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Initiation Report

Braille Energy Systems – A Micro-Cap that Punches Above its Weight

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Rating	Target Price
BUY	**$0.15**
Initiating	*Initiating*

May 15, 2023

All figures in CAD unless otherwise stated

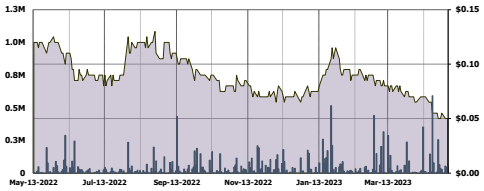
Braille Energy Systems Inc.	**BES:TSXV**
Rating	BUY
Target Price	$0.15
Return to Target	275%

Market Data	
Share Price	$0.040
Average Daily Volume (K)	53.1
FD ITM Shares (M)	91.7
Market Cap ($M)	$3.7
Cash ($M)	$2.5
Debt ($M)	$0.7
Enterprise Value ($M)	$1.8

Financial Estimates (FY)	**2022A**	**2023E**	**2024E**
Sales ($M)	$4.1	$4.6	$14.3
Gross Profit ($M)	$1.4	$1.5	$5.3
Gross Margin (%)	33%	33%	37%
Adj. EBITDA ($M)	-$1.5	-$2.6	-$3.3
Adj. EBITDA Margin (%)	-36%	-56%	-23%

Valuation	**2022A**	**2023E**	**2024E**
EV/Sales	0.4x	0.4x	0.1x
Auto Parts - EV/Sales	0.7x	0.5x	0.5x
Energy Storage - EV/Sales	6.0x	4.0x	3.1x

Please refer to the applicable disclosures on the back page
Source: Atrium Research, CapitalIQ, Company Documents



Braille Energy Systems Inc. holds an 89.95% equity interest in Braille Holdings Inc., which holds a 100% equity interest in Braille Battery Inc. Braille Battery is an established battery-manufacturing company supplying batteries to the professional motorsports industry. Braille Energy Systems (BESI) plans expand its market penetration into a wider range of market segments that require lightweight, high-performing energy solutions, using the most scientifically advanced materials.

What you need to know:

- Braille Battery is a market leader in performance batteries for motorsports and racing vehicles. Braille Battery has posted a 56% sales CAGR over the last four years and is soon to be profitable
- BES will be launching a residential battery backup power system in the coming quarters with potential to gain major market share
- BES trades at 0.1x 2024E sales compared to auto parts manufacturers at 0.5x and residential energy storage companies at 3.1x

Braille Energy Systems (BES:TSXV) has two major divisions, Braille Battery (89.95% owned) and the newly launched Braille Energy Systems, branded as Electrafy (100% owned). Braille Battery is a lithium-ion and AGM battery supplier to professional motorsport clients looking to improve performance. Braille Energy Systems is developing the next generation of energy backup power systems, with the potential to gain solid market share. **We are initiating coverage on Braille Energy Systems with a BUY rating and target price of $0.15/share.**

Investment Thesis Summary

***Braille Battery has Consistent Growth*.** Braille Battery has shown consistent growth over the last four years, growing revenue from $691K in FY18 to $4.1M in FY22 (56% CAGR). This was driven by increasing production at its manufacturing facility and developing brand equity within motorsports. We expect this growth to continue as BES begins its international expansion, which we think will allow the Company to reach enough operating leverage to become profitable in FY23.

Electrafy has Massive Potential. BES is planning to launch a residential backup power system FYQ2/24, followed by its whole home energy storage system. Braille's systems will be the most cost-efficient in the market and are expected to be sold wholesale to electrical wholesalers, home builders, and major retailers. We think the residential backup power market has various large tailwinds due to the aging grid system and renewable energy transition. We are conservatively estimating that Electrafy will post $8.5M in sales in FY24.

***Firebulb Technology is a Key Differentiator*.** BES recently purchased the exclusive rights for Firebulb Technology, which is the industry's first passive fire detection system. With lithium fires and safety being a major concern of the EV and renewables transition, this technology will become increasingly valuable and lead to product differentiation for Electrafy systems.

***Management Track Record*.** BES is led by CEO Lindsay Weatherdon, who brings over 30 years of sales and marketing experience, and Chairman Jeffrey York, who was previously Co-CEO of Farm Boy (sold to Empire Company for $800M) and CEO of Giant Tiger ($1B valuation). We think that their combined experience in sales and marketing will help lead Electrafy's distribution strategy and continue the consistent growth of Braille Battery.

Discounted Valuation. Braille currently trades at 0.1x 2024E sales compared to its auto parts manufacturing peers which trade at 0.5x 2024E sales and residential energy storage peers which trade at 3.1x 2024E sales. We use a SOTP valuation assuming 0.5x 2024E Braille Battery sales and 1.0x 2024E Braille Energy sales, leading to our $0.15/share target price.

Catalysts

- Electrafy Backup System Product Launch – FYQ2/24
- Braille Battery International Expansion – Ongoing
- Braille Battery Accelerated Revenue Growth – H2/23

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Investment Thesis

We are initiating coverage on Braille Energy Systems with a BUY rating and a target price of $0.15/share. Braille has two main divisions, Braille Battery (89.95% owned) and newly launched Braille Energy, branded as Electrafy (100% owned). Braille Battery is a lithium-ion and AGM battery supplier to the amateur and professional powersports/motorsports segments including OEM partners. Braille Energy Systems (branded as Electrafy) is developing the next generation of residential home backup power systems and energy storage systems, with the potential to disrupt the North American market based on its price leadership.

Braille Battery Has Consistent Growth

Braille Battery has shown consistent growth over the last four years, growing revenue from $691K in FY18 to $4.1M in FY22 (56% CAGR). This was driven by increasing production at its manufacturing facility and developing brand power within motorsports and powersports to a point where the Braille Battery brand has become synonymous with lightweight performance lithium batteries. Braille recently increased its footprint at its Florida facility from 5,000 square feet to 10,000 square feet, which should support a 5-10x in production volume. This will support Braille Battery expanding internationally, with its current priority being the U.K., Europe, and Australia. We are expecting that this will increase revenue to nearly $7M in annual sales in FY25, aided by tailwinds for lithium-ion batteries.

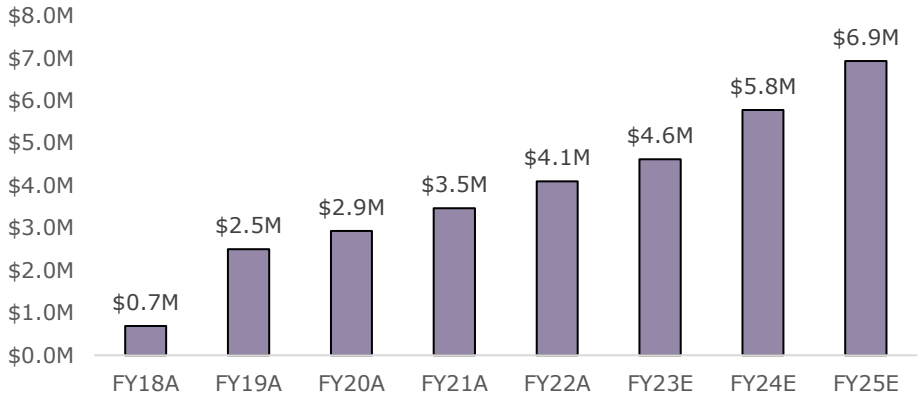

Figure 1: Braille Battery Projected Revenue Growth (Fiscal Years)

Braille has spent the last five years developing its brand as the best-in-class performance battery provider and now it is time to push profitability. While Braille Battery has just recently reached enough scale to become EBITDA breakeven, we are expecting margins to continue scaling upward as operating leverage takes hold. Gross margins declined in Q4/22 and Q1/23 due to higher transportation costs, Braille re-engineering their facility, and hiring additional personnel to support growth. However, management believes gross margins in the high 30s is sustainable in the long-term. We are anticipating that by 2025, BES' gross margins scale back to 37%, while EBITDA margins will increase to 10%.

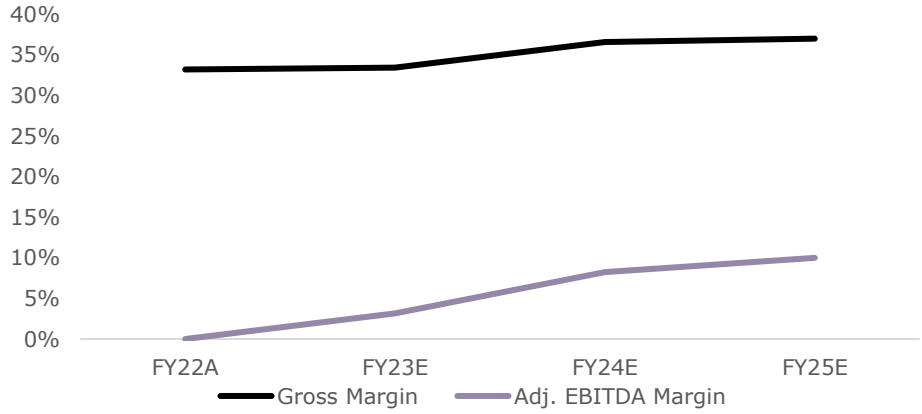

Figure 2: Forecasted Margins

Electrafy Has Massive Potential

Braille Energy Systems (branded as Electrafy) is developing residential backup power systems that aim to serve the critical need for on-demand energy given North America's aging electricity grid, terrorism attacks on grids, and weather-related issues. Its systems are expected to be the most cost-effective solution in the market (priced under US$10,000), easy to install (<4 hours and no fuel source or noise permits), easy to maintain (no regular maintenance), has a quiet design, and comes with a 12-year warranty.

BES is planning to initially launch its energy storage backup system in FYQ2/24, followed by its whole home system. The Electrafy system is certified under UL and utilizes Braille's UL-approved battery module. UL is well regarded as the gold standard for safety using its stringent design and testing criteria. The Company plans to sell the Electrafy systems wholesale to electrical wholesalers, home builders, and major home service companies. We note that Electrafy's systems are not solar compatible (vs. most of its competitors that are only solar compatible) since it is solely focused on serving the mass market of homeowners. This provides a much larger and underserved TAM for BES to penetrate.

Following the product launch in FYQ2/24, we are forecasting that Electrafy will generate $8.5M in sales in FY24 and $11.9M in FY25. We are anticipating the Electrafy products will have a 40% gross margin and 18% EBITDA margin in the long-term.

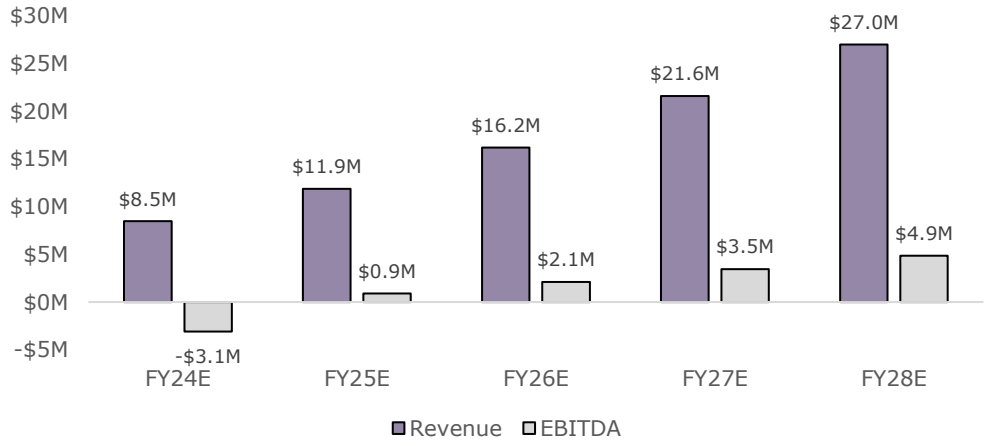

Figure 3: Electrafy Revenue & EBITDA Projections

Firebulb Technology is Key Differentiator

In December 2022, BES purchased the exclusive rights for the Firebulb Technology from UK-based GH Innovation Ltd. Firebulb is the industry's first passive thermal runaway detection using a mechanical technology. The technology engages its patented passive temperature monitor if a battery pack reaches a critical temperature, preempting thermal runaway by shutting down the battery current. With lithium fires and safety being a major concern of the EV and renewables transition, this technology will become increasingly valuable and lead to product differentiation for Electrafy's whole home systems. There also exists an opportunity to license and sell the Firebulb technology (not included in our estimates).

Energy Storage is Needed Due to Aging Grid System

As mentioned throughout our thematic piece on energy storage published March 9th (check it out here), energy storage is critical for the transition to renewables. Large sustained electrical outages are occurring with increased frequency around the world. In 2000, less than 12 major grid disruptions occurred in the U.S., compared to over 180 in 2020, while the hours of power interruptions doubled from 2013 to 2020 (source: WSJ). This is mainly due to the old age of the U.S. grid system, with the transmission system (long-distance) constructed 80 years ago and the distribution system (short distances) constructed multiple decades ago. Climate change and extreme weather have exacerbated this trend. Furthermore, with the adoption of renewable energy over the coming decades, the current grid will not be compatible with the constantly fluctuating supply, and thus require energy storage solutions and more flexible grid upgrades.

Management & Ownership

Braille Energy Systems is led by CEO Lindsay Weatherdon, who brings over 30 years of experience in various leadership roles across sales and marketing, and Chairman Jeffrey York, who was previously Co-CEO of Farm Boy (sold to Empire Company for $800M) and CEO of Giant Tiger ($1B valuation). We think that their combined experience in marketing and sales will help lead Electrafy's distribution strategy and continue the consistent growth of Braille Battery. Mr. Weatherdon has a 2% ownership in the Company while Mr. York has a 3% ownership, which is low insider ownership by micro-cap standards.

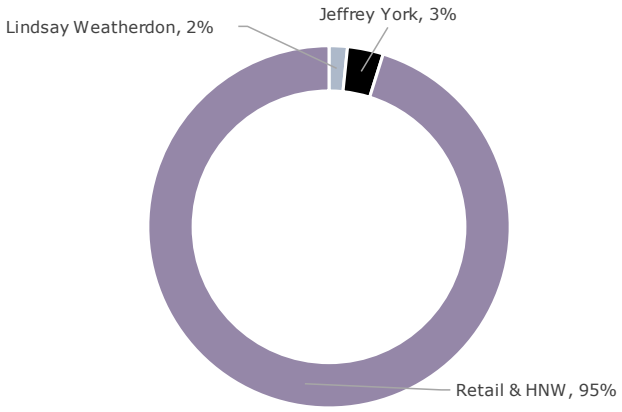

Figure 4: Ownership Structure

Valuation

Peer Group Analysis

We break down our peer group into two groups, auto parts manufacturers and residential energy storage, corresponding to Braille Battery and Braille Energy Systems respectively. The auto parts manufacturing group currently trades at 0.5x 2024E sales and 4.5x 2024E EBITDA. The residential energy storage group currently trades at 3.1x 2024E sales and 17.5x 2024E EBITDA. In comparison, BES trades at 0.1x 2024E sales and 2.0x 2025E EBITDA (we don't anticipate BES to be EBITDA positive in 2024). This implies that BES trades at a large discount to its auto part manufacturing peers and a massive discount to its energy storage peers. We note that BES also has one of the leading sales CAGRs in the group, at 114% (2022-2024E) vs. 15% for the auto parts manufacturers and 50% for the residential energy storage group. Given the large discrepancy between the groups, we chose to use a sum-of-the-parts (SOTP) valuation methodology to value BES, as seen in the target derivation section below.

Company	Ticker	Mkt Cap	EV	Sales CAGR	EBITDA Margin	EV/Sales			EV/EBITDA		
				(2022-2024E)	(2022)	2022A	2023E	2024E	2022A	2023E	2024E
Auto Parts Manufacturers											
Martinrea International Inc.	MRE	$983	$2,165	5%	10%	0.5x	0.4x	0.4x	4.7x	3.5x	3.2x
Abc Technologies Holdings Inc.	ABCT	$706	$1,425	30%	3%	1.1x	0.8x	0.6x	N/A	7.1x	4.8x
Exco Technologies Limited	XTC	$312	$411	13%	11%	0.8x	0.7x	0.7x	7.6x	6.5x	5.4x
Westport Fuel Systems Inc.	WPRT	$131	$118	11%	-10%	0.3x	0.3x	0.2x	N/A	N/A	N/A
Spectra Products Inc.	SSA	$2	$2	N/A	13%	1.0x	N/A	N/A	7.1x	N/A	N/A
Average				**15%**	**5%**	**0.7x**	**0.5x**	**0.5x**	**6.5x**	**5.7x**	**4.5x**
Residential Energy Storage											
Generac Holdings Inc.	GNRC	$9,356	$29,995	-1%	17%	4.9x	5.4x	5.0x	30.8x	32.7x	26.3x
Solaredge Technologies, Inc.	SEDG	$23,037	$23,517	27%	18%	5.6x	4.3x	3.5x	52.6x	23.2x	18.0x
Sunnova Energy International Inc.	NOVA	$2,473	$10,115	35%	29%	13.5x	9.5x	7.3x	N/A	32.1x	21.8x
Canadian Solar Inc	CSIQ	$3,153	$5,772	22%	10%	0.6x	0.5x	0.4x	6.5x	4.8x	3.7x
Beam Global	BEEM	$137	$137	91%	-39%	4.6x	2.2x	1.3x	N/A	N/A	N/A
Eguana Technologies Inc.	EGT	$70	$91	125%	-21%	6.8x	2.3x	1.3x	N/A	N/A	N/A
Average				**50%**	**2%**	**6.0x**	**4.0x**	**3.1x**	**29.9x**	**23.2x**	**17.5x**
Braille Energy Systems Inc.	**BES**	**$4**	**$2**	**114%**	**-36%**	**0.4x**	**0.4x**	**0.1x**	**N/A**	**N/A**	**N/A**

Figure 5: Peer Group Analysis (Source: Capital IQ)

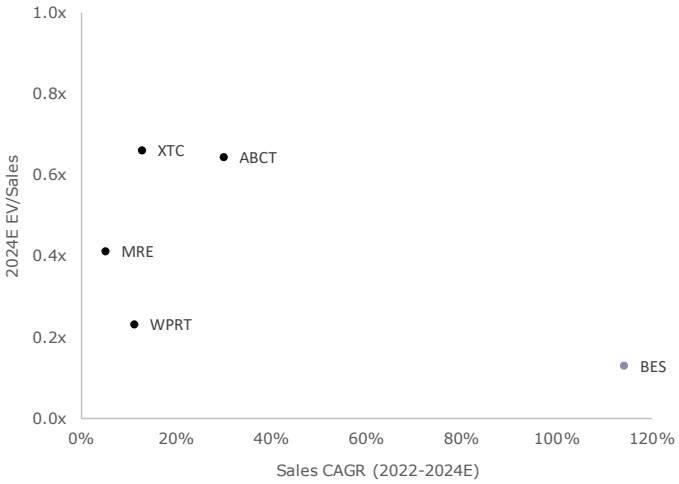

Figure 6: Auto Parts Manufacturers Peers

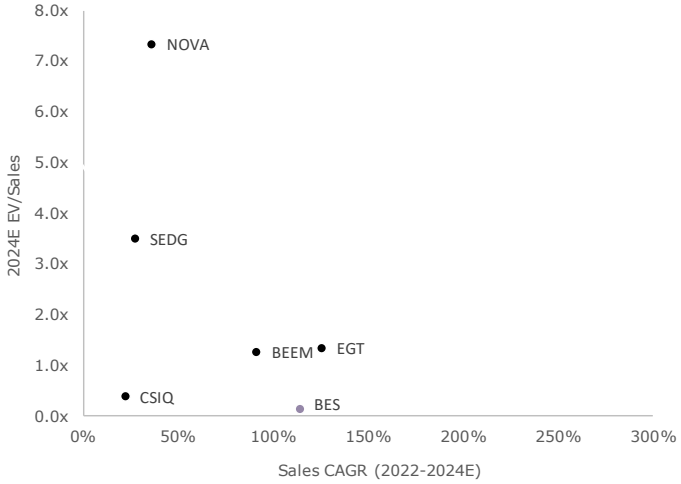

Figure 7: Residential Energy Storage Peers

Target Price Derivation

We utilize a sum-of-the-parts valuation for BES due to the discrepancy between multiples on auto parts manufacturers and energy storage manufacturers. As for Braille Battery, we use our FY24 sales estimate of $5.8M and a sales multiple of 0.5x to derive our $2.6M valuation ($0.03/share before NCI). We landed on 0.5x as our target multiple since this is the group average for auto part manufacturers. We were inclined to use a premium multiple due to Braille Battery's superior growth (56% sales CAGR over the last four years), but due to BES' unprofitable history and highly illiquid stock, we chose to stick with the group average. If Braille Battery can prove out profitability over the next year while continuing to outpace the group on topline growth, we can foresee increasing the multiple.

As for Braille Energy, we use our FY24 sales estimate of $8.5M and a target sales multiple of 1.0x to derive our $8.5M valuation ($0.09/share). 1.0x was selected as our target multiple since we think that Eguana Technologies (EGT:TSXV) is the most relevant comparable in the group given its size and liquidity; EGT trades at 1.3x 2024E sales, but still has a size and liquidity premium. We then adjust for cash, debt, and the non-controlling interest in Braille Battery, to arrive at our $0.15/share target price. We plan to shift both valuation methodologies to an EBITDA multiple, once BES can prove out profitability (Braille Battery in FY23 and Braille Energy Systems in FY25).

Braille previously owned a lithium exploration project in Quebec, Canada which was sold to Stria Lithium in August 2022. As such, Braille still holds 165K shares of Stria Lithium (SRA:TSXV), currently worth ~$38K, as well as a 1% NSR on the property. We do not include this in our valuation as it is largely non-core.

SOTP Valuation	
Braille Battery	
FY24E Sales ($M)	$5.8
EV/Sales Multiple	0.5x
Enterprise Value ($M)	$2.6
Braille Energy Systems	
FY24E Sales ($M)	$8.5
EV/Sales Multiple	1.0x
Enterprise Value ($M)	$8.5
(+) Cash ($M)	$2.5
(-) Debt ($M)	$0.7
(-) Non-Controlling Interest	$0.3
Equity Value ($M)	$12.6
Target Price (Rounded)	**$0.15**
Upside	*275%*

Figure 8: Target Price Derivation

		Braille Battery Multiple				
		0.1x	0.3x	0.5x	0.7x	0.9x
Braille Energy Multiple	0.6x	$0.10	$0.10	$0.10	$0.10	$0.10
	0.8x	$0.10	$0.10	$0.10	$0.15	$0.15
	1.0x	$0.10	$0.15	**$0.15**	$0.15	$0.15
	1.2x	$0.15	$0.15	$0.15	$0.15	$0.20
	1.4x	$0.15	$0.15	$0.15	$0.20	$0.20

Figure 9: Sensitivity Analysis
(See appendix for additional sensitivity analyses)

Discounted Cash Flow

Our DCF model builds on the assumptions in our financial assumptions in the Tear Sheet below, while forecasting out to FY28. We are assuming that revenue grows at a 25% CAGR in the four years beyond FY24 while EBITDA margins scale to 10% for Braille Battery and 18% for Braille Energy. We assume capex increases accordingly, to $2.0M in FY28. We also assume BES pays the $2.5M for Firebulb in FY26. Our DCF uses a 17% WACC and 7x exit EBITDA multiple to reaffirm our $0.15/share target price.

	FY23E	FY24E	FY25E	FY26E	FY27E	FY28E
Revenue ($M)	4.6	14.3	18.8	23.8	29.6	35.2
EBITDA ($M)	(2.6)	(3.3)	0.9	2.2	3.6	5.0
FCFF ($M)	(3.8)	(9.3)	0.2	2.4	3.0	2.8
PV of FCFF	(3.3)	(6.8)	0.1	1.3	1.4	1.1

WACC	
Cost of Equity	18%
Cost of Debt	10%
% Equity	85%
% Debt	15%
WACC	17%

DCF	
Sum of PV FCFFs	($6.2)
2028E EBITDA	$5.0
Exit Multiple	7.0x
Terminal Value	$35.0
PV of Terminal Value	$16.1
Enterprise Value	$10.0
(+) Cash	$2.5
(-) Debt	$0.7
(-) Non-Controlling Interest	$0.2
Equity Value	$11.6
Target Price (Rounded)	**$0.15**
Upside	*275%*

Figure 10: DCF Summary

Tear Sheet

Market Data	
Ticker	BES:TSXV
Stock Price	$0.04
Rating	BUY
Target Price	$0.15
Upside	275%
Market Cap ($M)	$3.7
Cash ($M)	$2.5
Debt ($M)	$0.7
EV ($M)	$1.8

Capital Structure	
Basic Shares Outstanding (M)	91.7
Warrants (M)	14.2
Options (M)	12.7
FD Shares (M)	118.5
FD ITM Shares (M)	91.7

Ownership	
Management & Board	5%
Retail & HNW	95%

Financial Estimates	FY22A	Q1/23A	Q2/23E	Q3/23E	Q4/23E	FY23E	Q1/24E	Q2/24E	Q3/24E	Q4/24E	FY24E	FY25E
Net Revenue ($M)	**4.1**	**0.9**	**1.1**	**1.4**	**1.3**	**4.6**	**1.1**	**1.8**	**4.3**	**7.0**	**14.3**	**18.8**
% YoY	*18%*	*-1%*	*0%*	*20%*	*30%*	*13%*	*25%*	*70%*	*214%*	*443%*	*209%*	*1616%*
COGS ($M)	2.7	0.6	0.7	0.9	0.8	3.1	0.7	1.2	2.7	4.4	9.0	11.8
Gross Profit ($M)	**1.4**	**0.3**	**0.3**	**0.5**	**0.5**	**1.5**	**0.4**	**0.7**	**1.6**	**2.6**	**5.3**	**7.0**
Gross Margin	*33%*	*29%*	*32%*	*35%*	*36%*	*33%*	*36%*	*36%*	*37%*	*37%*	*37%*	*37%*
Adj. EBITDA ($M)	**(1.5)**	**(0.7)**	**(0.7)**	**(0.6)**	**(0.6)**	**(2.6)**	**(0.1)**	**(0.9)**	**(1.6)**	**(0.7)**	**(3.3)**	**0.9**
Adj. EBITDA Margin	*-36%*	*-81%*	*-62%*	*-44%*	*-46%*	*-56%*	*-9%*	*-47%*	*-38%*	*-10%*	*-23%*	*5%*
Net Income ($M)	(3.3)	(0.8)	(0.8)	(0.7)	(0.7)	(3.1)	(0.2)	(1.0)	(1.8)	(0.8)	(3.8)	0.4
EPS (Basic)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.00)	(0.01)	(0.02)	(0.01)	(0.04)	0.00

Figure 11: Tear Sheet

Braille Battery: Company Overview

Business Model

BES holds an 89.95% equity interest in Braille Holdings, which holds 100% of Braille Battery Inc. Braille Battery is the world leader in manufacturing and selling high-performance ultra-lightweight lithium batteries and light-weight AGM batteries for the professional motorsports industry and car enthusiasts. The Company was founded over 20 years ago and has grown to produce the largest seller of automotive lithium starting batteries in the world by volume. The main advantage to using a lithium battery in motorsports is to reduce the weight of the vehicle, a key factor for building a motorsports vehicle; a lithium battery typically weighs 4x less than a traditional lead-acid battery (25lbs vs. 100lbs). Furthermore, Braille's batteries are able to offer the same voltage as a lead-acid battery, but with longer cycle life and higher cranking amps pound-for-pound. On average, a Braille lithium battery will last 10 years compared to the typical 3 years of a lead-acid battery. Braille also offers batteries for motorcycles, trucks, ATVs, golf carts, and boats.

Braille Battery has achieved numerous awards in motorsports including:

- First lithium battery to win a Formula One Championship
- First lithium battery to win the Indianapolis 500
- First lithium battery to win Rolex 24 at Daytona
- First lithium battery to win the Daytona 500

Figure 12: Braille Battery Awards (Source: Company Documents)

Products

The Company offers batteries in every shape and size, focusing on lithium batteries but also offering lead-acid counterparts and their required accessories. Braille's products use various composite technologies such as thermal management, high amperage solutions, high vibration designs, novel battery chemistries, battery controls, and dual-use chemistries.

Braille's batteries are priced at a premium due to their various advantages such as:

- Reduced power consumption compared to lead-acid solutions
- Extended battery life (2,000+ cycles vs. 300 cycles)
- Lower self-discharge rate (5x less than lead-acid)
- Faster and more efficient charging than other lithium batteries
- Lasts 3-5x longer than lead-acid batteries with increased reliability
- Weight reduction (4x)
- Improved engine management and data logging due to improvements in voltage stability

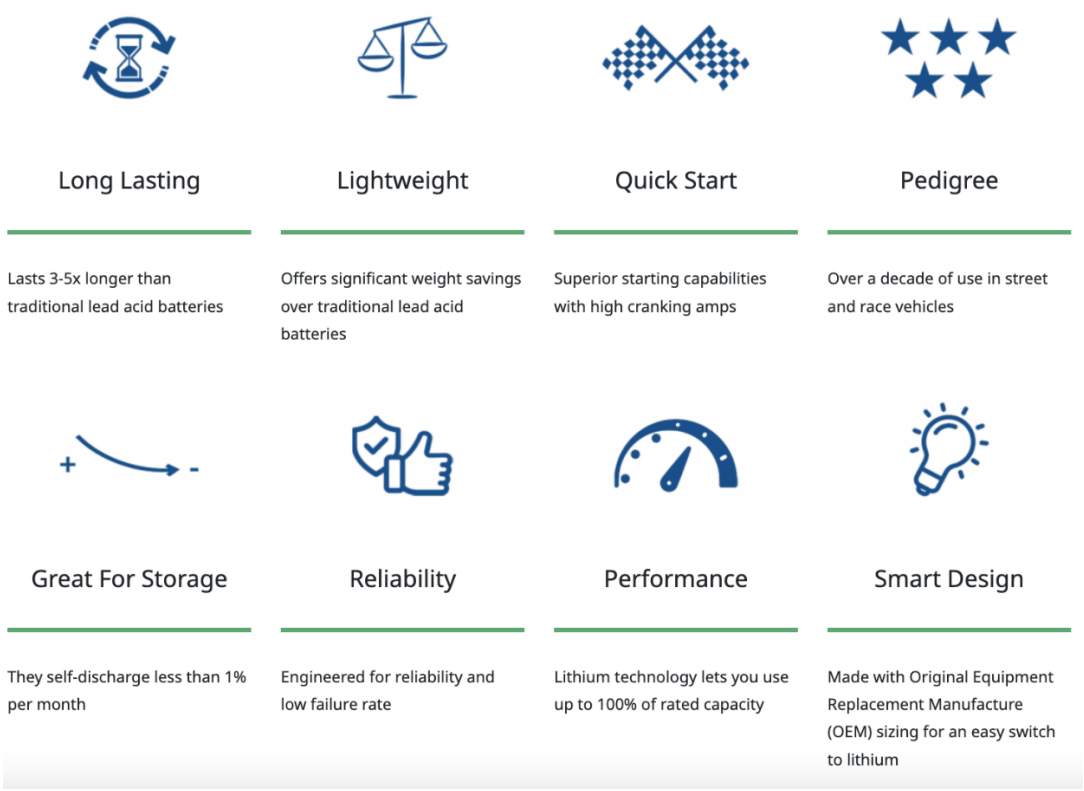

Figure 13: Braille Lithium Battery Benefits (Source: Company Documents)

Lithium-Ion Batteries

Braille's lithium-ion batteries were the first in the world to directly fit into original equipment applications. The product uses Lithium Iron Phosphate cells (also known as LFP), which provide high energy density and improved electrical performance. The product's main advantages are lower weight with a longer service life. Braille's lithium batteries also weigh less than its direct lithium competitors because it uses a current interruption device (CID) rather than a standard battery management system (BMS) which weighs much more. The CID mechanically disconnects the current flow through the cell if it experiences abnormal operating conditions. The battery can be fully charged in less than 30 minutes, weighs 70% less than its lead-acid counterparts, and has 3x the average lifecycle. The product has been trusted by factory racing teams such as Audi, Aston Martin, BMW, Corvette Racing, Ferrari, Ford, Jaguar, Lamborghini, Mazda, Nissan, Porsche, and Toyota, amongst others, and is now being offered to car enthusiasts. The battery has 5x the amperage of similar-sized lead-acid batteries and 12 volts of performance. The product comes in various other specifications than seen in the graphic below, such as Race Lithium Ion Intensity Carbon, Light & Strong Super 16V Lithium, Green Lite Power Sports Lithium Ion, and Drop In Lithium Applications Intensity. The pricing ranges from US$850 to US$2,000.

Figure 14: Micro Lite Lithium-Ion Battery Catalogue (Source: Company Documents)

Advanced AGM Batteries

Braille's Absorbent Glass Mat (AGM) battery is a lead-acid battery that is lighter and more powerful than traditional AGM batteries. The product uses a patented "sealed valve regulated" design that eliminates acid spills and corrosion and does not require any filling or maintenance. The battery has dual terminals, allowing it to be mounted in a variety of positions. The AGM battery uses stainless steel terminals that allow for higher bolt torque and helps keep the battery connected in high-vibration environments. This also included its "Long Lasting Endurance Series" which has the highest cranking power and the longest run times (Amp/Hr ratings) in their class. The pricing ranges from US$150 to US$400.

Figure 15: Advanced AGM Battery Catalogue (Source: Company Documents)

Accessories
Braille also offers various peripheral items such as charging solutions and mounting solutions, as seen in the figure below. The pricing for chargers ranges from US$150 to US$375.

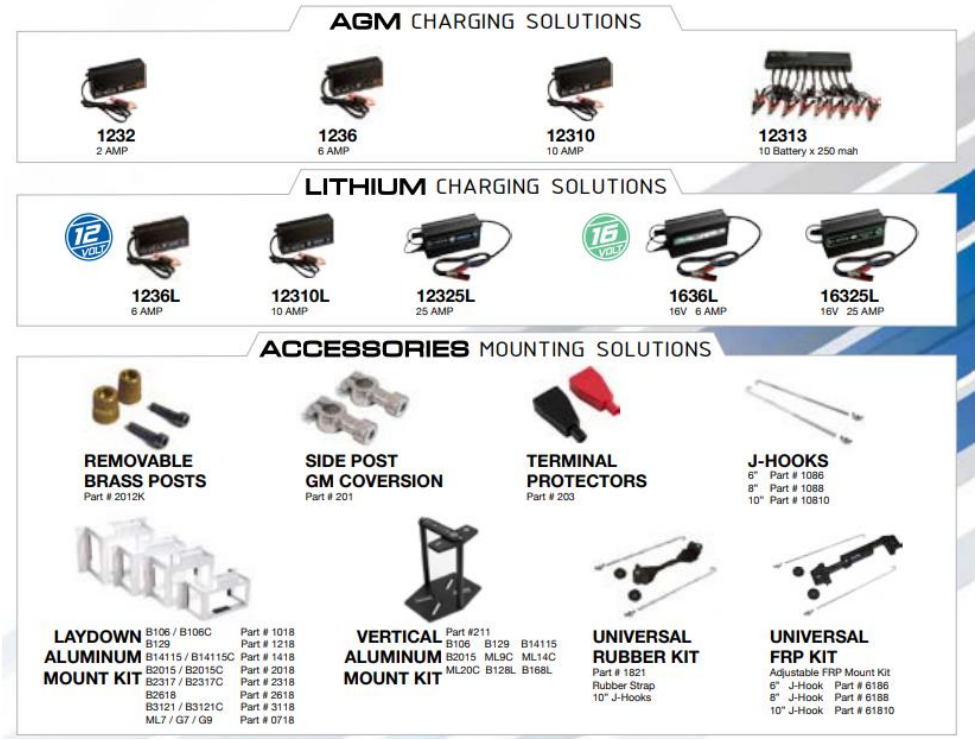

Figure 16: Accessories Catalogue (Source: Company Documents)

Supply Chain
Braille Battery manufactures its products in its Sarasota, Florida facility which houses management offices, design and engineering, research and development, manufacturing, logistics, and fulfillment. BES uses both prefabricated components delivered by third-party suppliers and in-house fabricated components to manufacture its batteries. This allows Braille to market its products as made and tested in America.

In November 2021, BES completed the expansion of its facility which aimed to meet the future demands for its new battery lines. This doubled the facility's footprint from 5,000 to 10,000 square feet. Management plans to scale production upwards in the long-term by improving automation and growing its manufacturing facility. A portion of the recent $913K financing will support this growth.

Figure 17: Braille Battery Sarasota Facility (Source: Google Maps)

Customers

The Company's core customer base spans performance street, track day, import tuner, and race vehicles. Furthermore, Braille Battery is the lithium battery of choice used exclusively in every car in Indycar & Indy Lights (official technical partner), SuperGT, and Australian V8 Supercars, along with a large majority of the prototypes and factory GT cars in the IMSA WeatherTech sports car series. The Company is also a major supplier to top teams in NASCAR, Formula One, Open Wheel, Drag Racing, Rally, SCCA, NASA, and many more. Its products are available through its website, various online distributors, and local specialty retailers. Braille currently sells to 25 dealers in North America, 4 in the U.K., 2 in Europe, 2 in the Middle East, and 1 in Japan.

Furthermore, Braille Battery is the preferred lithium upgrade for Harley Davidson and big-engine motorcycles. As such, Braille has been expanding its reach within the motorcycle commodity. Additionally, Braille has deep roots with the National Hot Rod Association (NHRA), as lithium batteries are the only batteries used in their sport.

Figure 18: Select Clients (Source: Company Documents)

Braille Battery has traditionally only operated in the U.S. and Canada but has been expanding into the U.K., Europe, Australia, Japan, and Dubai. In January 2023, Braille signed a 3-year European Distribution Agreement with Landport Batteries (major distributor with 500 partners across 35 countries), supporting its international expansion. As seen in Figure 19, only 7% of revenue comes from outside of the Americas, highlighting the opportunity to expand internationally. The Company's first growth priority is the U.K. where it has begun hiring sales representatives and onboarded various distribution partners.

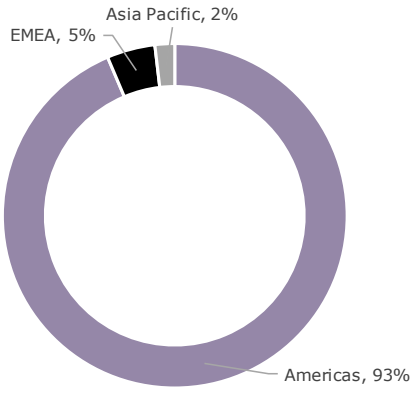

Figure 19: 2022 Revenue by Geography (Source: Company Documents)

Competition

Optima (Johnson Controls) – Optima is a high-performance automotive battery company providing deep cycle & starting batteries for high-performance cars, trucks, and marine vehicles. Optima Batteries was acquired by Clarios (formerly known as Johnson Controls Power Solutions in the early 2000s).

Odyssey Battery (EnerSys) – Odyssey Battery is a high-performance battery line of EnerSys, an industrial technology company. Odyssey Battery offers various battery types ranging from large cranking-focused batteries to deep cycle reserve power. The battery technology/chemistry is Thin Plate Pure Lead (TPPL) technology which features 99% pure lead plates that are extremely thin, so more of them can fit in the battery.

XS Power Batteries – XS Power Batteries is a high-performance battery manufacturer with a focus on 12V and 16V batteries for car racing and audio competitions. XS Power Batteries use only virgin lead, which has greater purity than batteries made of recycled lead. The batteries are known to be able to withstand high levels of vibration that are routine in racing.

Super B – Super B Lithium Batteries is a Company focused on supplying small, lightweight, and high-energy lithium batteries for vehicles (RV & high-performance vehicles), marine, and manufacturing/industrial industries. The battery composition is Lithium Iron Phosphate.

Lithium Pros – Lithium Pros is a group of battery enthusiasts who are focused on bringing the highest performance, ultra-lightweight lithium-ion batteries to the racing, marine, and specialty markets. The battery composition is Lithium Iron Phosphate. The Company prides itself on its compact, abuse-tolerant, powerful, and safe batteries.

Financials

Braille Battery has consistently grown revenue over the last four years, scaling from $0.7M to $4.1M (56% CAGR). We are expecting Braille Battery to continue on this path over the next two years, increasing revenue to $4.6M in FY23 and $5.8M in FY24.

From our conversations with management, we learned that Braille Battery is largely breakeven at the current $4.1M in revenue and the Company is aiming for 35-40% gross margins and 10% EBITDA margins over the next two years as operations scale upward.

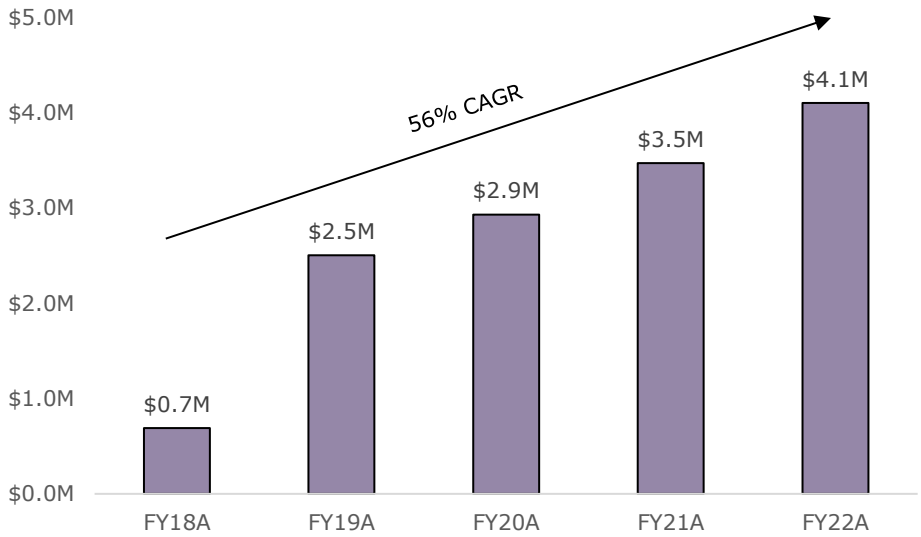

Figure 20: Historical Revenue Growth

Financial Estimates	FY22A	Q1/23A	Q2/23E	Q3/23E	Q4/23E	FY23E	Q1/24E	Q2/24E	Q3/24E	Q4/24E	FY24E	FY25E
Braille Battery												
Net Revenue ($M)	**4.1**	**0.9**	**1.1**	**1.4**	**1.3**	**4.6**	**1.1**	**1.3**	**1.7**	**1.6**	**5.8**	**6.9**
% YoY	*18%*	*-1%*	*0%*	*20%*	*30%*	*13%*	*25%*	*25%*	*25%*	*25%*	*25%*	*20%*
Gross Profit ($M)	**N/A**	**N/A**	**0.3**	**0.5**	**0.5**	**1.5**	**0.4**	**0.5**	**0.6**	**0.6**	**2.1**	**2.6**
Gross Margin	*N/A*	*N/A*	*32%*	*35%*	*36%*	*33%*	*36%*	*36%*	*37%*	*37%*	*37%*	*37%*
Adj. EBITDA ($M)	**N/A**	**N/A**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.5**	**0.7**
Adj. EBITDA Margin	*N/A*	*N/A*	*0%*	*5%*	*6%*	*3%*	*6%*	*7%*	*9%*	*10%*	*8%*	*10%*

Figure 21: Braille Battery Financial Projections

Braille Energy Systems: Company Overview

Business Model

There is a growing need for backup power across North America due to the aging grid system that was constructed over 80 years ago. This has caused a vast increase in rolling blackouts and grid instability. As such, there is a critical need for energy storage systems that provide continuous power to residential and commercial properties.

BES is developing two backup power systems, its Residential Solutions for Critical Systems (Backup) and its Residential Whole Home Systems. The backup system will protect up to 12 circuits (fully customizable), be scalable for 1-4 days of grid outages, and have a long service life with a 12-year warranty while being the most cost-effective backup power system on the market. The backup system will be priced under US$10,000 including installation with a minimum of one day of backup power. The whole home system will offer similar features but also use power supplied by the battery during peak rates and charge the system at low rates. BES sources components for its products globally and completes its final assembly at its Kingston, Ontario facility.

BES is planning to initially launch its backup system in FYQ2/24, followed by its whole home system. We note that BES is also commercially launching its ESS Lithium Battery Modules over the next year, which will be a battery module system sold into other competitors' energy storage products. We do not model a major financial contribution from this product, and focus our attention on the backup and whole home systems.

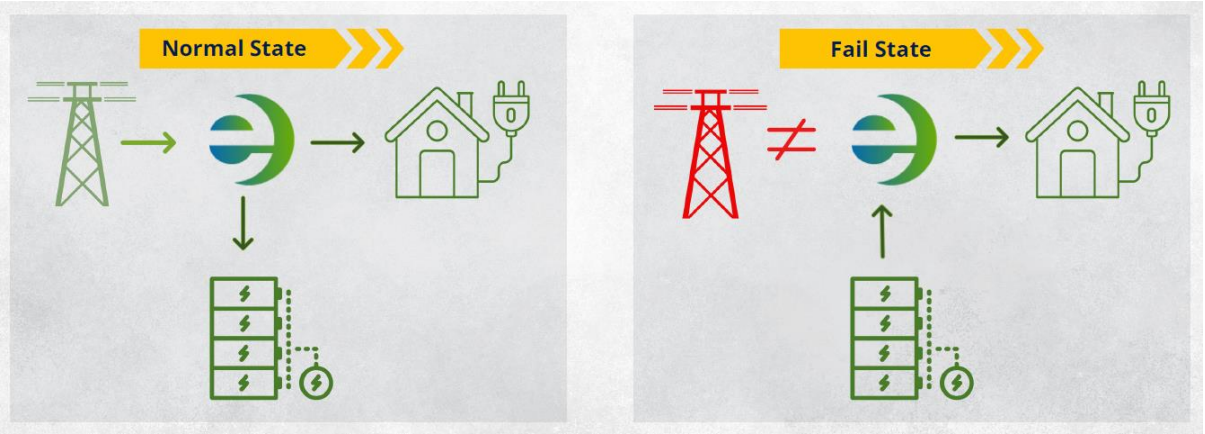

Figure 22: Electrafy Operating Diagram (Source: Company Documents)

The products are planning to have various competitive advantages over its peers including:

- Easy to install – less than 4 hours and no required fuel source or noise permits
- Easy to maintain – requires no fuel or regular maintenance
- Quiet design – sound is imperceptible to the homeowner (same as a refrigerator)
- 12-year warranty – back by a leading U.S. manufacturer of energy storage solutions
- Lowest cost per kWh in the market

Firebulb Technology

We note that lithium batteries are extremely safe but thermal runaway remains one of the industry's biggest challenges, being the leading cause of lithium fires. Thermal runaway is the overheating of the battery cell which results in a chemical reaction known as propagation. This process occurs when the temperature within the battery exceeds a certain point (when the heat generated is greater than the heat dispersed). This process continues with the heat of the battery cell increasing until it sparks a chemical reaction and, most typically, combusts. Once this occurs, the reaction creates a further temperature rise, amplifying the instability and producing thermal runaway. Once this process starts to occur, it is very difficult to stop. Most systems have a battery management system, which is an electronic device that safeguards the lithium batteries, but this can fail as well.

Figure 23: Thermal Runaway (Source: Company Documents)

BES' whole home system plans to include its patent-applied Firebulb technology, which is the industry's first passive fire detection system. Firebulb offers passive thermal runaway detection using a mechanical technology, and as such does not require an electrical current to operate. The technology engages its patented passive temperature monitor if a battery pack reaches a critical temperature, preempting thermal runaway by shutting down the battery current. The Firebulb technology is designed for stationary applications, however, BES is conducting R&D to bring this technology to mobile applications (vehicles).

BES purchased the exclusive rights for the Firebulb from UK-based GH Innovation Ltd in December 2022 including a one-year commercialization agreement followed by a purchase of the IP (and its patent file). BES will pay GH Innovation $334K to deliver the successful commercialization and marketing of the Firebulb IP and will later purchase the Commercialized IP for $2.5M based on certain milestones.

Competition

It is important to note that Electrafy's systems are not solar compatible, since it is solely focused on serving the mass market of homeowners (that don't have solar), in addition to solar being costly and not suitable for all markets. This compares to its competitors that are only compatible with solar. This provides a much larger and underserved TAM for BES to penetrate. Electrafy is priced as the most cost-effective option, making it accessible to the mass market.

Tesla Powerwall – The Tesla Powerwall is a home battery system that stores solar energy during the day so that it can be used for on-demand self-power to reduce a homeowner's reliance on the grid. The Powerwall uses a lithium-ion battery pack and is one of the most expensive forms of battery electric storage. While the system was originally only compatible with solar, in March 2023, Tesla started offering the product as a backup-only solution that charges from the grid. We look at this announcement as a major reaffirmation that there is a need for backup power solutions for homeowners without solar. Its 13.5 kWh solution's starting price is ~$14,000 before including solar.

Generac PWRcell – The Generac PWRcell is a fully-integrated solar and battery storage system. The product uses a range of 3 to 6 lithium-ion battery modules allowing for customization to fit any home of budget. The basic system provides 9 kWh of energy storage capacity, while the largest system has up to 36 kWh. The 9 kWh system costs ~US$18,000 without solar panels and ~US$29,000 with solar panels.

Simpliphi Power – Simpliphi Power is an energy storage system utilizing Lithium Ferro Phosphate technology which can be used on-grid or off-grid using solar panels. Simpliphi has a full suite of products including SimpliPHI Battery, SimpliPHI Inverter, SimpliPHI System, and its EnergyTrak App for remote configuration and monitoring. The entry-level system (9 kWh) costs ~US$15,000 without solar panels and ~US$43,000 with panels before rebates.

RESU (LG Chem) – LG Chem RESU is an energy storage system which pairs with solar panels to charge during the day and dispatch at peak hours or be used as a backup energy system in the event of an energy disruption from the grid. The battery is a lithium nickel manganese cobalt oxide (NMC) battery which is one of the most used lithium-battery technologies. The 9 kWh entry-level system cost between US$9,500-13,000 without solar panels and US$43,000 including solar panels (before rebates).

Financials

While Braille Energy Systems is currently burning ~$1-2M per year in developing its products, we are expecting revenue to begin being generated in FYQ2/24. BES should be able to maintain its price leadership with its <US$10,000 price point while posting 35-40% gross margins. Our sales forecasts can be found below ($8.5M in FY24 and $11.9M in FY25). We are assuming some discounting through Q1 and Q2, before tapering off in the back half of FY24, as such, gross margins scale from 30% to 38%, and Braille eventually becomes EBITDA positive in FY25.

Financial Estimates	FY22A	Q1/23A	Q2/23E	Q3/23E	Q4/23E	FY23E	Q1/24E	Q2/24E	Q3/24E	Q4/24E	FY24E	FY25E
Braille Energy Systems												
Net Revenue ($M)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**2.6**	**5.4**	**8.5**	**11.9**
% YoY	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*40%*
Gross Profit ($M)	**N/A**	**N/A**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**1.0**	**2.0**	**3.2**	**4.5**
Gross Margin	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*35%*	*38%*	*38%*	*37%*	*38%*
Adj. EBITDA ($M)	**N/A**	**N/A**	**(0.5)**	**(0.5)**	**(0.5)**	**(2.1)**	**0.0**	**(0.8)**	**(1.6)**	**(0.7)**	**(3.1)**	**0.9**
Adj. EBITDA Margin	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-165%*	*-63%*	*-13%*	*-36%*	*8%*

Figure 24: Electrafy Income Statement Projection

Financials

Capital Structure

YERB currently has 91.7M shares outstanding with minimal ITM dilutive securities (3.5M options), including its recent $912.5K equity financing. Its balance sheet contains lease obligations of $608K ($162K current, $446K non-current) and $40K in long-term debt.

FD ITM Shares Calculation	
Basic Shares Outstanding	91.7
Dilutive ITM Shares	3.5
Proceeds	$0.2
Repurchased Shares	2.9
Adj. Dilutive ITM Shares	0.6
FD ITM Shares	**92.3**
Full Diluted	118.5

Figure 25: Capital Structure (Treasury Stock Method)

Financial Forecast
As seen above, we forecast the income statements for each business separately, while the graphic below shows a consolidated income statement with corporate overhead included. Overall, we are expecting revenue to grow at a 66% CAGR, gross margins to grow to 37%, and for BES to reach EBITDA profitability in FY25.

Financial Estimates	FY22A	Q1/23A	Q2/23E	Q3/23E	Q4/23E	FY23E	Q1/24E	Q2/24E	Q3/24E	Q4/24E	FY24E	FY25E
Net Revenue ($M)	**4.1**	**0.9**	**1.1**	**1.4**	**1.3**	**4.6**	**1.1**	**1.8**	**4.3**	**7.0**	**14.3**	**18.8**
% YoY	*18%*	*-1%*	*0%*	*20%*	*30%*	*13%*	*25%*	*70%*	*214%*	*443%*	*209%*	*1616%*
COGS ($M)	2.7	0.6	0.7	0.9	0.8	3.1	0.7	1.2	2.7	4.4	9.0	11.8
Gross Profit ($M)	**1.4**	**0.3**	**0.3**	**0.5**	**0.5**	**1.5**	**0.4**	**0.7**	**1.6**	**2.6**	**5.3**	**7.0**
Gross Margin	*33%*	*29%*	*32%*	*35%*	*36%*	*33%*	*36%*	*36%*	*37%*	*37%*	*37%*	*37%*
Adj. EBITDA ($M)	**(1.5)**	**(0.7)**	**(0.7)**	**(0.6)**	**(0.6)**	**(2.6)**	**(0.1)**	**(0.9)**	**(1.6)**	**(0.7)**	**(3.3)**	**0.9**
Adj. EBITDA Margin	*-36%*	*-81%*	*-62%*	*-44%*	*-46%*	*-56%*	*-9%*	*-47%*	*-38%*	*-10%*	*-23%*	*5%*
Net Income ($M)	(3.3)	(0.8)	(0.8)	(0.7)	(0.7)	(3.1)	(0.2)	(1.0)	(1.8)	(0.8)	(3.8)	0.4
EPS (Basic)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.00)	(0.01)	(0.02)	(0.01)	(0.04)	0.00

Figure 26: Income Statement Forecast

Industry Overview

Automotive Batteries & Motorsports
The global automotive battery market did US$45B in sales in 2021 and is expected to grow at a 5.5% CAGR through 2028 to $66B (Source: Fortune Business Insights). This is led by the emergence of electric vehicles but still speaks to the growth in the core ICE vehicles market.

Viewership of motorsports has been on the rise over the last few years, popularized by Netflix's Drive to Survive Series. In 2022, Formula One viewership increased 39% YoY, while NASCAR viewership increased 6% YoY and IndyCar increased 5% YoY (Source: Sports Media Watch). While Braille Battery's business is not directly correlated with the popularity of motorsports (teams only need so many batteries), we think there are some trickle-down effects as more consumers become interested in retrofitting their cars. We do not think industry analysis is entirely relevant for Braille Battery as its growth is mostly idiosyncratic.

Energy Storage
Large sustained electrical outages are occurring with increased frequency around the world. In 2000, less than 12 major grid disruptions occurred in the U.S., compared to over 180 in 2020, while the hours of power interruptions doubled from 2013 to 2020 (source: WSJ). This is mainly due to the old age of the U.S. grid system, with the transmission system (long-distance) constructed 80 years ago and the distribution system (short distances) constructed multiple decades ago. The American Society of Civil Engineers found that 70% of transmission and distribution lines are well into the second half of their expected 50-year lifespans. While upgrades and maintenance are starting to ramp up, it is estimated that the U.S. will need to spend over $200B by 2029 to strengthen the grid (Figure 27). Climate change and extreme weather have exacerbated this trend. Furthermore, with the adoption of renewable energy over the coming decades, the current grid will not be compatible with the constantly fluctuating supply, and thus require energy storage solutions and more flexible grid upgrades. While these upgrades will take multiple decades to complete, residential homes are going to need energy storage to combat the increased grid disruptions, playing into Electrafy's value proposition. As such, the stationary battery storage market is expected to grow at a 27% CAGR from 2023 to 2032 (Source: Global Market Insights).

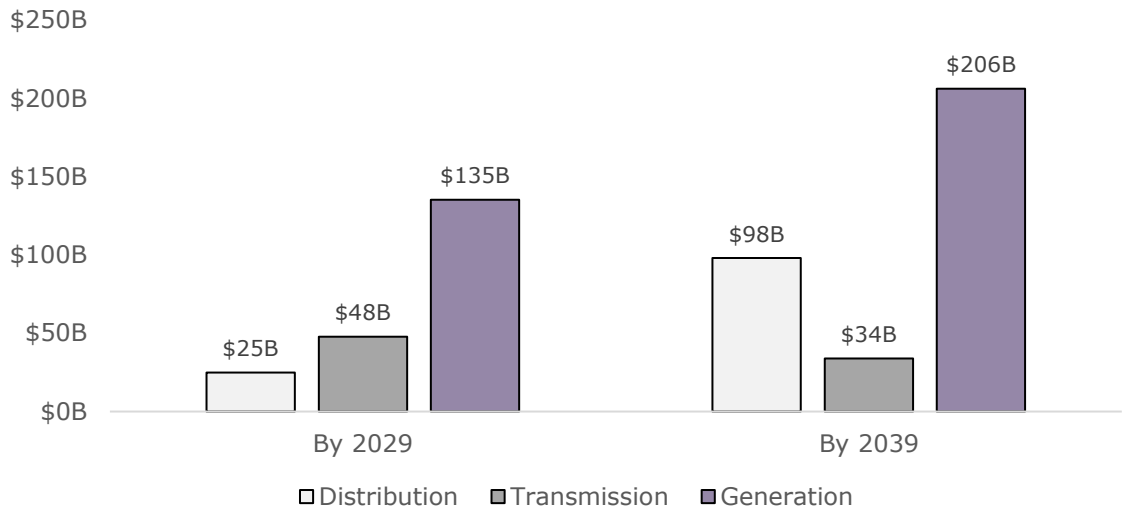

Figure 27: Investment Gap to Strengthen the U.S. Grid (Source: WSJ)

Solar and wind energy cannot produce energy 24/7 since there is not constant sunshine or wind in most regions. The levels of energy generated in a given hour vary based on weather, time of day, and the season. Thus, for the renewable energy transition to progress forward, we need to find solutions that can effectively store energy into the future (both short-term and long-term) in order to smooth out supply and demand. Ideally, grids can store excess energy during the lowest consumption hours and deploy (discharge) it during the higher consumption hours. The Fraunhofer Institute of Solar Energy estimates that if the grid transitioned to 80% renewables, about one month of energy would need to be stored at all times for stability (rising to two months at 90%). Furthermore, energy storage is needed to provide backup power in the event of an outage or emergency, which is the market BES is playing in currently. BloombergNEF estimates that the globe will install 411 GW of energy storage by 2030, a 15x from current levels (Figure 28).

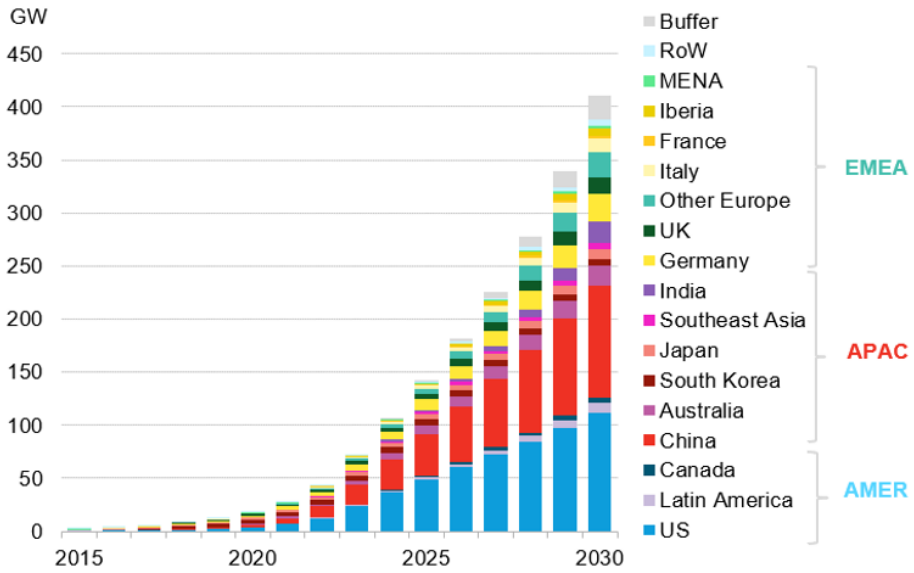

Figure 28: Global Cumulative Energy Storage Installations (Source: BloombergNEF)

Battery Safety
With the emergence of lithium batteries in renewable energy and EVs, comes an increasing importance for safety. While lithium batteries are almost always safer than their counterparts, there have been various global events harming the safety reputation of lithium batteries such as the E-bike fires in New York City. These fires are occurring due to thermal runaway (see Firebulb section above) within lithium batteries. We believe that the industry will develop to have even more stringent safety requirements and certifications to prevent disastrous events. This plays into BES' Firebulb technology which addresses this issue directly and can be licensed out to other battery manufacturers in the future.

Figure 29: NYC E-Bike Fire (Source: New York Post)

Management

Lindsay Weatherdon – CEO & Director
Mr. Weatherdon is President & CEO of BES and brings over 30 years of experience in executive roles. Lindsay is currently Executive Vice-President of Concord National LLP; one of Canada's leading Canadian consumer packaged goods sales & marketing agencies. Mr. Weatherdon has a diverse background in global sales, having held executive positions in Hardgoods Manufacturing where he developed retail strategies across large box and warehouse club formats. Mr. Weatherdon owns 1.5M shares, equating to 2% ownership.

Jeffrey York – Chairman
Mr. York is a chartered accountant who brings over 30 years of business experience to the board of BES. Mr. York is best known for his experience as Co-CEO of Farm Boy, an Ontario-based grocery chain. In 2018, Farm Boy was purchased by Empire Company (Sobey's Parent, $9B mkt cap) for $800M where Mr. York remains a Partner and Special Advisor to Sobeys. Mr. York began his professional career with Ward Mallette, Charted Accountants, before joining Giant Tiger Stores. Jeffrey spent 20 years at Giant Tiger and during his 10-year tenure as CEO, the Company grew its footprint nationwide and to being valued at over $1B. Mr. York currently owns 2.9M shares, representing 3% ownership.

Ivan Gissing (P.Eng) – CTO & General Manager
Mr. Gissing is the Chief Technical Officer and General Manager of BES, responsible for all operations at both the Sarasota, Florida, and Kingston, Ontario facilities. Ivan has 30+ years of experience successfully leading companies in product development and commercialization of disruptive technologies for the industrial power market. Ivan has an Electrical Engineering degree from Queen's University in Kingston, Canada, as well as his P.Eng. designation. His interest in product/technology development grew from his early career experience as an approval engineer with the Canadian Standards Association (CSA) where he had the opportunity to work closely with development teams at major companies such as GE and Westinghouse. Mr. Gissing has driven product developments utilizing technologies such as tubular plate lead-selenium battery cells for utility switchgear batteries for data center backup power, multi-element antenna arrays for positive train control, and ultra-wide input range DC-DC Converters for mission-critical railroad power systems. Ivan has previously led innovative product development/market strategies for companies such as Melcher, BAE, Varta, and Harper Detroit Diesel.

Judith Mazvihwa-MacLean – CFO
Ms. Mazvihwa-MacLean brings over 15 years of financial executive experience to the CFO role at BES. Judith has been the CFO of Focus Graphite Inc. (EVR:TSXV) a mid-tier, junior exploration and mining company for the last 12 years. Prior to the role at EVR, she was the CRO of Everton Resources, an exploration Company with assets in the Dominican Republic. Judith holds an MBA from Simon Fraser University as well as a CMA (Certified Management Accountant) designation from the CMA Society of B.C.

Marc Roy – Director
Mr. Roy brings over 25 years of executive and board experience to Braille. Marc is currently the CEO of Focus Graphite Inc. and Grafoid Inc. as well as an independent board member of Novexco Inc. Most recently, Marc served as an Executive at Bensussen Deutsch & Associates Inc. overseeing Europe, the Middle East, and Africa, as well as global mergers and acquisitions. Prior to his position at BDA Inc., he served as CEO of Brand Alliance and CEO of Accolate Reaction Promotion Group.

Risks

Competition Risk – Above Average
Braille operates in a highly competitive market with well-capitalized peers on both the Braille Battery and Braille Energy Systems side. Braille Battery has a dominant position as a battery supplier to racing and car enthusiasts, providing a competitive advantage. Electrafy is a new product and will need to compete with large peers that offer its product alongside solar and EV solutions. Furthermore, Tesla's announcement to offer its PowerWall without solar creates a new competitor in Electrafy's market. Electrafy plans to be the most cost-efficient option in the space, and is available to homeowners without solar/EVs; thus, the product is differentiated enough to carve out a niche.

Lack of Profitability – Average
Braille Battery does not have a history of profitability, but we believe it has reached an inflection point where its scale is large enough to reach profitability. As for Electrafy, the losses are likely to go deeper negative through FY23 as the Company markets and develops its new products. However, the Electrafy systems have great economics that should reach profitability by FY25.

Dilution Risk – High
Braille will likely need to raise additional funds to develop its operations for Electrafy and purchase raw materials. BES recently completed a $1M financing which reduces this risk in the short-term. We think the Company has strong access to capital given the CEO and Chairman's relationship network.

Illiquidity – High
BES stock is highly illiquid, only trading 53K shares per day (~$2K/day). This makes an investment in BES risky for institutional investors and some retail investors that are not comfortable with long-term holding periods.

Appendix

		Braille Battery Multiple				
		0.1x	0.3x	0.5x	0.7x	0.9x
Battery 2024E Sales	$1M	$0.10	$0.10	$0.10	$0.10	$0.10
	$3M	$0.10	$0.10	$0.15	$0.15	$0.15
	$5M	$0.10	$0.15	**$0.15**	$0.15	$0.15
	$7M	$0.10	$0.15	$0.15	$0.15	$0.15
	$9M	$0.10	$0.15	$0.15	$0.15	$0.20

		Braille Energy Multiple				
		0.8x	0.8x	1.0x	1.2x	1.4x
Energy 2024E Sales	$3M	$0.05	$0.05	$0.10	$0.10	$0.10
	$6M	$0.10	$0.10	$0.10	$0.10	$0.15
	$9M	$0.10	$0.10	**$0.15**	$0.15	$0.20
	$12M	$0.15	$0.15	$0.20	$0.20	$0.25
	$15M	$0.20	$0.20	$0.20	$0.25	$0.25

Figure 30: Target Price Sensitivity

		Exit EBITDA Multiple				
		5.0x	6.0x	7.0x	8.0x	9.0x
WACC	19%	$0.05	$0.10	$0.10	$0.15	$0.15
	18%	$0.05	$0.10	$0.10	$0.15	$0.15
	17%	$0.10	$0.10	**$0.15**	$0.15	$0.15
	16%	$0.10	$0.10	$0.15	$0.15	$0.20
	15%	$0.10	$0.10	$0.15	$0.15	$0.20

Figure 31: DCF Sensitivity

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