

MARKET HIGHLIGHTS

China's Geely to raise energy vehicle output

China's Zhejiang Geely will expand its new energy vehicle production capacity next year when it launches a new plant. p4

China's rare earths exports increase

China exported 3,430t of rare earths last month, up by 2.4pc compared with a year earlier, customs data show. p4

UBS spots end to commodity turnaround

The rebound in commodity prices this year, caused by faster than expected cuts to raw materials supply in China, has 3-6 months left to run, according to Swiss bank UBS. p4

Chinese EV sales fall short

China looks likely to miss its target for hybrid and electric vehicle (EV) sales this year, after they grew more slowly than expected in January-September. Subsidy cuts and the government's crackdown on fraud by EV manufacturers, suggest 2017 will be even tougher for the sector. p4

Wind energy developers crank up installations

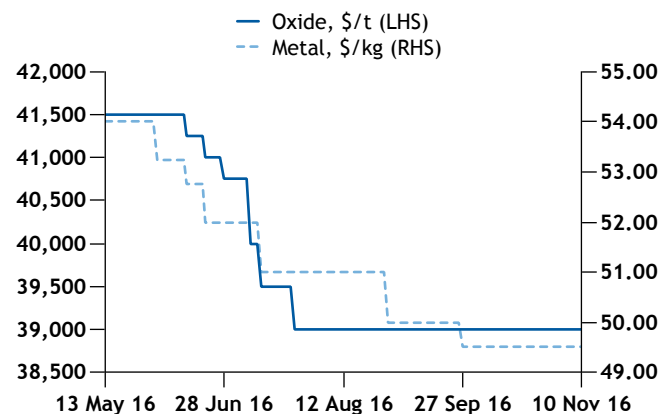
The US wind industry added 895MW of new capacity in the third quarter of 2016, doubling the 830MW developers installed during the first half of the year. p5

PRICES

Market snapshot				
Element	units	10 Nov		±03 Nov
		Low	High	
Cerium				
metal min 99% fob China	\$/kg	5.00	5.90	0.05
oxide 99.5-99.9% fob China	\$/t	1,630	1,780	30
metal min 99% ex-works China	Yn/t	31,000	32,700	350
oxide 99.5-99.9% ex-works China	Yn/t	10,300	11,000	250
Lanthanum				
metal min 99% fob China	\$/kg	4.80	5.60	-
oxide 99.5-99.9% fob China	\$/t	1,880	2,050	65
metal min 99% ex-works China	Yn/t	30,000	32,000	500
oxide 99.5-99.9% ex-works China	Yn/t	12,500	13,500	350
Praseodymium-Neodymium				
metal min 99% fob China	\$/kg	47.80	50.80	0.30
oxide min 99% fob China	\$/t	37,300	40,300	300
metal min 99% ex-works China	Yn/t	314,000	319,000	2,000
oxide min 99% ex-works China	Yn/t	245,000	249,000	2,000
Dysprosium				
metal min 99% fob China	\$/kg	249.00	264.00	1.00
oxide min 99.5% fob China	\$/kg	185.00	190.00	3.00
metal min 99% ex-works China	Yn/kg	1,630	1,730	10
oxide min 99.5% ex-works China	Yn/kg	1,205	1,230	8

Price tables show latest price assessments compared to one week ago. Most prices are assessed twice-weekly. For a full record of all the current week's prices please see separate tables entitled "Current week prices in full" which appear after the news and analysis section of the report.

Neodymium oxide 99.5-99.9% and metal 99% min fob China



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metal-pages

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Metal-Pages is the leading provider of benchmark price assessments, news, analysis and events for the rare earths industry. Argus Media acquired Metal-Pages in May 2014.

MARKET COMMENTARY AND PRICES

Rare earth prices increase as producers withhold sales

Prices for most Chinese rare earths strengthened this week as many suppliers were reluctant to sell material at lower prices because of heavy financial losses. An increasing number of enquiries have been seen on the spot market although actual transactions remain scarce. Most consumers are monitoring the market and waiting for clearer direction.

Chinese suppliers have received more enquiries from foreign buyers in recent days, even though many importers continued to press down target prices. Consumers in the catalyst sector have purchased more lanthanum in recent weeks and exporters have lifted offers because of strengthening domestic prices. Prices for 99.5-99.9pc lanthanum oxide were assessed at \$1,880-2,050/t fob, up by \$130/t from the low end of the price range on 3 November. Fob prices for 5N yttrium oxide were assessed unchanged at \$3,550-3,780/t today.

Lanthanum and cerium oxide prices have increased on the back of increased enquiries from the ceramics and FCC catalyst sectors. Prices for 99.5-99.9pc lanthanum oxide were assessed at Yn12,500-13,500/t (\$1,837-1,983.50/t), up by Yn700/t from the low end of the price range last week, while 99.5-99.9pc cerium oxide was assessed at Yn10,300-11,000/t, up from Yn10,000-10,800/t on 3 November. Most suppliers are reluctant to sell material at lower prices and a few buyers could not purchase 99.5-99.9pc lanthanum oxide lower than Yn13,000/t.

The praseodymium-neodymium market has edged up over the past week with producers withholding their sales in anticipation of higher prices. Prices for 99pc praseodymium-neodymium oxide were assessed at Yn245,000-249,000/t ex-works China, up by Yn2,000/t from last week. In line with

China export and delivered Europe prices

Element	units	10 Nov		±3 Nov
		Low	High	
Cerium				
carbonate min 45% REO fob China	\$/kg	0.85	1.20	0.05
metal min 99% fob China	\$/kg	5.00	5.90	0.05
oxide 99.5-99.9% fob China	\$/t	1,630	1,780	30
oxide 99.5-99.9% cif Europe	\$/kg	1.70	2.20	-
Dysprosium				
metal min 99% fob China	\$/kg	249.00	264.00	1.00
oxide min 99.5% fob China	\$/kg	185.00	190.00	3.00
oxide min 99.5% cif Europe	\$/kg	198.00	202.00	-
Europium				
metal min 99.9% fob China	\$/kg	275.00	288.00	-
oxide min 99.99% fob China	\$/kg	62.00	70.00	-
Erbium				
oxide min 99.5% cif Europe	\$/kg	26.00	29.00	0.50
Ferro-dysprosium				
min 80% Dy fob China	\$/kg	186.00	194.00	1.00
Gadolinium				
metal min 99% fob China	\$/kg	41.00	47.00	-
oxide min 99.999% fob China	\$/t	22,500	23,500	-
Lanthanum				
metal min 99% fob China	\$/kg	4.80	5.60	-
oxide 99.5-99.9% fob China	\$/t	1,880	2,050	65
oxide min 99.999% fob China	\$/kg	4.00	5.00	-
Mischmetal				
35% La 65% Ce fob China	\$/kg	4.65	5.60	-
low Zn and Mg fob China	\$/kg	17.00	21.00	-
Neodymium				
metal min 99% fob China	\$/kg	48.50	50.50	-
oxide 99.5-99.9% fob China	\$/t	38,000	40,000	-
metal 99% cif Europe	\$/kg	48.00	51.00	-
oxide 99.5-99.9% cif Europe	\$/kg	35.00	40.00	-
Praseodymium				
metal min 99% fob China	\$/kg	75.00	85.00	-
oxide 99.5-99.9% fob China	\$/t	48,000	52,000	-
Praseodymium-Neodymium				
metal min 99% fob China	\$/kg	47.80	50.80	0.30
oxide min 99% fob China	\$/t	37,300	40,300	300
Samarium				
metal min 99% fob China	\$/kg	13.70	15.00	-
oxide min 99.5% fob China	\$/kg	1.80	1.95	-
Terbium				
metal min 99.9% fob China	\$/kg	548.00	573.00	3.00
oxide min 99.99% fob China	\$/kg	417.00	432.00	7.00
oxide min 99.99% cif Europe	\$/kg	415.00	420.00	-
Yttrium				
metal min 99.9% fob China	\$/kg	33.00	34.50	-
oxide min 99.999% fob China	\$/t	3,550	3,780	-
oxide 99.999% cif Europe	\$/kg	4.25	5.25	-

Argus Rare Earths — exclusive content available

Mining project tracker

- Detailed updates on progress of key rare earths mining projects
- Compiled through direct contact with mining companies

Chinese exports

- Based on official monthly export customs data
- Breakdown of exports by element and destination market

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MARKET COMMENTARY AND PRICES

rising oxide prices, prices for 99pc praseodymium-neodymium metal were assessed at Yn314,000-319,000/t today, up by Yn2,000/t.

Terbium oxide prices have risen with increased enquiries from downstream sectors. Prices for 4N terbium oxide were assessed at Yn2,750-2,790/kg today, up from Yn2,700-2,740/kg last week. Many producers are reluctant to sell material at below Yn2,750/kg. The dysprosium market has rebounded slightly, even though only a small number of trades were concluded. Prices for 99.5pc dysprosium oxide were assessed at Yn1,205-1,230/kg today, up from Yn1,200-1,220/kg.

The gadolinium market was mostly flat, even though producers saw more enquiries from downstream buyers. Prices for 99.5-99.9pc gadolinium oxide and ferro-gadolinium were assessed stable at Yn65,000-67,000/t and Yn77,500-78,500/t ex-works today. Many producers expect prices to rise slightly in the near term.

Europium and yttrium oxide prices remained unchanged on falling consumption from the fluorescent powder industry. Prices for 99.99pc europium oxide were assessed at Yn390-410/kg ex-works, unchanged from last week. Prices for 99.999pc yttrium oxide were assessed flat at Yn20,000-22,000/t ex-works.

The erbium oxide market was quiet as traders refrained from large-scale purchasing, but many producers are withholding their stocks and waiting for higher prices in the short term. Prices for 99pc erbium oxide were assessed unchanged at Yn160,000-164,000/t ex-works today.

Europe

European rare earth prices remained mostly unchanged as lacklustre physical demand continued to weigh on the spot market. European prices failed to shadow Chinese fob prices higher as trickling demand overshadowed positive price movement in China.

European cif prices for 99.5pc cerium oxides remained anchored in a range of \$1.70-2.20/kg amid lacklustre market demand.

European cif prices for 99.5pc erbium oxide edged slightly higher amid renewed market interest. Prices were assessed within a range of \$26-29/kg.

Dysprosium oxide cif prices were stable at a range of \$198-202/kg while cif terbium oxide prices remained steady at \$415-420/kg.

Trickling demand also left neodymium oxide and metal prices stable. European cif prices for 99pc neodymium metal was stable at \$48-51/kg while 99.5-99.9pc neodymium oxide remained anchored at £35-40/kg.

China domestic ex-works prices				
Element	units	10 Nov		±3 Nov
		Low	High	
Cerium				
carbonate min 45% REO	Yn/t	4,800	5,900	300
metal min 99%	Yn/t	31,000	32,700	350
oxide 99.5-99.9%	Yn/t	10,300	11,000	250
Dysprosium				
metal min 99%	Yn/kg	1,630	1,730	10
oxide min 99.5%	Yn/kg	1,205	1,230	8
Erbium				
oxide min 99.5%	Yn/t	160,000	164,000	-
Europium				
oxide min 99.99%	Yn/kg	390	410	-
Ferro-dysprosium				
min 80% Dy	Yn/kg	1,230	1,260	5
Gadolinium				
metal min 99%	Yn/t	260,000	310,000	-
oxide 99.5-99.9%	Yn/t	65,000	67,000	-
Lanthanum				
metal min 99%	Yn/t	30,000	32,000	500
oxide min 99.999%	Yn/t	24,500	27,500	-
oxide 99.5-99.9%	Yn/t	12,500	13,500	350
Ce chloride min 45% REO	Yn/t	3,100	3,450	-
Mischmetal				
35% La 65% Ce	Yn/t	27,000	29,000	-
low Zn and Mg	Yn/t	115,000	123,000	-
Neodymium				
metal min 99%	Yn/t	315,000	320,000	-
oxide 99.5-99.9%	Yn/t	246,000	250,000	-
Praseodymium				
metal min 99%	Yn/t	455,000	475,000	-
oxide 99.5-99.9%	Yn/t	310,000	315,000	-
Praseodymium-Neodymium				
metal min 99%	Yn/t	314,000	319,000	2,000
oxide min 99%	Yn/t	245,000	249,000	2,000
Samarium				
metal min 99%	Yn/t	84,000	87,500	-
oxide min 99.5%	Yn/t	11,000	12,500	-
Terbium				
metal min 99.9%	Yn/kg	3,550	3,680	40
oxide min 99.99%	Yn/kg	2,750	2,790	50
Yttrium				
metal min 99.9%	Yn/kg	210	220	-
oxide min 99.999%	Yn/t	20,000	22,000	-

MARKET NEWS AND ANALYSIS

China's Geely to raise new energy vehicle production

China's Zhejiang Geely will expand its new energy vehicle production capacity next year when it launches a new plant.

Geely started building the plant, in central China's Hunan province, in April. The company is investing 3.5bn yuan (\$520mn) and the plant will have a capacity to produce 300,000 new energy vehicles a year.

The company expects its new energy vehicle sales to account for more than 90pc of its total vehicles sales by 2020. It expects pure electric vehicles to have a 35pc share of its new energy vehicle sales, with plug-in hybrid vehicles accounting for the rest.

Geely sold 21,000 new energy vehicles in January-September, up by 75.8pc on the year. New energy vehicles had a 4.6pc share of total sales, which reached 459,000 units in the same period.

Geely expects total sales of 750,000 units this year.

China's rare earths exports increase

China exported 3,430t of rare earths last month, up by 2.4pc compared with a year earlier, customs data show.

But the country's revenue from shipments fell by 48pc over the period, to 142.1mn yuan (\$21mn). The average export price declined by 49pc to Yn41,413/t, because of plentiful supplies and strong competition among producers.

Lower prices have prompted buyers outside China to buy more product so far this year.

China's rare earths exports totalled 38,430t in January-October, up by 43.6pc compared with the corresponding 10-month period of 2015. Associated revenue stood at Yn1.8bn, 1.6pc lower on the year.

UBS spots end to China-driven commodity turnaround

The rebound in commodity prices this year, caused by faster than expected cuts to raw materials supply in China, has 3-6 months left to run, according to Swiss bank UBS.

Production increases in coal and steel, prompted by higher prices, will rebalance the market and stimulus-led Chinese industrial growth will slow down within the next half year, the bank said.

The surprising "turnaround" in China's "troubled steel and coal sectors" in 2016 was thanks to stimulus measures that have boosted Chinese property and construction markets, at the same time as raw materials supply was curtailed by sharp cuts to domestic commodities production and capacity, UBS said.

But Chinese "supply side reforms" implemented to date are not sustainable, the bank said. And while capacity cuts have been steep, they are "still short of what had been thought necessary to achieve long-term balance".

"While the raw material sectors will probably benefit from the upturn for a few more months, an expected slow-down [in consumption] is expected to cap demand growth next year," UBS said. "Meanwhile, the price surge will probably encourage more supply, limit further price gains or lead to price declines."

Commodities prices are expected to "remain firm" in the coming 3-6 months, but steel mills may struggle to break even, assuming that steel markets continue to fluctuate around current prices, UBS said. Sustained steel price growth is unlikely, given the outlook for decelerating property investment, muted infrastructure growth and the knock-on effects of ebbing stimulus on manufacturing and vehicle sales.

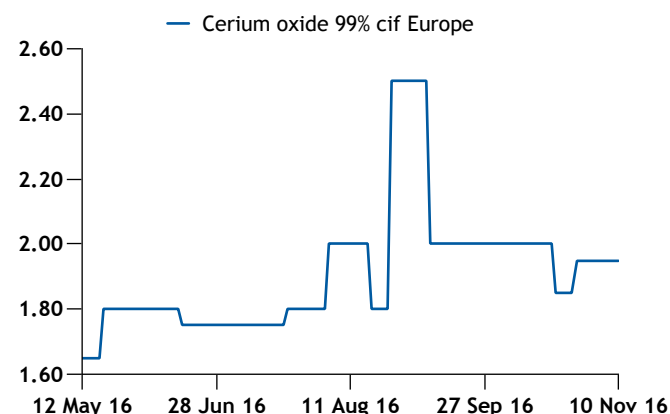
"We forecast a 16.9pc decline in apparent steel consumption to 580mn t in 2020, from 698mn t in 2015, implying a compound-average growth rate of -3.6pc," UBS said. "We foresee squeezing margins for midstream firms, including the steel sector, because they are unable to fully pass through the rising cost of coal to consumers amid lack of pricing power, stemming from overcapacity," it said.

Chinese EV sales fall short

China looks likely to miss its target for hybrid and electric vehicle (EV) sales this year, after they grew more slowly than expected in January-September. Subsidy cuts and the government's crackdown on fraud by EV manufacturers, suggest 2017 will be even tougher for the sector.

The China Association of Automobile Manufacturers (CAAM), an industry lobby group, forecast sales of 700,000

Cerium oxide 99.5-99.9% delivered Europe \$/kg



MARKET NEWS AND ANALYSIS

EVs in 2016, more than double last year’s 331,092 sales. But just 289,000 units were sold in the first nine months of the year. This suggests full-year sales of around 500,000 units, an increase of 51pc rather than 111pc. Conventional car sales grew by 13.2pc year on year to 19.4mn units in January-September.

Consumer purchases of EVs have started to slow in major cities such as Beijing. And that is even before the introduction of a new subsidy scheme from January next year that will push up the cost of EVs by 22,000 yuan (\$3,250). Beijing municipality is cutting subsidies next year for pure EVs by Yn5,000-11,000. At the same time, the government is considering a California-like system where manufacturers can earn carbon credits by selling clean vehicles or buy EVs to comply with CO2 targets. China plans to introduce nationwide carbon trading from 2017.

The costs to manufacturers are increasing after a crack-down on abuse of the subsidy system. The finance ministry fined five electric car manufacturers, including Suzhou-based Gemsea, in September. It accused them of fraudulently claiming government subsidies exceeding Yn1bn for vehicles that it had not fully built. Manufacturers collected around Yn10,000 per unit in subsidies last year].

The subsidy fraud was initially found mainly with manufacturers of electric buses but the government later discovered fraud by electric passenger vehicle manufacturers as well. Shanghai-listed Lifan Group, one of the companies cited for violating subsidy applications, admitted in October that it had erroneously claimed subsidies for 2,395 electric cars and that repayments would reduce its 2015-16 financial year pre-tax profit by as much as Yn114mn.

Academics at the Chinese Academy of Social Sciences (CASS) have, in the past, expressed concerns that over-subsidising EVs would be counterproductive. They argue that it would lead to excessive production of the most-subsidised vehicle types, rather than reflect the needs of the transport market. An electric bus produced by Gemsea is entitled to up to Yn500,000 in subsidies, covering most of the manufacturing cost. The government has proposed cutting subsidies for electric buses and halting subsidies of luxury EVs.

But the society of automotive engineers (SAE), an industry association, remains confident that, by 2020, EV sales will make up 7pc of total sales compared with a 2pc projection this year. And EV sales will make up 40pc of total sales by 2030, the SAE predicts.

Rising EV sales will help mitigate gasoline demand growth. IF EV sales undershoot CAAM forecasts by the expected amount this year, it suggests that conventional

vehicle sales may boost gasoline demand by 3,000 b/d. Apparent demand for gasoline – domestic production minus net exports – rose by 40,000 b/d in January-September. This figure is far lower than expected too, because it does not include production of blended gasoline.

Conventional vehicle engine efficiency improvements will help reduce gasoline consumption over time, too. Fuel consumption will drop from 6.7 litres/100km this year to 6l/100km by 2018 under government targets. The government wants vehicle manufacturers to lower fuel consumption by a further 0.5l/100km a year after 2018 – although oil companies and engineers are sceptical about how feasible this is.

Wind energy developers crank up installations

The US wind industry added 895MW of new capacity in the third quarter of 2016, doubling the 830MW developers installed during the first half of the year.

The American Wind Energy Association (AWEA), unveiling its latest market report at the Iowa state capitol, said the newly added capacity will boost the US’ total by 1.2pc to 75,716MW of installed capacity.

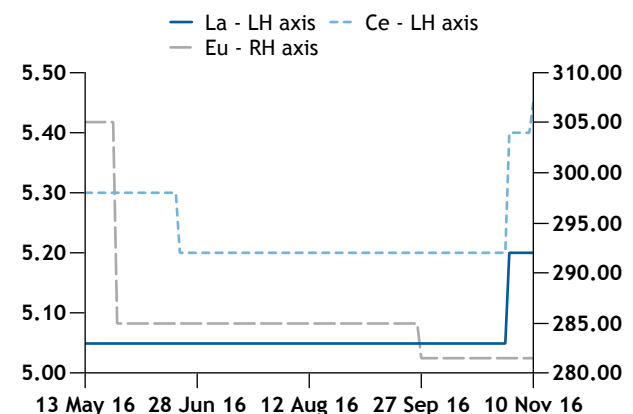
The year-to-date total of 1,725MW is likely to expand significantly in the fourth quarter, as business groups push to make end-of-year deadlines. Nearly 60pc of new capacity added in 2015 was installed in the final quarter.

The amount for 2016 under construction or advanced development is slightly more than 20,000MW, the group said. Developers have averaged a 15pc quarter-over-quarter growth rate since January, it said.

Iowa has the second-largest wind capacity in the US after Texas. Iowa governor Terry Branstad and lieutenant governor Kim Reynolds opened the event, in which each leader praised the industry and its benefits for Iowa.

Application focus - alloys

\$/kg



MARKET NEWS AND ANALYSIS

“There are days where we do 100pc” of Iowa’s generation needs with wind, although the daily average is about 35pc, Branstad said.

The governor also noted that Iowa is becoming a manufacturing hub for wind turbine component parts, generating extra revenue by exporting those products to other US states.

Corporate leaders investing in the state also spoke at the launch, including Vestas Americas’ Chris Brown and Alliant Energy’s Terry Kouba.

“Wind is winning,” wind energy developer Vestas Americas president and AWEA board chairman Chris Brown said. “Wind is winning here in Iowa, in America, and in the rest of the world.”

Vestas’ partnership with General Electric produced a combined 98pc of the third quarter’s 895MW in new capacity, the report said.

Alliant Energy vice president for generation operations Terry Kouba said his company’s planned 500MW expansion of its Whispering Willow site in Iowa would create enough power to light as many as 215,000 homes.

The AWEA report touted the decision state regulators made in August approving Wind XI, a 2,000MW proposal from MidAmerican Energy in which the company will invest \$3.6bn. MidAmerican described that project as the “largest

economic development project in Iowa’s history.”

Among US states, Texas installed 620MW of capacity in the third quarter, setting a new record of than 18,500MW in total capacity. The Lone Star State has nearly three times as much wind capacity as second-place Iowa, which has about 6,360MW.

**Argus Rare Earths:
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Argus Ferro-Alloys also features downloadable market data published in spreadsheet format, available only in Argus Direct.

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- › All historical pricing information, fully downloadable
- › China rare earths exports (by year)
- › Global rare earths project tracker

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Argus World Rare Earths Outlook to 2025 Strategy Report

The World Rare Earths Outlook to 2025 Strategy Report gives detailed insight into the global rare earths market for the next 10 years.

Published annually, it features detailed supply and demand projections to 2025, with dedicated sections on production, trade flows, stockpiles and consumption.

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PRICE INDEXES

Argus rare earths indexes (cumulative averages)					
element	units	month index Nov 16	month index Oct 16 final	Quarter index 4Q 16	Quarter index 3Q 16 final
Cerium					
carbonate min 45% REO fob China	\$/kg	0.98	0.98	0.98	0.98
metal min 99% fob China	\$/kg	5.41	5.20	5.26	5.20
oxide 99.5-99.9% fob China	\$/t	1,678.75	1,600.00	1,621.72	1,620.00
oxide 99.5-99.9% cif Europe	\$/kg	1.95	1.96	1.96	1.97
Dysprosium					
metal min 99% fob China	\$/kg	255.63	256.07	255.95	258.44
oxide min 99.5% fob China	\$/kg	185.38	185.17	185.22	186.82
oxide min 99.5% cif Europe	\$/kg	200.00	200.00	200.00	202.65
Europium					
metal min 99.9% fob China	\$/kg	281.50	281.50	281.50	284.78
oxide min 99.99% fob China	\$/kg	66.00	66.00	66.00	67.60
Erbium					
oxide min 99.5% cif Europe	\$/kg	27.06	27.43	27.33	28.05
Ferro-dysprosium					
min 80% Dy fob China	\$/kg	189.13	189.67	189.52	191.06
Gadolinium					
metal min 99% fob China	\$/kg	44.00	44.00	44.00	44.66
oxide min 99.999% fob China	\$/t	23,000.00	23,000.00	23,000.00	22,815.38
Lanthanum					
metal min 99% fob China	\$/kg	5.20	5.05	5.09	5.05
oxide 99.5-99.9% fob China	\$/t	1,908.13	1,850.00	1,866.03	1,868.85
oxide min 99.999% fob China	\$/kg	4.50	4.50	4.50	4.51
Mischmetal					
35% La 65% Ce fob China	\$/kg	5.13	5.13	5.13	5.13
low Zn and Mg fob China	\$/kg	19.00	19.00	19.00	19.00
Neodymium					
metal min 99% fob China	\$/kg	49.50	49.50	49.50	50.71
oxide 99.5-99.9% fob China	\$/t	39,000.00	39,000.00	39,000.00	39,223.08
metal 99% cif Europe	\$/kg	49.50	50.98	50.57	51.50
oxide 99.5-99.9% cif Europe	\$/kg	37.50	40.69	39.81	41.61
Praseodymium					
metal min 99% fob China	\$/kg	80.00	80.00	80.00	80.54
oxide 99.5-99.9% fob China	\$/t	50,000.00	50,000.00	50,000.00	50,142.31
Praseodymium-Neodymium					
metal min 99% fob China	\$/kg	49.04	49.00	49.01	50.36
oxide min 99% fob China	\$/t	38,537.50	38,500.00	38,510.34	39,876.92
Samarium					
metal min 99% fob China	\$/kg	14.35	14.35	14.35	14.55
oxide min 99.5% fob China	\$/kg	1.88	1.88	1.88	1.91
Terbium					
metal min 99.9% fob China	\$/kg	557.88	557.50	557.60	558.35
oxide min 99.99% fob China	\$/kg	419.13	417.50	417.95	419.92
oxide min 99.99% cif Europe	\$/kg	417.50	417.50	417.50	413.73
Yttrium					
metal min 99.9% fob China	\$/kg	33.75	33.75	33.75	34.08
oxide min 99.999% fob China	\$/t	3,665.00	3,665.00	3,665.00	3,707.46
oxide 99.999% cif Europe	\$/kg	4.75	4.96	4.91	4.95

CURRENT WEEK PRICES IN FULL

China export and delivered Europe prices							
Element	units	10 Nov		±8 Nov	8 Nov		±3 Nov
		Low	High		Low	High	
Cerium							
carbonate min 45% REO fob China	\$/kg	0.85	1.20	0.05	0.80	1.15	-
metal min 99% fob China	\$/kg	5.00	5.90	0.05	5.00	5.80	-
oxide 99.5-99.9% fob China	\$/t	1,630	1,780	30	1,600	1,750	-
oxide 99.5-99.9% cif Europe	\$/kg	1.70	2.20	-	1.70	2.20	-
Dysprosium							
metal min 99% fob China	\$/kg	249.00	264.00	1.00	248.00	263.00	-
oxide min 99.5% fob China	\$/kg	185.00	190.00	1.00	185.00	188.00	2.00
oxide min 99.5% cif Europe	\$/kg	198.00	202.00	-	198.00	202.00	-
Europium							
metal min 99.9% fob China	\$/kg	275.00	288.00	-	275.00	288.00	-
oxide min 99.99% fob China	\$/kg	62.00	70.00	-	62.00	70.00	-
Erbium							
oxide min 99.5% cif Europe	\$/kg	26.00	29.00	0.50	25.50	28.50	-
Ferro-dysprosium							
min 80% Dy fob China	\$/kg	186.00	194.00	1.00	186.00	192.00	-
Gadolinium							
metal min 99% fob China	\$/kg	41.00	47.00	-	41.00	47.00	-
oxide min 99.999% fob China	\$/t	22,500	23,500	-	22,500	23,500	-
Lanthanum							
metal min 99% fob China	\$/kg	4.80	5.60	-	4.80	5.60	-
oxide 99.5-99.9% fob China	\$/t	1,880	2,050	65	1,750	2,050	-
oxide min 99.999% fob China	\$/kg	4.00	5.00	-	4.00	5.00	-
Mischmetal							
35% La 65% Ce fob China	\$/kg	4.65	5.60	-	4.65	5.60	-
low Zn and Mg fob China	\$/kg	17.00	21.00	-	17.00	21.00	-
Neodymium							
metal min 99% fob China	\$/kg	48.50	50.50	-	48.50	50.50	-
oxide 99.5-99.9% fob China	\$/t	38,000	40,000	-	38,000	40,000	-
metal 99% cif Europe	\$/kg	48.00	51.00	-	48.00	51.00	-
oxide 99.5-99.9% cif Europe	\$/kg	35.00	40.00	-	35.00	40.00	-
Praseodymium							
metal min 99% fob China	\$/kg	75.00	85.00	-	75.00	85.00	-
oxide 99.5-99.9% fob China	\$/t	48,000	52,000	-	48,000	52,000	-
Praseodymium-Neodymium							
metal min 99% fob China	\$/kg	47.80	50.80	0.30	47.50	50.50	-
oxide min 99% fob China	\$/t	37,300	40,300	300	37,000	40,000	-
Samarium							
metal min 99% fob China	\$/kg	13.70	15.00	-	13.70	15.00	-
oxide min 99.5% fob China	\$/kg	1.80	1.95	-	1.80	1.95	-
Terbium							
metal min 99.9% fob China	\$/kg	548.00	573.00	3.00	545.00	570.00	-
oxide min 99.99% fob China	\$/kg	417.00	432.00	4.00	413.00	428.00	3.00
oxide min 99.99% cif Europe	\$/kg	415.00	420.00	-	415.00	420.00	-
Yttrium							
metal min 99.9% fob China	\$/kg	33.00	34.50	-	33.00	34.50	-
oxide min 99.999% fob China	\$/t	3,550	3,780	-	3,550	3,780	-
oxide 99.999% cif Europe	\$/kg	4.25	5.25	-	4.25	5.25	-

CURRENT WEEK PRICES IN FULL

China domestic ex-works prices							
Element	units	10 Nov		±08 Nov	8 Nov		±3 Nov
		Low	High		Low	High	
Cerium							
carbonate min 45% REO	Yn/t	4,800	5,900	300	4,500	5,600	-
metal min 99%	Yn/t	31,000	32,700	350	30,500	32,500	-
oxide 99.5-99.9%	Yn/t	10,300	11,000	250	10,000	10,800	-
Dysprosium							
metal min 99%	Yn/kg	1,630	1,730	10	1,620	1,720	-
oxide min 99.5%	Yn/kg	1,205	1,230	2	1,205	1,225	5
Erbium							
oxide min 99.5%	Yn/t	160,000	164,000	-	160000	164000	-
Europium							
oxide min 99.99%	Yn/kg	390	410	-	390	410	-
Ferro-dysprosium							
min 80% Dy	Yn/kg	1,230	1,260	5	1,230	1,250	-
Gadolinium							
metal min 99%	Yn/t	260,000	310,000	-	260,000	310,000	-
oxide 99.5-99.9%	Yn/t	65,000	67,000	-	65,000	67,000	-
Lanthanum							
metal min 99%	Yn/t	30,000	32,000	500	29,500	31,500	-
oxide min 99.999%	Yn/t	24,500	27,500	-	24,500	27,500	-
oxide 99.5-99.9%	Yn/t	12,500	13,500	350	11,800	13,500	-
Ce chloride min 45% REO	Yn/t	3,100	3,450	-	3,100	3,450	-
Mischmetal							
35% La 65% Ce	Yn/t	27,000	29,000	-	27,000	29,000	-
low Zn and Mg	Yn/t	115,000	123,000	-	115,000	123,000	-
Neodymium							
metal min 99%	Yn/t	315,000	320,000	-	315,000	320,000	-
oxide 99.5-99.9%	Yn/t	246,000	250,000	-	246,000	250,000	-
Praseodymium							
metal min 99%	Yn/t	455,000	475,000	-	455,000	475,000	-
oxide 99.5-99.9%	Yn/t	310,000	315,000	-	310,000	315,000	-
Praseodymium-Neodymium							
metal min 99%	Yn/t	314,000	319,000	2,000	312,000	317,000	-
oxide min 99%	Yn/t	245,000	249,000	2,000	243,000	247,000	-
Samarium							
metal min 99%	Yn/t	84,000	87,500	-	84,000	87,500	-
oxide min 99.5%	Yn/t	11,000	12,500	-	11,000	12,500	-
Terbium							
metal min 99.9%	Yn/kg	3,550	3,680	40	3,500	3,650	-
oxide min 99.99%	Yn/kg	2,750	2,790	30	2,720	2,760	20
Yttrium							
metal min 99.9%	Yn/kg	210	220	-	210	220	-
oxide min 99.999%	Yn/t	20,000	22,000	-	20,000	22,000	-



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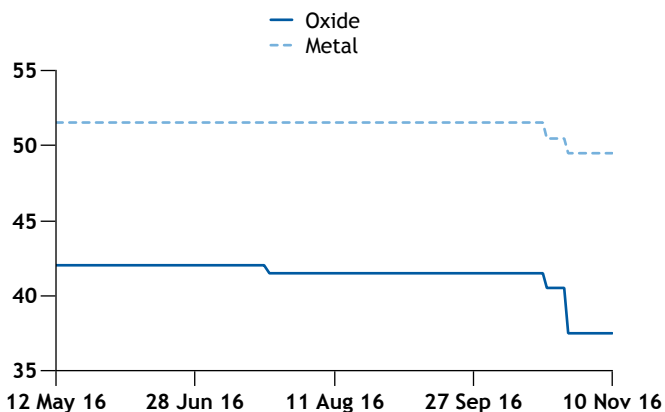


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Neodymium oxide and metal delivered Europe \$/kg

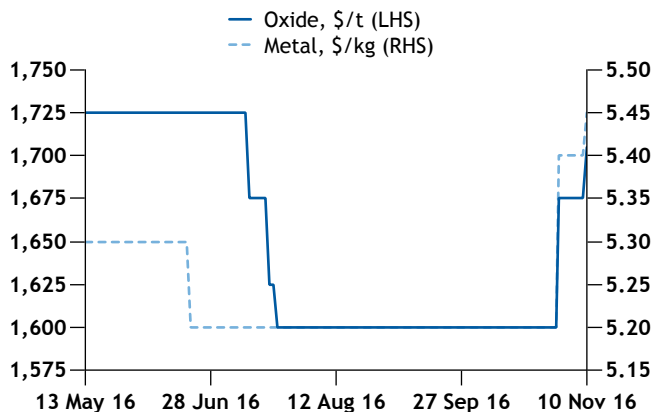


Argus Rare Earths Methodology

Fob China assessments are basis export duty paid, including any export taxes levied by China. Fob China prices are not inclusive of any import duty charged by the importing country. China domestic prices are basis ex-works, VAT paid, unless otherwise stated. European prices are basis in-warehouse Rotterdam, duty unpaid unless otherwise stated.

The full methodology and explanation of the Argus price assessment process can be found at: www.argusmedia.com/Methodology-and-Reference

Cerium oxide 99.5-99.9% and metal 99% min fob China



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