

# MP SUMMARY

*To bridge the gap between demand and Production .*

*A master plan was issued in 2006 and updated in march 2009 .*





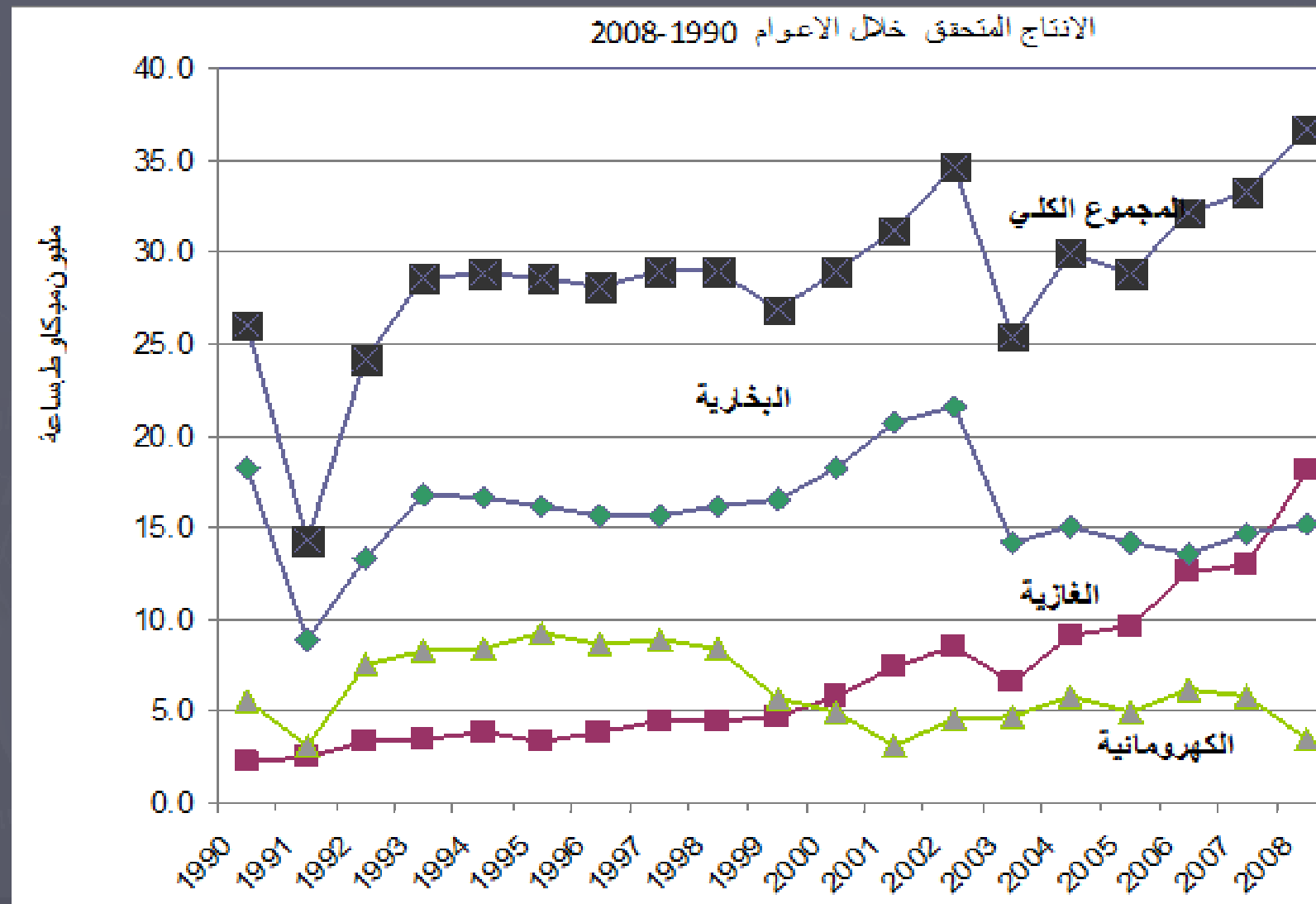
# *Energy Production Plants in Iraq*

- ▶ *Thermal .*
- ▶ *Gas.*
- ▶ *Hydro.*
- ▶ *Diesel.*

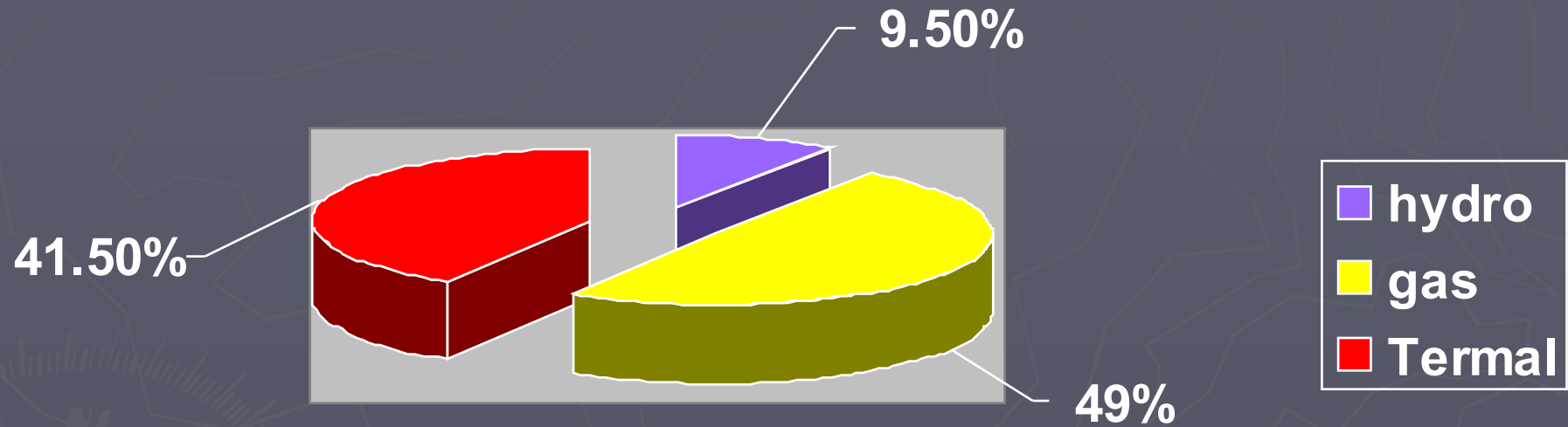
## *Percentage Participation of power plant for the years 1990- 2000-2008*

|                   | <i>1990</i>               |           | <i>2000</i>               |           | <i>2008</i>               |             |
|-------------------|---------------------------|-----------|---------------------------|-----------|---------------------------|-------------|
| <i>Plant type</i> | <i>Installed capacity</i> | <i>%</i>  | <i>Installed capacity</i> | <i>%</i>  | <i>Installed capacity</i> | <i>%</i>    |
| <i>Thermal</i>    | <i>5415</i>               | <i>73</i> | <i>5015</i>               | <i>62</i> | <i>5015</i>               | <i>41.5</i> |
| <i>Gas</i>        | <i>1760</i>               | <i>8</i>  | <i>1800</i>               | <i>20</i> | <i>5496</i>               | <i>49</i>   |
| <i>Hydro</i>      | <i>2347</i>               | <i>19</i> | <i>2430</i>               | <i>18</i> | <i>2513</i>               | <i>9.5</i>  |
| <i>Total</i>      | <i>9522<br/>MW</i>        |           | <i>9245<br/>MW</i>        |           | <i>13024<br/>MW</i>       |             |

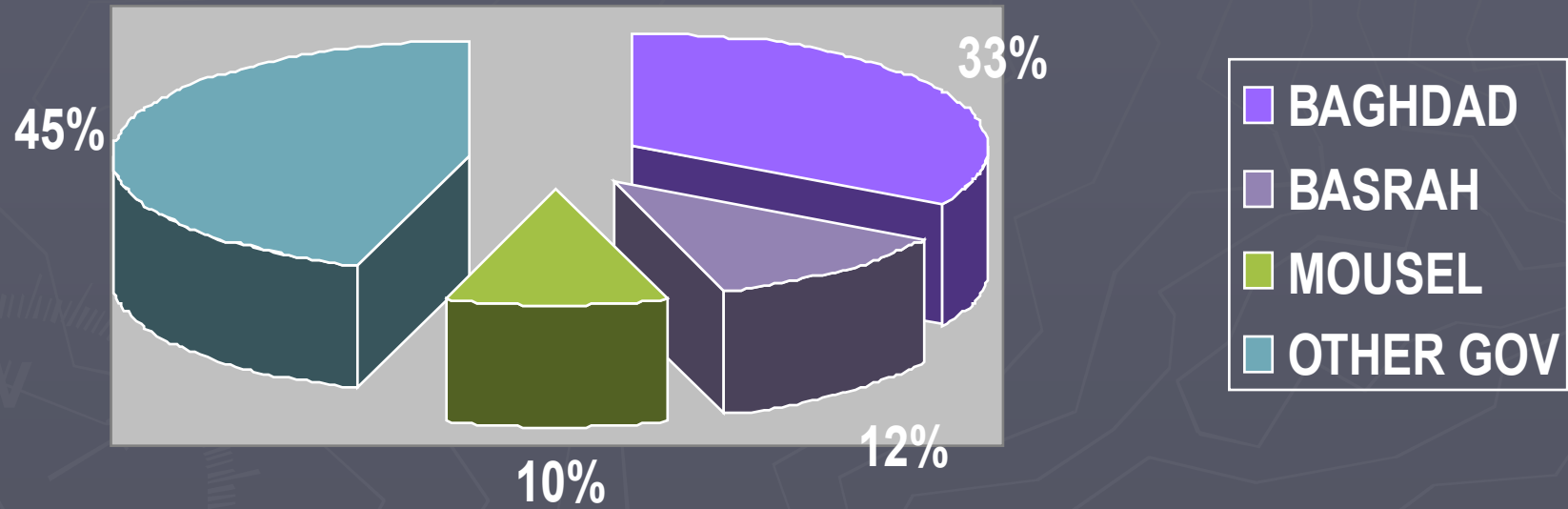
# Actual Energy production for the years 1990-2008



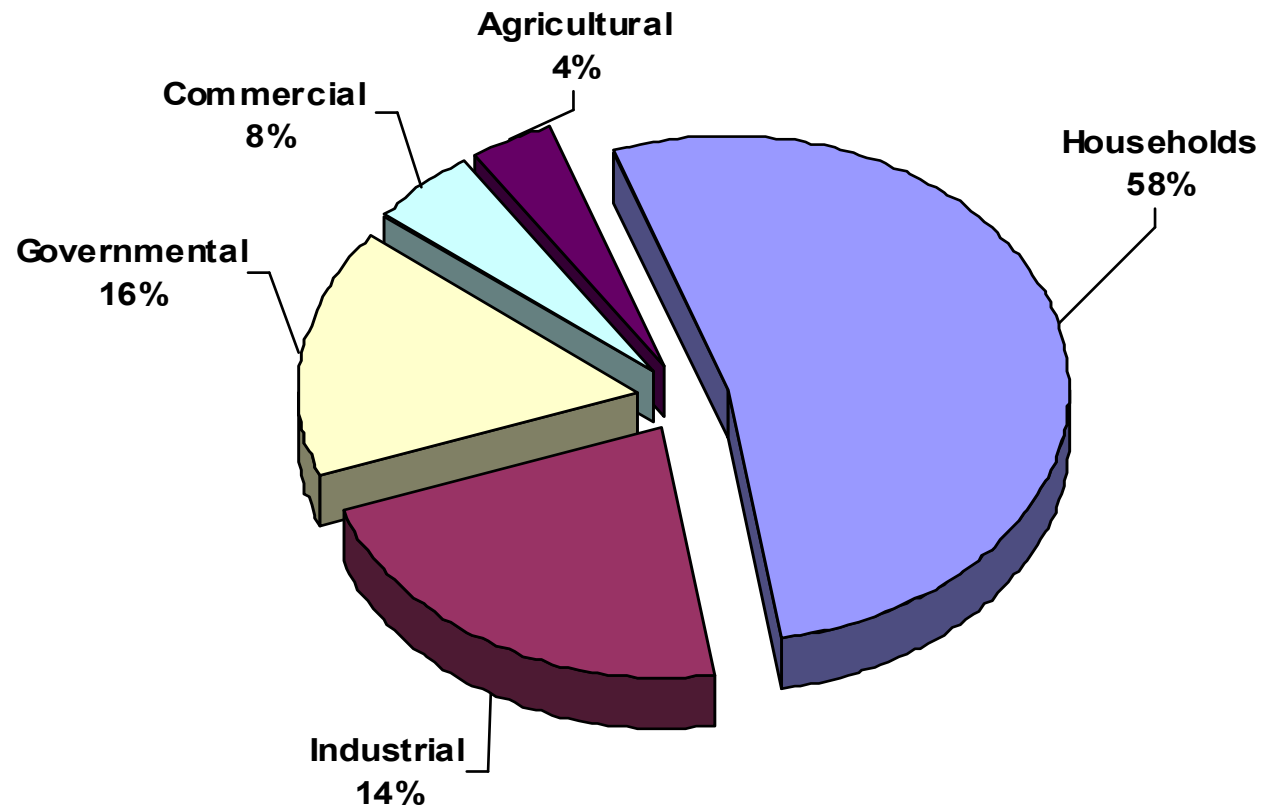
# *Power Plant Participation in Energy Production For 2008*



# *Status of load consumption*



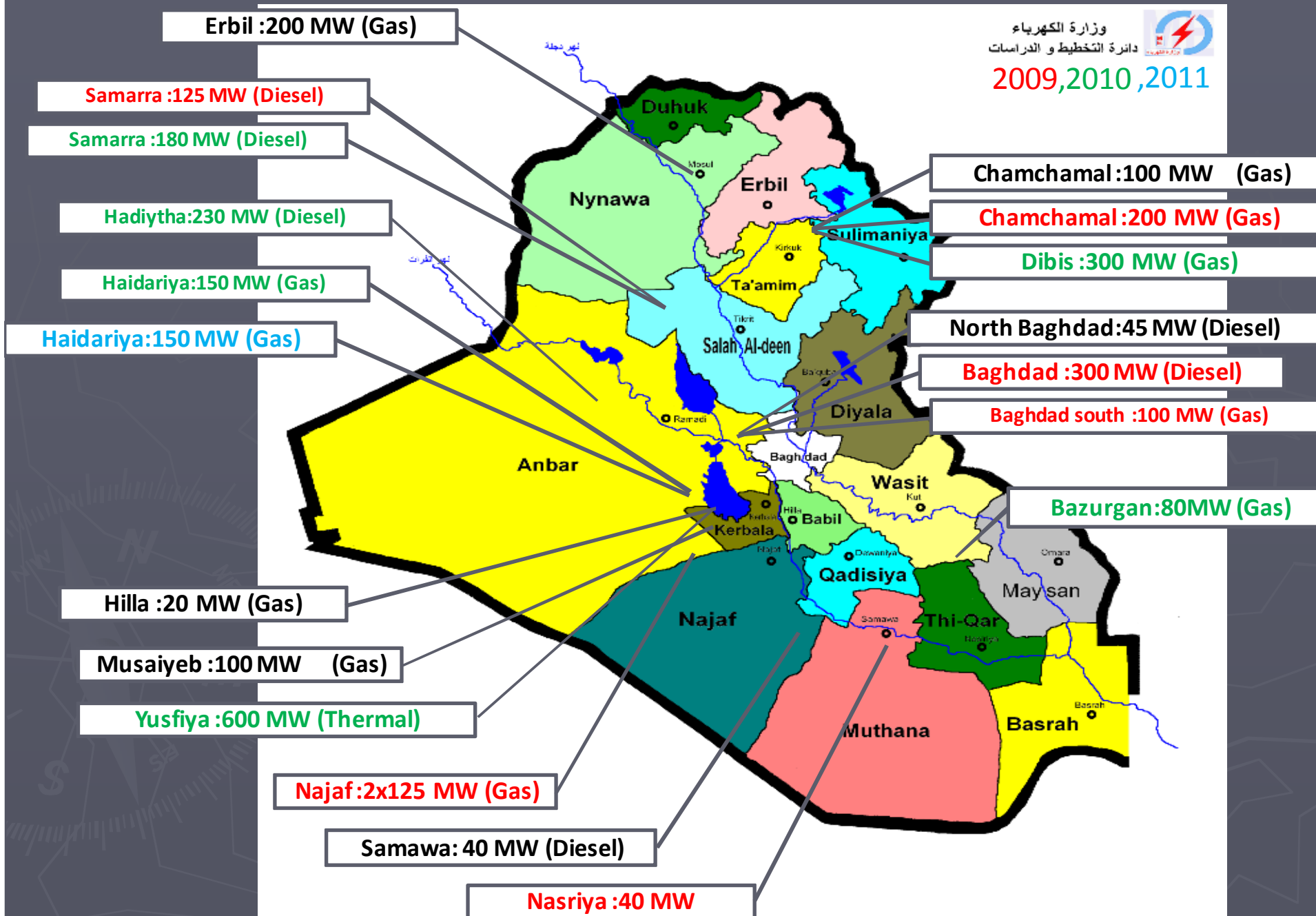
# Summary of load Distribution by Sectors



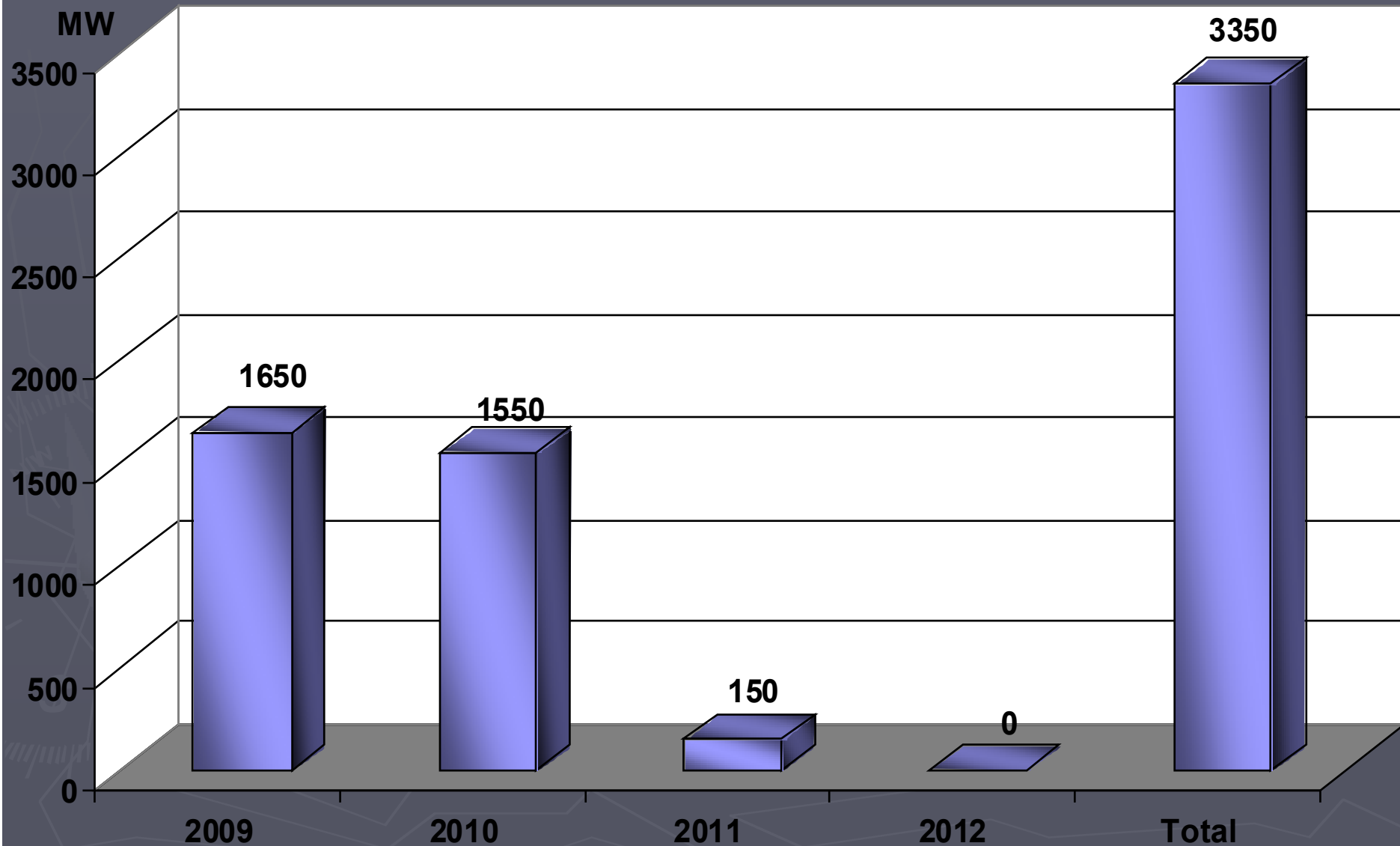


# On Going Power Projects

وزارة الكهرباء  
دائرة التخطيط والدراسات  
2009,2010,2011



# Expected Power Addition from the Ongoing Projects





New

Naynawa:6x125 MW

Baiji:6x160 MW

Al-Anbar:4x125 MW

Akkas:2x160 MW

Al-Khairat:6x125 MW

Kerbala2x125 MW

Hilla:2x125 MW

Najaf:4x125 MW

Dewaniya:4x125 MW

Samawa:4x125 MW

Nasiriya:4x125 MW

Kirkuk:1x260 MW

Dibis:2x160 MW

Chamchama I3x125 MW:

Mansuriya:2x125 MW

Dora(2):4x125 MW

Taji:4x40 MW

Al-Sadr:2x160 MW

Dora(3):6x125 MW

Quds:2x125 MW

Wasit:2x125 MW

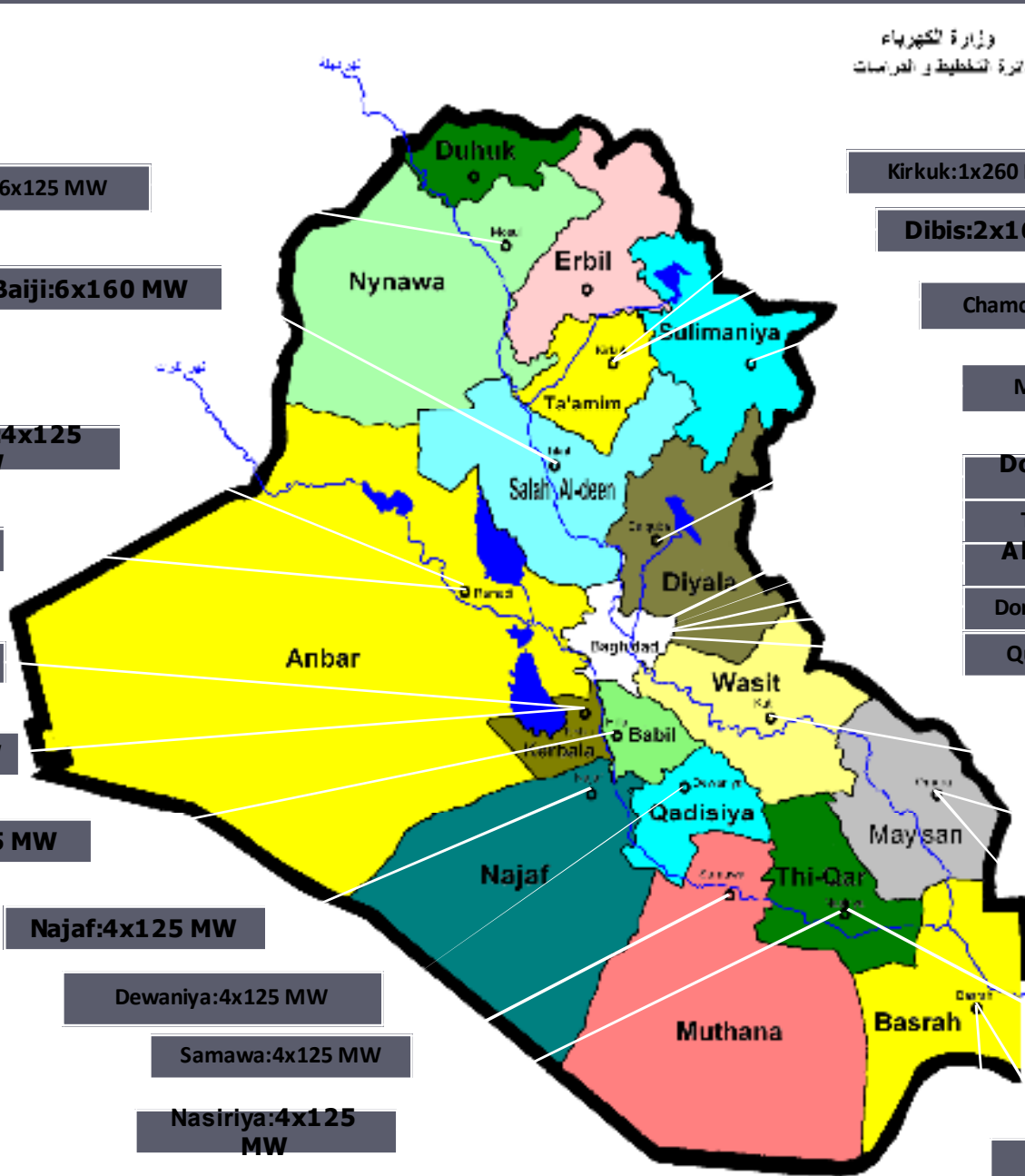
Bazurgan:2x40 MW:

Omara2x125 MW:

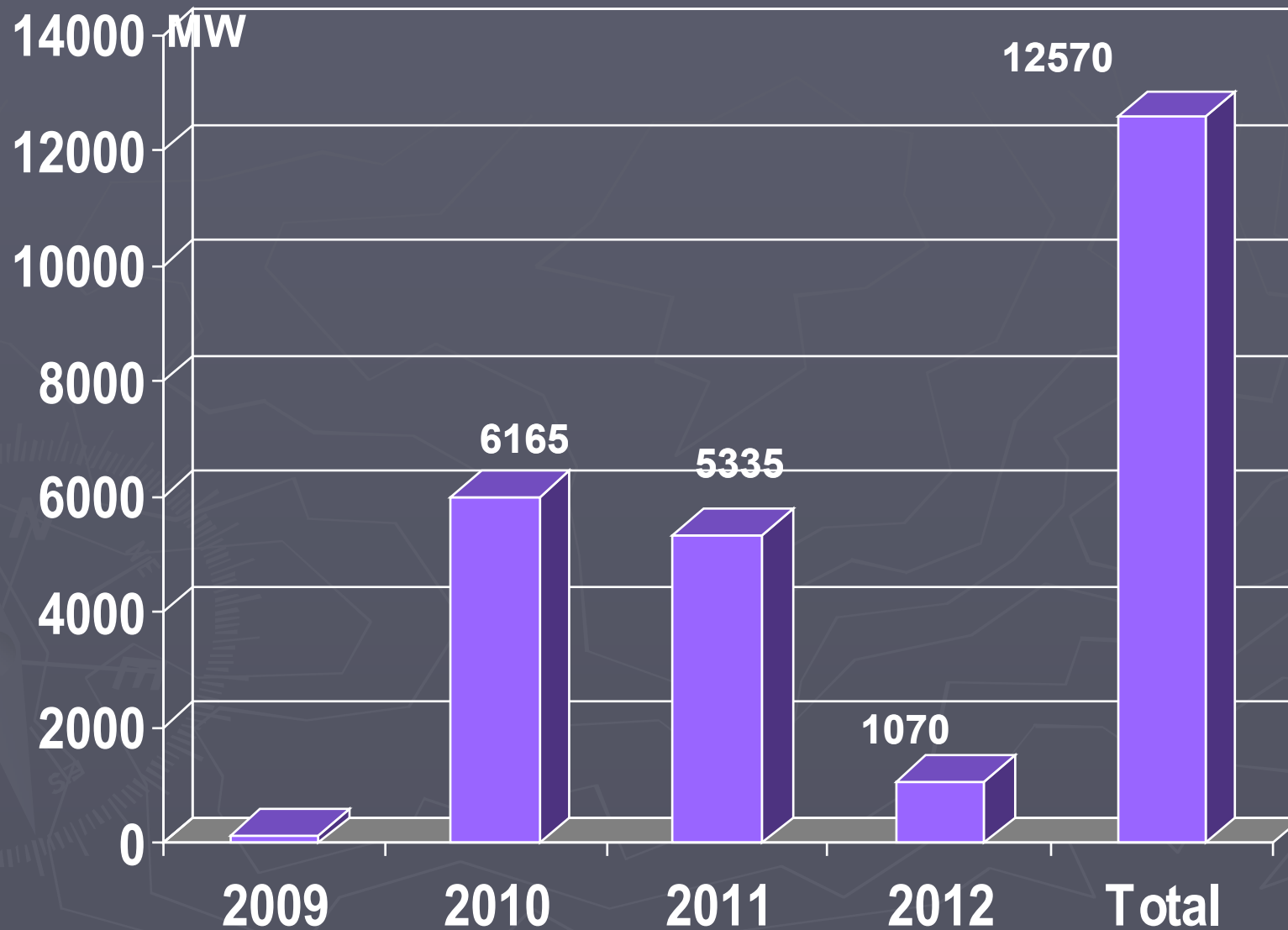
Nasiriya:1x40 MW

Rumaila:5x265MW

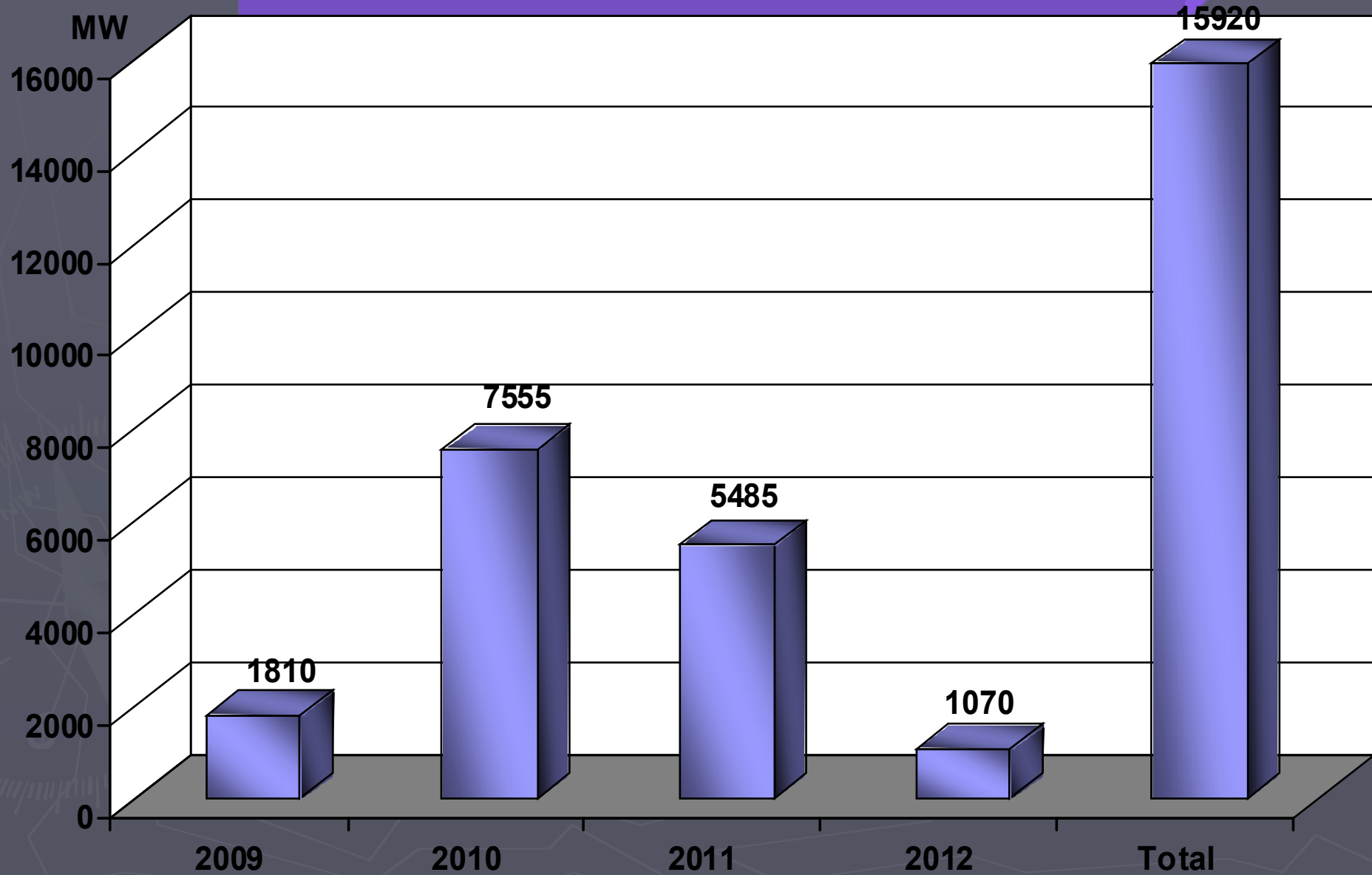
Shat Al-Basrah:6x125MW:



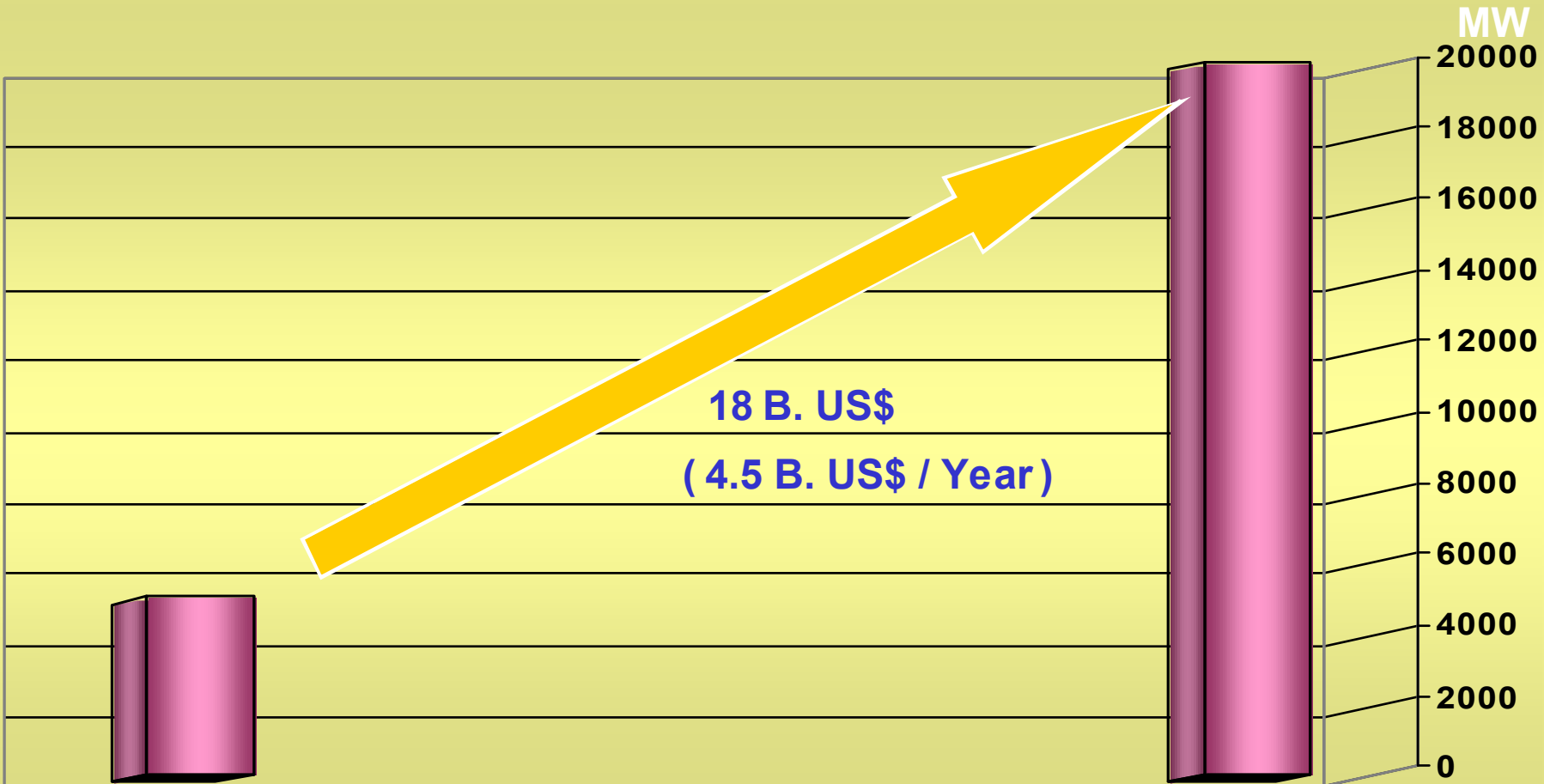
## Expected Capacity Additions from the New Gas Power Projects by MoE



# Total Expected Capacity Additions (Ongoing + Planned by MoE) 2009- 2012



# Estimated Fund Required for the Addition of New Projects



2008

2009

2010

2011

2012



# Projects

**Al-shemal : 1400 MW**

**Anbar: 1200 MW**

**Khairat : 1200 MW**

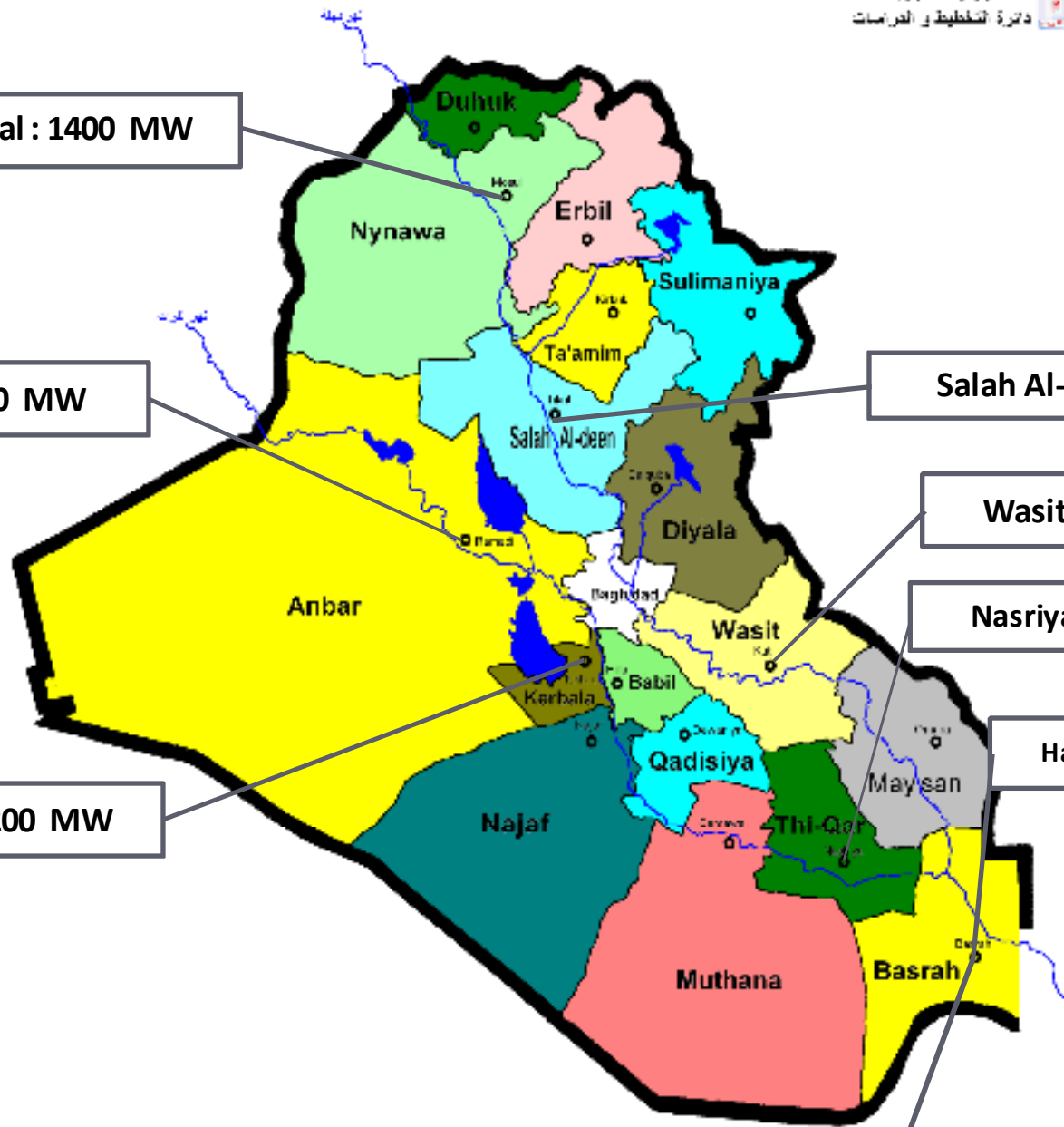
**Shat Albasrah : 1200 MW**

**Salah Al-Deen : 1200 MW**

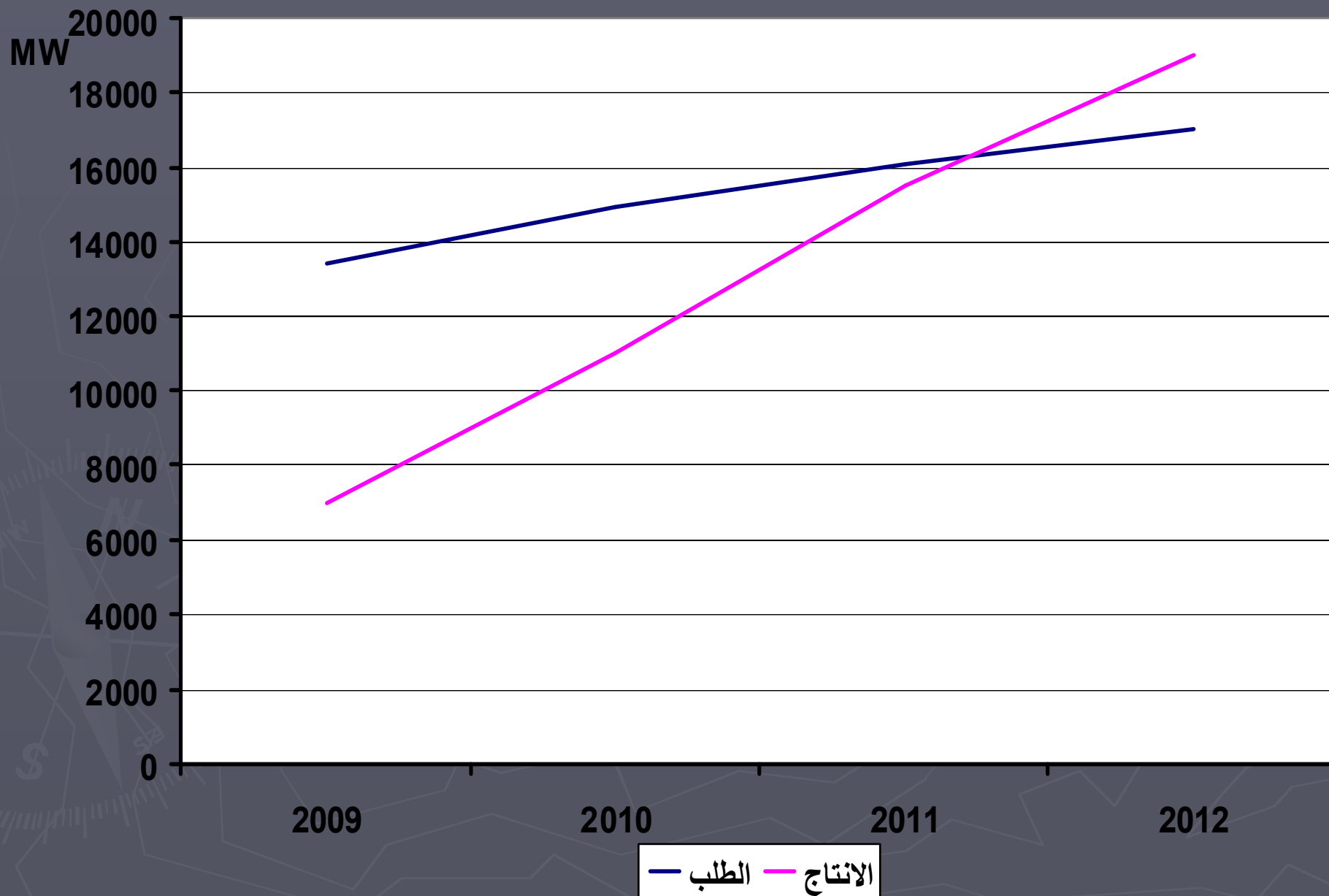
**Wasit : 1320 MW**

**Nasriya Expansion : 400 MW**

**Hartha Expansion : 600 MW**



# موازنة القدرة بين الطلب والانتاج





# Fuel Supply

Types of fuel used for generation in Iraq:

1 Fuel Oil

2 Natural Gas

3 Gas Oil

4 Crude Oil

MoE and MoO are continuously coordinating short and medium term plans

# Technical Challenges

- **AGING OF ELECTRICAL SYSTEM**
- **SPARE PARTS AVAILABILITY**
- **FUEL SUPPLY (Mismatch of Demand & Supply)**
- **CAPACITY BUILDING**

# Non-Technical Challenges

 SECURITY

 MILITARY OPERATIONS AND SABOTAGE

 FINANCIAL RESOURCES

 TARIFF AND BILL COLLECTION



# *Investment in Electrical Sector in Iraq*

- ▶ ***Expected Huge amount of Investment in all sectors in Iraq in the near future.***
- ▶ ***MoE invites and encourages companies to come and invest in Iraq.***
- ▶ ***MoE has put an ambitious investment plan .***

# *Ministry of Electricity*

## *Investment plan*

| <b>Governorate</b> | <b>Station</b>                 | <b>Type</b>  | <b>No .unit</b> | <b>MW</b>  | <b>Total MW</b> | <b>Fuel</b>                       | <b>Estimated Cost<br/>M/USD</b> |
|--------------------|--------------------------------|--------------|-----------------|------------|-----------------|-----------------------------------|---------------------------------|
| <b>Thi-Qar</b>     | <b>Al-Garrafa</b>              | <b>Gas</b>   | <b>2</b>        | <b>125</b> | <b>250</b>      | <b>Fuel oil /<br/>natural gas</b> | <b>250</b>                      |
|                    |                                |              | <b>2</b>        | <b>125</b> | <b>250</b>      |                                   | <b>250</b>                      |
|                    | <b>Nasiria<br/>(Extension)</b> | <b>Steam</b> | <b>2</b>        | <b>300</b> | <b>600</b>      | <b>Crud oil / fuel<br/>oil</b>    | <b>400</b>                      |
| <b>Karbela</b>     | <b>Al-khyrat</b>               | <b>steam</b> | <b>2</b>        | <b>300</b> | <b>600</b>      | <b>Fuel oil</b>                   | <b>400</b>                      |
| <b>Nenavia</b>     | <b>Al-Shemal</b>               | <b>steam</b> | <b>2</b>        | <b>300</b> | <b>600</b>      | <b>Fuel oil</b>                   | <b>400</b>                      |
| <b>Al-Anbar</b>    | <b>Al-Anbar</b>                | <b>steam</b> | <b>2</b>        | <b>300</b> | <b>600</b>      | <b>Crud oil / fuel<br/>oil</b>    | <b>400</b>                      |
| <b>Al-Basra</b>    | <b>Shat al-<br/>Basra</b>      | <b>steam</b> | <b>2</b>        | <b>300</b> | <b>600</b>      | <b>Fuel oil</b>                   | <b>400</b>                      |



### IPP Projects

**Al-shemal : 2x350  
MW**

**Al-Anbar: 2x300  
MW**

**Khairat : 2x300  
MW**

**Salah Al-Dean : 2x300  
MW**

**Nasriya : 2x300 MW**

**AL-Gharaf:4x125  
MW**

**Shat al-  
Basrah:2x300MW**

