Battery Separator

Tight supply into 2027; raise Yunnan Energy PT to Rmb100

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Yunnan Energy's share price has surged over 60% in the past three months (CSI 300 +1%), supported by improved separator pricing and a strong rebound in company profitability. We expect this positive momentum to continue into 2027, with wet separator industry utilization rates (UTR) set to improve by more than 10 percentage points in 2026—already surpassing the previous 2022 peak—and forecast to rise by another ~10ppt in 2027E. In our January 2026 report, "*China Battery & Materials: Field trip sparks confidence: Confirm CATL as top pick, u/g Yunnan Energy (separator),*" we identified battery separators as our most preferred battery material, citing a favorable supply-demand dynamic and high visibility due to long capacity lead times. Following improved unit profitability in 4Q25 and 1Q26, as well as the latest management commentary, we now raise our earnings forecasts for Yunnan Energy by 7%/27% for 2026/27E and lift our price target to Rmb100, implying 29% upside to the latest close. We reiterate our Overweight rating on Yunnan Energy and maintain a Neutral rating on Putailai. We raise our 2027 earnings forecast for Putailai by 13% (unchanged for 2026E) to reflect the improved industry supply-demand outlook for separators, and lift our price target to Rmb40 (9% upside to last close). *Within China's battery sector, our top picks remain CATL, Yunnan Energy, and Wuxi Lead.*

- **Shipment guidance revised up:** Yunnan Energy raised its 2026 capacity and shipment guidance from 14bn sqm to 15bn sqm, driven by strong demand. On the supply side, capacity is effectively running at full utilization, with only ~4–5 new lines coming online in 2026, contributing ~1bn sqm of incremental capacity. As such, the result of the supply upside will be delivered through internal efficiency improvements, including higher line speeds (already >90m/min on some lines) and yield improvements via process optimization.

- **Multi-round price hikes**: The industry is already in a multi-round price hike cycle. Yunnan Energy has implemented three rounds of price increases, starting in late-2025 to restore profitability, followed by 5–10% hikes in 1Q26 with partial customer acceptance. Most recently, in Mar–Apr 2026, the company raised prices by 10–20%, driven by ongoing capacity tightness and rising ultra-high molecular weight HDPE costs. While Putailai indicated that for base separator it largely follows market pricing given small scale so far means weaker pricing power.

- **Raw material pressure manageable**: Raw materials—including PE, white oil, and solvents—account for ~30%+ of cost, with recent increases in ultra-high molecular weight HDPE prices acting as a key

See page 17 for analyst certification and important disclosures, including non-US analyst disclosures.

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trigger for the latest round of price hikes. While key materials are procured through annual contracts with volume and price lock-ins, actual cost increases are more moderate than spot market moves. Meanwhile, Putailai noted that PE price increases have had minimal impact on its cost base.

- **Disciplined capacity expansion reinforces tight supply**. Supply growth remains disciplined and slow. Yunnan Energy's capacity has been running near full utilization since Aug-2025, with only marginal additions in 2026. Looking ahead, effective capacity is expected to reach ~17bn sqm in 2027 (organic), or ~19bn sqm including potential M&A, with management emphasizing a much more cautious expansion pace than in prior cycles. Putailai guided 2-2.5bn sqm shipments in 2026 and expects capacity to reach ~4.1bn sqm in 2027, planning for 10bn sqm capacity by end-28.

- **Earnings revisions:** Overall, we believe the separator industry is entering a sustained tightening cycle through 2026, supported by slow supply response, strong demand (especially ESS), and improving industry capacity discipline. This should translate into continued price hikes and unit profit recovery, particularly for leading players with stronger pricing power. We raise Yunnan Energy net profit by 7%/27%, in FY26E/27E reflecting higher shipment guidance, as well as improved pricing and unit profitability. We remain OW on Yunnan Energy and raise our PT to Rmb100 (from Rmb66). At the same time, based on Putailai's improved coated separator volume outlook, we raise Putailai earnings by 13% in 2027E. We remain N on Putailai and raise our PT to Rmb40 (from Rmb29).

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Equity Ratings and Price Targets

Company	Ticker	Mkt Cap ($ mn)	Price CCY	Price	Rating Cur	Rating Prev	Price Target Cur	Price Target End Date	Price Target Prev	Price Target End Date
Yunnan Energy	002812 CH	11,622	CNY	80.85	OW	n/c	100.00	Dec-26	66.00	n/c
Putailai	603659 CH	11,561	CNY	36.97	N	n/c	40.00	Dec-26	29.00	n/c

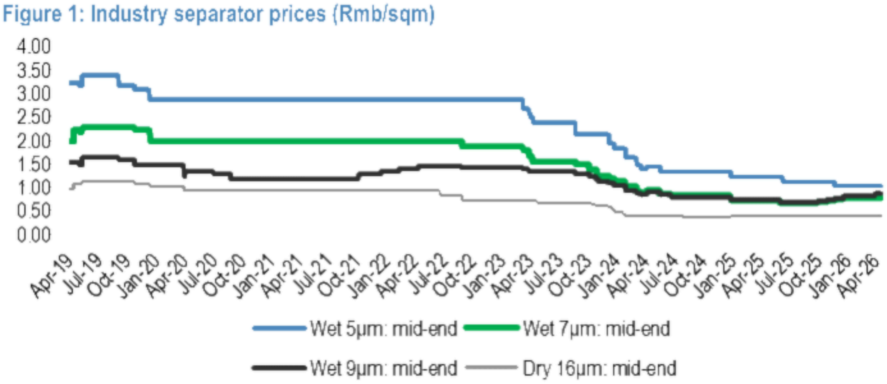
Source: Company data, Bloomberg Finance L.P., J.P. Morgan estimates. n/c = no change. All prices as of 27 Apr 26.

Industry separator price trends

Base separator price trends

- Prices for the 7µm and 9µm grade base wet separator increased by RMB 0.12/sqm (+17%) in 4Q25. In contrast, the 5µm grade declined by RMB 0.10/sqm (-9%) over the same period.
- In 1Q26, industry pricing remained largely stable. There were no price changes for the 5µm and 7µm grades wet separator, while the 9µm separator saw a modest increase of RMB 0.02/sqm (+2%) versus end-4Q25.
- Dry separator prices have remained flattish since 3Q25.

Figure 1: Industry separator prices (Rmb/sqm)



Source: ICCSino

Table 1: Industry separator prices (Rmb/sqm)

	Price (Rmb/sqm)				absolute price changes			price changes %		
	end-3Q25	end-4Q25	end-1Q26	latest	4Q25	1Q26	vs. end-1Q	4Q25	1Q26	vs. end-1Q
5 μ m Wet-process Separator	1.15	1.05	1.05	1.05	-0.1	0	0	-9%	0%	0%
7 μ m Wet-process Separator	0.69	0.81	0.81	0.81	0.12	0	0	17%	0%	0%
9 μ m Wet-process Separator	0.71	0.83	0.85	0.88	0.12	0.02	0.03	17%	2%	4%
16 μ m Dry-process Separator	0.42	0.42	0.42	0.42	0	0	0	0%	0%	0%
12 μ m Dry-process Separator	0.46	0.46	0.46	0.46	0	0	0	0%	0%	0%
7+2 μ m Ceramic Coated Separator	0.9	1.06	1.06	1.07	0.16	0	0.01	18%	0%	1%
7+2+1 μ m Ceramic & PVDF Coated Separator	1.1	1.26	1.26	1.27	0.16	0	0.01	15%	0%	1%
7+2+1+1 μ m Ceramic & PVDF Coated Separator	1.3	1.47	1.47	1.48	0.17	0	0.01	13%	0%	1%
9+3 μ m Ceramic Coated Separator	0.91	1.07	1.13	1.13	0.16	0.06	0	18%	6%	0%
9+3+1 μ m Ceramic & PVDF Coated Separator	1.11	1.28	1.3	1.32	0.17	0.02	0.02	15%	2%	2%
9+3+1+1 μ m Ceramic & PVDF Coated Separator	1.31	1.49	1.55	1.57	0.18	0.06	0.02	14%	4%	1%
12+4 μ m Ceramic Coated Separator	1	1.18	1.18	1.2	0.18	0	0.02	18%	0%	2%

Source: ICCSino

Table 2: Separator players' shipments (bn sqm)

	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26
Yunnan Energy	1.3	1.5	2.0	2.0	2.0	2.6	2.6	3.7	3.5
Senior – wet+dry	0.6	1.0	1.1	1.2	1.1	1.1	1.2	1.2	1.0
Sinoma	0.4	0.4	0.4	0.7	0.6	0.7	0.9	1.2	1.2
Putailai - base film	0.10	0.1	0.2	0.2	0.2	0.3	0.6	0.3	0.5
Putailai - coating	1.3	1.6	1.8	2.3	2.2	2.5	3.1	3.1	3.4
Gellec (FSPG High-tech)									1.3

Source: Company data

Table 3: Separator players' unit profit (Rmb/sqm)

	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26
Yunnan Energy	0.09	0.06	(0.09)	(0.58)	0.01	(0.05)	0.00	0.06	0.07
Senior	0.17	0.13	0.10	0.02	0.04	0.04	0.01	(0.06)	0.03
Sinoma	breakeven					Slightly loss			0.02-0.03
Putailai - base	0.1	0.1	0.1	0.1	0.1	0.09	0.09	0.09	0.09
Putailai - coating	0.2	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Gellec (FSPG High-tech)									0.07

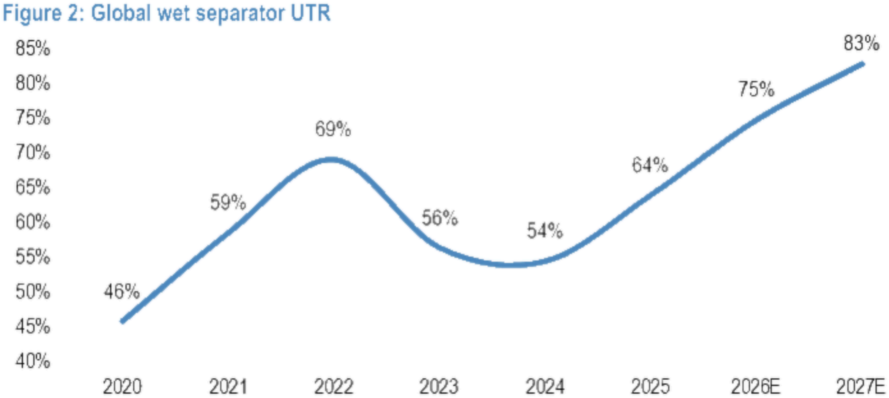
Source: Company data

Table 4: Global wet separator S-D

Global wet separator Effective capacity (mn sqm)	2020	2021	2022	2023	2024	2025	2026E	2027E
Yunnan Energy	1,960	3,315	5,175	7,200	8,000	12,000	15,000	19,000
Sinoma group	686	820	1,025	1,845	3,000	5,000	5,500	6,000
Senior	469	787	1,071	1,836	4,000	4,800	5,000	6,000
Gellec (FSPG High-tech)	294	638	975	1,980	3,600	5,900	6,800	7,000
Liaoyuan Hongtu	89	128	128	128	128	128	128	128
Cangzhou Mingzhu	114	114	144	180	290	490	890	1290
Jinhui High-tech	61	77	77	77	77	77	77	77
Horizon	171	240	428	1,178	2,000	2,385	2,385	2,385
Putailai			150	500	700	1,500	2,500	4,100
Malion			113	375	619	700	800	800
Others	2,500	3,281	3,014	4,401	2,486	2,486	2,486	2,486
Chinese players total	**6,344**	**9,400**	**12,300**	**19,700**	**24,900**	**35,466**	**41,566**	**49,266**
y/y	*37%*	*48%*	*31%*	*60%*	*26%*	*42%*	*17%*	*19%*
Asahi Kasei	655	850	1,000	1,175	1,425	1,575	1,925	1,925
W-scope	374	432	476	520	668	876	876	876
SKIET	646	1,045	1,507	1,533	1,680	1,775	1,870	1,970
Toray	480	480	480	480	480	480	480	480
LG Che-Tory				200	200	200	200	200
Sumitomo Chem	72	72	72	72	72	72	72	72
Entek					140	210	210	210
others	600	1,004	820	1,040	1,040	1,040	1,040	1,040
Ex China players total	**2,827**	**3,883**	**4,355**	**5,020**	**5,705**	**6,228**	**6,673**	6,773
y/y	*19%*	*37%*	*12%*	*15%*	*14%*	*9%*	*7%*	1%
Global wet separator effective capacity	**9,171**	**13,283**	**16,655**	**24,720**	**30,605**	**41,694**	**48,239**	**56,039**
y/y	*31%*	*45%*	*25%*	*48%*	*24%*	*36%*	*16%*	*16%*
Global wet separator UTR	*46%*	*59%*	*69%*	*56%*	*54%*	*64%*	*75%*	*83%*

Source: Company data, GGII, J.P. Morgan.

Figure 2: Global wet separator UTR



Source: Company estimates

Table 5: Valuation comparison of China battery supply chain

Company	Code	Rec	Cover analyst	Price 27-Apr	Mkt cap (US$M)	P/E (x) 26E	P/E (x) 27E	P/B (x) 26E	P/B (x) 27E	ROE 26E	ROE 27E	Price change YTD
Upstream - raw material						**21.4**	**17.4**	**2.9**	**2.5**	**18%**	**17%**	**15%**
Tianqi Lithium	002466 CH	N	Avery Chan	73.7	17,661	27.3	18.3	2.6	2.3	10%	13%	33%
Ganfeng Lithium	002460 CH	N	Avery Chan	84.1	24,824	32.9	29.2	3.4	3.1	11%	11%	34%
CMOC	3993 HK	OW	Avery Chan	18.3	57,785	10.8	10.4	3.2	2.6	33%	27%	-5%
Zhejiang Huayou	603799 CH	NC	-	66.3	18,432	14.7	11.6	2.4	2.0	17%	18%	-3%
Midstream - battery material						**28.9**	**26.1**	**3.2**	**2.9**	**13%**	**14%**	**19%**
Beijing Easpring	300073 CH	NC	-	62.6	4,995	31.8	25.1	2.2	2.0	7%	8%	8%
Shanghai Putailai	603659 CH	N	Rebecca Wen	37.0	11,576	24.5	17.6	3.4	2.9	15%	16%	35%
Shanshan	600884 CH	NC	-	15.9	5,255	nm	nm	n/a	n/a	n/a	n/a	18%
Shangtai	001301 CH	NC	-	78.4	2,996	15.7	11.7	2.5	2.1	16%	19%	-9%
Yunnan Energy	002812 CH	OW	Rebecca Wen	80.9	11,638	35.8	15.4	2.8	2.4	6%	10%	43%
Guangzhou Tinci	002709 CH	NC	-	55.3	16,511	19.5	16.9	5.1	4.2	29%	26%	19%
Capchem	300037 CH	NC	-	68.8	7,581	26.5	22.9	4.2	3.7	16%	16%	31%
Do-Fluoride	002407 CH	NC	-	34.5	6,023	30.0	26.3	n/a	n/a	20%	19%	2%
Shenzhen Senior	300568 CH	NC	-	16.5	3,258	34.9	24.0	2.1	2.0	6%	8%	8%
Hunan Yuneng	301358 CH	N	Rebecca Wen	89.9	11,109	26.7	24.3	4.2	3.5	19%	20%	39%
Dynanonic	300769 CH	UW	Rebecca Wen	52.3	2,149	nm	nm	3.1	3.2	2%	7%	19%
Ningbo Ronbay	688005 CH	UW	Rebecca Wen	34.7	3,630	54.2	76.6	2.9	2.9	5%	6%	-2%
CNGR	300919 CH	OW	Parsley Ong	61.9	9,077	18.3	n/a	2.2	n/a	9%	10%	34%
Battery equipment						**29.5**	**22.2**	**3.9**	**3.3**	**13%**	**15%**	**13%**
Wuxi Lead-A	300450 CH	OW	Rebecca Wen	57.4	13,983	32.4	24.0	5.1	4.2	16%	18%	15%
Wuxi Lead-H	470 HK	OW	Rebecca Wen	58.0	13,983	28.5	21.1	4.5	3.7	16%	18%	27%
Yinghe	300457 CH	NC	-	28.1	2,653	25.7	21.0	2.7	2.5	8%	9%	1%
Hangke	688006 CH	NC	-	31.7	2,806	31.3	22.7	3.2	2.9	10%	13%	8%
Downstream cell makers						**22.5**	**16.9**	**3.3**	**2.8**	**15%**	**17%**	**17%**
Gotion	002074 CH	UW	Rebecca Wen	39.5	10,492	26.1	17.2	2.4	2.1	10%	13%	1%
CATL-A	300750 CH	OW	Rebecca Wen	434.9	294,415	20.8	17.1	5.0	4.2	26%	27%	20%
CATL-H	3750 HK	OW	Rebecca Wen	675.5	294,415	28.2	23.2	6.7	5.7	26%	27%	35%
EVE Energy	300014 CH	N	Rebecca Wen	71.4	22,534	21.4	17.4	3.0	2.7	15%	16%	9%
CALB	3931 HK	N	Rebecca Wen	33.9	8,319	19.6	13.7	1.3	1.2	7%	9%	35%
REPT	666 HK	NC	-	15.7	4,675	24.4	16.9	2.9	2.1	12%	14%	18%
Sunwoda	300207 CH	NC	-	27.1	7,330	17.4	12.8	2.0	1.8	10%	13%	4%
NEV OEMs						**32.8**	**11.4**	**1.7**	**1.5**	**-3%**	**10%**	**-5%**
Brilliance China	1114 HK	UW	Nick Lai	2.8	1,822	5.1	4.4	0.7	0.6	12%	15%	-30%
Great Wall Motor	2333 HK	N	Nick Lai	12.5	22,174	7.2	6.7	0.9	0.9	14%	13%	-19%
Geely Automobile	175 HK	OW	Nick Lai	22.4	30,836	9.4	8.1	1.8	1.5	21%	21%	25%
GAC	2238 HK	N	Nick Lai	3.0	8,699	nm	nm	0.3	0.3	-1%	1%	-26%
SAIC	600104 CH	N	Nick Lai	13.7	23,083	13.1	11.5	0.5	0.5	4%	4%	-10%
BAIC Motor-H	1958 HK	N	Nick Lai	1.5	1,544	177.1	7.3	0.2	0.2	0%	2%	-22%
Changan Auto	200625 CH	N	Nick Lai	3.9	12,740	7.9	7.6	0.5	0.4	6%	6%	-8%
BYD	1211 HK	OW	Nick Lai	106.0	131,324	20.3	15.7	2.9	2.5	15%	17%	11%
NIO Inc - Adr	NIO US	OW	Nick Lai	6.2	15,560	nm	nm	nm	nm	-101%	14%	22%
XPeng Inc - Adr	XPEV US	OW	Nick Lai	16.7	15,947	nm	nm	4.0	4.2	-14%	-5%	-18%
Leapmotor	9863 HK	OW	Nick Lai	47.2	8,147	21.9	12.7	3.3	2.6	17%	23%	-3%
Li Auto - Adr	LI US	UW	Nick Lai	18.1	19,580	nm	28.4	1.8	1.7	-5%	6%	7%
Auto parts						**20.7**	**18.8**	**2.8**	**2.7**	**14%**	**10%**	**-10%**
Minth	425 HK	OW	Rebecca Wen	36.2	5,415	11.9	9.7	1.4	1.3	13%	14%	14%
Nexteer	1316 HK	N	Rebecca Wen	5.0	1,595	11.0	8.0	0.7	0.7	7%	9%	-22%
Fuyao-H	3606 HK	N	Rebecca Wen	62.5	22,292	14.1	11.9	3.4	3.0	25%	26%	-7%
Fuyao-A	600660 CH	N	Rebecca Wen	59.5	22,292	15.5	13.0	3.7	3.2	25%	26%	-8%
Huayu	600741 CH	N	Rebecca Wen	19.9	9,186	8.3	n/a	0.9	n/a	11%	11%	-1%
Joyson	600699 CH	N	Rebecca Wen	28.6	6,188	25.4	20.9	2.2	2.0	9%	10%	-9%
Tuopu	601689 CH	UW	Rebecca Wen	58.8	14,980	31.5	28.3	3.9	3.5	13%	13%	-24%
Sanhua	002050 CH	OW	Karen Li	45.9	27,049	40.6	34.7	5.5	4.9	14%	15%	-17%
Sanhua-H	2050 HK	OW	Karen Li	31.9	27,049	28.2	24.1	3.8	3.4	n/a	n/a	-17%
Simple average						**26.0**	**18.8**	**3.0**	**2.6**	**12%**	**14%**	**8%**

Source: Bloomberg Finance L.P., J.P. Morgan estimates. Note: Bloomberg consensus estimates for Not Covered (NC) stocks, J.P. Morgan estimates for all others. "nm" = not meaningful (loss or near breakeven).

Overweight

002812.SZ,002812 CH

Price (27 Apr 26): Rmb80.85

▲ **Price Target (Dec-26): Rmb100.00**
Prior (Dec-26): Rmb66.00

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Style Exposure

Quant Factors	Current %Rank	Hist %Rank (1=Top) 6M	1Y	3Y	5Y
Value	58	72	61	55	72
Growth	31	33	91	27	24
Momentum	8	95	89	98	17
Quality	91	91	76	37	51
Low Vol	76	64	67	64	74

Sources for: Style Exposure – J.P. Morgan Global Markets Strategy; all other tables are company data and J.P. Morgan estimates.

Yunnan Energy

Remain OW; Lift PT to Rmb100

Earnings revisions: We raise Yunnan Energy net profit by 7%/27% for FY26E/27E, reflecting higher shipment guidance, as well as improved pricing and unit profitability. We remain OW on Yunnan Energy and raise our PT to Rmb100.

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Price Performance

	YTD	1m	3m	12m
Abs	42.7%	12.0%	63.6%	189.1%
Rel	39.7%	7.6%	64.9%	164.7%

Company Data

Shares O/S (mn)	982
52-week range (Rmb)	84.00-25.87
Market cap ($ mn)	11,622
Exchange rate	6.83
Free float (%)	54.0%
3M ADV (mn)	35.26
3M ADV ($ mn)	338.0
Volatility (90 Day)	61
Index	SHASHR
BBG ANR (Buy | Hold | Sell)	16|1|0

Key Metrics (FYE Dec)

Rmb in millions	FY25A	FY26E	FY27E	FY28E
Financial Estimates				
Revenue	13,633	21,205	29,419	38,006
Adj. EBITDA	2,964	5,113	8,412	9,638
Adj. EBIT	783	2,725	6,073	7,364
Adj. net income	143	2,177	5,142	6,375
Net margin	1.0%	10.3%	17.5%	16.8%
Adj. EPS	0.15	2.18	5.09	6.31
BBG EPS	0.14	1.55	2.77	3.86
Cashflow from operations	1,144	3,337	5,684	6,409
FCFF	(1,027)	769	3,586	4,194
Margins and Growth				
Revenue Growth Y/Y (%)	34.1%	55.5%	38.7%	29.2%
EBITDA margin	21.7%	24.1%	28.6%	25.4%
EBITDA Growth Y/Y (%)	133.8%	72.5%	64.5%	14.6%
EBIT margin	5.7%	12.8%	20.6%	19.4%
Adj. EPS growth	(125.7%)	1390.0%	132.8%	24.0%
Ratios				
Adj. tax rate	67.8%	10.2%	10.6%	10.8%
Interest cover	-	-	-	-
Net debt/Equity	0.6	0.5	0.4	0.4
Net debt/EBITDA	5.1	3.0	1.8	1.6
ROCE	0.6%	5.4%	10.2%	10.2%
ROE	0.6%	8.2%	17.0%	17.7%
Valuation				
FCFF yield	(1.3%)	1.0%	4.4%	5.1%
Dividend yield	0.0%	0.0%	0.0%	0.0%
EV/EBITDA	22.1	12.9	7.9	7.0
EV/Revenue	4.8	3.1	2.3	1.8
Adj. P/E	551.4	37.0	15.9	12.8

Summary Investment Thesis and Valuation

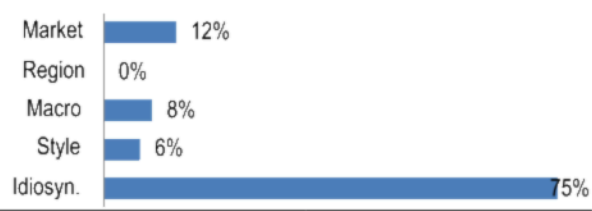
Investment Thesis

Yunnan Energy is the leading separator player in China and globally. We estimate the global wet separator utilization rate will increase by 9ppts y/y to 73% in 2026, surpassing the historical peak level in 2022 (69%). Separator capacity expansion typically requires a 12–15 month lead time. Capacity additions in 2026 from key players will primarily come from equipment ordered in 2022–2023, the capitalization of construction-in-progress projects, and production line efficiency improvements. Based on our discussions with industry participants, no meaningful new capacity expansion plans are currently in place. We anticipate an even tighter industry supply-demand balance in 2027, with the utilization rate reaching ~84%. We expect Yunnan Energy's earnings recovery in 2026/27E to be driven by the unit profit improvement. We remain OW on Yunnan Energy.

Valuation

We set our Dec-26 PT at Rmb100, based on 20x 2027E blended P/E (vs. previous Dec-26 PT of Rmb66, based on 25x 2026-27E blended P/E), below the average of the historical trading range, as we expect separator price and earnings recovery in 2026/27 to be driven by the tight industry supply-demand.

Performance Drivers



Factors	6M Corr	1Y Corr
Market: MSCI Asia Pac ex JP	0.33	0.34
Region: China	0.03	0.03
Macro:		
Markit EM Composite PMI SA	0.23	0.20
JPM China A-shares Sentiment	0.27	0.17
JPM Global Equity Sentiment	-0.18	-0.13
Quant Styles:		
Size	-0.23	-0.21
Momentum	-0.15	-0.12
Quality	0.01	-0.07

Source: J.P. Morgan Global Markets Strategy for Performance Drivers; company data, Bloomberg Finance L.P. and J.P. Morgan estimates for all other tables. Note: Price history may not be complete or exact.

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Table 6: Earnings revisions

	2026E			2027E		
RMB mn	Revised	Previous	% change	Revised	Previous	% change
Net Sales	21,205	21,173	0%	29,419	28,696	3%
Sales growth (yoy%)	56%	54%		39%	36%	
COGS	16,285	16,374	-1%	20,201	20,780	-3%
Gross profit	4,920	4,799	3%	9,218	7,916	16%
Gross margin (%)	23%	23%		31%	28%	
Operating profit	2,476	2,271	9%	5,941	4,592	29%
Operating margin (%)	12%	11%		20%	16%	
Pre-tax profit	2,466	2,270	9%	5,931	4,591	29%
Net profit	2,177	2,037	7%	5,142	4,044	27%
Net margin (%)	10%	10%		17%	14%	
Net profit growth (yoy%)	1428%	1245%		136%	99%	
EPS (basic)	2.18	1.96	12%	5.09	3.89	31%

Source: J.P. Morgan estimates.

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Investment Thesis, Valuation and Risks

Yunnan Energy New Material Group Co Ltd *(Overweight; Price Target: Rmb100.00)*

Investment Thesis

Yunnan Energy is the leading separator player in China and globally. We estimate the global wet separator utilization rate will increase by 9ppts y/y to 73% in 2026, surpassing the historical peak level in 2022 (69%). Separator capacity expansion typically requires a 12–15 month lead time. Capacity additions in 2026 from key players will primarily come from equipment ordered in 2022–2023, the capitalization of construction-in-progress projects, and production line efficiency improvements. Based on our discussions with industry participants, no meaningful new capacity expansion plans are currently in place. We anticipate an even tighter industry supply-demand balance in 2027, with the utilization rate reaching ~83%. We expect Yunnan Energy's earnings recovery in 2026/27E to be driven by the unit profit improvement. We remain OW on Yunnan Energy.

Valuation

We set our Dec-26 PT at Rmb100, based on 20x 2027E blended P/E, below the average of the historical trading range, as we expect separator price and earnings recovery in 2026/27 to be driven by the tight industry supply-demand.

Risks to Rating and Price Target

Downside risks: (1) worse-than-expected industry demand, (2) worse-than-expected unit profit and industry (price) competition, and (3) separator players started new capacity expansion.

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Yunnan Energy: Summary of Financials

Income Statement	FY24A	FY25A	FY26E	FY27E	FY28E
Revenue	**10,164**	**13,633**	**21,205**	**29,419**	**38,006**
COGS	(9,039)	(11,074)	(16,285)	(20,201)	(26,493)
Gross profit	**1,125**	**2,559**	**4,920**	**9,218**	**11,513**
SG&A	(745)	(904)	(1,357)	(1,896)	(2,470)
Adj. EBITDA	**1,268**	**2,964**	**5,113**	**8,412**	**9,638**
D&A	(1,794)	(2,181)	(2,388)	(2,339)	(2,274)
Adj. EBIT	**(526)**	**783**	**2,725**	**6,073**	**7,364**
Net Interest	-	-	-	-	-
Adj. PBT	**(845)**	**438**	**2,466**	**5,931**	**7,379**
Tax	185	(297)	(252)	(630)	(797)
Minority Interest	104	2	(37)	(159)	(207)
Adj. Net Income	**(556)**	**143**	**2,177**	**5,142**	**6,375**
Reported EPS	(0.57)	0.15	2.18	5.09	6.31
Adj. EPS	**(0.57)**	**0.15**	**2.18**	**5.09**	**6.31**
DPS	**1.55**	**0.00**	**0.00**	**0.00**	**0.00**
Payout ratio	NM	0.0%	0.0%	0.0%	0.0%
Shares outstanding	976	972	997	1,011	1,011

Balance Sheet	FY24A	FY25A	FY26E	FY27E	FY28E
Cash and cash equivalents	2,574	2,909	5,073	10,214	16,198
Accounts receivable	6,102	7,412	10,219	14,161	18,534
Inventories	2,963	2,280	3,855	4,782	6,271
Other current assets	2,185	2,678	1,234	1,024	1,064
Current assets	**13,824**	**15,279**	**20,381**	**30,181**	**42,068**
PP&E	28,792	29,789	29,444	28,647	27,914
LT investments	-	-	-	-	-
Other non current assets	4,583	3,680	3,234	2,777	2,321
Total assets	**47,200**	**48,747**	**53,058**	**61,605**	**72,303**
Short term borrowings	10,433	10,875	11,747	12,538	13,378
Payables	2,010	2,310	2,883	4,649	7,113
Other short term liabilities	1,200	1,309	1,471	1,554	1,639
Current liabilities	**13,644**	**14,494**	**16,102**	**18,740**	**22,131**
Long-term debt	5,070	4,993	4,993	4,993	4,993
Other long term liabilities	2,281	2,044	2,044	2,044	2,044
Total liabilities	**20,995**	**21,531**	**23,139**	**25,777**	**29,167**
Shareholders' equity	24,471	25,467	27,644	32,786	39,162
Minority interests	1,734	1,749	2,276	3,042	3,974
Total liabilities & equity	**47,200**	**48,747**	**53,058**	**61,605**	**72,303**
BVPS	**25.07**	**26.20**	**27.74**	**32.43**	**38.73**
y/y Growth	*(12.2%)*	*4.5%*	*5.9%*	*16.9%*	*19.4%*
Net debt/(cash)	15,429	15,102	15,102	15,102	15,102

Cash Flow Statement	FY24A	FY25A	FY26E	FY27E	FY28E
Cash flow from operating activities	**1,158**	**1,144**	**3,337**	**5,684**	**6,409**
o/w Depreciation & amortization	1,794	2,181	2,388	2,339	2,274
o/w Changes in working capital	(317)	(1,914)	(1,404)	(2,006)	(2,497)
Cash flow from investing activities	**(2,632)**	**(1,353)**	**(1,664)**	**(1,151)**	**(1,151)**
o/w Capital expenditure	(2,859)	(1,735)	(2,000)	(1,500)	(1,500)
as % of sales	*28.1%*	*12.7%*	*9.4%*	*5.1%*	*3.9%*
Cash flow from financing activities	**414**	**732**	**490**	**608**	**725**
o/w Dividends paid	(1,911)	(335)	0	0	0
o/w Shares issued/(repurchased)	201	101	0	0	0
o/w Net debt issued/(repaid)	2,875	1,199	0	0	0
Net change in cash	**(1,056)**	**505**	**2,164**	**5,141**	**5,984**
Adj. Free cash flow to firm	**(1,579)**	**(1,027)**	**769**	**3,586**	**4,194**
y/y Growth	*(71.1%)*	*(35.0%)*	*(174.9%)*	*366.5%*	*17.0%*

Ratio Analysis	FY24A	FY25A	FY26E	FY27E	FY28E
Gross margin	11.1%	18.8%	23.2%	31.3%	30.3%
EBITDA margin	12.5%	21.7%	24.1%	28.6%	25.4%
EBIT margin	(5.2%)	5.7%	12.8%	20.6%	19.4%
Net profit margin	(5.5%)	1.0%	10.3%	17.5%	16.8%
ROE	(2.2%)	0.6%	8.2%	17.0%	17.7%
ROA	(1.2%)	0.3%	4.3%	9.0%	9.5%
ROCE	(1.5%)	0.6%	5.4%	10.2%	10.2%
SG&A/Sales	7.3%	6.6%	6.4%	6.4%	6.5%
Net debt/Equity	0.6	0.6	0.5	0.4	0.4
Net debt/EBITDA	12.2	5.1	3.0	1.8	1.6
Sales/Assets (x)	0.2	0.3	0.4	0.5	0.6
Assets/Equity (x)	1.8	1.9	1.9	1.9	1.9
Interest cover (x)	-	-	-	-	-
Operating leverage	744.7%	(729.4%)	446.3%	317.3%	72.9%
Tax rate	(21.9%)	67.8%	10.2%	10.6%	10.8%
Revenue y/y Growth	(15.6%)	34.1%	55.5%	38.7%	29.2%
EBITDA y/y Growth	(73.2%)	133.8%	72.5%	64.5%	14.6%
EPS y/y Growth	(121.3%)	(125.7%)	1390.0%	132.8%	24.0%

Valuation	FY24A	FY25A	FY26E	FY27E	FY28E
P/E (x)	NM	551.4	37.0	15.9	12.8
P/BV (x)	3.2	3.1	2.9	2.5	2.1
EV/EBITDA (x)	51.8	22.1	12.9	7.9	7.0
Dividend Yield	1.9%	0.0%	0.0%	0.0%	0.0%

Source: Company reports and J.P. Morgan estimates.
Note: Rmb in millions (except per-share data).Fiscal year ends Dec. o/w - out of which

Putailai

Remain N; Lift PT to Rmb40

Earnings revision: Based on Putailai's improved coated separator volume outlook, we raise Putailai earnings by 13% in 2027E. We remain N on Putailai and raise our PT to Rmb40.

Neutral

603659.SS,603659 CH

Price (27 Apr 26): Rmb36.97

▲ **Price Target (Dec-26): Rmb40.00**
Prior (Dec-26): Rmb29.00

China

Asia Autos & EV Battery

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Key Changes (FYE Dec)

	Prev	Cur	Δ
Revenue - 27E (Rmb mn)	22,887	25,975	13.5%

Style Exposure

Quant Factors	Current %Rank	Hist %Rank (1=Top) 6M	1Y	3Y	5Y
Value	74	72	72	78	89
Growth	30	23	57	7	34
Momentum	13	15	26	81	64
Quality	51	66	50	15	66
Low Vol	73	74	72	64	80
ESGQ	22	20	23	9	-

Sources for: Style Exposure – J.P. Morgan Global Markets Strategy; all other tables are company data and J.P. Morgan estimates.

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Price Performance

	YTD	1m	3m	12m
Abs	35.2%	7.8%	28.7%	111.6%
Rel	32.2%	3.4%	30.0%	87.3%

Company Data

Shares O/S (mn)	2,136
52-week range (Rmb)	37.51-15.56
Market cap ($ mn)	11,561
Exchange rate	6.83
Free float (%)	42.9%
3M ADV (mn)	57.40
3M ADV ($ mn)	265.5
Volatility (90 Day)	45
Index	SHASHR
BBG ANR (Buy | Hold | Sell)	15|2|1

Key Metrics (FYE Dec)

Rmb in millions	FY25A	FY26E	FY27E	FY28E
Financial Estimates				
Revenue	15,711	19,412	25,975	31,049
Adj. EBITDA	3,063	4,098	5,658	7,041
Adj. EBIT	2,967	3,993	5,547	6,924
Adj. net income	2,359	3,180	4,423	5,525
Net margin	15.0%	16.4%	17.0%	17.8%
Adj. EPS	1.12	1.51	2.10	2.62
BBG EPS	1.12	1.53	2.02	2.42
Cashflow from operations	2,697	3,203	4,938	6,647
FCFF	1,266	1,203	2,506	3,954
Margins and Growth				
Revenue Growth Y/Y (%)	16.8%	23.6%	33.8%	19.5%
EBITDA margin	19.5%	21.1%	21.8%	22.7%
EBITDA Growth Y/Y (%)	90.6%	33.8%	38.1%	24.4%
EBIT margin	18.9%	20.6%	21.4%	22.3%
Adj. EPS growth	100.0%	34.8%	39.1%	24.9%
Ratios				
Adj. tax rate	11.7%	11.7%	11.7%	11.7%
Interest cover	-	-	-	-
Net debt/Equity	0.1	0.0	NM	NM
Net debt/EBITDA	0.5	0.2	NM	NM
ROCE	9.5%	12.0%	15.0%	16.6%
ROE	12.2%	14.6%	17.7%	18.9%
Valuation				
FCFF yield	1.6%	1.5%	3.2%	5.1%
Dividend yield	0.5%	0.6%	0.8%	1.2%
EV/EBITDA	28.3	21.1	15.3	12.3
EV/Revenue	5.5	4.5	3.3	2.8
Adj. P/E	33.0	24.5	17.6	14.1

Summary Investment Thesis and Valuation

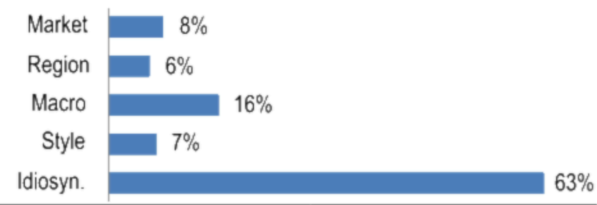
Investment Thesis

Putailai is a consolidated battery materials platform supplier of anode, separator and PVDF battery materials as well as equipment. We expect it benefited from strong volume growth of coated separator and the LT growth in base separator expansion. We have a Neutral rating because we view the current valuation as fair.

Valuation

We set our Dec-26 PT at Rmb40, based on 20x 2027E PER (previously Rmb29, based on 20x 2026E PER), 1SD above the historical trading range as we expect better earnings growth driven by the strong growth of separator shipments.

Performance Drivers



Factors	6M Corr	1Y Corr
Market: MSCI Asia Pac ex JP	0.24	0.30
Region: China	0.37	0.26
Macro:		
Generic 1st 'CO' Future	-0.19	-0.27
JPM China A-shares Sentiment	0.46	0.25
HSI Volatility Index	-0.28	-0.22
Quant Styles:		
Growth	0.45	0.28
DivYld	-0.36	-0.23
LowVol	-0.32	-0.22

Source: J.P. Morgan Global Markets Strategy for Performance Drivers; company data, Bloomberg Finance L.P. and J.P. Morgan estimates for all other tables. Note: Price history may not be complete or exact.

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Table 7: Earnings revisions

	2026E			2027E		
RMB mn	Revised	Previous	% change	Revised	Previous	% change
Net Sales	19,412	19,412	0%	25,975	22,887	13%
Sales growth (yoy%)	24%	24%		34%	18%	
COGS	12,981	12,981	0%	17,153	15,084	14%
Gross profit	6,430	6,430	0%	8,821	7,803	13%
Gross margin (%)	33.1%	33.1%		34.0%	34.1%	
Operating profit	3,993	3,993	0%	5,547	4,891	13%
Operating margin (%)	21%	21%		21%	21%	
Pre-tax profit	3,976	3,976	0%	5,529	4,873	13%
Tax rate	12%	12%		12%	12%	
Net profit	3,180	3,180	0%	4,423	3,898	13%
Net margin (%)	16.4%	16.4%		17.0%	17.0%	
Net profit growth (yoy%)	35%	35%		39%	23%	
EPS (basic)	1.51	1.51	0%	2.10	1.85	13%
EPS (fully diluted)	1.51	1.51	0%	2.10	1.85	13%

Source: J.P. Morgan estimates.

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Investment Thesis, Valuation and Risks

Shanghai Putailai New Energy Technology Co., Ltd *(Neutral: Price Target: Rmb40.00)*

Investment Thesis

Putailai is a consolidated battery materials platform supplier of anode, separator and PVDF battery materials as well as equipment. We expect it benefited from strong volume growth of coated separator and the LT growth in base separator expansion. We have a Neutral rating because we view the current valuation as fair.

Valuation

We set our Dec-26 PT at Rmb40, based on 20x 2027E PER, 1SD above the historical trading range as we expect better earnings growth driven by the strong growth of separator shipments.

Risks to Rating and Price Target

Upside/downside risks: (1) better- or worse-than-expected industry demand, and (2) better- or worse-than-expected unit profit and industry (price) competition.

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Putailai: Summary of Financials

Income Statement	FY24A	FY25A	FY26E	FY27E	FY28E
Revenue	**13,448**	**15,711**	**19,412**	**25,975**	**31,049**
COGS	(9,751)	(10,727)	(12,981)	(17,153)	(20,324)
Gross profit	**3,698**	**4,984**	**6,430**	**8,821**	**10,724**
SG&A	(769)	(898)	(1,068)	(1,403)	(1,677)
Adj. EBITDA	**1,607**	**3,063**	**4,098**	**5,658**	**7,041**
D&A	(85)	(96)	(105)	(112)	(117)
Adj. EBIT	**1,522**	**2,967**	**3,993**	**5,547**	**6,924**
Net Interest	-	-	-	-	-
Adj. PBT	**1,517**	**2,949**	**3,976**	**5,529**	**6,906**
Tax	(132)	(344)	(464)	(646)	(807)
Minority Interest	(194)	(246)	(331)	(460)	(575)
Adj. Net Income	**1,191**	**2,359**	**3,180**	**4,423**	**5,525**
Reported EPS	0.56	1.12	1.51	2.10	2.62
Adj. EPS	**0.56**	**1.12**	**1.51**	**2.10**	**2.62**
DPS	**0.14**	**0.17**	**0.23**	**0.31**	**0.43**
Payout ratio	25.0%	15.2%	15.2%	14.8%	16.4%
Shares outstanding	2,126	2,106	2,106	2,106	2,106

Cash Flow Statement	FY24A	FY25A	FY26E	FY27E	FY28E
Cash flow from operating activities	**2,372**	**2,697**	**3,203**	**4,938**	**6,647**
o/w Depreciation & amortization	85	96	105	112	117
o/w Changes in working capital	(672)	(1,295)	(751)	(827)	(1,050)
Cash flow from investing activities	**(3,709)**	**(2,974)**	**(2,012)**	**(2,012)**	**(1,512)**
o/w Capital expenditure	(3,263)	(1,519)	(2,012)	(2,012)	(1,512)
as % of sales	*24.3%*	*9.7%*	*10.4%*	*7.7%*	*4.9%*
Cash flow from financing activities	**(881)**	**(670)**	**(484)**	**(653)**	**(908)**
o/w Dividends paid	(625)	(646)	(484)	(653)	(908)
o/w Shares issued/(repurchased)	0	0	0	0	0
o/w Net debt issued/(repaid)	(271)	(78)	0	0	0
Net change in cash	**(2,216)**	**(947)**	**706**	**2,273**	**4,227**
Adj. Free cash flow to firm	**(780)**	**1,266**	**1,203**	**2,506**	**3,954**
y/y Growth	*(66.3%)*	*(262.3%)*	*(5.0%)*	*108.4%*	*57.8%*

Balance Sheet	FY24A	FY25A	FY26E	FY27E	FY28E
Cash and cash equivalents	6,586	5,983	6,689	8,962	13,189
Accounts receivable	3,937	4,873	8,767	10,630	13,162
Inventories	8,364	8,905	8,180	9,869	11,693
Other current assets	4,527	6,968	7,287	7,974	8,542
Current assets	**23,415**	**26,729**	**30,923**	**37,435**	**46,586**
PP&E	14,915	16,608	18,543	20,470	21,891
LT investments	451	517	517	517	517
Other non current assets	3,323	2,417	2,039	1,663	1,337
Total assets	**42,104**	**46,271**	**52,022**	**60,085**	**70,331**
Short term borrowings	7,350	9,297	11,488	14,449	17,957
Payables	3,065	4,551	4,551	4,551	4,551
Other short term liabilities	6,444	6,063	6,596	7,468	9,015
Current liabilities	**16,858**	**19,911**	**22,635**	**26,468**	**31,523**
Long-term debt	4,787	3,499	3,499	3,499	3,499
Other long term liabilities	918	1,079	1,079	1,079	1,079
Total liabilities	**22,563**	**24,489**	**27,213**	**31,046**	**36,101**
Shareholders' equity	18,387	20,434	23,129	26,899	31,516
Minority interests	1,153	1,348	1,679	2,139	2,714
Total liabilities & equity	**42,104**	**46,271**	**52,022**	**60,085**	**70,331**
BVPS	**8.65**	**9.70**	**10.98**	**12.77**	**14.96**
y/y Growth	*(1.1%)*	*12.2%*	*13.2%*	*16.3%*	*17.2%*
Net debt/(cash)	1,833	1,652	946	(1,327)	(5,554)

Ratio Analysis	FY24A	FY25A	FY26E	FY27E	FY28E
Gross margin	27.5%	31.7%	33.1%	34.0%	34.5%
EBITDA margin	11.9%	19.5%	21.1%	21.8%	22.7%
EBIT margin	11.3%	18.9%	20.6%	21.4%	22.3%
Net profit margin	8.9%	15.0%	16.4%	17.0%	17.8%
ROE	6.6%	12.2%	14.6%	17.7%	18.9%
ROA	2.8%	5.3%	6.5%	7.9%	8.5%
ROCE	5.3%	9.5%	12.0%	15.0%	16.6%
SG&A/Sales	5.7%	5.7%	5.5%	5.4%	5.4%
Net debt/Equity	0.1	0.1	0.0	NM	NM
Net debt/EBITDA	1.1	0.5	0.2	NM	NM
Sales/Assets (x)	0.3	0.4	0.4	0.5	0.5
Assets/Equity (x)	2.4	2.3	2.3	2.2	2.2
Interest cover (x)	-	-	-	-	-
Operating leverage	289.0%	564.4%	146.9%	115.1%	127.1%
Tax rate	8.7%	11.7%	11.7%	11.7%	11.7%
Revenue y/y Growth	(12.3%)	16.8%	23.6%	33.8%	19.5%
EBITDA y/y Growth	(47.2%)	90.6%	33.8%	38.1%	24.4%
EPS y/y Growth	(40.4%)	100.0%	34.8%	39.1%	24.9%

Valuation	FY24A	FY25A	FY26E	FY27E	FY28E
P/E (x)	66.0	33.0	24.5	17.6	14.1
P/BV (x)	4.3	3.8	3.4	2.9	2.5
EV/EBITDA (x)	54.3	28.3	21.1	15.3	12.3
Dividend Yield	0.4%	0.5%	0.6%	0.8%	1.2%

Source: Company reports and J.P. Morgan estimates.
Note: Rmb in millions (except per-share data).Fiscal year ends Dec. o/w - out of which