

# **MOE** وزارة الكهرباء وهزارهتى كارهبا



المديرية العامة لمشاريع الانتاج الغازية

General Directorate for Gas Power Plants Projects

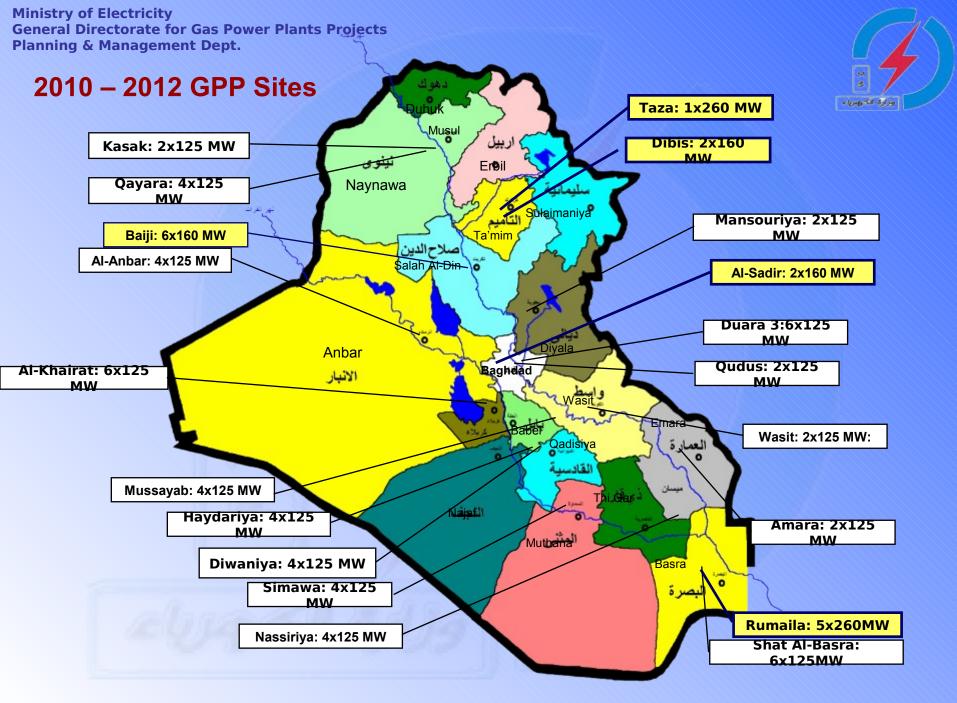
بەرپوەبەرايەتى گشتى پرۆژەكانى بەرھەمھينانى غازى

# **EPC & OE Conference**

Erbil - October 01, 2009



Ministry of Electricity/ Government of Iraq has already signed contracts for supplying units and major parts of GAS POWER STATIONS from GE (7000 MW) & Siemens(3560 MW) manufacturers. Different capacity units (125,160 and 270 MW) total 12000MW to be supplied and to be installed in different locations in Iraq during the period 2010 - 2012.





| 1  | Diwaniya     | 4X125 | GE      |
|----|--------------|-------|---------|
| 2  | Samawa       | 4X125 | GE      |
| 3  | Daura 2      | 6X125 | GE      |
| 4  | Kasek        | 2X125 | GE      |
| 5  | Qudus 3      | 2X125 | GE      |
| 6  | Shat-AlBasra | 6X125 | GE      |
| 7  | Amara        | 2X125 | GE      |
| 8  | Haydariya    | 4X125 | GE      |
| 9  | Wasit        | 2X125 | GE      |
| 10 | Mansouriya   | 2X125 | GE      |
| 11 | Nasiriya 1   | 4X125 | GE      |
| 12 | Khairat      | 6X125 | GE      |
| 13 | Qayara       | 4X125 | GE      |
| 14 | Anbar        | 4X125 | GE      |
| 15 | Mussaieb     | 4X125 | GE      |
| 16 | Rumaila      | 5X270 | Siemens |
| 17 | Taza         | 1X270 | Siemens |
| 18 | Dibis        | 2X160 | Siemens |
| 19 | Al-Sadr      | 2X160 | Siemens |
| 20 | Baiji        | 6X160 | Siemens |



### **SIEMENS** supply scope

The core of the Gas Turbine Package is the well-proven and reliable Siemens equipment:

- The Gas Turbine, SGT5-4000F
- The Gas Turbine Generator SGen5-1000A

### Scope of Supply

In brief the Scope of Supply comprises two Siemens Gas Turbine Packages with the following major equipment to be supplied:

- Gas Turbine,
- Generator,
- Auxiliary systems,
- Adjacent electrical equipment
- Gas Turbine control system.
- High voltage Switchgear with all relevant equipment



# **2010 plan**

1. Simawa

2. Diwaniya

3. Qudus 3

4. Daura 2

5. Kasek

6. Rumaila

7. Kirkuk – Taza

4X125 MW

4X125 MW

2X125 MW

6X125 MW

2X125 MW

5X270 MW

1X270 MW



## 1. SAMAWA

► Province : Al-Muthana

Capacity : 4X125 MW

➤ Site Dimension : 500X1000 m

Coordinates : 31°13'15" N 45°16'6.52" E

31°13'23.6" N 45°16'1.71" E

31°13'3.39" N 45°16'32.17" E

31°13'18.54" N 45°16'36.98" E

Fuel: HFO, LDO and NG

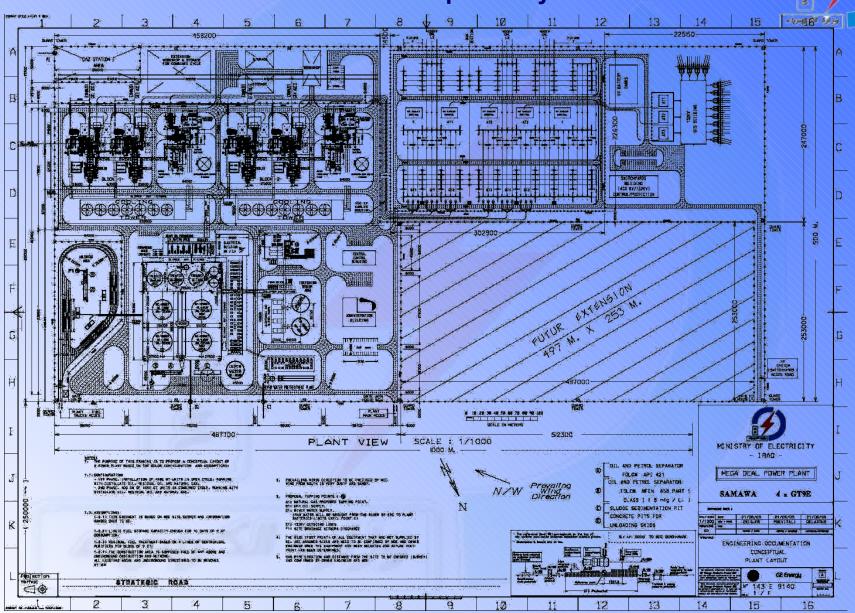
1.4 Km From Samawa Refinery

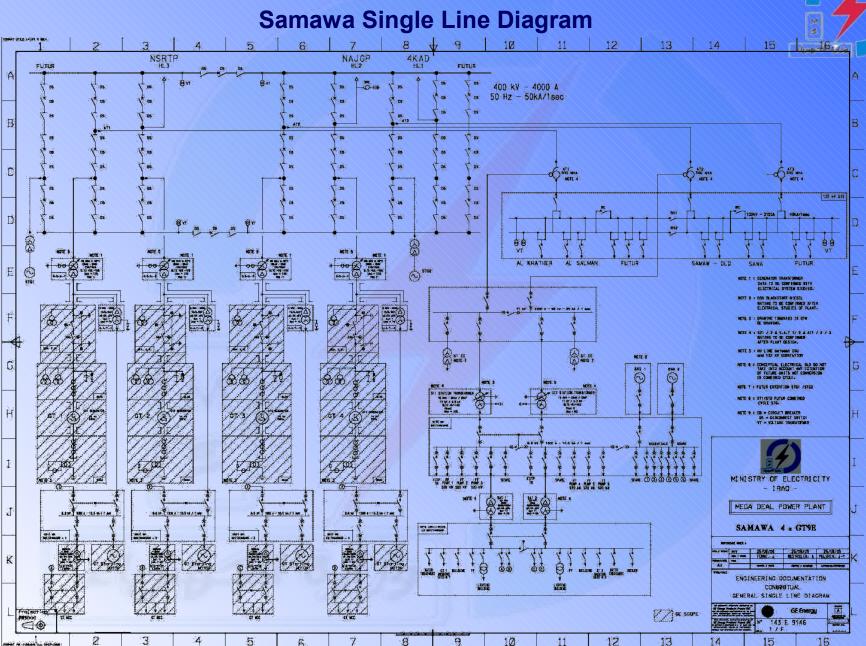
Water : 750 m From Slaibat river

Grid Connection: 400KV GIS Green Field



#### **Samawa Conceptual Layout**







# 2. DIWANIYA

Province : Diwaniya

Capacity: 4X125 MW

➤ Site Dimension : 500X1000 m

Coordinates : 31°58'35.11" N 44°41'31.72" E

31°58'46.69" N 44°41'17.96" E

31°59'.9.38" N 44°41'46.19" E

31°58'58.01" N 44°42'00.09" E

Fuel: HFO From Diwaniya Refinery, LDO & NG

50 Km from Axial Line

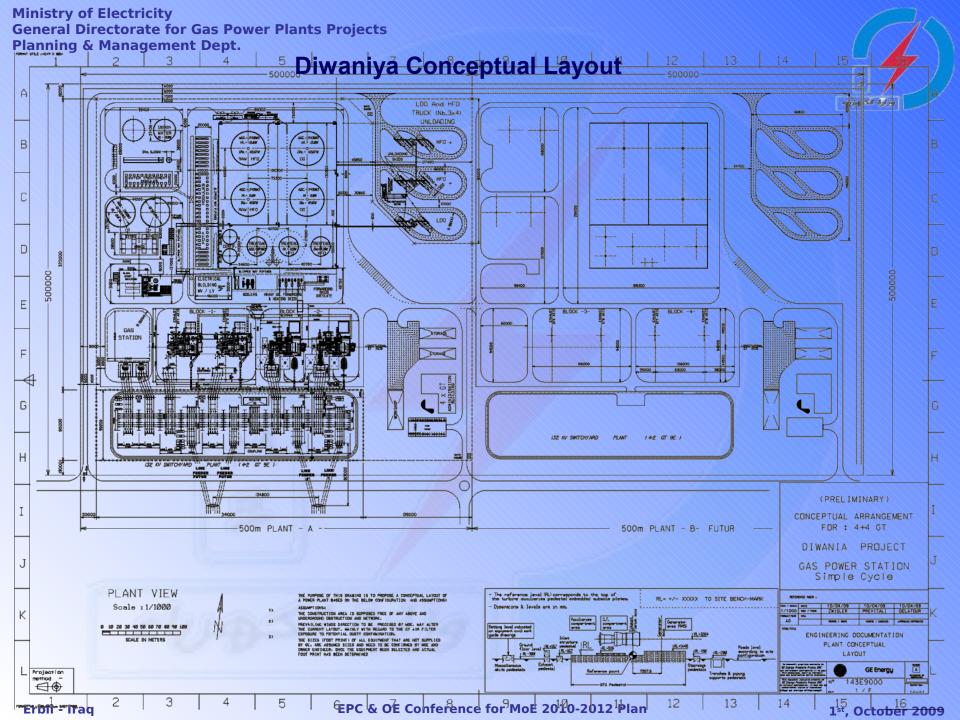
Water : 12 Km from Shamiya river

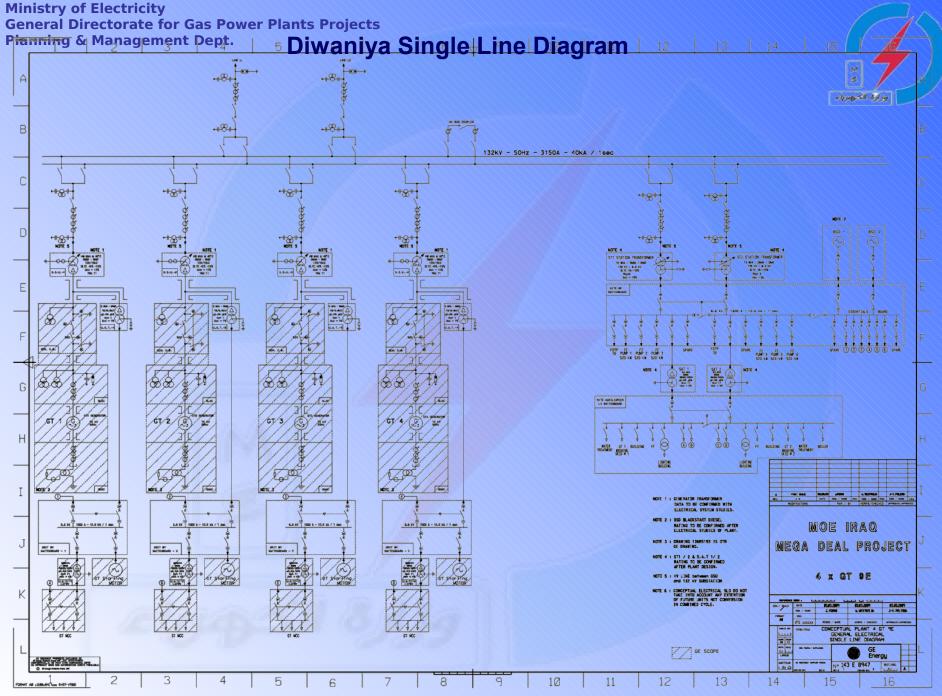
Grid Connection: 132KV GIS Green Field



### **Diwaniya Satellite Photo**









# **3. QUDUS 3**

➤ Province : Baghdad

Capacity: 2X125 MW

➤ Site Dimension : 98X220 m

Coordinates : 33° 29' 28.28" N 44° 21' 43.2" E

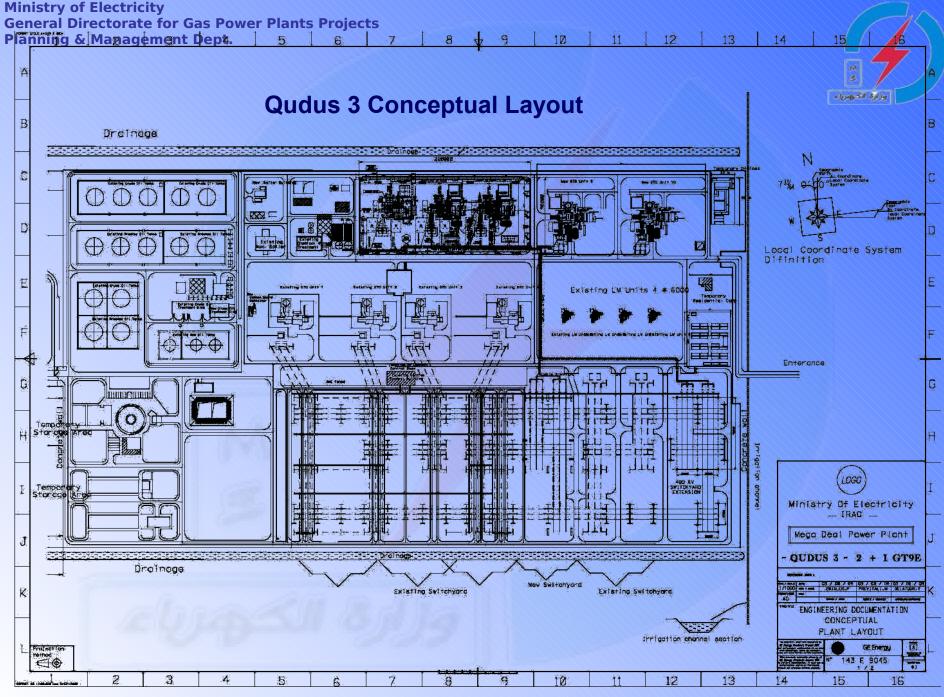
Fuel: LDO, NG 500m From Baghdad East

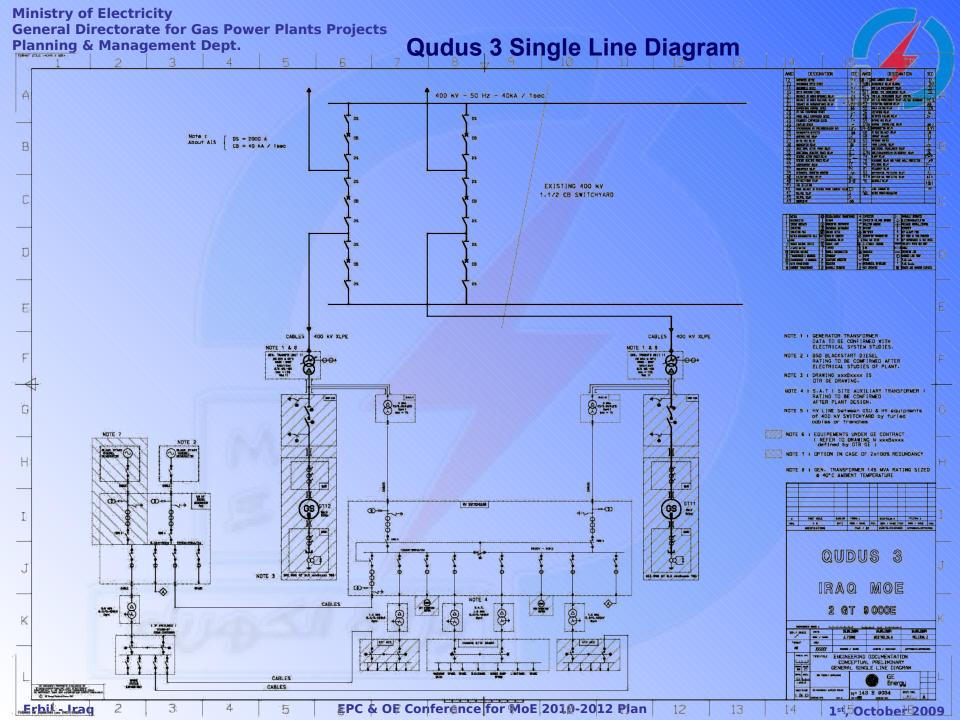
Oil Field

Water : 2 Km From Tigris river

Grid Connection: 400KV Extension to existing SS







## 4. DAURA 2



Capacity : 6X125 MW

Site Dimension: Trapezoid 700m, 275m, 400m

Coordinates : 33°14'37" N 44°25'37" E

33°14'43" N 44°25'47" E

33°14'33" N 44°25'44" E

33°14'29" N 44°25'44" E

33°14'22" N 44°25'44" E

33°14'20" N 44°25'47" E

33°14'18" N 44°25'48" E

33°14'18" N 44°25'49" E

33°14'15" N 44°25'52" E

33°14'12" N 44°25'41" E

33°14'13" N 44°25'41" E

33°14'12" N 44°25'35" E

Fuel: Fuel Oil: 3 – 5 Km From Daura Refinery

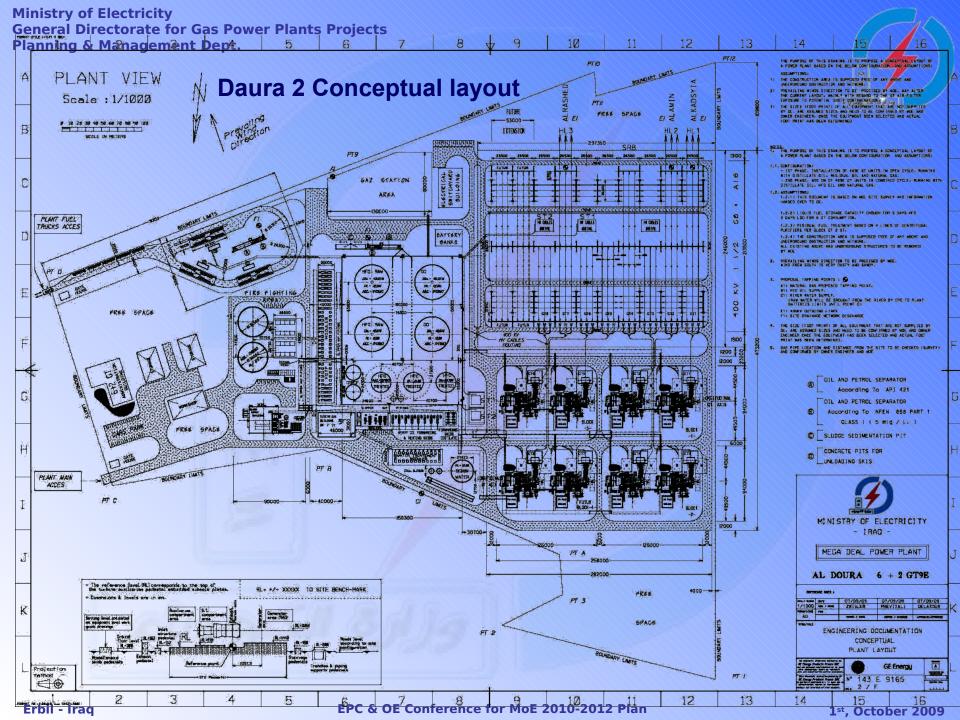
Water : 2 Km from Tigris river

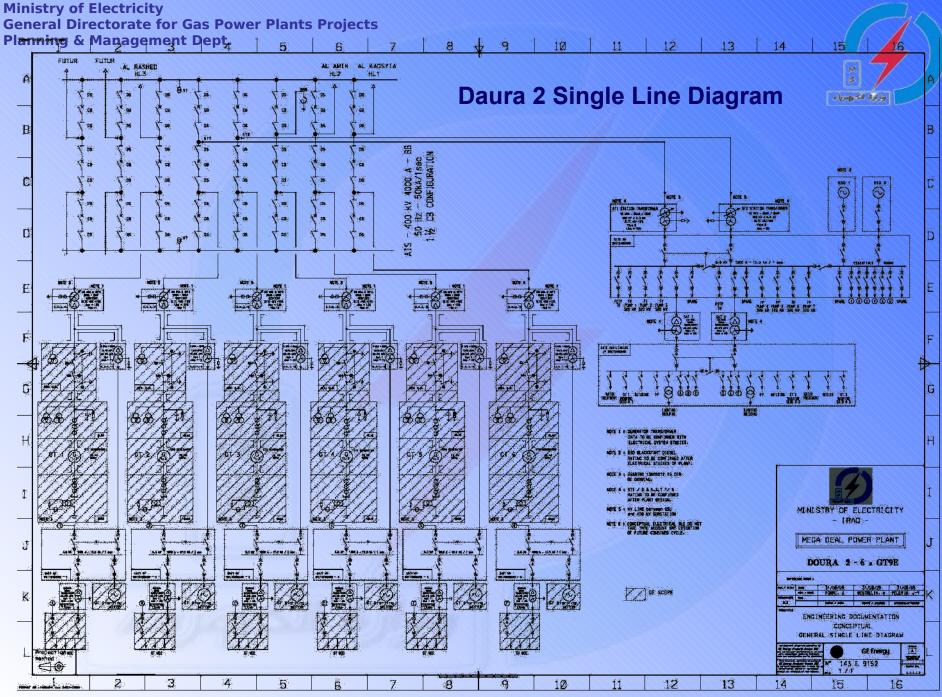
Grid Connection: 400KV Green Field



# Daura 2 Satellite Photo









# 5. Kasek

Province : Mosul

Capacity: 2X125 MW

➤ Site Dimension: 400X500 m

Coordinates : 36° 30' 22.4" N 42° 35' 50.98" E

36° 30.366" N 42° 35.864" E

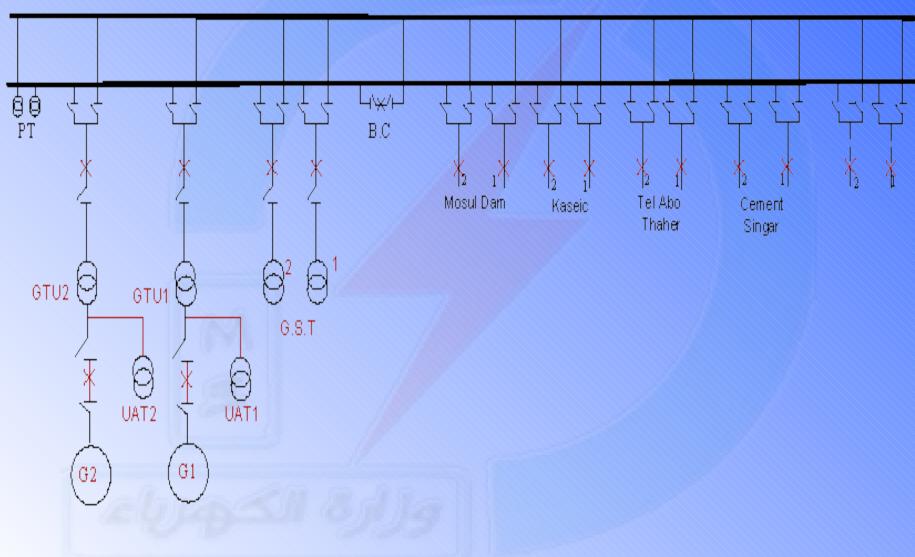
Fuel: HFO,10 Km From Kasek Refinery, LDO & NG

Water : 40 Km From Mosul Dam Lake

➤ Grid Connection: 132KV Connected to nearby existing Kasek 132KV GIS SS



# **Kasek Single Line Diagram**





# 6. Rumaila

Province : Basra

Capacity : 5X270 MW

➤ Site Dimension : 864X998 m

Coordinates : 30° 32.788' N 47° 24.034' E

30° 33.245' N 47° 24.356' E

30° 32.995' N 47° 24.817' E

30° 32.539' N 47° 24.487' E

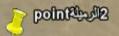
Fuel: NG, 5 Km From Qurna West Gas Oil Field

& LDO

➤ Water : 3 Km From Shat Al-Basra river

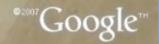
➤ Grid Connection: 400KV GIS Green Field



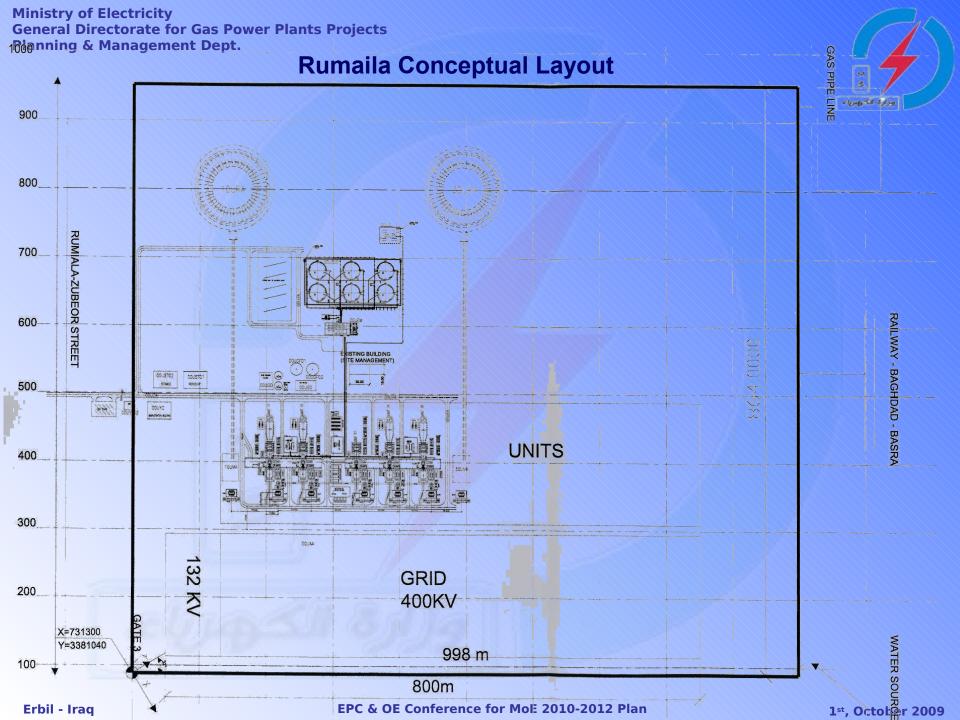


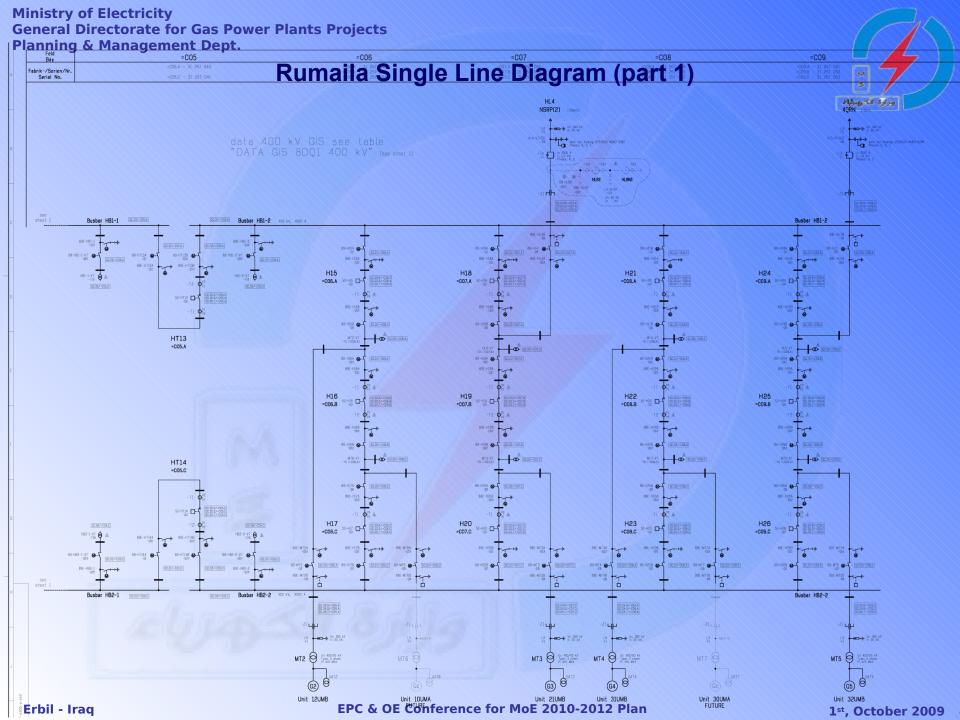


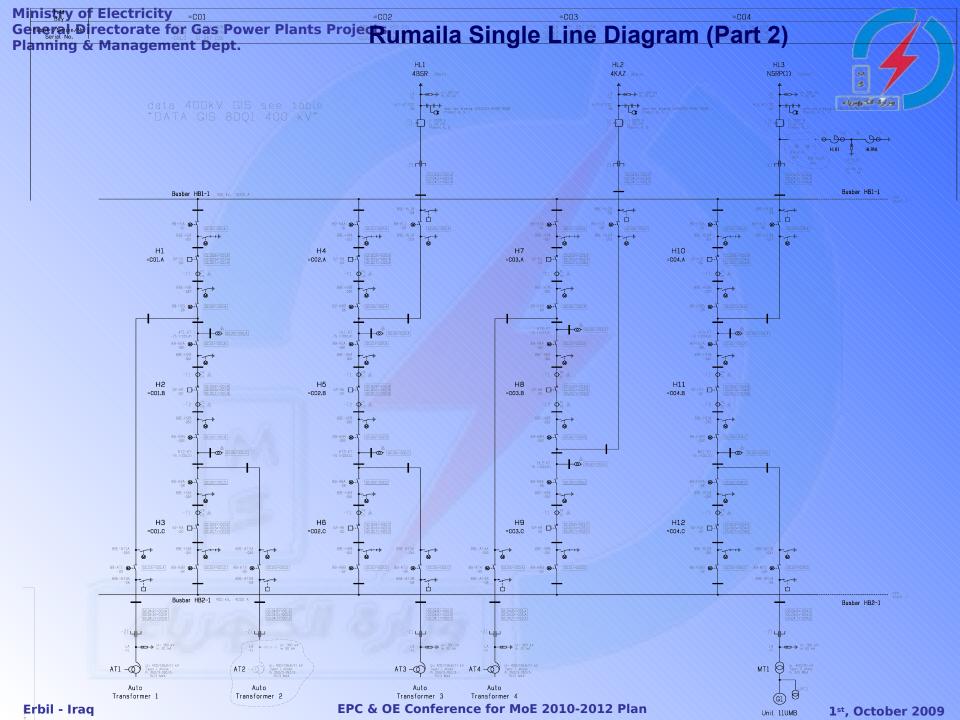
Map Data © 2009 AND Image © 2009 DigitalGlobe



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# 7. Taza

Province : Kirkuk

Capacity: 1X270 MW

➤ Site Dimension: 100X700 m

Coordinates : 35° 32' 69" N 44° 32' 12" E

35° 32′ 66″ N 44° 32′ 02″ E

35° 32' 89" N 44° 32' 14" E

35° 32' 86" N 44° 32' 21" E

35° 32′ 99″ N 44° 32′ 20″ E

35° 32' 96 N 44° 32' 25" E

Fuel: NG, 30 Km From Kirkuk Refinery (North Gas Factory)

& LDO

Water : Water Wells inside Site area

Grid Connection: 400KV Extension to existing SS



**Ministry of Electricity** General Directorate for Gas Power Plants Projects
Planning & Management Dept. Taza Conceptual Layout FEE Y=1000.000 3+++ Y=950.000 SPACE FOR UNLOADING FEEE 电区区 TEEE 11UEN01 Y=850.000 1 Y=800.000 HYDROGEN TIVEN 3 Y=750.000 Y=700.000





# Thank You for listening

**Ministry of Electricity** 

**General Directorate For Gas Power Plants Projects**