

5.1.1 Manufacturing

Refinery	Throughput (1)			Distillation capacity (2)			All data for year ended December 31 On stream factor % (3)			Utilization rate % (4)		
	2009	2008	2007	2009	2008	2007	2009	2008	2007	2009	2008	2007
Mongstad	10.0	10.0	10.9	8.7	8.7	8.7	92.3	92.2	97.8	86.8	88.2	93.2
Kalundborg	5.0	5.2	4.7	5.5	5.5	5.5	95.3	88.3	96.4	88.2	90.3	91.7
Tjeldbergodden	0.71	0.91	0.70	0.95	0.95	0.95	82.6	98.9	81.7	90.2	96.5	97.7

(1) Actual throughput of crude oils, condensates, NGL, feed and blendstock, measured in million tonnes. Higher than distillation capacity for Mongstad due to high volumes of fuel oil and NGL not going through the crude distillation unit.

(2) Nominal crude oil and condensate distillation capacity, and methanol production capacity, measured in million tonnes.

(3) Composite reliability factor for all processing units, excluding turnarounds.

(4) Composite utilization rate for all processing units, stream day utilization.

Mongstad product yields and feedstock	2009		For the year ended 31 December 2008		2007	
LPG	372	4%	311	3%	373	4%
Gasoline / naphtha	4,401	44%	3,902	39%	4,721	43%
Jet / kerosene	717	7%	820	8%	755	7%
Gasoil	3,473	34%	3,680	37%	3,865	35%
Fuel oil	374	4%	485	5%	311	3%
Coke / sulphur	164	2%	190	2%	222	2%
Fuel, flare & loss	532	5%	575	6%	692	6%
Total throughput	10,033	100%	9,963	100%	10,939	100%
Troll, Heidrun (FOB crude oils)	4,062	40%	4,676	47%	4,751	43%
Other North Sea crude oils (CIF crude oil)	3,679	37%	3,072	31%	3,780	35%
Residue	1,316	13%	1,132	11%	1,265	12%
Other fuel and blendstock	976	10%	1,083	11%	1,143	10%
Total feedstock	10,033	100%	9,963	100%	10,939	100%

Note: Changes in throughput and yields are partly due to maintenance shutdowns (e.g. major turnaround in 2008).

Kalundborg product yields and feedstock	2009		For the year ended 31 December 2008		2007	
LPG	71	1%	54	1%	78	2%
Gasoline / naphtha	1,620	32%	1,598	31%	1497	32%
Jet / kerosene	130	2%	251	5%	209	4%
Gasoil	2,140	43%	2,105	40%	1997	42%
Fuel oil (2)	886	18%	1,023	20%	746	16%
Coke / sulphur	0	0%	6	0%	5	0%
Fuel, flare & loss	189	4%	183	3%	186	4%
Total throughput(1)	5,036	100%	5,220	100%	4,718	100%
Condensates: Ormen Lange, Snöhvit, Sleipner	998	20%	659	12%	170	4%
Other North Sea crude oils	3,713	74%	4,314	83%	4395	93%
Other fuel and blendstocks	202	4%	247	5%	153	3%
Other crudes	123	2%				
Total feedstocks	5,036	100%	5,220	100%	4,718	100%

¹⁾ Total throughput has decreased from 2008, due to the economic downturn. The refinery operates in a market, that is oversupplied with products, so the production during 2009 was not maximized.

²⁾ The Fuel Reduction plant has been in operation throughout 2009, except for a planned shutdown in September, and an incident in October, hence the reduction in 2009.