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Water, electricity and the political context in Arab countries 2011

by

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0. Introduction

This report examines the electricity and water sectors in North African and Middle Eastern countries. It consists of three sections.

The first section examines the political, economic and global context as of September 2011. It looks at:

- Developments in each country, in particular the impact of democracy movements, which could affect policies in water, electricity and public services in general
- The position adopted by the international financial institutions
- The policies of the European Union (EU)
- The economic context and levels of public spending

The second section examines the water sector

- The extent of privatisation of water services and treatment plants, and problems and resistance
- The companies involved
- Trends and issues, including access and water resources

The third section examines the electricity sector

- The extent of privatisation of power plants and distribution systems
- The companies involved
- Trends and issues, including the Desertec project

1. The context: democracy movements, international institutions and EU policy

1.1. Democracy movements and public policy in Arab countries

The democracy movement in Arab countries is very important for many reasons. It also has a significant impact on policies relating to public services in general and water and electricity in particular, in various ways, including:

- independent trade unions playing a strong role in the democratic movements
- improved possibilities of rejecting neo-liberal policies promoted by the international institutions
- strengthening the position of auditors and others criticising privatised operations
- improved possibilities for reducing corruption

This section notes some relevant examples of these factors in countries in the region.

1.1.1. Algeria

Although democracy movements have not been so prominent in Algeria, the government is still experiencing pressures for reform of a regime which is characterised by "patronage networks supported by petrodollars, [and] a record of rampant corruption at the highest levels"[1]. These problems are reflected in the privatisations in the country. The private electricity concessions have been awarded to oil and gas companies as a downstream extension of their oil and gas rights, including SNC Lavalin which itself has an international record of corruption; and the only water privatisation contracts issued in the Maghreb since 2006 are in Algeria, including the management contract in Algiers at the incredibly generous price of €20million per year (see below).

1.1.2. Egypt

Egypt is an example of how the development of democratic politics makes it possible to construct different sets of policies. The next section provides details of how the interim Egyptian government was persuaded by popular demonstrations to reject a loan from the IMF and instead agree to a budget with increased social spending.

1.1.3. Jordan

As in Morocco, the King responded to democracy demonstrations by offering constitutional reforms which leave his power largely unchanged.: "democracy advocates dismissed the proposed revisions as a cosmetic and inadequate response to popular demands for reform." [2]

Jordan hosted the Arab Democratic Trade Union Forum in September 2011, which included unions from Bahrain (GFTU); Egypt (EFITU); Iraq (GFIW); Kuwait (KTUF); Libya (FLWF*); Mauritania (CLTM, CNTM, UTM); Morocco (CDT, CGTM, UMT); Palestine (PGFTU); Tunisia (UGTT); and Yemen (GFYWTU).[3]

1.1.4. Lebanon

There are major public finance problems. Spending rose by 7.5%, not much more than tax revenues, which rose by 6%. This would have been higher, but the government cut taxes on petrol/gasoline. Non-tax revenues e.g. from telecoms profits fell sharply. As a result, the deficit has risen to 25% of GDP, and over 40% of public spending is consumed by paying debt. [4]

The electricity system in Lebanon has inadequate generating capacity and suffers from power cuts. Businesses and households increasingly use their own diesel generators. Electricity is subsidised, but prices are still amongst the highest in the region. There is a legal framework for unbundling and privatisation since 2002, but it has not been implemented and the system remains integrated under Electricite de Liban. Liberalisation plans were agreed in 2010 , but have not yet been implemented: "The initiatives rely heavily on the private sector participation through the use of public-private partnerships or independent power producers ... the state is expected to fund about $1.55 billion, with roughly $2.32 billion coming from the private sector and around $1 billion from the international donor community." The plans were promoted and supported by the World Bank and IFC. [5]

There is a need for investment in the water sector, but the official policy is driven by the Higher Privatisation Council, which demands a new law to enable PPPs in the sector. The law was drafted in 2007 but has not yet been implemented. It is also heavily promoted by international institutions: a 2010 workshop organised by the EU Water Initiative, UNDP, GEF, and Suez (and others) was entirely concerned with discussing "opportunities and challenges related to private sector involvement in water infrastructure in Lebanon" ; a USAid programme on water in Lebanon was also focussed almost entirely on finding a role for the private sector, including PPPs. [6]

1.1.5. Libya

The transitional council has now been established in Libya. It has already received offers of loans and aid from the EU and others. First reports suggest that the council has adopted a cautious position.

1.1.6. Morocco

In Morocco, the "February 20 Movement" has organised a series of demonstrations for greater democracy, in which opposition to the water and electricity privatisations was an element. King Mohammed VI appointed a group to draw up a revised constitution, under which the King retains power over security and 'strategic policy' decisions, but is more restricted in who he can appoint as prime minister. The new constitution was approved in June 2011 by a large majority of voters. [7]

1.1.7. Palestine

The process of democracy-building in Palestine is in effect part of the process of establishing a nation. The initiative for greater UN recognition of Palestine is the latest step in this process. In the past, Palestine has had private water management contracts operated by Suez. However the Palestinian leadership has been criticised for adopting a neo-liberal policy. [8]

1.1.8. Tunisia

Tunisia is holding elections in October for a constituent assembly to write a new constitution. It has not so far agreed any deal with the IMF or other institution, but in July and August 2011the EU announced new aid packages for Tunisia. These include €90m.for economic recovery including greater transparency and access to information; it also includes €20m. for economic reforms: "to reinforce the Tunisian liberalisation and integration policy, which has not achieved the expected results, particularly in terms of growth and productivity rates in the services sector". [9]

1.1.9. Yemen

The uprisings in Yemen continue as of September 2011. There are already problems with the World Bank encouraging privatisation as part of both water policy and energy policy.

1.2. Global finance coordinated under IMF

Arab countries are now faced with a consolidated international consortium of international financial institutions led by rich countries and the IMF. This group effectively controls access to the great majority of the world's development funds, and is in a powerful position to impose policy conditions on access to these funds.

In May 2011, a conference of the richest countries in the world (the G8) agreed to encourage loans worth $20billion USD by development banks to Egypt and Tunisia. TheG8 stated that they : "welcomed the Egyptian authorities' decision to request IMF and multilateral development banks' assistance and Tunisia's request for a joint and coordinated development policy loan.". The IMF would provide a framework for the coordination of loans from the World Bank, the African Development Bank, the European Investment Bank / FEMIP, the European Bank for Reconstruction and Development (EBRD), the Islamic Development Bank and aid from donor countries.[10]

In September 2011 the total amount of loans was increased to $38 billion, and the countries were extended to include Morocco and Jordan, with an expectation that Libya will also be included. In addition, the G8 countries were joined by Kuwait, Qatar, Saudi Arabia, Turkey and the UAE. The Arab monetary fund also joined the financial institutions whose resources would be coordinated. The rich countries in the region are thus no longer an 'alternative' possible source of funds, but part of the IMF co-ordinated group. [11]

This approach has been criticised as an attempt to ensure that the economic policies of any new democratic governments will continue to follow the principles of neo-liberalism: "the initial focus of this structural adjustment will be the privatization of Egypt's infrastructure and the opening of the economy to foreign investment and trade through PPPs" (Adam Hanieh). In 2010 the IMF had previously endorsed the policies of the Mubarak regime as "Five years of reforms and prudent macroeconomic policies" and called for "Resuming privatization and increasing the role of carefully structured and appropriately priced PPPs"; an IMF staff mission had also congratulated the Gaddafi regime in Libya for a programme to make 340,000 public employees redundant, recommended that the process "should be accelerated", and stated that "The mission would like to thank the authorities for their excellent cooperation and hospitality." [12]

1.2.1. IMF – loans rejected by Egypt

In early June, the Egyptian government negotiated an agreement with the IMF for a $3 billion facility to support government finances; it was also discussing a $2.2 billion loan from the World Bank. Three weeks later, the finance minister announced that Egypt would not take up either loan. He explained that:

> "the decision to scrap the loans was in response to public opposition. He said the military council, in power during the current transition to elected rule, had decided "not to burden" those who take over from them with heavy loans." [13]

The opposition to the loan came from many directions, including the Council for Revolutionary Trustees (CRT), which issued statements saying "outside borrowing contradicts the principles of the Egyptian Revolution that called for freedom from all sorts of local and foreign pressure", and many columnists rebuked the government for taking such major decision without representation from the Egyptian people. The opposition was summarised by a democracy activist Wael Khalil:

> ""We really have a kind of distrust with the IMF and World Bank and their dealings and their praise of the previous regime during Mubarak's era," he said. "Not only are their problems with the conditions that come with these packages, but we shouldn't be taking loans that aren't needed and would go to subsidies of larger business, rather than development or to individuals in need," he added. During this transitional phase, Khalil pointed out, Egypt should decide on what kind of economy they are going to have, an economy that would adopt policies of social justice. "We have to work against these loans, as long as their conditions are not favorable and do not recognize social justice," he said. "It would be making a huge mistake getting rid of Mubarak without getting rid of

> the whole system that made the rich get richer before and widened the gap between the rich and the poor …. The revolution wasn't made so we would keep the same policies or to raise the capitalist race for friends of the Gamal Mubarak or the previous regime."”[14]

The interim Egyptian government in June 2011 approved a budget with a major increase in public spending on social security and public services, and infrastructure:

> “Egypt's Cabinet approved a budget for fiscal 2011-2012 on Wednesday, boosting spending in social programs to meet growing demands from the people after the uprising that ousted former President Hosni Mubarak. The budget totals 490.6 billion pound ($83 billion), reflecting a spending increase of 14.7 percent over the current fiscal year, while revenues are forecast at $59 billion, $9 billion more than the year before. A statement released by the Cabinet said the deficit is expected to drop to 8.6 percent of gross domestic product, compared to 9.5 percent for the current fiscal year. An earlier draft was gloomier, predicting a deficit of 11 percent of GDP. The budget reflects an attempt by the military council that replaced Mubarak to prop up the weaker sectors of society, freed from decades of constraints of the autocratic Mubarak regime and showing signs of open revolt, like widespread labour unrest. Samir Radwan, the finance minister, said the new budget incorporates two principles adopted by the government and the military council: increasing spending on social welfare and human development, as well as minimizing external borrowing. … The budget comes as "the Egyptian economy is going through extraordinary circumstances," the Cabinet statement said, adding that GDP growth is not expected to exceed between 3 to 3.5 percent….. "This is a reduced level that is not enough to generate the jobs needed by the new entrants into the job market," the Cabinet statement said. ….. Spending on health, education and other key services accounts for about 54 percent of expenditures in the new budget, while wages for the public sector eat up another almost $20 billion a 23 percent increase over the current year's budget. The transitional government's main focus in the coming year is on job creation and trying to accommodate demands for a greater equality in pay after years in which workers saw their already low salaries eroded by inflation. The new budget includes $8 billion in government investment in infrastructure and housing projects, a 16 percent increase, the statement said. Also, officials are focusing on boosting social services such as health and education, while slightly raising subsidies on key commodities. Fuel subsidies stand at $16 billion, the statement said. The new budget sees revenues climbing mainly from traditional sources like Suez Canal fees, as well as from the oil sector. Tax hikes, including on income and cigarettes, are also expected to generate new revenues.” [15]

1.2.2. Other IFIs and promotion of PPPs

The other IFIs, apart from applying policy conditionalities, will in particular encourage PPPs.

- **EIB: ‘an ambitious PPP programme’**

An EIB report on ways out of the crisis for North African countries, published in 2010, discussing public services and infrastructure, insisted that, although governments can provide these services directly, they “can also mobilise PPPs (public-private partnerships) and must learn to listen and be ready to respond selectively to requests from the corporate sector for measures that are compatible with competitiveness on the international market.” The EIB and the OECD organised a workshop on PPPs in the Mediterranean region in February 2011, which was also attended by the IFC. It was advertised as the “launch of an ambitious PPP programme in the FEMIP region by the EIB”. Presentations at the conference identified IPPs in electricity, renewable energy projects, water treatment plants and desalination plants as the main sectors for PPPs. [16]

- **Aid from USA via OPIC: supporting PPPs**

The USA promised an extra $1billion USD in aid from the export credit agency OPIC. An OPIC statement noted that this would be used “to identify Egyptian government owned enterprises investing in public-private partnerships (PPPs) in order to promote growth in mutually agreed-upon sectors of the Egyptian economy.” The USA had earlier promised that OPIC would invest “up to $2 billion in financial support to catalyze private sector investment in the Middle East and North Africa region”. [17]

- **European Bank for Reconstruction and Development (EBRD)**

The EBRD was created to finance development in the former communist countries of eastern Europe. It's remit was specifically extended at the G8 meeting to include north Africa . The EBRD uses a set of indicators of development which assume that privatisation or liberalisation is always beneficial. For example they assume that: additional privatisation is always better; higher foreign ownership of banks is better; and price liberalisation is always better.[18]

- **Box: Skewed PPPs under the IMF in Mubarak's Egypt**

Comment by Ahmed Tarik on Jadaliyya website 12 June 2011
http://www.jadaliyya.com/pages/index/1711/egypts-%E2%80%98orderly-transition%E2%80%99-international-aid-and-

"As a former employee of the PPP Authority in Egypt which is under the mandate of Ministry of Finance MoF, I know first hand how these deals work and how the IMF and World Bank use these neo-colonial programs to enslave us.
First, the IMF and World Bank are main consultants on almost all projects. During negotiation meetings with the main private sector bidders on the Project, the IMF team would side with almost all of the private companies request when it came to contact drafting, payment mechanisms and responsibility and services provided.
I worked on a project that was suppose to build nearly 345 public schools in 18 governorates (has not been implemented so far to the best of my knowledge). The main bidder on the Project had high profile lawyers that would continuously twist the arm of the MoF and the General Authority for Educational Buildings(GAEB). Most of the time, the bidders requests would be approved and drafted in the contract. For example, and this is one of many, schools usually have after school and weekend programs for their students. This was unacceptable to bidders and their high priced Dubai stationed lawyers. Schools in the contract were only to be open from 7am to 4pm. According to the lawyers, "the opening of schools on weekends or later on in the evening during the week would be a security threat to the investors and if such programs were to be implemented that would come with an extra cost". An extra cost the MoF could not afford. Further, the investors wanted to expand their "revenue streams" by having "cultural events" at the schools at night, such programs would inhibit the "cultural events" from taking place. Also, no students could be at school after 4pm. This means, a child that was waiting for their older brother or sister to pick them up would have to stay out in the street and wait if the person responsible for picking them up was late for any reason.
My point is this, the process and discourse to making money is unethical in its essence, especially on large scale projects. The maximization of profits always comes at the cost of people closest to the business operation, whether cutting costs, reduced services, unethical treatment of students...etc. If we want to build a new Egypt that meets the demands of its people we should not allow these types of aid programs to operate. These investors don't build schools to improve education, the build schools to make money. They don't build hospitals to provide decent health care, they build hospitals to overprice medical care that us the tax payers and generations after us will have to pay.
I believe the motivation and financing behind a project can always provide a good indicator of who will benefit most. Investors one and only goal is to make a profit, this is my view is not the motivation we need as Egyptians to build a country we fought for and will continue to fight for as this article clearly points out."

1.3. EU policy

The EU has said since March 2011 that it wants to support the development of democratic elections and civil society in the region, but it has reduced its initial support for strengthening social dialogue between employers and unions.

The EU position is being developed as part of the European Neighbourhood Policy (ENP), which deals with political and economic relations with countries in north Africa, eastern Mediterranean and eastern Europe. The ENP includes a Euro-med Partnership covering relations with the north African and eastern Mediterranean countries. Although the ENP has always included provisions for civil society involvement, these have been criticised for not providing significant support for trade unions or human rights organisations, and for promoting liberalisation and privatisation of public services such as energy, water and healthcare.

The first EU document on the democratic uprisings, in March 2011, included a commitment to help build civil society in the region by creating a platform for NGOs, trade unions and political parties, and also stated that it would specifically support social dialogue: "Social dialogue between trade unions and employers plays an important role in sustaining reform efforts. New trade unions and employers associations are now emerging. This provides an opportunity for more effective social dialogue. It should be supported through the Euro- Mediterranean Social Dialogue Forum which will facilitate exchange between the Mediterranean social partners on key employment and social issues and will support capacity building."

The full policy review document in May 2011, however, no longer mentions the role of social dialogue in sustaining reform, or the emergence of new trade unions, and merely states that the European Commission: "will enhance dialogue [between the EU and neighbourhood countries]on employment and social policy and encourage effective social dialogue including through the Euro- Mediterranean Social Dialogue Forum". It does still include a commitment to: "support the establishment of a European Endowment for Democracy to help political parties, non-registered NGOs and trade unions and other social partners", and states that the EU "will seek to bring partner countries' governments and civil society together in a structured dialogue on key areas of our co-operation. EU funding for such actions could be delivered through the establishment of a dedicated Civil Society Facility for the neighbourhood."

Critics suggest that it is "a struggle to find more than words in Europe's reviewed neighbourhood policy". The ENP will continue to focus on the liberalisation of trade. As of September 2011, the European Endowment for Democracy has not been created. It will not be based on major new funding from the EU, but will be based on voluntary donations: "We are not yet sure how the process would work and the funding would not be a great deal, but it would be symbolic of our support". As of September 2011 there has been no further news about when and how the Civil Society Facility will been set up. A similar 'civil society forum' was created in 2009 for eastern Europe, and NGOs in those countries have urged that they should be involved in the development of the new facility, calling especially for long-term funding and for 'civil society' to be defined broadly so as to include trade unions and universities.

The EU does not plan to impose greater transparency or democratic conditions on the dealings of oil companies in the region. In September 2011 it proposes negotiating 'strategic' energy contracts with other countries, but these will not include any conditions relating to democracy. The EU Energy Commissioner was quoted as saying: "If we say we're going to treat only with countries which are full democracies, we may as well just park our car in the garage". This is despite criticism of the EU oil and gas companies published in March 2011 in a joint report by Transparency International and Revenue Watch Institute: "None operate transparently. None reveal the royalty payments they pay to governments".

Box: History of European control of public finances in Arab countries

There is a long historical context of European states exercising power and influence over the public finances of countries in the Arab world. In the 19th century, Egypt, Morocco, Tunisia and other countries in the Ottoman empire were encouraged to borrow money from European countries by issuing bonds. When the countries were unable to repay the bonds, European countries took control of the public finances to prioritise payments to the banks who had lent the money. This was done in Tunisia in 1869, under an international financial commission; in Algeria in 1883, under which France took over the public finances; in Egypt in 1879, with a joint Anglo-French commission taking over public finances; for the Ottoman empire as a whole, in 1881, under a joint Anglo-French-German commission; and in Morocco in 1907, with a Spanish-French commission taking fiscal control. One role of these bodies was to award concessions to European countries for infrastructure development – mainly railways.

Another result of the process was that Egypt was forced to hand over its shares in the Suez canal company, which thus became a French company. It was later renationalised in 1956 by Egypt, despite an attempted invasion by France, Britain and Israel, but the World Bank later ensured that compensation was paid by making it a condition of their loan to help build the Asswan dam. This compensation enabled the Suez company to invest in other companies, mainly those involved in water and waste. It is now part of the GdF-Suez group, and one of the two largest multinationals involved in water, waste and energy privatisation throughout the world, including North Africa and the Middle East. [19]

1.4. Public finances

The levels of public spending of the countries in the table range between 22% in Yemen and Kuwait to 30% in Egypt, Tunisia and Lebanon.

The tax revenues of the countries in the table range between 22-24% of GDP in Jordan, Lebanon and Yemen, to 37% of GDP in Algeria and 47% in Kuwait.

The income levels of each country vary, with the oil producers highest.

The latest World Economic Outlook (September 2011) forecasts that growth has been slowed in many countries as a result of the internal conflicts, but positive growth is still forecast in all countries in 2012.

Table 1. Economic and fiscal data 2011

	Government expenditure % of GDP	Tax revenue %of GDP	GDP per capita (US Dollars)	Growth forecast for 2012 (%)
Algeria	25	37	4028	+3.3
Egypt	30	27	2270	+1.8
Libya	-	-	9713	-
Morocco	28	33	2811	+4.6
Tunisia	30	31	3792	+3.9
Jordan	29	23	4216	+2.9
Kuwait	22	47	54260	+4.5
Lebanon	30	22	8175	+3.5
Yemen	22	24	1118	-

Source: PSIRU http://www.psiru.org/countries , IMF, World Bank

2. Water

This section maps the extent of water privatisation in the region, with particular focus on Egypt, Palestine, Jordan, Lebanon, Tunisia, Algeria , Morocco, Libya, Yemen and Kuwait .

2.1. Water: privatised water distribution services

The table below shows a complete list of current concession, lease or management contracts for the operation of public water distribution systems.

Table 2. Current privatised water and sanitation contracts in Arab countries August 2011

Country	Location	Contract	Subsidiary	Parent	%	Type	Start	Yrs	End	Value total €m.	Employees
Algeria	Algiers	Water and sanitation	Suez	Suez	100	Management	2006	5	2011	20	
Algeria	Oran	Water	Aguas de Barcelona	Suez		Management	2008				
Morocco	Tetouan and Tangiers	Water, sanitation, electricity	Amendis	Veolia	51	Concession	2001	25	2026		
Morocco	Rabat/Sale	Water, sanitation, electricity	Redal **	Veolia	100	Concession	1999	30	2029		
Morocco	Casablanca	Water, sanitation, electricity, lighting	Lydec	Suez	51%	Concession	1997	30	2027	119***	3300
Oman	Muscat	Sanitation		Veolia	100	Management	2006	5	2011		
Saudi Arabia	Riyadh	Water and sanitation	Veolia	Veolia	100	Management	2008	6	2014	40	
UAE	Ajman	Sanitation	Moalajah	Veolia	67	Management	2006	27	2033	280	

** Note: Contract was originally awarded to consortium of EdP, Pleiade, (Portugal), Dragados (Spain); bought by Veolia 2002
*** Annual revenues from water and sanitation element

The following table shows management contracts in the region which have now expired or been terminated. Most of them are management contracts involving Suez in the eastern Mediterranean – Jordan, Lebanon and Palestine.

The Gelsenwasser contract in Algeria, awarded in 2008, was terminated in 2011 because "the company had shown itself incapable of honouring its contractual obligations to provide the water and sanitation service in the two towns" [*'s'est montrée incapable d'honorer ses engagements en matière d'alimentation en **eau** potable et d'assainissement dans ces deux villes'*][20]

Table 3. Terminated private water and sanitation contracts in Arab countries 1990-2011

Country	Location	Project	Date	Parent	Terminated
Algeria	Annaba & El Tarif	Water and sanitation	2008	Gelsenwasser	2011
Jordan	Amman	4 year water management contract	1999	Suez	ended
Lebanon	Tripoli	4 year water management contract	2002	Suez	ended
Palestinian territories	Bethlehem and Hebron	4 year management contract	1999	Veolia, Khatib & Alami	ended

Country	Location	Project	Date	Parent	Terminated
Palestinian territories	Gaza	4 year management contract – subsequently renewed on annual basis	1996	Suez, Khatib & Alami	ended

2.1.1. Problems with water and electricity contracts in Morocco

The water and electricity concessions in Morocco – in Casablanca, Tangiers, Tetouan and Rabat – are the only long-standing examples in the region of privatisation of water and electricity distribution. As in other countries in other regions of the world, there have been major problems with these contracts, which are all under severe pressure from public campaigns and critical audits:

- An official audit report has criticised the concessions http://www.courdescomptes.ma/
- There is a strong campaign against the Suez contract in Casablanca,
- The union leadership at Lydec is criticised for having been 'bought' by Suez [21]
- There are similar strong campaigns against Veolia in both Tanger and Tetouan, and Veolia was an explicit target of the democracy demonstrations in February 2011.

These campaigns and pressures have been brought together in the democracy movement in Morocco in February and March 2011. The demonstrations in Rabat and Tetouan included explicit demands to end Veolia's contracts, and in Tanger its offices were set on fire; in Casablanca, the demonstrators carried banners stating "Lydec must go!" [*« Lydec Dégage ! »*]. [22]

The auditor also publicly associated himself and his report with the movement: "In Rabat on Feb. 24, the president of the Cours de Comptes, Ahmed Midaoui, took part in the February 20 Movement's demonstration. After the march, he met with a member of the Movement, Ahmed Mediany, to promise that the Cours' report for the year 2009 which had just been published wouldn't fall into a black hole and that 'the time for silence has ended.' " [23]

The Lydec contract in Casablanca was mired in controversy from the start. It was directly negotiated rather than competitively tendered, through meetings in 1996 between the late King Hassan and then president of the French company, Jerome Monod. Local opposition by the town council and others delayed the start of the contract for a year. It was extended in 2009 to include street lighting. The campaign against the concession in Casablanca , "Stop Lydec", accuses Lydec of charging excessive prices, and failing to invest in improving the system. It demands the termination of Lydec's contract in the interest of users and workers. (see annexe, and http://stoplydec.wordpress.com). The auditor's report confirmed the underinvestment, adding that "the shortfall was especially marked in respect of sewerage". [24]

The auditor's report also spelt out how Suez takes money out of Lydec. The Moroccan company pays Suez every year a management fee for 'technical assistance', linked to total sales revenue, as well as other fees and expenses under the heading of 'ad hoc assistance' or 'training'. By itself: "this unilaterally fixed payment – worth a total of 927 million Dirham (€82 million Euros) up to 2008 - allowed the shareholder, Suez, to get back 100% of its capital in less than 10 years". These fees were in addition to the dividends paid by Lydec –dividends which are paid early to Suez, in advance of the final results, instead of releasing this capital for the investments required by the contract. Having transferred all its profits to Suez, Lydec then raised more funds for investment by issuing a bond and floating the company on the stock exchange, thus increasing the interest burden, and using the savings of Moroccans to finance investment which they had already paid for through the user fees. [25]

The contract is also failing to build local capacity and 'transfer knowledge', as the company claims and the city council expected. Lydec has pursued a policy of reducing the local workforce through successive waves of voluntary redundancies, and since 2005 this 'haemorrhage' of local qualified staff has accelerated. Local staff have been demoralised by unacceptable and discriminatory working conditions, while senior management positions have become the preserve of foreigners or consultants, and Moroccan managers have been progressively squeezed out. Many of them now work on a freelance base, sometimes as sub-contractors

to Lydec. But the most valuable consultancy work is always given to Safege – the consultancy subsidiary of Suez itself.[26]

The Veolia contracts are under similar pressure from public campaigns. Since autumn 2010 there have been weekly protest occupations of the town halls in both Tangiers and Tetouan, demanding a reduction in water and electricity prices and the termination of the contracts held by Amendis, the subsidiary of Veolia. The Tanger campaign is led by 'Coordination locale de lutte contre la vie chère', which includes 24 political, community and trade union organisations. In Rabat, a similar campaign of community and union organisations accused Veolia's subsidiary Redal of excessive pricing and underinvestment, and pinted out that "Comparative studies in several Moroccan cities show that prices are systematically higher under privatisation…. The inhabitants of Marrakech, Meknès, Fès, and Kénitra pay much less for their water than the people of Rabat" *« Des études comparatives menées dans plusieurs villes du Maroc montrent que les prix sont systématiquement plus élevés dans le cadre de la gestion déléguée par rapport à ceux de la régie publique. Les habitants de Marrakech, Meknès, Fès, Kénitra paient leur eau bien moins cher que les habitants de Rabat, la différence pouvant être de plus de 1 DH/m³ pour les tranches basses et de 7 DH/m³ pour les tranches hautes »*[27]

In March 2011 a government minister went to Paris, where he announced a proposed revision of the Tanger contract, while reassuring his hosts that: "The responsibility of the Moroccan state is to protect investors, especially when they observe their contracts and their undertakings" *« La responsabilité de l'Etat marocain est de protéger les investisseurs, notamment lorsqu'ils respectent leurs contrats et leurs engagements »*. But in April the Veolia subsidiary Amendis was subject to a fierce "inquisition" by Tangiers city council, which demanded payment of 55.3million Dirhams in fines (€4.9million Euros) for failure to make the investments required by the contract since 2002. In June 2011 the local elections in Tanger were won by a new mayor, Samir Abdelmoula, who is "adamant that the interests of the town and its citizens come before all other considerations, and said that the company had to sort itself out or leave" ["*Le maire Samir Abdelmoula est intransigeant, concevant que l'intérêt de la ville et des citoyens passe avant toute autre considération : «Amendis doit se ressaisir ou partir!»*] [28]

The concessions in Morocco also illustrate another common feature of privatisations, that is the use of joint ventures with local businesses, which ensures that local political and business elites share the same interests as the companies. All the concessions are run by companies which are joint ventures between the French multinationals and Moroccan companies, including large state-owned funds, companies owned by the royal family, and the largest private companies in the country. This is again a common tactic by the companies

- Lydec was originally created by a consortium of French and Spanish companies – Suez/Lyonnaise des Eaux, Electricite de France, Aguas de Barcelona, and Endesa. In 2005 it was listed on the stock exchange in Morocco, and 51% of its shares are now owned by Suez; 20% by Fipar Holding, and 15% by RMA Wataniya; and the rest by other investors, including 1,919 Lydec employees. Fipar Holding is a wholly-owned subsidiary of Moroccan state-run pension fund Caisse de Depot et de Gestion (CDG). It paid 400 mln dirhams ($47.8 mln/35.95 mln euro) for the shares in Lydec. RMA Wataniya is an insurance company which is the second largest private company in Morocco. [29]

- Amendis is the brand name of Société des Eaux et de l'Electricité du Nord (SEEN), which holds the Tangiers and Tetouan water and electricity contracts. It is 51% owned by Veolia and 49 % by Omnium Nord-Africain (ONA) and the Société Maroc - Emirats Arabes Unis de développement (SOMED). ONA is the largest Moroccan private company, mainly owned by the Moroccan royal family, with interests in many sectors including banking, agriculture and telecoms; in 2010 it merged with the financial company SNI – also owned by the royal family - and was delisted. SOMED is a joint Moroccan-Emirates investment company which is owned one-third by the Moroccan state, one-third by SNI (and thus by the royal family) and one-third by private Emirates funds. [30]

2.1.2. Management contracts and public investment in Algeria

In Algeria, Suez claims that the Algiers contract has succeeded in providing drinkable water 24/; that 100,000 informal homes, with 700,000 people, have become officially connected to the water and sanitation system; and that the percentage of people connected to sewerage has risen from 6% in 2006 to 53% in 2011, expected to rise further to 70% in 2012. However, the Algerian government has paid Suez €120 million for this 5 and a half year management-only contract, which is a very high price for such a contract.[31]

Suez has not invested any money in the improvements in Algiers - management contracts do not require any investment at all from the private company. The actual investment in informal settlements, and the extension of the sewerage system has been made by the Algerian government, at a rate of €200 million per year – a total of over €1 billion during this period.

The Algerian government continues to plan major investments in water and sanitation systems, nationally: " According to the public investment plan, Algeria plans to invest more than $15 billion dollars in water between 2010 and 2014, mainly to build 19 new dams, desalination plants, and transfer stations" *['L'**Algérie** a prévu d'investir plus de 15 milliards de dollars dans l'**eau** entre 2010 et 2014, notamment pour construire 19 nouveaux barrages, des stations de dessalement et des réseaux de transfert, selon un programme d'investissements publics. '].*[32]

2.2. Water and wastewater treatment plants (BOTs)

The table below shows the major treatment plants are BOTs where the company finances the construction and then recoups the costs through operation. The Suez-Degremont WWTP "will be entirely financed by the Egyptian state". [33]

Desalination plants have become a source of big business in the region. They require long-term commitments to purchase the water, and they also consume large amounts of energy. In 2005 the IEA expected that desalination plants would expand in the gulf states, Algeria and Libya, and that "Energy use in such plants will account for more than a quarter of the total increase in fuel use in the power and water sector in these countries." [34]

Table 4. Current treatment plant contracts (BOTs) in Arab countries August 2011

Country	Location	Contract		Subsidiary	Type	Start	Yrs	End	Value €m.	%
Algeria	Taksebt	WTP	Suez	Degremont	DBO	2005	5	2010	38	100
Egypt	Cairo	Gabal El Asfar WWTP	Suez	Degremont	DBO	2007			34	100
Egypt	Cairo	Gabal El Asfar WWTP	Suez	Degremont	Management	2005	5	2010	19.5	100
Egypt	New Cairo	New Cairo City	FCC	Aqualia	BOT	2009	15			
Israel	Ashkelon	Desalination plant	Veolia	Veolia	BOT	2002	25	2027		50
Morocco	Casablanca	Oum Er Rbia	Suez	Suez	BOT	2000	30	2030	305	100
Morocco	Marrakech	WWTP	Suez	Degremont	DBO	2005	5	2010	9	100
Oman	Sur	Desalination plant	Veolia	Veolia	BOO	2007	22	2029	111	52
UAE	Ajman	Sanitation	Veolia	Veolia	DB	2006	2	2008		20
UAE	Ajman	Sanitation	Veolia	Moalajah	Management	2006	27	2033	280	67
UAE	Abu Dabhi	WWTP	Veolia	Veolia	BOT	2008	25	2033	364	
UAE	Dubai	WWTP	Veolia	Veolia	DB	2008	4	2012	22.4	100
UAE	Fujairah	Fujairah 2 IWPP	Veolia	Veolia	O&M	2008			78	

2.3. Water: Companies

2.3.1. Suez and Veolia

The two French multinationals, Suez and Veolia, hold the great majority of the privatised water business in Arab countries, as they do in all regions of the world. They also have business in other sectors in this region, including waste management contracts, and (for Veolia) public transport contracts.

Both companies hold concession contracts in Morocco, all of which started in 2001 or earlier. All new contracts since that date have been either short-term management contracts, or contracts to build and operate treatment plants, BOT contracts. This has been a deliberate policy by the companies to reduce therir investment and political risk.

Both companies are now facing problems with their water and other businesses.

Veolia announced in July 2011 that it would write off €86 million and withdraw from a number of projects in North Africa – including a bus contract in Rabat, Morocco, and a waste contract in Alexandria, Egypt - referring to "localised disfficulties". [35]

More information about Suez and Veolia, including links to their websites and financial data, is available on the PSIRU website: for Suez see http://www.psiru.org/companies/suez-environnement for Veolia see http://www.psiru.org/companies/veolia-environnement

Table 5. Other business activities in the region by Suez and Veolia

Country	Sector	Parent	Details
Egypt	Waste management	Veolia	Alexandria. Now remunicpalised
Morocco	Waste management	Suez	SITA El Beida has a number of contracts: - Casablanca since 2004, under a 10 year contract - Oujda from 2009 under a 10 year contract - El Jadida from 2009 under a 7 year contract - Nouaceur from 2010
Morocco	Public transport	Veolia	Now remunicipalised
UAE	Waste management	Suez	AQSS (50-50 joint venture with Al Quadra Group) - Hazardous waste incinerator, Abu Dhabi, BOT contract in 2009 for 15 years -

2.3.2. Metito

Metito Utilities has seventeen BOT projects in the UAE, Bahrain, Egypt and Indonesia. It is mainly owned by Gulf Capital, a private equity firm based in Abu Dabhi. The IFC also has a 7.37% stake in Metito, and additionalkly has provided a $20 million loan; in 2010 it invested a further $20million in shares of Metito. It has also entered a joint venture in China with Berlinwasser - which is itself partly owned by Veolia. [36]

2.4. Water: trends and issues

2.4.1. Water: Access and affordability

The proportion of households connected to drinking water supply is very high in most countries, closer to the levels in high income countries than the average for developing countries. Moreover, the growth in drinking-water coverage since 1990 has been entirely due to full household connections. Although the level of sewerage connections is much lower, nevertheless the countries o f the region have 'improved' sanitation facilities much higher than other developing countries. The official joint monitoring report from the WHO states that, since 1990: "Notable increases in the use of improved sanitation have been made in Northern Africa" [37]

Table 6. Drinking water connections and improved sanitation: percentage of population

	Drinking water piped on premises 2008			Improved sanitation 2008
	Urban %	Rural %	Total %	Total %
Algeria	80	56	72	95
Egypt	99	87	92	94
Jordan	94	79	91	98

Kuweit	99	99	99	100
Lebanon	100	100	100	100
Libya	54	55	54	97
Morocco	88	19	58	69
Tunisia	94	39	76	85
Yemen	54	17	28	52
North Africa	*91*	*68*	*80*	*89*
Western Asia	*93*	*61*	*82*	*85*
Developing countries (all)	*73*	*31*	*49*	*52*
Developed countries	*98*	*81*	*94*	*99*
World	*79*	*34*	*57*	*61*

Source: JMP 2010 [38]

2.4.2. Public sector remains dominant

Throughout the region the dominant providers of water are public sector organisations. These include local authorities but also, in a number of cases, central government agencies. The municipal water company in Tunis, for example, is often praised as a model of a well-run water operation. Morocco's national water authority, ONEP, plays a positive role in developing services throughout the country, and has also been active in building partnerships with other public sector water services in other countries.

There is no general trend towards further privatisation. Jordan was the subject of pressure from the multinationals and the World Bank to privatise, and Suez was awarded a management contract in the early 2000s, but following an assessment of that experience the plans for water privatisation have been postponed or cancelled.

The democracy movements have increased the possibility of terminating the long-standing water and electricity concessions in Morocco. The movements have also made the main companies, Suez and Veolia, more wary of continuing to expand their involvement in the region – except for the the treatment and desalination plants in the gulf states and Saudi Arabia.

2.4.3. Water resources

Water resources are a major issue in the region.

- Some of the countries in the region, especially Jordan, Palestinian territories, and Israel, have very low levels of water resources for the needs of the population ('water stress').
    - Ownership and control of aquifers is one specific form of Israeli occupation of Palestinian territories; Palestinian water authorities have to buy bulk water from Israel.
- Water resources in Africa are increasingly the focus of international political and corporate initiatives. Land grabs are often based on the potential water resources. A recent SIWI article on southern Sudan references 'international investors' and land leases by China and India [39]
- BOT contracts for desalination plants and treatment plants to produce bulk water on a take-or-pay basis are a more important part of multinational company strategies. This has an impact on water supply services and employees because the fixed payments for bulk water take money out of the public service system and squeeze other spending e.g. on labour.
- The Nubian Sandstone Aquifer System (NSAS) is the largest known aquifer in the world, under Egypt, Libya, Chad and Sudan. Libya has tapped into it for the 'Great Manmade River' project, and Egyptian developers are also interested. Its use is monitored by a global project of the UNDP, GEF and the IAEA (extraordinarily).[40]

In Yemen "In addition, two issues which are largely specific to the country put a strain on development prospects: the rapid depletion of water reserves (aquifers); and the widespread consumption of qat, which translates into a deteriorated health status, accelerated drawing on water resources (qat cultivation consumes one-third of the abstracted groundwater), and reduced productivity, which is a major source of concern." [41]

3. Energy

3.1. Electricity: privatisations

This list excludes the private contracts for gas pipelines between north Africa and Europe e.g. the Maghreb-Europe Gas Pipeline. The IPPs listed are gas-fired except where specified.

The combined water and electricity concessions in Morocco – in Casablanca (Suez), and Tangiers and Tetouan (Veolia) are the main examples of privatisation of electricity distribution. As noted in the section on water, all of these concessions have been criticised by the public and by the Moroccan public auditor for over-charging and underinvestment.

Other IPPs are being developed in the region, for example the Sur project in Oman, where the bidders include AES, Marubeni (along with JBIC, a Japanese development bank) , Sembcorp, and Mitsui. [42]

The only recent example in the region of privatisation of electricity distribution is in Jordan, where EDCO was partially sold to a consortium of three companies, one Jordanian and two from the gulf states. This privatisation, and Jordan's IPP programme, has been supported by the World Bank group. Further IPPs are planned, including a third at Zarqa, the home of Jordan's main refinery that will provide feedstock for the plant in the absence of further Egyptian natural gas.[43]

In 2010 Tunisia invited tenders for a new IPP at Bizerte, but no award has yet been made. [44]

Egypt introduced IPPs in the mid-1990s, and split the state company into 7 regional companies which were then unbundled. But there were no further IPPs, the regional companies were never privatised, and the state is now leading a large programme of investment in generating capacity, which is expected to be cheaper than IPPs because it relies on public finance.[45]

Table 7. Privatised electricity in Arab countries August 2011

Country	Contract	Company	Parent	%	Type	MW	Start	Yrs	IFI support
Algeria	Electricity generation	Arzew IWPP	Algerian Energy Company (AEC)	95	IWPP	314	2005		
Algeria	Electricity generation	Hadjret	SNC Lavalin	26	IPP	1277	2006	22	
Algeria	Electricity generation	Skikda IPP,	SNC Lavalin	25	IPP	825	2004		
Egypt	Electricity generation	Port Said	Tanjong (Malaysia)	100	IPP	683	2001		IFC $200m.
Egypt	Electricity generation	Sidi Krir	Globeleq 61%,Edison International (Italy)39%		IPP	683	1999	20	
Egypt	Electricity generation	Suez Gulf	Tanjong (Malaysia)	100	IPP	683	2001		IFC $395m
Jordan	Electricity generation	Al Qatarna	KEPCO (Korea)65%, Xenel (Saudi) 35%		IPP	373	2011 ?	25	IDB $75m.
Jordan	Electricity generation	Amman East IPP	AES 60%, Mitsui 40%, Islamic Development Bank 23% [?]		IPP	370	2007		IBRD loan 45m. MIGA guarantee 67.5m.
Jordan	Electricity generation	Cegco	Dubai Holding (rest is government)	33	Sale	1700	2007		
Jordan	Electricity distribution	EDCO/IDECO	Dubai Holding 40%; National Industries Group Holding (Kuwait) 30%; United Arab		Sale	-	2008		

			Investors Company (Jordan) 30%						
Morocco	Electricity generation	Jorf Lasfar	Abu Dhabi National Energy Company (TAQA)	100	IPP	1360	1997	30	IBRD $176m. guarantee
Morocco	Electricity generation	Tahaddart	Endesa 32%, Siemens 20%, rest govt		IPP	384	2003		
Morocco	Electricity generation	Tetouan Wind Power Project	Theolia (France)	100	IPP Wind	50	1997	20	EIB 23.3
Morocco	Water, sanitation, electricity, lighting	Lydec - Casablanca	Suez	51	Concession	-	1997	30	119***
Morocco	Water, sanitation, electricity	Redal ** - Rabat/Sale	Veolia	100	Concession	-	1999	30	
Morocco	Water, sanitation, electricity	Amendis-Tetouan and Tangiers	Veolia	51	Concession	-	2001	25	
Palestine	Electricity generation	Gaza Power project	Consolidated Contractors International Company (Greece)	412	IPP (Diesel)	136	2000	20	
Tunisia	Electricity generation	Rades II	BTU Power Company 60%, Marubeni 40%		IPP	471	1999	20	
Tunisia	Electricity generation	SEEB	Caterpillar (USA) 50%, Candax (50%)		IPP	27	2002	20	
Yemen	Electricity generation	Al Hudaydah	Aggreko	100	Rent (Diesel)	50	2006	5	
Yemen	Electricity generation	Aggreko II	Aggreko	100 5	Rent (Diesel)	50	2006	5	

Source: PSIRU, PPIAF

3.2. Electricity: private companies

3.2.1. Aes

AES is the largest multinational company operating in developing countries throughout the world. It has been involved in a number of disputes with unions in different countries. It is the majority partner in one of the IPPs in Jordan.

3.2.2. Aggreko

Aggreko is a UK company which specialises in renting diesel-powered generators. This is an expensive and polluting way of generating electricity. Aggreko's business depends on countries failing to develop adequate electricity capacity by building permanent power stations. Aggreko's business in the region consists of two generators in Yemen.

3.2.3. Actis/Globeleq

Actis is a private equity company originally created and funded by the UK government aid agency, DFID. It invested widely in electricity in many developing countries under the name of Globeleq, but its only remaining investments in this sector are in Uganda – where it runs the distribution company, whose performance is regarded as oppressive and extortionate by the government – and one of the Egyptian IPPs.

3.2.4. BTU

The Rades II plant in Carthage, Tunisia is owned by the Carthage Power Company (CPC). This was originally set up by a consortium of Vivendi (then the parent company of what later became Veolia), Marubeni, and PSEG. In 2001 Vivendi sold its stake to PSEG and Marubeni, and in 2004 PSEG in turn sold its stake to BTU. CPC is thus now 40% owned by BTU and 60% by Marubeni. [46]

BTU is a private equity firm which specialises in investment in IPPs and desalination plants in developing countries. Its investors include “government investment arms and pension funds, and publicly traded commercial and investment banks in the Gulf Cooperation Council countries.”

In addition to CPC, since 2005 BTU owns a 10% stake in Taweelah Asia Power Company (TAPCO), a large independent water and power producer ("IWPP") in the UAE. Marubeni also owns a stake in this company too. BTU formerly had a 50% stake in Meiya Power Company, which owns 18 power stations in China: it sold this stake in 2007. [47]

3.2.5. Candax

Candax is a Canadian oil and gas company active in Tunisia and Madagascar. In Tunisia it has a 50% stake in the SEEB power station: its partner, Caterpillar Power Ventures Inc., owns the other 50%. SEEB is mostly fuelled by gas from one of Candax’ gas fields. [48]

3.2.6. Kepco

Kepco is the main electricity company in Korea, 51% owned by the Korean government, and the 271st largest company in the world. It owns IPPs in the Philippines and other countries, and is the main owner of a new IPP in Jordan.

3.2.7. Marubeni

Marubeni is a large Japanese multinational group. It includes a division which invests in IPPs around the world. In the MENA region, in addition to its stake in Rades II, it also owns shares in 4 IWPPs in the UAE, and two other IPPs in Saudi Arabia and Qatar.

3.2.8. Tanjong

Tanjong is a Malaysian investment company, originally set up as a British tin-mining company, whose main business is running lotteries in Malaysia. It owns and operates 13 IPPs in Malaysia and elsewhere, including two IPPs in Egypt, which it bought from the French multinational EdF in 2010 for $307 million. It is also part of the consortium that runs the Taweelah IWPP in UAE. [49]

3.2.9. SNC Lavalin

SNC Lavalin is a Canadian construction and engineering multinational, based in Quebec, the French-speaking area of Canada.It has a record of corruption and suspected corruption in a number of countries, including Bangladesh, India, . In September 2011 it was raided by Canadian police investigating corruption offences. It has large business in the oil and gas industry in Algeria, where it also has a share in two IPPs. It was originally awarded the contract for design work on a new town in Algeria, which was cancelled for being too exorbitant following investigations by the audit commission.[50]

3.3. Desertec and renewable energy [51]:

Desertec is an ambitious plan to harness mainly solar, but also wind energy, in the North African deserts to generate electricity. Desertec Industrial Initiative (Dii), a German-registered company with 21 shareholders, is spearheading the initiative, which will involve establishing a network of concentrating solar power (CSP) solar energy plants in the deserts of Algeria, Morocco and Tunisia. While some of the energy generated will meet local needs, it is envisaged that much of the energy will be transmitted to Europe. This will both meet some of Europe’s energy needs (an envisaged 15% by 2050), but will also help Europe meet its target for renewable energy . The energy will be transmitted across the Mediterranean Sea using high voltage direct current cables.
PSIRU published a detailed report on Desertec (“Desertec: what are the implications for Africa?” 2010 . http://www.psiru.org/reports/desertec-what-are-implications-africa) . This note updates that paper.

3.3.1. Dii shareholder

Dii sees itself as a facilitator and initiator in the process. In other words, Dii will initiate projects, and get the co-operation of the government concerned. The companies that make up the Dii shareholders will be involved in the financing, construction and operating of the plants.
Dii had thirteen founder shareholders in 2009 – mostly German-based companies specialising either in finances or active in the engineering/technological fields. There was one company from North Africa – Cevital, which is an Algerian company. Subsequent to this, Dii made a concerted effort to diversify both from Germany and from Europe more generally.
It drew in two companies from North Africa:

- Nareva, a Moroccan company; and in the last year,
- Acwa Power, a Saudia Arabia company

It also expanded into Italy, by first drawing in Enel Greenpower, and in the last year drawing in Terna Energy and Unicredit, an Italian financial institution.
Despite its attempts to draw in non-European companies as shareholders, Dii is still, however, dominated by companies in Germany, but also in other European countries - Italy, Spain and France. While it argues that it has companies from 15 countries, many of these companies are associate members (of which there are 34), rather than shareholders.
While the Dii head office is in Munich, Germany, it has also recently established offices in Rabat, Morocco and Tunis, Tunisia.

3.3.2. Progress with implementing Desertec

Dii plans to bring one CSP plant, with some of its energy being exported to Europe, into operation by 2013. This will be followed by two further projects. These initial projects are designed as pilots to gather information before more extensive plans are rolled out. Dii's first project is located in Morocco. It is also exploring the establishment of these reference or co-operation projects in Tunisia.

3.3.3. Implications of recent political events in the MENA countries

Dii argues that the political changes that have taken place in countries like Egypt and Tunisia open up opportunities for the large-scale development of renewable energy plants. Dii has clearly taken the initiative to work with the new governments in Egypt and Tunisia to continue the Dii plan. As the CEO of Dii, Paul van Son noted, "We're not particularly worried about Morocco or Tunisia. The energy minister in Tunisia is still the same person, so we haven't really been affected."[52] So for Desertec, despite the political upheavals and changes in government, it is business as usual.
The next Dii conference will be organised in Cairo in November 2011. An article in German magazine Der Spiegel describes this as "a public forum", which is intended to to provide "public dialogue and promote transparency": but the conference fee is €550 Euro per head. [53]

3.3.4. Update on developments in different countries

- **Morocco:**

Masen (the Moroccan Agency for Solar Energy) is a public-private partnership that was set up in March 2010, specifically to implement the integrated Moroccan Solar plan. Morocco is regarded as being at the forefront of developments to utilise solar energy, not least because it is currently the only country with transmission cables to Europe. The Moroccan Solar plan is intended to see the generation of 2 000 MW through solar power by 2020. Already the 500MW Ouarzazate Concentrated Solar Power Project is being developed with financial support from the World Bank ($200 million) [54], Climate Investment Funds (CIF), and African Development Bank (AfDB)[55]. It is the first project being developed under the Clean Technology Fund Investment Plan (see section 8 below)[56].
In 2011 Dii and Masen signed a Memorandum of Understanding in Morocco for the development of a large solar project as part of the second phase of development of the Moroccan Solar plan . Dii will be the enabler, with this role including "the preparation of economic and regulatory conditions for the export of electricity from the deserts". Masen will be the project developer and will manage the process in Morocco[57]. In other words, Masen will oversee the development of the project in the country while Dii focuses on getting the energy to Europe.

The Dii/Masen reference project will consist of a 400MW solar thermal power station and a 100MW photovoltaic plant. It is envisaged that it will export about 80% of the power generated from the 400MW plant to Europe, with 20% of the electricity generated being used for local needs. For the 200MW plant it is envisaged that 80% will be used for local needs, and 20% sent to Europe. It will require funding of between EUR 1.7 and 2 billion Euro.

- **Tunisia**

In April, just months after an interim government came into power in Tunisia, the Dii CEO met with four members of the interim government. The previous Tunisian government was strongly in favour of the Desertec project, and it seems that the new government is also giving its support.
In October 2010, Dii and STEG Energies Renouvables (STEG ER), a subsidiary of the state-owned electricity company STEG, signed a memorandum of understanding which commits them to do a feasibility study of a pilot project for solar and wind energy projects in Tunisia[58]. In terms of the memorandum, the pilot project will be for a project that can generate 500MW – which will be broken down to consist of 250MW solar, 125MW photovoltaic, and 125MW wind power. The energy generated will be to meet local needs, but also be exported to Europe. The memorandum also makes provision for the transfer of technologies and technical know-how to Tunisia[59].
STEG ER, also referred to as SER, which was set up in 2010, is to become a shareholder of Dii.

- **Algeria**

Despite doubts expressed by the Algerian government about the Desertec project, which gave rise in 2010 to reports that the government was withdrawing from the project, it seems that Algeria is again interested in being involved. The Algerian President, Abdelaziz Bouteflika, was quoted as saying that “we will work on renewable energy sources through a giant project that is called Desertec which we will develop by mutual consent.”[60]

3.3.5. Other CSP projects in the region:

The table below is a summary of other CSP projects in the North Africa region, which are not directly Desertec projects.

Table 8. Concentrating solar power (CSP) projects in North Africa (excluding Desertec)

Country	Project	Status	Funding source	Companies invovled
Egypt	Kuramayat solar plant – integrated solar combined cycle plant, with solar thermal component of 20MW	Now in operation	World Bank; GEF	Iberdrola and Mitsui – built Combined Cycle Power Island Orascum and Flagsol – built the solar field
	Kom Ombo			
Morocco	Ouarzazate – 125MW CSP plant First project being developed under the Clean Technology Fund Investment Plan	Been given the green light to go ahead		
	Ain Beni Mathar – integrated solar combined cycle system with a 30MW solar field		African Development Bank	
Tunisia	El Borma – 5MW solar thermal power[61]	Agreement signed		SITEP – Italian-Tunisian Oil Exploitation company
Algeria	Hassi R’mel – integrated solar combined cycle system with a 25MW solar field		GEF	

3.3.6. Desertec and public money

Desertec has made it clear that the ongoing development of the Desertec project will require public money. For instance, in relation to the Moroccan plans, it notes that because the production costs of a CSP plant are still greater than the general price level for electricity, the project will need government funding. This could

either be in the form of financing through grants or concessional financing, or through off-take by, for instance, guaranteeing the price at which the electricity will be bought[62].

3.3.7. World Bank and solar power plants in the Middle East and North Africa Regional Program

The Clean Technology Fund (CTF), a funding mechanism implemented by the multilateral development banks (MDBs), which focuses on low carbon development and the use of clean technologies[63], has a specific programme focusing on the development of Concentrating Solar Power in the Middle East and North Africa Region. This programme will assist with the financing of the expansion of CSP in Algeria, Egypt, Jordan, Morocco and Tunisia.
In providing this funding, however, the CTF investment plan makes it clear that certain market principles must be adhered to, and it envisages the private sector playing a key role in the development of CSP in the region. For instance, the plan makes clear that:

- One of the attractions of the CTF funding CSP plants in the region would be that it would assist in attracting private sector interest;
- It will be necessary to remove energy subsidies, which are regarded as "systemic barriers", as well as introduce "favourable policies that will encourage commercial utility operations". Subsidies, rather than being seen as necessary to ensure that everyone, including the poor, has access to affordable electricity, is regarded as hampering the development of the CSP market, presumably because it discourages private sector investment. [64]

Desertec and its shareholder companies is well-positioned to take advantage of the strong emphasis the MDBs are placing on the necessity of private sector involvement in the development of CSP projects in the region.

3.4. Electricity: trends and issues

3.4.1. Electricity: Access and affordability

Almost all countries in the region have achieved nearly universal levels of electricity connections. In Syria, rural electrification is still at only 84%; in Qatar, only 70%; and in Iraq, only 57% - which leaves over 4 million Iraquis unconnected.

The worst figure is for Yemen, where rural electrification is only 22%. As a result, only 38.2% of the whole population is connected, leaving 14.2 million people without access to electricity. This level of connection is one of the worst in the world, lower than the levels in Bangladesh, Haiti, Zimbabwe and Nigeria, and barely half the level in India.[65]

Table 9. Electrification rates in Middle East and North Africa

	Population (m.)	Electrification rate(%)			
		Total	Urban	Rural	Population without electricity millions
Algeria	34.6	99.3	100.0	98.0	0.2
Egypt	80.5	99.4	100.0	99.1	0.5
Libya	6.5	99.8	100.0	99.0	0.0
Morocco	31.6	97.0	98.0	96.0	0.9
Tunisia	10.6	99.5	100.0	98.5	0.1
Bahrain	0.7	99.4	100.0	95.0	0.0
Iran	76.9	98.4	100.0	95.0	1.2
Iraq	29.7	85.0	99.0	57.0	4.2
Israel	7.4	99.7	100.0	96.4	0.0
Jordan	6.4	99.9	99.5	100.0	0.0
Kuwait	2.8	100.0	100.0	100.0	0.0
Lebanon	4.1	99.9	100.0	99.3	0.0
Oman	3.0	98.0	99.9	93.0	0.1

Qatar	0.8	98.7	100.0	70.0	0.0
Saudi Arabia	2.0	99.0	100.0	95.0	0.2
Syria	22.2	92.7	100.0	84.0	1.5
UAE	5.0	100.0	100.0	100.0	0.0
Yemen	23.5	38.2	75.0	22.0	14.2

Source: IEA: Access to Electricity Database 2010 http://www.iea.org/weo/electricity.asp, World Gazettee

3.4.2. Public sector still dominant, but Jordan part-privatised

Electricity in the great majority of countries in the region remains predominantly in the hands of vertically-integrated public sector bodies, with the exception of Jordan. In the region as a whole IPPs generate a small proportion of electricity , and most investment is still financed by governments. [66] Strong public sector electricity companies can and should form the basis of further development. Lebanon is the only country where there is serious pressure for privatisation, because of the need for major investment and reform.

3.4.3. Nuclear power

The only country in the region with a nuclear power plant in 2011 is Iran. Work started on the plant in 1975, supplied by Siemens, but this was stopped in the Iranian revolution. Russia took over construction in 1992 and it finally started generating electricity for the grid in August 2011. The UAE has ordered 4 reactors from Korea in 2009, construction work is yet to start but is likely to go ahead. Jordan has been close to ordering a nuclear power station for some years but has not yet finally placed an order. Other countries are not likely to develop nuclear power for the near future. [67]

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