

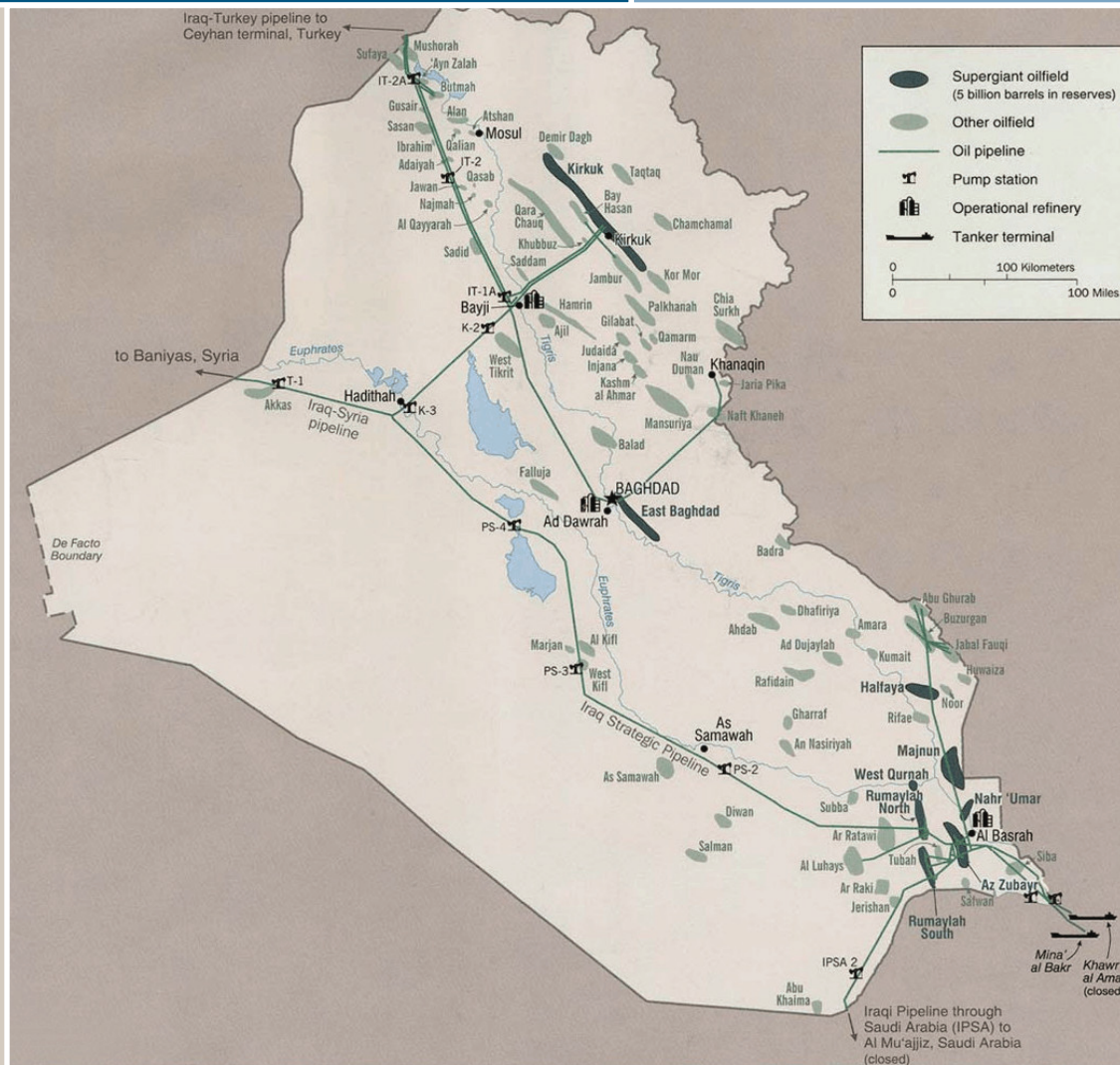
Geopolitics and Energy in Iraq

Where Politics Rules

A Report of the CSIS Energy and National Security Program

AUTHOR
Robert E. Ebel

August 2010



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CONTENTS

List of Figures	iv
List of Tables	v
About the Geopolitics of Energy Series	vii
1. Introduction	1
2. March 7, 2010, National Election	4
The Vote	4
A Manual Recount of the Baghdad Vote	7
Forming a Winning Coalition	9
3. How to Raise Oil Production Levels	11
4. Inadequate Iraqi Spending	16
5. Crude Oil Production and Export Earnings	18
Iraq before 2003	18
Iraq after 2003	20
6. Oil Exports: A Closer Look	35
7. Oil Services Contracts and Oil Company Negotiations	37
8. Aboveground Risks	41
9. Pipelines	44
10. Electricity	47
11. Epilogue	51
About the Author	55

List of Figures

Figure 1.1	Energy Consumption in Iraq, by Type of Fuel, 2006 (percentage)	2
Figure 3.1	Comparison of Department of State and Department of Energy Data Relating to Iraqi Crude Oil Production, June 2003–February 2007	12
Figure 5.1	Iraqi Crude Oil Production Levels, 1970–2005 (million barrels per day)	19
Figure 5.2	Iraqi Crude Oil Production, August–September 2004 (million barrels per day)	22
Figure 5.3	Iraqi Crude Oil Exports and Revenues, June 2003–August 2004	23
Figure 5.4	Iraqi Crude Oil Production, late October 2005–mid-December 2005 (million barrels per day)	23
Figure 5.5	Iraqi Crude Oil Exports and Financial Earnings, January–December 2005	24
Figure 5.6	Iraqi Oil Exports and Export Earnings, 2006	24
Figure 5.7	Iraqi Crude Oil Production, Fourth Quarter 2006 (million barrels per day)	25
Figure 5.8	Iraqi Crude Oil Production, Fourth Quarter 2007 (million barrels per day)	26
Figure 5.9	Iraqi Crude Oil Exports and Oil Export Earnings, December 2006–November 2007	27
Figure 5.10	Iraqi Crude Oil Production and Exports, August 2008–June 2009 (million barrels per day)	28
Figure 5.11	Iraqi Gasoline Imports as a Share of Total Supply, 2006–2009 (million liters per day)	28
Figure 5.12	Iraqi Budget, Oil Receipts, and Gross Domestic Product, 2008 and 2009 (billions of dollars)	30
Figure 5.13	Iraqi Monthly Crude Oil Production and Exports, June 2003–December 2009	31
Figure 5.14	Relation among Price of Oil, Oil Receipts, and Gross Domestic Product in Iraq	32
Figure 5.15	Iraqi Crude Oil Production and Exports, August 2009–May 2010 (million barrels per day)	34
Figure 6.1	Iraqi Crude Oil Exports, by General Destination, 2008 (as a percentage of total)	35
Figure 9.1	Iraqi Oil and Gas Fields, Gas Pipelines, and Existing and Planned Combustion Turbine Power Plants	45
Figure 10.1	Sources of Electricity Supply on the National Grid, by Month, January 2009–March 2010 (megawatt-hours per day)	48
Figure 10.2	Electricity Demand and Supply in Iraq, July 1, 2004–January 1, 2009 (megawatt-hours)	50
Figure 10.3	Electricity Supply and Demand in Iraq, August 2003–February 2010 (megawatt-hours)	50

List of Tables

Table 2.1	Results of March 7, 2010, National Election in Iraq	5
Table 5.1	Iraqi Oil Refining Capacity, 2004-2008	29
Table 5.2	Iraqi Refinery Yields, by Type of Product, 2008	29
Table 6.1	Iraqi Exports of Crude Oil, by Country of Destination, 2008 (thousand barrels per day)	36
Table 7.1	Iraq: Summary of Two Oil Field Bidding Rounds	39
Table 9.1	Export Pipelines Serving the Iraqi Oil and Gas Sectors	46



ABOUT THE GEOPOLITICS OF ENERGY SERIES

In November of 2000, CSIS published *The Geopolitics of Energy into the 21st Century*. The report was the culmination of a two-year effort conducted under the auspices of the Strategic Energy Initiative (SEI), designed to identify and examine significant geopolitical shifts that could impact future global energy security, supply, and demand. The effort, which was cochaired by Senator Sam Nunn and Dr. James Schlesinger, was undertaken on the premise that the relatively “benign” global energy situation that had persisted for the previous 15 years was masking emerging changes in both markets and international realignments and consequently allowing policymakers and the public at large to become complacent about making hard choices with respect to energy, foreign and security policy, the economy, and the environment.

The time horizon for the SEI report was the first two decades of the twenty-first century. Many of its conclusions, in hindsight, look remarkably prophetic and remain critically relevant almost a decade later, though events of the past several years also point to some clear omissions. Central to our (and a variety of other) forecasts at the time, the SEI report projected that energy demand over the time period would be met in essentially the same ways as it was at the turn of the century, but in increasingly larger quantities.

For example, the report concluded that fossil fuels would continue to provide the overwhelming majority (in excess of 85 percent) of global energy needs for the next several years; that the Persian Gulf would remain the key marginal supplier of oil to the world (cautioning, however, that massive investment would be needed to realize increases in future production output); that the anticipated growth in energy, especially natural gas, use would both tax the delivery system and raise a new series of geopolitical issues that could lead to new political alignments; that production from the Caspian would be important at the margin, but not (in this time frame) a pivotal source of global supply; that Asian demand would increasingly look to the Persian Gulf for energy; that Europe’s overreliance on Russian natural gas would become a “worrisome” dependency; and that U.S. oil imports would continue to grow.

Three broad conclusions were drawn from the SEI analysis—namely, that as the world’s only superpower, the United States must accept its special responsibilities for preserving worldwide energy supply; that ensuring adequate and reliable energy supplies would require enormous investments that needed to be made “immediately”; and that decisionmakers in this century would face the special challenge of balancing the objectives of sustained economic growth with concerns about the environment. The 2000 report even identified Osama bin Laden by name in a discussion of terrorism and the rise of dangerous nonstate actors.

Missing from the analysis, however, was the recognition of how quickly China’s energy demand would grow, how dramatically prices would change over a relatively short time period, or how precipitously climate change, carbon constraints, and renewable fuels initiatives would move to center stage.

Nonetheless, the SEI report emphasized the concerns surrounding the political fragility in key energy-producing countries and regions, predicted an increase in resource competition, and articulated how weakened U.S. alliance relationships with Europe, the Persian Gulf, and Asia, coupled with a resurgence of conflict and power politics, could adversely affect global energy security and promote geopolitical realignment.

At the time of its publication, portions of the SEI assessment were characterized as unduly pessimistic. Events of the last eight years suggest that they were anything but.

The intent of the Geopolitics of Energy series is not to assess the accuracy or shortcomings of our previous report or to develop a new bottom-up projection of supply and demand forecasts from now to 2030. Rather, our current work is designed to focus on relevant drivers that will dictate future trends in energy consumption, supply sources, geopolitical relations, foreign policy, and environmental choices.

1

INTRODUCTION

It is neither the intent nor the purpose of this report to discuss the course of U.S. military involvement in Iraq or to take a position on the question of troop withdrawal. Instead, part of this paper addresses the issue of the March 7, 2010, national election; the selection of a prime minister; and whether the promise held by the election will be fulfilled. If not, will the country return to the sectarianism conflicts that characterized its past? Senior Iraqi officials fear that the troop drawdown could well result in a power vacuum to be filled by insurgents.

This report also addresses the issue of the Iraqi oil and gas sector,¹ including security of the critical infrastructure, the role that sector has played over the years, its current position, and the prospects held for achieving a place in the world oil market commensurate with its reserves in the ground. Iraq continues to be the great unknown in terms of future world oil supply and is likely to remain so for the near term at least, if not longer should political constraints remain.

The report concludes with a look at the electricity sector and the general public unhappiness with inadequate supplies.

No one questions that Iraq possesses a very sizable oil potential, a potential that attracts the interest of international oil companies (IOCs) and national oil companies (NOCs) alike. With proven oil reserves of 115 billion barrels of conventional oil, ranking Iraq second only to Saudi Arabia in that respect, but with little exploration and development having been carried out during the past two decades, the country is one of the last remaining geologically attractive, relatively untested exploration sites. To illustrate, only 21 oil fields out of 80 discovered are now on stream.²

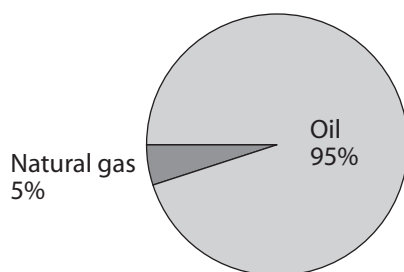
The issue then becomes one of access. The draft national oil law was to have clarified the conditions, the terms, and the entities that would be granted access. The draft unfortunately has been returned to the Council of Ministers where it sits today. Access will now come not through production-sharing arrangements (PSAs) but through service contracts awarded via two separate bidding rounds. Successful completion of these service contracts could see Iraq as perhaps vying with Saudi Arabia for leadership in world oil production and exports.

Natural gas reserves appear equally attractive, but exploration and development have been somewhat ignored in recent years as crude oil, especially its export as an earner of foreign exchange, continues to dominate.

1. The potential of natural gas has largely been ignored by most observers, although current production is relatively small, at about 8 billion cubic meters annually. Most goes to the production of liquefied petroleum gas (LPG) for the home market and to supplying electric power stations. Small volumes are reinjected to enhance oil recovery.

2. "Desert Could Yield 100bn Barrels," *Financial Times*, May 16, 2007. Another source stated that of Iraq's 78 oil fields identified as commercial by the government, only 27 were currently producing. A further 25 are not yet developed but are close to production, and 26 are not yet developed and far from production; see Ed Crooks, "Iraq Could Have Twice as Much Oil as Estimated," *Financial Times*, April 19, 2007.

Figure 1.1. Energy Consumption in Iraq, by Type of Fuel, 2006 (percentage)



Source: "Iraq," U.S. Energy Information Administration, 2006, www.eia.doe.gov/emeu/cabs/Iraq/background.html.

Natural gas clearly has great potential, but that potential is far from being realized. Proven reserves of natural gas are placed at 112 trillion cubic feet (equal to 3.17 trillion cubic meters), identifying these reserves as the tenth-largest in the world. It is interesting that the estimate of proven reserves is essentially the same as it was before the U.S.-led invasion. Flaring of associated natural gas and reinjection of natural gas at oil fields for the purpose of pressure maintenance plus covering domestic, industrial, and household needs in effect translate into little or no surplus volumes available for export. Shrinkage also reduces volumes available for general use.³ At present, Iraq neither exports nor imports natural gas.

As a result, the share of natural gas in Iraq's annual consumption of energy is quite small, approximately 5 percent. Oil provides all of the remaining 95 percent, as illustrated in figure 1.1. Coal is not available domestically, and none is imported.

Although the data shown are for 2006, it is very unlikely that any measurable shift or emergence of another fuel has occurred since then.

The United States has made considerable investments in terms of prestige, manpower, and dollars to restore the future of Iraq. Unfortunately, indigenous sectarian discontent plus troubling unrest in Afghanistan and concerns regarding the Iranian nuclear program continue to divert attention.

In recent months the question of the degree of Iranian involvement in Iraq has been raised. One senior U.S. military official, citing evidence that Iran continues to train Shiite extremists and provides them with rockets and other weapons, has stated clearly that Iran posed the greatest long-term threat to Iraq.⁴ Another unnamed U.S. official has stated unequivocally that "[t]he Iranian-armed militias are now the biggest threat to internal order [of Iraq]."⁵

3. Shrinkage accounted for roughly 41 percent of gross production of natural gas in 2008. Shrinkage reflects either purification or extraction of natural gas liquids, or both, plus losses caused by spillage, evaporation, and the like.

4. Yochi J. Dreazen and Laura Meckler, "Next Hot Topic in U.S. Campaign: The Iran Question," *Wall Street Journal*, April 8, 2008.

5. Karen DeYoung, "Iran Top Threat to Iraq, U.S. Says," *Washington Post*, April 12, 2008.

Afghanistan has emerged as a threat rivaling Iraq in terms of concerns to U.S. policymakers.⁶ A report by the Pentagon described Afghanistan as now more dangerous to U.S. forces than Iraq.⁷ The question then becomes one of fighting insurgents in two countries, and doing it successfully. Is success in Iraq more vital to U.S. interests, or is Afghanistan more critical?

6. Yochi J. Dreazen, "U.S. Sounds Afghan Alarm," *Wall Street Journal*, June 28, 2008.

7. *Report on Progress toward Security and Stability in Afghanistan* (Washington, D.C.: U.S. Department of Defense, June 2008), www.defense.gov/pubs/Report_on_Progress_toward_Security_and_Stability_in_Afghanistan_1230.pdf.

2

MARCH 7, 2010 NATIONAL ELECTION

The first national election after the U.S. invasion was held on January 30, 2005; the second national election took place on March 7, 2010. Approximately 62 percent of the more than 18 million eligible voters turned out to cast their ballots for candidates seeking seats in Iraq's Council of Representatives, its unicameral legislature.¹ The latter election was viewed as perhaps the best opportunity to accomplish what the United States and allied countries had been hoping for—the emergence of a unified and multisectarian government. Was that too much to seek, given the long and tumultuous history of the country?

The run-up to the election went as one should have expected. Sporadic violence continued around the country, with loss of life particularly threatening even on election day. Sunni insurgents had threatened to derail the election, an al Qaeda front organization threatened to attack political entities, and charges of harassment and detention were levied. When Prime Minister Nuri Kamal al-Maliki's list had been leading in the election, he saw no evidence of voting fraud. But when his closest competitor, Ayad Allawi, took a slim lead, Maliki demanded a recount—a demand the election board rejected.

The Vote

The vote count was completed and released on March 26. The tally gave Allawi and his coalition a total of 91 seats, with Maliki's bloc winning 89 seats (table 2.1). Neither party could claim a majority, which required 163 seats out of the 325 seats in the Council of Representatives. More than 6,000 candidates had vied for these 325 seats. The vote helped perpetuate Iraq's reputation as a polarized nation, with deep regional and sectarian schisms.²

Allawi had served as interim prime minister during 2004 but lost out in the country's first national election and was replaced by Maliki. One particular issue against Maliki is the continuing close relationship he has maintained with Iran.

The slim victory by Ayad Allawi and his alliance, which has heavy Sunni support, looked to unseat the majority Shiites who have held the reins of power since 2003. The Shiite alliance, holding 70 seats, would now seem to be in a position to be a kingmaker but, given the nature of politics in Iraq, a jump to early judgment would probably be unwise.

Then there is Moktada al-Sadr who remains in self-imposed exile in Iran, a radical cleric who fought against U.S. troops and who opposes any ties with the United States. Followers of Sadr belong to the Iraqi National Alliance, a purportedly pro-Iran organization. Do not underestimate his political senses, and do not be surprised if he trades his votes for a national position.

1. "Iraqi Vote Count Calls Rejected," China Economic Net, March 22, 2010.

2. Leila Fadel, "Vote Accentuates Iraq's Deep Splits," *Washington Post*, March 18, 2010.

Table 2.1. Results of March 7, 2010, National Election in Iraq

Election groupings	Number of seats
Iraqiya list (Allawi)	91
State of Law (Maliki)	89
Iraqi National Alliance (a Shiite coalition)	70
Kurdistan Alliance	43
Other	32
Total	325

Source: Leila Fadel and Karen DeYoung, "Illiawi's Bloc Wins Most Seats in Iraqi elections," *Washington Post*, March 27, 2010.

To no one's surprise, the vote results meant the winner would now be defined by whoever was successful in securing the necessary 163-seat majority through coalition building, a long and politically fractious undertaking. But that does not necessarily mean that Maliki or Allawi will gain the position of prime minister. It could very well go to another individual in exchange for coalition building needed to secure the needed majority.

It took more than five months to form a government after the 2005 election process had been completed. Rules also call for the last 15 seats to be given to members of religious and ethnic minority groups. One quarter of all seats should be filled by women, according to the constitution.³

It is important to underscore that provincial totals determine who has the opportunity to form the new government; it is not the national totals. Each of Iraq's 18 provinces receives seat allocations based on population.⁴ Seats in the national legislature are allocated on the basis of vote totals in each province.⁵ Thus, the largest number of seats controlled by a single alliance when the first session of the legislature takes place will be nominated to form a new government.⁶

Anthony H. Cordesman writes that both the election and the process of forming a government will be a failure unless the result is inclusive enough to at least be acceptable to Arab Shiites, Arab Sunnis, and Iraqi Kurds.⁷ Whether Shiite, Sunni, or Kurd, each looked forward to the coming weeks and months with trepidation, fearful of being marginalized in the new government. The Turkomans, a Turkic minority, consider themselves to be overlooked and are searching for ways to make use of what political strength they do have.

The United States kept its counsel to itself and did not publicly back any candidate, but it did say there were no signs of widespread fraud during the voting process.

3. Charles Recknagel, "With Iraq Votes Tallied, Deal-Making Begins," Radio Free Europe/Radio Liberty, March 26, 2010.

4. Margaret Coker, "Maliki's Alliance Has Edge in Iraq," *Wall Street Journal*, March 17, 2010.

5. Timothy Williams and Zaid Thaker, "Iraq's Premier, Trailing His Main Rival, Endorses a Recount of the Vote," *New York Times*, March 22, 2010.

6. "Iraqi Blocs Negotiating to Form Ruling Coalition," Radio Free Europe/Radio Liberty, March 31, 2010.

7. Anthony H. Cordesman, "The Real Results of the Iraqi Election: By July 2010, in Early 2011, or Years Later?" (Washington, D.C.: CSIS, April 6, 2010), 7, http://csis.org/files/publication/100406_Iraq_Election.pdf.

In the days and weeks following the disclosure of the voting results, public attacks did not diminish but instead appeared to multiply around the country. Targets varied from city to city, with bombings near three diplomatic missions in Baghdad the most surprising. Attackers seemed almost eager to show that their capabilities had not diminished and that the Iraqi security forces were powerless to stop them. To do so, targets have been selected, such as apartment buildings, where security would be minimal or not at all.

All probably have an eye on August 31, 2010, when the U.S. military will have cut its combat troop strength in Iraq to 50,000, marking the formal end of the U.S. combat mission in that country. Can that loss, will that loss be offset by a fully trained and capable Iraqi security force? Western media offered a variety of rationales to explain what was going on, some convincing, others less so. Although there are a reported 663,000 personnel in the Iraqi security forces,⁸ there is every reason to question whether sheer numbers with often questionable loyalty can do the job. Part of the rationale behind the attacks logically would be to show the Iraqi public that government forces cannot be trusted to provide the needed security for a democratic Iraq.

U.S. officials have carefully played down the bombings and have avoided comparison with the sectarian violence that plagued Iraq during 2006 and 2007. It is unlikely that the average Iraqi will be inclined to accept this line of thinking. Meanwhile, the Western media continue to examine a variety of possible coalitions that could make someone a winner. The longer it takes for a successful coalition to be assembled, however, the more likely that sectarian violence will emerge. In the interim, both sides continued to complain of vote-counting irregularities. If these irregularities can be confirmed, it may be expected that a vote recount will be undertaken at some voting centers.⁹

If one looks behind all this, and given the questionable security offered, it can be concluded that political factions are struggling to fill a perceived power vacuum in the country, a vacuum to be filled by those who secure the necessary power but also who can govern Iraq. Some of these political factions are said to have militias and their own intelligence and security forces¹⁰ and thus can do battle with more than just words.

What should Iraq be doing to forestall the prospect of sectarianism and accompanying violence? The most logical answer would be to encourage assembling a winning and broad-based coalition as quickly as possible while ensuring that this coalition has the means to form an acceptable and workable government. Speed is of the essence, and the self-serving advice and counsel of neighboring countries (read Iran) should be ignored.

There can be no denying that Iran is watching the postelection developments in Iraq and playing its hand very carefully, for the winner is not yet certain. There seems to be general acceptance that, in Iraq, no country can match the influence held by Iran.¹¹ If so, then what does Iran want? Whom does Iran want to win in Iraq? Probably not Allawi, but perhaps the ultimate victor may not be of concern if Iraq is not viewed as a challenge to Iran.

8. Ibid.

9. Timothy Williams and Duraid Adnan, "Iraqi Alliance Questions Vote Count in Election," *New York Times*, April 12, 2010.

10. Andrew England, "Security Forces in Iraq Battle Self-Doubt," *Financial Times*, April 6, 2010.

11. Andrew England, "Iraq's Allawi Aims to Topple Maliki Alliance," *Financial Times*, April 13, 2010.

Of perhaps greater importance: Can Iraq form a stable and truly national coalition government? There are those who say it will still take years for any new officials taking office to develop the capacity needed to govern effectively.¹²

A Manual Recount of the Baghdad Vote

Prime Minister Maliki had been pressing for a ballot recount for some time, based in part on his two-seat loss on March 7 to Allawi and his charges that there had been some manipulation in the voting stations. His request was finally granted on April 19 by an electoral review panel, with the review to be a manual recount limited to the 2.5 million votes cast in Baghdad. Because Baghdad accounts for 68 seats in the legislature, any measurable shift in the recount in Maliki's favor would be of primary importance and could change the outcome of the election held some six weeks before. Maliki's bloc had actually beaten Allawi 26 to 24 in the number of seats initially won in Baghdad.

It seems to be generally accepted that any change in the original seat tally brought about by the manual recount may well cause the loser's political temperature to rise to intolerable levels. But there might be other parties raising their own grievances as well,¹³ with Allawi now calling for a broader recount, implying that the Baghdad recount itself may not create conditions that would lead to formation of a new government.

Others also questioned the ultimate outcome of the voting recount. A member of Maliki's bloc opined that the exact number of seats each coalition wins was not significant, given that none won close to a majority.¹⁴

Before the manual recount had even begun, an Iraqi court—the Accountability and Justice Committee—on April 26 disqualified 52 candidates from the parliamentary elections, including two who had won seats, and threw out their votes.¹⁵ Both had come from the bloc led by Allawi (although some said only one came from the Allawi bloc). Their ouster came because the 52 candidates had been linked to the Baath Party of Saddam Hussein. A reported seven other successful candidates (or nine, again depending upon the source consulted) are being considered for disqualification, and there have been suggestions the seven are also from Allawi's bloc.¹⁶

Allawi laid down several conditions relating to the manual recount, stating that if these conditions were not met he would ignore the recount's results. The prospect for delay in seating a new government improved almost daily, in part because any removed candidate is free to appeal.

A decision to declare specific candidates' victories invalid was not expected before May 10, and more names may be put forward. The manual recount, to begin on May 3, was expected to take two to three weeks, if not longer. Time would seem to be of the essence, but politicians have their own goals in mind. Yet, just as the manual recount had begun, Maliki's coalition intervened

12. Elena C. Derby and Anthony H. Cordesman, "The Uncertainties behind Iraq's Election," CSIS, April 15, 2010. E-mail from the authors.

13. Steven Lee Myers and Tim Arango, "Iraqi Court Sets Partial Recount in Tight Election," *New York Times*, April 20, 2010.

14. Steven Lee Myers, "Election Ruling in Iraq Favors Prime Minister," *New York Times*, April 27, 2010.

15. Qassim Abdul-Zahra, "Barring of Candidates May Change Iraq Vote Outcome," Associated Press, April 26, 2010.

16. Chip Cummins, "Iraq Board Dumps 52 Ballot Names," *Wall Street Journal*, April 27, 2010.

and said the recount should be halted because the elections commission was using improper procedures that would produce an inaccurate result.¹⁷ Election officials replied that the recount would continue while the appeal was being reviewed.

What was the purpose of this particular intervention, at that particular time?

If the recount will not significantly alter the vote outcome, as seems to be the accepted opinion, then the only foreseeable result will be greater frustration on part of the general public. Is it part of a general plan to delay any meaningful electoral movement until after U.S. troops depart in August? Resulting frustrations then may well give way to street riots, with the possibility of Sunni involvement, and Prime Minister Maliki could counter with troops, all as part of a desire to stay in power.

Why would Prime Minister Maliki want to continue in the position he now holds? After all, his years as prime minister have not been marked by many particular victories he could claim as his own. No, he must be looking to the promise of the future, a future that holds the prospect of Iraq becoming a world leader in crude oil production and exports, if the results of the two bidding rounds come to life. With these implied gains would also come financial earnings that would allow Iraq to enjoy a greatly enhanced position not only in the Organization of the Petroleum Exporting Countries (OPEC) and the Persian Gulf but in the world of nations as well. Few politicians would turn their backs on such an opportunity.

The U.S. administration is well aware that Iraqi politicians are driven by personal ambition (as politicians are elsewhere around the world) and argues that the dispute over who gains the privilege to form the new government could extend the present political vacuum for months.¹⁸

Given the close two-seat election victory claimed by Allawi, could the recount lead to a change in the March 7 vote outcome? Probably not, seasoned observers offered, because Iraqi election laws allow candidates later declared ineligible to be replaced by the next one on the list who received the most votes.¹⁹ If so, the results of the general election would not be affected.

The United States, sensing that the political vacuum in Iraq could only expand and lead to more political turmoil, reportedly has come forward with proposed talks relating to a coalition government as a way out, with Maliki and Allawi each serving two years as prime minister.²⁰ Would this approach work? Doubtful. Sectarian dividing lines alone are likely far too ingrained for a coalition government to be acceptable to Sunnis, Shiites, and Kurds alike.

In the meantime, what does the United States do? Wait it out and hope for the best; that is, continue with the plans in place for troop withdrawal by the end of August 2010? Or conclude that the prospect for a new coalition government by that date looks too risky and slow the troop withdrawal, anticipating that sectarian violence will increase in parallel with the power vacuum? The

17. Suadad al-Salhy and Aseel Kami, "Iraq Starts Vote Recount, May Take Almost 2 Weeks," *Washington Post*, May 3, 2010.

18. Ernesto Londono, "U.S. Envoy Urges Iraqi Leaders to Look beyond Personal Ambitions," *Washington Post*, May 19, 2010.

19. This would be a solution only if a recalculation of the votes, following the deduction of votes won by those declared ineligible by the commission, shows that the coalitions still have the votes to hold onto their seats.

20. Patrick Cockburn, "U.S. Intervenes in Iraq Election Row," *The Independent*, April 26, 2010.

White House may insist that it has no plans to revisit the withdrawal timetable,²¹ but why should it say otherwise at this stage?

Forming a Winning Coalition

The first evidence that a winning coalition may be near at hand came on Tuesday, May 4, 2010, with the announcement that Maliki's State of Law coalition and the Shiite-dominated Iraqi National Alliance had formed an alliance that comes within four seats of the parliamentary majority needed to form a new government.²² The parliamentary majority required is 163 seats; the two blocs have 159 seats. The leading vote getter in the Iraqi National Alliance was cleric Moqtada al-Sadr's movement; unfortunately, he is known to be anti-American. The Iraqi National Alliance is also known to include leaders who have close ties to Iran.

Where will the needed remaining four seats come from? Kurdish parties could join the group, and Allawi's bloc has indicated it would consider joining.²³ But securing the four seats may not be the greater challenge, which might well be agreeing on who will be the prime minister in the new government. Maliki would of course like to keep his position as prime minister, but that is not a given. Indeed, naming a new prime minister may be the price to be paid for joining the new alliance.

There is another concern that looms ahead. The Sunnis supported Allawi, a Shiite, in the hope of gaining a political rebirth. If disqualifications, voting recounts, and coalition building destroy that hope, then the Sunnis could well revert to the insurgency displayed during 2006–2007.²⁴

Much is at stake in the assembling of a new government, and insurgents, likely al Qaeda, see an opportunity to influence thinking, but their approach is in the use of violence. The current political instability is viewed by insurgents as an excellent opportunity, and they responded on May 10. A series of shootings and bombings around the country killed at least 100 and left some 300 wounded. The message was clear: we are still here and you cannot stop us. Still, should such actions influence in any way the formation of a new government and the naming of a prime minister?

Then the unexpected happened, first reported on May 12. An agreement was reached to stop the campaign to bar candidates from politics if they had ties to the Baathist Party.²⁵ None of the winning candidates would now be barred. The nine winning Sunni candidates who were retroactively disqualified after the official results were announced would not be reinstated although they can appeal.²⁶

21. Peter Baker and Rod Norland, "As Iraq Remains Messier than Expected, Obama Sticks to a Deadline," *New York Times*, April 28, 2010.

22. Wall Street Journal Roundup, "Iraqi Shiite Blocs Are Near a Majority," *Wall Street Journal*, May 5, 2010.

23. Ben Lando, "Allawi's Bloc Warns Foes, Considers Joining Them," *Wall Street Journal*, May 6, 2010.

24. Ron Synovitz, "Iraqi Bloc Plans Response to Candidates' Disqualification," Radio Free Europe/Radio Liberty, April 27, 2010.

25. Anthony Shadid, "Iraqis Reach Deal to Stop Disqualifying Candidates," *New York Times*, May 12, 2010.

26. Ron Synovitz, "Iraqi Election Hinges on Court Ruling on Banned Candidates," Radio Free Europe/Radio Liberty, May 12, 2010.

The vote recount had come to a tentative end on May 16 when the election commission announced that a partial recount had preserved Allawi's close victory.²⁷ No evidence of fraud had been found. Several days later the appeals court ruled that no winning candidate would be barred from being seated in the legislature. Is Iraq now ready to form a new government? Not yet; there is still considerable behind-the-scenes maneuvering going on, and in Iraqi politics that means nothing yet is certain.

Moreover, the results of the March 7 election have not yet been ratified, and who will become the next prime minister still remains uncertain. When the election results are finally certified, the new legislature can convene. While that may come about shortly, that does not necessarily mean a new prime minister will be selected any time soon.

Maliki continues to position himself as having only the best interests of Iraq in mind. He supports an all-inclusive new government, cautions the United States not to become involved in Iraqi internal matters, and recognizes that his country remains divided along sectarian lines.²⁸ Will that be enough?

27. Anthony Shadid, "Recount in Iraq Preserves Victory for Maliki Rival," *New York Times*, May 16, 2010.

28. Leila Fadel, "Political Angling amid Uncertainty in Iraq," *Washington Post*, May 23, 2010.

3

HOW TO RAISE OIL PRODUCTION LEVELS

The U.S. Government Accountability Office (GAO) is regarded as the investigative arm of Congress. GAO supports Congress in meeting its constitutional responsibilities and helps ensure the accountability of the federal government for the benefit of the American people. GAO has been particularly active in reporting on progress in rebuilding the Iraqi oil and electricity sectors.

Two reports were released on these sectors during 2007 that brought clarity and objectivity to a very complex subject.¹ The May 2007 report concluded that, although the oil and electricity sectors are mutually dependent, the Iraqi government lacked integrated planning for these sectors and that situation had led to the inefficient management of the country's resources.²

The report noted that crude oil production had reached its highest annual average, 3.5 million barrels per day (b/d), in 1979. Although more than 30 years have since passed, that level of production has never been regained.

The July 2007 updated report noted that, despite \$2.7 billion in U.S. reconstruction funds, oil production had consistently fallen below U.S. program goals. In addition, the report found that oil production levels provided by the U.S. Department of State may be overstated, as data from the U.S. Department of Energy depicted production levels lower by 100,000 b/d to 300,000 b/d (figure 3.1), but declining to as little as 20,000 b/d in March 2007.

Inadequate metering, crude oil and product reinjection, corruption, theft, and sabotage were found to account for the discrepancies—challenges that had confronted the oil sector well before March 2003.³

Another challenge faces the oil sector, a challenge that has been described as possibly the most dire threat yet in Iraq's eight decades as a petroleum power: a brain drain.⁴ Many Iraqis had departed in the run-up to the war and even in the years afterward. Hundreds were fired by the United States, the occupying power, because of membership in the Baath Party, while others were caught up in resignations and government changes. Replacements were inexperienced or corrupt, or both. This loss of experienced personnel will come to bear on oil industry performance later on.

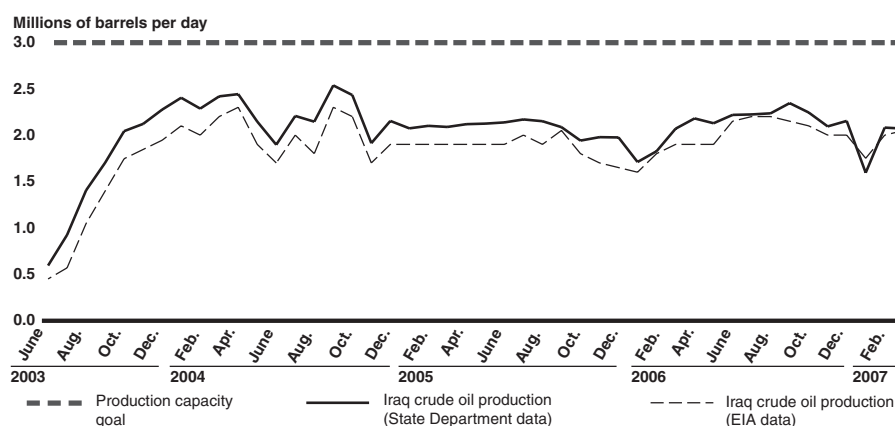
1. Government Accountability Office, *Rebuilding Iraq: Integrated Strategic Plan Needed to Help Restore Iraq's Oil and Electricity Sectors*, Report no. GAO-07-677 (Washington, D.C.: GAO, May 15, 2007); and GAO, "Serious Challenges Impair Efforts to Restore Iraq's Oil Sector and Enact Hydrocarbon Legislation," Report no. GAO-07-1107T (Washington, D.C.: GAO, July 18, 2007). The latter report is based on the May 2007 report and includes updated data.

2. GAO, *Rebuilding Iraq*.

3. A report to the UN Security Council in mid-December 2007 referenced the very slow progress being made to properly monitor how much oil the country is exporting, refining, and storing; see Daniel Bases, "UN Official Says Iraq Oil Metering Still Deficient," Reuters, December 19, 2007.

4. Chip Cummins, "Energy Security Is Hostage to Supply of Oil Professionals," *Wall Street Journal*, August 22, 2006.

Figure 3.1. Comparison of Department of State and Department of Energy Data Relating to Iraqi Crude Oil Production, June 2003–February 2007



Source: GAO, “Serious Challenges Impair Efforts to Restore Iraq’s Oil Sector and Enact Hydrocarbon Legislation,” Report no. GAO-07-1107T (Washington, D.C.: GAO, July 18, 2007), 2.

The oil minister of Iraq, Hussein al-Shahristani, had said in September 2006 that oil production was to hit 4 to 4.5 million b/d within the coming five years, and that an investment to reach this goal would total about \$20 billion.⁵ At the time of these remarks, Iraq was producing 2.3 to 2.4 million b/d. This five-year plan thus called for roughly doubling the then current output, with average annual increments exceeding 400,000 b/d. But August 2007 production rates were down from September 2006, placing the oil minister’s plans in question. The oil minister then added that he hoped to boost output to 6 million b/d over the next decade. Again, questionable. But the oil minister must always be optimistic, regardless of the realities.

How did the United States view the oil sector’s future? The GAO had placed the financial need of the oil infrastructure at between \$20 billion to \$30 billion, and that, with this funding properly invested, could raise crude oil production levels to 6 million b/d by 2015.⁶ To reach that goal would require an average annual production increment approaching 500,000 b/d. Very likely not doable even under the best of conditions. While there will always be hope, reality intrudes.

The lack of a national oil law should not be taken to mean that smaller companies, perhaps less risk averse, might not be willing to commit to Kurdistan. In early September 2007, Hunt Oil did just that, signing a production-sharing contract in Kurdish northern Iraq.⁷ President George W. Bush, when informed of the deal, wondered about its impact on the draft oil law, while Iraqi officials called the agreement illegal.

When questioned, Hunt Oil produced documentation to the effect that the U.S. Department of State had been kept fully informed and that the government did not object to contracts with the

5. Glen Carey et al., “Iraq Targets \$20 Billion Cost to Take Production to 4.5 Million b/d in 5 Years,” *Oilgram News*, September 12, 2006.

6. Dana J. Hedgpeth, “Iraq Far from U.S. Goals for Energy,” *Washington Post*, September 2, 2007.

7. Michael A. Fletcher, “Iraq Oil Deal Gets Everybody’s Attention,” *Washington Post*, September 24, 2007.

Kurdish Regional Government (KRG). This and other contracts struck with the KRG infuriated the Iraqi government, and the United States in support continued to hold to the position that these contracts undermined Baghdad's fragile central government and to discourage such deals.⁸

Others wondered, however, whether this was just the beginning of a flood of companies now willing to commit, inasmuch as Kurdistan in August 2007 had enacted its own regional oil law. Roughly one month later the KRG was able to announce that it had signed eight PSAs and two more were in the offing, all with small companies. Major international oil companies were perhaps conspicuous by their absence as they did not want to risk blackballing by Baghdad if they did become involved in Kurdistan.

By the end of November 2007 more than 20 contracts had been signed with the KRG. Baghdad could hardly contain its anger, calling the deals illegal and threatening retaliation when those companies came seeking opportunities in the southern part of the country.

What was the attraction that had brought these companies to Kurdistan? Where else could smaller, independent companies have access to a substantial reserves potential under commercially acceptable terms? The answer to the latter question was sufficient in itself.

Indeed, the first crude oil produced by a small foreign company since the fall of Saddam Hussein had been scheduled for June 2007.⁹ The company was DNO, of Norway, and the flow was to begin from a well in Kurdistan. A PSA had been signed with the KRG in June 2004. Absent pipeline availability, the oil had to be trucked to market. Volumes were small, with no real impact on Iraqi supply. The KRG presumably had not forgotten that Baghdad's permission was required if any oil was to be exported.

While such events may be newsworthy, small companies are not the answer to Iraq's problems. These problems can be resolved only by those multinationals that can bring funding, experience, and technology to the table. Small companies may take the risk, drill several wells, and hope that the oil law will soon be passed so that they can sell out to a major. Most majors, however, might find these opportunities too small, especially after running the project economics.

Nonetheless, crude oil production in the northern part of Iraq rose to 601,000 b/d in February 2008, helping national output to average 2.5 million b/d that month, the highest average since September 2004.¹⁰

Whether the grouping of small independents contributed to this surge in production is not yet clear. Oil exports from Iraq averaged 1.97 million b/d during the first quarter of 2008, up by 500,000 b/d over first quarter 2007, in part reflecting tighter pipeline security.

It was thought that higher export levels plus higher crude oil prices could well bring Iraqi oil revenues to \$70 billion for the year 2008, according to a report prepared by the Special Inspector

8. Richard A. Oppel Jr., "State Department Inspector to Investigate Texas Oil Company's Deal in Kurdistan," *New York Times*, July 25, 2008.

9. Javier Blas and Carola Hoyos, "Norwegian Company to Pump Iraqi Oil," *Financial Times*, May 15, 2007. Three other companies have risked investing in Iraq—Addax Petroleum of Canada, Genel Energy of Turkey, and Dana Gas of the United Arab Emirates.

10. Faleh al-Khayat, "Iraqi Crude Oil Output Hits Post-2004 High in February," *Oilgram News*, March 10, 2008.

General for Iraq Reconstruction (SIGIR).¹¹ This oil revenue estimate quickly caught the eye of the U.S. Congress, with calls for Iraq to spend more of its money on reconstruction and for the United States to spend less.

Baghdad then decided to initiate its own negotiations with the IOCs in Amman, Jordan, with the objective set at raising output through technical service agreements (TSAs) at fields already producing.¹² These agreements were expected to bring a transfer of technology, expertise, and training to the country's oil sector.¹³ This effort recognized that an approved oil law might not be in place for some time, yet Baghdad understood that it must show some progress in the oil sector, in part to take advantage of currently high oil prices.

TSAs were to be awarded for five fields in northern and southern Iraq, and the government expected each field to add an average of 100,000 b/d to the country's annual output.

Not to be outdone, the oil minister of the KRG, Asti Hawrami, took off for a visit to the United States to meet with political and business leaders of IOCs. It can be expected that actions and counteractions will continue for some time although as long as the rhetoric remains just that, the Iraqi oil sector should not be negatively affected.

Given that the very future of the oil sector and, by extension, the country as a whole would seem dependent on its passage, what is it about the draft oil law that is so contentious?¹⁴ The United States is pressing for its passage as a way of bringing together the multiple Iraqi factions now tearing the country apart. Is this U.S. "push" part of the problem? What is at stake? Nothing more than control of the oil and gas resources and, especially, how the oil revenues are to be shared as well as definition of the rights of the foreign investor.

Crude oil fields in any country will begin to decline at some point in time. That decline must be offset if national output is to at least hold constant, let alone increase. Equally important, proven oil reserves are drawn down as well. Sustainable increases in oil production and additions to reserves can be secured in Iraq as in any oil-producing country: drilling of new wells at operating fields as well as those newly discovered, workovers of old wells, and increases in the oil recovery factor. Iraq was reported to have 1,288 flowing wells in 2008, plus 238 wells on artificial lift.¹⁵ These wells, taken together, were averaging roughly 1,500 b/d.

Reports in late 2006 noted, however, that gains from actual oil wells drilled and well work-over efforts had been barely enough to offset oil field depletion, let alone provide for production increases.¹⁶ Failing that, and in the face of growing demand plus refinery limitations, petroleum

11. Yochi J. Dreazen and Chip Cummins, "Iraq Oil Revenue May Top Outlook," *Wall Street Journal*, April 20, 2008.

12. Faleh al-Khayat and Cathy Landry, "Iraq Development Talks with Oil Majors," *Oilgram News*, November 28, 2007.

13. Ben Lando, "Analysis: Iraq Oil Law Holdup Political," United Press International, March 17, 2008. Over the next two years, \$2.5 billion has been set aside for these agreements. Negotiations are being conducted with BP, Shell, ExxonMobil, Chevron, and Total.

14. The Iraqi government in late July 2007 passed a law privatizing the oil-refining sector as a way of attracting foreign investment and eliminating the fuel shortage; see Ben Lando, "Iraqi Oil Refineries Go Private," United Press International, July 25, 2007. The refinery law is separate from the draft oil law.

15. "OPEC Annual Statistical Bulletin, 2008" (Vienna: Organization of the Petroleum Exporting Countries, 2009).

16. Faleh al-Khayat, "Iraqi 'Missing Barrels' Increase to 140,000 b/d in Third Quarter," *Oilgram News*, November 6, 2006.

product imports still offered the only option, except for possible but necessarily limited contributions from renewable fuels, fuels substitution, and improved fuels efficiency.

None of these latter approaches has yet been undertaken, and it is probably too early for that. Such are not in the current interests of Iraq. The dominant role of the oil sector is unmistakable: more than 90 percent of government earnings, other than financial aid, and about 95 percent of foreign exchange earnings have come from the activities of the oil sector. That dominance cannot be ignored, and it explains why emphasis on recovery to prewar levels and then expansion in crude oil production will continue to lead all economic activity.

4

INADEQUATE IRAQI SPENDING

The United States has made nearly \$53 billion available for use in Iraqi reconstruction, and of that sum it had spent \$44.6 billion as of the end of 2009.¹ Despite some successes, the reconstruction program has been dogged by insurgency, mismanagement, and poor coordination among the various U.S. agencies. About half of the funds spent have been used to train, equip, and support Iraq's military and police forces. Overall security has improved compared with the years 2006–2007 when sectarian warfare peaked, but security threats still remain.

The GAO released a report in January 2008 that presented a negative assessment of Iraqi efforts to rebuild the economy.² It was found that just 4.4 percent of that year's reconstruction budget had been spent by August 2007. That rate in turn was much lower than spending through August 2006. This key conclusion of the report was acceptable to neither the U.S. Department of State nor the U.S. Department of the Treasury, with Treasury noting in response that GAO had not fully surveyed the budget to the extent it should have.³

The differing opinions can be attributed to the general unreliability of Iraqi data. Understanding and accepting this unreliability is a *sine qua non* for assessing and utilizing reporting on that country.

Media headlines continued to point out that Baghdad, flush with cash earned from oil exports, still was unable to spend it all. The country simply does not have the facilities or the trained manpower to handle such sums of money coming through the door.

Funding has always been an issue. The United States had made available \$7.4 billion, obligated about \$7.1 billion, and spent about \$5.1 billion during fiscal years 2003 through fiscal 2006, all in support of reconstructing the oil and electricity sectors. In addition, about \$3.8 billion in Iraqi funds had been spent through end of December 2005.

What was accomplished? What was obtained as a result of these expenditures? In terms of oil and electricity supplies, not much more than holding supply levels relatively constant but still considerably short of domestic needs. What about water? About 70 percent of Iraqis lack access to clean water, and that lack raises prospects for widespread diseases. Funds needed for the coming years will be a large multiple of what has already been spent, and there can be no assurance that such funds will be made available or spent wisely.

Part of the problem is the sheer inability of the Iraqi government to spend those funds allocated. For the oil sector in particular, the future very much depends on a petroleum law deemed

1. Matt Kelley, "The Cost of Iraq Reconstruction," *USA Today*, March 22, 2010.

2. GAO, "Iraq Reconstruction—Better Data Needed to Assess Iraq's Budget Execution," Report no. GAO-08-153 (Washington, D.C.: GAO, January 15, 2008).

3. *Ibid.*; detailed comments and criticisms submitted by the State Department and the Treasury Department can be found in separate appendices to the GAO report.

attractive by foreign investors, with an acceptable national allocation of oil-derived income in place. In addition, progress in both the electricity and oil sectors is hindered by cumbersome Iraqi government procedures and practices. To expect measurable changes any time soon would not be warranted under present conditions.

5

CRUDE OIL PRODUCTION AND EXPORT EARNINGS

Iraq before 2003

Under the leadership of Saddam Hussein, who parceled out favors and punishment alike, Iraq was a failed state in the years leading up to the 2003 U.S. invasion. The oil industry had been nationalized, beginning in 1971, at which time few foreigners had been employed in the country. Iraqi oil production peaked just nine years later, at 3.8 million b/d in September 1980. Then two Gulf wars, the imposition of sanctions, and the creation of the UN Oil-for-Food program¹ influenced oil production levels during the subsequent 20-odd years running up to 2003.²

Iraq invaded Iran on September 23, 1980; Iran countered successfully; and Iraq unilaterally declared a cease-fire on June 10, 1982, although continuing Iranian attacks were followed by Iraqi aircraft strikes at oil targets. The war continued to escalate, with Iran accepting a cease-fire by July 1988.³

Not long thereafter, on August 2, 1990, Iraq invaded Kuwait. The world oil market reacted as the fear of war and long-term oil supply disruptions began to spread. Peace talks were not successful, and in mid-January 1991 U.S. aircraft struck Iraqi military targets. Iraq fired missiles at Israel and Kuwait, triggering in part the movement of UN troops into Kuwait City. The war ended at the close of February 1991, and Iraqi troops exited Kuwait, setting oil wells afire as a departing gesture.

Iraq, a founding member of OPEC, had held a production quota of 3.4 million b/d but fell short of that quota during most of the time. Yet it could be said that Iraq controlled more oil than any publicly traded company.

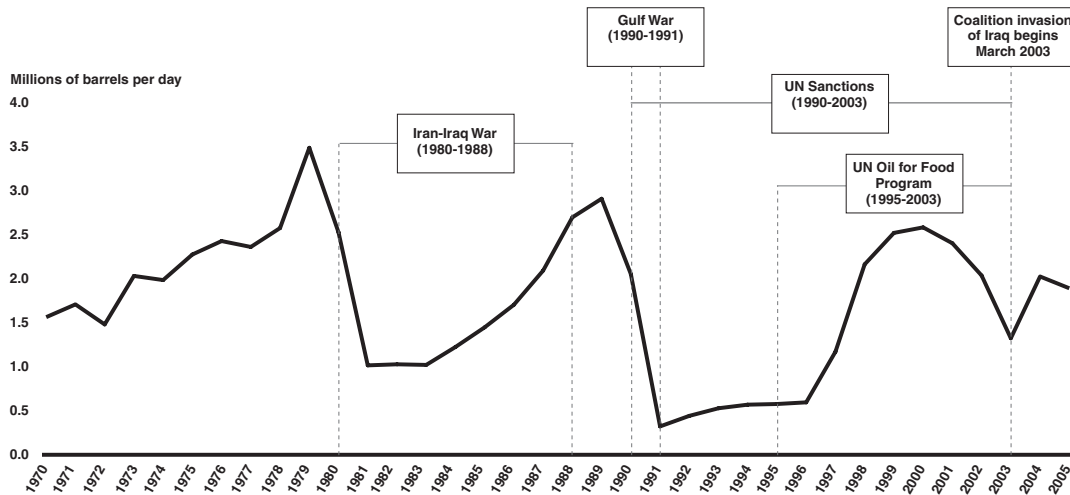
The Iran-Iraq War left much of the country's infrastructure badly damaged by this conflict. The Gulf War that covered the years 1990–1991 brought further damage to the oil industry. Crude oil production had fallen to just 1 million b/d in 1981, then marked time for several years and began to recover, reaching roughly 3 million b/d by 1989, then again falling dramatically to 300,000

1. The Oil-for-Food program lasted from 1997 until March 2003 when it was replaced by United Nations Security Resolution 1483, establishing the Development Fund for Iraq. The program later became controversial, the U.S. government began to investigate, and 33 companies have disclosed some sort of involvement with the investigation.

2. The government of Iraq on June 30, 2008, brought charges against 93 named individuals and companies claiming conspiracy to commit bribery, fraud, and money laundering, committed while the program was functioning; see James Norman, "Iraq Sues in U.S. Courts against Oil-for-Food," *Oilgram News*, July 2, 2008.

3. The chronologies offered in this and the following paragraphs have been based on information provided by the Energy Information Administration of the U.S. Department of Energy; see "Annual Oil Market Chronology," <http://eia.doe.gov/cabs/AOMC/9099.html>.

Figure 5.1. Iraqi Crude Oil Production Levels, 1970–2005 (million barrels per day)



Source: GAO, *Rebuilding Iraq: Integrated Strategic Plan Needed to Help Restore Iraq’s Oil and Electricity Sectors*, Report no. GAO-07-677 (Washington, D.C.: GAO, May 15, 2007), 14.

b/d in 1991 because of the Gulf War. Inauguration of the Oil-for-Food program in December 1996⁴ allowed output to rise to 2.5 million b/d (figure 5.1).

The impact of the two wars on the oil sector is very clear from figure 5.1, with sharp declines followed by gradual recovery. The U.S. and coalition invasion (Operation Iraqi Freedom) in March 2003 took production down to roughly 1.3 million b/d, but again recovery followed.

What about the oil fields themselves? What kind of condition were they in? The UN was curious and extended an invitation to Saybolt International, a Dutch firm, to visit Iraq and evaluate the health of the Iraqi oil sector. Saybolt did so, on two separate occasions—March 1998 and January 2000.

Saybolt’s findings underscored the sector’s “lamentable” state, as evidenced by the following excerpt from the report covering its January 2000 visit:

The group has to report that the previously noted lamentable state of the Iraqi oil sector has not improved. It is apparent that the decline in the condition of all sectors . . . continues, and is accelerating in some cases. This trend will continue, and the ability . . . to sustain the current reduced production levels will be seriously compromised, until effective action is taken to reverse the situation.⁵

Were these findings wholly impartial? Possibly not. Both visits had made the case for the accelerated delivery of spare parts and equipment, contracts for which were being held up by the United States.

Nonetheless, there is scant evidence that could point to improvement as the result of any required effective action taken during the years following the January 2000 visit. Because the U.S.

4. The Oil-for-Food program had been manipulated by Saddam Hussein to his own advantage, in part through illegal surcharge kickbacks on barrels of oil sold.

5. Excerpted from “Future of Iraq Project” (unpublished manuscript).

Army Corps of Engineers had conducted “aboveground” assessments only, contracts were let with two non-U.S. Western firms to study the impact on southern and northern fields of past reservoir management practices. These practices, largely the overproduction of fields, plus the reinjection of heavy ends and other questionable approaches, had led to high water cuts and to reduced recovery levels. How should these fields now be approached?

Shell and Exploration Consultants Limited were tasked with studying the Kirkuk oil field in the north of the country in order to determine future development options for the field. The first phase of the study was submitted to the Iraq Ministry of Oil (MOO) in early summer 2006.⁶ Findings were inconclusive because of intermittent and below-capacity production. A study undertaken by BP, examining the Rumaila oil field in the south, found that water injection was not the correct approach to raising output and that artificial lift or gas injection would be preferable.

Almost a decade after the Saybolt report, oil field development was being held back because of the lack of water for injection at producing fields. Water flows in both the Tigris and Euphrates rivers are declining. Exxon Mobil reportedly will lead a joint water injection project in southern Iraq, aiming to produce between 10 million and 12 million barrels of water a day for injection at six oil fields.⁷

Iraq, confronted by UN sanctions and lacking advanced oil recovery technology, had seriously damaged these oil fields in trying to maximize production. The effects of that damage are still apparent, but whether this damage will affect long-term recovery levels is yet unanswered.

Not long after the Saybolt findings, the UN assembled a team of experts to travel to Iraq for the purpose of providing guidance to the secretary-general regarding funding for the oil industry. The team visited Iraq from March 18 to April 1, 2001. Team findings were not all that different from those of Saybolt:⁸

- There are currently no facilities for the accurate measurement of crude oil production,
- Peak oil output levels reached briefly in July 1990 were only achieved at the expense of long-term damage to the oil-bearing structures,
- There has been collateral damage to surface facilities operating beyond recommended (and safe) maintenance periods, and
- There are significant technical and infrastructure problems which, unless addressed, will inevitably result in the reduction of crude oil production from then current levels.

Not a particularly promising evaluation of the Iraq oil sector, but would another team visiting Iraq today produce a much different assessment of the past seven years?

Iraq after 2003

Many Americans and foreign observers believed that the war with Iraq was largely about oil. Alan Greenspan, former chairman of the Board of Governors of Federal Reserve System, said as much

6. Faleh al-Khayat, “Shell, BP Submit Key Field Studies to Iraq Government,” *Oilgram News*, October 31, 2006.

7. “Iraq Weekly Status Report, April 21, 2010,” Bureau of Near Eastern Affairs, U.S. Department of State.

8. “Letter (with Annex) dated 6 June 2001 from the Secretary-General addressed to the President of the Security Council,” Document no. S/2001/566.

in his 2007 book, but in an interview with the *Washington Post* he clarified that statement by commenting that securing global oil supplies was “not the administration’s motive.”⁹

During the two months prior to the March 2003 invasion, Iraq had produced an average of 2.8 million b/d of crude oil, exported 2 million b/d, and processed 690,000 b/d in refineries.¹⁰ In the months following the invasion, looting and attacks on pipelines sharply reduced both crude oil production and exports.

Indeed, looting and sabotage after the war ended brought considerable destruction to oil sector facilities whereas the war itself had imposed little damage. In reality, the Gulf War of 1990–1991 had been far more devastating in terms of destruction and production losses.

Some seven years later, the performance of the oil sector still lagged behind prewar levels, coming close but still disappointing. The struggle continues.

A large number of Iraqi senior oil officials had departed the country well before March 2003, but they still kept close contact with former colleagues and relished the thought of returning to a post-Saddam Iraq. How did they view the future—the so-called morning after?

There was no doubt in their minds as to how the future would unfold:

- There would be no occupation army.
- We Iraqis would govern.
- The oil sector would be ours, to develop as we envisaged.
- Our first task would be to restore law and order and to supply food and fuel to the population.

Prewar optimism had been running high in the United States and in Iraq. Former Iraqi oil officials were postulating that an oil production goal of 6 million b/d by 2010 was quite reasonable, and the longer-term future was viewed in even brighter terms. U.S. officials, perhaps as not as self-confident as the Iraqis, nonetheless forecast end-2003 output at 3 million b/d, with increases to 4–5 million b/d in the near term.

2003–2005

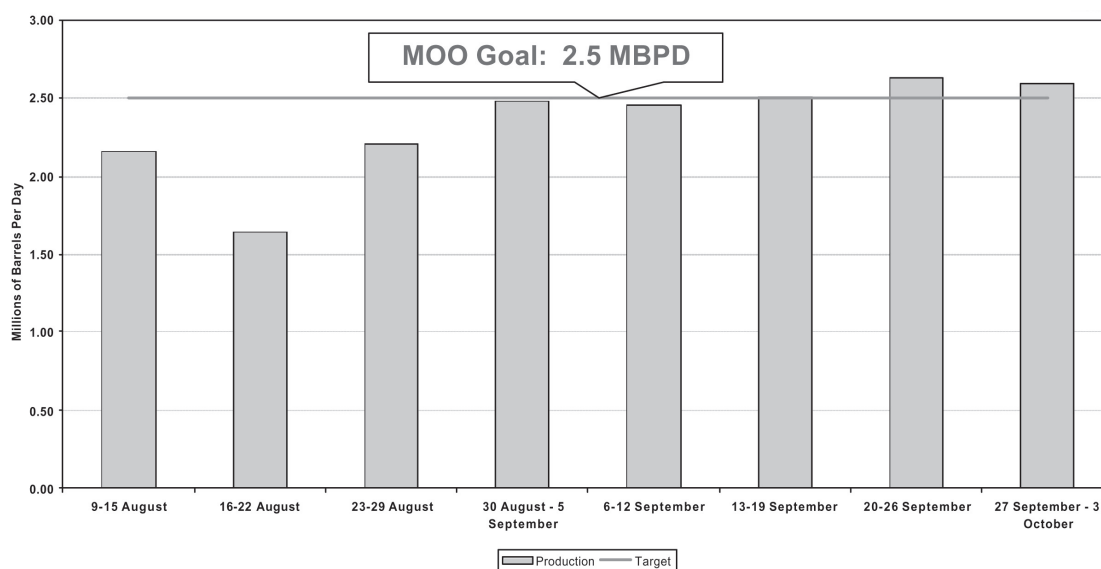
Estimates of Iraq crude oil production beginning with June 2003 and extending through December 2003 can be found in figure 3.1. As shown, output during this time period expanded rapidly, from roughly 500,000 b/d in June to probably 2.0–2.2 million b/d by December, depending on whether U.S. Department of State or Department of Energy estimates are accepted. The telling point in figure 3.1, however, is that peak production would soon be reached and never exceeded.

A snapshot of Iraqi crude oil production from August 2004 to end September–early October 2004 (figure 5.2) helps explain why the government was consistently placing the annual goal of 2.5 million b/d before the oil sector. Indeed, the MOO in December 2004 had set a long-term target of 2.8 to 3.0 million b/d, equal to prewar capacity, against a prewar peak of 2.5 million b/d obtained in March 2003.

9. Bob Woodward, “Greenspan: Ouster of Hussain Crucial for Oil Security,” *Washington Post*, September 17, 2007.

10. Faleh al-Khayat, “Iraq Oil Sector Struggles Five Years after Baghdad’s Fall,” *Oilgram News*, April 9, 2008.

Figure 5.2. Iraqi Crude Oil Production, August–September 2004 (million barrels per day)



Source: "Iraq Weekly Status Report, 06 October 2004," U.S. Department of State.

By the end of August–early September the goal of 2.5 million b/d had been reached, and by the end of September and into October the production of crude oil was exceeding the goal. It seemed reasonable then to consider that comparable gains in crude oil production could be anticipated for the coming months. But those expectations fell short, and the total of 2.594 million b/d of crude oil extracted during late September–early October 2004 has yet to be matched.

Had there been comparable gains in the export of crude oil and in the earnings from these sales? Yes and no. Crude oil exports had jumped from a bare 200,000 b/d in June 2003 to a peak of 1.825 million b/d by March 2004. Then a decline set in, with exports falling to 1.14 million b/d in August 2004 (figure 5.3), but with recovery to 1.703 million b/d in September.

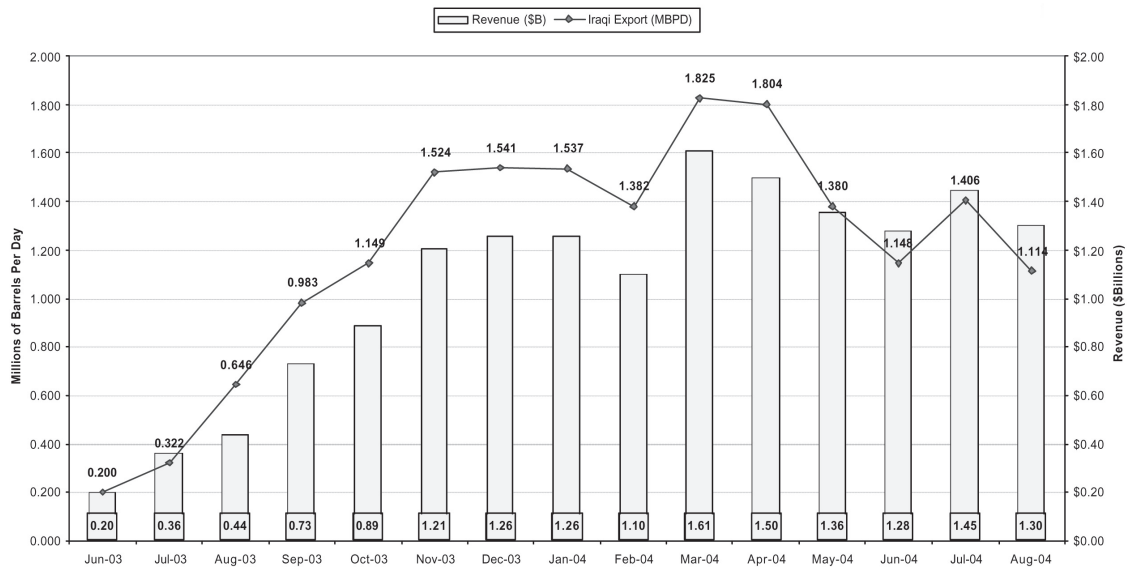
Crude oil output was holding relatively constant as 2004 was coming to a close but still falling considerably short of the 2.5 million b/d goal set for the year by the MOO (figure 5.4). Meanwhile, crude oil exports had been increasing during the months of July, August, and September but then fell off sharply during the remainder of the year. The fall in exports from 1.609 million b/d in September to 1.168 million b/d in November was particularly unsettling as was the loss of export earnings.

Looking at the year 2005 as a whole, in terms of oil production and export earnings, the last three months had to be particularly disappointing (figure 5.5). Clearly, the oil sector had hoped for a better showing in order to provide the basis for gains in the coming months.

2006

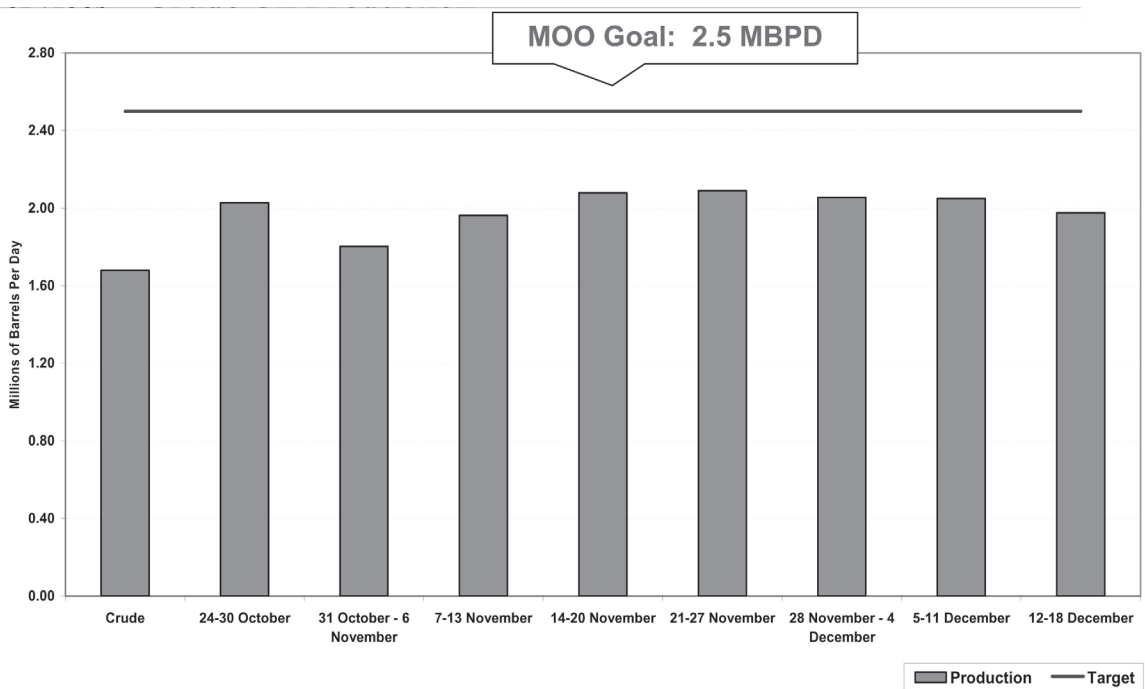
Crude oil exports fluctuated rather dramatically during 2006, from a low of 1.05 million b/d during January of that year to a peak of 1.68 million b/d in July and August, then declining to 1.44 million b/d during November and 1.48 million b/d during December (figure 5.6), repeating the

Figure 5.3. Iraqi Crude Oil Exports and Revenues, June 2003–August 2004



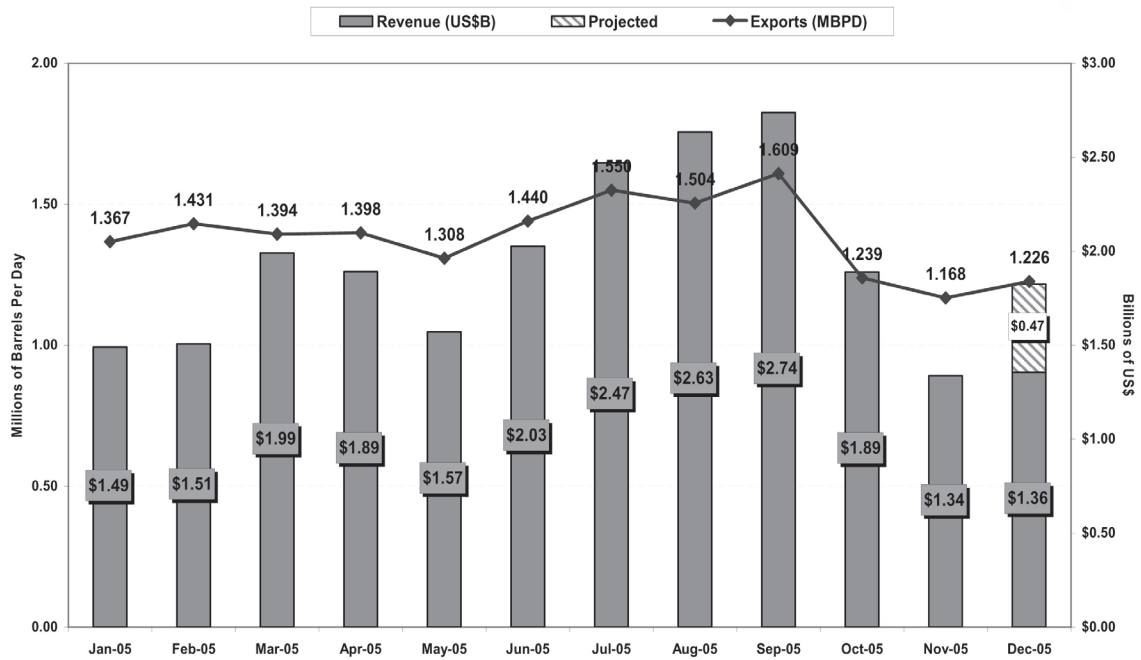
Source: "Iraq Weekly Status Report, 06 October 2004," U.S. Department of State.

Figure 5.4. Iraqi Crude Oil Production, late October 2005–mid-December 2005 (million barrels per day)



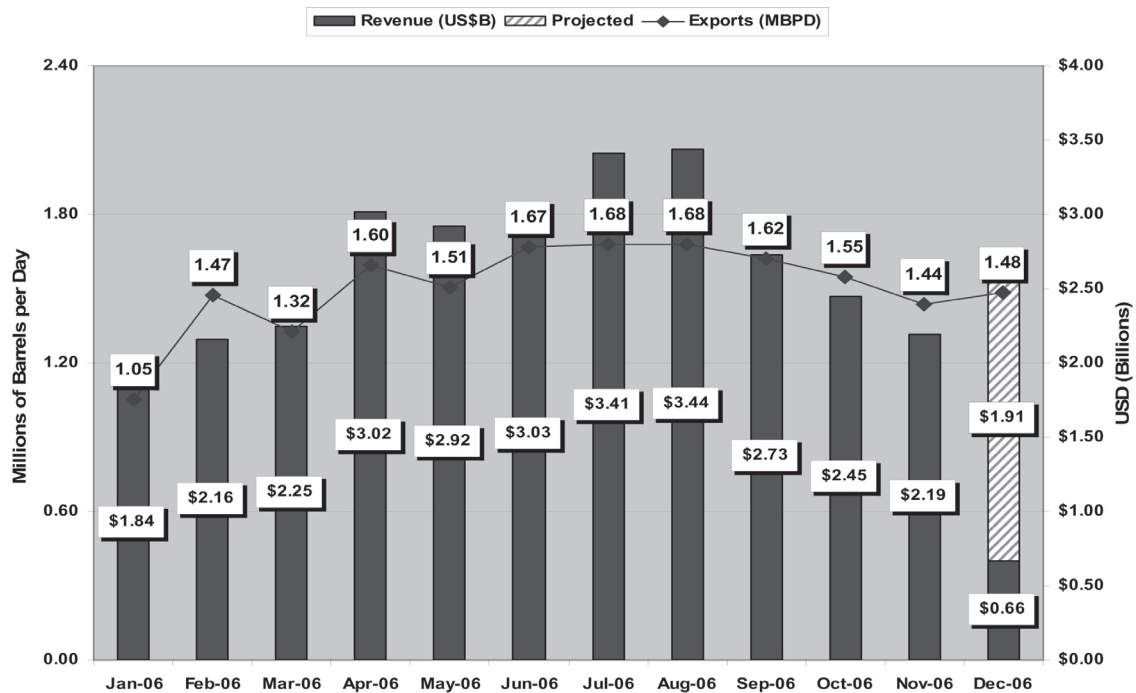
Source: "Iraq Weekly Status Report, December 28, 2005," Bureau of Near Eastern Affairs, U.S. Department of State.

Figure 5.5. Iraqi Crude Oil Exports and Financial Earnings, January–December 2005



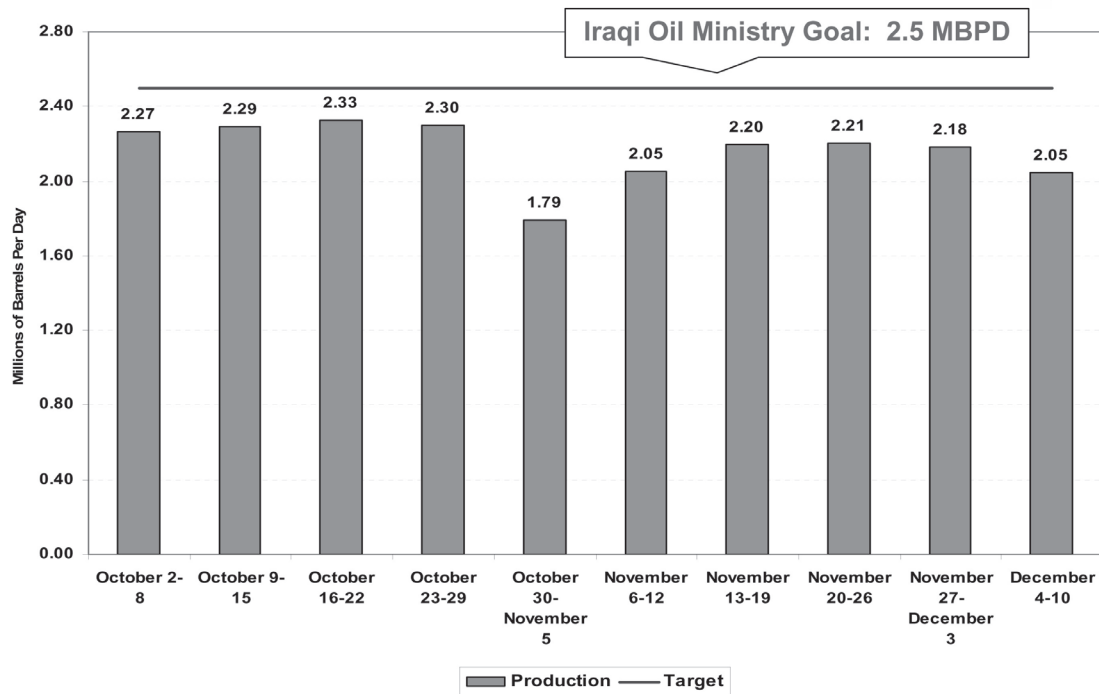
Source: "Iraq Weekly Status Report, December 28, 2005," Bureau of Near Eastern Affairs, U.S. Department of State.

Figure 5.6. Iraqi Oil Exports and Export Earnings, 2006



Source: "Iraq Weekly Status Report, December 13, 2006," Bureau of Near Eastern Affairs, U.S. Department of State.

Figure 5.7. Iraqi Crude Oil Production, Fourth Quarter 2006 (million barrels per day)



Source: "Iraq Weekly Status Report, December 13, 2006," Bureau of Near Eastern Affairs, U.S. Department of State.

pattern exhibited during 2005. What mattered most, however, were the export earnings, and these earnings showed a prospective 30 percent gain over 2005 revenues.

Earnings fluctuated during the year, peaking in July and August as did exports, but earnings still showed a substantial \$6.6 billion gain over 2005.

The Iraq MOO had set a crude oil production goal of 2.5 million b/d for 2006, too high for the producing sector to achieve given all the constraints that the oil industry continued to face. Production levels during the last quarter of 2006 were fairly typical for the year as a whole (figure 5.7), with declines reflecting pipeline sabotage and other subversive activity, although performance was slightly better than during the preceding two years.

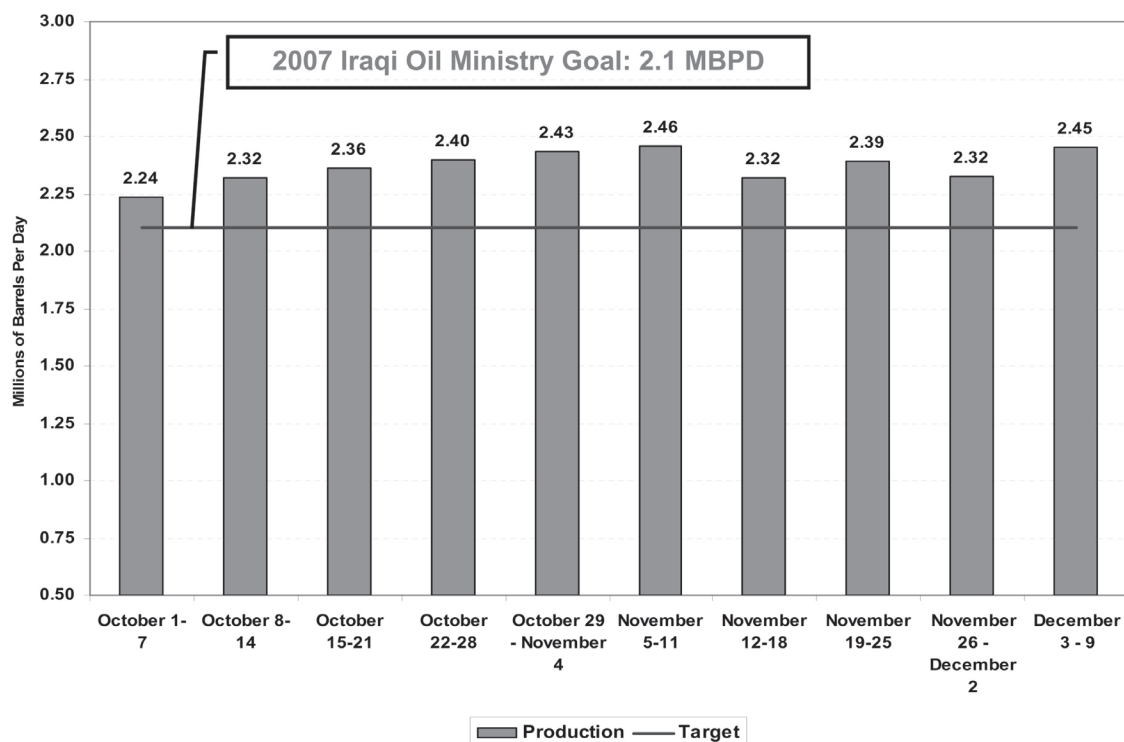
2007

The year 2007 was acceptable in terms of greater Iraqi involvement in civil and military matters although sectarian conflict still ravaged the country. Of particular importance, oil production hit a nearly four-year high in December, averaging 2.45 million b/d (figure 5.8),¹¹ although production fell back by some 230,000 b/d during January 2008. Moreover, the average output for 2007 reached 2.181 million b/d, marginally above the 2006 annual average. Oil exports in 2007 were placed at 1.651 million b/d.

The Iraqi MOO had learned from the 2006 experience that crude oil production levels should be realistic and not be set beyond the capabilities of the sector. Thus, the goal for 2007 reflected a

11. Faleh al-Khayat, "Iraqi Oil Output Hits New High in December," *Oilgram News*, January 8, 2008.

Figure 5.8. Iraqi Crude Oil Production, Fourth Quarter 2007 (million barrels per day)



Source: "Iraq Weekly Status Report, December 12, 2007," Bureau of Near Eastern Affairs, U.S. Department of State.

substantial downward revision from the 2006 level, to 2.1 million b/d. As a result, the production performance was able to meet and exceed the revised goal, giving confidence that the oil industry was now indeed making progress.

Was that a false signal? Perhaps it was. Two years later, during 2009, not much had changed in terms of oil production, export levels, and financial revenues from oil sales.

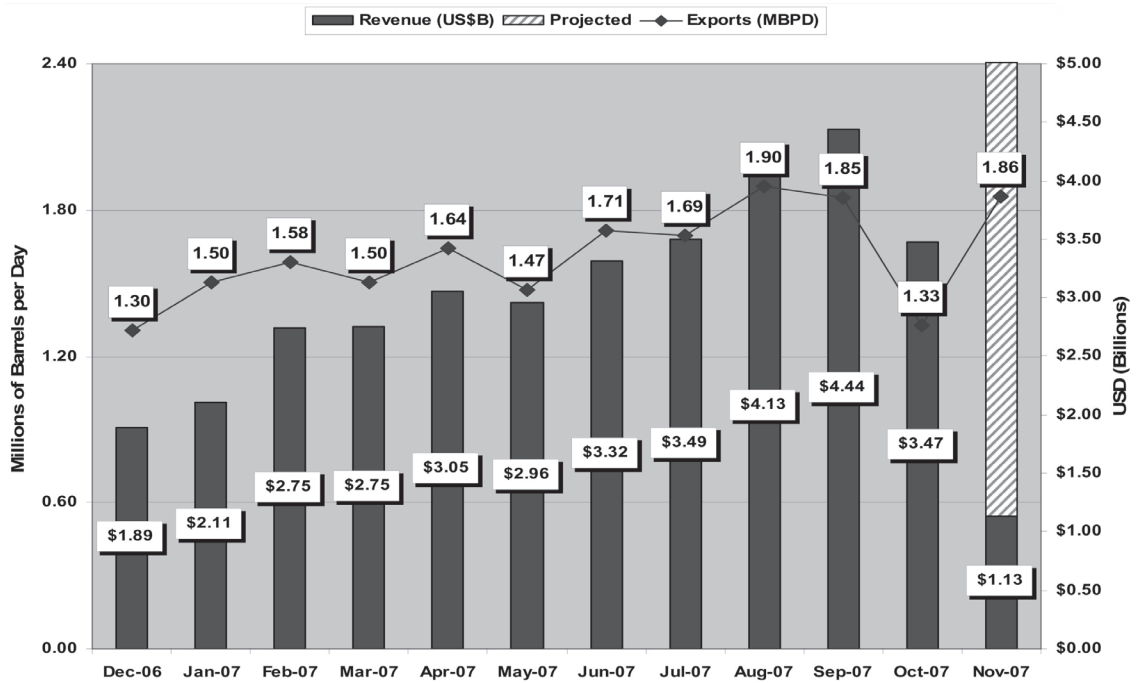
Petroleum product imports were still very much essential to daily Iraqi life. During the first week in December 2007, for example, 17 percent of diesel supplies were imported, 20 percent of kerosene, and, most important of all, 50 percent of gasoline. Despite these comparatively high import requirements, domestic crude oil production had been consistently exceeding the 2.1 million b/d goal set by the Iraqi MOO. The deciding factor had not been crude oil supply but, instead, adequate refining capacity. As a result, throughout most of 2007 crude oil exports had been able to show generally average monthly increases (figure 5.9).

Export earnings approached \$36 billion by early October, after having hit a peak in September, largely paralleling export levels.

2008-2009

By June 2008 Iraqi oil exports had surpassed 1.9 million b/d, and crude oil production was reported to exceed 2.5 million b/d for the second month running. Yet by August exports were down

Figure 5.9. Iraqi Crude Oil Exports and Oil Export Earnings, December 2006–November 2007



Source: "Iraq Weekly Status Report, December 12, 2007," Bureau of Near Eastern Affairs, U.S. Department of State.

139,000 b/d from the previous month, averaging 1.756 million b/d while production was 2.538 million b/d, down slightly from July.¹² The oil export slide continued, with deliveries of just 1.64 million b/d in September, marginally up to 1.694 million b/d in October on the basis of slightly higher crude oil production levels.

A time line from August 2008 through June 2009, depicting crude oil production and exports (figure 5.10), is fairly typical of shifts in production and exports.

Gains achieved in the earlier months were due largely to improved security along the northern pipelines running to the border with Turkey and to increased output from the northern and southern oil fields.¹³ The June 2008 production and export levels were presented as postwar highs, and Hussein al-Shahristani, the Iraqi oil minister, took the opportunity to set a production level of up to 2.9 million b/d by the end of 2008. Unfortunately, as the close of 2008 drew nearer, the oil minister's outlook for the year moderated to 2.7 million b/d.¹⁴ Even that reduced goal turned out to be an overstatement.

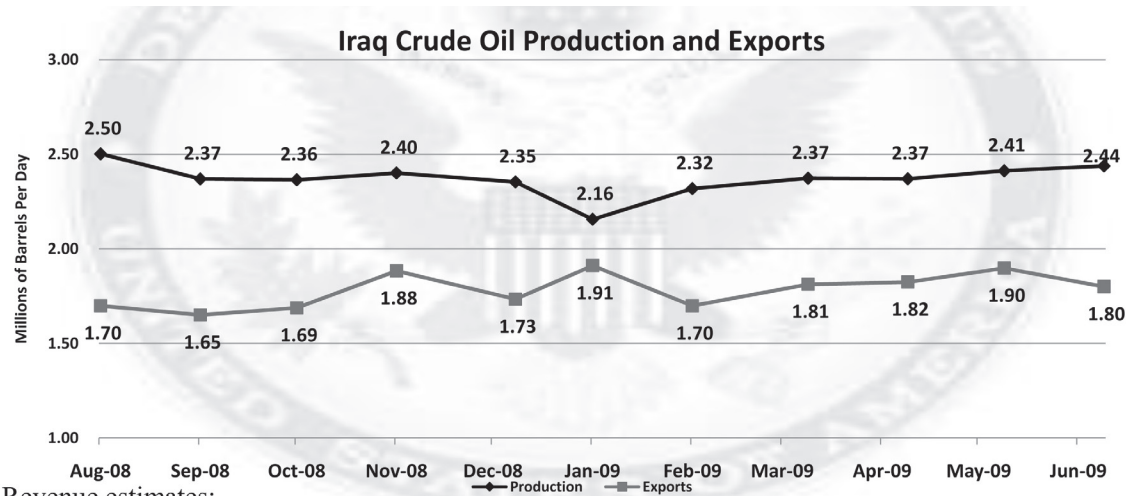
All was perceived not to be well. Additions to refining capacity meant more petroleum products for the home market but reduced volumes of crude oil for export. Large investments were

12. Faleh al-Khayat, "Iraqi Exports Fall to 2.54 Million b/d in August," *Oilgram News*, September 9, 2008. The headline is incorrect and should have referred to production, not exports.

13. Ahmed Rasheed, "Iraq Oil Output, Exports Hit Post-War High," Reuters (Baghdad), June 1, 2008.

14. Kate Dourian et al., "Iraq Halts Short-Term TSC Negotiations with Majors: Shahristani," *Oilgram News*, September 10, 2008.

Figure 5.10. Iraqi Crude Oil Production and Exports, August 2008–June 2009 (million barrels per day)



Revenue estimates:

2007: \$41.0 Billion

2008: \$61.9 Billion

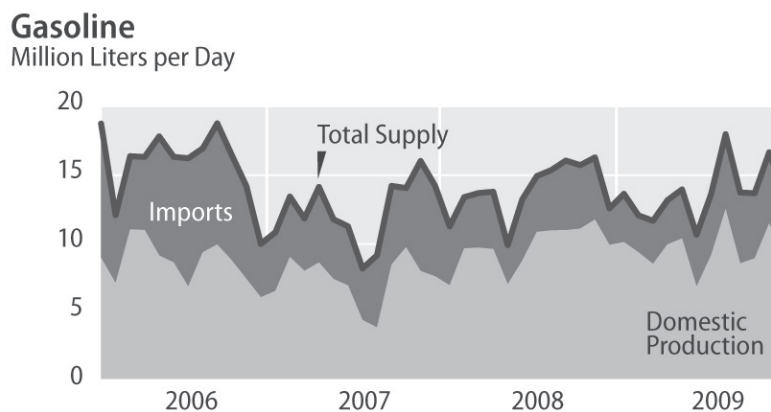
2009 (ytd): \$12.72 Billion

Source: "Iraq Weekly Status Report, June 10, 2009," Bureau of Near Eastern Affairs, U.S. Department of State.

required in the oil production sector, and pipelines were badly in need of repair and replacement. Iraq's aging oil infrastructure most likely can be blamed in large part for crude oil production and export levels holding relatively unchanged during the past two years.

Iraq had continued to rely on product imports during the period 2006–2009 to balance out supply and demand for all major liquid fuels, with gasoline imports providing the greater share. Approximately one-third of gasoline supply during the fourth quarter of 2009 originated outside Iraq (figure 5.11).

Figure 5.11. Iraqi Gasoline Imports as a Share of Total Supply, 2006–2009 (million liters per day)



Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report and Semiannual Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, January 30, 2010).

Table 5.1. Iraqi Oil Refining Capacity, by Year, 2004–2008

Year	Thousand barrels per day
2004	603.0
2005	603.0
2006	638.5
2007	638.5
2008	658.5

Source: *Annual Statistical Bulletin, 2008* (Vienna: Organization of the Petroleum Exporting Countries, 2009).

OPEC's *Annual Statistical Bulletin, 2008* provides a table listing world refining capacity, by country; table 5.1 shows the data for Iraq. An examination of these and other data leads unavoidably to a finding of completely inadequate and outdated refining capacity in Iraq.

Refining capacity in Iraq is divided among 11 facilities; one facility—Baiji—accounts for roughly one-half of the total, or 310,000 b/d. The Basrah and Daura refineries together provide 260,000 b/d of capacity, with the remainder of 88,000 b/d found in eight plants.

A separate table in the OPEC *Annual Statistical Bulletin, 2008* shows that these refineries yielded 491,000 b/d of refined products in 2004, but that yield declined to 453,200 b/d in 2009, a drop of almost 6 percent from 2008. In contrast, refining capacity had risen by 55,000 b/d during these same years. Thus, capacity utilization had been declining, forcing a continued reliance on product imports in varying degrees.

A third table of interest presented the output of refined products, by type, of individual OPEC-member countries for the years 2004–2008. Unfortunately, data for just one year—2008—was provided for Iraq (table 5.2).

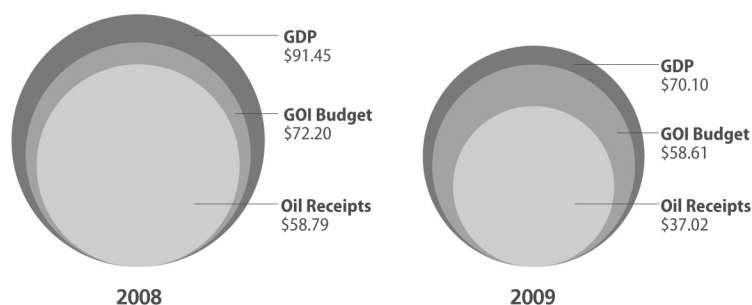
Table 5.2. Iraqi Refinery Yields, by Type of Product, 2008

Type of product	Thousand barrels per day
Gasoline	59.9
Kerosene	46.7
Distillates	83.7
Residuals	209.5
Other	53.3
Total	453.1

Source: *Annual Statistical Bulletin, 2008* (Vienna: Organization of the Petroleum Exporting Countries, 2009).

The relatively low gasoline yield together with the very high yield of residuals clearly underscores just how outdated Iraqi refineries really are and why Iraq has no choice but to continue to import gasoline and other products.

Figure 5.12. Iraqi Budget, Oil Receipts, and Gross Domestic Product, 2008 and 2009, (billions of dollars)



Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report and Semiannual Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, January 30, 2010).

OPEC statistics on Iraq's refineries do not compare particularly well with data included in the reports by the SIGIR. The latest SIGIR quarterly report references 13 refineries outside of the Kurdistan region and states that six of these refineries receive enough crude oil to operate at about 50 percent or higher utilization.¹⁵ First quarter 2010 statistics have Iraq's refineries as a whole operating at about 60 percent of capacity, which was placed at 790,000 b/d. That implies a charge to refining of 474,000 b/d. Unfortunately, imports to fill the gap between supply and demand are still required.

Accusations of corruption and smuggling continued to garner headlines. The oil law is waiting to be debated by the national legislature,¹⁶ and Baghdad was still visibly upset with the KRG for signing multiple oil exploration contracts with small Western firms.

Figure 5.12 displays the importance of oil revenue to Iraq during both 2008 and 2009. High crude oil prices during the first six months of 2008 benefited the country's gross domestic product (GDP) and the government's budget. For 2008, oil revenues provided slightly more than 81 percent of the government budget, but during 2009, given sharply reduced oil revenues because of lower oil prices, that share stood at only about 63 percent. GDP was more adversely affected, declining by a bit more than the full revenue loss.

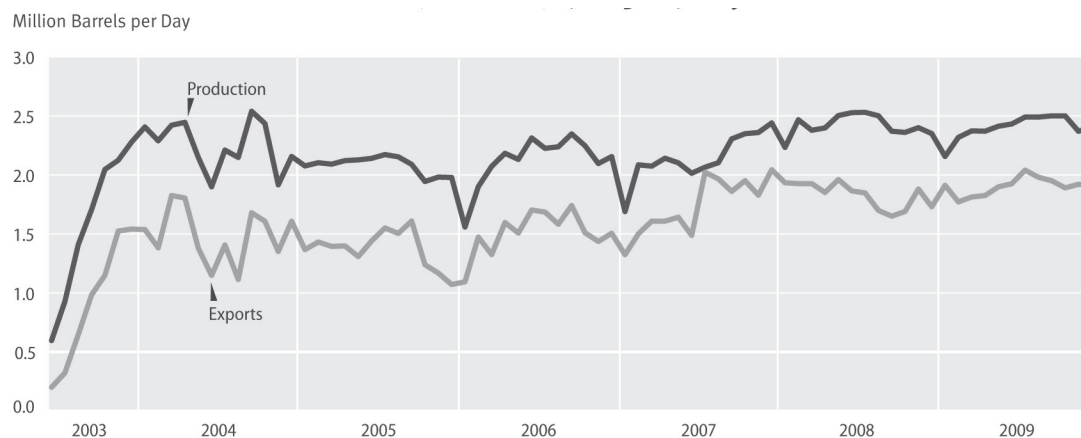
Crude oil production and exports during the time period from June 2003 through December 2009 are presented in figure 5.13.

In summary, this graphic tells the story of an oil sector that had recovered rather quickly during the early months following the U.S.-led invasion, then suffered because of internal conflict, took advantage of the high crude oil prices from mid-2007 through June 2008, then fell back again. This latter decline perhaps was due as much to the country's aging oil infrastructure as to any other issue.

15. Special Inspector General for Iraq Reconstruction (SIGIR), *Quarterly Report to the U.S. Congress* (Washington, D.C.: U.S. Government Printing Office, April 30, 2010).

16. Baghdad believes that existing legislation suffices because it is not offering production-sharing contracts but rather service or technical assistance arrangements; see Takeo Kumagai and Sabah Jerges, "Iraq Extends Japex Accord on Oil Field Assistance," *Oilgram News*, January 9, 2008.

Figure 5.13. Iraqi Monthly Crude Oil Production and Exports, June 2003–December 2009



Note: Numbers affected by rounding.

Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report and Semiannual Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, January 30, 2010).

The relation among the price of crude oil, Iraqi oil export receipts, and GDP is depicted in figure 5.14. There can be no doubting the importance of the financial income from oil exports, but it is really the price of a barrel of oil that carries the day, as it does for GDP as well.

What happens to Iraqi crude oil after it has been produced? The last quarter of 2009 can serve as an example:¹⁷

- Production: 2.42 million b/d,
- Exports: 1.91 million b/d,
- Burned in electric power plants: 56,000 b/d, and
- Charged to refining: 450 thousand b/d.

This simplified summary assumes no additions to or withdrawals from stocks, nor losses in the field, nor any loss of barrels through smuggling. It does make the important point that burning of crude as a fuel to generate electricity is still essential. The ability to be able to present a more detailed look at crude oil production and disposition is likely beyond the current capabilities of the oil sector.

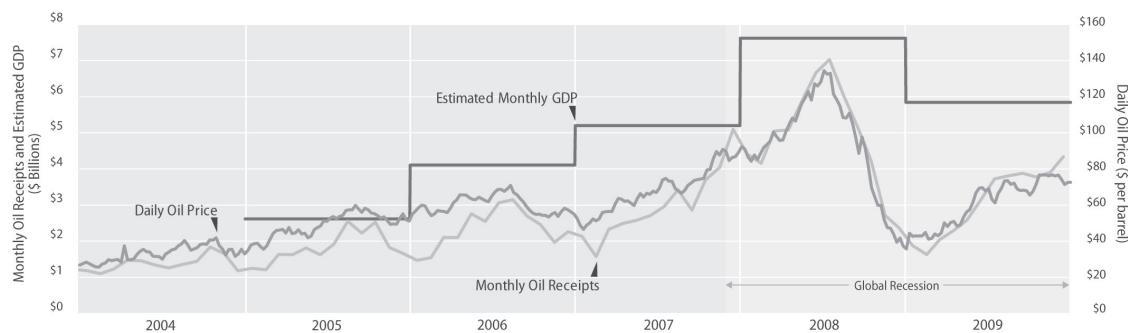
2010

The so-called morning after has had an extended run but has not lived up to the expectations of either the Iraqi people or the U.S. administration. After seven years the occupation army is still in place¹⁸ and the loss of life had become unacceptable to many groups in the U.S. population (the

17. SIGIR, *Quarterly Report to the U.S. Congress* (Washington, D.C.: U.S. Government Printing Office, January 30, 2010).

18. There are certain powers and limitations relative to an occupying power. Under the law of occupation, oil fields can be taken over and rebuilt, and production levels can be raised if the proceeds were used to accomplish the purported aim of the United States, that is, channeling the reserves to meet the people's

Figure 5.14. Relation among Price of Oil, Oil Receipts, and Gross Domestic Product in Iraq



Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report and Semiannual Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, January 30, 2010).

U.S. military death toll in the Iraq War had reached 4,392 by mid-April 2010), but just when the last soldier does depart, even though a timetable has been set for end-2011, is one of those questions authorities in the United States and Iraq must answer. Above all, Iraqis have not been able yet to solidify and govern the country as a whole.

Law and order for all practical purposes have not been completely restored, and there are groups still fighting among themselves, with agents of the Iraqi government, and against the foreign presence. Food supplies are unevenly distributed, fuel must be imported to meet domestic needs, and electricity and water supply continue to be erratic: not the kind of report card that the Iraqis and the United States had anticipated.

Iraq today must cope with an official unemployment rate of 28 percent although local analysts place the rate much higher. Some seven million people, or one-quarter of the country's population, are said to be living in poverty. The burden of corruption is pervasive. Transparency International in its 2009 Corruption Index placed Iraq in 167th place, above only Sudan, Burma, Afghanistan, and Somalia.¹⁹ It cannot be said that the country faces a truly bright future.

There was some cause for concern mixed with a degree of satisfaction as the results of oil exports during February 2010 were released. Oil exports reportedly had reached the highest level in 20 years; nevertheless, revenues dropped slightly that month because of slightly lower prices. Yet again, the question of monitoring oil production and exports was raised, this time by the UN. In response, the government of Iraq in early April 2010 informed the UN Security Council that it planned to install by the end of 2010 a metering system to measure production and exports and as well as name an international monitor to ensure that all export-derived revenue was accounted for.²⁰

needs. Proceeds can also be used to cover the costs of the occupation but not of the war. The occupation ends when an agreement has been signed between the parties at conflict that brings the conflict to an end, or foreign military troops have been withdrawn or are no longer exerting control over the population. In the interim, the drilling of new wells in a military-occupied territory has been deemed unlawful by the U.S. Department of State.

19. "Iraqi Officials Suspended for Not Disclosing Personal Finances," Radio Free Europe/Radio Liberty, April 2, 2010.

20. Bill Varner, "Iraq to Take Control of Oil Revenues by End of 2010, UN Says," Bloomberg, April 6, 2010.

Given the anticipated increases in oil production deriving from implementation of contracts signed during the two recently completed bidding rounds, how might OPEC react? Iraq has not been subjected to OPEC production quotas, but would that change as Iraqi production reached a certain level? Minister of Oil Shahrastani said in mid-March 2010 that he did not think Iraq would be subject to OPEC quotas until it had reached an output of at least 4 million b/d, and he projected that would happen by 2012.²¹ He added that Iraq expects to produce 12 million b/d within seven years (that is, by 2017), simply assuming that all the production plateau commitments would have been met by that time.

The oil minister probably stands alone in making that particular assessment. Other Iraqi officials say they plan to add 10 million b/d of producing capacity by 2017.²² There is a tremendous difference between actual production levels and the capacity to produce. Most market followers are far less optimistic, given the long list of issues that face the developers.

What are those issues? The list includes shortages of qualified oil field personnel, drilling rigs and associated equipment, pipelines, and roads plus adequate and reliable supplies of electricity and water. Yet, given the nature of the service contracts, the foreign companies should be expected to put forward their very best efforts, to the extent they can.

It should be emphasized that, in its dealings with foreign oil companies, Iraq clearly can negotiate from a position of strength. It sits on huge proven oil reserves, production costs are low, the crude oils are of generally high quality, and there is relatively easy access to ports of export.²³ All the risks attendant to investing in the oil production sector thus are “aboveground” and not below ground.

An oil law has been drafted and debated, but passage still remains uncertain. As the two successful bidding rounds have demonstrated, the allure of oil is seemingly all powerful, at least for those IOCs and NOCs that may view themselves as less risk averse than the competition.

There was little progress in crude oil production and exports during the second half of 2009 and into May 2010 (figure 5.15). To illustrate, oil production in March was placed at 2.25 million b/d, down 180,000 b/d compared with June 2009. Similarly, exports during the same time period had declined by 220,000 b/d, to 1.8 million b/d. By May, production had returned to February levels, whereas exports had jumped considerably and were running above the trend line for August–April.

The MOO was able to note that oil exports during February 2010 had reached their highest level—2.05 million b/d—since Saddam Hussein invaded Kuwait in 1990, a level that was slightly exceeded in early May. The MOO also stated that an export goal of 2.15 million b/d had been set for 2010, seemingly reasonable but yet calling for an average gain that so far in 2010 has been beyond the oil sector’s reach.

For the month of March 2010 as a whole, crude oil output is thought to have declined by 85,000 b/d compared with February, to 2.365 million b/d.²⁴ Despite that decline, the monthly crude oil production curve is now much smoother than in earlier years when infrastructure

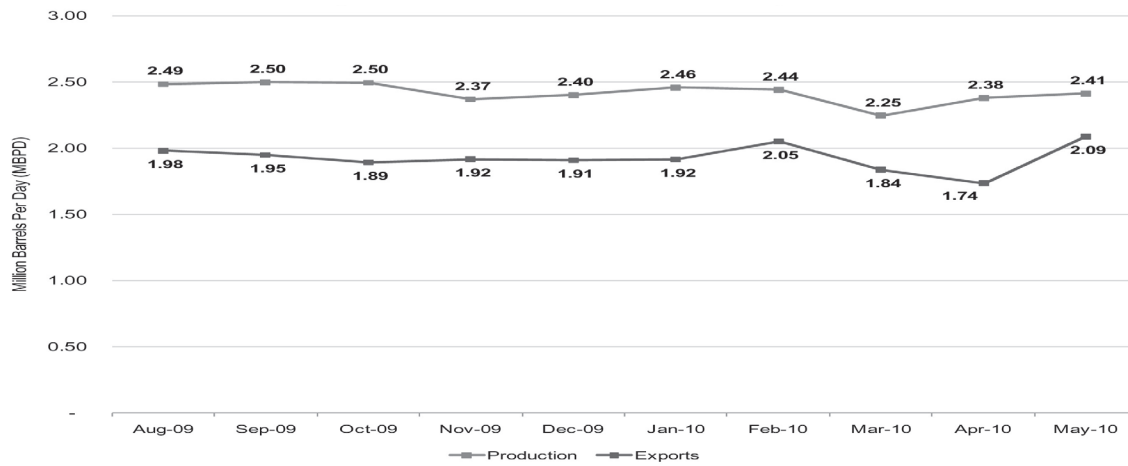
21. “Iraq Status Report, March 24, 2010,” Bureau of Near Eastern Affairs, U.S. Department of State.

22. Russell Gold, “BP Begins Big Push to Revive Iraq’s Oil,” *Wall Street Journal*, March 31, 2010.

23. That is, when the pipelines have not been put out of commission by insurgents.

24. “OPEC March Crude Output Down 30,000 Bbl/day to 29.205 Mln,” Bloomberg, March 31, 2010. This is a more up-to-date source than the SIGIR report.

Figure 5.15. Iraqi Crude Oil Production and Exports, August 2009–May 2010 (million barrels per day)



Source: "Iraq Status Report, May 12, 2010," Bureau of Near Eastern Affairs, U.S. Department of State.

constraints, electricity shortages, and even sabotage worked to reduce growth. Indeed, oil production had recovered to 2.4 million b/d by April 10. Unfortunately, oil exports declined sharply after February 10, dropping during the next two months by 340,000 b/d just as per barrel prices were rising.

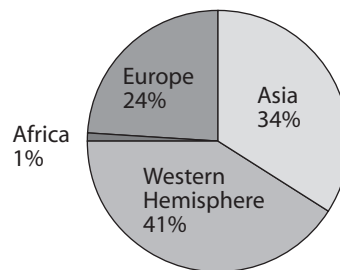
It should be emphasized that, despite the sums invested during the past seven years, current levels of crude oil production and producing capacities are really no greater than what they were before March 2003. Perhaps less worrisome, domestic oil demand levels still hold roughly unchanged at 600,000 b/d. Any substantial growth in demand would today have to be met by increasing product imports.

6

OIL EXPORTS: A CLOSER LOOK

Crude oil production and export or import levels are always important indicators of any country's economic well-being. For Iraq, oil exports are major contributors to funding government operations. The preceding chapter tracks these exports and their financial earnings since at least the U.S.-led invasion in 2003. Where have these oil exports been directed? Figure 6.1 offers a general answer for 2008.

Figure 6.1. Iraqi Crude Oil Exports, by General Destination, 2008 (as a percentage of total)



Source: "Iraq: Oil Exports" U.S. Energy Information Administration, 2008, www.eia.doe.gov/cabs/Iraq/OilExports.html.

Although figure 6.1 does provide some sense of where the oil exports end up, it does not tell whether the problem facing all oil-exporting countries—finding energy security through diversity of markets—has been solved in Iraq's case. Has Iraq been successful? Table 6.1 on the next page attempts to fill that gap.

Iraq seems content with the geographic distribution of its oil exports, and the issue of energy security and diversification rarely, if ever, comes up. Iraq has other issues of more pressing concern.

Table 6.1. Iraqi Exports of Crude Oil, by Country of Destination, 2008 (thousand barrels per day)

Importer	Destination
North America	758.9
United States	627.0
Eastern Europe	109.7
Western Europe	392.3
France	60.6
Germany	3.6
Italy	178.1
Netherlands	44.1
Spain	36.8
Middle East	2.5
Asia and Pacific	591.8
Japan	42.8
Total world	1,855.2

Source: *Annual Statistical Bulletin, 2008* (Vienna: Organization of the Petroleum Exporting Countries, 2009). These statistics may not always equate to the statistics presented in chapter 5 because OPEC has its own method of reporting. Nonetheless, there were 549,000 b/d exported to unidentified Asia and Pacific buyers during 2008, and it would be useful to know who they were, especially because only 42,800 b/d could be identified as going to Japan.

7

OIL SERVICE CONTRACTS AND OIL COMPANY NEGOTIATIONS

The Iraqi government, recognizing that the draft oil law had to be put to work, passed or not, and anxious to raise oil production and export levels, decided in early February 2008 to open up to foreign investment.¹ The government chose not to offer PSAs but rather TSAs, a form of service contract much simpler in detail and much shorter in time than a PSA. Undoubtedly the TSA was chosen in large part because of Iraqis' frustration deriving from the inability to achieve marked gains in crude oil production and that, in turn, meant missing out on the increasing market price of a barrel of crude oil. Also, the government was aware that PSAs would not play well with the Iraqi citizenry.

Do not dismiss, however, the somewhat general feeling among Iraqis that the invasion of Iraq was really all about oil and that now the time had come for foreign oil companies to collect.

Interested companies likely understood that there was domestic opposition to PSAs and foreign oil companies in general. It had been thought that these TSA contracts would be signed by the end of June 2008, but that time passed by without any success. Negotiations had not been going well, companies wanted at least partial pay in oil plus certain other advantages, and there was always the chance there would be no signatures at all.²

Nevertheless, just one company—Anadarko—departed, and the remainder were still at the table.

The contracts to be offered were no-bid, somewhat unusual for the oil industry, and would be only one year in length so as not to conflict with the longer-term contracts to be offered later. The possibility existed that these short-run TSAs could become redundant if contract signing continued to be delayed.

Winners, if any, could look forward to being paid in cash for their services and not in oil, but nonetheless they would be viewed as having a leg up over their competition. It is also likely that the winners would minimize exposure of their employees to security threats and would employ Iraqi subcontractors wherever possible.

What did Iraq expect in return? The companies chosen would be requested to raise the output from already producing fields by 100,000 b/d from each of the six fields being offered, with a commitment to invest \$500 million in each. The upcoming licensing round, involving long-term contracts, could build on that production level. But those additions to production were not likely to be reached before mid-2010 at the earliest.

1. Roula Khalaf et al., "Iraq Sidesteps Oil Law Impasse," *Financial Times*, February 6, 2008.

2. Gina Chon, "Iraq, Foreign Companies Stalled in Oil Negotiations," *Wall Street Journal*, August 13, 2008.

Negotiations were brought to an end when, on September 9, Oil Minister Shahrastani announced the termination of discussions, citing an overlap with full-field development contracts that would go into effect in mid-2009.³

The longer-term bidding round was launched at the end of June 2008; it involved development of six oil fields and two gas fields⁴ and 35 companies eager for a position in the Iraqi oil sector.⁵ Iraqi government officials hoped that, with foreign-company involvement, crude oil output could add 1.5 million b/d by 2013 to the 2.9 million b/d goal of 2008. Yet the absence of a hydrocarbons law had to underlie the reluctance of foreign oil companies to make a commitment.

The signing of the 20-year service contracts was expected at the end of 2009.⁶ Each foreign company would be required to have an Iraqi partner and to hire Iraqi workers. The latter requirement would not likely pose much of an early issue, given that these foreign companies would be very much aware of potential threats to the security of their personnel and would want to minimize exposure. Still, the issue quickly became one of shortages of skilled Iraqi labor.

More than that, the prospect of Iraq breaking into three parts—Kurds in the north, Sunnis in the center, and Shiites in the south—if passage of the oil law were to be delayed beyond reason and if the election scheduled for March 7, 2010, were contested because of fraud, had to concern friend and foe. Unfortunately, the fact is that there is oil in the north and in the south but not in the center, and that leaves Baghdad in a vulnerable position.

The Iraqi oil minister, Hussein al-Shahrastani, building on the confidence generated by growth in oil production as 2007 came to a close, said that he expected the increment in oil production to reach as much as 400,000 b/d during 2008.⁷ Part of this confidence was attributed to improved security in the oil sector.

Later, the oil minister hoped that Iraq would be producing 2.9 million b/d as 2008 came to a close.⁸ Did this assume that the TSAs would be providing the basis for growth? No, Iraq was confident that a safer environment would allow the anticipated growth and that TSAs might not be needed if they were not signed, and soon. Shahrastani was again sorely disappointed as crude oil output considerably fell short of that goal.

In a press interview on the sidelines of the World Economic Forum in Davos, Minister Shahrastani noted in addition that “we expect to take Iraq to between 6 and 8 million barrels a day in about 10 to 12 years.”⁹ In other words: don’t expect such production levels until near the close of the next decade at the earliest.

The first bidding round was held in June 2009 and was largely considered a failure. Only one bid was accepted, but that bid involved Rumaila, Iraq’s largest oil field, with 17.8 billion tons of proven reserves and currently producing 1 million b/d.

3. Ernesto Londono, “U.S. Envoy Urges Iraqi Leaders to Look beyond Personal Ambitions,” *Washington Post*, May 3, 2010.

4. The six fields are West Qurna, Rumaila, Kirkuk, Zubair, Maysan, and Bai Hassan; see Sudarsan Rachavan and Steven Mufson, “Iraq Opens Oil Fields to Global Bidding,” *Washington Post*, June 30, 2008.

5. Sabah Jerges, “Iraq Launches First Post-War Upstream Licensing Round,” *Oilgram News*, July 1, 2008.

6. Faleh al-Khayat, “Iraq Cuts Interim Contract Term to One Year,” *Oilgram News*, July 2, 2008.

7. Jane Barnett and Alex Lawler, “Iraq Sees Higher Oil Output in 2008,” *Guardian*, January 25, 2008.

8. “Iraq Sets Crude Oil Production Target of 2.9 Million b/d by Year End,” *Oilgram News*, April 23, 2008.

9. “AP Interview: Iraqi Oil Minister Says Best Bid Will Prevail in Race for Unexplored Fields,” PR-Inside.com, January 25, 2008.

Table 7.1. Iraq: Summary of the Two Oil Field Bidding Rounds

OIL FIELD	BIDDING CONSORTIUM ^a	PROVED RESERVES (BILLION BARRELS)	CURRENT PRODUCTION (BARRELS/DAY)	REMUNERATION FEE (\$/BARREL)	PLATEAU PRODUCTION COMMITMENT (BARRELS/DAY)	PRODUCTION PLATEAU PERIOD (YEARS)	SIGNATURE BONUS ^b (\$ MILLIONS)
Project Round 1							
Rumaila	BP (51%), CNPC (49%)	17.8	1,000,000	2.00	2,850,000	7	500
West Qurna 1	ExxonMobil (80%), Shell (20%)	8.6	270,000	1.90	2,325,000	7	400
Zubair	Eni (44%), Oxy (31%), Kogas (25%)	4	205,000	2.00	1,200,000	7	300
Project Round 2							
Majnoon	Shell (60%), Petronas (40%)	12.6	55,000	1.39	1,800,000	10	150
Halfaya	CNPC (50%), Petronas (25%), Total (25%)	4.1	3,000	1.40	535,000	13	150
Qaiyarah	Sonangol (100%)	0.8	2,000	5.00	120,000	9	100
West Qurna 2	Lukoil (75%), Statoil (25%)	12.9	0	1.15	1,800,000	13	150
Badra	Gazprom (40%), Kogas (30%), Petronas (20%), TPAO (10%)	0.1	0	5.50	170,000	7	100
Garraf	Petronas (60%), Japex (40%)	0.9	0	1.49	230,000	13	100
Najma	Sonangol (100%)	0.9	0	6.00	110,000	9	100
Total		62.7	1,535,000		11,140,000		2,050

Note: Numbers affected by rounding.

^a Key to acronyms and national affiliation: BP = Royal British Petroleum (United Kingdom), CNPC = China National Petroleum Corporation (China), ExxonMobil (United States), Shell = Royal Dutch Shell (United Kingdom), Eni (Italy), Oxy = Occidental Petroleum (United States), Kogas = Korea Gas Corporation (Korea), Petronas (Malaysia), Total (France), Sonangol (Angola), Lukoil (Russia), Statoil (Norway), Gazprom (Russia), TPAO = Turkish Petroleum Corporation (Turkey), Japex = Japan Petroleum Exploration Company (Japan).

^b A signature bonus is a non-recoverable sum of money that the winning bidder agrees to pay to the GOI upon award of the contract.

Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report and Semiannual Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, January 30, 2010).

Original plans had called for two gas fields to be offered during the first bidding round, but no bids were offered. The second bidding round was to have offered two more gas fields but did not. Another attempt will be made in September 2010 when three gas fields—Akkas, Mansuriya, and Siba—will be offered. These are nonassociated natural gas fields, the first two of which had been offered in the first round and the third had been removed from the second bid round. The MOO has indicated that it wants to produce natural gas for use in the generation of electricity.

The second bidding round was held on December 11–12, 2009, but before that round began, two more oil field bids had been accepted, one for the West Qurna 1 field and the second for the Zubair field. Results of the two bidding rounds are set out in table 7.1.

In mid-May 2010 a Chinese consortium agreed to develop three oil fields in the south of Iraq.¹⁰ These three oil fields, known as the Maysan fields, had been offered during the first bidding round, but there had been no bidders. Current total production from all three averages 100,000 b/d, and the TSA calls for production to average 450,000 b/d within six years. For its efforts the consortium will receive \$2.30 for every barrel produced above the current level plus 10 percent.

In the early days following the successful conclusion of the bidding rounds, there was considerable speculation surrounding those levels of crude oil production that might be reached during the coming years. Some individuals were postulating that Iraqi crude oil production could be exceeding that of Saudi Arabia.

As shown, current production of the 10 fields made available stood at 1.535 million b/d. Of those 10 fields, 4 were not in production. The producing potential of all 10 was placed at a

10. “Chinese-Turkish Consortium Seals Iraq Oil Deal,” *Daily Star*, May 18, 2010.

staggering 11.140 million b/d. If that potential were to be reached, the impact on world oil supply and pricing would be unprecedented.

Is it realistic, however, to assume that the commitment to plateau production will be achieved in this decade? Reality began to intrude as the media pointed out all those obstacles that lay ahead:

- Difficulties providing adequate security;
- Lack of supporting infrastructure, including pipelines, export terminals, and roads;
- Political uncertainties; and
- Training adequate numbers of Iraqi labor.

Oil service companies such as Schlumberger, Halliburton, and others are gearing up to take full advantage of the business opportunities offered by the successful two bidding rounds. At the same time these opportunities are constrained by the obstacles noted above, and, moreover, it is unlikely that trained and experienced local labor will be sufficient in number to fill the huge gap that will exist.

What should have been helpful to Iraq as a whole had been the expectation of the KRG that it would begin exporting 250,000 b/d from northern Iraq at some time during 2009.¹¹ That expectation was a rather large leap forward, considering current production in the KRG north then was a bare 10,000 b/d, with no access to the Iraqi oil export pipeline system because the PSAs have been based on the KRG's own law. The sticking point has been the lack of a mechanism to pay those foreign oil companies working in the province. It remains for Baghdad to set that mechanism in place.

The MOO had taken great pride in announcing that Iraqi oil exports during February 2010 had reached their highest level—2.069 million b/d—since the invasion by Saddam Hussein of Kuwait in 1990.¹² Not only that, but that level was regarded as a step toward reaching the goal of exporting 2.15 million b/d during 2010. That is a comparatively modest goal and should be regarded as achievable if oil pipelines remain in operation and particularly if the election of March 7, 2010, does not lead to internal bickering and sectoral strife.

In the meantime, passage of the oil bill still remains thwarted and in limbo because of disagreements over oil field control and the allocation of oil revenues.

11. Kate Dourian et al., "Kurdistan Expects Crude Exports Next Year," *Oilgram News*, July 3, 2008.

12. "Iraq Status Report, March 10, 2010," Bureau of Near Eastern Affairs, U.S. Department of State.

8

ABOVEGROUND RISKS

What are those aboveground risks that embrace Iraq? Nothing more—or less—than looting, sabotage, smuggling and thievery, corruption,¹ and personnel security plus a general lawlessness in a society where problems can be, and have been, easily solved at the end of a gun, by an improvised explosive device (the dreaded IED) or by a car bomb. Corruption in the Iraqi oil sector is (still) pervasive, according to U.S. officials,² with smuggling or diversion of crude oil and petroleum products a continuing and almost historic problem.

There is no generally accepted estimate of the volumes of crude oil and petroleum products smuggled out to neighboring countries. Differing methodologies suggest differing answers, ranging from 20,000 b/d to 500,000 b/d. No good reason has been offered as to why, after seven years of occupation, meters to measure crude oil flows have not been installed or, if they have, are not calibrated, repaired if broken, or replaced.

Two possible explanations have been offered: that the project has been delayed by bureaucracy, or that vested interests benefit from the lack of metering, that is, smugglers or corrupt officials or both have prevented the project from moving forward.³

If Iraq does not know precisely how much crude oil is moving at any given time, then that makes the smugglers' job much easier.

U.S. military officials believe that at least one-third, and possibly much more, of the fuel from Iraq's largest oil refinery—Baiji—is diverted to the black market, with a portion of the earnings helping fund the insurgents.⁴ In fact, money, far more than ideology, is a crucial motivation for a majority of Sunni insurgents. But there are more contributors to insurgent funding than just the Baiji refinery. Literally nothing is exempt.

How much smuggling is taking place? How much is it costing the country? Of course what are not available are precise data—just estimates—but the income loss is severe. Losses from the Baiji refinery alone, with a capacity of 300,000 b/d, may reach \$2 billion per year.⁵ It is thought that, overall, smuggling denies Iraq as much as \$5 billion annually.

1. Corruption is apparently far worse than had been thought. A senior State Department official recently described corruption in Iraq as “real, endemic, and pernicious.” See Karen DeYoung and Walter Pincus, “Corruption in Iraq ‘Pernicious,’ State Dept. Official Says,” *Washington Post*, October 16, 2007.

2. Kate Dourian, “Pipeline Exclusion Zone Boosts Kirkuk Oil Exports,” *Oilgram News*, July 29, 2008.

3. Pratap Chatterjee, “Mystery of the Missing Meters: Accounting for Iraq’s Oil Revenue,” CorpWatch, March 22, 2007, www.corpwatch.org/article.php?id=14427&printsafe=1.

4. Richard A. Oppel Jr., “Iraq’s Insurgency Runs on Stolen Oil Profits,” *New York Times*, March 16, 2008.

5. Yochi J. Dreazen, “U.S., Iraq Launch Campaign to Cut Oil Smuggling,” *Wall Street Journal*, March 15, 2007.

Domestically produced petroleum products such as gasoline, stolen from pipelines or refineries, are sold at black market prices to local consumers or smuggled out of the country in tank trucks, all for sizable financial gain. Other than what local refineries provide, gasoline is supplied to Iraq in two ways, either smuggled in or purchased from neighboring countries in an attempt to satisfy domestic needs.

Heavily subsidized fuel costs in Iraq lead not only to artificial increases in consumption but also to the need to import fuel to meet this higher demand. A contract had been let to KBR, Inc., prior to the beginning of the war to truck in gasoline from Kuwait. The price of the gasoline when delivered had been set by the Iraqi government at \$1.13 per gallon; the delivered cost later was determined to be about \$8 per gallon.⁶

The need to import gasoline, for example, may also be charged to refineries unable to keep up with demand, with those same cheap prices inviting smugglers to respond to markets outside Iraq where prices are higher.

Consumption of fuel by the U.S. military has been astronomical. The average U.S. GI uses about 20.5 gallons of fuel every day, translating into 3 million gallons per day for Operation Iraqi Freedom.⁷ The bulk of the fuel used by the U.S. military must be trucked in from Kuwait. In 2007 alone the U.S. military in Iraq burned more than 1.1 billion gallons of fuel.

The three major operating refineries in Iraq have a combined capacity of between 600,000 b/d and 700,000 b/d, but operating levels are low. For 2007, funds available to cover the cost of importing petroleum products were doubled to in excess of \$400 million per month, implying an annual bill of \$5 billion.

Another aboveground risk requires particular attention. That risk is a serious problem—if not more so—and has to do with the millions of pieces of unexploded ordnance left over from the Iran-Iraq War during the years 1980–1988. Does Iraq have the responsibility for finding and removing these explosives? Iraqi authorities have reported that there are more than 27 million land mines and unexploded ordnance awaiting recovery, with the larger number to be found in the border oil fields.

These aboveground risks also combine to question to what degree the production data can be accepted. There were a reported 469 attacks on Iraqi pipelines, oil installations, and oil personnel from mid-June 2003 through the end of March 2008.⁸ Attacks against the oil pipeline network had been averaging one or two per week and at times took the Kirkuk-Ceyhan crude oil export pipeline out of service.

Although most of the attacks had been concentrated in the north, sporadic attacks in the south underscored local dissatisfaction with the general state of affairs. It is virtually impossible to protect any pipeline along its entire route, particularly if insurgents have inside information about how and where the line is being protected.

6. James Glanz, “Cost of Taking Fuel to Iraq Is Questioned in New Audit,” *New York Times*, November 7, 2006.

7. Robert Bryce, “Oil for War,” *American Conservative*, March 10, 2008.

8. “Iraq Pipeline Watch,” Institute for the Analysis of Global Security, www.iags.org/iraqpipelinewatch.htm. With the posting of an oil pipeline attack on March 27, 2008, IAGS noted that the pipeline watch was now being updated only sporadically.

Major foreign oil companies are sensitive to all these risks, and the listing of risks should be expanded to include the as yet unavailability of a petroleum law.⁹ Oil companies can be very patient and content to bide their time, yet that patience is not endless. If the prospect of passage of an oil law¹⁰ does not improve reasonably soon, it can be expected that someone will break rank. Small independent companies have responded in the north but no large international companies that were still unwilling to jeopardize their future in Iraq by upsetting Baghdad.

The much-delayed oil law has remained stuck in the political backwater of Iraq's legislature, the Council of Representatives, with allocations of oil-derived funds perhaps a key divisive issue. If it were so important to get the draft law passed, as it appears to be, then why the holdup? Disputes between the central government and the KRG over the latter's decision to pass its own law plus the extent of central control over the oil resources and whether the oil and gas sector should be open to foreign investment were considered (and still are) largely responsible.¹¹

As 2009 wound down, oil producers and potential exporters in the Kurdish north began to consider the prospect of having access to the Kirkuk-Ceyhan pipeline. If granted, that would add considerably to oil exports from Iraq. An agreement had been signed in late November 2008 that would permit three oil fields being developed by foreign companies in the north to use the Kirkuk-Ceyhan crude oil export pipeline, although not all the sticking points had yet been resolved.¹² In the interim, crude oil production in Kurdistan would be limited to 10,000 b/d, all from the Tawke field.

Exports from the Tawke field were cut off in September 2009 by the producing company, DNO International ASA, as the Baghdad government continued to dispute those contracts that had been signed between small independents such as DNO and Kurdish authorities.¹³ DNO happened to be the first foreign company to produce crude oil in Iraq since the 1970s. Exports were to resume in April (but they did not) as the desire for increased oil sales and financial earnings offset any unhappiness with the original contract.

9. See Sabah Jerges, "Kurdistan Approves Regional Oil and Gas Law, Now Waits on Baghdad," *Oilgram News*, August 8, 2007. The KRG approved in early August 2007 its own regional oil and gas law consistent with the Iraq constitution. Hunt Oil Co. of Dallas, Texas, was quick to respond and signed an exploration contract covering the Duhuk area of Kurdistan. The Iraqi oil minister rejected the deal; it had no standing in the eyes of Baghdad.

10. Even if passage of an oil law should come relatively soon, major oil companies will be understandably reluctant to take up positions in Iraq unless and until security conditions can be notably improved.

11. Ben Lando, "Analysis: Pentagon: Iraq Oil Laws Stuck," United Press International, March 12, 2008.

12. Kate Dourian, "Iraq Agrees to Tie Kurdish Oil Fields to Export Pipeline," *Oilgram News*, November 25, 2008.

13. Grant Smith, "Iraq Will Increase Oil Reserves, Al-Shahristani Says," Bloomberg, March 17, 2010.

9

PIPELINES

Pipelines are the subject of attention by both the Iraqi government and insurgents. Because pipelines cannot be protected along their entire route, levels of violence remain high and a variety of risks still must be confronted.¹

One of the key risks is the age of the Iraqi oil pipeline system. Pipelines are essential to the export of oil from Iraq, and this dependence is no more vital than that represented by those pipelines linking onshore storage facilities to offshore tanker-loading terminals.² Two 31-mile pipelines, each 48 inches in diameter, handle nearly all Iraqi oil exports from the south of the country. These lines reportedly could fail at any time because of age.³ Were that to happen, the impact on Iraq, especially on the national budget, would be devastating.

For the country's oil sector to function profitably, free and continuous access to export pipelines is essential. Although the export pipeline network looks more than adequate on paper, in practice the system will always be vulnerable to attack. These attacks reflect the understanding that the export of oil plays to the psychological and financial well-being of Iraq. Interrupt the flow to deny exports and a fundamental victory can be achieved by insurgents. There are no export or import natural gas pipelines (figure 9.1).

A listing of crude oil and natural gas pipelines—active, idle, and planned—is presented in table 9.1.

Oil exports from the south originate at the port of Basra on the Persian Gulf and the nearby terminal at Khor al-Amaya. Although the pipelines delivering crude oil for export to these two terminals are perhaps just as vulnerable as the Kirkuk-Ceyhan line, attempts to sabotage have been rare.

But sabotage may not be the greater danger. The U.S. Department of State in an unusual move in October 2008 warned the U.S. Congress that these dual 48-inch crude oil export pipelines could potentially fail at any time, rupturing from severe corrosion.⁴

It is perhaps safer in the northern part of the country, in Kurdish territory. Unfortunately, the Kurdish territory holds only a reported 3 percent of the country's oil reserves,⁵ whereas the northern Iraqi province of Kirkuk holds 16.5 billion barrels of proven oil reserves.⁶ A major oil company

1. Anthony H. Cordesman, CSIS, e-mail to author, January 9, 2008.

2. Daniel Dombay and Carola Hoyos, "U.S. Warns on Ageing Iraqi Oil Pipelines," *Financial Times*, October 14, 2008.

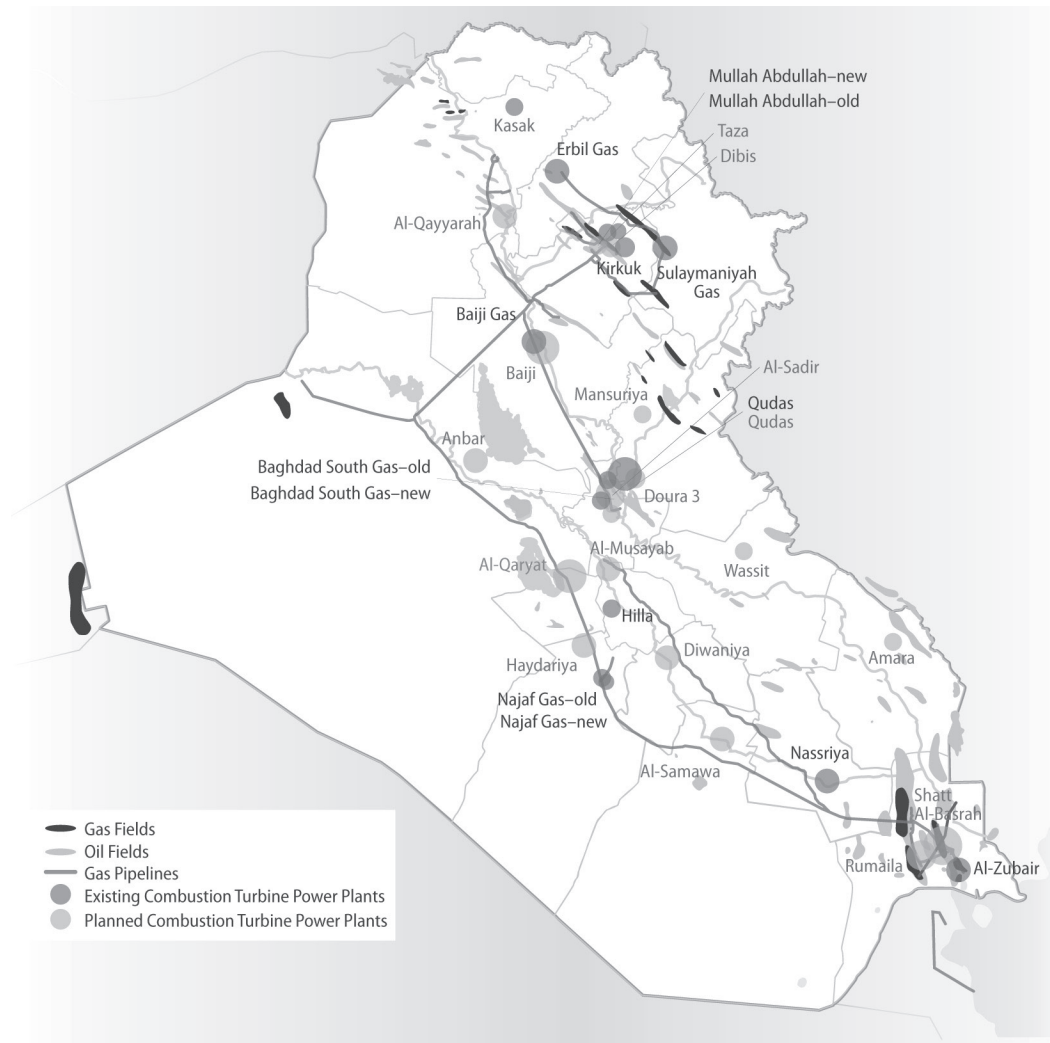
3. Ibid.

4. Ibid.

5. Ed Crooks and Sheila McNulty, "Big Oil Plays Waiting Game over Iraq's Reserves," *Financial Times*, September 19, 2007.

6. Faleh al-Khayat, "Fight for Iraq's Kirkuk Province May Escalate," *Oilgram News*, August 25, 2008.

Figure 9.1. Iraqi Oil and Gas Fields, Gas Pipelines, and Existing and Planned Combustion Turbine Power Plants



Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, April 30, 2010).

most likely would be inclined, at least under current conditions, to bypass any opportunity in the Kurdish north.

Perhaps of more immediate concern is the question of whether the existing pipeline network can accommodate the increases in domestic production as the service contracts referenced above begin to be implemented. The answer should be obvious to all: no, the network cannot. A major new construction effort will be called for, as well as refurbishing existing pipelines. Where will the new pipelines originate and terminate?

There is little evidence available—other than several broad-based plans—that indicates the Iraqi government has begun to address the issue of expanding exports out of the north. Rather, it should be expected that expansion will be undertaken to ensure that exports from the south will not be impeded by limited pipeline capacities.

Table 9.1. Export Pipelines Serving the Iraqi Oil and Gas Sectors

Type	Origin	Terminus	Comments
Natural gas	Western Iraq	Deir Ezzor (Syria)	Newly proposed
Crude oil	Iraq	Lebanon	Existing line to be rehabilitated; closed since March 2003
Crude oil	Kirkuk	Ceyhan (Turkey)	Operated only sporadically during the early days of the war to 2007; now normally carries about 500,000 b/d
Crude oil	Basra	Abadan refinery (Iran)	Newly proposed
Products	Abadan	Unspecified site (Iraq)	Newly proposed
Natural gas	Kurdistan	Ceyhan (Turkey)	Newly proposed

Source: Author's records.

It is not yet clear if and when natural gas supply in Iraq will exceed domestic requirements and volumes will become available for export.

There likely will be government pressure to export natural gas, largely for the foreign exchange earnings to be had. Potential domestic consumers will vociferously object, however, if they see natural gas volumes being diverted for export while their needs go unmet.

10

ELECTRICITY

No commodity is more essential to the productivity and comfort of everyday life than the steady and reliable supply of affordable electricity. That is true just as much for Iraq as it is for the United States. Indeed, nothing will disquiet a population more than flicking on the switch but the lights staying off.

What are the sources today of electricity supply on Iraq's national grid? The largest share of Iraq's generating capacity is provided by combustion turbine plants under the Ministry of Electricity (figure 10.1). These plants provided about 2,327 megawatts (MW)¹ during the first quarter of 2010, down 192 MW from the preceding quarter. First quarter 2010 supply covered 71 percent of demand, but that level was an improvement over the 66 percent of first quarter 2009.

First quarter 2010 electricity generation averaged 5,635 MW, up 7 percent over the last quarter 2009. Imports of electricity, largely from Iran, averaged 694 MW, bringing average daily supply to 6,329 MW.

The Iraqis could not count on electricity being available when they needed it. In the early days of the occupation, thieves took down power lines and stripped out the copper wiring that was to be sold on the black market. Saboteurs blew up pylons carrying the power lines in order to disrupt electricity flows. Electric power-generating plants were stripped of equipment, including computers and documentation, rendering the plants inactive.

The electric power sector faced continued shortages of experienced engineers and technicians. Electricity cutoffs impacted the oil industry across the board. These two sectors are mutually dependent, and most of the oil infrastructure—oil wells, refineries, pipelines, gasoline pumps—are vulnerable when electricity is shut off. On occasion a catch-22 emerged; for example, the disruption of electric power supply shut down oil refineries, and that in turn led electricity-generating plants to complain they could not supply power because they had no fuel.

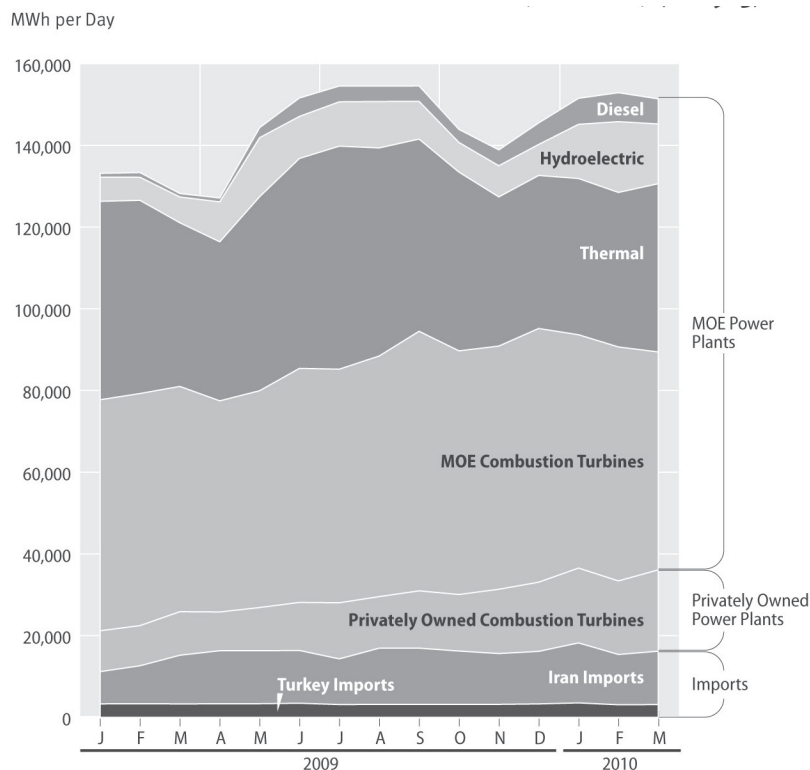
At that time (2008) approximately 1,500 MW of electricity generation—equal to one-third of the country's peak output—were not available because the power plants could not secure enough fuel.² It seems somewhat incongruous that a country then producing 2.4 million b/d of crude oil could not provide enough fuel to keep these power plants operating. The SIGIR quarterly report of April 30, 2010, did note that most Iraqis do not pay their power bills on the grounds that they are not getting reliable power.

Unfortunately that situation derived in part from the effort by the MOO to maximize oil exports. Oil export earnings in 2007 provided almost \$40 billion or about 95 percent of the

1. A megawatt is equal to 1 million watts.

2. Glenn Zorlette, "Oil and Electricity Ministries Won't Mix," *International Herald Tribune*, March 10, 2008.

Figure 10.1. Sources of Electricity Supply on the National Grid, by Month, January 2009–March 2010 (megawatt-hours per day)



Source: Special Inspector General for Iraq Reconstruction, *Quarterly Report to the United States Congress* (Washington, D.C.: U.S. Government Printing Office, April 30, 2010).

government’s income.³ Pushing oil exports may have meant more money in the bank but at the cost of ignoring the needs of the power sector. In addition, little or no natural gas was available that could be burned to generate electricity.

Both the electricity and the oil sectors were found to be in far worse condition than had been thought prior to March 2003. Just as the oil sector has been burdened by an ineffective metering system, so is the electricity system, plus it must deal with numerous illegal connections. As a result, consumption cannot be accurately measured; neither can theft be successfully deterred.

The SIGIR, in its January 30, 2010, report to Congress, stated that by the end of 2009 a sum of \$2.48 billion had been spent to rehabilitate Iraq’s water and sanitation infrastructure and improve the delivery of services.⁴ Was the population any better off? Yes and no. Although the number of Iraqis having access to potable (drinkable) water by mid-2009 was almost four times that of 2003, only about 70 percent reported being able to get safe and clean drinking water *at least some of the time*. Iraqi resource mismanagement, poor maintenance, and illegal tapping into water mains all came in for a share of the blame.

3. Ibid. The MOO is equally opposed to projects that would help capture gas currently being flared and deliver that gas to power plants.

4. SIGIR, *Quarterly Report to the U.S. Congress* (January 30, 2010).

The effect of the two wars and of the UN sanctions had not been particularly obvious to outsiders, except for reports that had been prepared by Western firms. Indeed, experts who had the opportunity to inspect the oil and electricity sectors after March 2003 were amazed that the Iraqis in charge had been able to keep the sectors producing to the extent that they had.

Expanded electricity generation was a need recognized equally by the Iraqi government and by the United States. A new law was being drafted that would encourage more investment and generation and would pave the way for foreign and domestic companies to invest in new plant construction, a step toward fully privatizing the electricity sector.⁵ A laudable step, but a fully privatized electricity sector must be viewed as little more than a dream.

The U.S. reconstruction strategy involving the electricity sector did not particularly benefit Baghdad as the city was receiving an average of only 8.1 hours per day during the second quarter of 2007, or two-thirds of the prewar level.⁶ Supplies to the rest of the country exceeded those to Baghdad as the strategy had been focusing on providing electricity more equitably throughout the country.

The SIGIR did note that transfer of power to Baghdad from other areas had been difficult because of the political manipulation of the power grids. Transmission lines were a favorite target of sabotage while provinces refused to follow the allocations of electricity set down by the Ministry of Electricity.

Electricity supplies began to grow slowly by mid-2007, and they continued that growth throughout the following 18 months, to January 2009. Improvements were dramatic for both the city of Baghdad and the country as a whole. The Department of State reported that, after meeting demand from essential services, the daily supply of electricity for Baghdad had reached 13.2 hours and just slightly less—13.1 hours—for Iraq as a whole.⁷

By mid-2009, the situation was either getting better or continuing to deteriorate depending on which electricity supply-demand chart was consulted. To illustrate, suppose the observer was interested only in long-term trends and focused on the following graph (figure 10.2).

The correct conclusion from figure 10.2 is that electricity supplies were continuing to fall further behind demand. The Department of State at the same time recognized that an unknown part of the supply-demand gap is filled by private generation, implying that supply was actually closer to demand than is shown in the figure.

As of the end of 2009, the United States had allocated \$5.16 billion, obligated \$5.00 billion, and spent \$4.86 billion to help improve the generation, transmission, and distribution of Iraq's electricity.⁸

Nevertheless, expansion in demand continued to outstrip supply although the demand peaks and valleys began to edge closer to supply. Indeed, electricity supply by February 2010 met 70 percent of estimated demand compared with 60 percent for the year-earlier period.⁹ Supply deteriorated during the next several months, falling in early May to 66 percent of demand. The observer mentioned above, who might want to take another, more recent look at the electricity sector, as

5. Iraq Oil Report.com, www.iraqoilreport.com/.

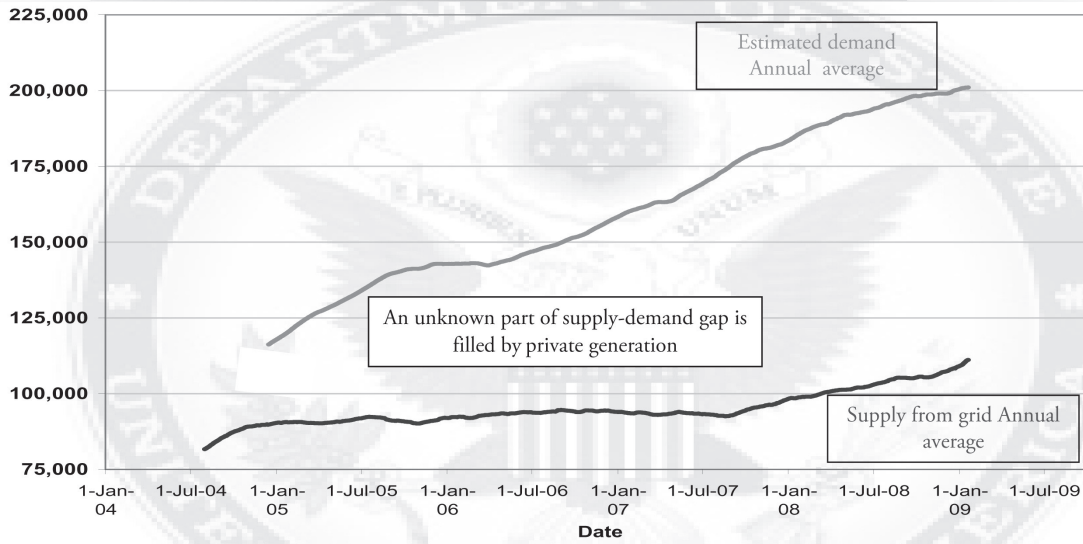
6. SIGIR, *Quarterly Report to the U.S. Congress* (Washington, D.C.: U.S. Government Printing Office, July 30, 2007).

7. "Iraq Status Report, January 22, 2009," Bureau of Near Eastern Affairs, U.S. Department of State.

8. SIGIR, *Quarterly Report U.S. Congress* (January 30, 2010).

9. "Iraq Status Report, February 24, 2010," Bureau of Near Eastern Affairs, U.S. Department of State.

Figure 10.2. Electricity Demand and Supply in Iraq, July 1, 2004–January 1, 2009 (mega-watt-hours)

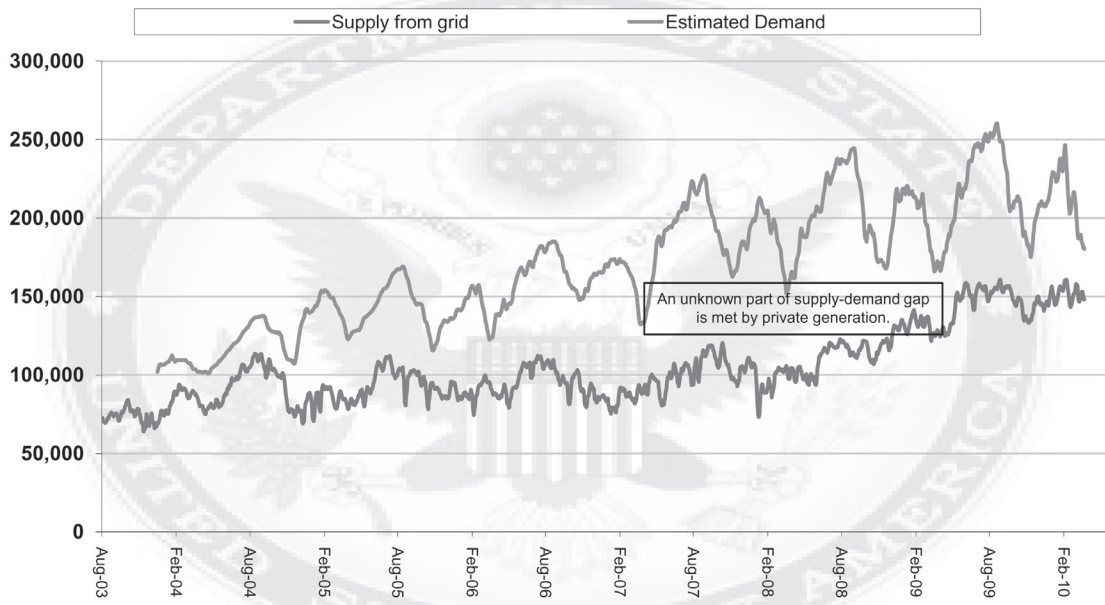


Source: "Iraq Status Report, January 22, 2009," Bureau of Near Eastern Affairs, U.S. Department of State.

shown in figure 10.3, could have drawn another wrong conclusion if not paying close attention. The measurement unfortunately is a bit misleading, as it catches supply seasonally nearing its closest point to demand.

By the last week of March 2010 electricity supply was covering 82 percent of demand. But, as summer approaches and demand rises, once again the gap will widen as it always has in the past.

Figure 10.3. Electricity Supply and Demand in Iraq, August 2003–February 2010 (mega-watt-hours)



Source: "Iraq Status Report, March 31, 2010," Bureau of Near Eastern Affairs, U.S. Department of State.

11

EPILOGUE

The research and writing of the preceding chapters were completed on May 25, 2010. This epilogue serves to bring the reader up to date on significant developments between that time and June 23, 2010.

Although corruption is generally singled out as one of the major detractors facing Iraq today, it has been part and parcel of life in that country since the 1920s at least, when oil field development offered up new opportunities for the local tribes.¹ Corruption is still very much in evidence today, and the sums involved far exceed those of the earlier years. Local tribes may be expected to seek financial compensation, for example, from foreign oil companies searching for oil on their lands. These approaches possibly would not fit the definition of corruption, but would extortion be a better fit?

How can the problem be truly solved when tribes may accept payment for pipeline protection, as an example, but then attack the very same facilities they are to protect? U.S. and other forces on the ground have tried to convince tribal leaders that it is their country to protect, on behalf of all Iraqis, but the effort has not yet met with acceptable success.

Sectarian violence continues to plague Iraq. A commentary in the Saudi-controlled London newspaper *al-Hayat* spelled out the writer's perception that Iraq is on the verge of a bloody struggle and that violence will not stop unless the Sunnis raise the white flag and accept a second place and perhaps a third place.²

The Sunnis, however, are planning a comeback, so it has been reported,³ now disenfranchised but eager to take advantage of the country's political vacuum. Should the Sunnis not be given reasonable representation in the new government, their anger and frustration could well explode. Unfortunately, they lack an identifiable and acceptable leadership, and that is part of the problem.

The chairman of the U.S. Joint Chiefs of Staff was quoted in early June 2010 as saying that al Qaeda's affiliate in Iraq has been "devastated" by a leadership vacuum and a money squeeze.⁴ Is that good news; does it mean that bombings and such are essentially over? Not at all. A day later gunmen killed 10 at various sites around the country, with the assaults attributed to insurgents as well as al Qaeda remnants. Insurgents wearing military uniforms attacked Iran's central bank days later, leading to the deaths of 26 people.⁵

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1. Ellen Knickmeyer, "Graft Alleged in Iraq Oil Protection Effort," *Washington Post*, February 5, 2006.
 2. "Iraq: The Business Outlook (2)," MEC Analytical Group, May 29, 2010.
 3. Ernesto Londono, "Sunni Insurgent Groups Gather to Plan Comeback," *Washington Post*, June 1, 2010.
 4. Robert Burns, "Chairman of Joint Chiefs Finds Developments Encouraging," Associated Press, June 6, 2010.
 5. "26 Die as Insurgents Storm Iraq's Central Bank," China Economic Net, June 14, 2010.

Politically motivated attacks continue, relatively unabated. During one week in mid-June the death toll hit almost 100, giving credence to the assumption that insurgents will continue to take advantage of the inability to form a new government. But there are other, more simple, reasons as well. Hot summers bring out the protestors, and these protestors gathered on June 19 to demand electricity and potable (drinkable) water to help them cope with the blistering summer heat.⁶ The result: one dead, three injured. Iraqis living in Baghdad complain that they get only about four hours of electricity each day. That protest, plus others, led to the resignation of the Iraqi electricity minister, who indicated he was doing so because he did not want to be part of the current political crisis.⁷

Prime Minister Nuri Kamal al-Maliki, in an effort to bring some clarity to the issue, stated at a press conference that electricity demand simply was outstripping supply, and the gap would remain for two more years, that is, until those power stations now being built were finished.⁸

As if Iraq did not have enough to worry about, neighboring Iran tests Iraq with air and artillery bombardments, directed at Kurdish villages near the border. These attacks are supposedly meant to weaken Kurdish guerrillas who strike in Iran and take refuge in Iraq.⁹ There are no soldiers—U.S., Iraqi, or Kurdish—in the general areas being attacked. Nor has there been any serious response to these attacks. To add to the situation, Turkey also bombs border areas in Iraq in pursuit of rebels. It seems that Baghdad's attention and concerns lie elsewhere, but part of that attitude may reflect secret agreements having to do with eliminating the Kurdish guerrilla threat.

Minister of Oil Hussein al-Shahristani keeps the oil sector in the news with comments about its glorious near-term future. Speaking at an oil and gas conference in Kuala Lumpur, also in early June, he stated that Iraq would be producing 11.6 million b/d by 2017, a short seven years away. By 2017, he added, Iraq would have a production capacity exceeding 12 million b/d.¹⁰ Calculations may support these projections, but other calculations show that an average annual production increment of 1.3 million b/d would have to be achieved during the intervening seven years. Unlikely, given the number of obstacles that await, one of which stems from OPEC membership. Iraq has been freed from oil export quotas for a number of years now, but as oil production and exports grow to more substantial levels OPEC will not be so accommodating.

Shahristani spoke also of his own future, noting that he did not plan to remain as oil minister in the new government. Finally, he threw down a perhaps unintended challenge to Russia when he observed that any additional demand for oil, particularly in the Asian market, would have to be met by Iraq. Russia has a crude oil pipeline under construction from West Siberia to the Pacific Ocean port of Nakhodka, and that pipeline is designed specifically to supply markets in the Far East. Only the market will benefit from two competitors, if it reaches that stage.

On June 1, 2010, the Iraq Supreme Court ratified the results of the March 7 election. Now what? Faced with the deadline of 15 days to seat the new parliament following the election ratification, Iraq's president, Jalal Talabani, on June 8 called the legislature—the Council of

6. Aziz Alwan and Leila Fadel, "Protest over Patchy Electricity Leaves 1 Dead, 3 Hurt in Basra," *Washington Post*, June 20, 2010.

7. "Iraqi Electricity Minister Resigns over Shortages," *China Economic Net*, June 22, 2010.

8. Leila Fadel, "Lack of Power, Water Puts Iraqis on Edge," *Washington Post*, June 23, 2010.

9. Timothy Williams and Namo Abdulla, "Poking and Prodding at Border, Iran Tests Iraqi Resolve," *New York Times*, June 17, 2010.

10. "Iraq Aims to Meet Asian Oil Demand," *Siasat Daily*, June 7, 2010.

Representatives—into session on June 14. The duty of the legislature will be to first elect a new speaker and then a president who, in turn, will decide which of Iraq's rival political factions will name a prime minister and cabinet ministers.¹¹ Following that, the president will give the leader of the largest bloc in parliament 30 days within which to form a new government. Sounds simple enough, but the devil is found in the details.

Who actually has the largest bloc: Ayad Allawi who won 91 seats during the March 7 election, or Maliki who won only 89 seats? A court opinion held out the possibility that the largest bloc could be created after the election, and that would make Maliki the winner, as opposed to Allawi.

Efforts to assemble a winning coalition will now come under pressure. The State of Law, Maliki's coalition, had earlier reached tentative agreement with the Iraqi National Alliance, but subsequent discussions encountered several roadblocks. One obstacle, and perhaps the most defining one, is the opposition of Shiite cleric Moktada al-Sadr to Prime Minister Maliki, who of course wants another term in office.

Supporters of Sadr, known as Sadrists, also demand the release of some 2,000 Sadrist detainees and an end to government harassment,¹² presumably for their willingness to remain in the coalition.

Allawi's Iraqiya list, with the most seats won during the election, believes it is logical that it be invited to form the new government, now that the election results have been certified. Unfortunately, as noted by the court, under the election laws of the country, the largest coalition in parliament, that is, holding the largest number of seats, has the prospect of taking the lead.

Just as Iraqis are struggling to form a new government, U.S. diplomats await the handover of responsibilities as U.S. forces are reduced to 50,000 in number by the end of August 2010. One thing is certain as that reduction takes place—the approach will be different but the goals will be the same.¹³ It may be of interest to note that the number of U.S. forces now in Afghanistan exceeds the number of U.S. forces in Iraq.

Can Iraqis look back on how they saw the future unfolding (see page 21) and point to any accomplishments? The goals, set before the invasion, appeared simple and relatively easy to accomplish, but the history of Iraq has interfered.

- There would be no occupation army, *but now not until 2012*.
- We Iraqis would govern, *if sectarian strife can be overcome*.
- The oil sector would be ours, to develop as we envisaged, *but corruption and political divisions have to be eliminated*.
- Our first task would be to restore law and order and to supply food and fuel to the population, *a task that is far from finished*.

Maliki continues to make the case for his retention as prime minister, while recognizing that he is not particularly well liked. He points to the prospect of Iraq's descent into the violence and

11. Lara Jakes, "New Iraqi Parliament to Convene Next Week," Associated Press, June 8, 2010.

12. "Iraq Shi'ite Group Accused of Intransigence in Coalition Talks," Radio Free Europe/Radio Liberty, June 1, 2010.

13. Ernesto Londono and Karen DeYoung, "U.S. Officials Grapple with Shift from Military-Run Effort in Iraq," *Washington Post*, May 25, 2010.

sectarian rivalry that dominated the country before he took over in 2006.¹⁴ More than that, he asked that greater powers be given to the prime minister. “I will be either a prime minister, under the Constitution, or not a prime minister at all,” he added.¹⁵

The new coalition, bringing together the State of Law and the Iraqi National Alliance, was given a new name—National Alliance. The apparent loser, Iraqiya, now risks being shut out of top positions in the Council of Representatives. The new legislature met for the first time on Monday, June 14. Little was accomplished during this first meeting, lasting just 20 minutes, whereas a speaker should have been elected and then a president within a month.¹⁶ To minimize problems and recognizing that no consensus was in sight, the legislature would remain open.

The prospect that the struggle for political leadership would be lengthy could easily lead to violence as extremist groups take advantage of the resulting political paralysis. The Kurds, not surprisingly, have finally weighed in with a number of guarantees to be granted before backing a new government, including the region’s right to oversee its oil resources.¹⁷ The Kurds see themselves as a kingmaker, that is, their 43 votes cast in support of the National Alliance would be sufficient backing to form a new government.

Until agreement can be reached as to which group will be called on to lead the country—and that could take weeks if not months, if history has any meaning—Iraq essentially will be marking time, and one can only speculate what might happen in the interim. In the future, will the new government be responsive to the needs of the general public or will these needs essentially be overlooked as they have been in the past?

When the last U.S. troops have departed Iraq, what kind of future awaits? It would indeed be grossly overly optimistic to anticipate that sectarian violence, political dissension, and corruption would all be overcome by steadily mounting oil wealth, for example. That wealth will likely feed discontent, not alleviate it. Would Iraq be better off in the long run if it were not burdened by a resource curse? Perhaps so.

14. Anthony Shadid, “Maliki Says Iraq Needs Him as Leader,” *New York Times*, June 9, 2010.

15. *Ibid.*

16. Reider Visser, “The Iraqi Parliament Opens, and Stays Open,” *historiae.org*, June 14, 2010, <http://historiae.org/parliament.asp>.

17. Spencer Swartz, “Iraq’s Kurds Seek Guarantees,” *Wall Street Journal*, June 15, 2010.



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Ebel, who has traveled widely in the former Soviet Union, was a member of the first U.S. oil delegation to visit that country in 1960 and in 1970 was in the first group of Americans to inspect the new oil fields of Western Siberia. In November 1997 he led an International Energy Agency team examining the oil and gas sector of Turkmenistan and Uzbekistan.

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Ebel is a past chairman of the Washington Export Council and past member of the board of American Near East Refugee Aid. He received the Department of State’s Distinguished Public Service Award in April 2002. He is the author of a number of books and reports, including *Energy Choices in Russia* (CSIS, 1994), *Energy in the Near Abroad* (CSIS, 1997), *China’s Energy Future* (CSIS, 2006), *The Geopolitics of Russian Energy* (CSIS, 2009), *Energy and Geopolitics in China* (CSIS, 2009), and *Geopolitics of the Iranian Nuclear Energy Program* (CSIS, 2010). He was coeditor, with Prof. Rajan Menon, of *Energy and Conflict in Central Asia and the Caucasus* (2000) and edited *Caspian Oil Windfalls: Who Will Benefit?* (2003). Earlier books include *The Petroleum Industry of the Soviet Union* (1961) and *Communist Trade in Oil and Gas* (1970).

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