



مركز الإحصاء  
STATISTICS CENTRE

# Energy & Water

Abu Dhabi Emirate -2015



inFigures

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## Introduction

This report presents statistics on key energy and water figures in the Emirate of Abu Dhabi for the year 2015, comprising statistics of Oil and Natural Gas, statistics of electrical energy and desalinated water consumption, renewable energy statistics. The main sources of these statistics are Abu Dhabi National Oil Company - ADNOC, TAKREER, Abu Dhabi Water and Electricity Company, Abu Dhabi Future Energy Company – Masdar.

## Key points

### 1. Oil and Refined Petroleum Statistics

Oil and gas sector is one of the most important pillars of Abu Dhabi economy, forming a large share of the GDP. The total production of Abu Dhabi crude oil in 2015 was 1,068,575 thousand barrels, of which 892,230 thousand barrels were exported to other countries. Crude oil exports represented about 83.5% of the production of the same year. The amount of production in 2015 increased by 66,396 thousand barrels or 6.6% compared to 2014 and as a result, petroleum products increased in 2015 by 50.2% compared to 2014.

**Table 1: Crude oil production and exports**

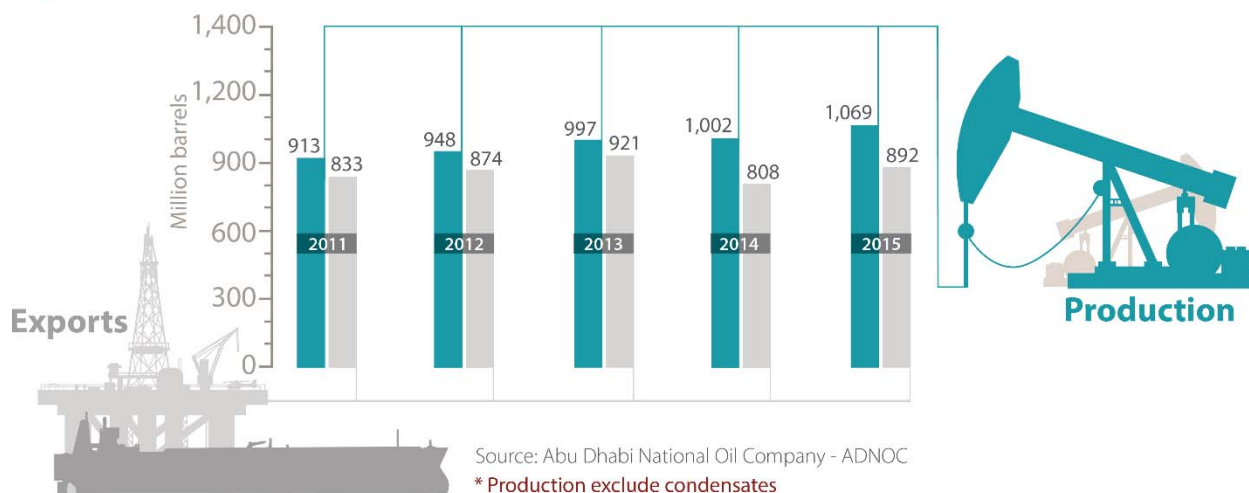
(Thousand barrels)

Year	2011	2012	2013	2014	2015
Production *	913,191	948,200	996,928	1,002,179	1,068,575
Exports	833,070	873,515	920,687	808,131	892,230

Source: Abu Dhabi National Oil Company - ADNOC.

\* Production excludes condensates.

**Figure 1: Crude oil production and exports \***



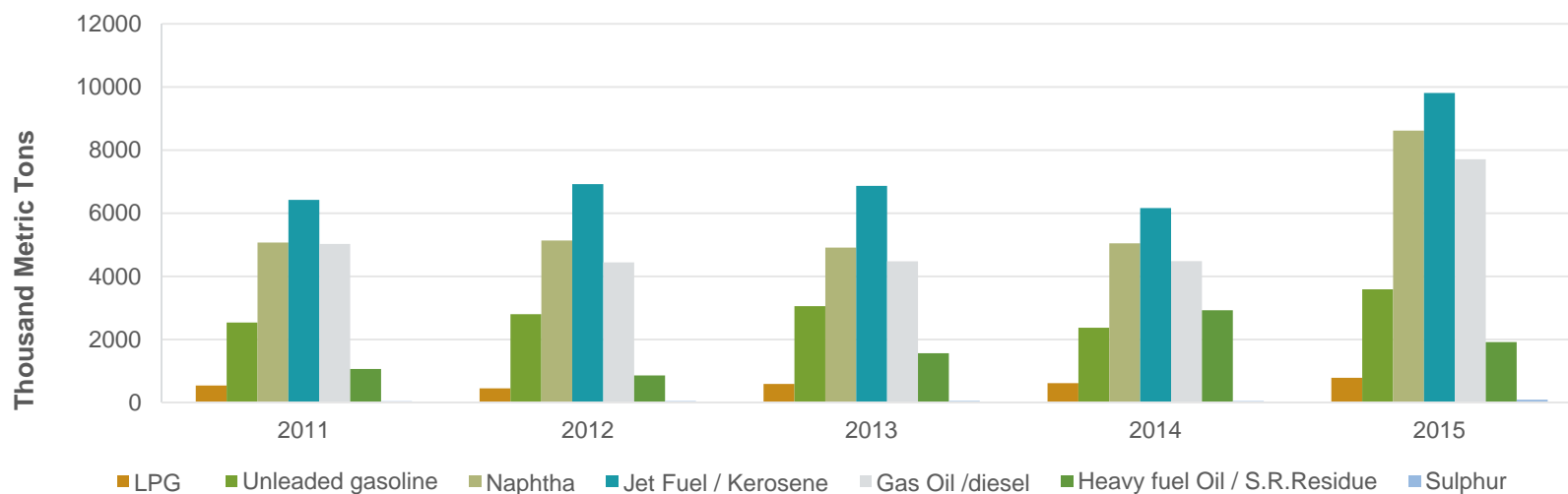
**Table 2: Production of refined petroleum products**

(Thousand Metric Tons)

Product Type	2011	2012	2013	2014	2015
<b>Total</b>	<b>20,702</b>	<b>20,658</b>	<b>21,516</b>	<b>21,657</b>	<b>32,522</b>
LPG	540	453	591	618	785
Unleaded gasoline	2,537	2,800	3,056	2,371	3,589
Naphtha	5,071	5,137	4,912	5,048	8,619
Jet Fuel / Kerosene	6,422	6,921	6,866	6,162	9,810
Gas Oil /diesel	5,024	4,442	4,477	4,482	7,711
Heavy fuel Oil / S.R.Residue	1,067	860	1,564	2,927	1,917
Sulfur	41	46	50	49	91

Source: Abu Dhabi National Oil Company – ADNOC, TAKREER.

**Chart 2: Production of refined petroleum products**



Source: Abu Dhabi National Oil Company – ADNOC, TAKREER.

## 2. Natural Gas Statistics

The importance of natural gas stems from the variation of its uses in the Emirate of Abu Dhabi, such as liquefied fuel and other products such as propane, butane and pentane. It is also used in industries such as iron and steel, aluminum, cement. Natural gas is also re-injected in the oil wells to increase productivity and maintain pressure oil reservoir. The total production of Abu Dhabi Natural Gas in 2015 was 2,734 billion cubic feet, which is a decrease to 2.3% compared to 2014.

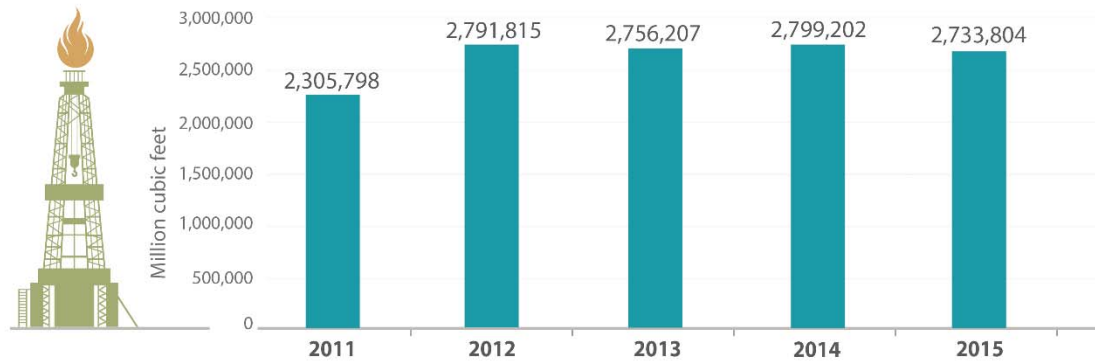
**Table 3: Natural gas production**

(Million Cubic feet)

Year	2011	2012	2013	2014	2015
<b>Annual Production</b>	2,305,798	2,791,815	2,756,207	2,799,202	2,733,804
<b>Daily production</b>	6,317	7,628	7,551	7,669	7,490

Source: Abu Dhabi National Oil Company - ADNOC.

**Figure 3: Natural gas production**



Source: Abu Dhabi National Oil Company – ADNOC

**Table 4: Production and Exports of Liquefied Natural Gas Products by product type**

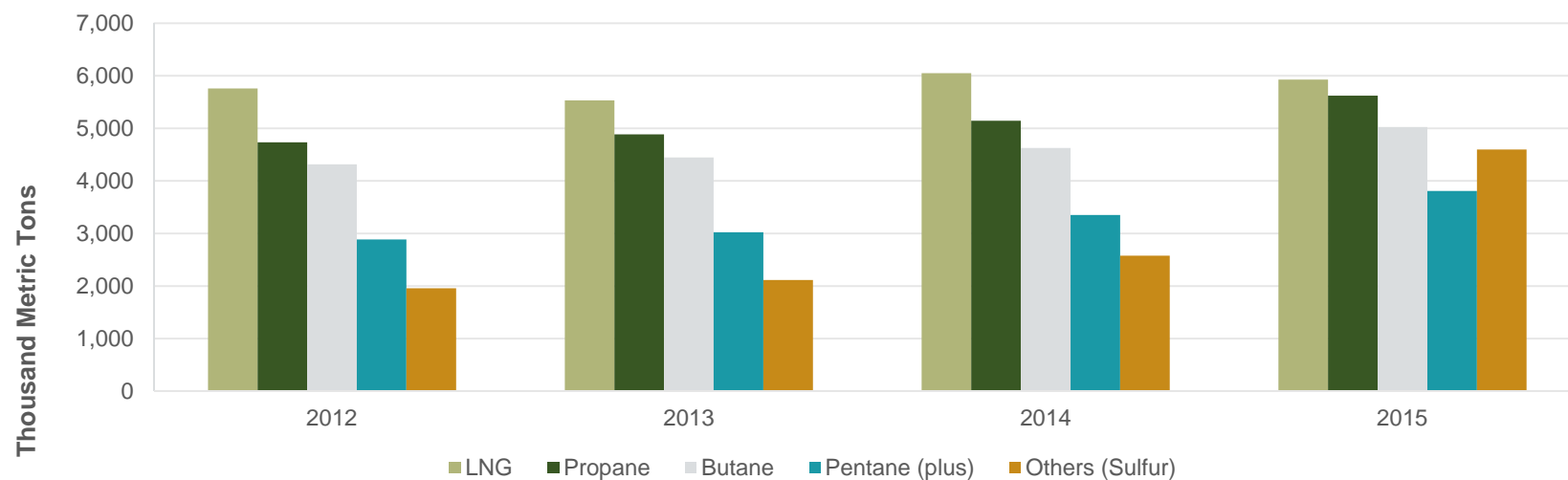
(Thousand metric ton)

Year	2012		2013		2014		2015	
	Production	Exports	Production	Exports	Production	Exports	Production	Exports
LNG	5,760	5,601	5,531	5,441	6,050	5,856	5,929	5,728
Propane	4,734	4,643	4,885	3,672	5,146	4,509	5,621	4,880
Butane	4,317	4,239	4,447	3,375	4,627	4,089	5,025	4,426
Pentane (plus)	2,888	2,835	3,024	2,143	3,352	2,876	3,808	3,332
Others (Sulfur)	1,958	1,956	2,117	2,187	2,579	2,490	4,597	4,617
<b>Total</b>	<b>19,656</b>	<b>19,274</b>	<b>20,003</b>	<b>16,818</b>	<b>21,754</b>	<b>19,821</b>	<b>24,981</b>	<b>22,984</b>

Source: Abu Dhabi National Oil Company - ADNOC .

Note: Excluding condensates

**Chart 4: Production of Liquefied Natural Gas Products by Product Type**



Source: Abu Dhabi National Oil Company - ADNOC .

Note: Excluding condensates

### 3. Electrical Energy Statistics

Water and electricity sector is deemed to be one of the most important sectors supporting development and serving the community. It also provides basic and necessary services for Economic activities, Citizens and Non- Citizens. The total electricity production by companies in the Emirate of Abu Dhabi in 2015 was about 66,626 GWh, an increase of about 43.9% during the period since 2011. The electric power consumed during the same period increased by 45.6%, reaching 62,979 GWh. This includes the internal consumption by power stations as well as losses through the network. Energy is produced through generators by burning fossil fuels where natural gas forms 99.7% of the total fuel consumed due to economic, technical and environmental considerations.

**Table 5: Electrical power statistics**  
(MWh)

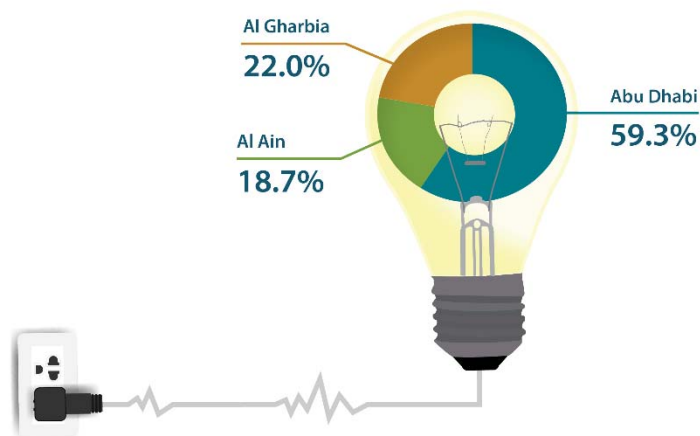
Item	2011	2012	2013	2014	2015
Total electricity production	46,314,248	50,378,419	51,936,813	58,342,545	66,626,469
Transferred from EMAL & TAKREER	52,655	2,828	27,982	11,802	-4,378,464
<b>Total</b>	<b>46,366,903</b>	<b>50,381,247</b>	<b>51,964,795</b>	<b>58,354,347</b>	<b>62,248,005</b>
Electricity exports	3,115,984	3,264,421	2,698,226	5,513,310	-731,065
Electricity consumption *	43,250,919	47,116,826	49,266,569	52,841,037	62,979,070
Electrical consumption per capita**	20.01	20.35	19.77	19.89	22.62
Electricity planned capacity (MW)	10,875	10,867	10,917	12,571	12,571

Source: Abu Dhabi Water and Electricity Company - ADWEC.

\*Consumption includes internal electrical consumption by power stations & technical losses through the network in Abu Dhabi Emirate.

\*\* Data per capita has been updated as a result of updates on population estimates in the Emirate of Abu Dhabi 2006- 2014.

**Figure 5 :** Relative distribution of electricity consumption in the Emirate of Abu Dhabi by region, 2015



Source: Statistic Centre – Abu Dhabi



#### 4. Desalinated water consumption

The Emirate of Abu Dhabi consumed from desalinated water about 1,154 MCM in 2015, with a daily average of 3 MCM and per capita average daily consumption of 1.14 cubic meters. Consumption of desalinated water increased by 19.97 % from 2011 and this rise is the result of increasing demand on water from various sectors.

**Table 6: Desalinated water consumption by region**

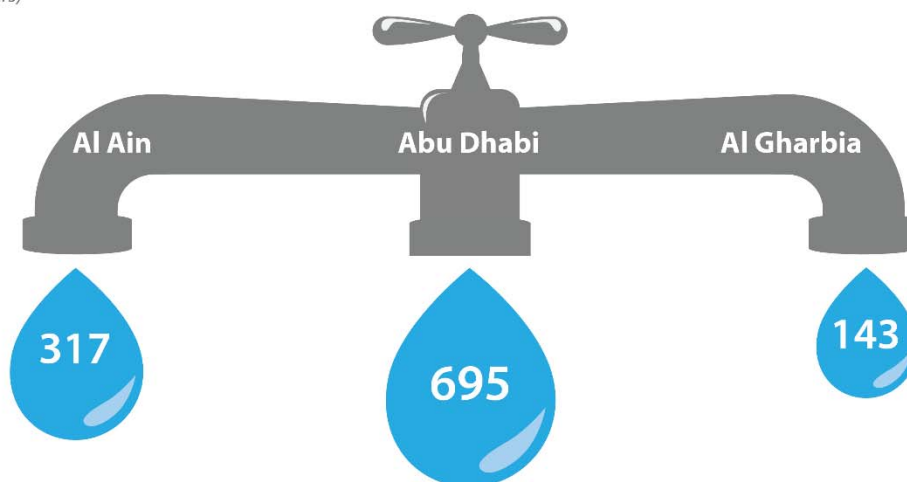
(Million cubic meters)

Item	2011	2012	2013	2014	2015
Abu Dhabi	593	654	657	684	695
Al Ain	259	287	293	294	317
Al Gharbia	110	120	133	150	143
<b>Total</b>	962	1,060	1,083	1,129	1,155

Source: Abu Dhabi Water and Electricity Company - ADWEC.

**Figure 6: Desalinated water consumption by region, 2015**

(Million cubic meters)



Source: Abu Dhabi Water and Electricity Company - ADWEC

## 5. Renewable energy

In the recent years, Abu Dhabi Government has paid particular attention to renewable energy as part of its efforts to diversify energy sources in Abu Dhabi. This culminated in the implementation of several renewable energy projects, namely electricity generation from solar energy, by Abu Dhabi Future Energy Company – Masdar. As the projects became operational, the production of electricity from solar energy reached 264,014 MWh in 2015, marking a growth of 0.5 % compared with 2014. This increase is due to the commencement of operation of the Shams solar power station in late 2013, while 2014 was a full year of operations.

**Table 7: Renewable energy statistics**  
(MWh)

Item	2011	2012	2013*	2014*	2015
Electricity Generation	17,986	18,586	47,823	262,667	264,014
Export of Electricity	11,291	17,131	43,754	232,228	233,147
Import of Electricity	10,668	18,383	34,903	50,605	50,955
Electricity planned capacity (MW)	11	11	111	111	111

Source: Abu Dhabi Future Energy Company – Masdar

\*Date in 2013 & 2014 include Shams solar power station

**Figure 7: Electricity generation from renewable energy, 2011-2015 \***



Source: Abu Dhabi Future Energy Company – Masdar

\* Data in 2013 & 2014 include Shams solar power station



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