

Operator Energy Consumption

The following table presents estimates for direct and indirect energy usage, which can be attributed to our interests, for a majority of our revenue-generating mineral properties, as available from Skarn Associates for calendar years 2018 through 2024. The table also details the GHG emissions associated with each unit of direct and indirect energy and provides a weighted average performance for the portfolio. Entries labeled “NR” means the data was not reported in the Skarn Associates database, and those labeled “—” are for periods when Royal Gold did not have royalty or stream revenue from the mineral property. Skarn Associates may update prior year information, which we may have presented in prior reports. We use the most current data available from Skarn Associates and adjust our presentation of data and calculations accordingly. The Operator Energy Consumption table does not include assets from the Sandstorm/Horizon or Kansanshi transactions as these were not in our portfolio during 2024.

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Principal Properties										
Andacollo Teck Resources Limited	2019	17.2%		98	319	417	71	113	103	26
	2020	13.4%		81	253	334	71	76	75	25
	2021	11.4%		103	338	441	71	0	16	30
	2022	8.4%		81	254	335	71	0	17	30
	2023	8.4%		82	213	295	71	0	20	27
	2024	6.5%	4th	60	150	210	71	0	20	27
Cortez ³ Nevada Gold Mines LLC	2019	4.3%		47	18	65	71	81	74	19
	2020	6.1%		85	27	112	71	81	73	18
	2021	11.0%		179	54	234	71	71	71	12
	2022	10.6%		130	45	175	71	91	76	26
	2023	18.8%		223	79	302	71	21	58	16
	2024	11.3%	3rd	172	64	236	71	17	56	41

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Mount Milligan Centerra Gold Inc.	2019	23.3%		187	386	573	70	8	29	33
	2020	24.8%		203	459	662	70	11	29	30
	2021	23.5%		202	443	645	70	3	24	29
	2022	27.0%		252	473	725	70	3	26	27
	2023	23.5%		237	491	728	70	3	25	27
	2024	24.3%	4th	264	475	740	70	4	27	26
Pueblo Viejo Barrick Gold Corporation	2019	17.3%		1,251	0	1,251	77	0	77	266
	2020	16.9%		1,404	17	1,422	62	156	64	308
	2021	14.1%		1,646	24	1,669	60	164	62	355
	2022	12.4%		1,326	19	1,346	60	163	61	305
	2023	10.6%		821	27	849	52	149	55	230
	2024	9.6%	4th	437	148	477	51	149	59	150
Non-Principal Properties										
Allan/Borax Nutrien Ltd.	2019	0.3%		NR	NR	NR	NR	NR	NR	NR
	2020	0.3%		NR	NR	NR	NR	NR	NR	NR
	2021	0.3%		NR	NR	NR	NR	NR	NR	NR
	2022	0.3%		NR	NR	NR	NR	NR	NR	NR
	2023	0.3%		NR	NR	NR	NR	NR	NR	NR
	2024	0.3%	NR	NR	NR	NR	NR	NR	NR	NR
Bald Mountain ³ Kinross Gold Corporation	2019	0.2%		5	0	5	71	196	82	3
	2020	0.0%		1	0	1	71	196	82	3
	2021	0.2%		4	0	5	71	155	78	3
	2022	0.4%		8	1	9	71	102	74	3
	2023	0.3%		8	1	10	71	92	74	3
	2024	0.1%	3rd	2	0	3	71	295	95	3

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Bellevue Bellevue Gold Ltd.	2019	0.0%		0	0	0	NR	NR	NR	NR
	2020	0.0%		0	0	0	NR	NR	NR	NR
	2021	0.0%		0	0	0	NR	NR	NR	NR
	2022	0.0%		0	0	0	NR	NR	NR	NR
	2023	0.0%		0	0	0	NR	NR	NR	NR
	2024	1.1%	NR	NR	NR	NR	NR	NR	NR	NR
Canadian Malartic ³ Agnico Eagle Mines Ltd.	2019	1.8%		23	15	38	70	0	42	28
	2020	1.6%		23	16	39	70	1	41	28
	2021	1.5%		18	11	29	70	1	43	24
	2022	1.0%		12	9	21	69	1	39	34
	2023	0.3%		4	3	6	70	1	42	34
	2024	0.1%	3rd	1	1	2	69	0.2	36	35
Celtic/Wonder North Northern Star Resources Ltd.	2019	0.0%		0	0	0	NR	NR	NR	NR
	2020	0.0%		0	0	0	NR	NR	NR	NR
	2021	0.0%		0	0	0	NR	NR	NR	NR
	2022	0.0%		0	0	0	NR	NR	NR	NR
	2023	0.0%		0	0	0	NR	NR	NR	NR
	2024	0.1%	NR	NR	NR	NR	NR	NR	NR	NR
Côté IAMGOLD Corporation	2019	—%		—	—	—	—	—	—	—
	2020	—%		—	—	—	—	—	—	—
	2021	—%		—	—	—	—	—	—	—
	2022	0.0%		0	0	0	NR	NR	NR	NR
	2023	0.0%		0	0	0	NR	NR	NR	NR
	2024	0.5%	2nd	9	4	13	69	10	50	39

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Dolores Pan American Silver Corporation	2019	1.9%		37	10	48	70	128	83	15
	2020	1.5%		35	10	45	70	127	83	15
	2021	2.0%		27	12	39	70	98	79	14
	2022	1.9%		21	12	32	70	44	61	13
	2023	1.6%		13	11	24	70	44	58	13
	2024	1.1%	2nd	11	9	19	68	123	93	11
Don Nicolas ³ Cerrado Gold, Inc.	2019	0.0%		NR	NR	NR	0	0	0	NR
	2020	0.4%		0	0	0	59	0	59	76
	2021	0.2%		6	0	6	63	0	63	76
	2022	0.2%		5	0	5	63	0	63	76
	2023	0.1%		2	0	2	63	0	63	76
	2024	0.4%	2nd	11	0	11	67	0	67	14
El Limón Equinox Gold	2019	0.6%		15	5	20	74	83	76	103
	2020	0.9%		17	6	23	74	83	76	103
	2021	1.0%		19	8	27	74	83	76	113
	2022	1.2%		12	10	22	73	0	39	141
	2023	1.1%		13	10	24	70	0	40	150
	2024	1.2%	3rd	15	12	27	70	0	39	154
Goldstrike ³ Nevada Gold Mines LLC (Goldstrike and Carlin were combined by Nevada Gold Mines for reporting purposes starting in 2019 and are referred to as Carlin.)	2019	0.9%		41	18	59	77	59	72	288
	2020	0.7%		26	8	33	79	81	79	143
	2021	0.6%		26	7	33	78	77	78	114
	2022	0.7%		23	4	27	88	145	96	163
	2023	0.3%		14	3	17	74	17	63	246
	2024	0.3%	4th	15	3	18	75	15	64	275

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Granite Creek i-80 Gold Corp.	2019	0.0%		0	0	0	NR	NR	NR	NR
	2020	0.0%		0	0	0	NR	NR	NR	NR
	2021	0.0%		0	0	0	NR	NR	NR	NR
	2022	0.0%		0	0	0	NR	NR	NR	NR
	2023	0.0%		0	0	0	NR	NR	NR	NR
	2024	0.2%	NR	NR	NR	NR	NR	NR	NR	NR
Gwalia ³ Genesis Minerals Limited	2019	1.0%		18	0	18	62	0	62	134
	2020	0.9%		21	0	21	61	0	61	164
	2021	0.9%		21	0	21	60	0	60	130
	2022	0.8%		21	0	21	60	0	60	130
	2023	0.7%		18	0	18	61	0	61	130
	2024	0.7%	4th	18	0	19	59	182	60	125
Khoemacau MMG Limited (formally Khoemacau Copper)	2019	—%		—	—	—	—	—	—	—
	2020	—%		—	—	—	—	—	—	—
	2021	0.7%		5	6	11	74	259	172	
	2022	3.1%		22	25	46	74	259	172	52
	2023	5.4%		36	38	74	74	233	157	49
	2024	4.3%	1st (Cu)	39	40	79	71	274	176	50
King of the Hills Vault Minerals Limited	2019	0.4%		0	0	0	NR	NR	NR	NR
	2020	0.2%		0	0	0	NR	NR	NR	NR
	2021	0.0%		0	0	0	NR	NR	NR	NR
	2022	0.2%		10	0	10	64	0	64	35
	2023	0.8%		27	0	27	62	0	62	42
	2024	0.9%	4th	30	0	30	63	0	63	36

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
LaRonde Zone 5 ³ Agnico Eagle Mines Ltd.	2019	0.5%		2	5	7	59	1	18	147
	2020	0.4%		2	5	6	60	0	16	152
	2021	0.4%		2	5	6	61	0	17	147
	2022	0.6%		3	7	9	61	0	17	162
	2023	0.5%		2	6	9	61	0	17	162
	2024	0.6%	2nd	3	8	11	62	0	176	167
Leeville (North) ³ Nevada Gold Mines LLC (Scope 1 emissions included portions of emissions from the Western 102 and TS power plants.)	2019	0.3%		15	6	21	77	59	72	288
	2020	0.3%		12	4	16	79	81	79	143
	2021	1.0%		45	12	57	78	77	78	114
	2022	0.9%		31	6	37	88	145	96	163
	2023	1.1%		49	12	61	74	17	63	246
	2024	1.3%	4th	68	15	84	75	0	64	275
Manh Choh Kinross Gold Corporation	2019	0.0%		0	0	0	NR	NR	NR	NR
	2020	0.0%		0	0	0	NR	NR	NR	NR
	2021	0.0%		0	0	0	NR	NR	NR	NR
	2022	0.0%		0	0	0	NR	NR	NR	NR
	2023	0.0%		0	0	0	NR	NR	NR	NR
	2024	1.7%	2nd	33	7	40	71	296	109	6
Mara Rosa Hochschild Mining plc	2019	0.0%		0	0	0	NR	NR	NR	NR
	2020	0.0%		0	0	0	NR	NR	NR	NR
	2021	0.0%		0	0	0	NR	NR	NR	NR
	2022	0.0%		0	0	0	NR	NR	NR	NR
	2023	0.0%		0	0	0	NR	NR	NR	NR
	2024	0.7%	2nd	6	7	13	74	23	47	39

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Marigold ³ SSR Mining Inc.	2019	1.5%		27	2	29	70	81	68	1
	2020	1.7%		39	3	42	70	81	64	2
	2021	1.6%		43	3	46	70	97	63	2
	2022	1.3%		32	2	34	70	98	65	2
	2023	1.0%		19	2	21	70	92	72	3
	2024	1.3%	4th	38	5	43	75	104	73	2
Meekathara ³ Westgold Resources Ltd.	2019	0.7%		20	0	20	70	0	70	56
	2020	0.8%		24	0	24	70	0	70	56
	2021	0.7%		22	0	22	70	0	70	53
	2022	0.6%		17	0	17	70	0	70	55
	2023	0.4%		12	0	12	70	0	70	63
	2024	0.1%	NR	NR	NR	NR	60	0	60	62
Peñasquito Newmont Corporation	2019	4.1%		67	61	127	74	129	100	51
	2020	7.1%		63	66	129	74	127	101	41
	2021	8.2%		87	81	168	74	111	91	41
	2022	7.6%		85	75	160	74	117	94	39
	2023	3.4%		44	74	119	74	71	72	67
	2024	7.7%	4th	88	148	235	74	72	73	67
Rainy River Coeur Mining, Inc.	2019	5.5%		106	54	160	70	2	47	32
	2020	4.7%		89	53	142	70	6	46	31
	2021	5.2%		111	65	176	70	6	46	32
	2022	5.0%		94	59	154	70	8	46	34
	2023	5.8%		101	64	165	70	11	47	35
	2024	5.6%	3rd	83	71	154	70	8	41	35

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Red Chris Newmont Corporation	2019	—%		—	—	—	—	—	—	—
	2020	—%		—	—	—	—	—	—	—
	2021	—%		—	—	—	—	—	—	—
	2022	0.5%		11	9	20	65	7	37	34
	2023	0.6%		15	13	28	69	5	39	36
	2024	0.4%	4th	12	11	23	69	4	38	59
Robinson KGHM International Ltd.	2019	1.9%		46	46	92	71	158	114	41
	2020	2.2%		64	63	127	71	158	114	41
	2021	1.8%		44	44	88	71	158	114	41
	2022	1.9%		50	49	100	71	158	114	41
	2023	1.5%		44	44	88	71	158	114	41
	2024	2.5%	4th	58	58	116	71	180	125	41
Skyline Wolverine Fuels, LLC	2019	0.3%		NR	NR	NR	NR	NR	NR	NR
	2020	0.3%		NR	NR	NR	NR	NR	NR	NR
	2021	0.1%		NR	NR	NR	NR	NR	NR	NR
	2022	0.0%		NR	NR	NR	NR	NR	NR	NR
	2023	0.3%		NR	NR	NR	NR	NR	NR	NR
	2024	0.3%	NR	NR	NR	NR	NR	NR	NR	NR
South Laverton ³ Northern Star Resources Ltd.	2019	1.1%		18	0	18	74	0	74	36
	2020	2.2%		36	0	36	74	0	74	36
	2021	1.9%		46	0	46	70	0	70	49
	2022	1.3%		40	0	40	74	0	74	21
	2023	1.4%		31	0	31	73	0	73	29
	2024	1.4%	3rd	33	0	33	63	0	63	15

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Southern Cross Shandong Tianye Group	2019	0.4%		4	2	6	74	192	116	36
	2020	0.3%		3	1	4	74	189	111	29
	2021	0.3%		3	2	5	74	187	116	34
	2022	0.3%		2	2	4	74	182	129	55
	2023	0.3%		2	2	5	74	182	129	54
	2024	0.4%	2nd	3	3	5	74	149	112	54
Voisey's Bay Vale S.A.	2019	2.0%		16	0	16	71	0	71	52
	2020	1.5%		11	0	11	71	0	71	52
	2021	2.6%		22	0	22	71	0	71	52
	2022	1.5%		21	0	21	71	0	71	60
	2023	0.8%		19	0	19	71	0	71	57
	2024	1.0%	2nd (Cu)	47	0	47	71	0	71	173
Wassa Chifeng Jilong Gold Mining Co., Ltd.	2019	4.4%		22	21	44	71	36	54	50
	2020	5.0%		23	26	50	71	37	53	46
	2021	4.9%		34	34	69	71	184	127	62
	2022	5.2%		34	34	68	71	184	128	62
	2023	5.2%		22	30	51	71	188	140	56
	2024	6.3%	2nd	24	39	63	74	189	145	56
Wharf Coeur Mining, Inc.	2019	0.6%		9	7	16	71	114	88	22
	2020	0.7%		7	7	13	71	96	83	22
	2021	0.6%		14	7	21	71	43	62	22
	2022	0.5%		13	6	18	71	46	63	22
	2023	0.7%		17	2	20	71	113	68	7
	2024	0.5%	3rd	10	1	11	63	114	68	6

Mineral Property/Operator	Year ¹	Royal Gold Net GEOs ² (%)	Total Energy Intensity (GJ/ GEO) Quartile Ranking ⁸	RGLD Attributed Energy Estimates ^{4,5}			Energy Emission Factor			Electrical Power Consumption (kW-hr/t Ore Treated)
				Direct	Indirect	Total	Direct	Indirect	Total	
				(Tera Joule)			(tCO ₂ e/Tera Joule)			
Williams ⁷ Barrick Gold Corporation	2019	0.6%		4	6	10	66	5	31	77
	2020	0.7%		4	5	9	65	8	32	101
	2021	0.4%		3	5	8	63	8	27	153
	2022	0.2%		1	2	4	64	8	28	155
	2023	(0.2%)		-1	-2	-3	62	8	27	140
	2024	0.3%	2nd	2	3	5	61	8	26	127
Xavantina Ero Copper	2019	—%		—	—	—	—	—	—	—
	2020	—%		—	—	—	—	—	—	—
	2021	1.2%		4	9	12	74	17	34	154
	2022	3.1%		9	18	27	74	17	36	141
	2023	4.1%		6	12	18	74	17	36	141
	2024	5.0%	2nd	12	24	36	61	13	31	203
Other Interests	2019	0.2%		NR	NR	NR	NR	NR	NR	NR
	2020	0.1%		NR	NR	NR	NR	NR	NR	NR
	2021	0.2%		NR	NR	NR	NR	NR	NR	NR
	2022	0.2%		NR	NR	NR	NR	NR	NR	NR
	2023	0.3%		NR	NR	NR	NR	NR	NR	NR
	2024	0.1%	NR	NR	NR	NR	NR	NR	NR	NR