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Tripoli's Electricity Crisis and its Politicisation

As springtime temperatures rise, the Libyan capital area of Tripoli heads into a new season of longer electricity outages. This year, a blockade imposed by pro-LNA factions on all crude-oil extraction in protest of the GNA-backed Turkish intervention may exacerbate the electricity crisis even further compared to previous years. Indeed, some power plants require fuel to operate at a time when domestic refineries are shuttered and imports become subject to stricter budget limitations. Moreover, reduction in economic activity due to Covid-19-related measures may prove insufficient to yield appreciable relief on the households' front. Against 2020's unusual backdrop, this policy brief dissects the main dynamics of the nine-year-long electricity crisis affecting Tripoli. In doing so, it provides an overview of how the crisis has been politicized, exploited and exacerbated by Libya's civil war and illicit economy actors.

Introduction

Since April 2019, Libya's civil war – between the internationally-recognised Government of National Accord (GNA) and the eastern-based Libyan National Army (LNA) – has worsened living conditions in the capital, Tripoli. The electricity infrastructure has been one of the collateral victims of Libya's conflict while, in general, public assets and their maintenance have been neglected for years. This policy brief looks at the electricity crisis affecting the greater Tripoli area, where the mismanagement, exploitation and politicisation of Libya's third-largest industrial sector has had serious consequences for the safety of its citizens and the country's economy.

At this time of year, power outages are relatively tolerable in Libya. Going into the summer, however, temperatures will rise and blackouts will last longer and become more frequent. Even if the lockdown currently in place in connection with the Covid-19

pandemic causes a reduction in electricity consumption by industries and businesses, the risk of long outages remains. Moreover, the almost-complete blockade on oil exports since mid-January, imposed by pro-LNA factions in protest against the GNA-backed Turkish intervention, is likely to create severe shortages of diesel and other refined products needed to run some of greater Tripoli's power plants.

Tripoli's electricity crisis has its roots in infrastructural deficiencies resulting from the halt of development projects and direct and indirect attacks on electricity installations. It affects a considerable portion of the industry and has links with illicit activities. This document begins by providing an overview of the infrastructural and administrative weaknesses leading to the crisis. It then shows how the crisis is linked to the conflict per se and analyses how it is exacerbated by various actors. It

also refers to a parallel and associated health and environmental crisis due to the piles of rubbish that have accumulated since the beginning of the civil war in April 2019, before concluding and providing recommendations.

An Overview of the Infrastructural and Administrative Deficiencies

Libya's electricity infrastructure has been in decline since the 1990s, when international sanctions made it difficult for Muammar Gaddafi's regime to hire foreign engineering companies. Between 2004 and 2010, Tripoli became less isolated and its finances improved. However, the Libyan authorities did not seize the opportunity to carry out the drastic overhaul that the country's electricity grid needed. By February 2011, Libya had entered a period of uncertainty, fragmentation and conflict, which is ongoing.

Many components of Libya's infrastructure, including its electricity grid, have received minimal maintenance for decades. They have also been damaged by the various bouts of warfighting. What is more, hardly any development projects were undertaken to compensate for damage to the sector and increasing demand due to the refusal of foreign contractors to operate in Libya's security environment, especially since the abduction of Turkish electrical engineers in 2017.¹ According to the General Electrical Company of Libya (GECOL), Libya's public electricity monopoly, there is a power deficiency of approximately 25 per cent – with production averaging 5,800 megawatts (MW) against

maximum consumption of 7,500 MW.² With consumption projected to double to 15,000 MW within the next 10 years, these stagnant production levels are expected to cause an irreversible failure nationwide.³ Power outages in Tripoli typically last five hours per day during spring and autumn and for up to 40 hours at a time in the peak summer and winter months. This results in drastically reduced productivity and revenue, the death of newborn babies in hospital incubators,⁴ the spread of respiratory difficulties attributable to ubiquitous power-generator smoke, and the undermining of morale among the capital's citizens. 'Since 2011, our initial civil and political rights demands have disintegrated to no more than the basic rights to safety, cash liquidity and electricity,' said one Tripoli resident in an interview. GECOL adopts a programme of power load shedding, i.e. rationing power outage hours in a manner that is proportionate to electricity consumption per area. However, Tripoli – home to over half the country's permanent and displaced population – bears the overwhelming and often sole share of power load shedding in the entire western region. The cities of Janzour and Tajoura, on the outskirts of Tripoli, refuse to fully take part in the programme, and cities such as Zawiya, Misrata and those in the western mountains often take no responsibility for alleviating the nationwide power crisis.

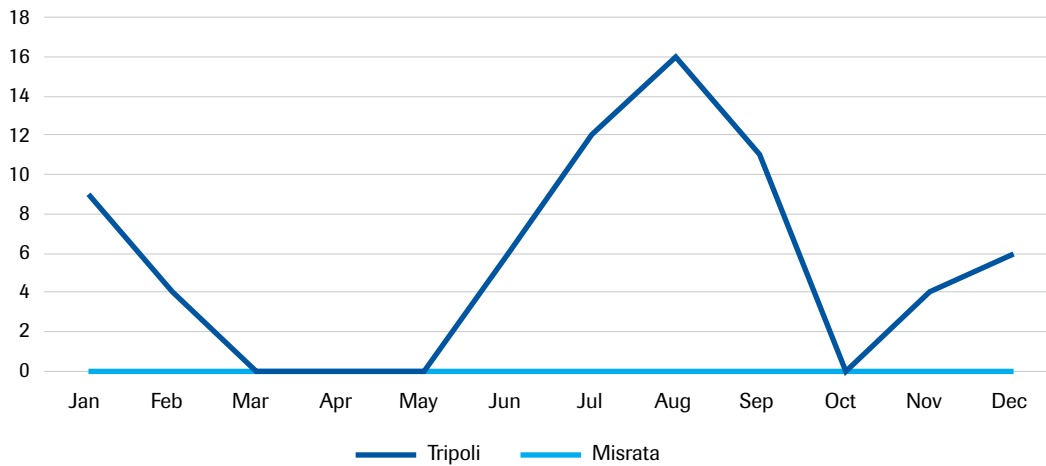
1 Reuters (24 June 2018) *Three kidnapped Turkish Engineers Released from Southern Libya*. Online: <https://www.reuters.com/article/us-libya-security/three-kidnapped-turkish-engineers-released-in-southern-libya-idUSKBN1JK02G>.

2 See GECOL Daily Power Load Updates https://www.gecol.ly/GECOL_LY/DetailsControl.aspx; Cousins, M. (23 October 2019) *Candid Assessment of Libyan Energy Sector at Tunis Forum*. Online: <https://www.libyaherald.com/2019/10/23/candid-assessment-of-libyan-energy-sector-at-tunis-forum/>.

3 Gecol (19 January 2018) *Report on the Main Questions around Libya's Electricity Crisis Solutions*. Online: <https://www.youtube.com/watch?v=q-r6GuRJz5Q>.

4 Busayla, M. (14 January 2017) *Libya's Electricity Crisis... Multiple Reasons and a Continuous Suffering*. Online: <https://al-ain.com/article/electricity-libya-crisis-interruption>.

Figure 1 Average power load shedding hours (2019)



Over and above illegal power connections, theft of copper wires, sabotage of transmission towers and destruction of power stations by petty criminals and armed groups, institutional corruption is a major contributor to the crisis. The Libyan Audit Bureau has accused GECOL – which has received approximately 8 billion Libyan dinars (€5.1 billion) over the past eight years – of serious administrative negligence and operational mismanagement estimated to have reduced output capacity by more than a half.⁵

Engulfment in the Illicit and War Economies

Infrastructural and administrative deficiencies aside, the Tripoli electricity crisis is a prime example of the gradual, and often accidental, exploitation of

public infrastructure weaknesses in the politics of the ongoing civil war – through two main mechanisms. First, power generator dealers and other profiteers recognised that they could exploit the continuing crisis by selling alternatives to public electricity and increasing the price of diesel in the black market. Since 2011, household and commercial electricity generators, often of a much poorer quality than advertised, have flooded the country, promoted via sponsored social media advertisements by dealers with access to foreign currency. Several testimonials collected in interviews point to the involvement of illicit economic actors attacking energy infrastructure or control room operators in Tripoli, leading to outages until generator stocks are sold out. Because the generator market is so lucrative, and because most generators run off diesel, diesel is often removed from fuel stations to private warehouses – mostly in Libya’s western coastal region and during the peak consumption months – where it is sold on the black market at 12 times the official rate.

The second mechanism has been the control or disruption of the power supply for leverage, protest, retaliation or the exertion of influence. Outside of Tripoli, stronghold districts and cities that are far less militarily fragmented than the

5 See Libyan Audit Bureau Report 2017, pp. 797-811 (2017) <http://audit.gov.ly/home/pdf/LABR-2017.pdf>; Libyan Audit Bureau Report 2015 in English, pp. 291-299 (2015) <http://audit.gov.ly/home/pdf/EN-LABR-2015.pdf>; Sada News (1 October 2019) *Audit Bureau reveals Negligence of Stations and Resource Mismanagement at GECOL*. Online: <https://sada.ly/2019/10/01/اديوان-المحاسبة-يكشف-وجود-اهمال-للمحط>.

capital refuse to pick up any power load shedding hours, often by force.⁶ A recurring source of disruption comes from the city of Zawiya, where in 2017 gas gauges from its power station were closed in protest at the kidnapping of local people in Wersheffana. This resulted in a total blackout and the nationwide electricity network being compromised.⁷ Last July, armed groups from the city cut off the south's power supply, to which southern armed groups retaliated by forcing the Libyan Man-made River Authority to disrupt the water supply to western and central Libya for weeks.⁸ Subsequently, control of the power supply is influential on the premise that it offers an opportunity for patronage,⁹ as was true for the commander of the Abu Slim force in central Tripoli. For years he threatened the nearby control rooms against administering any (high) power outages in the district.¹⁰ This made him popular with local residents and gave him legitimacy, despite public consensus against irregular armed groups in the capital.

The Electricity Crisis in Light of the Ongoing War in Tripoli

With regards to LNA-controlled eastern Libya – which has its own parallel GECOL – it is important to clarify that the inoperative interconnection supply lines between west and east have prevented the politicisation of electricity resources between the divided regions.¹¹ However, the LNA's advance on Tripoli since April 2019 has rendered the electricity supply vulnerable to both warring camps.

The early months of the LNA offensive on Tripoli saw few to no power outages due in part to low demand but also, possibly, to the GNA's short-lived policy of public appeasement, which included, for example, the timely payment of public wages. The GNA is regularly criticised for its neglect of and failure to provide public services in Tripoli, which many view as contributing to the electricity crisis. Residents note that power load shedding tends to disappear every year on 17 February, when the revolution is celebrated, despite there being high demand as it is one of the coldest months. They also note that power load shedding tends to spike to prevent the public from acceding certain news or developments, such as the LNA's "zero-hour declaration" in December 2019 which coincided with a blackout. Despite the circumstantial nature of the above observations, more substantiated sources point towards the GNA's local armed allies aggravating the crisis in order to punish Tripoli's citizens for their support for the LNA¹² or their lack of participation against the LNA's advance. GECOL's top officials have admitted, most recently at a press conference in July 2019, that equal load shedding hours between cities could not be instituted because of armed interventions

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- 6 Alarabiya (17 January 2017) *Libya drowning in Darkness due to Collapse of Electricity Grid*. Online: <https://www.alarabiya.net/ar/north-africa/2017/01/15/#ليبيا-غارقة-في-الظلام-لانهار-شيكات-الكهرباء>.
- 7 Remarks of SRSG Ghassan Salame to the United Nations Security Council on the Situation in Libya (29 July 2019) <https://unsmil.unmissions.org/remarks-srsg-ghassan-salam%C3%A9-united-nations-security-council-situation-libya-29-july-2019>; Busayla, M. (14 January 2017) *Libya's Electricity Crisis... Multiple Reasons and a Continuous Suffering*. Online: <https://al-ain.com/article/electricity-libya-crisis-interruption>.
- 8 Hadiya, Z. (15 July 2019) *A Different Kind of War between Libyan Regions... Water for Electricity*. Online: <https://www.independentarabia.com/node/41446/> - الأخبار/العلماء-العربي/حرب-من-نوع-آخر-بين-المناطق-الليبية-الماء-مقابل-الكهرباء
- 9 Ghubara, A. (18 August 2018) *Electricity... A Major Libyan Dilemma*. Online: <https://www.afrigatenews.net/article/الكهرباء-معضلة-ليبية-كبرى/>.
- 10 Libya Bahi (20 July 2018) *Two Dead in the Ranks of Protestors over the Blackout in Tripoli*. Online: <http://www.libyabahi.com/index.php?s=news&id=32721>.

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- 11 Alraed Channel (2 February 2016) *Special Coverage: Libya's Electricity Sector's Reality, Challenges and Future*. Online: <https://www.youtube.com/watch?v=nhl3G4pj1E>.
- 12 Alwasat (4 August 2019) *Three Power Stations raided in Tripoli*. Online: alwasat.ly/news/libya/253340.

that it refused to name, stating only that its operators and units are attacked on average four times a day.¹³

The increased power outages in the summer of 2019 could also have been in the GNA's favour in terms of local support, since the heavy fighting in southern Tripoli resulted in serious damage to many transmission towers and supply lines, preventing GECOL engineers from accessing the conflict zone for maintenance.¹⁴ Moreover, the hostilities forced the departure of three foreign technical teams that were renovating generation units in southern Tripoli.¹⁵ GNA-supporting media outlets attribute all these losses to the LNA. Subsequently, worsening living conditions and the displacement of hundreds of thousands of families due to the fighting has reinforced local support for the GNA.

The Parallel Crisis of Uncollected Rubbish

The electricity crisis appears to be mutually reinforcing a parallel rubbish crisis in Tripoli. According to GECOL, the Southern Tripoli Electricity Station, in the south-west of the city under GNA control, has been repeatedly breaking down due to its turbines becoming blocked by the smoke from burning waste

in a nearby temporary landfill.¹⁶ This has been disrupting a network supply of 400 MW.¹⁷ Due to its dense population, which keeps being displaced further inwards by the conflict, the capital generates up to 3,000 tons of waste per day.¹⁸ Theoretically, waste management in Tripoli is conducted in stages by public cleaning companies under the auspices of the Ministry of Local Governance. Waste is collected in trucks from residential, commercial and industrial areas to transitory sites in the city until their final transportation to the main landfill of Sidi Al-Sayeh, 50 km south of the city.¹⁹ However, rubbish collection services in the capital have ceased since the LNA's advance in April 2019. In the summer of 2019, the main landfill came under LNA control in an inaccessible conflict area, rendering it out of reach.²⁰

Since the municipalities halted waste collection services,²¹ households and businesses have been forced to dump their

13 Aljazeera (14 July 2019) *GECOL Press Conference on the Electricity Crisis*. Online: <https://www.youtube.com/watch?v=X4XT5P54yMo>.

14 Middle East Online (30 May 2019) *Tripoli Residents Torn Between the Hell of Conflict and the Flames of a Summer without Electricity*. Online: <https://middle-east-online.com/-/مخاوف-سكان-طرابلس-بين-حجيم-المعارك-ولهب-صيف-بلا-كهرباء>; France 24 (30 May 2019) *War-torn Libya's Electricians battle to keep the Lights on*. Online: <https://www.france24.com/en/20190530-war-torn-libyas-electricians-battle-keep-lights>.

15 218 TV (12 July 2019) *Libyan State 'Responsible' for Electricity Cut-off: General Company for Electricity*. Online: <https://en.218tv.net/2019/07/12/libyan-state-responsible-for-electricity-cut-off-general-company-for-electricity/>.

16 Alwasat (2 February 2020) *South Tripoli Electricity Station Suspended due to Burnt Rubbish*. Online: <http://alwasat.ly/news/libya/272065>; Assad, A. (8 February 2020) *Libya's Electricity company Resumes Operations of South Tripoli Power Plant*. Online: <https://www.libyaobserver.ly/news/libyas-electricity-company-resumes-operations-south-tripoli-power-plant>.

17 Alwasat (2 February 2020) *South Tripoli Electricity Station Suspended due to Burnt Rubbish*. Online: <http://alwasat.ly/news/libya/272065>.

18 Zaptia, S. (9 October 2019) *Tajura Waste Recycling Project Launched*. Online: <https://www.libyaherald.com/2019/10/09/tajura-waste-recycling-project-launched/>.

19 Asharq Al-Awsat (3 October 2019) *As Libya's War Drags on, Tripoli Drowns in Waste*. Online: <https://aawsat.com/english/home/article/1929946/libyas-war-draws-tripoli-drowns-waste>; Lewis A. (15 October 2019) *War means Mountains of Garbage in Tripoli's Streets*. Online: <https://www.reuters.com/article/us-libya-security-rubbish/libyan-conflict-leaves-rubbish-mounds-smoldering-in-tripolis-streets-idUSKBN1WT1MJ>.

20 UNDP Libya (4 February 2020) *New Lenses for Blind Solid Waste Areas*. Online: <https://www.ly.undp.org/content/libya/en/home/presscenter/articles/2018/blog-New-lenses-for-blind-solid-waste-areas.html>.

21 Asharq Al-Awsat (3 October 2019) *As Libya's War Drags on, Tripoli Drowns in Waste*. Online: <https://aawsat.com/english/home/article/1929946/libyas-war-draws-tripoli-drowns-waste>.

rubbish on the street and burn it.²² As a temporary solution, the transitory sites were used as permanent landfills, but to no avail.²³ The inner-city sites in Abu Slim and Suq al-Juma are small and already operating beyond capacity.²⁴ For about a month at the height of the crisis, one site was closed by armed groups until the GNA made a pay-off,²⁵ signifying further exploitation of the crisis. The uncollected rubbish led to the appearance of pop-up landfill sites across the city, the most recent being in the Suq Al-Juma Municipality, close to Mitiga airport – Tripoli’s only functional airport.²⁶ The Ministries of Transport and Local Governance have criticised this decision because of its negative consequences for the aviation and service industries in the vicinity.²⁷ This signifies a further deepening of divisions between central public administration actors and decentralised unilateral efforts to tackle the crisis.

Tripoli’s streets, neighbourhoods and even highways are drowning in rubbish, causing increased threats to public health. Bad odours, germs and insects are spreading alongside a rise in respiratory illnesses

and skin conditions,²⁸ while doctors and researchers warn of the return of diseases such as cholera and malaria,²⁹ and now the threat of the Covid-19. Locals have been much more vocal about the rubbish crisis than they have about the interminable and less immediate electricity crisis. Many protests have been organised against municipal decisions to open temporary landfills in residential areas.³⁰ One angry demonstrator even aimed his grievance at both warring camps: ‘Keep your ministerial portfolios and keep the money, but do find a solution to this garbage crisis because it’s making us sick’.³¹ Power outages often disrupt the pumping of water to businesses and households that do not possess rooftop water tanks. This could have a profound impact on preventative hygiene measures against waste in public spaces and the Covid-19 pandemic.

Conclusions

Undeniably, technical frailty is the operational root of the electricity crisis in Tripoli, but it is exacerbated and perpetuated by its politicisation as part of the civil war. As summer approaches, rising temperatures will put greater demand on the electricity network. Although the effect of industrial and commercial shutdown due to the Covid-19 pandemic could offset some of the pressure, hospitals and homes may still not receive a regular electricity supply. The ongoing January 2020 blockade of oil exports imposed by pro-LNA factions in protest against the GNA-backed Turkish intervention

22 Zaptia, S. (9 October 2019) *Tajura Waste Recycling Project Launched*. Online: <https://www.libyaherald.com/2019/10/09/tajura-waste-recycling-project-launched/>.

23 Libya Al-Ahrar (11 October 2019) *Tripoli Garbage Crisis – Another Face of Haftar’s Aggression*. Online: <https://www.youtube.com/watch?v=oRjnfEXlgu0>;

Lewis, A. (15 October 2019) *War means Mountains of Garbage in Tripoli’s Streets*. Online: <https://www.reuters.com/article/us-libya-security-rubbish/libyan-conflict-leaves-rubbish-mounds-smoldering-in-tripolis-streets-idUSKBN1WT1MJ>.

24 Lewis, A. (15 October 2019) *War means Mountains of Garbage in Tripoli’s Streets*. Online: <https://www.reuters.com/article/us-libya-security-rubbish/libyan-conflict-leaves-rubbish-mounds-smoldering-in-tripolis-streets-idUSKBN1WT1MJ>.

25 Naji, K. (28 September 2019) *Garbage seizes its Grip on Tripoli*. Online: bit.ly/3dxE1eQ.

26 Zaptia, S. (9 October 2019) *Tajura Waste Recycling Project Launched*. Online: <https://www.libyaherald.com/2019/10/09/tajura-waste-recycling-project-launched/>.

27 Libyan Cloud News Agency (6 February 2020) *Ministry of Local Governance Undersecretary: We Were Surprised by the Establishment of the Interim Landfill in Mitiga Airport*. Online: <https://www.youtube.com/watch?v=sqbRpAGOPGs>.

28 Asharq Al-Awsat (3 October 2019) *As Libya’s War Drags on, Tripoli Drowns in Waste*. Online: <https://aawsat.com/english/home/article/1929946/libyas-war-drag-tripoli-drowns-waste>.

29 Aljazeera Media Library (4 November 2019) *Garbage Piling in the Capital’s Streets*. Online: <https://www.youtube.com/watch?v=pDqkZnWi43g>.

30 Libyan Cloud News Agency (23 January 2020) *Alsarraj and Alkarama Locals Oppose the Establishment of an Interim Landfill*. Online: <https://www.youtube.com/watch?v=ITmKx60-0d0>.

31 Asharq Al-Awsat (3 October 2019) *As Libya’s War Drags on, Tripoli Drowns in Waste*. Online: <https://aawsat.com/english/home/article/1929946/libyas-war-drag-tripoli-drowns-waste>.

could cause even further escalation in the electricity crisis. As revenues plunge, the fuel needed to operate some power plants will be harder to come by.³² More generally, weaker public finances mean that even less maintenance work will be carried out.

As in many other conflict zones, local armed actors and profiteers in Tripoli exploit the weakness of public infrastructure and services. For example, they distribute subsidised goods such as cooking gas and wheat at exorbitant prices. At the same time, rental prices for displaced families have spiked and the already high cost of living in the capital continues to rise.

Since the crisis is underreported in both international and national media, understanding the politicised elements of Libya's electricity crisis relies to a great extent on observing the market and conflict dynamics in the wider context of the civil war. What is certain is that the indiscriminate imposition of power load shedding hours on the residents of Tripoli, along with the accumulation of rubbish and the impact of the Covid-19 pandemic, is leading to a health and environmental crisis. Although Libya's electricity crisis has many roots – pertaining to fragile infrastructure, poor administration, and coercion by non-state actors – lack of security has been the main problem affecting it. Only when a steady national security apparatus is restored and armed attacks on power installations have ceased will foreign companies return to complete development projects and the power load shedding system become just.

Recommendations

Tripoli's electricity crisis existed prior to the current armed conflict, oil blockade, rubbish crisis and Covid-19 pandemic. As summer heat returns, the combination of all these factors increases the probability of a humanitarian catastrophe. In coming to terms

with this reality, the main recommendation is for national actors and their foreign backers to put an immediate end to the escalation of the conflict or to support a humanitarian pause. In isolating the electricity crisis, the following recommendations are offered to policy actors:

1. From a technical perspective, **import electricity from neighbouring countries** as a viable short-term solution to prevent the collapse of the electricity network. Algeria and/or Egypt could supply an additional 400 MW to the power grid. This option proved successful in the eastern region.³³
2. The EU and its member states should take initiatives to deploy European technology and expertise to **repair and bolster the Tripoli area's electricity infrastructure**.
3. A drastic solution would be to **go green by shifting the focus of national production and international aid to solar energy**. A study by the University of Nottingham estimated that Libya could harness the equivalent of seven million barrels of oil a day from the sun by covering just 0.1 per cent of its territory with solar panels,³⁴ which would generate 250 MW of electricity plus extra for export.³⁵ The UN Development Programme has already successfully installed solar panels in several Libyan hospitals.³⁶

33 Middle East Online (30 May 2019) *Tripoli Residents Torn Between the Hell of Conflict and the Flames of a Summer without Electricity*. Online: <https://middle-east-online.com/> - مخاوف سكان طرابلس بين حميم المعارك ولهبب صيف بلا كهرباء.

34 Alaraby (6 September 2019) *Could Solar Power be the Answer to Libya's Energy Problems?* Online: <https://www.alaraby.co.uk/english/indepth/2019/9/6/Developing-solar-power-energy-in-Libya>.

35 Libya 218 (26 June 2019) *Power Outages in Libya... An Annual Crisis... Problems and Solutions*. Online: https://www.youtube.com/watch?v=xX6l0c5Mj_Y.






36 UNDP, *Boosting Benghazi's Health Sector: Solar Energy for Al-Kwayfia Hospital*. Online: <https://www.ly.undp.org/content/libya/en/home/stories/Boosting-Benghazi-Health-Sector-Solar-Energy-for-Al-Kwayfia-Hospital.html>; Alaraby (6 September 2019) *Could Solar Power be the Answer to Libya's Energy Problems?* Online: <https://www.alaraby.co.uk/english/indepth/2019/9/6/Developing-solar-power-energy-in-Libya>.

32 Laessing, U. and Lewis, A. (17 January 2020) *Eastern Libya Halts More than Half the Country's Oil Output*. Online: <https://www.reuters.com/article/us-libya-oil/eastern-libya-halts-more-than-half-the-countrys-oil-output-idUSKBN1ZG2B5/>.

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