

**TABLE 1. WORLD REFINED COPPER PRODUCTION AND USAGE TRENDS**

Thousand metric tonnes, copper

COUNTRY	2019	2020	2021	2022 p/	Jan-Jul			2023 p/			
					2022	2023	% ch.	Apr	May	Jun	Jul
World Copper Mine Production (Concentrate & SX-EW)	20,673	20,771	21,295	21,972	12,439	12,662	1.8%	1,808	1,848	1,881	1,890
World Copper Mine Capacity	24,255	25,121	26,102	26,936	15,569	16,290		2,305	2,392	2,324	2,408
Mine Capacity Utilization Rate (%)	85.2	82.7	81.6	81.6	79.9	77.7		78.4	77.3	80.9	78.5
Primary Refined Copper Production	20,152	20,820	20,809	21,512	12,360	13,153	6.4%	1,885	1,903	1,848	1,930
Secondary Refined Copper Production	4,007	3,843	4,149	4,153	2,403	2,692	12.0%	396	418	400	369
World Refined Copper Production (Primary & Secondary)	24,159	24,663	24,958	25,665	14,764	15,845	7.3%	2,281	2,321	2,248	2,298
Seasonally Adjusted World Refined Copper Production - monthly 1/					2,125	2,280		2,313	2,289	2,233	2,277
World Copper Refinery Capacity	29,552	30,201	30,686	31,316	18,133	18,786		2,659	2,756	2,676	2,770
Refinery Capacity Utilization Rate (%)	81.8	81.7	81.3	82.0	81.4	84.3		85.8	84.2	84.0	83.0
Secondary Refined as % in Total Refined Copper Production	16.6	15.6	16.6	16.2	16.3	17.0		17.4	18.0	17.8	16.0
World Refined Copper Usage 2/	24,321	24,945	25,204	26,056	15,018	15,630	4.1%	2,264	2,370	2,320	2,318
Seasonally Adjusted World Refined Copper Usage - monthly 1/					2,171	2,259		2,264	2,348	2,242	2,259
World Refined Copper Stocks (End of Period)	1,215	1,236	1,210	1,373	1,362	1,306		1,412	1,352	1,307	1,306
Period Stock Change	-12	21	-26	163	152	-66		-18	-60	-45	0
Refined Copper Balance 3/	-162	-282	-246	-391	-254	215		17	-49	-72	-19
Seasonally Adjusted Refined Balance 4/					-326	144		49	-59	-9	18
Refined Copper Balance Adjusted for Chinese bonded stock change 5/	-340	-172	-443	-519	-159	243		0	-91	-102	-29
LME Copper Price 6/	6,000	6,181	9,317	8,797	9,435	8,666		8,814	8,234	8,386	8,445
Comex Copper Price 7/	272.10	280.29	424.94	400.08	429.44	394.45		400.04	374.17	379.60	383.57

p/ Preliminary

1/ See note below on seasonal adjustments. Figures in the year-to-date columns represent seasonally adjusted monthly averages.

2/ Apparent refined usage is used for the European Union (EU-15) instead of the accumulation of the individual countries' refined usage.

3/ Surplus or deficit is calculated using total refined production minus refined usage.

4/ Refined balance is calculated using seasonally adjusted total refined production minus seasonally adjusted refined usage.

5/ See note below on refined balance adjusted for Chinese bonded stock change.

6/ Averages for the period in US dollars per ton of copper.

7/ Averages for the period in US cents per pound of copper.

**Note on refined balance adjusted for Chinese bonded stock change.**

Beginning in January 2014 Bulletin, the International Copper Study Group (ICSG) introduced an additional line item for apparent world balance that includes an adjustment for assumed changes in Chinese bonded stocks. Historically, ICSG has only accounted for reported stock data in its statistics and therefore did not account for unreported stocks change in the calculation of apparent usage. In recent years anecdotal evidence has suggested that there have been substantial fluctuations in Chinese bonded stock levels and apparent consumption based on trade, production, and changes in exchange inventories may not adequately reflect industrial use in a given time period. ICSG acknowledges the distortion these unreported stock movements can cause in the calculation of the world copper refined balance and, effective with the January 2014 Bulletin, will include an additional line item - Refined World Balance Adjusted for Chinese Bonded Stock Changes. As there is no officially reported data for Chinese bonded stocks, ICSG will use an average of stock estimates provided by two consultants based on their ongoing research and analysis of the Chinese copper market to estimate the unreported inventory changes.

**Note on seasonal adjustments:**

The International Copper Study Group introduced seasonal adjustments in its supply usage table to help better assess the state of the copper market. The introduction of seasonally adjusted refined usage and refined balance figures was originally intended to account for the effects of variations in days per month and holiday periods in certain key copper using regions of the world. Starting with the April 2007 edition of the Copper Bulletin (January 2007 data), the International Copper Study Group will be using the U.S. Census Bureau's X-12 seasonal adjustment program to calculate seasonally adjusted refined usage, production, and balance figures in order to provide more analytically rigorous seasonally adjusted results. Seasonal adjustments have also been made for data from past years.

Each month the ICSG issues the above table in a Press Release which is also included in ICSG's web site:

[www.icsg.org](http://www.icsg.org)