TABLE 1. WORLD REFINED COPPER PRODUCTION AND USAGE TRENDS

Thousand metric tonnes, copper

2020	2021	2022	2023 p/	Jan-Feb			2023 p/		2024 p/	
				2023	2024	%ch.	Nov	Dec	Jan	Feb
20,745	21,260	21,921	22,401	3,399	3,624	6.6%	1,943	1,997	1,845	1,779
25,197	26,247	27,046	28,180	4,486	4,734		2,356	2,443	2,442	2,292
82.3	81.0	81.1	79.5	75.8	76.6		82.5	81.7	75.6	77.6
20,812	20,787	21,145	22,057	3,593	3,785	5.3%	1,871	1,915	1,960	1,825
3,843	4,149	4,153	4,489	706	761	7.8%	388	382	395	366
24,656	24,936	25,298	26,547	4,299	4,546	5.8%	2,259	2,297	2,356	2,191
				2,223	2,348		2,264	2,273	2,308	2,388
30,216	30,733	31,426	32,253	5,156	5,347		2,679	2,775	2,760	2,587
81.6	81.1	80.5	82.3	83.4	85.0		84.3	82.8	85.3	84.7
15.6	16.6	16.4	16.9	16.4	16.7		17.2	16.6	16.8	16.7
24,948	25,211	25,832	26,549	4,047	4,351	7.5%	2,351	2,255	2,386	1,964
				2,197	2,353		2,283	2,252	2,421	2,285
1,236	1,210	1,258	1,191	1,419	1,248		1,182	1,191	1,172	1,248
21	-26	48	-67	161	57		-44	9	-19	76
-292	-275	-534	-3	252	196		-93	42	-30	226
				52	-10		-19	21	-113	103
-182	-473	-661	-30	387	231		-102	36	-25	256
6,181	9,317	8,797	8,478	8,978	8,328		8,174	8,394	8,344	8,311
280.29	424.94	400.37	385.33	410.57	380.45		371.84	385.15	381.21	379.66
	20,745 25,197 82.3 20,812 3,843 24,656 30,216 81.6 15.6 24,948 1,236 21 -292 -182 6,181	20,745 21,260 25,197 26,247 82.3 81.0 20,812 20,787 3,843 4,149 24,656 24,936  30,216 30,733 81.6 81.1 15.6 16.6 24,948 25,211  1,236 1,210 21 -26 -292 -275  -182 -473 6,181 9,317	20,745       21,260       21,921         25,197       26,247       27,046         82.3       81.0       81.1         20,812       20,787       21,145         3,843       4,149       4,153         24,656       24,936       25,298         30,216       30,733       31,426         81.6       81.1       80.5         15.6       16.6       16.4         24,948       25,211       25,832         1,236       1,210       1,258         21       -26       48         -292       -275       -534         -182       -473       -661         6,181       9,317       8,797	p/           20,745         21,260         21,921         22,401           25,197         26,247         27,046         28,180           82.3         81.0         81.1         79.5           20,812         20,787         21,145         22,057           3,843         4,149         4,153         4,489           24,656         24,936         25,298         26,547           30,216         30,733         31,426         32,253           81.6         81.1         80.5         82.3           15.6         16.6         16.4         16.9           24,948         25,211         25,832         26,549           1,236         1,210         1,258         1,191           21         -26         48         -67           -292         -275         -534         -3           -182         -473         -661         -30           6,181         9,317         8,797         8,478	2020         2021         2022         2023           20,745         21,260         21,921         22,401         3,399           25,197         26,247         27,046         28,180         4,486           82.3         81.0         81.1         79.5         75.8           20,812         20,787         21,145         22,057         3,593           3,843         4,149         4,153         4,489         706           24,656         24,936         25,298         26,547         4,299           30,216         30,733         31,426         32,253         5,156           81.6         81.1         80.5         82.3         83.4           15.6         16.6         16.4         16.9         16.4           24,948         25,211         25,832         26,549         4,047           2,197         1,236         1,210         1,258         1,191         1,419           21         -26         48         -67         161           -292         -275         -534         -3         252           -182         -473         -661         -30         387           6,181         9,317	2020         2021         2022         2023         2024           20,745         21,260         21,921         22,401         3,399         3,624           25,197         26,247         27,046         28,180         4,486         4,734           82.3         81.0         81.1         79.5         75.8         76.6           20,812         20,787         21,145         22,057         3,593         3,785           3,843         4,149         4,153         4,489         706         761           24,656         24,936         25,298         26,547         4,299         4,546           30,216         30,733         31,426         32,253         5,156         5,347           81.6         81.1         80.5         82.3         83.4         85.0           15.6         16.6         16.4         16.9         16.4         16.7           24,948         25,211         25,832         26,549         4,047         4,351           2,197         2,353           1,236         1,210         1,258         1,191         1,419         1,248           21         -26         48         -67         161         <	2020         2021         2022         2023         2024         %ch.           20,745         21,260         21,921         22,401         3,399         3,624         6.6%           25,197         26,247         27,046         28,180         4,486         4,734           82.3         81.0         81.1         79.5         75.8         76.6           20,812         20,787         21,145         22,057         3,593         3,785         5.3%           3,843         4,149         4,153         4,489         706         761         7.8%           24,656         24,936         25,298         26,547         4,299         4,546         5.8%           30,216         30,733         31,426         32,253         5,156         5,347           81.6         81.1         80.5         82.3         83.4         85.0           15.6         16.6         16.4         16.9         16.4         16.7           24,948         25,211         25,832         26,549         4,047         4,351         7.5%           2,197         2,353           1,236         1,210         1,258         1,191         1,419         1,248	2020         2021         2022         2023         2024         %ch.         Nov           20,745         21,260         21,921         22,401         3,399         3,624         6.6%         1,943           25,197         26,247         27,046         28,180         4,486         4,734         2,356           82.3         81.0         81.1         79.5         75.8         76.6         82.5           20,812         20,787         21,145         22,057         3,593         3,785         5.3%         1,871           3,843         4,149         4,153         4,489         706         761         7.8%         388           24,656         24,936         25,298         26,547         4,299         4,546         5.8%         2,259           81.6         81.1         80.5         82.3         83.4         85.0         84.3           15.6         16.6         16.4         16.9         16.4         16.7         17.2           24,948         25,211         25,832         26,549         4,047         4,351         7.5%         2,351           1,236         1,210         1,258         1,191         1,419         1,248	2020         2021         2022         2023         2024         %ch.         Nov         Dec           20,745         21,260         21,921         22,401         3,399         3,624         6.6%         1,943         1,997           25,197         26,247         27,046         28,180         4,486         4,734         2,356         2,443           82.3         81.0         81.1         79.5         75.8         76.6         82.5         81.7           20,812         20,787         21,145         22,057         3,593         3,785         5.3%         1,871         1,915           3,843         4,149         4,153         4,489         706         761         7.8%         388         382           24,656         24,936         25,298         26,547         4,299         4,546         5.8%         2,259         2,297           30,216         30,733         31,426         32,253         5,156         5,347         2,679         2,775           81.6         81.1         80.5         82.3         83.4         85.0         84.3         82.8           15.6         16.6         16.4         16.9         16.4         16.7	2020   2021   2022   2023   2024   %ch.   Nov   Dec   Jan

## 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.

 $\label{thm:eq:csg} \textbf{Each month the ICSG} \ \textbf{issues the above table in a Press Release which is also included in ICSG's web site:}$ 

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