

Employees (end of year)

Mining area	1989 ¹⁾	2011 ²⁾	2012 ²⁾	2013 ²⁾
Rhineland	15,565	11,591	11,241	10,730
Lusatia	79,016	8,126	8,169	8,369
Central Germany	59,815	2,531	2,519	2,512
Helmstedt	1,693	522	495	471
Small firms	642	–	–	–
Germany	156,731	22,770	22,424	22,082

1) Annual average – without employees in own public power stations
2) including employees in own public power stations

Lignite reserves in bn t

Mining area	Geological reserves	Economically minable reserves	Approved and developed opencast mines
Rhineland	55.0	35.0	3.0
Lusatia	11.8	3.3	1.0 ¹⁾
Central Germany	10.0	2.0	0.4
Germany	76.8	40.3	4.4

1) reserves according to approved mining fields per 31.12.2013 = 1.0 bn t
additional reserves in approval process = 0.8 bn t

Production of lignite products (in mt)

Products	1989	2012	2013	Changes 2013/2012 in %
Briquettes	49.39	1.93	1.95	+1.2
Dry and pulverized/ Fluidized-bed coal	4.41	4.68	4.86	+3.8
Coke	5.09	0.17	0.16	-4.8

Selected coal qualities in the main lignite mining areas

Mining area	Calorific value kJ/kg	Ash content in %	Water content in %	Sulphur content in %
Rhineland	7,800 – 10,500	2.5 – 8.0	50 – 60	0.15 – 0.5
Lusatia	7,800 – 9,500	2.5 – 16.0	48 – 58	0.3 – 1.5
Central Germany	9,000 – 11,300	6.5 – 10.0	49 – 53	1.3 – 2.1
Helmstedt	8,500 – 11,500	5.0 – 20.0	40 – 50	1.5 – 3.5

10 Facts around Lignite

For many years to come, lignite is the only domestic energy supplier that is available in large amounts without subsidies on **competitive** terms.

With an output of approx. 183 mill. tonnes (2013), lignite contributes almost 40 % to Germany's primary energy generation and is thus an **important domestic energy supplier**.

High-quality and by worldwide standards, exemplary **recultivation** is compensation for land required for mining operations.

About 90 % of total lignite output is used for domestic **power and district heat** generation. All power plants have highly efficient systems for flue gas desulphurisation, dust removal and NO_x reduction.

Thanks to the combination of opencast mines and power plants, lignite-based plants offer a maximum of **security of supply**. There are **no transport risks**.

In 2013, lignite-fired power plants generated some 162 bn. kilowatt hours of power. **Every fourth kilowatt hour** of power consumed in Germany is derived from domestic lignite.

In Germany, some **86,000 competitive jobs** are secured by the lignite mining and lignite-based power generation industry. The lignite mining sector provides top-quality primary professional training to round 1,500 young people.

Industrial safety has attained a high development level: With 2.6 notifiable accidents at work per 1 mill. working hours (2013), the lignite mining sector ranks far below the average of the total German industry (2012: 15.5).

The lignite mining industry stands for preventive climate protection. With high investment in the power plant population, i.e. new power plants and modernisation, **efficiency of power generation** was and still is **continuously being stepped** up while the emissions are being lowered simultaneously.

The **flexibility** of modern lignite-fired power plants is comparable to gas and steam plants and provides cost-effective system services to compensate the fluctuating electricity generation from wind and solar.

— DEBRIV —

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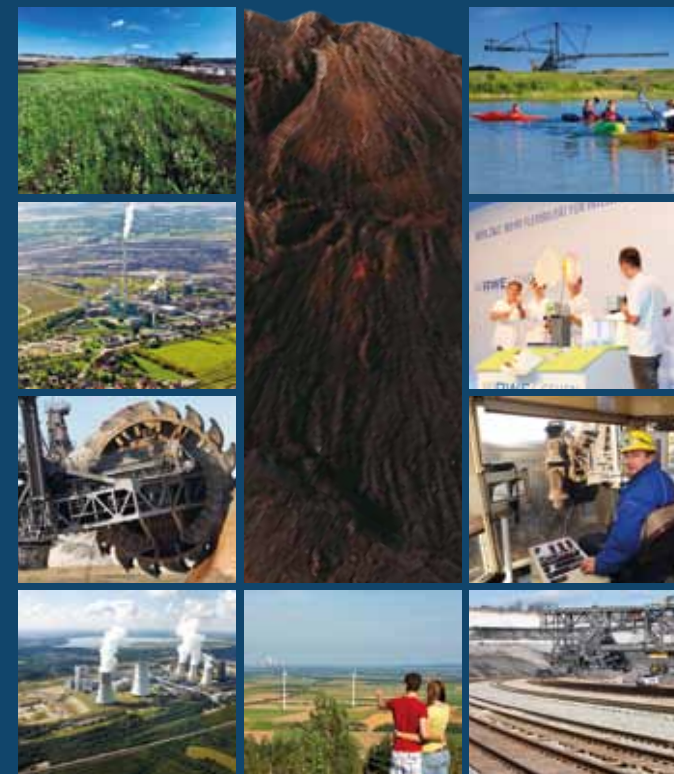
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(Data preliminary for 2013)



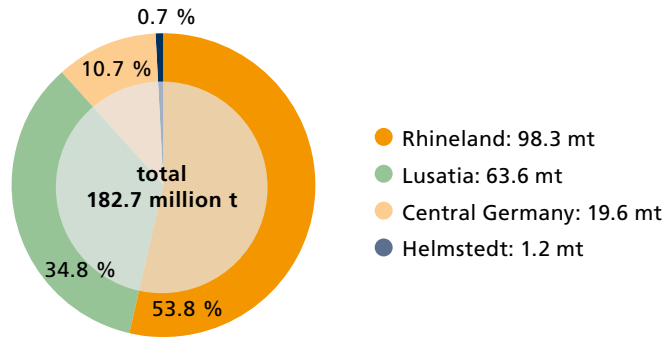
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Lignite in Germany 2013 Facts and Figures



Lignite production according to mining areas

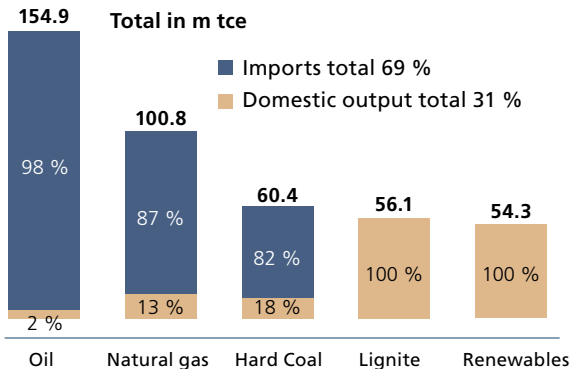


Utilisation of lignite ¹

Mining areas	Generation of electricity and heat	Refining	Others
	in million t		
Rhineland	87.0	11.0	0.3
Lusatia	59.9	3.7	0.0
Central Germany	18.0	0.8	0.8
Helmstedt	1.4	-	-
Germany	166.3	15.5	1.1

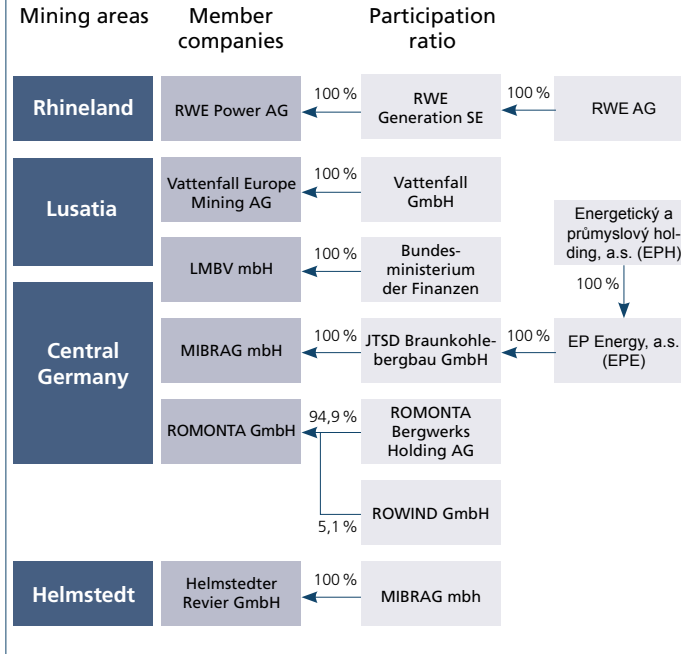
1) Deviations between production and utilisation caused by change in stocking and deliveries between the mining areas

Share of domestic output in primary consumption 2012*)

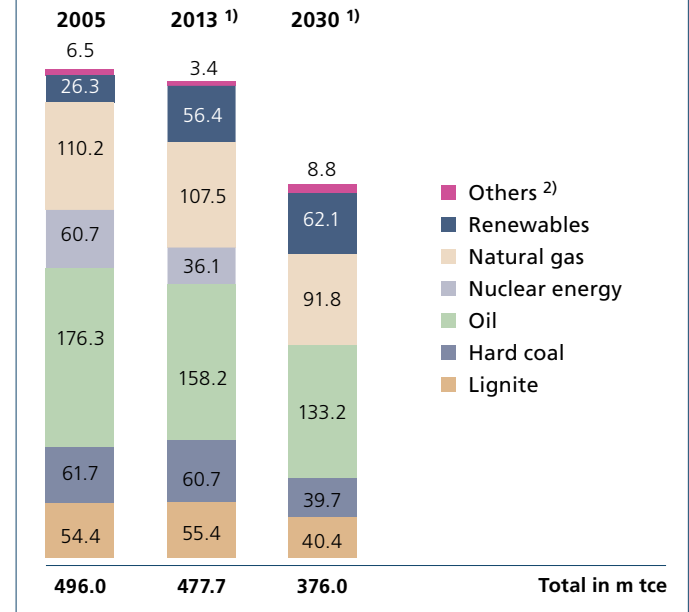


*) provisional Source: Arbeitsgemeinschaft Energiebilanzen

Participation ratios of the lignite companies



Primary energy consumption



1) provisional/forecast Source: Arbeitsgemeinschaft Energiebilanzen, Energieprognose 2009 (Referenzprognose), DEBRIV
2) including power exchange balance

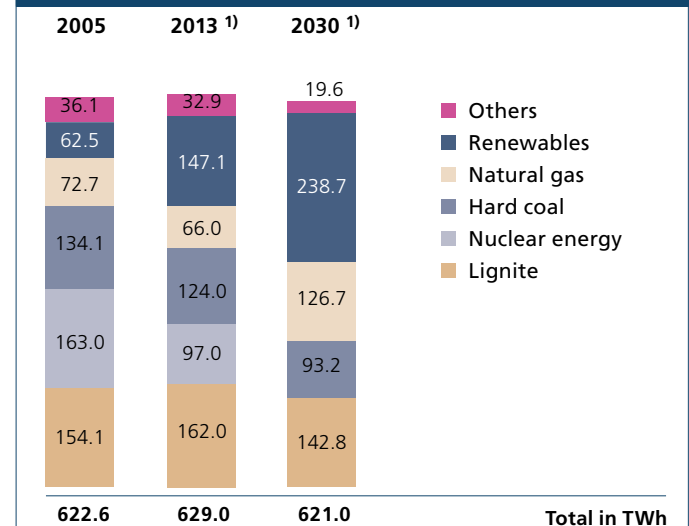
Capacity and generation of lignite powerstations

Federal state	Gross installed power Jan. 1, 2014	Electricity generation 2013 ⁵⁾
	MW	TWh
North-Rhine/Westphalia	11,366 ¹⁾	82.3
Brandenburg	4,764 ²⁾	36.1
Saxony	4,640 ³⁾	33.4
Saxony-Anhalt	1,233 ⁴⁾	7.7
Lower Saxony	407	1.6
Berlin	188	
Hesse	40	0.9
Bavaria	2	
Baden-Wuerttemberg	2	
Total	22,642	162.0

including newly built power stations (since 1995):

- 1) Niederaußem (1,012 MW) 3) Boxberg (900 MW und 675 MW)
 Neurath (2,200 MW) Lippendorf (1,840 MW)
 2) Schwarze Pumpe (1,600 MW) 4) Schkopau (980 MW) 5) estimated

Total gross electricity generation



1) provisional/forecast Source: BMWi, Arbeitsgemeinschaft Energiebilanzen, Energieprognose 2009 (Referenzprognose), DEBRIV