

**Action Summary – 10 January 2022**

Analyst Theodore R. O'Neill – KULR 2022/2023 outlook improving - Reiterate Buy rating and \$7 PT

- **Company is adding additional development orders that could lead to multiple \$100MM markets.** In addition to the November order from Lockheed Martin (LM-NR), energy storage developer Volta Energy Products announced a three-year deployment order to apply KULR's thermal safety solutions for its energy storage systems with an initial \$1.6MM.
- KULR's passive propagation resistant (PPR) solution suite — designed to stop lithium-ion battery failures from spiraling out of control without external fire suppression — has been used on NASA missions. The system prevents cell-to-cell thermal runaway and contains any fire and debris inside a battery pack protection, turning the system off to prevent any spread in damage.
- The partnership between KULR and Volta parent company Viridi Parente marks the first application of PPR for energy storage and will see Volta deploy up to 1,000 new storage units with the safety technology. It hopes to deploy as many as 50,000 units by 2023. The failsafe system can make energy storage safer and less expensive for a variety of residential and business uses by limiting the need for external fire suppression tools.
- **Building a suite of battery safety products.** Its lithium-ion battery safety technology solutions is recognized by the U.S. Department of Transportation which expanded its expansion of a permit to transport reused, refurbished and retrofitted lithium-ion batteries for recycling on September 24, 2021.
- **Attractive valuation.** Although the shares trade above peer averages, on the basis of discounted future earnings, we feel the shares are undervalued.

1/10/22 Closing price: \$2.72	Market cap: \$285 million	2022 P/E: NMF	2022 EV / Sales: 41
Shares outstanding: 104.7 million	Insider ownership: 37%	3-month avg. trading volume: >3MM	Dividend/Yield: NA/NA

**GAAP estimates (EPS excluding deemed dividend in dollars – Revenue in thousands)**

Period	EPS	Revenue	GP Margin
1Q20A	\$(0.01)	\$78	67%
2Q20A	\$(0.01)	\$201	79%
3Q20A	\$(0.00)	\$137	55%
4Q20A	\$(0.01)	\$208	81%
FY20A	\$(0.03)	\$624	73%
1Q21A	\$(0.02)	\$418	34%
2Q21A	\$(0.03)	\$628	30%
3Q21A	\$(0.03)	\$601	74%
4Q21E	\$(0.03)	\$750	60%
FY21E	\$(0.11)	\$2,397	51%
1Q22E	\$(0.03)	\$1,500	50%
2Q22E	\$(0.03)	\$2,000	50%
3Q22E	\$(0.03)	\$2,000	50%
4Q22E	\$(0.02)	\$3,000	50%
FY22E	\$(0.10)	\$8,500	50%

Note: Numbers may not add due to rounding. See our full model in the back of this report.

**Cash balance (in thousands)**

• 2019A	• \$109
• 2020A	• \$8,880
• 2021E	• \$9,513
• 2022E	• \$1.195

**Debt (in thousands)**

• 2019A	• NA
• 2020A	• \$2,332
• 2021E	• NA
• 2022E	• NA

**Adj. EBITDA (in thousands)**

• 2019A	• (\$2.0)
• 2020A	• (\$2.4)
• 2021E	• (\$10.7)
• 2022E	• (\$10.7)

**Risks/Valuation**

- Risks include: Highly competitive business; changes in customer demand, commercialization of technology
- Our \$7 target is derived using a discounted future earnings model.

**Company description:** KULR Technology Group, Inc. (KULR-NYSE) is a leading developer of next-generation lithium-ion battery safety and thermal management technologies. Backed by a strong intellectual property portfolio, KULR enables leading aerospace, electronics, and electric vehicle manufacturers to make their products cooler, lighter and safer for the consumer.

*Figure 1 – KULR Technology Group, Inc. – One-Year Trading snapshot*



Source: FactSet

## Valuation Methodology

We believe KULR is undervalued and we support that belief with two valuation techniques, one absolute and one relative. The following valuation techniques are being used:

- 1) The discounted value of all future earnings was used for our price target (see Figure 2)
- 2) Valuation relative to peers (see Figure 3)

## Discounted Future Earnings – Basis for Price Target

Our 12-month price target of \$7 is based on a discounted earnings model. For valuation purposes, we sum up all future earnings discounted at 8%. We are making two main assumptions:

- Near-term rapid growth for earnings which steps down to GDP after 7 years
- Company reaches breakeven in 2023

Our valuation model is shown in Figure 2 below. Note, this model understates future new products and growth through acquisitions and probably understates the tax benefits, but offsetting that, the earnings never have a down year. The implied share price is \$6.83 which we round up to \$7.

*Figure 2 - KULR Technology Group, Inc - Discounted Future Earnings*

<b>Discounted Earnings</b>		<b>\$ 6.83</b>
Year 1 is	Forecast	Discounted
2022	EPS	EPS
1	(0.10)	(\$0.10)
2	0.10	\$0.09
3	0.20	\$0.16
4	0.30	\$0.22
5	0.45	\$0.31
Terminal Value		\$6.16

Source: Litchfield Hills Research LLC

## Valuation Relative to Peers

In Figure 3 we look at a summary of metrics for KULR peers. If we compare KULR to a simple average of its peers, the shares sell, on average, above for a premium, but this likely reflects the low level of sales expectations. One thing common to the companies on the list is that they have high gross profit margins and companies with high gross profit margins tend to trade for higher sales multiples. A very high multiple for KULR isn't extraordinary. Details on each of the peers can be found in Figure 4.

*Figure 3 – KULR Technology Group, Inc. – Valuation Relative to Peers*

	2022 EV / Sales	2022 Sales Multiple
Average	13.64	20.25
KULR	41.29	42.47
<b>Premium/(Discount) to peers</b>	<b>203%</b>	<b>110%</b>

Source: Litchfield Hills Research LLC and Refinitiv Eikon (Formerly Thomson Reuters Eikon)

## Guidance and Financial Forecasts

The company is not providing guidance. We assume there is a small capital raise in 2022 to fund growth. Our financial forecast assumes a slow growth in revenue. The company has been pulling together solid business relationships with companies that will use KULR products. Those companies, however need to execute on their production plans.

*Figure 4 – KULR Technology Group, Inc. – Comp Table*

FactSet Ticker	Company Name	Closing Price	Market Cap \$MM	EV \$MM	2022 Consensus Multiples	
					EV /Sales	Market Cap / Sales
TSLA-US	Tesla Inc	\$1,026.96	1,031,340	1,148,421	15.43	13.84
RIVN-US	Rivian Automotive, Inc. Class A	\$86.28	77,004	83,603		
QS-US	QuantumScape Corporation	\$21.01	6,846	7,364		
NVX-AU	NOVONIX Ltd	\$6.70	3,241	2,366	34.60	47.16
ENVX-US	Enovix Corporation (US Listing)	\$19.78	2,873	2,542		
FSR-US	Fisker Inc	\$16.24	2,669	4,088	16.53	21.58
PTRA-US	Proterra Inc.	\$9.09	1,984	1,531	4.90	5.00
MVST-US	Microvast Holdings, Inc.	\$5.21	1,566	797	6.00	6.63
LICY-US	Li-Cycle Holdings Corp.	\$9.02	1,472	338	1.26	5.50
BLNK-US	Blink Charging Co	\$23.70	1,000	815	23.78	31.35
ABML-US	American Battery Technology Company	\$1.03	651	567		
RIDE-US	Lordstown Motors Corp	\$3.29	632	358	2.67	6.28
RMO-US	Romeo Power Inc	\$3.23	433	257	2.34	4.88
FUV-US	Arcimoto, Inc.	\$7.50	282	253	8.62	10.36
SOLO-US	Electrameccanica Vehicles Corp	\$2.20	253	23	8.53	16.14
IPWR-US	Ideal Power Inc.	\$10.28	61	39	38.97	74.24
	<b>AVERAGE</b>				<b>13.64</b>	<b>20.25</b>
KULR-US	KULR Technology Group Inc	\$2.72	361	351	41.29	42.47
	<b>KULR-US Premium/(Discount) to peers:</b>				<b>203%</b>	<b>110%</b>

Figure 5 – KULR Technology Group, Inc. – Income Statement (\$000)

December year-end	2018 Year	2019 Year	2020A Year	2021E				2021E Year	2022E				2022E Year
				Q1A	Q2A	Q3A	Q4E		Q1E	Q2E	Q3E	Q4E	
<b>Total revenue</b>	\$1,274	\$830	\$624	\$418	\$628	\$601	\$750	\$2,397	\$1,500	\$2,000	\$2,000	\$3,000	\$8,500
<i>Growth</i>		-35%	-25%	439%	212%	339%	260%	284%	259%	218%	233%	300%	255%
Cost of Goods	337	227	169	275	439	155	300	1,170	750	1,000	1,000	1,530	4,280
<b>Gross Profit</b>	<b>937</b>	<b>604</b>	<b>455</b>	<b>143</b>	<b>189</b>	<b>446</b>	<b>450</b>	<b>1,227</b>	<b>750</b>	<b>1,000</b>	<b>1,000</b>	<b>1,470</b>	<b>4,220</b>
<b>Gross Margin</b>	<b>73.6%</b>	<b>72.7%</b>	<b>72.9%</b>	<b>34.1%</b>	<b>30.1%</b>	<b>74.2%</b>	<b>60.0%</b>	<b>51.2%</b>	<b>50.0%</b>	<b>50.0%</b>	<b>50.0%</b>	<b>49.0%</b>	<b>49.6%</b>
Operating Expenses													
R&D	\$508	\$502	\$290	\$123	\$353	\$482	\$500	\$1,458	\$500	\$500	\$500	\$500	\$2,000
% of total revenue	40%	60%	46%	29%	56%	80%	67%	61%	33%	25%	25%	17%	24%
General and administrative	\$2,511	\$2,081	\$2,506	\$1,493	\$2,723	\$3,104	\$3,100	\$10,421	\$3,100	\$3,200	\$3,300	\$3,400	\$13,000
% of total revenue	197%	251%	402%	357%	433%	517%	413%	435%	207%	160%	165%	113%	153%
Total Operating Expenses	3,019	2,583	2,795	1,616	3,076	3,586	3,600	11,878	3,600	3,700	3,800	3,900	15,000
<b>Operating Income</b>	<b>(2,082)</b>	<b>(1,979)</b>	<b>(2,340)</b>	<b>(1,473)</b>	<b>(2,887)</b>	<b>(3,140)</b>	<b>(3,150)</b>	<b>(10,651)</b>	<b>(2,850)</b>	<b>(2,700)</b>	<b>(2,800)</b>	<b>(2,430)</b>	<b>(10,780)</b>
<b>Operating Margin</b>		<b>-238.4%</b>	<b>-375.1%</b>	<b>-352.5%</b>	<b>-459.5%</b>	<b>-522.6%</b>	<b>-420.0%</b>	<b>-444.3%</b>	<b>-190.0%</b>	<b>-135.0%</b>	<b>-140.0%</b>	<b>-81.0%</b>	<b>-126.8%</b>
Total Other Items	23	(0)	(510)	(242)	(140)	45	0	(337)	0	0	0	0	0
<b>Pre-Tax Income</b>	<b>(2,058)</b>	<b>(1,980)</b>	<b>(2,850)</b>	<b>(1,715)</b>	<b>(3,027)</b>	<b>(3,096)</b>	<b>(3,150)</b>	<b>(10,988)</b>	<b>(2,850)</b>	<b>(2,700)</b>	<b>(2,800)</b>	<b>(2,430)</b>	<b>(10,780)</b>
<b>Pre-Tax Margin</b>			<b>-456.8%</b>	<b>-410.3%</b>	<b>-481.8%</b>	<b>-515.2%</b>	<b>-420.0%</b>	<b>-458.4%</b>	<b>-190.0%</b>	<b>-135.0%</b>	<b>-140.0%</b>	<b>-81.0%</b>	<b>-126.8%</b>
Taxes (benefit)	0	0	0	0	0	0	0	0	0	0	0	0	0
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Net income</b>	<b>(2,058)</b>	<b>(1,980)</b>	<b>(2,850)</b>	<b>(1,715)</b>	<b>(3,027)</b>	<b>(3,096)</b>	<b>(3,150)</b>	<b>(10,988)</b>	<b>(2,850)</b>	<b>(2,700)</b>	<b>(2,800)</b>	<b>(2,430)</b>	<b>(10,780)</b>
Deemed dividend for Series C			(\$2)	\$0	(\$2,624)	\$0	\$0	(\$2,624)	\$0	\$0	\$0	\$0	\$0
<b>Net income attributable to shareholders</b>			<b>(\$2,852)</b>	<b>\$0</b>	<b>(\$5,651)</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$13,612)</b>	<b>\$0</b>	<b>(\$2,700)</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$10,780)</b>
<b>EPS</b>	<b>(0.03)</b>	<b>(0.02)</b>	<b>(0.03)</b>	<b>(0.02)</b>	<b>(0.03)</b>	<b>(0.03)</b>	<b>(0.03)</b>	<b>(0.11)</b>	<b>(0.03)</b>	<b>(0.03)</b>	<b>(0.03)</b>	<b>(0.02)</b>	<b>(0.10)</b>
<b>EPS plus deemed dividend</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>(0.06)</b>	<b>0.00</b>	<b>0.00</b>	<b>(0.14)</b>	<b>0.00</b>	<b>(0.03)</b>	<b>0.00</b>	<b>0.00</b>	<b>(0.10)</b>
Diluted Shares Outstanding	77,642	80,123	82,032	90,079	92,513	99,019	104,700	96,578	105,000	105,000	105,000	105,000	105,000

Figure 6 – KULR Technology Group, Inc. – Balance Sheet (\$000)

December year-end	FY2022E	FY2021E	FY2020E	FY2019	FY2018
<b>Balance sheet</b>					
<b>Current Assets</b>					
Cash and S.T.I.	\$1,195	\$9,513	\$8,880	\$109	\$230
Accounts receivable	1,000	800	55	30	112
Inventories	400	200	55	27	10
Other assets	500	500	150	43	55
<b>Total Current Assets</b>	<b>3,095</b>	<b>11,013</b>	<b>9,142</b>	<b>209</b>	<b>406</b>
Net PP&E	200	100	58	28	45
Goodwill & Intangible	0	0	0	0	0
Other non-current assets	800	813	9	0	0
<b>Total Assets</b>	<b>\$4,095</b>	<b>\$11,926</b>	<b>\$9,208</b>	<b>\$237</b>	<b>\$451</b>
<b>Current Liabilities</b>					
Accounts payable	\$1,000	\$500	\$69	\$349	\$118
Accrued exp. & other	\$1,000	\$700	\$395	\$659	\$374
Deferred revenue	\$0	\$0	\$20	\$15	\$0
Other current liabilities	\$500	\$400	\$2,463	\$0	\$0
<b>Total current liabilities</b>	<b>2,500</b>	<b>1,600</b>	<b>2,947</b>	<b>1,034</b>	<b>576</b>
Notes payable	0	0	142	0	0
Other Liabilities	600	550	0	0	0
<b>Total Liabilities</b>	<b>3,100</b>	<b>2,150</b>	<b>3,090</b>	<b>1,034</b>	<b>576</b>
<b>Stockholders' Equity</b>					
Preferred stock	0	0	0	0	0
Common stock	9	10	9	8	8
Additional paid-in-capital	34,000	32,000	17,356	7,591	6,284
Retained earnings	(33,014)	(22,234)	(11,246)	(8,396)	(6,417)
Cum. Other comp and treasury stock	0	0	0	0	0
Total stockholders' equity	995	9,776	6,119	(797)	(125)
<b>Total Liabilities and equity</b>	<b>\$4,095</b>	<b>\$11,926</b>	<b>\$9,208</b>	<b>\$237</b>	<b>\$451</b>

Source: Company reports and Litchfield Hills Research LLC

Figure 7 – KULR Technology Group, Inc. – Cash Flow (\$000)

	FY22E	FY21E	FY20A	FY19
Net Income	(\$10,780)	(\$10,988)	(\$2,850)	(\$1,980)
Accounts receivable	(200)	(745)	(25)	82
Inventories	(200)	(145)	(28)	(17)
Other assets	0	(350)	(107)	11
PP&E	(100)	(42)	(30)	17
Goodwill & Intangible	0	0	0	0
Other non-current	13	(804)	(9)	0
Accounts payable	500	431	(280)	231
Accrued exp & other - related party	0	0	(10)	(74)
Accrued exp. & other	300	305	(264)	285
Deferred revenue	0	(20)	5	15
Other current liabilities	100	(2,063)	2,463	0
Notes payable	0	(142)	142	0
Other Liabilities	50	550	0	0
Common stock	(1)	1	1	0
Additional paid-in-capital	2,000	14,644	9,765	1,308
Cum. trans. adj. and treasury stock	0	0	0	0
Dividends	0	0	0	0
Total Cash Flow	(8,318)	633	8,771	(121)

Source: Company reports and Litchfield Hills Research LLC

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