

Iraqi Ministry of oil Fossil Fuel Resources (Latest Estimates)

IRAQ is one of the major oil producers .and has the third largest proven oil reserves in the world were estimated at (115 billion barrels) and (110 T. cubic feet) of proven natural gas reserves.

About 70% of Iraqi natural gas reserves are associated, 20% non associated (free), and 10% dome gas .

In addition, most experts agree that even the latest figures may considerably underestimate the Iraqi true potential because of the low level of exploration activity. Only about 10% of Iraq has been explored.



IRAQ possesses twelve oil refineries: three of which are large capacity and nine are small topping plants.



Name of Refinery	Design Capacity 1,000BPD of crude oil	Available capacity 1000BPD of crude oil
Basrah	140	120
Dourah	90	74
Kirkuk	30	28
Baiji	290	220
Najaf	20	16
Kasak	10	6
Samawah	20	16
Haditha	16	8
Gazirra	14	0
Nassirya	30	25
Misan	10	7
Siniaya	30	18

Current Status

No refinery has been able to operate at full capacity in recent years because of damage from wars and sanctions. In 2004, they processed about 400,000 - 500,000 BPD of crude on average. All their output is consumed by the domestic market but is insufficient to fully meet local market demands.

Oil and gas sector strongly affected by these events and consequently caused shortages in all energy fronts in country.

Oil ministry is particularly aware of these shortages so major steps were considered. The following are the main concepts of the Iraqi oil and gas development plan.



Ministry Goals

The main scope of the development plan addresses:

- Improving management systems.
- Rehabilitating existing facilities .
- Improving and increasing processing capacity.
- Improving product specifications .
- Reducing natural gas flaring .
- Reducing heavy petroleum products (fuel oil) from refineries.



On the other hand demand for oil products, especially gasoline, has been rapidly increasing in recent years in accordance with the ongoing reconstruction work for the country's recovery. However, there is insufficient production capacity from domestic refineries because of the aforementioned reasons. In 2004, MoO had to import some 60% of its domestic demand for gasoline totaling 20 million liters/d but domestic production amounted to no more than 8 million liters/d. The shortfall resulted in 12 million liters/d being imported.



Iraq's refineries produce large quantities of fuel oil which effects refinery production when the tanks become filled with fuel oil.

This condition reduces or stops production. For this reason, Iraq needs to invest in technology upgrades to reduce the quantity of fuel oil.



Iraq's oil and gas fields have more than 500 structures of which about 80% have not been drilled. High international investment is needed with fields like Mansuria, Akkaz, and others.

Most of Iraq's natural gas is associated with oil. The rate of gas production is proportional to the crude oil production. This effects the gas industry such as power generation, petrochemical, and fertilizer but unfortunately significant volumes of associated gas are flared off.



Oil Ministry Plan

- Increase the utilization of natural gas. -
- Replace the dependence on crude oil consumption for power generation .
- Dedicate the oil mainly for export and refineries



Electrical sector

the first Gulf war and the economic blockade, which resulted in an interruption of all electric power projects,

- After 2003 the electricity system was suffering from severe shortages in electricity production by about (50%) of the load which is estimated to be up to (6500) megawatts, while the limits of reliable productive capacity (3500) megawatts. In addition to the system bottlenecks and problems in the networks of transport of fuel and electrical distribution networks and to keep the electrical system working the cutting electric program for country-level has been implemented and the program is still valid till now.



During the period 2004-2008 was adopted a policy to develop and increase the capacity of existing stations and improving the performance and effectiveness of electrical systems to maintain the stability of the energy processed and increased reliability as well as the expansion and upgrading of transmission and distribution networks in all parts of Iraq and initiate a project to link electricity networks with neighboring countries due to the high economic returns and reduce in operating costs and dealing with emergencies that happen in electrical system .

In the quick actions had been contracted with several international companies which have a long experience in the electrical industry field to supply Iraq with gas stations (quick monument).



The policy was followed during this period •
to encourage the private sector to engage
in investment, for example the entry of
the private sector in the province of
Kurdistan for the construction of power
plant capacity (500) megawatts in Arbil.



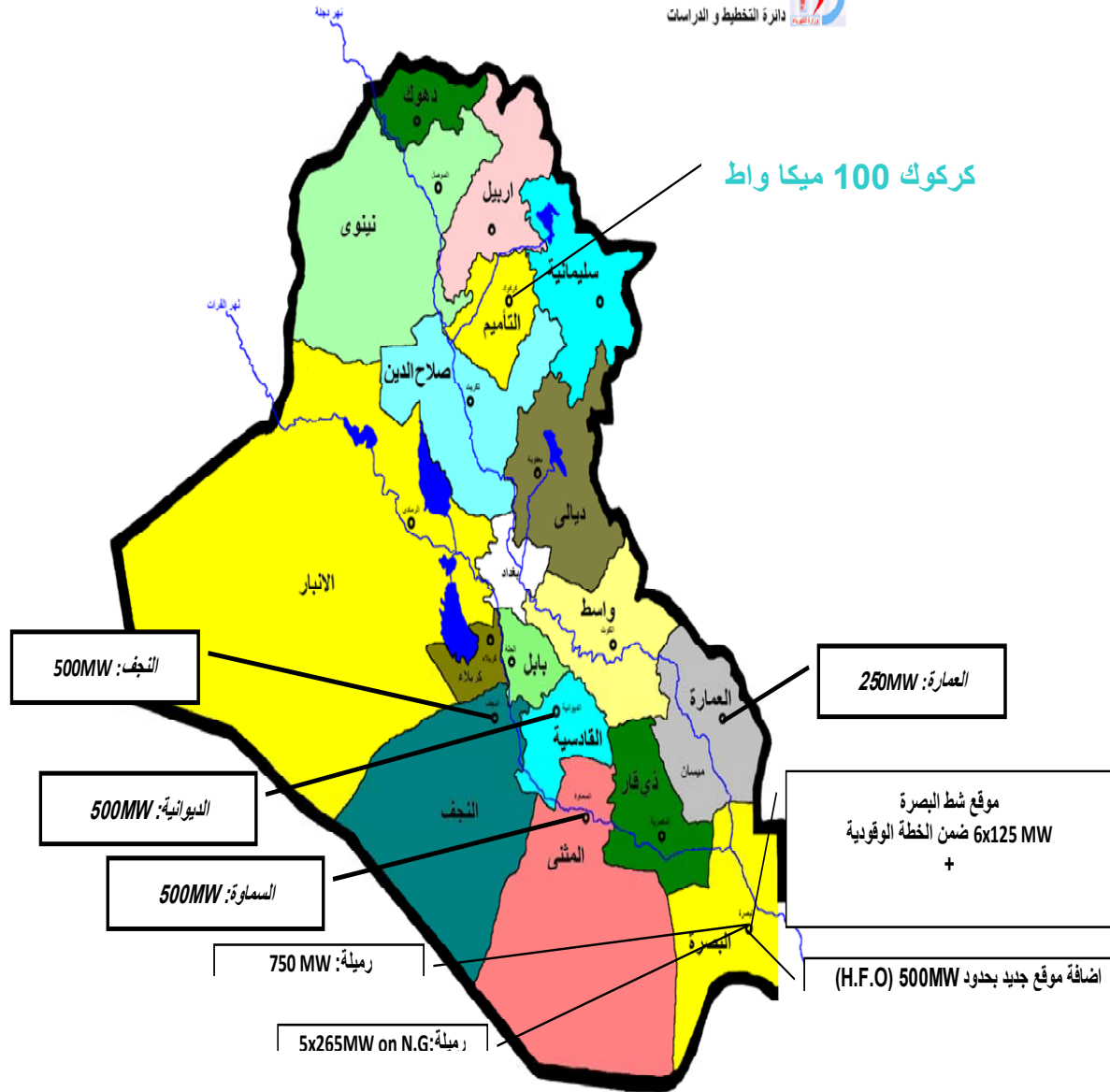


المشاريع المقترحة للاستثمار

وزارة الكهرباء
دائرة التخطيط والدراسات

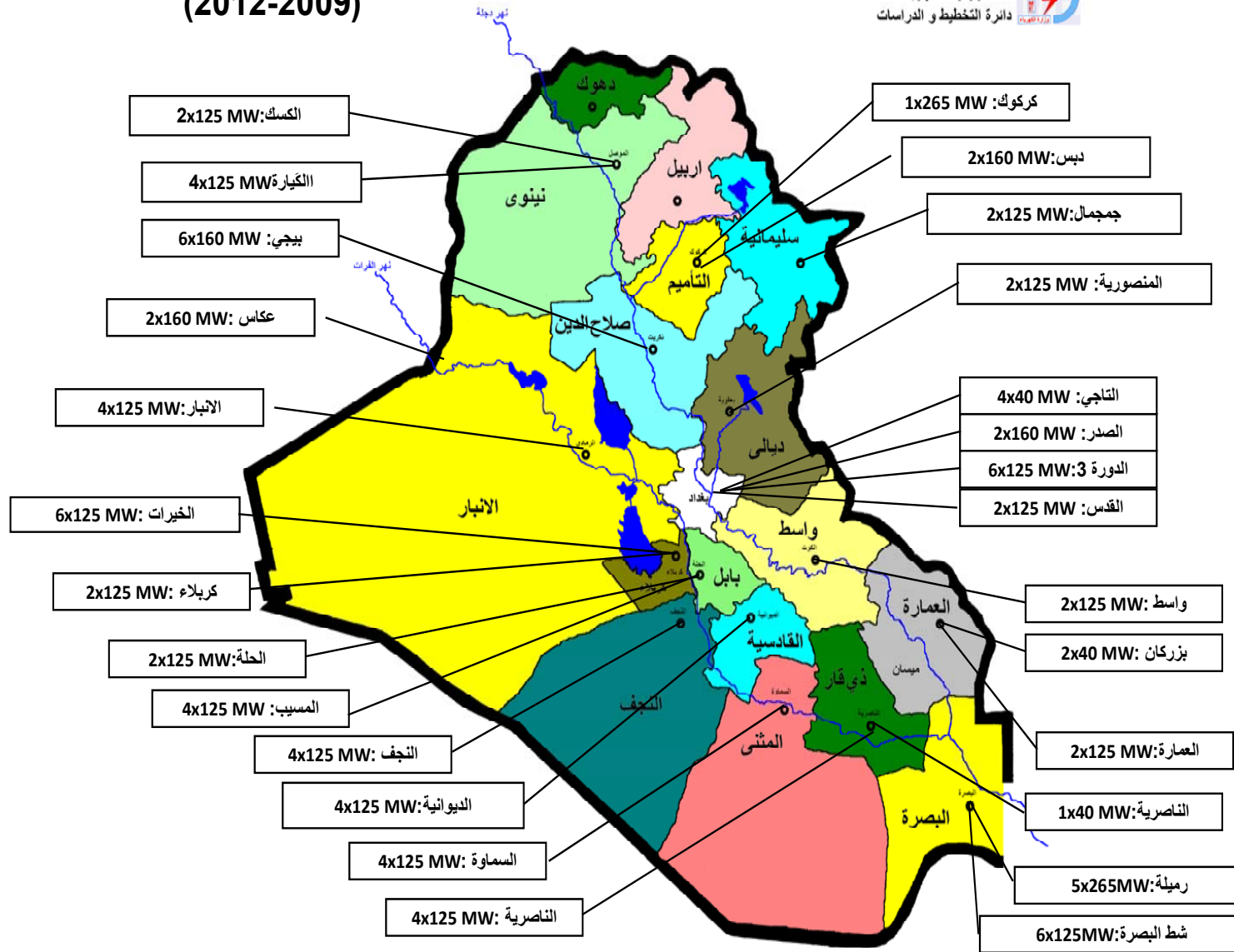


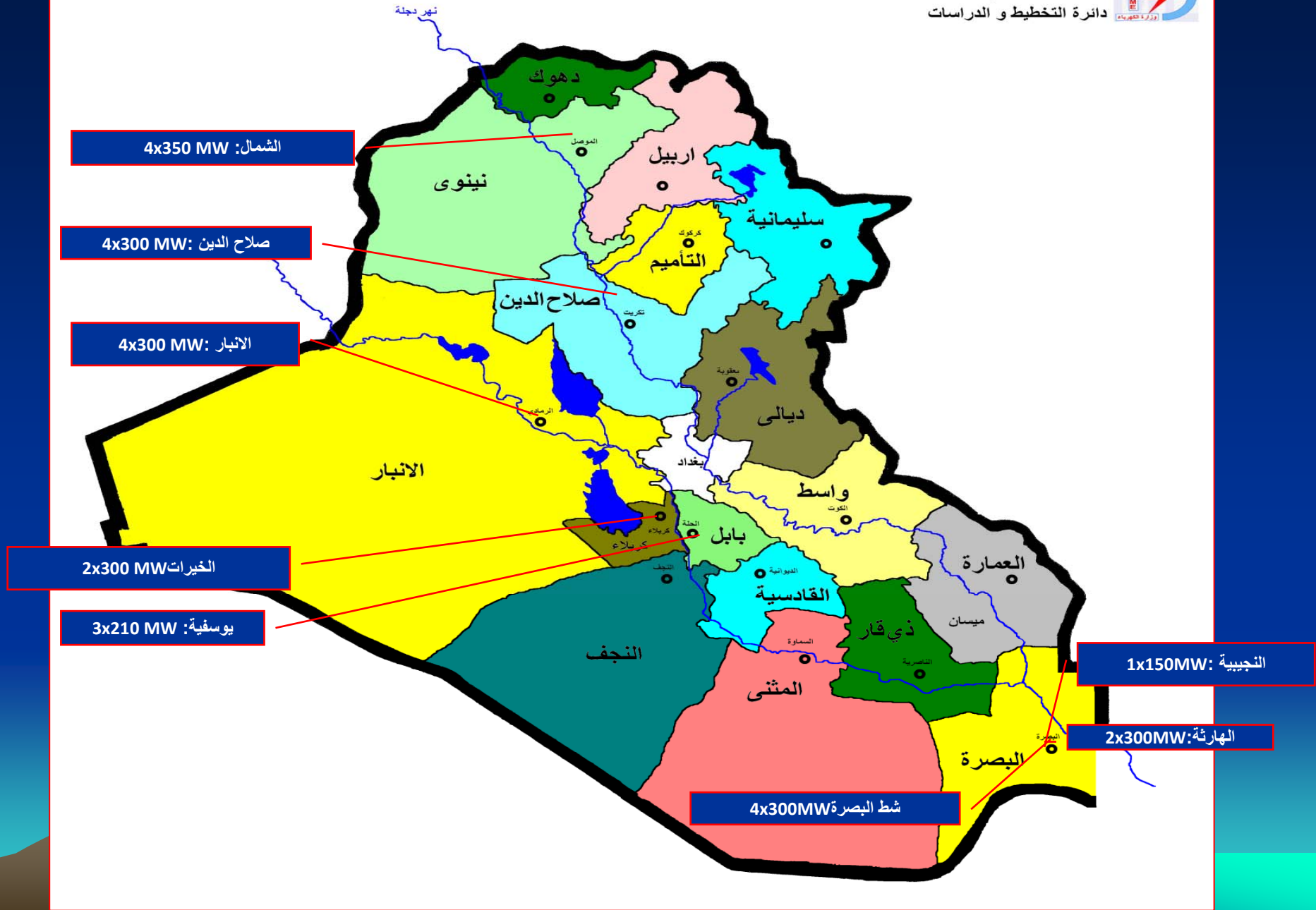
كروك 100 ميكا واط



المشاريع الغازية الجديدة للأعوام (2012-2009)

وزارة الكهرباء
دائرة التخطيط والدراسات





Renewable energy

Every day the sun pours more energy on to the surface of our plants than we use from all sources in an entire year.

Iraq is more fortunate country in solar radiation which it self represents one of the natural resources of the country .the amount of radiation an average of (6.5 – 7) kw /m² range in duration of sunshine in Iraq from (2800-3300) hr/ year .

Iraq is making some modest steps in the field of alternative energy for example :

Use of solar energy in the field of cathodic protection of pipelines carrying crude oil . and in street, residential complexes lighting, of the oil companies and use the water heater for domestic use that are running on solar energy.



There are some restrictions •

1 - The presence of dust reduces the effectiveness of the system for up to 50% in case of non-cleaned and in particular Iraq is exposed to 42 dust storm in 2009 alone. •

2 - The cooling equipment and assembly of heat from the sun are very expensive at the moment •

3 - Storage of solar energy when the sun goes down and the type of use and the period of use and total cost of storage. •



so we need to Develop a national strategy •
and develop existing renewable energy
projects and monitor the necessary
amounts to finance these projects to
provide the energy needs of all segments
of society . •



WASSIT			
No	Station	Existing	Future
1	Wassit		Th.st 4 x 330
AL ANBAR			
No	Station	Existing	Future
1	Al Anbbar		G.st 10 x 125
2	Akass		G.st 2 x 160
SALAH AL DIN			
No	Station	Existing	Future
1	Baiji	Th.st 6 x 220	G.st 4 x 160
		G.st 4 x 159	
		G.st 8 x 23	
2	Salah al din		Th.st 4 x 300

KIRKUK			
No	Station	Existing	Future
1	Kirkuk taza	G.st 1 x 265	G.st 2 x 125
		G.st 1 x 65	
2	Mula abd alla	G.st 12 x 20	
		G.st 6 x 37	
3	Dibss	G.st 3 x 37	G.st 2 x 160
		G.st 4 x 10	
		Th.st 4 x 15	
NAINAWA			
No	Station	Existing	Future
1	Al mosul	G.st 12 x 20	
2	Nainawa		G.st 3 x 125
3	Al shimal		Th.st 4 x 350



DIESEL GENERATOR

No	Station	Existing	Future
1	Diesel haditha		10 x 23
2	Diesels samara		20 x 17
3	Al huria north Baghdad		5 x 11.8
			8 x 7.75
			4 x 5.5
4	Al qadissa station al anbar		12 x 2.5
5	Al faloga station al anbar		12 x 2.5
6	Al basrah center station		12 x 2.5
7	Al basrah bab alzubar station		12 x 2.5
8	Al kadmia Baghdad		12 x 2.5
9	North baghdad		12 x 2.5
10	Alzafrania		(2.5 x 12) x 2
11	Al washsh		12 x 2.5
12	New baghdad		(2.5x 12) x 2
13	Al gadria		12 x 2.5
14	Trade generator	1.2x 208	
15	Electric generator	1 x 47	