

John Hamilton sees energy as a vital factor in Libya's civil war

At the time of writing in early April, Libya is in the grip of a civil war the outcome of which no one can predict. The situation is so volatile that it is not possible to guess even where the balance of advantage will lie in a few days, let alone in weeks. Analysing what has happened and what might happen to the country's energy sector is therefore a challenging task. Verifiable information – never in large supply in Colonel Muammar Qadhafi's Jamahiriya – is scarce. At question is far more than just waiting to see who will have control of the country's valuable resources; which international companies might benefit or lose out; and whether any part of Libya will be able to export oil in the foreseeable future. Rather gas and oil – or more precisely power and fuel – have taken on vital humanitarian and strategic military importance. Access to them both will be decisive not only in the armed conflict, but also in what its consequences will be for the population. This is also the context in which the United Nations' and other sanctions regimes will be enforced, as the UK, USA and EU look for ways of strangling the regime without doing the same to the population.

Right now the country is divided and neither side appears to have a 'killer blow' it can land on the other. For the Interim National Transitional Council (INTC), the divided and disorganised body which rules rebel 'Free Libya', this would mean instigating a coup or revolt against Qadhafi in Tripoli. For Qadhafi it means taking back the territory he has lost. The No Fly Zone (NFZ) approved by the UN Security Council ought at a minimum to protect the territory between Benghazi and the Egyptian border from falling under Qadhafi's rule again – although even that is not certain. The rebels have briefly taken over towns along the coast up to but not including Qadhafi's tribal stronghold and home town of Sirte.

Significantly all the Sirte Basin oil fields and key oil export terminals are east of Sirte itself. The INTC's strategic objective is to establish firm control over all this territory, with a notional dividing line at Bin Jawad, which lies between Sirte and the oil terminal of As Sidrah (through which oil from the Waha Oil Company is exported). Control over the strategically vital oil terminal towns of Ras Lanuf and Marsa al-Brega further east along the Gulf of Sirte has switched several times. A 'see-saw' scenario in which the centre of Libya becomes a perpetually shifting battle is one most feared by both Libyans and observers of the conflict.

The only oil fields and terminals definitely in INTC hands are easternmost Sarir and Mesla fields from which oil is piped to the Tobruk terminal. These are capable of producing about 100,000 b/d. Benghazi-based Arabian Gulf Oil Company (Agoco) allegedly sold one shipment to an Italian buyer for approximately \$80m in hard cash in early March, but since then the terminal has not exported, although it is ready to do so. In late March, Qatar offered to act as an intermediary, marketing oil exported by Agoco, which has seceded from National Oil Corporation (NOC) control and declared itself to be under INTC authority. The INTC says that Qatar will place revenues in an escrow account to comply with sanctions, which have been imposed on NOC, and also by the USA on Agoco itself.

Qadhafi-controlled Libya is itself divided. A bitter struggle is still underway in the town of Misrata – strategically important as the gateway to Tripoli and home to a major support from which most Gulf of Sirte offshore oil exploration has been serviced. Government troops have also assaulted a number of towns in the Jebel Nafusa – a mountainous area south of Tripoli. The hydrocarbons in western Libya are located in offshore fields north of Tripoli and onshore fields in the Ghadames area on the border with Algeria and the Murzuq area in the far south-west. The pipelines to the coast pass through the Jebel Nafusa, making it a strategic

location. Colonel Qadhafi is said to have ordered the evacuation of offshore rigs in mid-March – which some understood as a threat that he could destroy them creating a Mediterranean environmental catastrophe. The onshore fields are also shut. Speaking on the telephone from Tripoli on 29 March NOC chairman Shukri Ghanem confirmed that all exports had stopped – not only because of sanctions but also because 'most of the fields are closed'. He said that 'the workers abandoned them because of the looting'.

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In the same conversation, Ghanem also made claims about the refining industry under regime control. He claimed that the Az-Zawia refinery west of Tripoli – which has capacity to process 120,000 b/d of oil was operating at 80 percent of capacity. He did not specify which fields the crude was coming from. The regime retook the town of Az-Zawia in a brutal crackdown which may have killed a large number of civilians – the facts have yet to be established. As well as guarding Tripoli's route to the Tunisian border, the town is home to the only refinery now under total regime control. Since sanctions, it is the only source of fuel for both transportation and power generation for the two main Tripoli power stations, and several others including at least one of the two Al-Khums power stations which provides power to the Great Man-Made River – a scheme for piping vast quantities of water from deep aquifers in the far south of Libya to the coast.

In Tripoli by end March there was already a severe shortage of diesel and petroleum for civilian use. The extent to which this was hampering military

efforts was not clear. One of the key unknowns is the amount of storage capacity that exists for both crude and for refined products. Ghanem admitted the shortage of fuel for vehicles saying 'Zawia is not producing enough to reach Tripoli,' adding that 'everybody wants his tank full'. But a Libyan oil sector professional now outside the country passed on rumours that the authorities in Tripoli were 'going mad about establishing some sort of contact with [Algerian state company] Sonatrach to transport some fuel for domestic use by tanker via Ghadames'.

There are few other domestic sources of fuel. The 220,000 b/d refinery at Ras Lanuf has not been operational for weeks as the town has been the focus of military skirmishes and most of the workers have fled. Kerosene tanks at the refinery were also destroyed in an attack by regime aircraft early in the conflict. Libya's other refineries are a small plant at Sarir and the 20,000 b/d Tobruk refinery which is supplying eastern Libya. The INTC's troops are short of fuel – and sources have suggested they may now be getting extra imported supplies. Qatar's intervention in late March, promising not only to help with exports but also to supply fuel, is therefore an important lifeline. It has already sent a pair of tankers with a total of 3800t of liquefied petroleum gas to Benghazi to alleviate a shortage of cooking gas, and will presumably send more of what is needed.

So far, gas supplies have continued uninterrupted by the conflict. Libya's gas network is not yet unified – the project to build a coastal pipeline has been delayed by at least two years and the contractor Punj Lloyd has struggled to complete a final section of the pipeline between Az-Zawia and Tripoli. The western network supplies gas to the power stations at Al-Ruweis (Western Mountain), Abu Kamash and Az-Zawia. It also feeds the Zuwara and Az-Zawia desalination plants. The gas comes from Eni's Western Libya Gas Project. When sanctions were first applied on the Qadhafi regime, Eni shut down exports through Greenstream but

obtained an exemption from the UN to continue supplying gas domestically for humanitarian reasons.

Gas in the east of Libya is supplied from associated gas fields in the Sirte Basin, most of which are under the control of NOC subsidiary Sirte Oil Company. It also operates an LNG plant at Marsa al-Brega, which even before the crisis was operating at a fraction of its design capacity. Sources both outside Libya and in Benghazi say that supplies have remained on stream and that there is no shortage of power. The majority of eastern power comes from gas and some from oil. The regime has used its control over the power network as a weapon to some extent – the town of Misrata has been cut off from both power and the main water supply for nearly a month. Its 500,000 population is dependent on its gas-fired seawater desalination plant. But there are physical limits to this and Tripoli cannot cut off Benghazi from the grid. According to a senior General Electricity Company of Libya source in Benghazi, the grid is divided into three with the National Control Centre in Tripoli, and a grid operated out of Sirte and one out of Benghazi. But it would collapse if major eastern infrastructure went down. Cutting power to the east would also affect Egypt, given the interconnections in place.

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The situation as it stands could last for weeks or months. UK military strategists are known to doubt whether the combination of the INTC's disorganised volunteer forces and the NFZ are capable of changing the situation on the ground or putting sufficient pressure on Qadhafi to 'crack' Tripoli. Diplomatic sources appear more confident about the dismantling of the regime following the defection of the foreign minister and former External

Security Organisation chief Musa Kusa on 31 March. He was for four decades one of the most feared men in Libya after only the Colonel himself. But a coup remains impossible to predict.

The longer the conflict persists, the greater the chance of a breakdown in the nation's energy infrastructure as a result either of collateral damage, sabotage, or degradation. This could quickly escalate into a humanitarian catastrophe, should for instance the power supply to the Great Man-Made River fail, oil in storage at refineries or power stations run out, or if gas supplies from either east or west be interrupted. In terms of how the industry could eventually be revived, little can be said while the conflict is at this stage. So long as the Qadhafi regime is in control of Tripoli, there can be little hope of any foreign participation on the ground. Maintaining sanctions on the regime that are both effective and humanitarian will probably be impossible. If that is needed, some sort of Iraq-style oil-for-food programme will have to be introduced, with all the potential for abuse that Saddam Hussein notoriously took advantage of. Sanctions could be lifted on the east of Libya allowing Agoco to restart its sector. But international oil companies may be hesitant about turning their backs on Tripoli where their current interests mostly reside. The international community may be wary of sanctioning activity that appears too much like the partitioning of the country. The legal and constitutional implications of such a division would be immense. It is therefore unlikely that the Sirte Basin – the heart of Libya's oil sector – will start producing again in significant quantities until the conflict has been resolved one way or the other. However, some activity is not only possible but also essential to sustain both resistance – and life.

