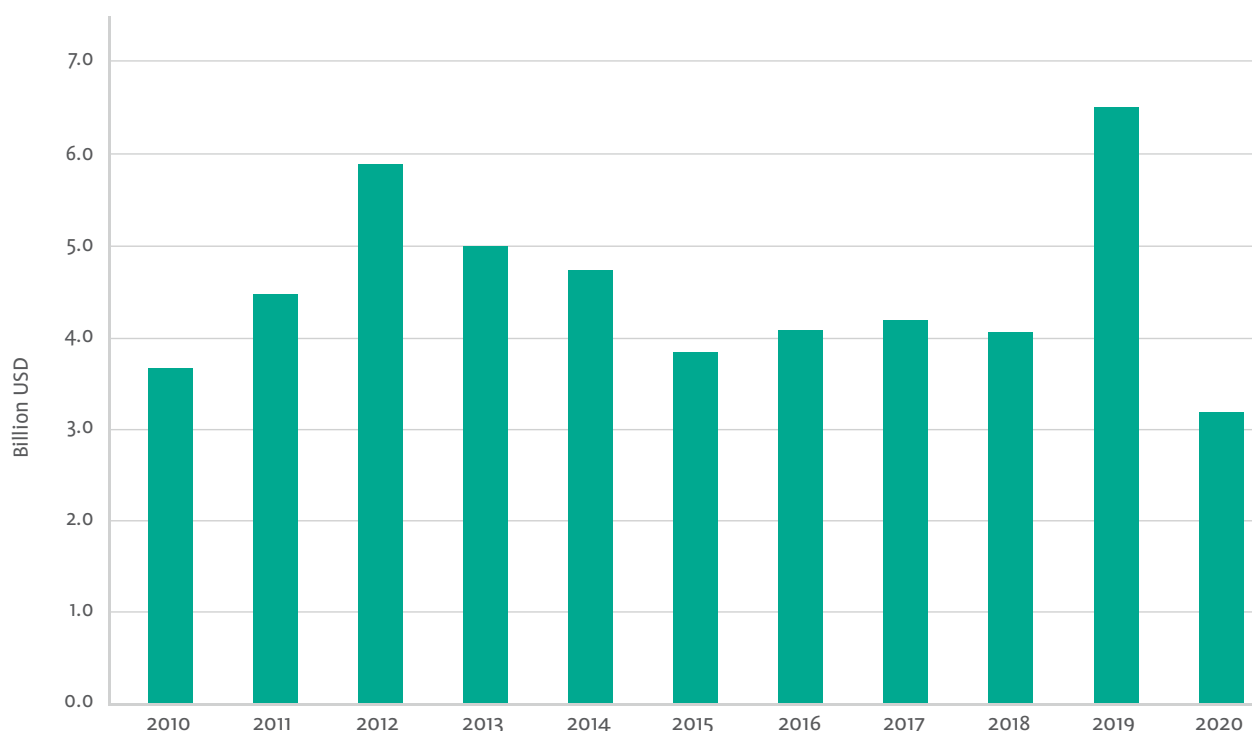


Figure 4

Lebanon's
Estimated Mineral
Fuel and Oil
Imports, 2010-2020
(Lebanese Finance
Ministry)

14

The Deir Ammar
Combined Cycle
Gas Turbine (CCGT)
power plant has an
installed capacity
of 464 MW. The
effective capacity
was 430 MW as
of 2018, according
to the Ministry of
Energy and Water.

The only time Lebanon managed to import natural gas was through Syria to feed the Deir Ammar (Beddawi) power plant¹⁴ in northern Lebanon specifically. In 2009, the Lebanese Gas Pipeline (also referred to as GASYLE) was activated and used to supply the Deir Ammar station with gas from Syria, based on an agreement between Lebanon, Syria and Egypt ([MEES](#), Mon, 26 Oct 2009 - Volume: 52 Issue: 43). This pipeline is in fact a spur of the Arab Gas Pipeline (AGP) and runs from the Syrian border to Tripoli. The AGP, in turn, originates in Egypt's al-Arish and passes through Jordan and Syria. Lebanon initially received natural gas quantities of around 26.3 million cubic meters (MMCM)/month, enough to fire one of the two gas turbines at the Deir Ammar power plant, according to an [analysis](#) published in 2016 by the United Nations Development Program (UNDP) under the title "Cost Benefit Analysis for the Use of Natural Gas and Low Carbon Fuels."



Map 2

Arab Gas Pipeline
(U.S. Energy
Information
Administration,
June 2015)

Switching from gas oil to natural gas to operate the Deir Ammar power plant resulted in “an economic return to the Lebanese economy of about \$125 million in 2010,” according to the UNDP [report](#). This solution should have taken place even before 2009. An article published on June 3, 2009 in *An-Nahar* newspaper¹⁵ noted that the gas deal with Egypt was supposed to be inked in June 2008 but due to internal political and security events on May 7, 2008, talks over this vital energy matter stalled.

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The article was
written by An-
Nahar's Sabine
Oweiss, June 3,
2008.



Article 3

Article published
by An Nahar
newspaper on
June 3, 2009 notes
that the delay in
importing gas
“cost the treasury
\$200 million” (by
Sabine Oweiss).

Importing natural gas from Egypt was a significant overdue measure. Tabourian said in 2009 that Lebanon was likely to save “around \$240million in its energy bill” when the Deir Ammar was fully converted to gas ([MEES](#), Mon, 26 Oct 2009 - Volume: 52 Issue: 43). This measure, however, was short-lived.

The agreement to import Egyptian gas did not last long. Unrest in Egypt led to a halt in the gas flow to Lebanon [towards the end of 2010](#).

III. Understanding The Process and Problem:

How Was Lebanon Importing Its Energy Requirements Prior To The 2019 Crisis?

According to the author's research and interviews with oil industry sources, countries that are heavily reliant on oil products imports typically buy these requirements through term contracts, which are sold on a fixed differential to spot prices. Other countries opt to buy these products through a government-to-government basis, which is also a common way for importers to secure their oil supplies.

For instance, Iraq buys its gasoil supplies "through term contracts, and they are valid for a year," according to a source from a price reporting organization who spoke on condition of anonymity. Iraq has its own refining challenges, and for this reason it has spent around \$2.5-\$3 billion annually on oil imports, mostly gasoline and gasoil¹⁶. Among the advantages of term contracts is that "they are generally a better way for buyers not to be exposed to price volatility," as oil prices fluctuate, according to Mideast Gulf oil traders.

In November 2005, the Lebanese Ministry of Energy and Water signed an agreement with Algerian state-run Sonatrach through which Lebanon was supposed to import from Algeria a total of 1 million tons of gas oil and 1.1 million tons of fuel oil¹⁷ for power generation over a period of three years. ([MEES, Mon, 21 Nov 2005 - Volume: 48 Issue: 47](#)). This was reported back then as part of Lebanon's plan to import products on a government-to-government basis. A similar [renewable agreement](#) was reached with Kuwait earlier that year to import around 500,000 tons/year of gas oil, also for a period of three years. That year, Lebanon was experiencing [political instability that affected its economic growth](#). The petroleum imports bill was a [burden](#) as global oil prices surged in the summer 2005, and "Lebanon appealed to Arab governments to cut oil deals directly with Lebanon," [reported The Daily Star](#) Lebanese newspaper. The successive Lebanese cabinets kept renewing the contracts until 2020 when an investigation was launched into the energy imports sector due a sub-standard fuel cargo carried by an oil tanker identified as the *Baltic*.

In March 2020, the *Baltic* arrived in Lebanon laden with a fuel oil cargo. Upon examining a sample of the fuel oil at a lab tasked with testing the quality of the petroleum products imported into the country, the results confirmed that the cargo was according to standards. However, when the Middle East Power (MEP) – the company operating the reciprocating engines at Zouk and Jiyeh— carried out its own testing, the results showed that the cargo was off-spec, according to information detailed in an indictment that was leaked last year to Lebanese media. MEP refused to use the fuel oil, prompting the relevant Lebanese authorities to call for a new testing. This time, the results showed that the cargo— which the *Baltic* was carrying— was sub-standard, with a major problem related to the percentage of sediments, which can cause damage to some power plants. This event signaled that the test results were being manipulated to ensure the fuel is discharged in Lebanon.

Based on the leaked indictment that followed the pre-trial investigations in 2020, a number of lab employees responsible for testing oil samples admitted that they had falsified the test results of some imported oil products over the past years to make

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Compounding crises: Iraq's oil and energy economy, by Ahmed Mehdi and Ali Al-Saffar, The Oxford Institute for Energy Studies, July 2020: <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2020/07/Compounding-crises-Iraqs-oil-and-energy-economy.pdf>

17

Algerian fuel oil has a low sulfur content.

them appear compatible with the specifications and standards Lebanon is supposed to be adhering to. The *Baltic* was one of many other oil tankers.

Testing petroleum products is essential to make sure the end user is not receiving off-spec or sub-standard supplies. Morgan Downey explains in his book *Oil 101* that “testing can be very important, especially in situations where fuels not meeting specifications, such as specs for jet fuel¹⁸, can have catastrophic results.”

Over the past years, a number of fuel shipments that entered Lebanon were reportedly off-spec and could not be used at the power plants in Zouk and Jiyeh, which began operating in 2017 (these are different from the old power plants in the same areas). These shipments, which included ones that caused damage to the engines at the MEP-operated power plants, were detailed in the testimony of Yahya Mawloud, Chief Operations Officer at MEP.

On June 1, 2021, the author sat down with Mawloud to understand what happened.

“Our problems with using heavy fuel oil began in 2017 when our operations kicked off. We discovered that the fuel treatment systems in the power plants were not compatible with the type of fuel oil bought by the Lebanese government,” Mawloud said.

During 2017 and 2018, oil shipments received by MEP were not considered of “ideal standards”, but the major problem, according to Mawloud, started in January 2019. In the case of one oil tanker, MEP discovered after testing samples of the fuel oil it was carrying that the cargo was not in line with the International Standards Organization (ISO)¹⁹ standards. The problem worsened in July 2019, as Mawloud explained, when the fuel oil started causing problems to the engines, forcing the company to temporarily halt operations. Among the important characteristics of fuel oil is viscosity—the higher the viscosity the slower the material flows. But according to Mawloud, this element was not always stable.

“We asked on several occasions if our chemical engineers and operators could hold a technical meeting to discuss the issue of [off-spec] fuel oil anywhere with Sonatrach,” Mawloud told the author. But his requests were not met. “When we asked for the Sonatrach contract, we were told that it was confidential. We never received the contract until it became public, and made it to the media,” he added.

When the author asked the General Director of the General Directorate of Oil, Aurore Feghali, if off-spec oil shipments entered Lebanon in the past, her answer was: “In the past years, there were few incidents involving off-spec shipments, bought by importing companies. These used to be rejected and ordered out of the country.” The General Directorate of Oil was part of the Ministry of Oil—which was cancelled as per Law 247 of 07/08/2000, article 7. Following that decision, it was incorporated into the Ministry of Energy and Water.

According to details shared by Feghali, there are “seven accredited international testing companies with representations in Lebanon”, that are tasked with taking samples of oil shipments entering Lebanon and transporting them to the relevant laboratories for testing. If the sample is compatible with Lebanese standards, the ship would discharge its oil cargo, otherwise, the company notifies the General Directorate of Oil, according to Feghali.

18

Aviation fuel.

19

The International Standards Organization (ISO) is one of many organizations that set test methods and fuel specifications (Oil 101, by Morgan Downey, 2009.).

The fuel oil quality has so far improved, according to Mawloud. “This shows that those who were buying the fuel shipments in the past knew that it was off-spec, and after the case was made public, they started paying attention to the issue of specifications,” he noted.

The investigations that took place last year following the sub-standard fuel oil cargo carried by the Baltic raised questions about the money the Lebanese government may have wasted on off-spec fuel shipments. Although it is difficult to quantify this waste, research conducted by the author shows that Lebanon could have easily revised its fuel specifications over the past decades to cut its expenditures, with a particular focus on the sulfur content which affects the price of fuel oil.

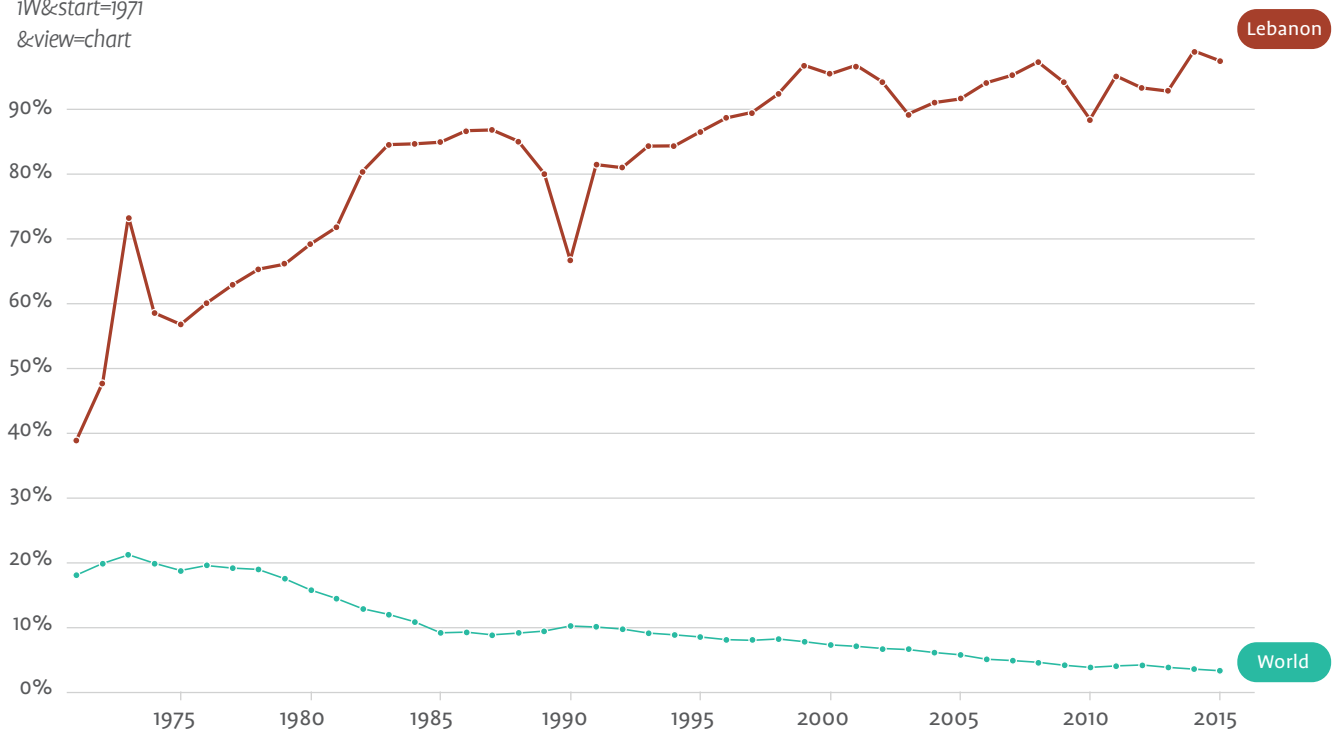
20

Oil 101, by Morgan Downey, 2009.

Figure 5

Percentage of Lebanon's Electricity Production from Oil Sources (Source: The author came across this map in “A Question of Power, Electricity and the Wealth of Nations”, by Robert Bryce. Data source: OECD/IEA 2014, via World Bank: <https://data.worldbank.org/indicator/EG.ELC.PETR.ZS?end=2015&locations=LB-1W&start=1971&view=chart>)

In a report published in January 2008 ([Electricity Sector Public Expenditure Review](#)), the World Bank pointed out that among the measures that Lebanon could have taken to reduce expenditures in the electricity sector was a revision of heavy fuel oil specifications. “A revision of the fuel specification on HFO from 1% to 3.5% sulfur content could bring annual savings of close to US\$12 million by 2008,” the [report](#) said. It added that the 1% sulfur content required on the imported HFO used for power generation seemed “inordinately restrictive,” and had “limited sources thus making it more expensive.” An environmental and health analysis study was required before a change in specifications. When burned, sulfur turns into a pollutant²⁰—the higher the sulfur content, the more sulfur dioxide (SO₂) emissions are released—especially from old [power plants that lack scrubbers](#). These toxic emissions—released in the ambient atmosphere from power plants in Zouk and Jiyeh—are harmful to human health and the environment, according to Dr. Najat Saliba, a professor of analytical chemistry at the American University of Beirut (AUB). “Fuel oil should not be burned in power plants located in residential areas,” she noted. The Zouk power plant is among the [world's hotspots for the emission of SO₂](#), according to Greenpeace.



The 1% HFO supplier markets are even more limited now due to new international regulations. For instance, BP, Shell, Petroineos and Repsol were traditionally the largest suppliers of 1% HFO in Europe, according to a source at a price reporting organization who spoke on condition of anonymity. However, following the introduction on January 1, 2020, of IMO 2020, a global regulation limiting the sulfur content of fuel oil used in ships from 3.50 % to 0.50 %, most of them switched to 0.5 % fuel oil. “BP and Shell continue to supply that grade, as they have huge refineries in Rotterdam that still produce it. But the amount produced is not that huge,” the same source explained.

Based on available data, Lebanon’s fuel oil specifications were not reviewed over the past decades, and furthermore, last year’s investigations showed that off-spec shipments ended up in the country after their results were falsified in local laboratories. The leaked indictment, which was covered by several media outlets in Lebanon, showed that those shipments were purchased as part of the government’s contract with Sonatrach.

IV. Which Regulatory Body Should Have Overseen The Contract With Sonatrach?

The Director General of the Central Tender Board, Jean Ellieh, who testified in the case of the sub-standard fuel oil shipment in 2020, said²¹ that the act of continually extending the contract since 2005 “signaled wrongdoings,” adding that the relevant authorities in 2005 were supposed to undertake the tender process through the Tender Board. Whenever the contract was due to be renewed, a new tender process was supposed to be pursued because market prices were changing throughout the past years, Ellieh explained.

21

His statements are found in the leaked indictment.

Based on a [report](#) published by the Legal Agenda (LA)— a Beirut-based nonprofit research and advocacy organization— “in principle, the Tender Board assumes a regulatory role”. [Articles 16 and 18 of the Tendering System](#) task it with auditing tenders to ensure there are [no violations](#). However, as the Legal Agenda notes, the Tender Board can present its remarks on a particular tender and share them with the relevant ministry, but the latter is not obligated to abide by them. And herein lies the problem.

Ellieh noted in an [interview with the Legal Agenda](#) that most tenders happen outside this department, allowing public administrations to avoid the monitoring process of the Tender Board. This in turn increases the possibility of corruption.

Earlier this year, Ellieh proposed the idea of a comprehensive criminal audit of public tenders in general. “The unprecedented economic, financial and living conditions that the country has reached, calls for a criminal audit, starting with public tenders to regain wasted funds,” Ellieh told the author.

On June 7, 2021, the author sat down with Ellieh to further understand the relationship between the Tender Board and the Ministry of Energy and Water when it comes to tenders. “The Ministry of Energy in its legal relationship with the Tender Board is the same as any other ministry.” Once the ministry has prepared its books of terms, it must send them to the Tender Board, Ellieh explained, and this is stipulated in the [articles of the Tendering System](#).

However, in the middle of this financial crisis, the conditions for holding a tender “have become difficult,” Ellieh noted. “This situation affects potential investors who will shy away from participating in any tender.”

V. The Ongoing Burden Of Oil Imports On State’s Finances Amid The Financial Crisis

Data from Kpler, which provides real-time data on vessels and their cargoes, shows that even in the middle of the financial crisis oil tankers have never stopped calling on Lebanon, whether destined for the public or private sector. Since 2020, however, the country has been facing delays in paying for oil shipments due to cash flow problems. Some tankers the author monitored took over a month to discharge at the Jiyeh and Zouk power plants, raising questions about the demurrage costs, in addition to the costs of the shipments themselves. [Demurrage](#) is defined as the cost paid for keeping vessels waiting at sea after failing to unload the cargo according to an agreed schedule, and these are hefty costs. According to one [tender issued by the Ministry of Energy and Water in February 2021](#) to buy Heavy Fuel Oil Grade (B), “in case of demurrage incurrence on Buyer at discharge port(s)/berth(s), it will be calculated and paid on a pro-rata basis as per maritime vessel’s charter party rate according to the world scale, to be known by the Buyer at the time of maritime vessel nomination, with a maximum rate of US Dollars 18,000 per day.”

The oil tankers that waited for over a month to discharge fuel oil needed for the power plants at Zouk and Jiyeh, included: the Seaempres (IMO 9236755) and the Donald (IMO 9353125). The Seaempres, arrived in Lebanon in late April 2021, and was seen leaving on June 14 after it had discharged its cargo. Meanwhile, the Donald had to wait to unload from May 16 until late June. The tanker was seen leaving Lebanon on June 28, according to data from MarineTraffic, a shipping website that provides real-time data on the movement of ships.

Feghali confirmed the delays in offloading oil tankers. The Central Bank is trying to ration whatever is left of the foreign reserves which have reportedly dropped from over [\\$30 billion prior to the financial crisis to some \\$15 billion by March 2021](#), making it extremely challenging to pay for any imports, including oil products.

“Any tanker, whether it is for the public or private sector, and which has to wait to unload, implies there are costs that must be paid each day, and by public, I mean Électricité du Liban (EDL),” she told the author. “...The government is paying for the demurrage costs. The private sector of course pays for its own costs,” Feghali added.

By the end of 2020, Lebanon’s way of importing its energy needs was forced to change following the pre-trial investigations into the sub-standard shipment. Since then, the Ministry of Energy and Water has been buying its oil requirements via the spot market.

A spot contract is the opposite of a term contract. The spot contract, as some Mideast Gulf oil traders explained it to the author, “is for a volume of oil on a one-off basis, for immediate delivery. In practice, depending on the crude or oil product and market in question, a spot shipment can be regarded as for delivery between 3 and 40 days forward.”

In this case, Lebanon's Ministry of Energy issues a spot tender and shares it with trading firms. This tender must include the quantities required, delivery, and of course specifications—such as viscosity, sulfur content— in addition to terms and conditions. A contract would be awarded to the firm that presents the lowest offer and meets the requirements.

“Spot trading ensures efficient response to uncertainty”, as the sources explained to the author, however, there is a price volatility that needs to be considered, as prices are always changing, in addition to having an unstable supplier base.

“In my opinion, the spot cargo option, and even if it yields positive results, is the worst solution,” Mawloud told the author. “This will affect our operations because every time we are buying from a different supplier.”

A gasoil shipment which the government purchased on the spot earlier this year had to wait for over one month to discharge due to disagreements over some of its specifications. The delay was partly responsible for the temporary shutdown of the Zahrani and Deir Ammar power plants in March. The gasoil cargo was carried by the *Histria Perla* (IMO 9301287) which arrived in Lebanon on March 4 and had to wait until around April 13 to start discharging, based on data from Kpler. In the meantime, Lebanese citizens had to endure extra hours of power outages due to the ongoing mismanagement of this sector.

VI. Mismanagement And Corruption Since 1990s: What Does It Signal?

In an article published by *An-Nahar* on August 21, 2003, and carried by the *Middle East Reporter* newsletter (*MER Weekly, August 30, 2003*), one of its columnists²² noted that “all regimes have wanted to fight corruption, but every time a reform campaign was launched, the effort was aborted because of political interference and considerations.” Observers were cautious of anti-corruption initiatives in the country, arguing that stemming corruption from the government's administrations was a daunting task because “the political cover enjoyed by politicians involved in corruption, bribery and the handing out of kickbacks, was not lifted,” according to the *Middle East Reporter* newsletter (*August 30, 2003*).

22

Nicholas Nassif.

Since the 1990s, the overused phrase “a mafia-like fuel cartel that is stronger than the government” (*MER, March 13, 1999*) has been utilized by media outlets, researchers investigating corruption, and ordinary Lebanese citizens. And there is a good reason why this term is at least three decades old.

Between 1996 and 1998, *An-Nahar* newspaper carried a series of investigations into shady oil deals that took place during the time of former Oil and Industry Minister Shahe Barsoumian. These were translated by the *Middle East Reporter* newsletter and published in its weekly newsletter on March 13, 1999 and were reviewed by the author. The investigations were also studied and analyzed by Reinoud Leenders in his book *Spoils of Truce: Corruption and State-building in Postwar Lebanon* (2012).

In one case, *An-Nahar* reported on February 20, 1998, that a quantity of crude oil from tanks in Zahrani in southern Lebanon was sold as “oil residues” to a private Lebanese company, at a rate of \$7 per ton. The price, however, was reportedly higher given that the oil residues were in fact crude oil. The oil ministry back then denied *An-Nahar*'s findings.

This is based on data published by local Arabic press which was translated by the Middle East Reporter (MER) newsletter.

According to Leenders's book, the private company loaded the quantity onto a tanker and sold it to a non-Lebanese company at \$15 per ton. In the oil market, cargoes change hands— sometimes it is easy to track the original seller, but it is not always the case. For instance, and as one oil industry source explained to the author, a seller could buy an oil cargo from the US, ship it to Gibraltar, and from there it is picked up by a different buyer who moves it to Malta. From here, the cargo is once again moved to Greece and onward to its destination, Lebanon. In between, the buyer and seller can remain anonymous. "If someone wants to stay anonymous, they can," the source said.

An Nahar published in February 1998 a faxed statement showing that the tanker ended up in Texas and discharged on November 29, 1997 crude oil and not "residues" as the oil ministry maintained (*MER*, March 13, 1999). The final buyer would have reportedly paid around \$57 per ton.

To put this into perspective, assuming that the tanker was carrying around 33,000 tons, then the ministry sold it for only \$231,000 (\$7 per ton) while the company in the US ended up paying around \$1.8 million (around \$57 per ton)²³. So that is a waste of around \$1.5 million (*MER*, March 5, 1999).

Barsoumian denied *An-Nahar*'s findings, calling the faxed document the paper published "a defamation", according to the *Middle East Reporter* newsletter (March 13, 1998).

These cases and others became part of what local media called back then the "fuel mafia scandal" (*MER*, March 10, 1999), like the fuel oil scandal in 2020 which the author analyzed some of its details in the previous sections of this report.

Barsoumian was formally charged on March 10, 1999, with abuse of office and alleged "embezzlement of some \$800 million in shady fuel oil deals" that reportedly took place between 1995 and 1998 (*MER*, March 9, 1999). Other detainees were also held in this case. According to the local media at the time, Barsoumian was the first former Lebanese minister in Lebanon's modern history to be tried on charges related to corruption— which continues to paralyze the country up until this day (*MER*, March 5, 1999).

Barsoumian, who oversaw the oil ministry from 1995 through 1998, said at the time of his interrogation that his prosecution was "politically-motivated", and denied charges leveled against him (*MER*, March 5, 1999). No other top officials were arrested, prompting some media outlets to question the seriousness of the anti-corruption drive back then, and whether investigators were ready to reveal the whole network involved in illicit oil deals (*MER*, April 10, 1999). At least one oil trader affiliated with an oil trading company was questioned in the case linked to Barsoumian, but he was not officially charged, and was later released after spending around nine months in custody, according to a report published by [The Daily Star](#) (December 1, 1999). Barsoumian was also jailed for around a year and then released on bail.

Fast forwarding to the present time, similar corruption cases were uncovered last year during the pre-trial investigations into the issue of the sub-standard fuel oil shipment in Lebanon, showing that very little has been done since the 1990s to tackle mismanagement and corruption in the vital energy imports sector.

“The first way to take advantage of corruption is not to have a regulatory body— or in the case of Lebanon, only the Tender Board,” Ghassan Moukheiber, an expert on human rights and anti-corruption, told the author on June 1, 2021.

Although this report focuses on the energy imports for the public power sector, it is important to note that the absence of strong governments throughout the past decades has also allowed private companies to flourish and monopolize the process of importing oil products such as gasoline that is essential for the transportation sector. On top of that, several politicians are involved in those private companies, signaling that their decisions with respect to oil imports could be politically motivated. “If we look today at the beneficiaries, or in other words the visible or invisible owners of such companies, we will find politicians or figures with close ties to them,” said Marc Ayoub, an energy researcher at the American University of Beirut (AUB). There are around 13 private companies today in Lebanon that import oil products such as gasoline, liquefied petroleum gas (LPG), which is also known as cooking gas, and diesel for the private market. These are not used in the power generation sector.

Considering The Financial and Political Crises, What's The Way Forward?

Lebanon's energy sector might appear now to be resistant to reforms more than ever, especially amid the current acute financial crisis. The solutions, however, for jumpstarting gradual reforms in a sector that has been a burden on the state's finances since the early 1990s, are available. They have been known for over a decade now, and previous energy administrations identified them.

Had Lebanon's successive governments seriously embraced at least some of those measures over the past decades—while leaving petty political and sectarian considerations aside, concrete steps would have been taken to restructure the EDL that continues to drain the government's coffers, and once that have taken place, solutions related to power production would have ensued. These would have included, among others:

- 1) Replacing old thermal power plants— that should have been decommissioned many years ago—with modern and cost-effective power utilities.
- 2) Modern and cost-effective power plants would have meant switching to cleaner, and most importantly, less costly fuels, namely gas, and after setting up the required infrastructure. Lebanon's plans to switch its existing power plants from utilizing gas oil and fuel oil to gas date back at least to 1990s, based on archival research ([MEES](#), Mon, 01 Nov 1999 - Volume: 42 Issue: 44). Various hurdles have prevented plans, such as liquefied natural gas (LNG) proposals, from being implemented, and these included political and security risks, delays in forming a cabinet, and a lack of clear planning from the relevant authorities ([MEES](#), 19 Jul 2013 - Volume: 56 Issue: 29).

Advanced solutions and private investments in the energy sector currently require first and foremost strong and transparent governance to gradually steer the country towards both political and fiscal stability. The fuel oil deal with Iraq is yet another proof that for sustainable solutions to finally be implemented in Lebanon's energy sector this would require a sustainable way of thinking.

If the current administration wants to move ahead with unsustainable solutions, such as the deal with Iraq, considering the financial crisis and political impasse— the following measures need to be carried out:

1. Clarify the details of any final agreement with Iraq.
2. If a company will be involved in swapping the Iraqi fuel oil, a transparent tender process needs to be held, and the name of the company should be made public.
3. The final product that reaches Lebanon for power generation needs to be in line with the specifications followed at the public power plants.
4. If Lebanon wants to revise some of its fuel specifications to cut expenditures, it is required to carry out an environmental and health assessment, given that two of its polluting HFO-fired power plants, Zouk and Jiyeh, are in residential areas.

Author's Bio

Noam Raydan is a Baghdad-based independent energy researcher and reporter, focusing on Iraq and Lebanon. She also has extensive experience covering political and security developments in Syria, Lebanon, and Iraq for renowned media outlets including the Wall Street Journal and the Financial Times.



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