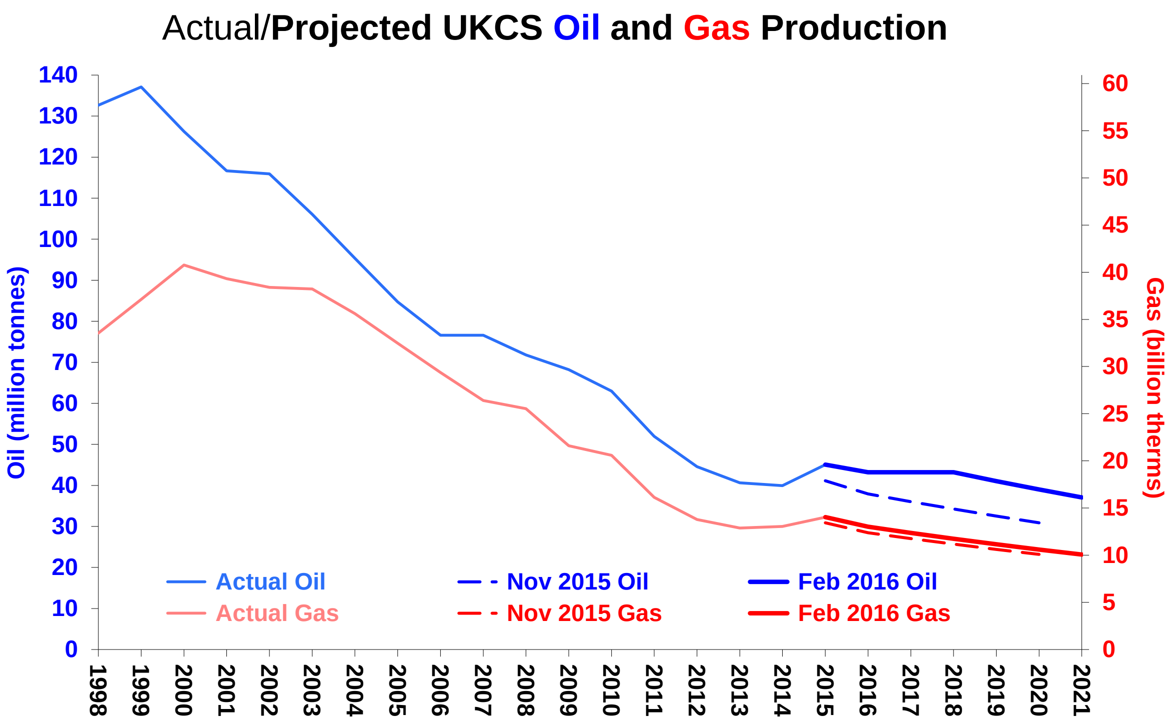
UKCS Oil and Gas Production Projections

The charts and tables below show the OGA's latest projections of UK Continental Shelf (UKCS) crude oil, natural gas liquid (NGL) and natural gas production for the period 2016 to 2021. The projections for gas relate to net UKCS production available for sale.

The current (February 2016) projections are based on detailed field-by-field data provided to the OGA by the current operators of each field in early 2016. We have adjusted some of the operator field level data (for example to reflect OGA officials' judgement about likely uptime and project slippage) and also applied very significant negative contingencies to the aggregate figures. The extent of these contingencies reflect past experience of forecasting deviations; recent industry forecasts have tended to over-predict production significantly in the short and medium term, reflecting asymmetric upside and downside risks. The contingencies also include a small notional allowance for production from recently discovered fields awaiting appraisal and as-yet-undiscovered fields that might be found and brought into production in this timeframe.

While central projections of oil and gas production are shown in the chart, the table on page 3 illustrates a (wide) range of possible outcomes because the future rate of production is dependent on a number of different factors including the level of investment and the success of further exploration. Operators continue to find it difficult to predict production accurately as older fields mature and their reliability reduces. A significant share of future oil and gas production is expected to come from new fields and major projects in existing fields compounding the difficulty of making accurate forecasts given the risks of project slippage and uncertain start-up profiles. **The central projections are therefore our best estimates rather than a definitive prediction of future production of oil and gas from the UKCS.** With the recent dramatic fall in oil prices the projections are even less certain than normal.

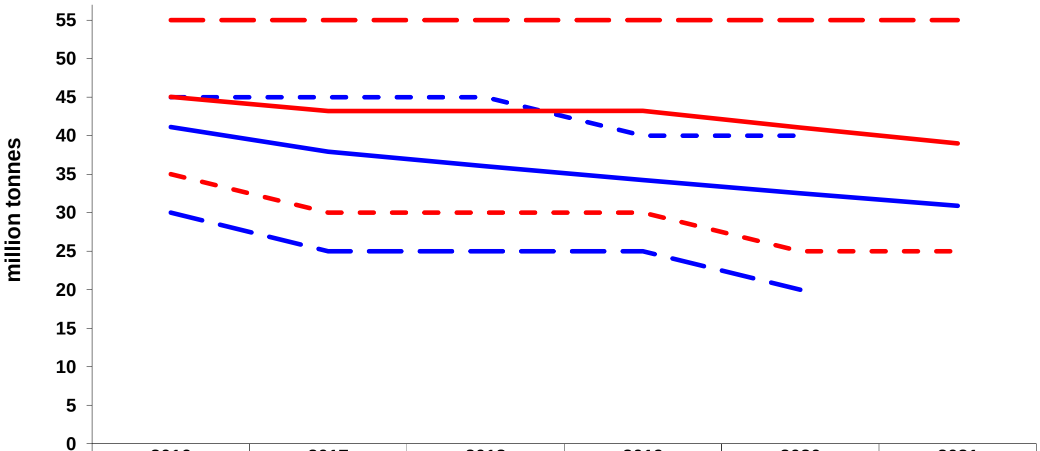
The chart below shows actual production levels in recent years and our current and previous (November 2015) projections; the colour-coded scales are different for oil (left-hand Y-axis) and gas (right-hand Y-axis) while the actual levels of oil and gas production are shown in lighter shades than the projected levels.



Production of both oil (especially) and gas was higher than expected in November 2015. The projections for oil and, to a much lesser extent, gas have been revised upwards reflecting the higher outturn for 2015 and the continuing strength of industry forecasts for later years despite the “lower for longer” outlook for oil prices. After 2021, oil and gas production are both assumed to decline at 5% a year as illustrated in the table on page 4 below.

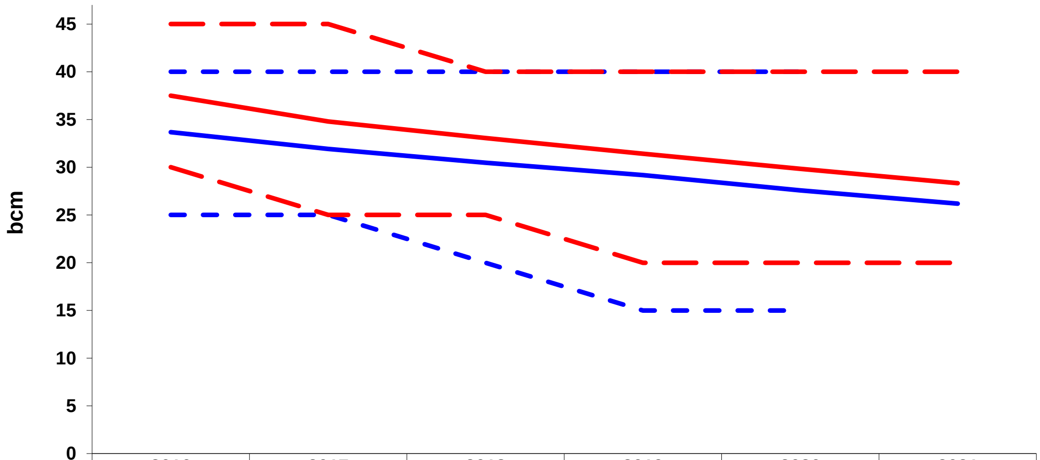
The charts below compare the current and previous central projections with (as dashed lines) the ranges published here (on page 3) and previously.

Comparison of Oil Production Projections



	2016	2017	2018	2019	2020	2021
Nov 2015 - High	45	45	45	40	40	
Nov 2015	41.1	37.9	36.0	34.2	32.5	30.9
Nov 2015 - Low	30	25	25	25	20	
Feb 2016 - High	55	55	55	55	55	55
Feb 2016	45.0	43.2	43.2	43.2	41.0	39.0
Feb 2016 - Low	35	30	30	30	25	25

Comparison of Gas Production Projections



	2016	2017	2018	2019	2020	2021
Nov 2015 - High	40	40	40	40	40	
Nov 2015	33.7	31.9	30.5	29.2	27.6	26.2
Nov 2015 - Low	25	25	20	15	15	
Feb 2016 - High	45	45	40	40	40	40
Feb 2016	37.5	34.8	33.0	31.4	29.8	28.3
Feb 2016 - Low	30	25	25	20	20	20

Indicative Ranges of Production Projections

a) Oil (including NGLs)			
	million tonnes		
2016	35	-	55
2017	30	-	55
2018	30	-	55
2019	30	-	55
2020	25	-	55
2021	25	-	55

b) Natural Gas Liquids (NGLs)			
	million tonnes		
2016	1.9	-	2.9
2017	1.8	-	2.8
2018	1.8	-	2.8
2019	1.8	-	2.8
2020	1.7	-	2.6
2021	1.6	-	2.5

c) Gas			
	billion cubic metres		
2016	30	-	45
2017	25	-	45
2018	25	-	40
2019	20	-	40
2020	15	-	45
2021	15	-	40

a) Production of oil (including NGLs) in 2015 was 45.0 million tonnes
b) Production of NGLs in 2015 was 2.4 million tonnes
c) Net production of gas in 2015 was *c.*37.5 bcm

Mike Earp

Oil and Gas Authority (OGA)
tel +44 (0)3000 671604
e-mail mike.earp@oga.gsi.gov.uk
February 2016

UK Oil and Net Gas Production and Demand (all level figures in million tonnes of oil equivalent)

	Oil Production	Oil Demand	Net Oil Exports/ (Imports)	Oil exports as per cent of demand	Oil import dependency	Net Gas Production	Net Gas Demand	Net Gas Exports/ (Imports)	Gas exports as per cent of demand	Gas import dependency	Oil & Net Gas Production	Oil & Net Gas Demand	Net Oil & Gas Exports/ (Imports)	Oil & Gas exports as per cent of demand	Oil & Gas import dependency	
1998	145	91	54	60%		85	82	2	3%		230	173	57	33%		1998
1999	150	90	61	68%		94	88	6	6%		244	178	66	37%		1999
2000	138	89	49	55%		103	91	12	13%		241	180	61	34%		2000
2001	128	88	40	46%		99	90	10	11%		227	177	50	28%		2001
2002	127	87	40	47%		97	88	9	10%		224	175	49	28%		2002
2003	116	87	29	34%		96	89	8	9%		213	176	37	21%		2003
2004	105	89	15	17%		90	91	(1)		1%	194	180	14	8%		2004
2005	93	92	1	1%		82	89	(7)		8%	175	180	(5)		3%	2005
2006	84	91	(7)		7%	74	84	(10)		12%	158	175	(17)		10%	2006
2007	84	88	(4)		5%	67	86	(19)		22%	151	173	(23)		13%	2007
2008	79	86	(8)		9%	64	89	(24)		27%	143	175	(32)		18%	2008
2009	75	83	(8)		10%	54	82	(27)		33%	129	164	(35)		21%	2009
2010	69	81	(12)		15%	52	89	(37)		42%	121	170	(49)		29%	2010
2011	57	79	(22)		28%	41	74	(33)		45%	98	153	(55)		36%	2011
2012	49	77	(28)		37%	35	70	(35)		50%	84	147	(63)		43%	2012
2013	44	76	(32)		42%	33	69	(36)		53%	77	145	(68)		47%	2013
2014	44	76	(32)		42%	33	63	(30)		48%	77	138	(62)		45%	2014
2015	49	76	(26)		35%	35	63	(28)		44%	85	139	(54)		39%	2015
2016	47	74	(27)		36%	33	66	(33)		50%	80	140	(60)		43%	2016
2017	47	74	(26)		36%	31	67	(36)		53%	78	140	(62)		44%	2017
2018	47	72	(25)		35%	30	64	(34)		54%	77	136	(59)		44%	2018
2019	45	72	(27)		37%	28	62	(34)		55%	73	134	(61)		45%	2019
2020	43	70	(28)		39%	27	59	(33)		55%	69	129	(60)		46%	2020
2021	41	70	(29)		42%	25	62	(36)		59%	66	131	(65)		50%	2021
2022	39	69	(31)		44%	24	61	(37)		60%	63	130	(67)		52%	2022
2023	37	69	(32)		47%	23	61	(38)		62%	60	130	(70)		54%	2023
2024	35	69	(34)		49%	22	64	(42)		66%	57	133	(76)		57%	2024
2025	33	68	(35)		52%	21	63	(42)		67%	54	131	(78)		59%	2025
2026	31	69	(37)		54%	20	63	(44)		69%	51	132	(81)		61%	2026
2027	30	69	(39)		57%	19	65	(47)		71%	48	134	(85)		64%	2027
2028	28	69	(41)		59%	18	63	(45)		72%	46	132	(86)		65%	2028
2029	27	69	(42)		61%	17	64	(47)		74%	44	133	(89)		67%	2029
2030	26	69	(44)		63%	16	62	(46)		74%	42	132	(90)		68%	2030
2031	24	69	(45)		65%	15	62	(47)		75%	39	131	(92)		70%	2031
2032	23	70	(47)		67%	14	64	(50)		77%	38	134	(96)		72%	2032
2033	22	70	(48)		69%	14	62	(49)		78%	36	132	(97)		73%	2033
2034	21	70	(49)		70%	13	65	(52)		80%	34	135	(101)		75%	2034
2035	20	70	(51)		72%	12	63	(50)		80%	32	133	(101)		76%	2035

Notes:

Oil Demand includes Bunkers (estimated at 2.5 mtoe from 2015 onwards); Net Gas Production and Demand exclude oil and gas producers' own use.
Both actual and projected Net Exports (Imports), and thus Import Dependency, are as implied by the difference between UK production and UK demand.

The production projections for 2016–2021 are consistent with those published by DECC at https://www.gov.uk/oil-and-gas-uk-field-data.
After 2021, oil production is assumed to decline at 5% pa and gas production to decline at 5% pa.

The demand projections for 2015–2035 are consistent with the Reference Scenario in the Updated Energy and Emissions Projections published by DECC
(at https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2015) in November 2015.