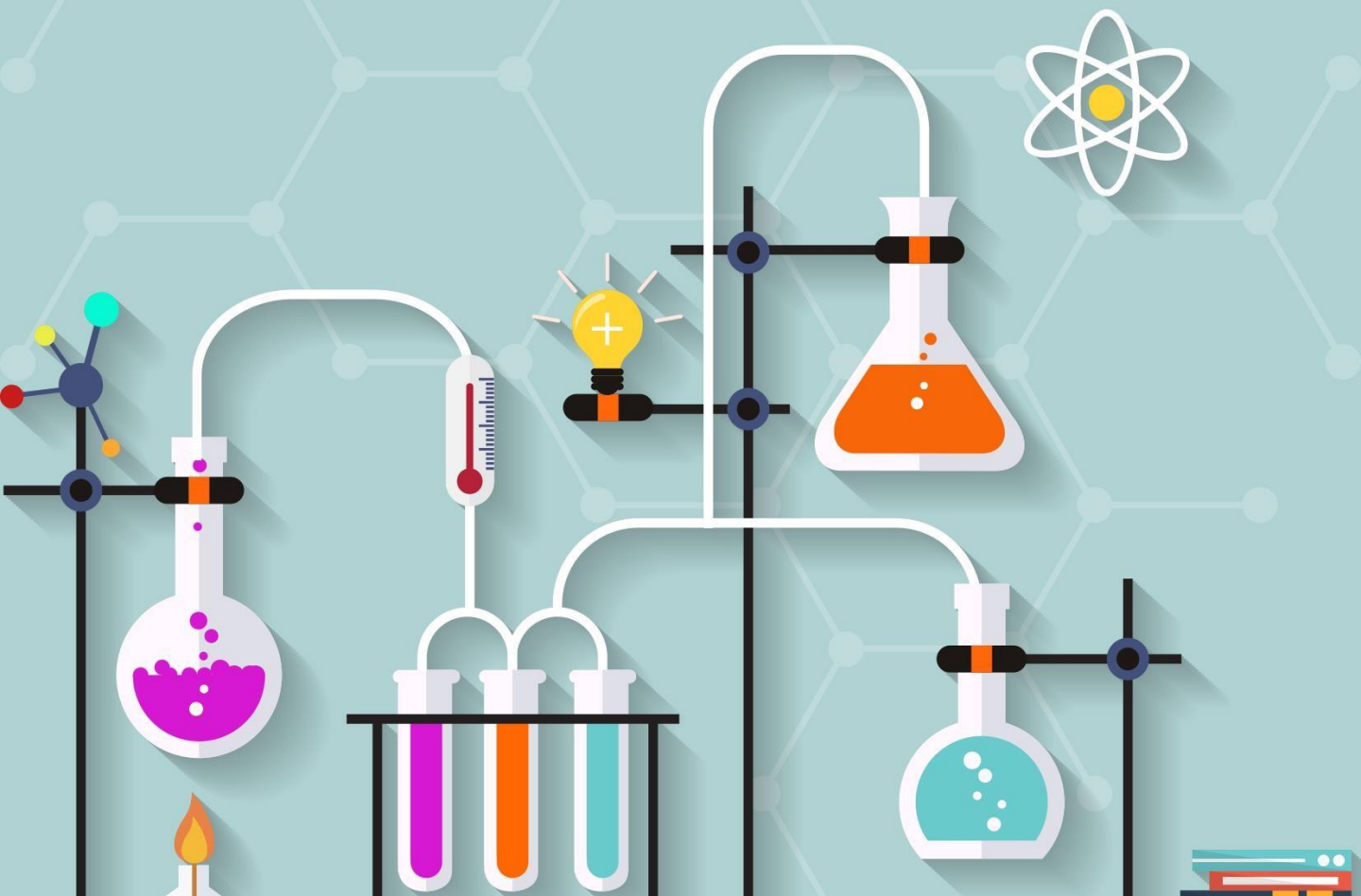


# Archean Chemical Industries Ltd- Event Update



## Archean Chemical Industries Ltd- Expanding into 1) Compound Semiconductor (Silicon Carbide) and 2) Zinc-Bromide Battery Technology in Energy Storage

CMP INR 596*	Target INR 943	Potential Upside 58%	Market Cap (INR Mn) INR 73,545	Recommendation BUY	Sector Chemical
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### Twin Tailwind from Dual Expansion:

- ACI is investing GBP 15 million for a 21.33% stake in **Clas-SiC Wafer Fab Limited**, a UK-based **Silicon Carbide (SiC)** wafer foundry specializing in SiC MOSFETs and diodes. This investment secures **technology exclusivity in India**, enabling Archean to integrate its specialty chemicals expertise into **SiC semiconductor business**, achieving cost efficiencies and a streamlined supply chain to meet growing demand in high-growth markets like **EVs and renewable energy**.
- ACI has also signed a binding term sheet for strategic investment of **USD 12 million** for a **21% stake** in **Offgrid Energy Labs**, a company specializing in **zinc-bromide battery technology** under its patented ZincGel® brand. This investment aligns with Archean's strategy to enter the energy storage sector, leveraging synergies with its bromine business to support Offgrid's production scale-up and meet growing demand in renewable energy and industrial storage applications.
- We believe these are pivotal strategic moves by ACI which might not yield immediate results, undoubtedly set a strong course for the company's future growth. These initiatives align with Archean Chemical's focus on entering the semiconductor space, targeting high-growth sectors such as EVs, renewable energy, industrial power electronics, and data centers. Additionally, the investment in Offgrid Energy Labs enables ACI to actively participate in the rapidly expanding energy storage sector by leveraging its specialty chemical capabilities to meet battery storage requirements.
- We firmly believe ACI is on the right track to expand into more critical, value-added products. On one hand, the expansion into bromine derivatives, and on the other side, the recent strategic investments into semiconductor and energy storage system, highlight the company's intent to move deeper into the value chain and gradually transition away from commodity-type business. **We reiterate our "BUY" rating on the stock, valuing it at a P/E multiple of 19x on FY26 EPS, with a target price of 943.**

### MARKET DATA

Shares outs (Mn)	123
Mkt Cap (INR Mn)	73,545
52 Wk H/L (INR)	838/510
Volume Avg (3m K)	221
Face Value (INR)	2
Bloomberg Code	ACI:IN

### KEY FINANCIALS

Particulars	FY22	FY23	FY24	FY25E	FY26E
Revenue From Operations	11,304	14,411	13,301	17,128	23,851
EBITDA Profit	4,672	6,340	4,627	5,857	8,502
EBITDA %	41%	44%	35%	34%	36%
Profit After Tax	1,882	3,826	3,190	4,057	6,125
PAT%	17%	27%	24%	24%	26%
P/E	39	19	23	18	12

Source: Company, KRChoksey Research

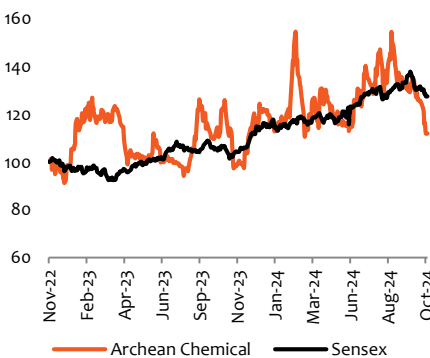
### Investment in Clas-SiC Wafer Fab Limited through SiCSem Private Limited

- ACI is investing into Clas-SiC Wafer Limited through its step-down subsidiary SiCSem Private Limited. Neun Infra Private Limited which is a wholly owned subsidiary of ACI incorporated SiCSem earlier. The target company is specialized in SiC MOSFETs (Metal-Oxide-Semiconductor Field-Effect Transistor) device manufacturing. It is investing GBP 15 million (**GBP 10 million in primary subscription and GBP 5 million in secondary purchase**) for a 21.33% stake in Clas-SiC Wafer Fab Limited.
- SiCSem has established strategic partnerships with global leaders, including Clas-SiC Wafer Fab (UK) for SiC process technology, NoMIS Power (USA) for device design and automotive qualification, Aixtron (Germany) for epitaxial film deposition equipment, and IIT Bhubaneswar for SiC crystal growth research, targeting high-quality SiC power device manufacturing within 24-36 months to serve both domestic and international markets
- SiCSem proposes to establish its silicon carbide manufacturing facility in the state of Odisha. An application has also been submitted to the Indian Semiconductor Mission under the Government of India and is currently awaiting approval.

### Strategic Investment for Energy Storage Expansion:

- ACI, through a **\$12 million investment**, is acquiring a **21% stake** in Offgrid Energy Labs, which specializes in **ZincGel® zinc-bromide battery technology**—a solution well-suited for renewable energy storage and low-power mobility applications due to its high cycle life, safety, and cost advantages.
- This investment aligns with ACI's core specialty in bromine, a key component in Offgrid's zinc-bromide batteries. By leveraging its bromine capabilities, ACI can support Offgrid's production scale-up, directly contributing to the rapidly growing energy storage
- ACI is facilitating the establishment of a pilot manufacturing facility in the UK, with plans for a large-scale mega-factory in India to meet global demand. With the stationary energy storage market expected to exceed \$30 billion by 2030, this investment positions ACI to capitalize on the rising demand driven by renewable energy integration and grid modernization.

### SHARE PRICE PERFORMANCE



### MARKET INFO

SENSEX	79,402
NIFTY	24,180

### SHARE HOLDING PATTERN (%)

Particulars	Sept-24 (%)	Jun-24 (%)	Mar-24 (%)
Promoters	53.45	53.46	53.46
FIIIs	10.17	9.53	5.86
DIIs	21.83	21.04	27.13
Others	14.56	15.96	13.55
Total	100	100	100

\*Based on Previous closing

## Archean Chemical Industries Ltd-

### What is SiC (Silicon Carbide)?

**Silicon Carbide (SiC)** is a compound semiconductor made from silicon and carbon. Unlike traditional silicon, which is widely used in semiconductor manufacturing, SiC has unique properties that make it especially suitable for high-performance, high-power applications. Key characteristics of SiC include:

**Higher Efficiency and Power Density:** SiC can operate at higher voltages and frequencies than silicon, which reduces energy loss during power conversion.

**Thermal Stability:** SiC can withstand much higher temperatures without degrading, making it suitable for environments where durability and reliability under extreme conditions are critical.

**Faster Switching Speeds:** SiC devices can switch on and off faster than traditional silicon devices, which improves performance in applications that require rapid switching.

### How SiC is Different from Silicon?

**Voltage and Temperature Tolerance:** SiC has a much higher breakdown voltage and thermal conductivity than silicon, allowing devices to handle more power and operate in harsher conditions.

**Efficiency:** SiC devices are generally more efficient, meaning they waste less energy in the form of heat. This makes them ideal for applications where efficiency is paramount, such as electric vehicles (EVs) and renewable energy systems.

**Size and Weight:** Due to its superior properties, SiC allows for smaller and lighter device designs without sacrificing performance, leading to more compact electronic systems.

### SiC MOSFETs and Diodes

**SiC MOSFET (Metal-Oxide-Semiconductor Field-Effect Transistor):** This is a type of transistor used in power electronics for switching and amplification. SiC MOSFETs handle high power loads more efficiently than silicon MOSFETs and are preferred in applications that require high-voltage operation with minimal energy loss.

**SiC Diodes:** These are unidirectional devices that allow current to flow in only one direction. SiC diodes, specifically Schottky diodes, are used for high-speed switching applications with minimal energy loss, making them ideal for power rectification in demanding environments.

### Applications of SiC MOSFETs and Diodes

SiC MOSFETs and diodes are critical components in industries that demand high performance, efficiency, and durability. They are widely used in:

**Electric Vehicles (EVs):** SiC MOSFETs and diodes are essential in EV powertrains and charging systems, as it will increase the efficiency and range of electric vehicles by reducing energy losses.

**Renewable Energy Systems:** SiC devices are used in solar inverters and wind turbine systems to convert and manage high-power levels efficiently, supporting the integration of renewable energy into the power grid.

**Industrial Power Electronics:** SiC components are ideal for industrial applications, such as motor drives, data centers, and power supplies, due to their ability to handle high power densities with greater reliability.

**Data Centers:** SiC technology enables high-efficiency power supplies in data centers, reducing energy consumption and thermal management costs, which are critical for large-scale data operations.

### Financial Performance of Clas-SiC Wafer Fab Limited

Clas-SiC Wafer Fab Limited, a UK-based SiC manufacturing company established in June 2017, has shown significant revenue growth over the past three fiscal years, as outlined below:

**FY 2024:** GBP 10.01 million

**FY 2023:** GBP 10.65 million

**FY 2022:** GBP 2.04 million

Source: Company, KRChoksey Research

## Archean Chemical Industries Ltd-

### Capabilities of Offgrid

Offgrid has created a proprietary battery technology using **zinc-bromide chemistry**, offering notable advantages in both cost and performance. This battery system is designed specifically for applications that demand frequent deep charging and discharging cycles, making it highly suitable for **renewable energy storage** and **low-power mobility solutions**. Offgrid is pre-revenue company.

### Key aspects in Zinc Bromide Batteries

**Technology Differentiation of ZincGel® Batteries:** Offgrid's ZincGel® zinc-bromide batteries offer a **superior cycle life of 7,500 cycles**, enhanced safety, and better cost-effectiveness compared to **traditional lithium-ion batteries**. This makes them particularly suited for applications that require frequent daily charge and discharge, such as **commercial and industrial (C&I) solar systems** and **utility-scale grid stability projects**.

**Pilot Manufacturing Facility in the UK:** ACIL is supporting Offgrid in setting up a **pilot manufacturing facility in the UK** to begin scaled production of ZincGel® batteries. This facility should serve as an initial testing and production hub, allowing Offgrid to streamline manufacturing processes before expanding to a larger scale.

**Planned Giga-Factory in India:** Looking ahead, ACIL plans to establish a **giga-factory in India** to scale up the production of ZincGel® batteries for broader distribution. This large-scale facility aims to meet the rising demand in both domestic and international markets, supporting India's ambitions in renewable energy and grid infrastructure.

• **Market Potential and Growth Forecast:** The **global stationary energy storage market** is expected to exceed **\$30 billion by 2030**, driven by the increasing integration of renewable energy sources and the need for grid modernization. Offgrid's ZincGel® technology is positioned to tap into this growing demand, leveraging its advantages in energy storage applications.

**Demand Surge in India's Battery Storage Market:** In India, demand for battery energy storage systems (BESS) is growing rapidly, with **2024 tenders exceeding 7GWh** in storage capacity, valued at around **\$1 billion**. This demand is fueled by the country's renewable energy targets, creating significant opportunities for Offgrid's ZincGel® technology as it expands production in the region.

### Valuation and view:

We firmly believe ACI is strategically positioned to expand into critical, value-added products through its advancement in bromine derivatives and recent strategic investments in high-growth sectors. These initiatives underscore the company's intent to deepen its value chain presence and gradually transition away from commodity-based operations. Archean Chemical remains on track to launch its bromine derivative products, including Clear Brine Fluids, PTA Synthesis, and other specialty chemicals, in the second half of FY25 (H2FY25). Additionally, the recent acquisition of Oren Hydrocarbon is expected to become operational in H2FY25, with management projecting revenue exceeding INR 2,000 million from this segment. With bromine prices stabilizing and the increasing contribution of non-commodity revenue from H2FY25E onward, ACI is well-positioned for a potential re-rating. Despite short-term uncertainties in product mix, we forecast robust growth, projecting a 34%/39% revenue/net profit CAGR during FY24-FY26E, driven by volume recovery in core products and an uptick in new derivative offerings. We reiterate our **"BUY" rating** on ACI, valuing the stock at a P/E multiple of **19x on FY26 EPS**, with a target price of **INR 943**.

## Archean Chemical Industries Ltd-

### Financials:

#### Exhibit 1: Profit & Loss Statement

Particulars	FY22	FY23	FY24	FY25E	FY26E
Revenue From Operations	11,304	14,411	13,301	17,128	23,851
Expenses					
Gross Profit	10,911	14,383	12,424	15,669	21,743
Gross Profit Margin%	97%	100%	93%	91%	91%
Employee Benefit Expenses	378	720	724	878	1,153
Other expenses	5,861	7,323	7,073	8,934	12,089
Operating Expenses	6,633	8,071	8,674	11,271	15,349
<b>EBITDA Profit</b>	<b>4,672</b>	<b>6,340</b>	<b>4,627</b>	<b>5,857</b>	<b>8,502</b>
<b>EBITDA %</b>	<b>41%</b>	<b>44%</b>	<b>35%</b>	<b>34%</b>	<b>36%</b>
Finance Cost	1,617	970	85	63	73
Depreciation	669	686	703	759	810
Total Expenses	8,918	9,727	9,462	12,093	16,232
Profit Before Taxes	2,510	5,117	4,272	5,423	8,185
Total Tax Expenses	628	1,291	1,082	1,366	2,061
<b>Profit After Tax</b>	<b>1,882</b>	<b>3,826</b>	<b>3,190</b>	<b>4,057</b>	<b>6,125</b>
PAT Margin %	17%	27%	24%	24%	26%
<b>Adj. Diluted EPS (INR)</b>	<b>15.3</b>	<b>31.0</b>	<b>25.9</b>	<b>32.9</b>	<b>49.6</b>

#### Exhibit 3: Cash Flow Statement

Particulars	FY22	FY23	FY24	FY25E	FY26E
<b>Net cash generated from operating activities</b>	<b>3,145</b>	<b>4,961</b>	<b>3,794</b>	<b>5,619</b>	<b>5,540</b>
Net cash (used in) investing activities	-1,101	-2,903	-3,073	-1,607	-1,074
Net cash generated from / (used in) financing activities	-2,237	-2,120	-326	-594	-682
Cash & Cash Equivalents at the end of the year	122	60	455	3,873	7,657

#### Exhibit 4: Key Ratios

Key Ratios	FY22	FY23	FY24	FY25E	FY26E
EBITDA Margins (%)	41.3%	44.0%	34.8%	34.2%	35.6%
Net Profit Margin (%)	16.6%	26.5%	24.0%	23.7%	25.7%
RoE (%)	112.5%	45.2%	20.4%	21.6%	26.3%
RoCE (%)	39.3%	44.2%	24.4%	26.4%	32.3%
RoA (%)	12.7%	23.3%	16.7%	18.1%	22.5%
Debt/Equity (x)	321.3%	0.1%	3.5%	1.6%	1.8%
P/E (X)	39.1	19.2	23.2	18.1	12.0

Source: Company, KRChoksey Research

#### Exhibit 2: Balance Sheet

Particulars	FY22	FY23	FY24	FY25E	FY26E
Property, plant and equipment	10,455	10,649	11,180	12,067	12,257
Capital work in progress	172	362	462	412	437
Right-of-use assets	406	450	416	433	424
Other financial assets	18	222	155	187	171
Other non current assets	274	99	998	549	773
<b>Total non-current assets</b>	<b>11,327</b>	<b>11,787</b>	<b>13,297</b>	<b>13,694</b>	<b>14,129</b>
Inventories	1,208	1,678	1,273	1,726	2,226
Investments	111	2,101	3,499	2,800	3,149
Trade receivables	1,530	1,177	1,564	1,707	2,590
Cash and cash equivalents	122	60	455	3,873	7,657
Other financial assets	146	163	146	155	151
Other current assets	400	317	321	319	320
<b>Total current assets</b>	<b>3,986</b>	<b>5,767</b>	<b>7,262</b>	<b>10,583</b>	<b>16,097</b>
<b>Total Assets</b>	<b>15,313</b>	<b>17,554</b>	<b>20,559</b>	<b>24,276</b>	<b>30,226</b>
Equity Share Capital	193	246	247	247	247
Other Equity	2,430	14,064	16,769	20,367	25,743
<b>TOTAL EQUITY</b>	<b>2,623</b>	<b>14,310</b>	<b>17,015</b>	<b>20,614</b>	<b>25,989</b>
Borrowings	8,428	8	594	336	465
Lease liabilities	455	357	312	335	323
<b>Total non-current liabilities</b>	<b>10,934</b>	<b>1,520</b>	<b>2,194</b>	<b>1,893</b>	<b>2,043</b>
Borrowings	21	207	2	104	53
Total Trade Payable	1,123	956	998	1,211	1,738
Other financial liabilities	49	214	241	228	234
Other Current Liabilities	486	194	28	111	70
Total current liabilities	1,756	1,724	1,349	1,770	2,193
Total Liabilities	12,690	3,244	3,543	3,663	4,236
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>15,313</b>	<b>17,554</b>	<b>20,558</b>	<b>24,276</b>	<b>30,226</b>

## Archean Chemical Industries Ltd-

Archean Chemical Ltd.			
Date	CMP (INR)	TP (INR)	Recommendation
28-Oct-24	596	943	BUY
07-Aug-24	709	943	BUY
31-Jul-24	762	943	BUY

Rating Legend (Expected over a 12-month period)	
Our Rating	Upside
Buy	More than 15%
Accumulate	5% – 15%
Hold	0 – 5%
Reduce	-5% – 0
Sell	Less than – 5%

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