

# The 35<sup>th</sup> JCCP 2017 International Symposium Panel Discussion January, 2017 presented by

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# Iraq's Oil Refining Sector Between Realistic and Aspiration

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- Ministry of oil development plan
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# Major Existing Refineries in Iraq

There are 14 existing refineries in Iraq managed by three national refining companies, the design capacities of these refineries are shown as follow:

## 1- North Refineries Company (NRC)

- 150,000 BPSD Baiji North Refinery
- 70,000 BPSD Baiji Sallahuddin I Refinery
- 70,000 BPSD Baiji Sallahuddin II Refinery
- 30,000 BPSD Kirkuk Refinery
- 30,000 BPSD Siyniah Refinery
- 20,000 BPSD Kisik Refinery
- 14,000 BPSD Qaiyarah Refinery
- 16,000 BPSD Haditha Refinery
- 20,000 BPSD Aljazeera Refinery

# Baiji Refineries



Unfortunately most of these refineries are damaged and affected by the recent war , and they are in the process of damage assessment to start rehabilitation and reconstruction activities, some of these refineries are going to be reconstructed by Ministry of oil and the others are going to be submitted to the private investment.

## 2- Midland Refineries Company (MRC)

- 212,000 BPSD Doura Refineries
- 30,000 BPSD Najaf Refinery
- 30,000 BPSD Semawah Refinery
- 10,000 BPSD Dywaniyah Refinery

### 3- Southern Refineries Company (SRC)

- 210,000 BPSD Basrah Refineries
- 30,000 BPSD Nasiriya Refinery
- 30,000 BPSD Maissan Refinery



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## Map showing Iraq's existing refineries





## Ministry of oil's development plan

Since the oil sector is comprising approximately 95 % of Iraqi national revenue, and it represents the main source for foreign currency reserve for the country, Developing refining sector is one important aspect of the development plan, in order to reduce the gaps of demand and supply of oil products for public use, and to minimize the import quantities of these products.

In order to achieve the target, MoO has planned many various projects for improving the oil products balance through:

- ✓ Rehabilitation of the existing refinery facilities
- ✓ Construction of new refineries complexes via private sector investment, and
- ✓ Upgrading of refineries process for higher yield of light products (Gasoline, Kerosene & Diesel).

## Future Refineries in Iraq:

Ministry of oil has decided through the well elaborated Integrated National Energy Strategy 2013 – 2030 (INES) to submit some new refineries for private investment under crude oil refineries Investment Law 64 / 2007 with its amendments, in addition to the Karbala refinery which financed by Iraqi Ministry of oil's budget.

## NRC:

- ✓ New Kirkuk Refinery with capacity of 150,000 BPSD.  
(Prequalification of Investors)
- ✓ New Refinery at Kirkuk with capacity of 70,000 BPSD.  
(Negotiation with private Investor)

## MRC:

- ✓ New Karbala Refinery with capacity of 140,000 BPSD .  
under construction (EPC phase)
- ✓ New Kut Refinery with capacity of 100,000 BPSD .  
(Prequalification of Investors)
- ✓ New Samawa Refinery with capacity of 70,000 BPSD .  
(Prequalification of Investors)

## SRC:

- ✓ New Basra Refinery with capacity of (100,000 – 150,000) BPSD. (Prequalification of Investors)
- ✓ New Nasiriya Refinery with capacity of 300,000 BPSD. (Prequalification of Investors)
- ✓ New Maissan Refinery with capacity of 150,000 BPSD. Under construction (EPC phase)

## Refining Projects

### 1- North Refineries Company (NRC's) Projects:

- ✓ Rehabilitation of revamped and modified stabilization units as Atmospheric Distillation units (105&107) at Kirkuk Province with 13,000 BPSD for each.
- ✓ Rehabilitation and reconstruction of affected and damaged refineries post last war.

## 2- Midland Refineries Company (MRC's) Projects:

- Steam Boilers (5 \* 80 Ton/hr) Capacity, in the process of (re – announcement).
- CCR + HDT project, tender documents preparing for completion of remaining activities.
- Compound cycle Gas Turbine, 2 units, 18 MW for each, they have been installed with some remaining parts.
- Nitrogen production Unit, with capacity of 1500 Nm<sup>3</sup>/hr, (Under construction).
- Hydrogen production Unit, with capacity of 4000 Nm<sup>3</sup>/hr.  
( Commissioning and start up )
- Hydrogen purification Unit, with capacity of 2000 Nm<sup>3</sup>/hr.  
( Commissioning and start up )

- Cooling Tower 10,000 m<sup>3</sup>/hr (under Construction).
- Lube oil blending unit 40 m<sup>3</sup>/hr (Commissioning & start up)
- 14 Crude Oil, Lube Oil and Asphalt storage tanks with various capacities (Under Construction)
- 6 storage tanks with various capacities for Crude Oil and products (Future project)



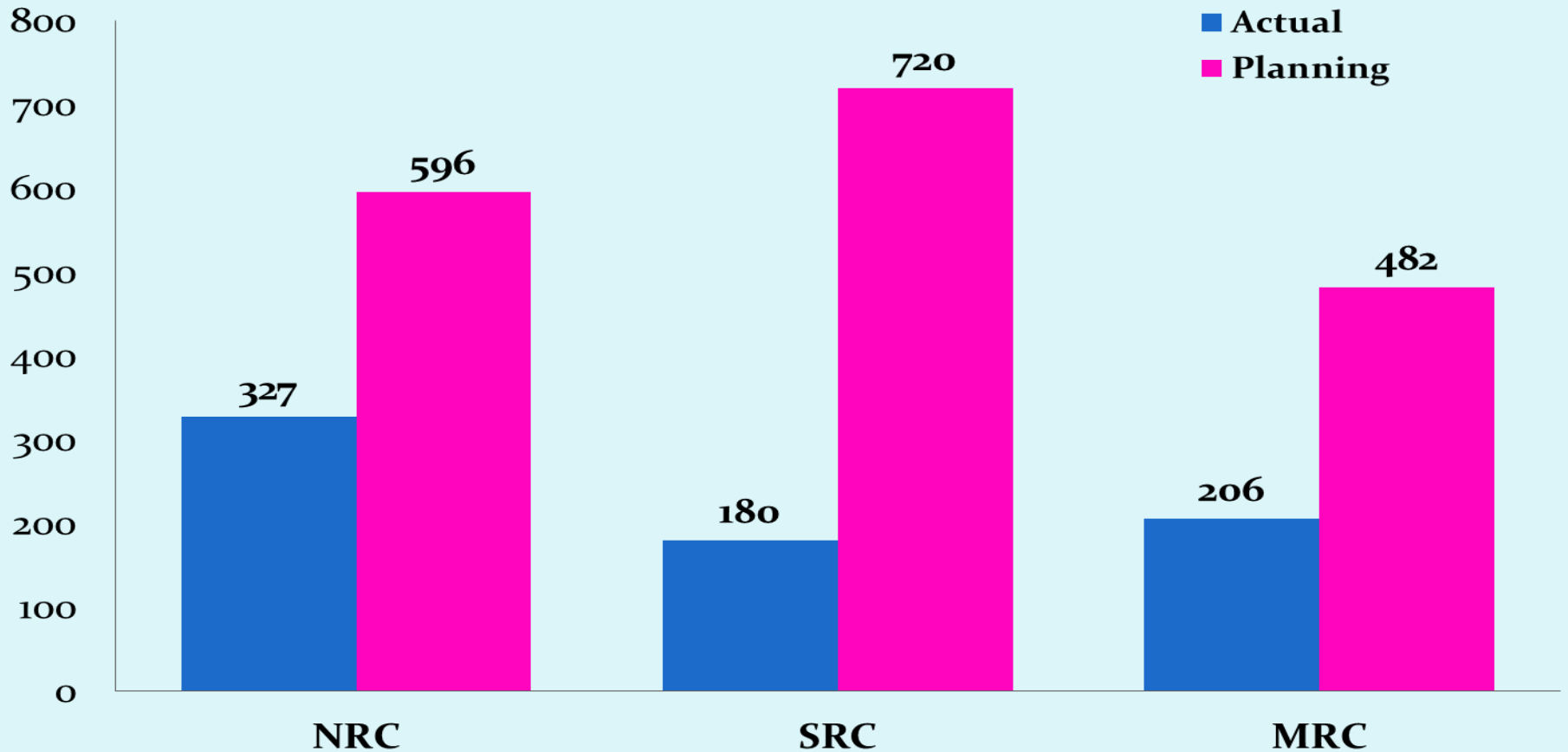
## 3- Southern Refineries Company (SRC's) Projects

- New FCC Complex with capacity of 55,000 BPSD.  
(EPC phase – Financed via JICA ODA Lone)
- New 70,000 BPSD Distillation unit with LPG unit 200 Ton/Day (Under construction)
- New Isomerization unit 11,000 BPSD (Under construction)
- New Boilers, (3 \* 100 Ton/hr ) (Under construction)
- Oxidation for Asphalt 700 Ton/day (Future project)
- Lab project (75000 – 100000) Ton /year (Future project)
- Crude Oil storage tanks (3 \* 30,000 m<sup>3</sup>) capacity  
(Future project)
- Crude oil pipe line 32" size with 17 km length (Future project)

- New Waste Water Treatment Plant, (under construction)
- New Cooling Tower (Under construction)
- New Gas Oil Hydro treatment unit (Future project)
- New Naphtha Hydrotreater unit 15,000 BPSD (Future project)
- Hydrogen production unit, with 16,000 Nm<sup>3</sup>/hr capacity (Future project)
- Reforming unit with 18000 BPSD capacity (Future project)
- Isomerisation unit 6000 BPSD (Future project)
- Hydrotreater 3000 BPSD (Future project)
- R.O Unit with 300 m<sup>3</sup>/hr (Future project)

# Refining Capacity in IRAQ Actual & Planning ( 1000 BPSD)

For NRC up to June, 2014



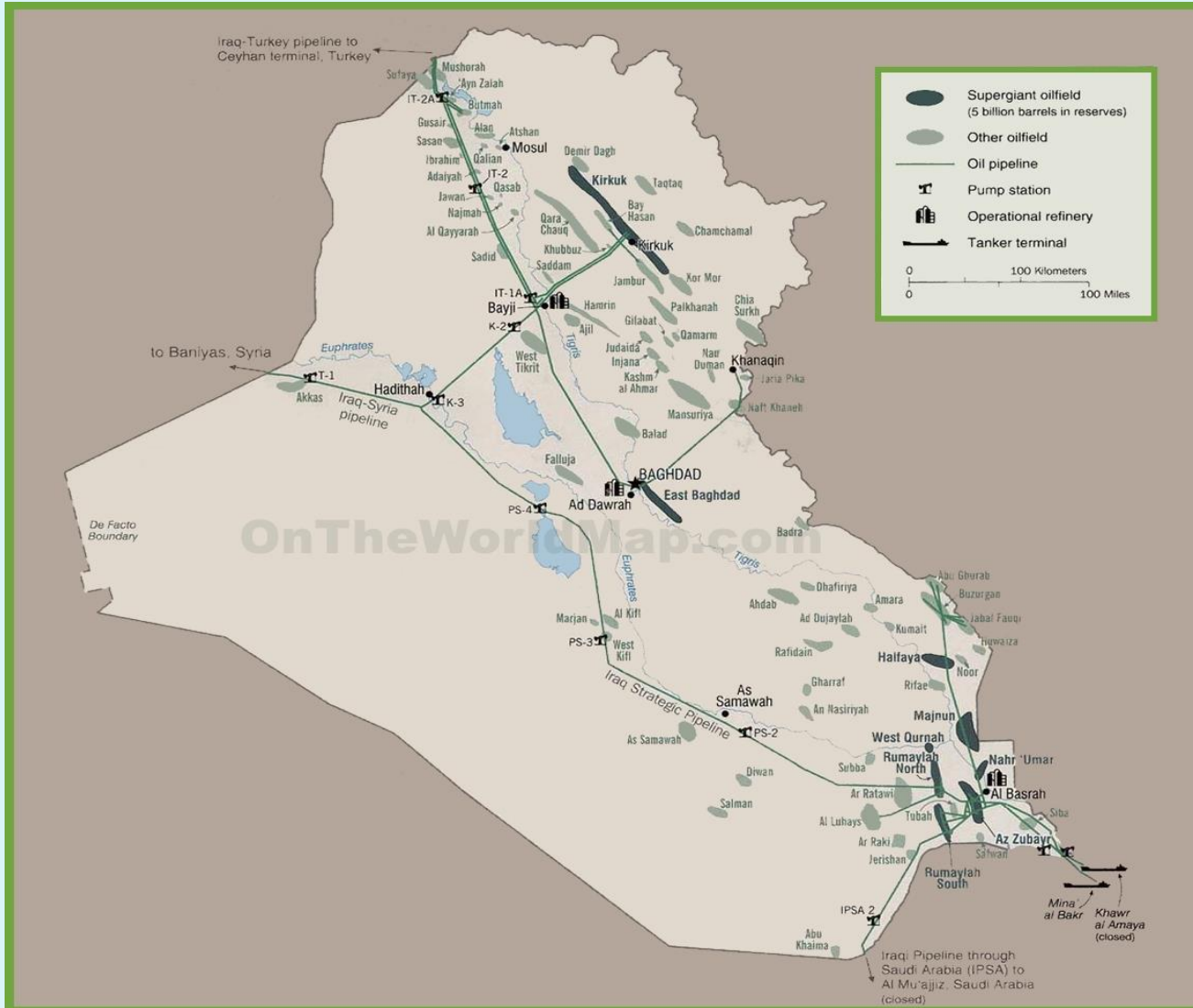


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# Map Shows Oil & Gas Fields, Oil pipelines & pump stations, Refineries & Tanker Terminal



## Conclusions

Our primary goals are to:-

- Optimize production levels.
- Improving products quality.
- Improving efficiency.
  - a- Replacing old Control Systems with DCS systems.
  - b- Upgrading refineries.
  - c- Replacing old static and rotary equipment by new ones.
- Enhancing safety and security.
- Reducing downtime.
- Be green with the environment, through;
  - a- Producing high quality products with low sulfur contents.
  - b- Rehabilitation of Waste Water Treatment plants to improve water quality for irrigation & cooling water make – up use or at least before discharged to the river.

**Thank you for your attention**