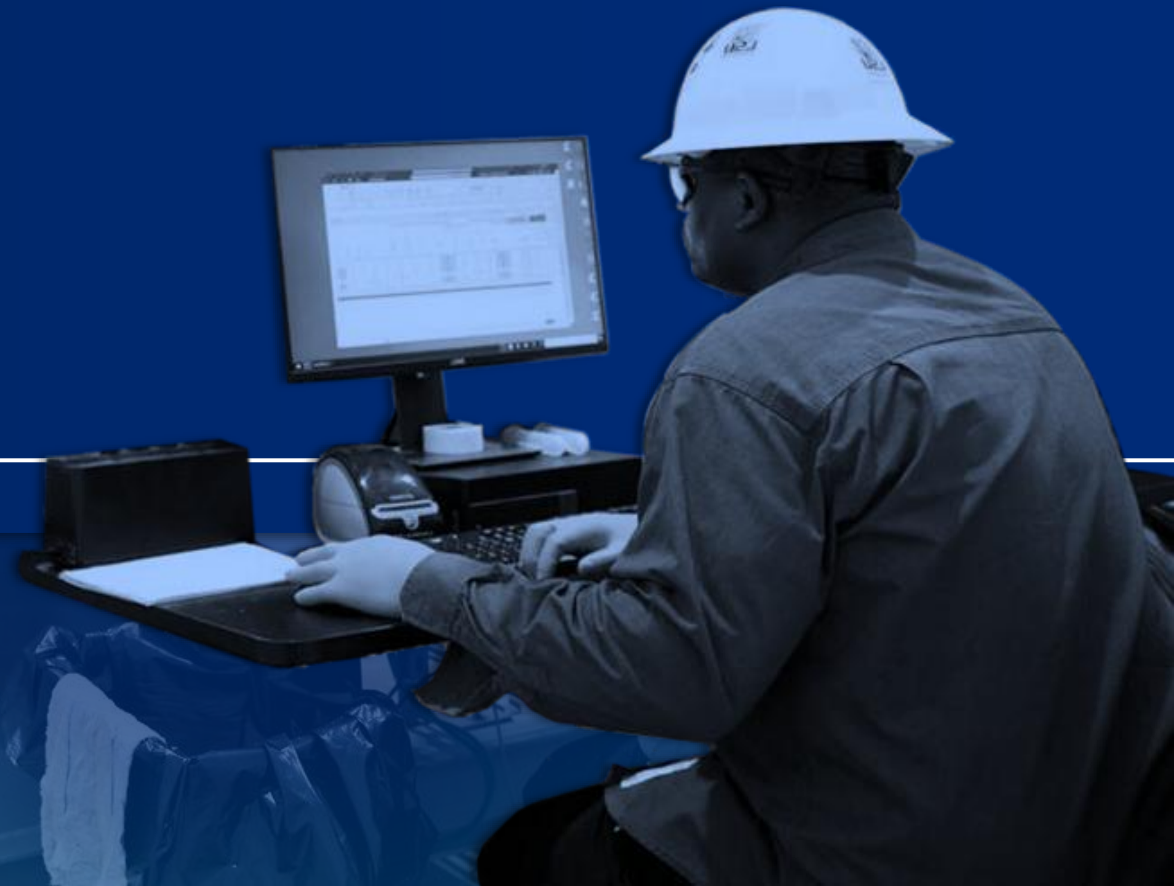
NYSE : SLI | TSX.V : SLI

The Future of Lithium in North America

Creating a Leading U.S. Lithium Business



September 2026

www.standardlithium.com

Cautionary Statement

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This Presentation shall not constitute an offer to sell or a solicitation of an offer to purchase securities, and shall not constitute an offer, solicitation or sale in any state or jurisdiction in which or to any person to whom such an offer, solicitation or sale would be unlawful. Where this Presentation includes information on peer companies and other industry and market data, we have obtained this information from publicly available and other third-party sources as well as the Company's good faith estimates. While the Company believes the information was prepared by reputable sources, the Company did not independently verify the information or the underlying assumptions. No representation or warranty is made as to accuracy, completeness or reasonableness of such information.

This presentation also includes certain estimates and projections that are based on internal models. Although the estimates are based upon assumptions and analysis that we believe to be reasonable, there can be no assurance that actual results will not differ, perhaps materially, from the estimates presented in this presentation.

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Forward-Looking Statements

Except for statements of historical fact, this Presentation contains certain "forward-looking information" within the meaning of applicable Canadian securities legislation and "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 (collectively referred to herein as "forward-looking information"). The statements relate to future events or the Company's future performance. All statements, other than statements of historical fact, may be forward-looking information. Information concerning mineral resource and mineral reserve estimates also may be deemed to be forward-looking information in that it reflects a prediction of mineralization that would be encountered if a mineral deposit were developed and mined. Forward-looking information generally can be identified by the use of words such as "seek", "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "predict", "propose", "potential", "target", "intend", "could", "might", "should", "believe", "scheduled", "implement" and similar words or expressions. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information.

In particular, this Presentation contains forward-looking information, including, without limitation, with respect to the following matters or the Company's expectations relating to such matters: the Company's planned exploration and development programs (including, but not limited to, plans and expectations regarding advancement, testing and operation of the lithium extraction pilot plant and collaboration with Equinor ASA ("Equinor")); commercial opportunities for lithium products; filing of technical reports; expected results of exploration programs; accuracy of mineral or resource exploration activity; accuracy of mineral reserves or mineral resources estimates, including the ability to develop and realize on such estimates; whether mineral resources will ever be developed into mineral reserves, and information and underlying assumptions related thereto; budget estimates and expected expenditures by the Company on its properties; regulatory or government requirements or approvals; the reliability of third party information; continued access to mineral properties or infrastructure; payments obligations pursuant to property and offtake agreements; fluctuations in the market for lithium and its derivatives; expected timing of anticipated expenditures; anticipated timelines for a Final Investment Decision and production at the SWA Project (as defined below); performance of the Company's business and operations; changes in exploration costs and government regulation in Canada and the United States; competition for, among other things, capital, acquisitions, undeveloped lands and skilled personnel; changes in commodity prices and exchange rates; currency and interest rate fluctuations; the Company's funding requirements and ability to raise capital; geopolitical instability; war (such as the U.S. military intervention in Iran and Russia's invasion of Ukraine); health and safety protocols and their efficacy and impacts on timelines and budgets; and other factors or information.

Forward-looking information does not take into account the effect of transactions or other items announced or occurring after the statements are made. Forward-looking information is based upon a number of expectations and assumptions and is subject to a number of risks and uncertainties, many of which are beyond the Company's control, that could cause actual results to differ materially from those that are disclosed in or implied by such forward-looking information. With respect to forward-looking information listed above, the Company has made assumptions regarding, among other things: current technological trends; ability to fund, advance and develop the Company's properties; the Company's ability to operate in a safe and effective manner; uncertainties with respect to receiving, and maintaining, mining, exploration, environmental and other permits; operation of a joint venture ownership structure with Equinor; pricing and demand for lithium, including that such demand is supported by growth in the energy security and storage market and the electric vehicle market; impact of increasing competition; commodity prices, currency rates, interest rates and general economic conditions; the legislative, regulatory and community environments in the jurisdictions where the Company operates; impact of unknown financial contingencies; impacts of changes in current and future trade agreements, legislation, regulations, import tariffs and other similar trade barriers including material changes in the U.S.-Mexico-Canada Agreements and implementation of the "America First Trade Policy"; increases in geo-political tension and tension with respect to lithium; market prices for lithium products; budgets and estimates of capital and operating costs; estimates of mineral resources and mineral reserves; reliability of technical data; anticipated timing and results of operation and development; inflation; war (such as the U.S. military intervention in Iran and Russia's invasion of Ukraine); and the impact of health and safety protocols on the Company and its business. Although the Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable, the Company can give no assurance that these assumptions and expectations will prove to be correct. Since forward-looking information inherently involves risks and uncertainties, undue reliance should not be placed on such information.

Forward-looking information involves known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such factors include, but are not limited to: general economic conditions in Canada, the United States and globally; industry conditions, including the state of the energy security and storage market and the electric vehicle market; governmental regulation of the mining industry, including environmental regulation; geological, technical and drilling problems; unanticipated operating events; negotiation of commercial access agreements; reliance upon joint venture partners and disagreements surrounding project development; competition for and/or inability to retain drilling rigs and other services and to obtain capital, undeveloped lands, skilled personnel, equipment and inputs; ability to secure further leasehold positions and perform further exploration drilling in East Texas; the availability of capital on acceptable terms; the need to obtain required approvals from regulatory authorities; uncertainties associated with estimating mineral resources and mineral reserves, including uncertainties relating to the assumptions underlying mineral resource and mineral reserve estimates; whether mineral resources will ever be converted into mineral reserves; uncertainties in estimating capital and operating costs, cash flows and other project economics; liabilities and risks, including environmental liabilities and risks inherent in mineral extraction operations; health and safety risks; risks related to unknown financial contingencies, including litigation costs, on the Company's operations; unanticipated results of exploration activities; unpredictable weather conditions; unanticipated delays in preparing technical studies; inability to generate profitable operations; restrictive covenants in debt instruments; lack of availability of additional financing on terms acceptable to the Company; intellectual property risk; stock market volatility; volatility in market prices for commodities; liabilities inherent in the mining industry; inflation risks; risks related to war (such as the U.S. military intervention in Iran and Russia's invasion of Ukraine); global pandemics; changes in tax laws and incentive programs relating to the mining industry; other risks pertaining to the mining industry; conflicts of interest; dependency on key personnel; and fluctuations in currency and interest rates, as well as those factors discussed in the section entitled "Risk Factors" in the Company's AIF.

Cautionary Statement (continued)

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

Readers are cautioned that the foregoing lists of factors are not exhaustive. All forward-looking information in this this Presentation speaks as of the date of this Presentation. The Company does not undertake any obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as required by law. All forward-looking information contained in this Presentation is expressly qualified in its entirety by this cautionary statement. Additional information about these assumptions and risks and uncertainties is contained in the Company's filings with securities regulators, including the Company's most recent MD&A for our most recently completed financial year and, if applicable, interim financial period, which are available on SEDAR+ at www.sedarplus.com and EDGAR at www.sec.gov.

Currency

Except where otherwise indicated, all references to currency in this Presentation are to U.S. Dollars ("$").

NI 43-101 Disclosure

Scientific and technical information in this Presentation has been reviewed and approved by Steve Ross, P. Geo., Vice President Resource Development, of the Company, who is a "qualified person" under National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101").

Further information about the South West Arkansas ("SWA") Project, including a description of key assumptions, parameters, methods and risks, is available in the NI 43-101 technical report titled "South West Arkansas Project NI 43-101 Technical Report & Definitive Feasibility Study, Arkansas, United States" dated October 14, 2025 (the "South West Arkansas DFS"), available under the Company's SEDAR+ profile or otherwise updated by the information provided in the Company's news release announcing a preliminary economic assessment on the Franklin Project dated September 8, 2026, and available under the Company's SEDAR+ profile.

Further information about the Franklin Project in the northeast region of Texas (the "Franklin Project") including a description of key assumptions, parameters, methods and risks, is available in the NI 43-101 technical report titled "NI 43-101 Technical Report: Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s Franklin Project, Located in Hopkins, Franklin, and Titus Counties, Texas, United States" dated November 5, 2025 (the "Franklin Project Report"), available under the Company's SEDAR+ profile.

The mineral resources and mineral reserves contained in this Presentation have been prepared in accordance with the requirements of securities laws in effect in Canada, including NI 43-101, which governs Canadian securities law disclosure requirements for mineral properties. All terms not otherwise defined have the meaning given to them under the CIM Definition Standards for mineral resources and mineral reserves.

NI 43-101 differs from the requirements of the United States Securities and Exchange Commission ("SEC") that are applicable to domestic United States reporting companies. Any mineral resources or reserves reported by the Company herein may not be comparable with information made public by United States companies subject to the SEC's reporting and disclosure requirements.

Non-GAAP Measures

This Presentation includes certain performance measures ("non-GAAP measures") which are not specified, defined, or determined under generally accepted accounting principles (in the Company's case, International Financial Reporting Standards, or "IFRS").

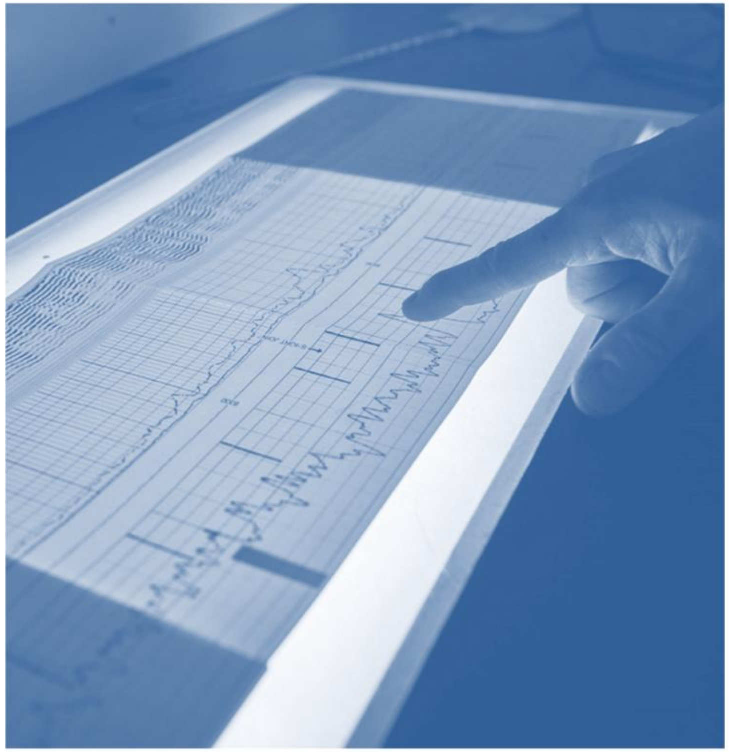
The non-GAAP financial measures used in this Presentation and common to the mining industry are all-in operating costs. All-in operating cost reflects both direct costs and indirect costs, as well as royalties, sustaining capital and allowances for mine closure, but is exclusive of taxes. The majority of the all-in operating cost for the SWA Project comprises reagent usage required for extraction of lithium from brine, as well as conversion to battery quality lithium carbonate and electricity consumption.

These are common performance measures in the lithium mining industry, but because they do not have any mandated standardized definitions, they may not be comparable to similar measures presented by other issuers. Accordingly, the Company uses such measures to provide additional information and readers should not consider them in isolation or as a substitute for measures of performance prepared in accordance with generally accepted accounting principles ("GAAP"). Upon commencing commercial production and reporting all-in operating costs, the Company will provide a reconciliation to IFRS figures then presented.

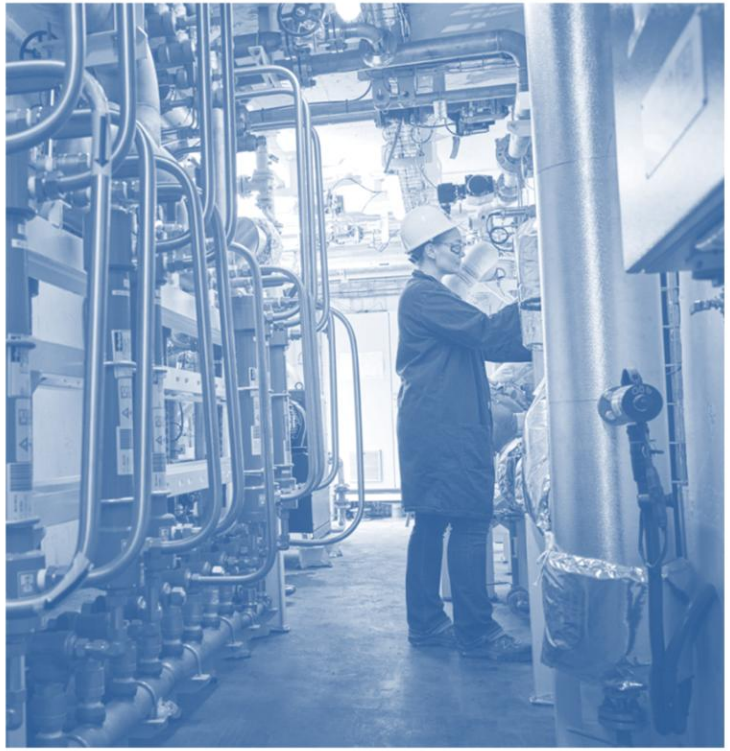
Department of Energy Acknowledgement and Disclaimer

This material is based upon work supported by the U.S. Department of Energy's Office of Critical Minerals and Energy Innovation under award Number DE-MS0000099. The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.

Standard Lithium aims to be a leading low-cost sustainable U.S. lithium producer



Plans for attractive near-term commercial-scale production by applying innovative technologies to our world class assets in Arkansas and Texas



Building projects with our global partners in a region with broad stakeholder and regulatory support

Standard LITHIUM

Investment Highlights

Premier Lithium Resource in North America	Position in the Smackover is **large and scalable** with some of the **highest reported lithium-in-brine grades** in North America[1]
Advantaged Cost Structure	High grade resource, proven commercial-scale technology and infrastructure drives low operating costs – expected to rank in **first (lowest) quartile of global cost curve[2]**
Strong Government Support	**SWA Project identified as transparency project** on Federal Permitting Dashboard[3], and awarded **$225 million grant from the U.S. Department of Energy ("DOE")[4]**
Strategic Location	Assets located in areas with **established natural resource extraction industries**, **infrastructure and skilled workforce**, as well as proximity to key battery supply chains
World-Class Partners	**Partnerships bring complementary resources and expertise**: Equinor provides subsurface and large-project delivery experience and Aquatech aids in development of flowsheet and technology, including providing performance guarantees
Advanced and De-risked Project Development	Finalized SWA Definitive Feasibility Study ("DFS"), which supports a **highly attractive asset**, and completed extensive field testing of direct lithium extraction ("DLE") technology to **de-risk performance**
Attractive Market Fundamentals	Global lithium demand projected to reach 3.3 million tonnes of lithium carbonate equivalent ("LCE") by 2030 – more than doubling from 2025 levels[5] – with **strong U.S. support for advancing domestic production[6]**

1. Standard Lithium press releases on July 15, 2025 and September 8, 2026
2. Source: Benchmark Minerals Q2 2026 Lithium Forecast
3. Standard Lithium press release on April 21, 2025. Inclusion on the Permitting Dashboard as a FAST-41 transparency project highlights the project's role in advancing domestic critical mineral lithium production and supporting U.S. energy independence but does not create an assumption of project approval, favorable review or federal funding
4. DOE grant awarded to SWA Lithium LLC, a jointly-owned U.S. subsidiary of Standard Lithium and Equinor for initial phase of SWA Project
5. Q2 2026 Fastmarkets Lithium Forecast
6. Executive Order 'Immediate Measures to Increase American Mineral Production' signed March 20, 2025

Delivering Made-in-America Lithium

Standard Lithium has executed a focused strategy built on four core pillars, which we believe positions the company to deliver domestically produced lithium in 2029

SECURE THE BEST RESOURCE	UNLOCK RESOURCE WITH PROVEN TECHNOLOGY	DE-RISK RESOURCE AND TECHNOLOGY	ALIGN WITH THE RIGHT PARTNERS

2017
- Entered Smackover through Tetra Option Agreement (part of SWA Project)

2020
- Began Operations of DLE Demo Plant at Lanxess Bromine Operations

2021
- Executed Joint Development Agreement with Koch (now Aquatech[1]) to Develop and Commercialize DLE

2024
- Entered Strategic Partnership with Equinor[2]
- Executed DLE Technology License for SWA Project[3]

2025
- Finalized $225mm Grant from DOE[4]
- Released DFS for SWA Project[5]
- Released Maiden Resource for First Project in East TX (Franklin Project)[6]

2026
- Binding offtake agreements for SWA Project with Trafigura and LG Energy Solution[7]
- Concluded U.S. federal NEPA review[8]

2029
- Expecting Final Investment Decision and Start of Construction by Year-End 2026
- Targeting First Commercial Production at SWA Project in 2029

1. For further details see Aquatech press release dated September 16, 2025
2. Standard Lithium press release dated May 9, 2024
3. Standard Lithium press release dated October 28, 2024, signed license agreement with Koch Technology Solutions (now Aquatech) to deploy and use Li-ProTM Lithium Selective Sorption ("Li-Pro LSS") technology at SWA Phase 1
4. Standard Lithium press release on January 16, 2025; DOE grant awarded to SWA Lithium LLC, a jointly-owned U.S. subsidiary of Standard Lithium and Equinor for initial phase of SWA Project
5. Standard Lithium press release dated September 3, 2025
6. Franklin Project Maiden Inferred Resource Report dated November 5, 2025
7. Standard Lithium press releases dated March 9, 2026 and August 31, 2026
8. Standard Lithium press release dated May 14, 2026

The Smackover: A World-Class Lithium Resource

High-quality lithium brine resource

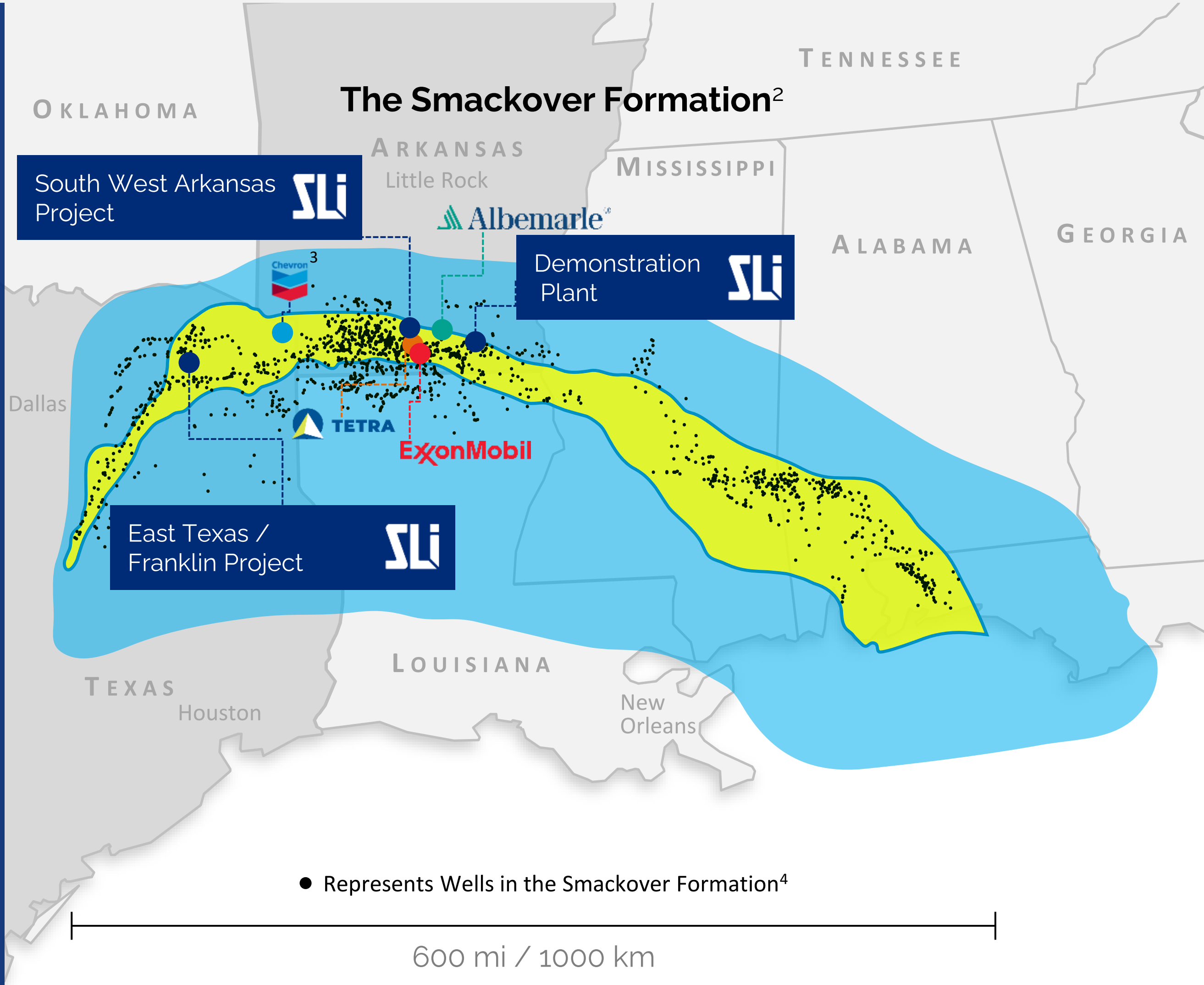
- Some of the highest recorded lithium concentrations outside of South America
- 8+ billion gallons of brine processed annually in Arkansas for bromine production[1]

Proven reservoir with significant geological understanding

- 100+ years of energy operations
- 60+ years of continuous brine extraction operations[1]
- Geologic data from thousands of wells

Significant infrastructure to support growth

- Region is home to one of North America's largest and oldest brine processing industries[1]
- Gulf Coast chemical industry provides ease of access to key reagents
- Availability of water, power, natural gas, road, rail and skilled labor



1. Arkansas Department of Energy and Environment, *"Lithium Facts"*
2. Identified locations for Albemarle, ExxonMobil, and Chevron include both bromine and lithium operations
3. Chevron press release on June 17, 2025. Chevron acquired two leasehold acreage positions across regions in Northeast Texas and Southwest Arkansas
4. Arkansas Department of Energy and Environment dated August 2025, *"Lithium Update"*

Developing Highly Attractive U.S. Lithium Assets

SOUTH WEST ARKANSAS	EAST TEXAS
	

Ownership:
55% Standard Lithium / 45% Equinor[1]

South West Arkansas

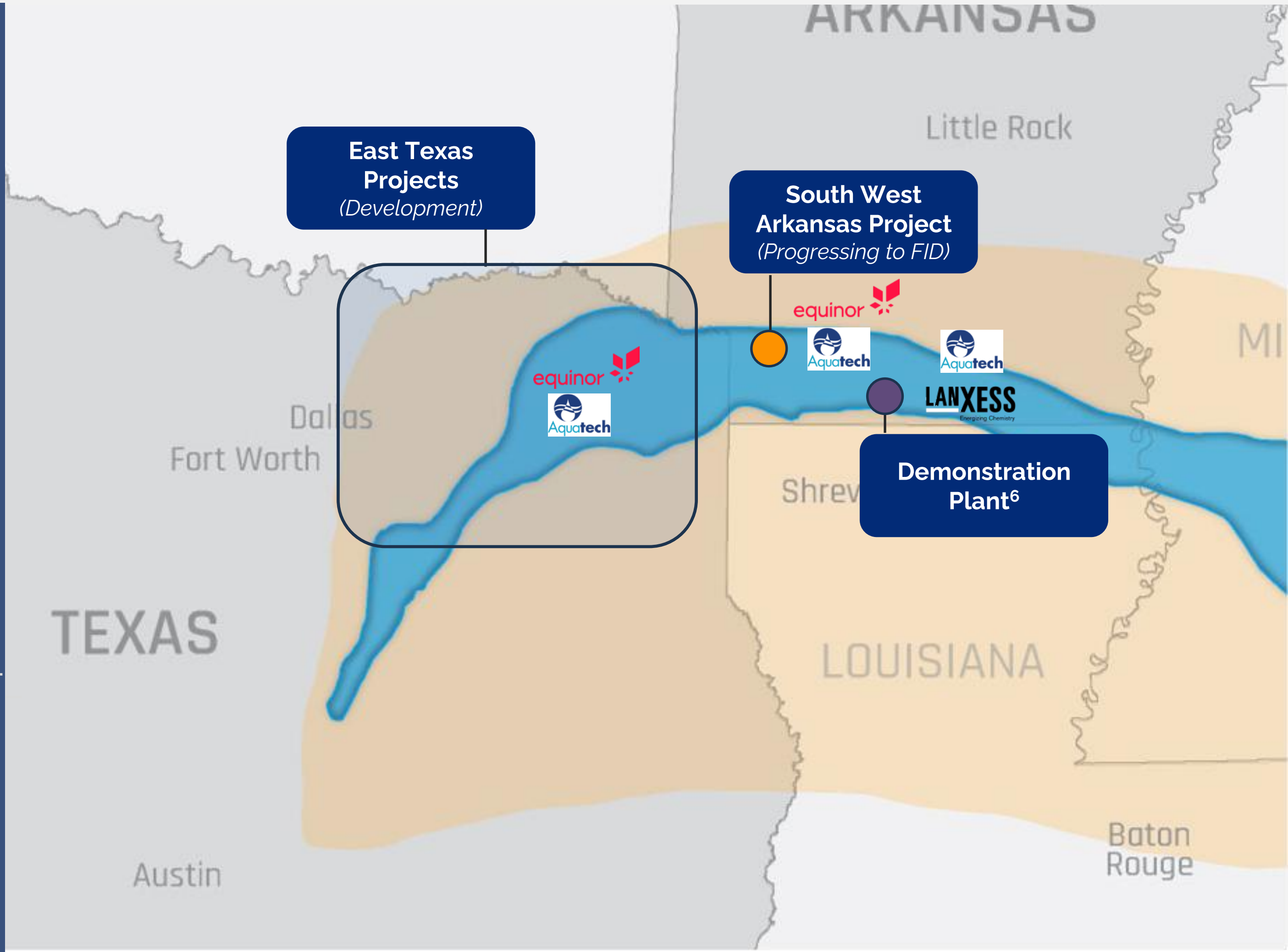
Key Highlights:
- Avg. lithium concentration of **442 mg/L** on Measured & Indicated Resource with results **up to 616 mg/L**[2]
- Closed **$225 million grant** from DOE[3] and included as transparency project on Federal Permitting Dashboard[4]

Production:
- Initial capacity of **22,500 tonnes per annum ("TPA") lithium carbonate**, with further expansion opportunity[2]
- Targets first commercial production in **2029**

East Texas

Key Highlights:
- Avg. lithium concentration of **562 mg/L** on Indicated Resource (Franklin Project) with significant potash and bromine concentrations[5]
- Potential for significant upside with further exploration

Production:
- **70,000 TPA of potential lithium carbonate** capacity at Franklin Project[5]
- Targeting well over **100,000 TPA** lithium chemicals over multiple phases and projects in TX



1. Standard Lithium press release on May 8, 2024
2. South West Arkansas Project DFS dated October 14, 2025 and supplemental guidance thereto; max grade referenced in press release dated July 15, 2025
3. Standard Lithium press release on January 16, 2025; DOE grant awarded to SWA Lithium LLC, a jointly-owned U.S. subsidiary of Standard Lithium and Equinor for initial phase of SWA Project
4. Standard Lithium press release on April 21, 2025
5. Franklin Project Preliminary Economic Assessment press release dated September 8, 2026
6. The Company's Demonstration Plant is located at the Lanxess South facility near El Dorado, AR

South West Arkansas: First Planned U.S. Commercial DLE

MILESTONES

DLE De-Risking Complete[1]

Successful field-test surpassed key performance criteria

Front-End Engineering Design & DFS Complete

DFS technical report released October 2025

Targeting FID and Construction in 2026

Offtake and debt finance process well-advanced

HIGHLIGHTS (100% Ownership Basis)[2]

22,500 TPA
Lithium Carbonate Production Capacity

2029
Targeted First Commercial Production

549 mg/L
Initial Grade at Start of Production

481 mg/L
Average Grade over Plant Operating Life

1.2Mt
Total Measured & Indicated Lithium Carbonate Equivalent Resource[4]

$1.7bn
Unlevered Pre-Tax NPV_8 [3]

20%
Pre-Tax IRR[3]

$1,449mm
Total CAPEX

$4,516 $/t
Average Annual Cash OPEX

20+ Year
Modelled Operating Life

Note: All model outputs are expressed on a 100% ownership basis with no adjustments for project financing assumptions. Standard Lithium's economic interest in the SWA Project is 55%. Any discrepancies in the totals are due to rounding effects

1. Standard Lithium press release dated March 11, 2025
2. South West Arkansas Project Definitive Feasibility Study dated October 14, 2025 and supplemental guidance thereto
3. Assumes $22,400/t lithium price based on average of Fastmarket's 20-year forward pricing curve
4. Includes measured & indicated resource of 922kt and 255kt, respectively; shown inclusive of reserves; excludes inferred resource of 278kt.

Franklin Project: A Premier Global Lithium Asset

MILESTONES

Maiden Inferred Resource Complete
Released September 2025

Preliminary Economic Assessment ("PEA") Complete
Technical Report being finalized

Targeting Preliminary Feasibility Study in 2027
Including further evaluation of bromine and potash opportunities

HIGHLIGHTS (100% Ownership Basis)[1]

70,000 TPA
Lithium Carbonate Production Capacity

Early 2030's
Potential First Commercial Production

562 mg/L
Initial Lithium Grade at Start of Production
515 mg/L
Average Grade over Plant Operating Life

1.8Mt
Total Indicated LCE Resource[4]

\$5.0bn
Unlevered Post-Tax NPV_8 [2]
24%
Post-Tax IRR[2]

\$49.9k/t
Capital Intensity[3]

\$4,226/t
Average Annual Cash OPEX

2.7Mt
Total Indicated Bromide Resource[4]
15.1Mt
Total Inferred Potash Resource[4]

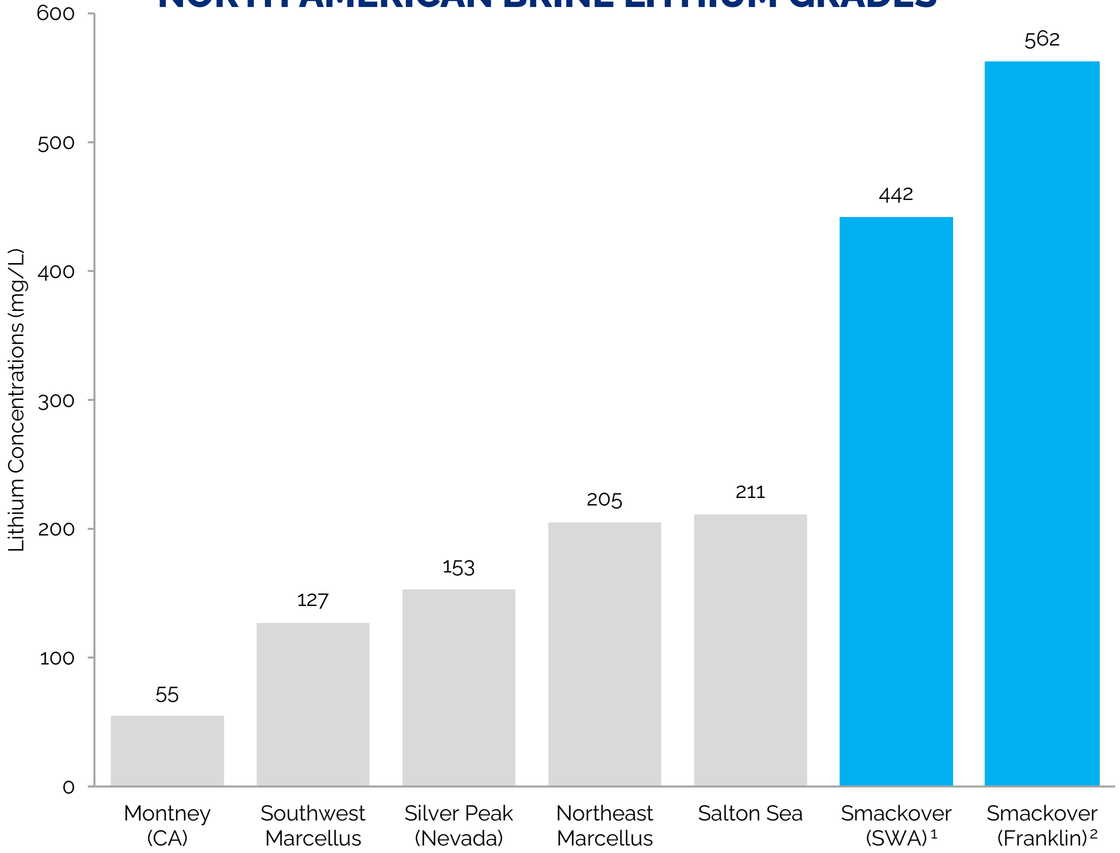
Note: All model outputs are expressed on a 100% ownership basis with no adjustments for project financing assumptions. Standard Lithium's economic interest in the Franklin Project is 55%. Any discrepancies in the totals are due to rounding effects

1. Franklin Project PEA press release dated September 8, 2026. The PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves and there is no certainty that the PEA will be realized
2. Assumes \$22,400/t lithium price and a 20-year modelled operating life
3. Calculated as initial CAPEX divided by annual production capacity of lithium carbonate
4. Excludes inferred lithium and bromide resource of 2.1Mt and 3.1M, respectively. Bromide is the ionized form of the commercial product bromine and potash is potassium chloride

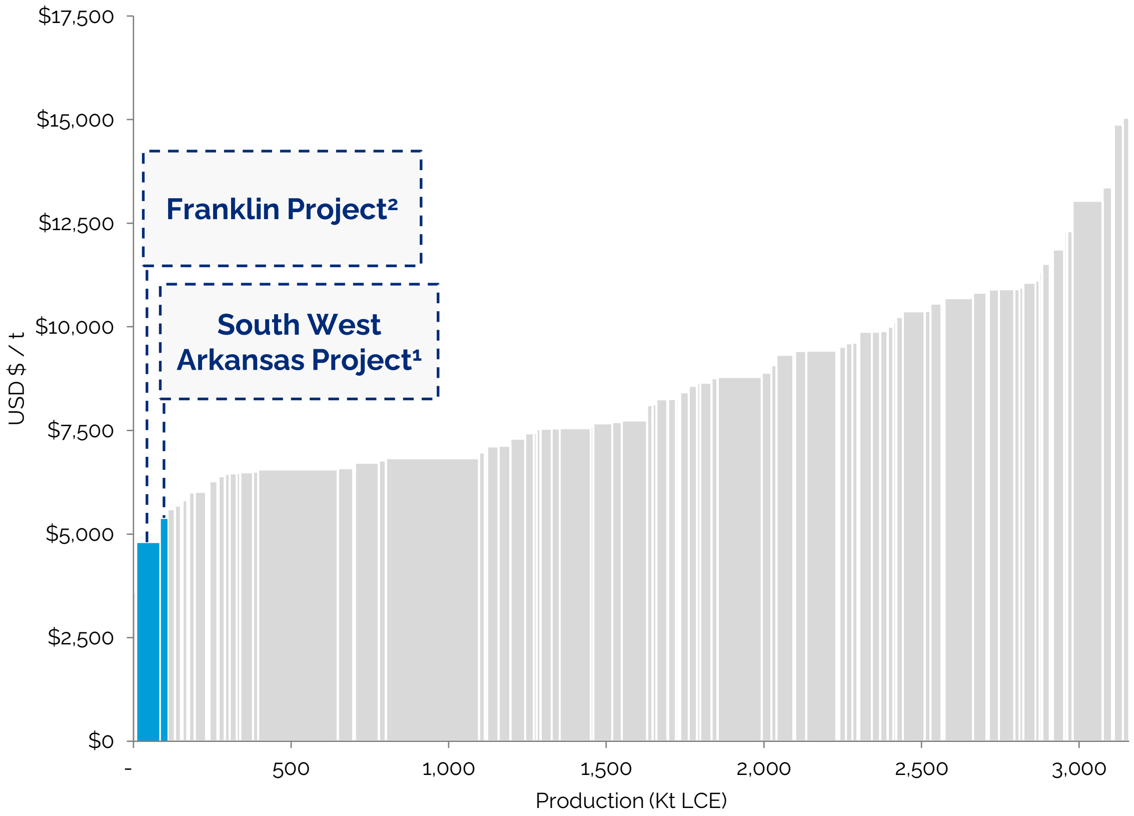
Compelling Economics Driven By High Grades

The Smackover Formation's high lithium concentration drives low-cost estimates
Standard Lithium anticipates its projects to rank among first quartile on global lithium cost curve

NORTH AMERICAN BRINE LITHIUM GRADES



GLOBAL LITHIUM PRODUCTION COST CURVE[3]



1. South West Arkansas Project Definitive Feasibility Study dated October 14, 2025. Average lithium concentration of Measured & Indicated Resource. Average operating costs based on annual production capacity of 22,500 tonnes of lithium carbonate. Includes royalties and excludes sustaining and closure CAPEX
2. Franklin Project PEA press release dated September 8, 2026. Average lithium concentration of Indicated Resource. Average operating costs based on annual production capacity of 70,000 tonnes of lithium carbonate. Includes royalties and excludes sustaining and closure CAPEX
3. Source: Benchmark Minerals July 2026 Forecast. Reflects C1 costs which include mining/extraction, processing, G&A, transportation, port loading & storage, concentrate shipping, chemical conversion, chemical shipping, by-product credits *plus* royalties/production taxes. Based on 2030 LCE production and cost

Strong U.S. Government Support

Support from Department of Energy and Executive Office's National Energy Dominance Council reinforces SWA Project importance and development timeline

Recipient of $225m DOE Grant

- Received a **$225 million grant from the DoE** to support the SWA Project's construction[1]
- Grant aims to **increase production of critical minerals in the U.S.**

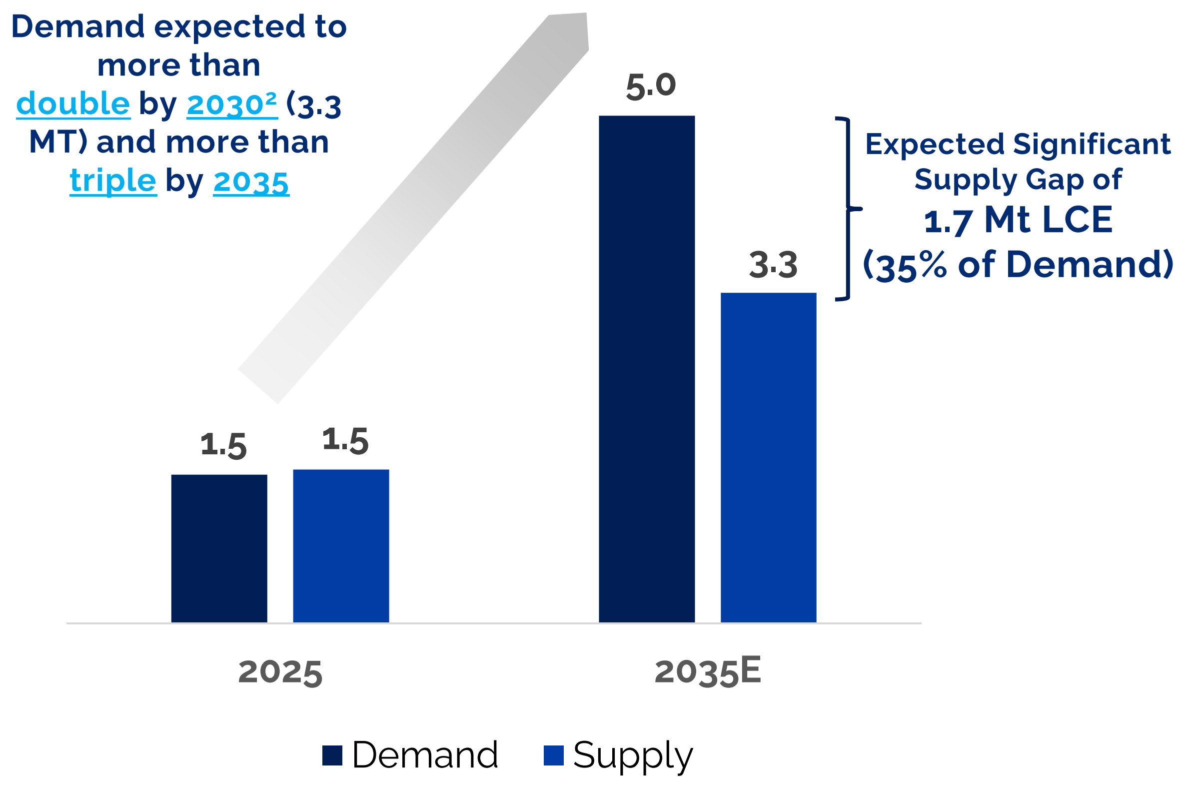
Designated as Federal Transparency Project

- SWA Project has been included on the Federal Permitting Dashboard as a **FAST-41 transparency project[2]**
- SWA is one of a small group of domestic lithium projects with this designation

1. Standard Lithium press release on January 16, 2025; DOE grant awarded to SWA Lithium LLC, a jointly-owned U.S. subsidiary of Standard Lithium and Equinor for initial phase of SWA Project
2. Permitting Council press release dated April 18, 2025, *"Trump Administration Advances First Wave of Critical Mineral Production Projects"*. Inclusion on the Permitting Dashboard as a FAST-41 transparency project highlights the project's role in advancing domestic critical mineral lithium production and supporting U.S. energy independence but does not create an assumption of project approval, favorable review or federal funding

Compelling Lithium Market Fundamentals

GLOBAL LITHIUM DEMAND & SUPPLY (MT LCE)[1]



Lithium is Powering Artificial Intelligence (AI)

- Unprecedented need for power from generative AI driving a projected **29% CAGR** for the storage market in the U.S.[3]
- Global use of lithium in battery storage systems expected to grow at a **16% CAGR** over the next 10 years[1]

Lithium is Driving Electric Mobility

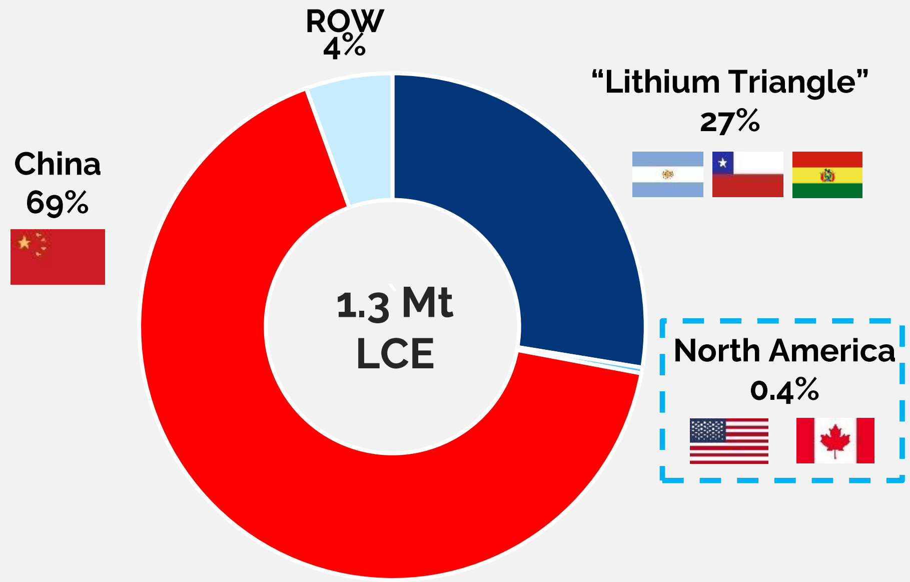
- Lithium demand from EVs expected to grow at **22% CAGR** in the U.S. over the next 10 years, outpacing the projected **15% CAGR** for global demand growth from EVs[1]

1. Source: Q2 2026 Fastmarkets Lithium Forecast. CAGRs shown for 2025E – 2035E
2. 2030E projected demand and supply of 3.3Mt LCE and 2.9Mt LCE, respectively
3. Source: Global Market Insights report "*U.S. Storage Market Size – By Technology, By Application, Analysis, Share, Growth Forecast, 2025 – 2034*" dated March 2025

Growing Need for Domestic U.S. Lithium

U.S. Highly Reliant on China and Other Countries for Lithium

2025E LITHIUM CHEMICALS PRODUCTION BY REGION[1]



North America accounts for ~13% of global lithium demand with minimal lithium chemical production today

Conventional Lithium Assets Facing Challenges

Water scarcity making traditional low-cost brine pond growth challenging

Lengthy permitting timelines, with vocal stakeholder or activist concerns

Governments seeking greater share of economics or supply chain

Spodumene processing dominated by China (~80% in 2025)[1]

1. Source: Benchmark Minerals Q4 2025 Lithium Forecast. Lithium chemicals defined as the refined, processed forms of lithium, including lithium hydroxide, lithium carbonate, lithium chloride, and lithium sulfate; excludes secondary conversion

Strategic Access to Domestic Market

U.S. needs significant supply growth to meet forecasted lithium demand

- **We believe our advantaged location** gives SLI a competitive edge to be a key supplier to **emerging energy security and storage, electric vehicle and battery manufacturing markets in North America**
- **Existing access to road, rail, navigable rivers**, and close tie-in to gulf coast are key sustainable strategic advantages to SLI's asset base
- **Local workforce and regulatory regimes** that have over half a century of experience, oil and gas production, refining and chemical manufacturing

SLi ~100 Miles to TX

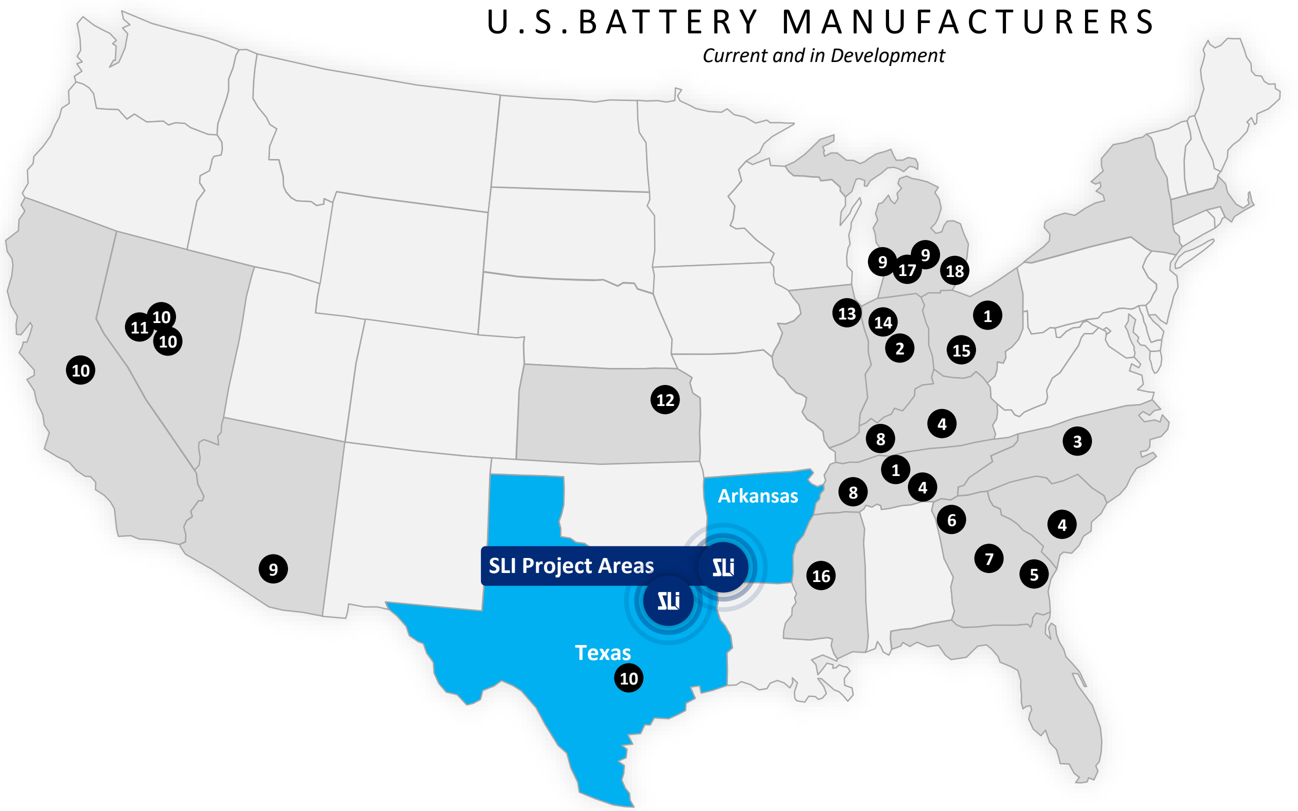
SLi ~700 Miles to TN

SLi ~1,000 Miles to MI

Current Supply Chain — 20,000+ Nautical Miles to U.S. Manufacturing[1]

U.S. BATTERY MANUFACTURERS

Current and in Development



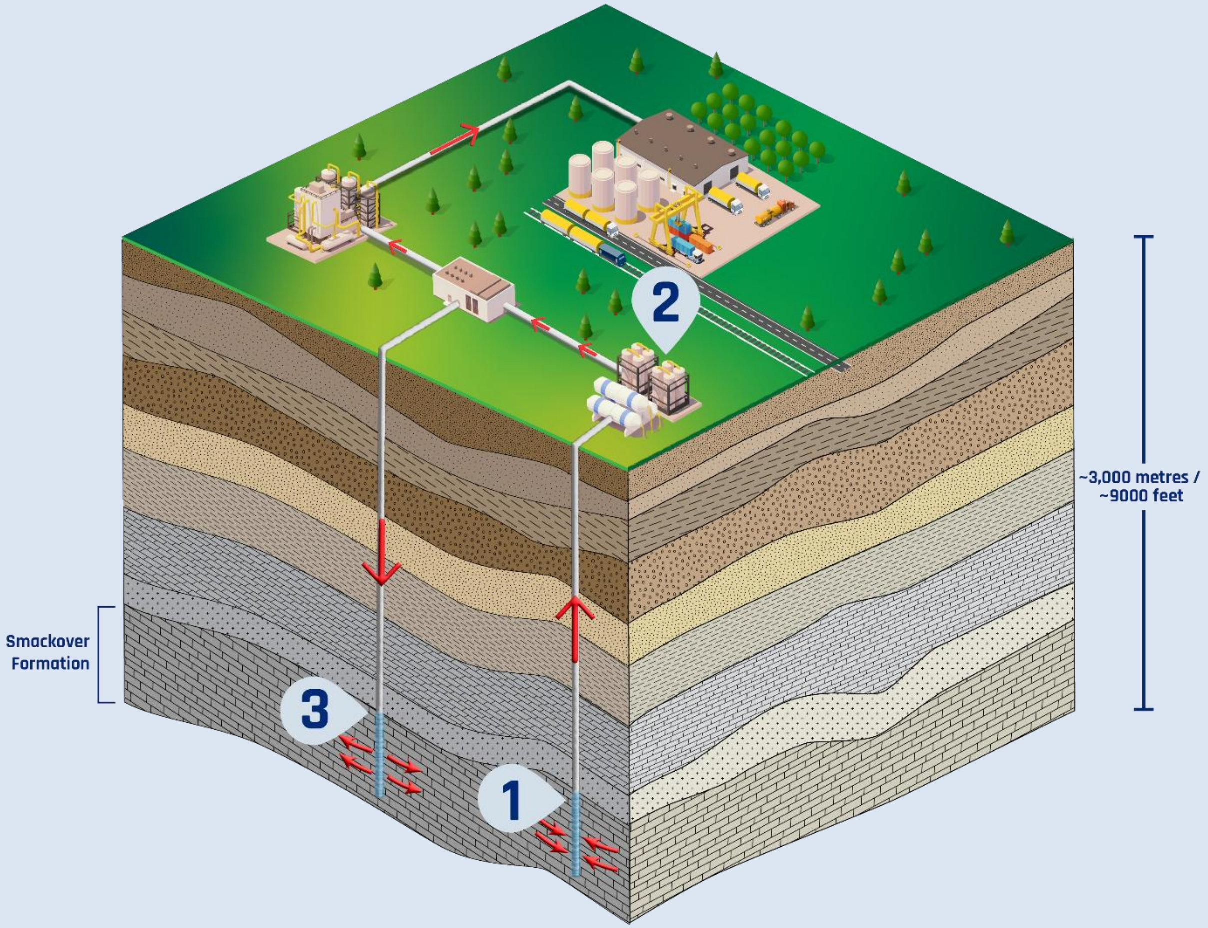
1. ultium cells, gm, LG Energy Solution (2 plants)
2. STARPLUS ENERGY, SAMSUNG ELECTRONICS, STELLANTIS
3. TOYOTA
4. AESC (3 plants)
5. HYUNDAI, LG Energy Solution
6. HYUNDAI, SK on
7. SK on
8. BlueOval SK, Ford, SK on (2 plants)
9. LG Energy Solution (3 plants)
10. TESLA (4 plants)
11. TESLA, Panasonic
12. Panasonic
13. 国轩高科
14. SAMSUNG ELECTRONICS, gm
15. HONDA, LG Energy Solution
16. DAIMLER, PACCAR, EVE
17. Ford
18. one our next energy

Disclosures as of October 2025

1. Assumes mining location in western South America or Australia, refining in China, cathode production in Korea, and OEM destination in the US

High Value Strategic Partnerships

From Brine to Battery Grade Lithium – Leveraging Strategic Partnerships



Refining and Direct Lithium Extraction

- Utilizing Aquatech's proprietary Lithium Selective Sorption ("LSS") process across the Smackover
- Standard Lithium has regional exclusivity in the Smackover for the LSS process

Aquatech

Reservoir and Well Development

- Equinor's proven capabilities in reservoir and well development support project success

equinor

Production and Reinjection

- Equinor brings significant experience in designing and delivering onshore facilities
- Standard Lithium's Demonstration Plant provides de-risking and valuable learnings to go forward production

De-Risked DLE Technology

Operating commercial-scale Demonstration Plant

- Lithium Selective Sorption unit supplied by KTS (now Aquatech) is believed to be the largest known commercial-scale column operating in a DLE facility
- Has consistently achieved targeted >95% lithium recovery and average key contaminant rejection of >99%
- Processed 42 million gallons of brine since 2020, equating to ~180 tonnes of LCE[1]

Successful field-test at SWA Project

- Performed field test on brine from an SWA well and achieved >99% lithium recovery and rejection of key contaminants[2]
- Field test produced 970 gallons of purified 6% lithium chloride solution[2]
- Viewed as final testing of flowsheet and underpins SWA Project's FEED and DFS

Technology performance guarantee from Aquatech

- License agreement with Aquatech to deploy and use their DLE technology includes certain technology performance guarantees:
  - +95% lithium recovery and +99% contaminant rejection (including calcium, sodium, potassium, and magnesium)
  - Includes water use, as well as security of supply for the sorbent

Large Demonstration Plant in Operation Since 2020

1. Illustrative calculation based on average input of 214 mg/L; does not reflect actual LCE produced or sold
2. Standard Lithium press release dated March 11, 2025

Pathway to Final Investment Decision at SWA

Key Milestones at South West Arkansas Project

FEED & DFS Results ✓

- Flowsheet has been finalized and DLE technology de-risked through successful field test at SWA

NEPA Review ✓

- Concluded National Environmental Policy Act with Finding of No Significant Impact from Federal government[1]
- Required in connection with $225 million grant from Department of Energy

Key Construction Contracts ✓

- Awarded EPCM (Wood) and EPCC (S&B/Hatch) agreements for well field and Central Processing Facility, respectively[2]
- Includes Limited Notices to Proceed in advance of a Final Investment Decision

Customer Offtake *(advancing)*

- Signed second agreement with LG Energy Solution for 8ktpa in Aug 2026, bringing total offtakes to ~90% of target[3]
- Signed first agreement with Trafigura for 8ktpa[4]
- In advanced discussions and aim to conclude process shortly

Project Finance *(advancing)*

- Received Indications of Interest for >$1B in project finance debt led by three major Export Credit Agencies and group of commercial banks[5]
- Well-progressed, with final negotiation subject to result of offtake process

Expect to reach FID and begin construction in 2026, with first commercial production targeted in 2029

1. Standard Lithium press release dated May 14, 2026
2. Standard Lithium press releases dated May 21, 2026 and May 26, 2026
3. Standard Lithium press release dated August 31, 2026
4. Standard Lithium press release dated March 9, 2026
5. Standard Lithium press release dated December 9, 2025

Capital Formation "Pyramid"

Standard Lithium is committed to maximizing shareholder returns through a strategic and methodical approach to capital formation

Leveraging strategic partnerships to maximize project success

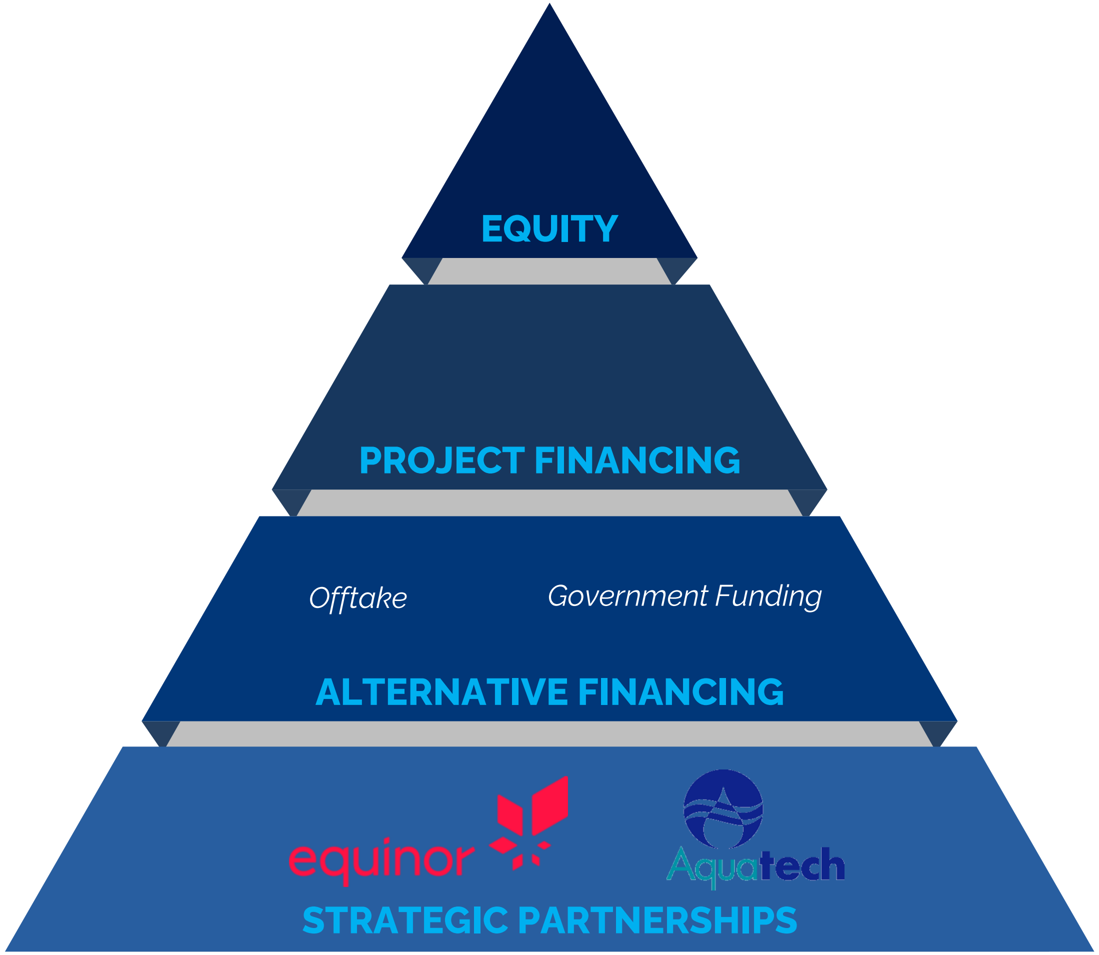
- Standard Lithium has secured investments from Equinor and Koch Industries
- Industry-leading partners bring technical, operational and strategic capabilities in addition to financial strength

Prioritizing low-cost, limited-recourse financing

- Closed $225 million grant from the DOE which will support construction of Phase 1 of the SWA Project[1]
- Process advancing to secure roughly $1.1B in targeted project debt financing along with customer offtake[2]

Focused on maximizing shareholder value by limiting dilution

- Equinor investment done at the project level without issuance of any Standard Lithium shares
- **Prioritize and execute at the "base of the pyramid and build up",** lowering the cost of capital as we de-risk the projects, minimizing parent company equity raise requirements



1. Standard Lithium press release on January 16, 2025
2. Standard Lithium press release dated December 9, 2025

Capitalization & Liquidity

Financial Highlights

- Positive working capital with no revolving or term debt obligations[1]
- Closed a $130 million follow-on public offering on October 20, 2025[2]
- Closed a $225 million grant from the DOE in January 2025[3], one of the largest ever awarded to a U.S. critical minerals project
- One of largest shareholders (Koch, ~6% of total outstanding shares) is long-standing strategic partner[4]

Liquidity & Capitalization[1] (USD millions)

Cash	$137.3
Debt	$0

Basic Shares Outstanding (mm)[5]	246.4
Share Price (USD)	$2.64
Market Capitalization (mm)	~$650

Source: FactSet

1. Liquidity as of 6/30/2026 balance sheet, NYSE trading data as of August 27, 2026
2. Standard Lithium press release dated October 20, 2025
3. DOE grant awarded to SWA Lithium LLC, a jointly-owned U.S. subsidiary of Standard Lithium and Equinor for initial phase of SWA Project
4. Ownership figures as per Koch, Inc. Form 13-F dated March 31, 2026
5. Basic shares outstanding as of August 10, 2026 Management's Discussion & Analysis

Standard LITHIUM

NYSE : SLI | TSX.V : SLI

Appendix

www.standardlithium.com

Management Team

David Park
CEO & Director

David Park is an experienced executive with 28+ years in the energy and industrial sectors. He most recently served as President of Koch Strategic Platforms and previously as SVP of Strategy and Business Development at Georgia-Pacific, leading new platform acquisitions. He has held roles as President of TrueNorth Energy and CFO for Koch's Canadian exploration, pipeline, and energy trading business. Earlier in his career, he worked as an International Business Development Specialist at Atomic Energy of Canada Ltd. David holds a B.S. in Economics from Texas A&M University and an M.A. in Economics from George Mason University.

Dr. Andy Robinson
President, COO & Director

Andy Robinson, co-founder of Standard Lithium, is a Geoscientist, experienced executive, team builder and project developer with 25+ years of strategic and executive experience. Andy has held senior technical, corporate & executive roles with private and public resource, power and energy companies in Europe and North America. Andy is a pioneer in lithium extraction and purification technology and holds a Ph.D. in Geochemistry from the University of Bristol, UK.

Salah Gamoudi
CFO

Salah Gamoudi most recently served as EVP and CFO of SandRidge Energy (NYSE:SD) from 2020–2023, where the company delivered significant shareholder value over his tenure. He previously held senior executive roles at public natural resource companies, driving turnarounds, restructurings, and an IPO. Earlier in his career, he worked in energy and natural resources across private equity, audit, and consulting with LRR Energy, Lime Rock Resources, Deloitte, and Ernst & Young. Mr. Gamoudi earned an M.B.A. with honors from Wharton and a B.A. in Accounting from Portland State University. He is also a Certified Public Accountant.

Mike Barman
Chief Development Officer

Mike Barman has nearly 20 years of experience advising senior executives and boards, most recently as Managing Director in Investment Banking at Stifel Nicolaus Canada (formerly GMP Securities). While at Stifel, he advised on 30+ M&A and corporate transactions totaling over $22 billion, and led or co-led 80+ financings, raising more than $10 billion in equity and debt capital. He holds a Master of Financial Economics and an Honours B.A. in Economics from the University of Toronto, where he received the C.L. Burton Open Scholarship for academic excellence.

South West Arkansas Project | DFS Results

Definitive Feasibility Study Highlights

- **First commercial production targeted in 2029** with initial capacity of 22,500 tpa battery-quality Li_2CO_3. Would mark the first commercial lithium output from the Smackover Formation
- **20+ year operating life** supported by Resource & Reserve modeling with 481 mg/L average lithium concentration over production plan and ample opportunity for future expansion
- **Strong economics:** \$1.7bn unlevered pre-tax NPV_8, 20.2% IRR and \$22,400/t lithium price based on average of Fastmarket's 20-year forward pricing curve
- **Low costs:** Average operating cost of \$4,516/t and all-in cost of \$5,924/t
- **\$1.45B Total CAPEX:** Class III estimate informed by 18-month front-end engineering design, with 12.3% contingency and improved capital intensity expected on future expansion phases
- **Upgraded Resource definition:** Proven Reserves of 447,000 t LCE at 481 mg/L; Measured & Indicated Resource of 1,177,000 t LCE at 442 mg/L
- **First U.S. commercial DLE** using Aquatech Lithium Selective Sorption process with performance guarantees and regional exclusivity in Smackover under Joint Development Agreement[3]

Definitive Feasibility Study Summary[1] *(100% Ownership Basis)*

Annual Production Capacity of Li2CO3	*tpa*	22,500
Modeled Plant Operating Life	*years*	20
Brine Flowrate at Start of Production	*bbl/d*	148,000
Average Brine Flowrate over Modeled Plant Operating Life	*bbl/d*	168,000
Lithium Grade at Start of Production	*mg/L*	549
Average Lithium Grade over Plant Operating Life	*mg/L*	481
Total CAPEX	*\$mm*	1,449
Average Annual Cash OPEX	*\$/t*	4,516
Average Annual All-in OPEX[2]	*\$/t*	5,924
Selling Price	*\$/t*	22,400
Discount Rate	*%*	8.0
Net Present Value (NPV) Pre-Tax	*\$mm*	1,666
Net Present Value (NPV) After-Tax	*\$mm*	1,275
Internal Rate of Return (IRR) Pre-Tax	*%*	20.2
Internal Rate of Return (IRR) After-Tax	*%*	18.2

Note: All model outputs are expressed on a 100% ownership basis with no adjustments for project financing assumptions. Standard Lithium's economic interest in the Project is 55%. Any discrepancies in the totals are due to rounding effects

1. South West Arkansas Project Definitive Feasibility Study dated October 14, 2025
2. Includes operating expenditures, royalties, sustaining capital and closure costs. Royalties include quarterly gross lithium royalty of 2.5% as approved by the Arkansas Oil and Gas Commission ("AOGC"), an additional brine fee of \$65/acre per year and override fees payable on certain optioned brine leases
3. For further details of acquisition of KTS direct lithium extraction technology see Aquatech press release dated September 16, 2025

Franklin Project | PEA Results[1]

Preliminary Economic Assessment Highlights

- **Robust lithium project economics:** unlevered after-tax NPV_8 of $5.0 billion, an IRR of 24.0%, and a 3.1-year payback period assuming price of $22,400/t
- **Globally significant production scale:** production capacity of 70ktpa battery-quality lithium carbonate. Initial production could begin in the early 2030's with additional potential for a longer operating life and further expansion
- **Competitive operating cost estimate:** average annual lithium cash operating costs of $4,226/t, and average annual all-in costs, including cash operating cost, royalties, sustaining capital and closure costs, of $5,054/t
- **Increased exploration activities support significantly larger and upgraded Mineral Resource definition:** new Indicated Resource is 1.77M tonnes LCE at an average lithium concentration of 562 mg/L for 0.59 km³ of brine volume and upgraded Inferred Resource is 2.13M tonnes LCE at an average concentration of 572 mg/L for 0.70 km³ of brine volume
- **Extensive brine mineral leasing for the Franklin Project:** brine mineral leasing ongoing since 2022 now encompassing 44,541 hectares (110,064 acres), an increase of 37% from the Maiden Inferred Resource Report. 30,994 hectares (76,588 acres) gross mineral area leased to support Resource
- **Additional value creation potential from bromine:** considers a scenario based on bromine commercial opportunity of 50ktpa
- **Possible future upside from potash:** does not assume potash contribution, but highlights another possible source of future upside subject to evaluation

PEA Summary *(100% Ownership Basis)*

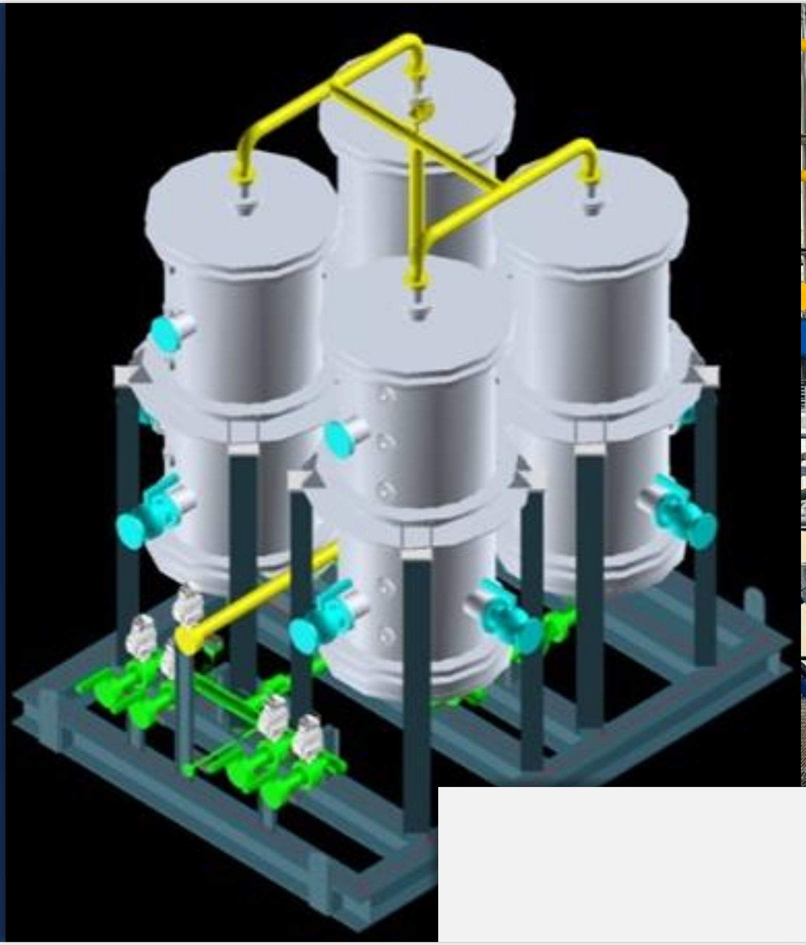
Lithium Facility and Wellfield		
Annual Production Capacity of Lithium Carbonate	tpa	70,000
Average Production over Modelled Plant Operating Life	tpa	64,600
Modelled Plant Operating Life	years	20
Average Brine Flowrate over Modelled Plant Operating Life	bbl/d	455,000
Lithium Concentration at Start of Production (Year 1)	mg/L	562
Average Lithium Concentration over Plant Operating Life	mg/L	515
Initial CAPEX *(includes 20% contingency)*	$ million	3,496
Capital Intensity	$'000/t	49.9
Average Annual Cash Operating Cost	$/t	4,226
Average Annual All-in Cost	$/t	5,054 [2]
Lithium Carbonate Selling Price	$/t	22,400
NPV (After-Tax)	$ million	4,992 [3]
IRR (After-Tax)	%	24.0 [3]
Payback Period (After-Tax)	years	3.1 [3]

Note: All model outputs are expressed on a 100% ownership basis with no adjustments for project financing assumptions. Standard Lithium's economic interest in the Project is 55%. Any discrepancies in the totals are due to rounding effects. No bromine or potash is considered in the economic case shown

1. Franklin Project PEA press release dated September 8, 2026. The PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves and there is no certainty that the PEA will be realized
2. Non-GAAP financial measure that includes cash operating cost, royalties, sustaining capital and closure costs. Royalties include gross revenue lithium royalty of 2.5%. Lithium royalties in Texas are established on a lease-by-lease basis and are agreed between the lessor and lessee. The exact royalties signed by Smackover Lithium are confidential and commercially sensitive, but 2.5% is used in the project economics as a representative rate
3. Illustrative after-tax calculations based on assumption that the Project corporate entity is taxed as a stand-alone US C-Corporation and does not include the potential impact of currently held corporate net operating losses or credits, nor potential tax shields generated from financing. Assumes a U.S. Federal income tax rate of 21% and a State of Texas franchise tax rate of 0.59% (net of federal benefit)

Technology | Proven at Commercial-Scale

- In March 2024, Standard Lithium successfully installed and commissioned the Li-Pro™ Lithium Selective Sorption (LSS) commercial scale unit supplied by KTS (now Aquatech) at its Demonstration Plant[1]
- This unit is believed to be the largest known commercial-scale column operating in a DLE facility
- **On Oct. 28, 2024, SWA Lithium, the JV between SLI and Equinor which is developing the SWA Project, announced that it entered into a license agreement with KTS (now Aquatech) to deploy and use their Li-Pro LSS technology at the JV's commercial plant for SWA Phase 1**
    - The license agreement includes certain technology performance guarantees for lithium recovery (+95%), contaminant rejection (+99%)[2], and water use
- Have consistently achieved targeted lithium recovery and average key contaminant rejection rates while operating
- Over **15,000 operational cycles** using Li-Pro™ LSS technology and roughly **42 million gallons (1 million barrels)** of Smackover brine processed in total since 2020
    - Equates to **~180 tonnes LCE** processed through the Company's DLE flowsheet[3]



Aquatech

1. For further details see Aquatech press release dated September 16, 2025
2. Impurities included in performance guarantee include calcium, sodium, potassium and magnesium
3. Illustrative calculation based on average input of 214 mg/L; does not reflect actual LCE produced or sold

SWA | Successful Field-Test

Successfully completed the de-risking of our DLE technology with a field-test at South West Arkansas

- Field-pilot DLE facility exceeded key performance criteria to confirm engineering design – ***recovered over 99% of lithium from brine, sourced from SWA Project well***
- Rejection of key contaminants all within acceptable tolerance of design criteria
- Field-pilot plant completed nearly 500 DLE cycles, processing 2,385 barrels of brine
- Approximately 970 gallons (23 barrels) of concentrated and purified lithium chloride solution (6% LiCl solution) produced
- Lithium chloride solution sent off-site to potential equipment vendors for conversion into battery-quality lithium carbonate with positive results
- ***Samples expected to play a key role in qualification process with prospective off-take partners***
- Field-test is viewed as ***final testing of flowsheet*** and results underpin the SWA Project's FEED and DFS
- Data from field-test supplements the roughly 40 million gallons of brine processed at Standard Lithium's Demonstration Plant since 2020

Source: Standard Lithium press release dated March 11, 2025

Equinor | International Pioneers in the Energy Transition

Equinor are energy experts and world-leaders in renewable and low carbon solutions

An international energy company headquartered in Norway with operations in oil & gas, renewables and low carbon solutions

Equinor is a leading multinational energy company with operations across 36 countries

- Historically focused on oil & gas, Equinor has expanded its presence in renewables & low carbon as well as innovation and digital
- Equinor has a strong commitment to sustainability, evidence of which can be found in its commitment to the battery value chain

Equinor is a global premier resource developer with significant experience in project development and onshore facilities

- In addition to significant experience in subsurface assessment and production, Equinor has a track record of project development and execution with onshore facilities around the world
- Equinor's ability to provide resource development and facilities expertise significantly de-risks project execution

Equinor is one of the world's largest energy companies

- Equinor brings a multi-billion dollar market cap and investment grade balance sheet to support project execution

Aquatech | Critical Minerals & Metals Resource Recovery

SLi

Aquatech brings significant expertise in lithium extraction and refining

Aquatech

Enabling the energy transition by delivering complete water and process technology solutions to solve water scarcity and ensure critical minerals security

Pioneering sustainable solutions

- Established in 1981 in Canonsburg, Pennsylvania with offices throughout the US, India, Europe, the Middle East and China, and a process technology R&D center in Wisconsin
- Successfully executed more than 2,000 site solutions in over 60 countries globally
- End-to-end process solutions to produce technical and battery-grade lithium hydroxide, lithium carbonate and lithium salts
- Received minority growth investment from Cerberus' Supply Chain and Strategic Opportunities platform in April 2025

Significant alignment between Standard Lithium and Aquatech[1]

- Joint Development Agreement with Aquatech (successor to Koch Technology Solutions) to collaborate on technology & process solutions for commercial DLE
- License agreement to deploy and use Li-Pro LSS technology at the commercial processing facility for initial phase of the SWA Project[2]

1. Aquatech acquired Koch Technology Solutions direct lithium extraction technology. For further details see Aquatech press release dated September 16, 2025
2. Standard Lithium press release dated October 28, 2024; license agreement was executed by SWA Lithium, the JV between Standard Lithium and Equinor which is developing the SWA Project

Standard LITHIUM

Leading a new era of responsible lithium production in America

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