Buy American Requirement Waiver Request

[Piedmont Lithium Inc. 2678-1739]

Project Description and Location:

The LHP-2 Project will produce 30,000 metric tons per year of battery quality lithium hydroxide using the innovative Metso:Outotec pressure leach process which has reduced capital and operating costs and superior emissions and fewer solid wastes compared with incumbent technologies. The Project will be located in McMinn County, Tennessee.

Total Estimated Cost:

The total estimated cost for LHP-2 is $572 million. The Applicant has requested DOE funding of $142 million and is providing an estimated cost share of $430 million.

Item Subject to Waiver:

Name	Cost	Countries of Origin	Relevant PSC and NAICS Code
LiOH Technology Package including Crystallizer Package	$130,528,204	Finland Germany United States	

Waiver Justification:

The Metso:Outotec LiOH Technology Package requires proprietary equipment and intellectual property which is sourced from the EU. As part of due diligence and preliminary engineering for the LHP Project, Piedmont completed multiple testwork programs and technical studies to evaluate two different methods of conversion of spodumene concentrate to battery quality lithium hydroxide. These methods included:

- Acid-roasting and causticization
- Metso:Outotec pressure leaching

Acid roasting is the conventional methodology used by Chinese lithium hydroxide producers to manufacture lithium hydroxide. It is an 'open source' process which does not require the use of specific proprietary equipment. Piedmont completed bench scale testwork and a prefeasibility study of an acid roast plant. The acid roasting route has negative environmental impacts including 1) the production of sodium sulfate anhydrous, a soluble hazardous byproduct 2) creation of emissions associated with the acid roast and 3) an aluminosilicate tail which has residual acidic properties which must be neutralized.

Applicant expects the Project to provide additional economic benefits to the local region by attracting other businesses and increasing revenue to current local businesses.

Project Technology. The Project will be one of the world's largest and lowest-cost producers of lithium hydroxide, with a sustainability footprint that is superior to incumbent producers, all in an ideal location to supply the rapidly growing EV supply chain in the United States. The Project will manufacture LiOH sourced from hard rock lithium ore by using a novel process which is expected to result in lower overall operating costs, fewer emissions, reduced carbon intensity, and no hazardous byproducts. Piedmont will use Metso:Outotec's proprietary technology in the Project which includes pressure leaching, conversion and ion exchange process stages.

[redacted]

(b) (4)

The Project will advance state-of-the-art LiOH manufacturing by deploying an innovative technology pioneered by Metso:Outotec. [redacted]

The Project would be the first in the United States to utilize the pressure leach technology for LiOH manufacturing at a commercial scale [redacted]

(b) (4)

[redacted]

Project Site. The proposed project location is McMinn County, Tennessee. The proposed site is Tennessee certified, located within an Opportunity Zone, has direct access to high voltage power, natural gas, water, and wastewater services. Additionally, the project is logistically advantaged with adjacent rail service provided by CSX, in close proximity to U.S. routes 11 and 411, and near Interstate I-75. The site is approximately 12 miles from the Hiawasee River allowing barge transport of SC6 to the Project and potential modularization of construction.

Figure 8 shows the location of the LHP-2 Project at the preferred site location near Etowah in McMinn County, TN.

The Applicant has an agreement with Metso:Outotec for use of its technology and engineering for the pressure leaching technology. [redacted]

(b) (4)

2.2. Feasibility

Project Technology. The technology provides innovative and proven calcination, leaching, purification, and lithium recovery technologies covering the whole range of production, from SC6 to battery grade LiOH. **Figure 10** below outlines the Metso:Outotec LiOH manufacturing process. [redacted]

(b) (4)

The LiOH manufacturing process for the Project will have the following process stages:

- Calcination of α-spodumene to ß-spodumene
- Milling of the ß-spodumene
- Pulping of milled ß-spodumene
- Slurry preparation for pressure leaching
- Pressurized autoclave leaching of the ß-spodumene
- Solid/liquid separation of the pressure leach slurry
- Conversion of the autoclave residue
- Leach residue filtering and handling
- Ion exchange and solution polishing
- Crystallization of lithium hydroxide and product handling
- Crystallization mother liquor bleed distribution and carbonation
- lithium recovery before effluent treatment

lithium-ion battery production. Finnish-based Keliber and Canada's Critical Elements have each completed successful pilot programs on their own SC6 sources using the Metso:Outotec conversion technology. According to publicly available reports on Keliber's agreement with Metso:Outotec, "a continuous lithium hydroxide pilot was carried out at the Outotec R&D center. The purity of the product received was extremely high and lithium recovery in the process was better than the one used in the Definitive Feasibility Study in February 2019."[2] The outcomes of Piedmont's own Definitive Feasibility Study mirrored these results.

Piedmont expects the results of the future pilot program as well as the batch scale testwork using Ghanaian and Canadian SC6 samples will achieve similar quality results to prior programs.

LiOH conversion process using pressure leach technology is not a new concept. Metso:Outotec has decades of experience processing lithium with first patents filed in 1980's. [redacted]

(b) (4)

[redacted] Piedmont pilot test with Carolina's ore produced similar results and is within the expected conversion range when comparing with Metso:Outotec's experience with other feedstocks.

While the chemistry of the pressure leach technology is proven in pilot and bench scale tests, all scale-up commercial equipment for each stage of the process have been installed and operated in other metallurgical processes. The rotary kiln is used in various industrial applications such as cement production. Metso:Outotec has designed and installed at least seven autoclaves for various projects globally since 1998.

2.3. Innovation and Impacts

The use of Metso:Outotec's third party technology for LiOH processing will reduce CO_2 emissions and reagent usage. Lastly, relative to competitors, the Project will result in lower water usage and a smaller land footprint. **Figure 16** provides a comparison of Piedmont's sustainability profile compared to international competitors derived from Minviro Reports and Piedmont's own estimates.

[2] *See* Paul Moore, *Keliber books Outotec for basic engineering of Päiväneva lithium concentrator*, International Mining, June 30, 2020, https://im-mining.com/2020/06/30/keliber-books-outotec-basic-engineering-paivaneva-lithium-concentrator/.

Furthermore, while several alternate sources of lithium have been proposed both domestically and internationally including but not limited to lithium clays, searlesite, hectorite, geothermal brines, and direct lithium extraction, none of these sources have yet to be proven at commercial scale.

3. Workplan and Market Transformation Plan

3.1. Project Objectives

As noted throughout this technical volume, the Applicant will build, own, and operate an advanced manufacturing plant for up to 30,000 tpy of battery quality LiOH. The Project seeks to bring a secure and sustainable domestic supply of LiOH to the United States.

3.2. Technical Scope Summary

The completed LHP-2 facility will support Piedmont's mission to produce battery grade LiOH to the nation's energy transition leveraging battery technology and electric vehicles. The LiOH manufacturing facility scope includes the following major unit processes and services:

- Alpha Spodumene feed material
- Ore preparation including calcining, cooling, and milling
- Alkaline leaching and carbonate
- Primary and secondary solid liquid separation
- Lithium hydroxide conversion
- Evaporation, crystallization and drying
- Product storage and packing
- Tailings handling and off-site disposal

The non-process infrastructure scope includes the following major unit processes and services:

- Raw, process, fire, and potable water storage and distribution
- Reagent storage, mixing, and distribution
- Compressed air services
- Steam production and supply
- Weighbridge
- Utilities distribution
- Buildings
    - LiOH Building
    - Conversion Mill Shelter
    - Boiler Room
    - Compressor Building
    - Demineralized Water Building
    - Water Distribution Pump Building
    - Product Storage Building
    - Administration and Cafeteria Building
    - Laboratory Building
    - Guard Shack
    - Fire Water System Building

Current and Pending Support

The following list includes the sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses.

Title of Activity	Sponsor of Activity/Source of Funding	Award or other Identifying Number	The Total Cost or Value of the Award or Activity	The Award Period (Start Date – End Date)	The person-months of effort per year being dedicated to the award or activity
Consultant – Primero Group Limited	Preliminary Economic Assessment Study	n/a	Study Phase & Execution Stage of project	Q4 2022 Feasibility Study to be completed	12 months per year
Consultant – Metso Outotec	Lithium hydroxide manufacturing technology package	n/a	Study Phase & Execution Stage of Project	2021 - TBD	12 months per year
Consultant - GEA	Crystallization package	n/a	Study Phase & Execution stage of project	Start - January 2021	12 months per year
Consultant - Veolia, Swenson	Alternate Crystallization Providers	n/a	Execution stage of project	Start – May 2022	12 months per year
Consultant - SGS Lakefield	Metallurgical testwork	n/a	Study Phase stage of project	Start – January 2018	12 months per year
Consultant - HDR Engineering, Inc	Permitting, environment, and social studies	n/a	Study Phase & Execution stage of project	Start – December 2017	12 months per year
Consultant - Benchmark Mineral Intelligence	Lithium products marketability	n/a	Study phase stage of project	Start - 2021	As needed

Title of Activity	Sponsor of Activity/Source of Funding	Award or other Identifying Number	The Total Cost or Value of the Award or Activity	The Award Period (Start Date – End Date)	The person-months of effort per year being dedicated to the award or activity
Research – Ames Laboratory	Research targeting processing technologies to extract most of Lithium values from spodumene	n/a	Study phase stage of project	Start – 6/2021	Contracts and scope of work TBD
Research - Lawrence Berkeley National Laboratory	low temperature extraction of lithium from alpha spodumene	n/a	Study phase stage of project	Start – 6/2021	Contracts and scope of work TBD
Southeast Tennessee Development District	Local Workforce Investment	n/a	Project Execution	2023	Scope of training and investment TBD
Cleveland State Community College	Customized Training Programs	n/a	Project Execution	2023	Scope of training and investment TBD
Tennessee College of Applied Technology	Training Programs	n/a	Project Execution	2023	Scope of training and investment TBD
Tennessee Wesleyan University	Customized Training Programs	n/a	Project Execution	2023	Scope of training and investment TBD
Binh Meador	Staff	n/a	All phases	Start – 2020	12 months per year
Austin Devaney	Staff	n/a	All phases	Start - 2020	12 months per year
Patrick Brindle	Staff	n/a	All phases	Start - 2018	12 months per year
Malissa Gordon	Staff	n/a	All phases	Start - 2020	12 months per year

*As required, a description of the above "other award[s] or activit[ies]" has been appended to this Current and Pending Support.

Signature: _____

Date: June 29, 2022

I, Patrick Brindle, Chief Operating Officer of Piedmont Lithium Inc, certify to the best of my knowledge and belief that the information contained in this Current and Pending Support Disclosure Statement is true, complete and accurate. I understand that any false, fictitious, or fraudulent information, misrepresentations, half-truths, or omissions of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (18 U.S.C. §§ 1001 and 287, and 31 U.S.C. 3729-3730 and 3801-3812). I further understand and agree that (1) the statements and representations made herein are material to DOE's funding decision, and (2) I have a responsibility to update the disclosures during the period of performance of the award should circumstances change which impact the responses provided above.

2678-1739 Piedmont Lithium DMP

Data Management Plan
Department of Energy (DOE)

A. Data Types and Sources

Piedmont Lithium Inc. ("Applicant" or "Piedmont") proposes activities including the engineering, procurement, construction, commissioning, ramp-up, qualification, and handover to operations of a battery-quality lithium hydroxide manufacturing plant to be located on a greenfield site in McMinn County, Tennessee.

Execution of the project will be undertaken on an engineer, procure, and construct (EPC) basis with Kiewit, a U.S. construction company, as EPC Contractor. Detailed design engineering is expected to commence in Q3 2022 with construction activities commencing in Q2 2023 with expected completion in about 24 months.

The Project will collect, and store datasets related to battery material production statistics. A description of data to be produced by the Project includes, but is not limited to, data that are:

- Safety performance data
- Engineering documents and drawings
- Construction records
- QA/QC documentation
- Operating manuals and procedures
- Commissioning data
- Physical collections – product samples
- Models – lab testing
- Simulations – validation
- Schedules and Costs
- Project correspondence

Any source data used as inputs to the Project will be properly referenced in resulting publications and data submissions, and if publicly available online, may be linked to as part of one or more data submissions, but will not be actively managed by this Project. This Project may use proprietary source data subject to license agreements that forbid its public release. Any derivative data products resulting from this work will be made publicly available at the time of publication and will include references to the source data, but due to license restrictions, some source data may not be made available.

B. Content and Format

The Project will leverage existing data standards established by DOE's Office of Science and Technical Information, and the General Services Administration's Project Open Data.

Project Management data, as indicated above, will be stored in team-accessible folders on SharePoint, and other sites, and made available for DOE and the team to access throughout the duration of the Project.

During the lifecycle of the Project, data will be stored in the most useful format for the Project team, which may occasionally include proprietary formats. Data stored in proprietary formats may be exported to more commonly accessible formats prior to public dissemination, to ensure maximum utility and availability of data resulting from this Project.

Document management will be controlled by the Integrated Project Management Team (IPMT) in the Company's InEight document management software. Project documentation will be controlled between Piedmont and Contractors via Project Document Control.

Key ERP systems that will contain our general ledger activity (NetSuite), including the payroll system (Vensure) which tracks time and related taxes, and our expense reimbursement system (Expensify) which integrates with our general ledger system are all subject to our SOX control testing. Further, we obtain a SOC-1 control report for each of these three key systems (NetSuite, Vensure, and Expensify) and document and test the relevant user controls, including access and segregation of duties.

Scheduling and Project Tracking Data

Piedmont has retained HDR Engineering as Program Manager and Owner's Engineer for the execution of the LHP-2 Project. Project schedules will be managed by HDR using Primavera P6.

Design Data Management

Engineering design changes will be controlled through the Project's Management of Change Process. Field changes during construction will be controlled through redline drawing changes and approved by the Engineer. Field changes will be incorporated into the as-built Project documentation. Scope changes which have cost or schedule impacts will be managed contractual Change Notices and follow the EPC Contract's Change Notice Procedure process. All changes will be reviewed and approved by the Owner prior to implementation.

Project Cost Data Management

Project costs will be managed using the Project Cost Breakdown Structure, which includes the Work Breakdown Structure plus additional cost details. The Project will be implemented using a Target Cost Model with progress measured on an Earned Value Basis. Project costs will be managed using the Company's project software, InEight, and ERP system, Oracle Netsuite. HDR Engineering will assist the Owner in processing contractor claims, validating earned value analysis, verifying invoices, and managing change order.

Document Management

Piedmont will follow established versioning and change control of documents related to lab testing, validation, transmittals, requests for information, and documentation of project decisions. Respective documents will be stored in InEight, Netsuite, and SharePoint

Safety, Quality, and Commissioning

Project QA/QC will be managed in accordance with the Project Quality Plan which sets forth the requirements for quality in engineering design, procurement, equipment inspections, field inspections, non-destructive testing requirements, and pre-commissioning tests. Third party specialists will be employed by the Owner where required to ensure that Contractor performance is in accordance with the EPC Contract. A management system will be chosen and in place before commencement of construction phase.

Workflows-- Engineering Documentation and Folder Structures

Engineering documentation will be controlled by the Engineering Manager and the Document Controller using the control process shown in **Figure 1** and filed according to the folder structure in **Figure 2**.

Figure 1. Engineering Documentation Swim Lane Diagram

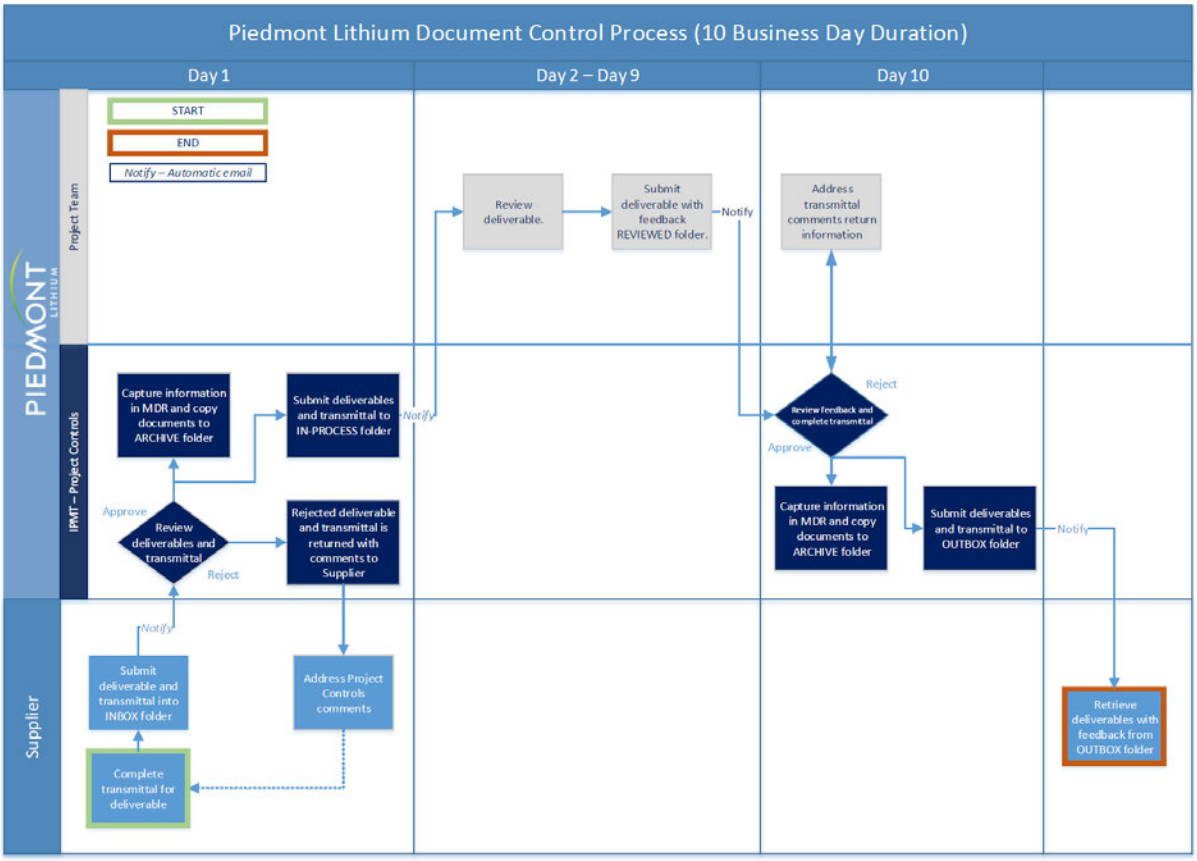
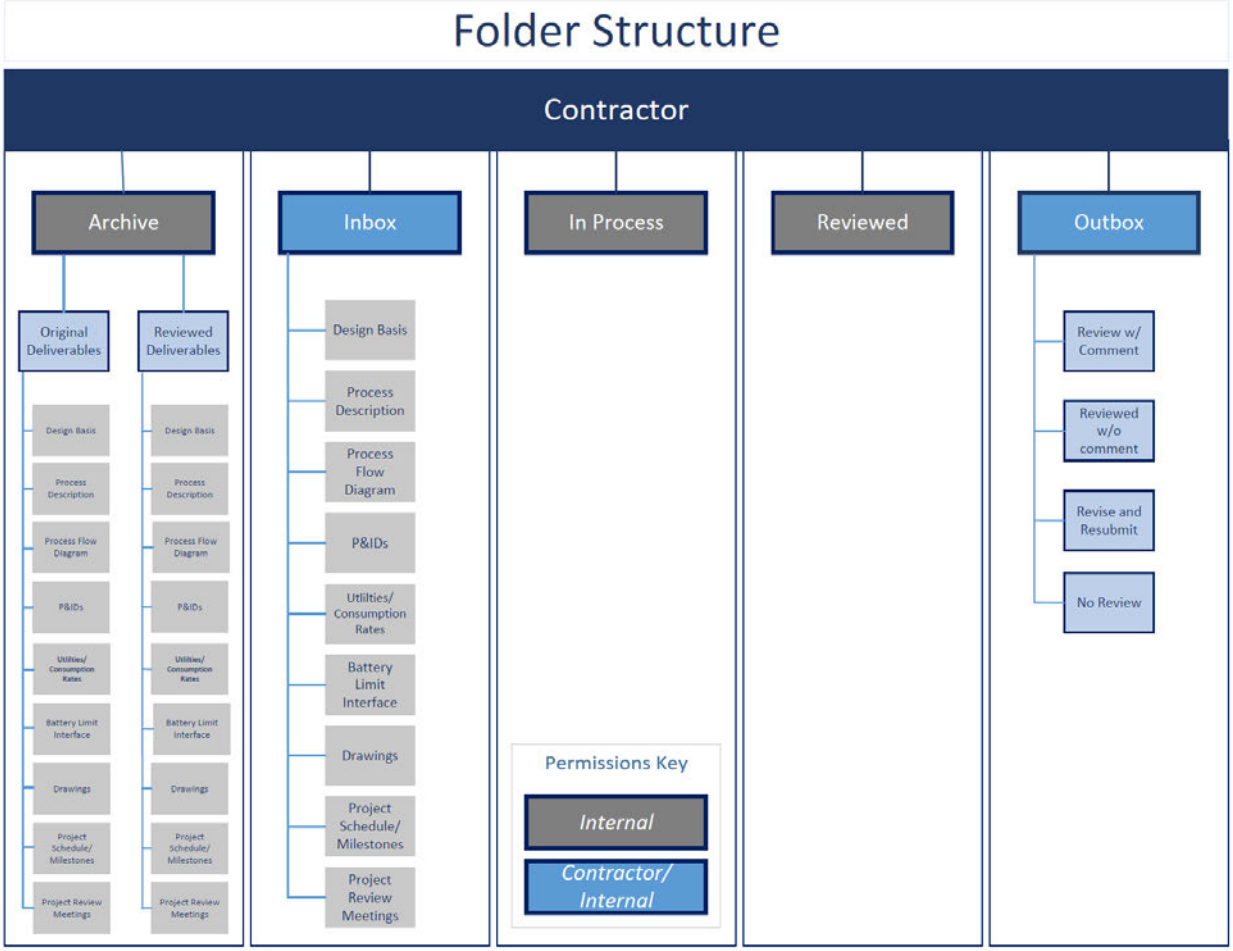


Figure 2. Engineering Documentation Folder Structures



C. Sharing and Preservation

Data Sharing encompasses the spectrum from making data available upon specific request to depositing data in an open and publicly accessible repository. Below are Piedmont's standards for sharing and preserving data.

- Piedmont maintains a Microsoft 365 E5 ecosystem in which all company-owned devices, data and document storage, email, and all corporate apps and admin portals are only accessible through password and multifactor authentication.

- All non-public facing data and documentation is stored securely within the Microsoft 365-based Piedmont SharePoint and OneDrive document repository and internal collaboration system.

- Access to public-facing data and documentation will be available through our existing corporate website and/or microsite.

- The data and documentation on our Piedmont websites are physically accessible through the administrative portal which only allows administrator or contributor login using password and multifactor authentication.

- All Piedmont data and documentation stored within SharePoint, OneDrive, Outlook (Exchange), and Teams is backed up daily via an offsite, redundant SaaS-based enterprise backup solution which provides granular data recovery options, per user and per site.

- Upgrades to Data Protection policies, remediation of vulnerabilities, and security configurations are continuously monitored and modified using Defender for Cloud recommendations.

D. Protection

Critical Project data are will be housed in the InEight database, which is hosted behind firewalls in a secure cloud environment on InEight. Users must have an account to access the network and the applications and databases within the network. Additional user accounts are required for logging into the InEight application and the database. Vendor data is uploaded to the SharePoint, which is hosted on the Microsoft Cloud. Microsoft Cloud is a leading cloud provider, offering a secure, reliable, and scalable computing environment. Microsoft Cloud utilizes cyber security checks and balances to protect information security, conforms to FedRAMP certifications, and includes multiple redundant backups for data preservation.

The Project data manager at each contributing institution will work closely with the Project team to ensure that publicly available Project data do not contain any Personal Identifying Information, proprietary interests, or other inappropriate content. Piedmont will communicate the data management plan and provide training and guidance on data flow and practices. As an additional line of defense, all Project data are will be curated by the data management team and reviewed a second time to ensure data quality and relevance.

- SharePoint accessibility is maintained so that “private” folders containing sensitive information can only be accessed by specific stakeholders based on their role, responsibility, department or manually added through the permissions administrative section.

- All Windows-based Piedmont company-owned devices utilize Bitlocker encryption with encryption keys automatically stored in Azure.

- Files located in SharePoint and OneDrive can be shared with external users when they are added as a Guest User within our managed users account in Azure.

- All Piedmont devices can be disabled and all data and documentation can be wiped from devices via Azure and/or Endpoint Manager.

- USB thumb drives are inoperable on Windows devices to prevent copying and/or moving Piedmont data from managed devices to non-managed devices.

- All Piedmont company-owned devices are onboarded with Endpoint Detection and Response which provides advanced attack detections that are remediated in near real-time or are actionable for remediation.

- Data Loss Prevention policies, including U.S. Patriot Act and U.S. Financial Data policies, have been integrated and are maintained to prevent sharing of sensitive information.

- Retention Policies for Exchange, SharePoint, OneDrive, M365 Groups, and Exchange Public Folders have been integrated to prevent any type of deletion across the Piedmont ecosystem.

- Insider Risk Management is monitored through Microsoft Purview and Compliance Management.

E. Rationale

The development and collecting of battery materials testing and validation data in this Project are essential to the success of the Piedmont plant. The data management strategy adopted by this Project is essential to maintaining the intellectual property of the Project partners.

Piedmont will form an IPMT that will oversee the performance of the EPC Contractor. The IPMT will use established plans and procedures to control project outcomes including safety performance, cost and schedule management, document control, asset management, change management, financial controls, risk management, quality assurance and quality control.

NETL F 451.1-1/6
Revised: 11/1/2010
Reviewed: 12/9/2014
(Previous Editions Obsolete)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL VOLUME

2678-1739

2678-1739 PIEDMONT LITHIUM EIV

I. GENERAL

This Environmental Volume provides, in detail, all information requested by the Department of Energy (DOE) regarding a proposed project to build, own, and operate an advanced manufacturing plant for up to 30,000 metric tons per year of battery quality Lithium hydroxide. The manufacturing plant utilizes an innovative third-party processing technology that has superior operating cost and sustainability profiles relative to current producers based in Australia, China, and South America. The plant is being built in McMinn County, Tennessee.

II. CONTENT

A. ENVIRONMENTAL INFORMATION DESCRIBING THE PROJECT AND THE PROJECT SITE(S).

1. Summary

Lithium hydroxide ("LiOH") is the preferred feedstock for high-nickel cathodes used in electric vehicle ("EV") batteries today, and likely, in the future. Piedmont Lithium Inc. ("Piedmont" or the "Applicant") is a Delaware corporation, which is listed on Nasdaq and trades under the symbol "PLL." The Applicant will build, own, and operate an advanced manufacturing plant to produce up to 30,000 metric tons per year ("tpy") of battery quality LiOH. The U.S.-based manufacturing plant will produce LiOH from spodumene concentrate ("SC6") sourced from projects in Ghana and Canada, where the Applicant holds equity interest and material offtake rights, and other market sources. The manufacturing plant utilizes an innovative third party LiOH processing technology that has superior operating cost and sustainability profiles relative to current producers based in Australia, China, and South America ("LHP-2 Project" or the "Project"). Establishing this facility will help achieve DOE's goals of reducing the burden of sourcing materials from foreign companies.

The scope of the Project encompasses SC6 storage, LiOH processing and manufacturing, shipping and logistics. The projects which support the LHP-2 Project are excluded from the grant application scope. The Applicant seeks a grant under DOE-FOA-2678 AOI 1 -=- LHP-2 Project including all manufacturing processes and on-site supporting infrastructure.

The Project will be located in McMinn County, Tennessee. The Project is expected to begin construction in the first half of 2023, subject to equity and permitting timelines. The Project will then commence commissioning, ramping up incrementally, and starting in late 2025. Full capacity is expected by 2026.

The site in McMinn County, Tennessee is a greenfield site, which is currently located on private land that is primarily pasture land and strands of forests, with some identified wetlands and streams. McMinn County Economic Development (EDA) has completed some preliminary studies on the site to determine stream and wetland delineation, archaeological presence, endangered species, geotechnical, and other general assessments.

Consideration of this proposed Project has indicated likely potential beneficial impacts to the community, with no risks at this time. The benefits include increased jobs for an area that has seen recent decline and a recent layoff by a prominent employer in the area. Other benefits include increased revenue for businesses in the region to support lodging, construction materials, materials and tools for operations, and service providers for maintenance and operations.

Establishing an environmentally sound, safe, and beneficial relationship with the McMinn community will be undertaken as a priority focus. Additional outreach and partnerships will extend the economic benefits throughout the region as well. At the local level, various community engagements have already begun and will continue throughout the project duration and into the operational phase. Piedmont has begun quarterly community forums, a community working group, and a storefront in McMinn County have already commenced. The goal of these activities is to incorporate community input into the evaluation and design of the project. Focal areas include environmental, transportation, infrastructure and plant design/planning.

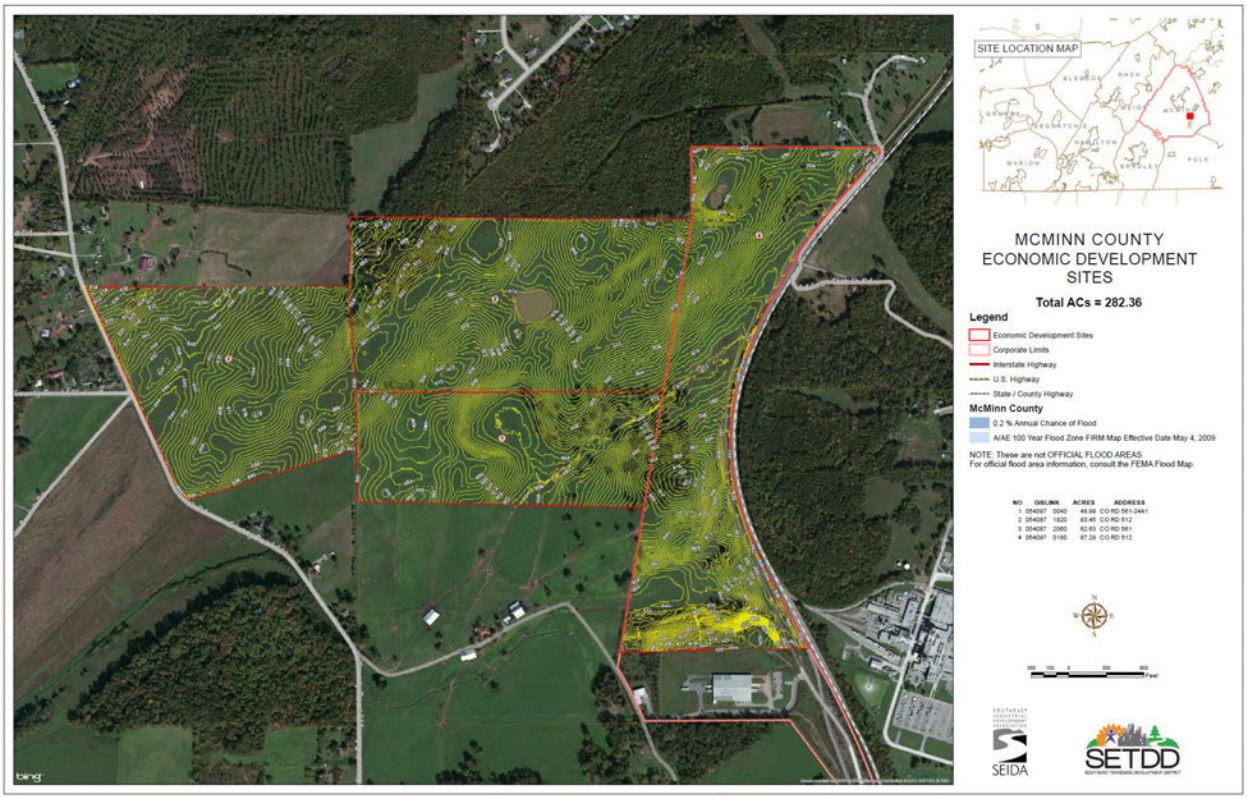
Figure 1. Photo of the McMinn County LHP-2 Project Site

Figure 2. A Preliminary Design of the LHP-2 Project

2. Environmental Status

McMinn County EDA consulted with Tennessee Department of Environment and Conservation (TDEC) - Division of Natural Areas, which concluded that there are no known state rare species, or suitable habitat for state rare species on the site. TVA reviewed the TVA Regional Natural Heritage Database and concluded that there have been no known observations of state or federally listed terrestrial species reported within three miles of the site. TVA's review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) revealed records of four federally listed species Indiana bat (*Myotis sodalis*), northern long-eared bat (NLEB) (*Myotis septentrionalis)*, and rusty-patched bumblebee (*Bombus affinis*) exist in McMinn County, TN. The USFWS has determined that one additional federally listed species (gray bat [*Myotis grisescens*]) potentially occurs in the site. Of these federally listed species, the Project may affect the gray bat, Indiana bat, and the NLEB. Foraging habitat for all three bat species occurs over a pond located on the site; tree clearing would remove suitable summer roosting habitat for Indiana bat and NLEB. No suitable winter habitat occurs within the site for any of the bat species. Therefore, pending site development activities, such as tree clearing and grading, may affect the three federally listed bat species. A mitigation measure the Applicant will employ is to avoid tree clearing that would occur during bat-occupied timeframes, which includes April 1-November 14 (summer roosting season, pup season, and swarming season). **Figure 3** shows a topographic overview of the proposed LHP-2 Project site.

Figure 3. Topographic Map of the LHP-2 Project Site in McMinn County, Tennessee



Based on guidance provided by the USFWS Rusty Patched Bumble Bee Map[1] the Project is in the Historical Range of the rusty-patched bumblebee. The USFWS states that for this portion of the historical range, the rusty-patch bumblebee is not present and Section 7 consultation and Incidental Take Permits are not required. Rusty-patched bumblebee would not be impacted by the Project.

McMinn County EDA consulted with TDEC-Division of Archaeology, which concluded that there are no known prehistoric or historic archaeological sites recorded within the site. TVA's assessment included a review of resources protected by the Archaeological Resources Protection Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), and the National Historic Preservation Act (NHPA). TVA also consulted with the Tennessee Historical Commission (THC), which revealed that a portion of the L&N Railroad line adjacent to the site is considered a historic resource, though still currently operational. TVA recommended this portion of the L&N Railroad to be eligible for the National Register of Historic Places (NRHP) for its importance in the economic development of the region for which the Tennessee State Historic Preservation Office (SHPO) concurred. The site does not provide cultural or religious significance

to federally recognized Indian tribes. While the Project proposes to construct a rail spur onto the site from the L&N Railroad, it would not change the physical features within the resource's setting that could contribute to its historical significance; therefore, the Project would not affect resources protected by the ARPA, NAGPRA, or NHPA.

3. Proposed Project and Its Alternatives

The Applicant will build, own, and operate an advanced manufacturing plant for up to 30,000 metric tons per year ("tpy") of battery quality LiOH. The U.S.-based manufacturing plant will produce lithium hydroxide from SC6 sourced from projects in Ghana and Canada, where the Applicant holds equity interest and material offtake rights, or other market sources. The manufacturing plant utilizes an innovative third party LiOH processing technology.

The selected site is a greenfield site which is currently located on private land that is primarily pasture land and strands of forests with some identified wetlands and streams. The scope of this Project will include site clearing activities and earthworks in accordance with site development plans which are still in progress. The design of this facility will not impact any wetlands and/or streams. A preliminary geotechnical study was completed for site characterization and indicative foundation recommendations. A detailed geotechnical investigation will be completed during detailed design engineering prior to construction. Design engineering has commenced and the permitting process has begun for an air quality construction permit, which will be necessary to begin construction. Piedmont anticipates receipt of all permits required for start of construction (i.e. air, water) by the end of 2022. A Final Investment Decision is expected by the end of Q1 2023 with EPC execution of the LHP-2 Project expected to commence soon thereafter. First lithium hydroxide crystals are expected in late 2025, with ramp to full production completed in 2026.

A site plan is currently being generated, but is not yet available.

The Applicant conducted a thorough site selection process to determine the best site for this project. The selection process evaluated logistics, proximity to customers, green benefits, incentives, labor, community impact, permit readiness, infrastructure, and waste disposal options. By working with various Economic Development groups in North Carolina, South Carolina, Tennessee, and Georgia the team was able to identify 3 candidate sites that could meet the needs of the project. Members of the leadership team conducted a tour of the final sites and a decision was made that the McMinn County, Tennessee provided the best location that met each criteria at a very high level of based on assessed factors.

4 Existing and Future Environment

a. Land Use

This 280 acre plot of land is primarily pastureland, with strands of forests, which also includes wetlands and streams. Electric, natural gas, and water utilities border the property, but water lines, pipelines and transmission lines will have to be created to bring these utilities to the exact property location. Service availability of these resources is adequate to supply this Project. The site is located with a rail line just north of the property, which can allow for both incoming raw materials and outgoing product, if necessary. McMinn County EDA is currently working with TDOT to expand a nearby road to allow for multiple large truck access to this site location. Barge access on the Hiawasee River is about 20 miles away from the site is being considered as a potential access route to deliver raw materials.

Settlement ponds will be developed to provide protection of stormwater runoff from the property. Where, how many, and size will be determined during the layout design for the site.

b. Atmospheric Conditions/Air Quality

The Project site area is in an attainment area. The average local temperatures for this region are highs of 85 degrees Fahrenheit and lows of 64 degrees Fahrenheit. The air quality index (AQI) for this region ranges from mid-teens to highs near 70. The range noted references quality of good to moderate. An unhealthy range is 151 – 200 so these values highlight that the general atmospheric conditions and air quality are in “normal” conditions. Our proposed Project will not impact these conditions. The TDEC Division of Air Pollution Control is the administrative body responsible for permitting for this proposed site. Estimated potential emissions for the site include: PM - 46.2 tons per year (tpy); SO_2 - 0.65 tpy; NOx - 99 tpy; CO - 92.4 tpy; VOC - 6.14 tpy; GHG - 130,278 tpy; and total HAP - 2.60 tpy.

c. Hydrologic Conditions/Water Quality

The site for this Project is in the Upper Tennessee Watershed. This basin is comprised of nearly 200 river miles from the confluence of the Holston and French Broad Rivers. At this time, we have no data indicating the surface and groundwater quality for the proposed project area.

No floodplains, unique aquatic habitats, or recreational areas have been identified in the Project area. There should be no constraints, or availability concerns, regarding water availability for this Project site. The City of Etowah has the required capacity available to treat any wastewater that will be generated from the site operations. Given that this Project is not yet fully designed, effluents that will be generated at the site have not been completely identified. Once design is complete, this information will be available and used to determine potential impacts and required mitigations.

d. Geologic/Soil Conditions

A preliminary geotechnical study for the proposed site has been completed. The results indicate that the site is generally adaptable for light and/or heavy industrial developments. The geotechnical report indicates some firm residual soils and underlying karst geology. The overall results of the study note that heavy buildings (> 300 kips) could experience settlement if supported on shallow foundations. A detailed geotechnical investigation will be completed during detailed design engineering based on a final site layout. The detailed geotechnical investigation will include final foundation recommendations, including potential deep foundations, to minimize settlement within allowable tolerances for plant equipment.

e. Vegetation and Wildlife Resources

An endangered species study for the proposed site has been conducted. The State of Tennessee has certified that the site should not have any impacts to rare, threatened, or endangered plant species on this site.

As previously noted, there are wetlands on this property, but the project will not impact the wetlands for this project. No floodplains or other ecologically sensitive terrain have been identified.

f. Socioeconomic Conditions

An Environmental Justice review was conducted for this proposed project area. The population of this specific region is comprised of 70% white and 30% non-white with the majority (15.7%) of the non-white being Black or African American.

McMinn County is located close to the Smoky Mountains of Tennessee. McMinn county has 430 square miles of land area and 2.1 square miles of water area. As of 2020, the total population of McMinn County is 53,794, and has grown 2.9% since 2010. The population growth rate is lower than the state average rate of 8.9% during the same period and is lower than the national average rate of 7.4% from 2010 to 2020. McMinn County median household income was $46,872 in 2020. McMinn County median house value was $140,000 in 2022. The average house value in Tennessee is $177,600 and the national average of $229,800. On average, the public school district that covers McMinn County is close to the state average in quality. The Applicant will conduct socio-economic baseline data collection efforts in 2022 and will use this data to complete both a screening level and full socio-economic impact assessment as part of planning that is underway for the Project.

g. Historic/Cultural Resource

An archaeologist report was conducted for the proposed Project area. The State of Tennessee has certified that they did not find any prehistoric or historic archaeological sites recorded on the site.

h. Visual Resources

This site does not have any scenic vistas or existing aesthetic landscaping in the Project area.

i. Health/Safety Factors

Given that this is a proposed project, there are no current emissions, effluents, or noise levels at the project site. The health and safety baseline conditions within in the Project area have not been assessed at this time. However, the Applicant will commence detailed baseline data collection programs across the Project Area to determine the potential effects of the Project on the health and safety of both its employees, and the local residents. This baseline monitoring will include air and noise monitoring programs that will be used to support health and safety related assessments during the FEED, detailed design and construction phases of the Project. The monitoring of these components will continue throughout the operation of the Project, in accordance with any permits required for Project operations.

j. Solid and Hazardous Wastes

No wastes are currently generated from the site. Non-hazardous solid waste will be generated from the Project as part of the LHP-2 manufacturing process. This waste will be disposed of at a nearby landfill. The solid waste may have potential in cement or concrete applications, but additional work is required to determine if a regional customer would be able to accept the material.

B. ENVIRONMENTAL IMPACTS OF THE WORK TO BE PERFORMED.

Current Status: The project is at a basic engineering level of development currently. Front End and Detailed Design Engineering will commence in July 2022. As part of detailed design, elements of project development which may have environmental impacts will be evaluated. The alternatives that will be evaluated regarding potential environmental impacts will include, but will not be limited to:

- Process plant layout: the layout will not impact stream or wetland features that have been identified on the Site.

- Process plant technology: Piedmont has selected the innovative Metso:Outotec process to reduce solid wastes from the Project and eliminate sodium sulfate tailings. Process water will be recycled within the plant to the extent practical. Process effluent which cannot be recycled will be pre-treated prior to discharge to Publicly Owned Treatment Works (POTW).

- Waste storage facility locations: no permanent on-site waste disposal facility is contemplated as part of the Project. Non-hazardous waste generated as part of the lithium hydroxide manufacturing process will be disposed of at an existing off-site landfill.

- Waste storage facility designs: no permanent on-site waste disposal facility is contemplate as part of the Project. Non-hazardous waste generated as part of the lithium hydroxide manufacturing process will be disposed of at an existing off-site landfill.

A number of baseline studies have already been completed for the site. A list of environmental baseline data collection programs or technical studies associated with detailed design scheduled for 2022 are included in **Figure 4**.

Figure 4. Status and Plan for Additional Environmental Studies

Study	Status
Cultural Resources Survey	Complete
Threatened & Endangered Species Surveys	Complete
Air Monitoring Program	Baseline studies to be undertaken during designed design. To be developed in accordance with permit requirements
Noise Monitoring Program	Baseline studies to be undertaken during detailed design.
Geotechnical characterization	Complete. Detailed investigation to be completed during detailed design based on final site layout.
Geochemical characterization	Complete. Detailed investigation to be completed during detailed design based on final site layout.
Solid Waste study	Leaching Environmental Assessment Framework (LEAF) Testing of tailings has been completed to determine suitability for landfill disposal or other opportunities.
Traffic study	Heavy haul and traffic studies to be completed by EPC contractor during detailed design engineering
Socio-Economic Baseline Data Collection	Data provided by McMinn County EDA. Environmental Justice snapshot completed.

a. Land Use

Erosion, sediment control, and stormwater management features will be installed at the start of construction in accordance with the Project permits in order to mitigate potential impacts associated with construction. Additional activities which may have limited impacts including noise and dust will be managed in accordance with Kiewit (EPC Contractor) best practices. The wastes associated with construction activities at the plant will be managed by the project EPC contractor in an environmentally sound manner, consistent with Kiewit's best management practices. Any wastes will be handled properly on-site and properly disposed of off-site. The Applicant will evaluate potential mitigation strategies aimed at minimizing the impacts to land and wastes.

Permanent stormwater management features will remain in place post-construction to manage stormwater discharge.

The non-hazardous solid waste associated with the production activities of the plant will not be disposed on-site but will be transported to appropriate waste management facilities for disposal. Wastewater produced by the operation of the facility will be pre-treated on-site before being discharged to the municipal wastewater treatment plant (under an industrial user discharge permit) for final treatment.

b. Atmospheric Conditions/Air Quality

The project site is in an attainment area. The Project will be required to limit and control emissions using the appropriate emissions control technology and management practices. In addition, potential sources of nuisances will be mitigated to limit their impact on the community, workplace hygiene, and the environment.

The LHP-2 Project will operate under the conditions of an operating permit issued by the TDEC and pursuant to applicable air rules and regulations. Estimated potential emissions for the site include: PM - 46.2 tons per year (tpy); SO_2 - 0.65 tpy; NOx - 99 tpy; CO - 92.4 tpy; VOC - 6.14 tpy; GHG - 130,278 tpy; and total HAP - 2.60 tpy when accounting for performance of emission control devices.

The construction activities for the plant are expected to have some limited environmental impact. During construction, steps will be implemented to reduce the emissions of dust and particulate matter.

c. Hydrologic Conditions/Water Quality

It is not expected at this time that significant impacts to hydrologic or water quality conditions would occur as part of this Project.

d. Geologic/Soil Conditions

Topsoil will be moved during clearing activities and reused on site when construction is complete or removed from the site, after characterization for anticipated beneficial reuse. Soils beneath the top soil will also be affected by being reworked, removed from the site, or used on site as part of the construction process. Site civil design has commenced and is ongoing. Civil design will maximize cut/fill balance and work is still being undertaken to determine what amount of soil needs to be removed from the site, what will remain, and how any excess soil can be beneficially reused.

e. Vegetation and Wildlife Resources

Threatened and Endangered Species surveys were completed for the Site in connection with establishing site readiness. Review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) revealed records of four federally listed species Indiana bat (*Myotis sodalis*), northern long-eared bat (NLEB) (*Myotis septentrionalis)*, and rusty-patched bumblebee (*Bombus affinis*) exist in McMinn County, TN. The USFWS has determined that one additional federally listed species (gray bat [*Myotis grisescens*]) potentially occurs in the site. Of these federally listed species, the Project may affect the gray bat, Indiana bat, and the NLEB. Foraging habitat for all three bat species occurs over a pond located on the site; tree clearing would remove suitable summer roosting habitat for Indiana bat and NLEB. No suitable winter habitat occurs within the site for any of the bat species. Therefore, pending site development activities, such as tree clearing and grading, may affect the three federally listed bat species. A mitigation measure the Applicant will employ is to avoid tree clearing that would occur during bat-occupied timeframes, which includes April 1-November 14 (summer roosting season, pup season, and swarming season). To minimize impacts to several bat species, clearing activities will not occur during the roosting, pup, or swarming periods.

f. Socioeconomic Conditions

Potential impacts to socio-economic will be evaluated in detail as the prefeasibility and feasibility assessments progress throughout 2022 and 2023. These assessments will include the evaluation of positive and negative impacts of the project.

Employment at the Project site is estimated to create approximately 100 permanent operations jobs along with 40 corporate personnel. The Project is also expected to create approximately 500 additional construction jobs throughout the life of construction. The Applicant expects the Project to provide additional economic benefits to the local region by attracting other businesses and increasing revenue to current local businesses.

The Applicant plans to consider a Socio-Economic Baseline and Social and Human Rights Impact Assessment, which will:

- Conduct desktop research, using publicly available information, to identify key characteristics, including the following: population and demography; economic activities, workforce participation, employment and cost of living; social infrastructure and social and cultural values; key ecosystem services; community participation in planning and decision making of local development; among others

- Conduct interviews (up to 15) to augment the desktop research, identifying community challenges, priorities and opportunities

- Validate the baseline with key community members and stakeholders (format of meetings to be designed as part of the Stakeholder engagement strategy)

- Conduct a high-level Social and human rights impact assessment

- Identify social impact prevention, mitigation and opportunity activities which will be included in the Stakeholder engagement and social management plan

- Validate key mitigation measures with key community members and stakeholders (format of meetings to be designed as part of the Stakeholder engagement strategy)

The Applicant will conduct a Traffic Assessment to establish:

- Baseline traffic monitoring at selected intersections. Monitoring includes AM/PM variability. Two monitoring periods planned to evaluate seasonal variability

- Development of traffic inventory for the Project: construction, operations, equipment deliveries, material deliveries, product export, employee traffic

- Traffic Impact Analysis modeling for key intersections and road segments to determine changes in Level of Service, identify improvements/mitigations.

The Applicant will conduct a Noise Assessment to include:

- Identification of sensitive receptors, including nearest residents, special areas like historic districts, and wildlife areas

- Focused short-duration noise monitoring (1 week) in the vicinity on sensitive receptors. Two separate monitoring events planned in 2022-2023 to evaluate seasonality (summer; fall/winter)

g. Historic/Cultural Resource

As stated previously, a review has determined it is unlikely there are significant cultural resources on site, but additional consideration will be made to the need for a comprehensive historical or archeological sites survey. The character of the area where the Project is proposed to be constructed is agricultural in nature and the proposed use aligns with the county of McMinn's comprehensive plans. If, as part of other reviews or considerations of the site, it is determined there is a potential for historical or archeological resources to be present on site, a survey will be completed.

h. Visual Resources

The plant site is presently a greenfield site, and the construction of the plant is not expected to have a negative impact of the aesthetics of the area.

i. Health/Safety Factors

The occupational risk associated with this manufacturing plant will be consistent with most other industrial applications. The presence of toxic or hazardous substances, any increase in noise, odor, or heat at this facility will be managed in such a manner that it does not pose safety and health issues for the employees, and the surrounding community.

j. Solid and Hazardous Wastes

As with most manufacturing operations, solid and hazardous wastes will be generated. Piedmont is an excellent environmental steward and manages wastes generated from its facilities in accordance with applicable local, state and federal rules and regulations.

The LHP-2 Project will generate approximately 400,000 metric tons per year of analcime, which is an inert aluminosilicate. The analcime is non-hazardous and will be disposed of at an off-site landfill.

k. Impacts on Regional or Local Plans

The Project Site is currently owned by McMinn County EDA and is part of the regional plan for industrial development. The Project encompasses improvements to natural gas and water utilities. Solid waste will be managed by the current private providers in the area, but there should be no detrimental impact to the region. The air quality will be regulated by the TDEC, which will help ensure adherence to any state and federal requirements. The Project is in an attainment area currently for air quality. McMinn County has grant funding for road improvements surrounding the Site from TDOT. These road upgrades will be funded upon commencement of the Project. The Project will have a positive impact on the local labor force,

by providing a regional draw for staffing. The community is planning for that impact and will have a labor force impact review to evaluate new courses of study that local colleges, universities and high schools can provide to support the new employer.

C. Potential Liability to DOE of Existing Conditions at the Site

The Project site, a greenfield site, has historically been used for pasture land. No industrial or manufacturing operations have been housed at the site in the past. Accordingly, we are not aware of testing results that would form the basis for exposing DOE to previous liability. There are no significant or outstanding actions with the federal, state, or local regulatory agencies with regard to historical environmental contamination, or pending reclamation requirements.

Given there are no existing operations at the site, there is no potential liability to DOE currently. Many studies have been completed and no known conditions presented themselves that would allow potential liability.

D. Ability to meet Compliance Requirements at the Site

The facility will comply with all applicable federal, state, and local environmental statutes and the rules and regulations. Piedmont's Vice President – Safety, Environment and Health and the Company's Chief Operating Officer and the Facility's Environmental Health and Safety staff will be responsible for compliance.

The Applicant's strategy for meeting all compliance requirements will be assessed and considered internally. The Applicant will then identify the best available control technology and feasible practices for compliance with Federal air, land use, and water quality statutes. In addition, the Project site is located in an attainment area for all criteria pollutants and the Applicant will determine how to meet the applicable requirements dictated by that status. Required permits for the site are shown in **Figure 5**.

Figure 5. Permitting Requirements for LHP-2 Project Site

Permit **description**	**Regulating Agency**
Air Quality Construction Permit	TDEC Air Pollution Control
Air Quality Non-Title V Air Permit	TDEC Air Pollution Control
TNR100000 for General NPDES Permit for Stormwater Discharges from Construction Activities	TDEC-DWR
TNR050000 NPDES Stormwater Multi Sector	TDEC-DWR
Driveway Permit	TDOT

The list shown above highlights the permits that will be required to be in compliance with State and Local laws to operate the project. The details necessary to finalize these permits will be based on samples from test work and lab testing that will be necessary to properly design and permit. Applicant will work with the regulatory agency to ensure compliance methods and targets are understood and met. For all permitting the best available control technology will be employed to minimize and/or mitigate any effluents.

Piedmont is creating a robust environmental management system and has knowledgeable staff to address the environmental issues. The Applicant employs the best available control technology and management practices in the handling of air, land, water and waste issues. A few examples of activities that will be undertaken at the new facility:

Stormwater Discharge – The facility will be required to implement best practices for the management of stormwater and obtain coverage under a stormwater discharge permit issued by the TDEC.

Wastewater Discharge – The facility will pre-treat process wastewater on-site before discharging it to the municipal wastewater treatment plant pursuant to an industrial user discharge permit.

Air Emissions – The facility will be required to obtain an air construction and operating permit from TDEC, which will include conditions imposed on the operation of emission units (e.g. emission limits and operation of control devices).

Solid Waste Disposal – The facility will be required to comply with state and federal waste transport and disposal regulations when managing waste generated at the facility.

Generally, the best available control technologies that will be considered during engineering evaluations will include, but are not limited to:

Air Quality

- Water trucks to minimize dust during construction activities
- Polymers/tackifiers used on key roadways and facilities to reduce dust.
- Spray systems, wet scrubbing and bag houses (or other potential technologies) will be used in the processing plant to mitigate dust.
- Electric back-up power systems will be evaluated to eliminate use of conventional diesel/gas powered generator systems.

Water Quality

- Low water consumption alternatives will be evaluated for the processing plant.
- Water recycling opportunities will be evaluated to reduce dependence on potential municipal or water resources.

Soils

- Soils potentially disturbed by operations will be salvaged and stockpiled for use in reclamation.
- Potential repurposing of waste products to minimize the overall acreage of new disturbance.

E. EXPERIENCE AND APPROACH TO THE IDENTIFICATION AND RESOLUTION OF ENVIRONMENTAL ISSUES.

Piedmont is a world-class organization with experienced leaders within our operations and safety, environment, and health group that have addressed and resolved environmental concerns in the past. The company has the experience and the resources to address and resolve environmental concerns associated with this Project, should they arise.

Key Environmental Team

The Piedmont environmental team is led by the Company's VP of Safety, Environment, and Health, Monique Parker and the Company's Chief Operating Officer, Patrick Brindle.

Patrick Brindle, EVP and Chief Operating Officer

Mr. Brindle has served as our Executive Vice President and Chief Operating Officer since March 2022 and previously held the position of Chief Development Officer from May 2021 until March 2022. From January 2018 to May 2021, Mr. Brindle served as our Vice President and Project Manager. Prior to joining the Company, from January 2000 to December 2017, he worked in various roles in engineering and management including as Vice President of Engineering with DRA Taggart, LLC, a subsidiary of DRA Global Limited (ASX: DRA), an engineering firm specialized in project delivery of mining and mineral processing projects globally. Over his career, Mr. Brindle has held various management and senior engineering roles, including multi-year expatriate assignments, and has completed EPC projects in diverse jurisdictions, including the U.S., Canada, China, Mongolia, Brazil, Russia and others. Mr. Brindle received a B.S. in Environmental Science and a B.S. in Civil Engineering from Virginia Tech.

Monique Parker, CSP, VP Safety, Environment and Health

Ms. Parker is a chemical engineer by training with 20+ years' experience in environmental services, process improvements, operations management and safety leadership. From 2016 – 2021 Ms. Parker held several senior leadership roles at Albemarle, including Corporate Global Business Unit HSE Leader, Global Quality Director for lithium specialties, Business Process Improvement Director, and New Product Development.

Prior to joining Albemarle Ms. Parker held safety and environmental leadership positions at Owens Corning, Hexcel, Unilever, and Milliken. She earned her B.S. in Chemical Engineering from Tennessee Tech and is a Certified Safety Professional.

Piedmont has significant experience in identifying, developing, and operating world class lithium assets in a responsible and sustainable manner. Our company is creating the appropriate environmental management systems necessary for the conduct of its operations. Although not available at this time, detailed and comprehensive environmental policies will be developed as part of the feasibility and detailed design studies for the Project. These policies will align with not only the state and federal expectations but also the corporate expectations of the Applicant.

DOE F 540
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Exp. 11/30/2020

OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

ENVIRONMENTAL QUESTIONNAIRE

SECTION I. PROJECT SUMMARY	
Control Number:	2678-1739
Project Title:	LHP-2 Lithium Hydroxide Project
Applicant:	Piedmont Lithium Inc
Other Participants (Subrecipients, Contractors, etc.):	
FOA Number:	DE-FOA-0002678
FOA Title: Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing .	

SECTION II. BACKGROUND AND INSTRUCTIONS

Pursuant to the U.S. Department of Energy's National Environmental Policy Act (NEPA) implementing regulations (10 C.F.R. Part 1021), the Office of Energy Efficiency and Renewable Energy (EERE) is required to evaluate the potential environmental impact of projects that it is considering for funding. EERE must determine at the earliest possible time whether any proposed project qualifies for a categorical exclusion under 10 C.F.R.§ 1021.410 or will require further environmental review within an environmental assessment or an environmental impact statement.

You are required to answer the questions below for the project as a whole, including all work to be performed by the Recipient, its subrecipients and contractors, including any work outside of the United States. You may not limit your responses to work performed by the Recipient only unless instructed to do so by EERE. In completing this questionnaire, you must provide specific information regarding the nature of your proposed project, including information on its size, operations, and the types and quantities of air emissions, wastewater discharges, solid wastes, land disturbances, etc. You should identify the location(s) of the proposed project and describe the activities that would occur at each location.

The form should be completed and signed by the Principal Investigator for the project or another member of your organization who has sufficient knowledge of the project to answer the questions truthfully and accurately.

Failure to fully and adequately complete this form will delay EERE's environmental review of your proposed project. Please note that false statements or misrepresentations may result in civil and/or criminal penalties under 18 U.S.C. § 1001.

BURDEN DISCLOSURE STATEMENT
Public reporting burden for this collection of information is estimated to average 60 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2-GTN, Paperwork Reduction Project (1910-1800), U.S. Department of Energy, 1000 Independence Avenue S.W., Washington, D.C. 20585; and to the Office of Management and Budget (OMB), Paperwork Reduction Project (1910-1800), Washington, D.C. 20503.

SECTION III. PROJECT EVALUATION

1a. In the box below, please provide a brief summary of the proposed project activities. Describe physical activities, not goals and objectives. Specify if this project is part of a larger project or connected to another project.

Example: The proposed project activities include the design, development, fabrication, and field testing of advanced biomass harvesting equipment. Design, development, and fabrication activities would occur at our research and development facility adjacent to our manufacturing plant in Dearborn, Michigan. Equipment testing would occur in various agricultural fields in the surrounding area over a two-year period.

Explanation:

The proposed project activities include the engineering, procurement, construction, commissioning, ramp-up, qualification, and handover to operations of a battery-quality lithium hydroxide manufacturing plant to be located on a greenfield site in McMinn County, Tennessee.

Execution of the project will be undertaken on an engineer, procure, and construct (EPC) basis with Kiewit, a U.S. construction company, as EPC Contractor. Detailed design engineering is expected to commence in Q3 2022 with construction activities commencing in Q2 2023 with expected completion in about 24 months.

Design engineering will be undertaken principally in Kansas City, MO.

Construction, commissioning, ramp-up and operations will be performed on the project site in Tennessee.

1b. Is there other Federal government involvement outside of EERE in any aspect of this project (e.g., funding, permitting, technical assistance, project located on Federally administered land)?

Yes ☐ | **No** ■

If you checked "Yes," please list the agency, describe the nature of its involvement, and provide a point of contact at the agency, if known.

Explanation:

1c. Is the proposed project limited exclusively to intellectual, academic, or analytical activities?

Intellectual, academic, and analytical activities include, but are not limited to:

- Literature searches and information gathering
- Data analysis
- Computer modeling
- Analytical reviews
- Conceptual design
- Feasibility studies
- Document preparation
- Data dissemination
- Paper studies

You must answer "No" to this question if the proposed project involves any laboratory research and/or development, physical experiments, pilot-scale projects, demonstration projects, field tests, land-disturbance, construction, or similar activities.

Yes ☐ **| No** ☒

If you checked "Yes," proceed directly to Section IV (Certification) and complete the information and signatures as requested. If you checkned "NO" you must complete the entire questionnaire.

Explanation:

If you checked "Yes," proceed directly to Section IV (Certification) and complete the information and signatures as requested. If you checked "No," you must complete the entire questionnaire.

2a. Is the project fully defined at this point (i.e., all sites and activities are known)?

Yes ☐ | **No** ☒

If you checked "No," please describe those sites and/or activities/tasks that are yet to be defined and complete the remainder of the questionnaire to the best of your knowledge.

Explanation:

The project is at a basic engineering level today. Front end and detailed design engineering are commencing in Q3 2022.

Activities and tasks, yet to be defined, include final layout of the facility, raw materials and finished goods logistics to and from the site, final disposal for waste from operations, and wastewater composition from the operations.

2b. In the chart below, please describe the following four types of identifying information concerning project activities to be performed:

(1) each location where work would be performed, including address or coordinates, names of facilities, and whether this is a Recipient, Subrecipient, or Contractor location;
(2) the nature of the location (e.g., urban, industrial, suburban, agricultural, university campus, manufacturing facility) and the current condition and/or use of the site;
(3) the types of activities to be conducted at that location;
(4) land administration (e.g., BLM, USFWS, DOD, state, private).

(1) ***List all Locations Where Project Activities Would Occur (Facility Name and Address or Coordinates) and Indicate Recipient, Subrecipient, or Contractor***	*(2)* ***Nature of Location and Current Condition/Use***	*(3)* ***Activities to be Performed at Each Location***	*(4)* ***Land Administration***
Kiewit 9401 Renner B	Kiewit - EPC Office; U	Activities include design of the Lithium Hy	Private Kiewit -
LiOH Plant 2 (recipient)	Pasture and Forested	Activities include fabrication and operatic	McMinn County
Example 1: Smith Laboratory (recipient) 1234 College Lane Baltimore, MD XYZ Corporation (subrecipient) 1232 Industrial Drive Golden, CO	Smith Laboratory – Dedicated University Laboratory Facility XYZ Corporation – Manufacturing Facility in Industrial Park	Activities would include design and fabrication of a gallium-nitrate battery at XYZ Corporation's battery manufacturing facility using existing equipment. The battery would then undergo testing including battery charge/discharge cycling at Smith Laboratory. Data analysis would also occur at Smith Laboratory.	Smith Laboratory – State property XYZ Corporation – Private property
Example 2: Capital High School (recipient) 1234 Eagle Lane Golden, CO	High school property in a suburban environment that has been previously disturbed and is owned by the City.	Activities would include the installation of a 50 kW wind turbine adjacent to the football stadium. The final height for the turbine would not exceed 140 feet (hub height) or 170.6 feet (maximum blade height) with a blade radius of 31.5 feet. There is an airport 15 miles away from project site location.	City

2c. In the box below, please identify and describe: (1) any known or potential health and safety hazards to the public or project workers that may result from or are associated with your proposed project; and (2) any efforts that would be taken to mitigate these hazards. <u>Describe individually for each site discussed in Question 2b.</u>

Example (Hazards): The project would involve the use and handling of various hazardous materials, including metals and industrial solvents. All such handling would occur in-lab, and our organization is dedicated to proper hazardous material handling and disposal practices, so the project activities that involve these materials would pose no risk to the public. All hazardous materials would be managed in accordance with Federal, state, and local environmental regulations.

Example (Mitigation): Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified. This would help ensure compliance with applicable health and safety regulations, and minimize health and safety risks to employees and the public.

Explanation:

Kiewit (Hazards): The design phase of the project does not involve any known or potential health and safety hazards outside of normal office setting risks.

Kiewit (Mitigation): Existing corporate health and safety policies and procedures are fully developed and will be followed by all while engaging in the various design activities in the office setting.

LiOH Plant 2 (Hazards): The proposed project would involve the use of equipment at high temperatures, potential dust generation, use and handling of various chemicals and materials (some with hazardous characteristics), some areas of high noise volume when in close proximity, and truck and other vehicle traffic.

LiOH Plant2 (Mitigation): A detailed Safety and Health plan and programs will be created to manage all above mentioned risks using the hierarchy of controls with PPE being the last solution to be implemented. Protections will be provided for areas where employees may come in close contact with equipment at high temperatures. Dust suppression and control equipment will be installed as the primary mitigation with PPE provided where there are still risks. All other risks will be evaluated once design is complete to determine and implement the best mitigation for each.

2d. In the box below, please identify and describe any of the following that would be associated with the proposed project. <u>Describe individually for each site discussed in Question 2b.</u>

(1) any physical modification of existing facilities or construction of new facilities (this does NOT include modification to equipment, only facilities);
(2) ground disturbing activities;
(3) any change in the use, mission, or operation of existing facilities;
(4) installation or deployment of equipment outdoors including the area of disturbance, what currently exists at the site, the dimensions of the installation, any associated infrastructure, etc.

Example 1: Physical modification of existing facilities and ground disturbing activities -To accommodate testing facilities necessary for the project, the current testing facility would have to be expanded by approximately 4,500 square feet.

Example 2: Change in use of existing facility - A room within our facility that has served as a dedicated wind tunnel would be modified to serve as an environmental test chamber. This would require the adaptation of the chamber's construction to partition off part of the room and seal it to allow generated environmental fluctuations within.

Example 3: Installation of equipment outdoors and ground disturbing activities - The proposed turbine location is on school property located in a previously disturbed area south of the existing school building and near the high school athletic facilities and fields. East of the school are two golf courses; south and north are single family residential neighborhoods; and to the west are two public park properties. There are wooded areas located on the school property to the south and west. The foundation of the wind turbine would be approximately 25 square feet with an additional 5 square feet of disturbance during construction. The foundation would be approximately 10-15 feet in depth. There would be a minor, temporary land disturbance adjacent to the proposed site for crane work and the tower staging area. Existing roads would be used to access the project location.

Explanation:

Kiewit - There will be no such activities at this location.

LiOH plant - This proposed project will consist of complete fabrication of an entire new facility on greenfield proprty. Construction will consist of earthworks necessary to get the land at the proper elevation for the entire site. This being a complete new build and many design factors in regards to acreage and building sq ft are still being finalized.

The construction is not expected to impact jurisdicational features. The property is owned by McMinn County Economic Development today and is contiguous to other manufacturing businesses.

Existing road and rail will be used to access the site.

2e. In the box below, please identify and describe any existing, modifications to, or new permits, licenses, or authorizations that would be required to perform project activities (such as environmental permits, operating permits, or drilling permits). <u>Describe individually for each site discussed in Question 2b.</u>

Example 1: The project would generate small amounts of effluent waste which will be discharged into the Potomac River, requiring our organization to secure the requisite discharge permit pursuant to state and Federal regulations.

Example 2: The project activities would be conducted for the next three years. We would be required to replace our current solid waste disposal permit with an updated permit that may alter the nature of what and how we are permitted to dispose of solid waste.

Example 3: The project activities would take place in marine navigable waters and would require permits from the U.S. Coast Guard and the U.S. Army Corps of Engineers.

Explanation:
Kiewit - no known permit or licenses are required for design

LiOH Plant 2 - The proposed project will require an air permit, various water permits to manage stormwater and wastewater from the site. There are wetlands on the site, but we are working to design the facility to not impact any features so we do not expect that the project will require a USACE Section 404 Individual Permit or Section 401 Water Quality Certification. We expect based on our calculated emissions that we will require a Synthetic Minor Construction and Operations air permit.

2f. In the box below, please list the estimated quantities of materials to be used (e.g., feedstock, chemicals, water) and produced by the project (e.g., biofuel). Describe individually for each site discussed in Question 2b.

Explanation:
Kiewit - not applicable

LiOH Plant 2 - Production - 30,000 metric tons per year lithium hydroxide monohydrate

Reagents and feedstock - the following list is the major feedstock and reagents only:
- spodumene concentrate - 195,000 metric tons per year
- process water - 514,000 gallons per day
- soda ash - 42,632 metric tons per year
- hydrated lime - 33,553 metric tons per year
- hydrochloric acid - 3,000 metric tons per year
- sodium hydroxide - 712 metric tons per year
- trisodium phosphate - 1,650 metric tons per year

2g. In the box below, please quantify, to the extent possible, all emissions into the ambient air resulting from project activities. Indicate if the project site is within an attainment or non-attainment area. Describe air emissions individually for each site discussed in Question 2b.

Note: Potential emissions include, but are not limited to, greenhouse gas emissions, particulate matter, and airborne pollutants. Sources of emissions can include stationary sources, such as boilers, process heaters, generators, and/or solvent usage, or mobile sources such as vehicles. It is presumed that every project would result in some emissions being released into the ambient air, so applicants answering "none" must explain why no emissions would be released. Non-attainment areas are designated parts of the country where air pollution levels persistently exceed the national ambient air quality standards. See 42 U.S.C. 7501(2).

Explanation:
Kiewit - not applicable

LiOH Plant 2 (attainment) - Potential emissions for the site include (all tons are short tons):
PM - 46.2 tpy; SO2 - .65 tpy;NOx - 99 tpy; CO - 92.4 tpy; VOC - 6.14 tpy; GHG - 130,278 tpy; total HAP - 2.60 tpy

McMinn County Tennessee is in an attainment area.

2h. In the box below, please describe: (1) all non-hazardous wastes that would be generated by the proposed project including recycled materials, and (2) the method of their disposal. Describe individually for each site discussed in Question 2b.

Note: It is presumed that every project would generate solid wastes, so applicants answering "none" must explain why no waste would be generated. Non-hazardous waste is any garbage, refuse or trash, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. See 40 C.F.R. § 261.2.

Explanation:

Kiewit - not applicable

LiOH Plant 2 - The non-hazardous waste to be generated includes the tailings from the lithium hydroxide operations. The tailings is analcime, which is an inert aluminosilicate. The disposal method at this time includes landfilling of the material. Other alternatives are currently being evaluated. Estimated production of tailings is approximately 400,000 tons per year.

3. Is the proposed project near, or does it involve, any of the following resources? Please indicate below any and all resources that could be affected by any project activities. (See Attachment 1 to the Environmental Questionnaire for resource definitions.)

- ☐ a. Historical, archeological, or cultural resources (includes listed and eligible resources over 50 years old or of cultural significance)
- ☐ b. Threatened or endangered species (whether proposed or listed by state or Federal governments), including their habitat
- ☐ c. Marine mammals or essential fish habitat
- ☒ d. Floodplains or wetlands
- ☐ e. Tribal lands or resources of Tribal interest/sensitivity
- ☐ f. Ocean resources (e.g., coral reefs)
- ☐ g. Land resources (e.g., tundra, rainforests)
- ☐ h. Coastal zones
- ☐ i. Migratory birds, or Golden or Bald Eagles
- ☐ j. Areas having a special designation (e.g., Federal and state designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries)
- ☐ k. Prime farmland, unique farmland, or other farmland of statewide or local importance
- ☐ l. Special sources of water (e.g., sole source aquifers)

If you checked any boxes above, provide a detailed description of: (1) the resources that could be affected, and (2) how project activities may affect those resources.

Explanation:

There are jurisdictional streams and wetlands identified on the property. These features will not be impacted by the design or construction of the facility.

4. **Does the proposed project involve any of the following activities or areas of concern? Please indicate below any and all activities or areas of concern that exist in the vicinity of your project, are required for your project, or could affect your project.** (See Attachment 1 for definitions of each activity or area of concern.)

- ☒ a. Clearing or excavation
- ☐ b. Dredge and/or fill
- ☐ c. Pre-existing contamination
- ☐ d. Pesticide use
- ☐ e. Asbestos or lead-based paint
- ☐ f. Polychlorinated biphenyls (PCBs)
- ☐ g. Navigable air space
- ☐ h. Underground storage tanks
- ☐ i. Underground extraction/injection
- ☐ j. Use of a non-renewable resource

If you checked any boxes above, provide a detailed description of: (1) each activity or area of concern, and (2) the effects of each activity or area of concern on your project and/or the surrounding area.

Explanation:

To complete the proposed project clearing and/or grading of the land will be required to ensure proper land evaluations for construction.

5. Would the proposed project have the potential to result in impacts to the surrounding community? Please indicate below all areas of concern that exist in the vicinity of your project, are required for your project, or could affect your project.

- ☐ a. Visual impacts
- ☐ b. Populations of low income or minorities (Environmental Justice)
- ☒ c. Changes in local employment
- ☐ d. Changes in local traffic patterns or density
- ☒ e. New transportation access
- ☒ f. New utility lines or right-of-ways
- ☐ g. Other impacts

If you checked any boxes above, please provide a detailed description of: (1) the communities affected, and (2) what effects the project would have.

Explanation:

The proposed project will impact local employment by bringing approximately 200 new full time employment positions to the area. Construction employment will be approximately 500 people. With recent layoffs in the area, these jobs will be a positive impact to the communities within at least a 50 mile radius.

The existing road entering the property will be upgraded by McMinn County under an approved grant in collaboration with TNDOT. This will be a positive for this proposed project, but also future development to the surrounding industrial park.

There are existing utilities in close proximity to the site today, but new utilities may be required for power, water, wastewater and natural gas connections to the project to the project site.

6. Would the proposed project use, result in, or require the management, storage, transport, or disposal of radioactive, toxic, or hazardous chemicals, waste, or other materials that require special handling?

Note: Hazardous chemicals and materials include those which, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may increase the risk of mortality or pose a substantial threat to human health or the environment when improperly stored, transported, disposed of, or otherwise managed.

Yes ☒ | **No** ☐

If you checked "Yes," please provide a detailed description of: (1) the materials; (2) approximate quantity of each; (3) their role in the project; and (4) storage, transport, and disposal procedures for each material.

Explanation:

This proposed project will use hydrochloric (98%) and sulfuric (98%) acid. There will be a 7,500 gallon tank to store hydrochloric acid and a 3,000 gallon tank to store sulfuric acid. These materials will be used in the lithium hydroxide production process as part of the Ion Exchange step.

7. Would the proposed project involve the use or development of recombinant DNA or genetically engineered microorganisms, plants, animals, or similar technologies?

Yes ☐ | **No** ☒

If you checked "Yes," please provide a detailed description of: (1) the genetic modifications, (2) the safety procedures in place for their handling and use over the course of the project, and (3) how they would be disposed of at the project's conclusion.

Explanation:

8. Does the project involve the use of any nanoscale materials or nanotechnology?

Note: Nanotechnology is defined as research and technology development at the atomic, molecular, or macromolecular levels using a length scale of approximately one to one hundred nanometers in any dimension; the creation and use of structures, devices and systems that have novel properties and functions because of their small size; or the ability to control or manipulate matter on an atomic scale.

Yes ☐ | **No** ☒

If you checked "Yes," please describe: (1) the nanoscale materials used, (2) potential risks those materials may pose, and (3) how they would be disposed of.

Explanation:

9. Is there any public opposition concerning any of the project activities?

Yes ☐ | **No** ☒

If you checked "Yes," please describe the nature of the opposition and any actions you may have taken or plan to take to address it.

Explanation:

10. Would the project involve activities or deployments into marine/freshwater aquatic environments?

Yes ☐ | **No** ☒

If you checked "Yes," please provide a detailed description of: (1) the proposed activities or deployment, (2) where and when these activities would occur, and (3) what permit/authorizations have been or would be acquired for this activity.

Explanation:

11. Would the proposed project result in a discharge of any type of wastewater, pollutant, or contaminant, including thermal discharges, to a sewer system, stormwater system, soils, retention ponds, or any water resources (e.g., surface water, including lakes, rivers, creeks, and wetlands; and ground water)?

Note: Under Federal law, the term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. See 33 U.S.C. § 1362(6). The term "contaminant" means any physical, chemical, biological, or radiological substance or matter in water. See 42 U.S.C. § 300f(6).

Yes ☒ | **No** ☐

If you checked "Yes", please quantify and characterize the wastewater or pollutants and provide a detailed description of the: (1) wastewater, pollutants, or contaminants to be released; and (2) the water resources that may be affected.

Explanation:
The proposed project would generate wastewaters that would be pretreated onsite prior to being sent to a municipal publicly owned treatment works (POTW). There will also be a need for sewer system support for the proposed project. At this time, stormwater from the site is expected to be released to the natural environment (this is yet to be determined how it will be managed and will have to be properly permitted).

12. Would the proposed project have the potential to generate noise impacts to adjacent communities, employees working at the project site, wildlife, and/or sensitive receptors including hospitals, schools, daycare facilities, and elderly housing?

Yes ☐ | **No** ☒

If you checked "Yes", please provide a description of: (1) the receptors that may be impacted and their estimated distance from the project activities, (2) the level of noise generated (in A-weighted decibels (dbA)) to each receptor, and (3) anticipated duration.

Explanation:

13. Please provide a detailed description of how the project would be decommissioned, including the disposition of equipment and materials.

Explanation: The intended project life is 30 years or longer. At the conclusion of the operating life of the LHP-2 Project the facility will be decommissioned. A detailed Decommissioning Plan will be developed towards the end of life of operations. Generally, equipment which has stored or processed hazardous materials will be dismantled, removed, and disposed of by specialty contractors.

Equipment which can be relocated to other facilities or sold to other manufacturers will be removed. To the extent practical the facility will be repurposed for future manufacturing applications. Areas of the plant which cannot be repurposed will be scrapped and removed.

Structures that cannot be re-used will be removed with foundations demolished to grade.

Piedmont will coordinate with McMinn County EDA to ready the site for potential redevelopment.

SECTION IV. CERTIFICATION

I hereby certify that I am authorized to submit, and I do so hereby submit, the information in this questionnaire on behalf of the Recipient named below. I certify that the information provided herein is accurate and complete as of the date shown below. I understand that false statements or misrepresentations may result in civil and/or criminal penalties under 18 U.S.C. § 1001. If I receive any information that would indicate that any of the above-referenced answers are no longer correct or complete, I agree to notify EERE immediately. If it is necessary for EERE to modify the information I provide, EERE will request that I recertify the revised form.

Name	Patrick H. Brindle
Title	Chief Operating Officer
Applicant	Piedmont Lithium Inc
Signature	
Date	June 26, 2022

EERE ENVIRONMENTAL QUESTIONNAIRE
ATTACHMENT 1

Definitions for Question 3 –Resources*

Historical, Archeological, or Cultural Resources. The National Historic Preservation Act; the Historic Sites, Buildings and Antiquities Act; the American Indian Religious Freedom Act; and the Archeological Recovery Act provide for the preservation of sites, buildings, structures, or objects of historic, archeological, or architectural significance designated by Indian, Federal, state, or local governments or listed or eligible for listing on the National Register of Historic Places. The Archeological Resources Protection Act, Antiquities Act, and Native American Graves Protection and Repatriation Act also apply if the proposed project is on Federal and tribal land. This item should be checked "yes" if a proposed project is in an area that meets any of the above, or if an archeological survey has not been performed. Provide documentation of any consultation or State Historic Preservation Officer determination letters if available. If this information is not available or a survey has not been conducted recently, DOE may require such a survey to be conducted prior to any proposed project implementation.

Threatened/Endangered (T/E) Species and/or Critical Habitat. The Endangered Species Act provides for protection of animals, birds, fish, plants, and other living organisms that are in danger of extinction. A list of T/E species is provided in 50 C.F.R. Part 17. Consultations with the U.S. Department of Interior Fish and Wildlife Service (FWS), National Marine Fisheries Services (NMFS), and the corresponding state agency should be documented. This item should be checked "yes" if any state- or Federally-listed or proposed threatened or endangered species or critical habitat is located in the proposed project area, or could be indirectly affected by the proposed project. If the status of T/E species at the proposed project location is unknown, please contact the local or state office of the FWS or NMFS to obtain a listing of potential species and habitats found in the area.

Floodplains. Floodplains are lowlands adjoining inland and coastal waters with a 1 percent or greater chance of inundation in any given year. Indicate "yes" if the proposed project location is in or adjacent to a floodplain area. If documentation is available noting the floodplain boundaries, please provide a copy. Appropriate documentation of the 100 year floodplain [or 500 year floodplain for critical actions**] boundaries include: Flood Insurance Rate Maps or Flood Hazard Boundary Maps prepared by the Federal Emergency Management Agency (FEMA) of the U.S. Department of Homeland Security. Executive Order 11988 Floodplain Management requires Federal agencies to avoid incompatible development in floodplains, and consider the conformance of the proposed project to floodplain standards, potential effects of the proposed projects on floodplains, and potential effects of floodplain modifications on other local properties and improvements.

** Critical actions as defined in the Implementing Guidelines to Executive Order 11988 are activities for which chance of flooding is too great.

Wetlands. Wetlands are areas inundated by surface or groundwater with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction, [10 C.F.R. 1022.4]. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflow, mudflats, and natural ponds. Man-made ponds can qualify as wetlands if invasion of appropriate flora or fauna has occurred. Appropriate documentation of presence or absence of wetlands within the area of project effect includes: FWS National Wetlands Inventory; U.S. Department of Agriculture Soil Conservation Service Local Identification Maps; U.S. Geological Service (USGS) Local Identification Maps; USGS Topographic Maps; state wetland inventories; and regional or local government sponsored wetland and land use inventories. Executive Order 11990 Protection of Wetlands requires Federal agencies to consider the effects of proposed projects on wetlands, and to avoid, to the extent possible, destruction and modification of wetlands. If the status of land in or around the proposed project location is unknown, please contact the state or local U.S. Army Corps of Engineer's office.

Coastal Zones. Coastal zones are the coastal waters and adjacent shore lands of the Great Lakes, and the Atlantic, Pacific, and Arctic Oceans, Gulf of Mexico, and Long Island Sound. The term "coastal state" includes the states bordering on those bodies, plus Puerto Rico, the Virgin Islands, Guam, the Commonwealth of Northern Mariana Islands, and the Trust Territories of the Pacific Islands and American Samoa. Coastal states have authority regarding actions, which directly affect coastal zones, in accordance with the Department of Commerce regulations promulgated under the Coastal Zone Management Act. Federal activities and Federal development projects must be consistent with state coastal zone management (CZM) programs to the maximum extent possible. Federal activities are those performed by or on behalf of a Federal agency in the exercise of its statutory responsibilities. Indicate "yes" if the proposed project is located in a coastal zone State or is in the vicinity of a coastal zone State. If a consistency determination has been obtained, or a written "negative determination" (indicating that a consistency determination is not required) please provide a copy. See 15 C.F.R. 930.

Migratory Birds, Golden or Bald Eagles. Other Federal and state laws that protect wildlife species include the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Examples of protected migratory birds include Canadian geese and great blue herons. This item should be checked "yes" if the proposed project may directly or indirectly impact any of these species or their habitats. If the status of other protected species is unknown in the proposed project location, please contact the local or state office of the FWS to obtain a listing of potential species and habitats found in the area.

Areas Having a Special Designation. Various Federal laws restrict the ability of Federal agencies to aid developments affecting national wilderness areas, national memorial parks, national parks, national monuments, national primitive areas, national preserves, national recreational areas, national wild and scenic rivers, national grasslands, national wildlife refuges, national forests, national lakeshore or seashore, and national trails. Indicate "yes" if any of these areas of special environmental or natural significance is located in close proximity to the proposed project location and describe the specific special designation.

Prime Farmland, Unique Farmland, or Other Farmland of Statewide or Local Importance. The Farmland Protection Policy Act requires Federal agencies to consider ways to lessen the effects of proposed projects that convert or adversely affect prime farmland which is not currently classified or designated for future urban development or water storage. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Prime farmland also includes land that possesses the above characteristics, but is being used currently to produce livestock and timber. Prime farmland does not include lands designated for future urban development, such as land that has been identified for commercial, industrial, or residential development by zoning code, ordinance, or a comprehensive land use plan [7 U.S.C. 4201(c)(1)]. The U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) field office serving the area can provide assistance in determining whether a proposed location or site meets the definition of prime farmland. Form AD 1006, the Farmland Conversion Impact Rating Form, available at NRCS offices, should be used for this purpose.

Special Sources of Water. Through the Safe Drinking Water Act, EPA and states designate Critical Aquifer Protection Areas and Sole or Principal Source Aquifers, and State-Designated Wellhead Protection Areas in accordance with 42 U.S.C. 300h-6(b), 42 U.S.C. 300h-3(e), and 42 U.S.C. 300h-7(e), respectively. Such areas are accorded special protection to assure the quality and availability of public water supplies. Indicate "yes" if the proposed project is located in an area designated for protection (e.g., is included in an area wide groundwater quality protection plan), or would constitute a potential source of contamination within an existing or expected wellhead protection area serving a public water supply. If aquifer designations are not known for the proposed project area, contact the environmental protection office for the State.

* Definitions and requirements are subject to regulatory changes.

Definitions for Question 4 – Activities or Areas of Concern*

Clearing or Excavation. Clearing or excavation refers to the removal of vegetation, soil, sediments, or disturbance of land surfaces and subsurface including cutting, burning, digging, grading, filling, or blasting. Provide the estimated area to be affected, the quantity of material to be added or removed, and the planned disposition of spoils. Describe the potential for runoff or erosion, any control techniques to be employed, and the distance to nearby surface water bodies, including wetlands.

Dredge and/or Fill. Dredge and/or fill are the excavation of material from waters of the United States. Filling is the discharge of material into waters of the United States to change the bottom elevation. Waters of the United States are all interstate waters, and intrastate lakes, rivers, streams, mudflats, wetlands, sloughs, plays, or natural ponds. These activities include "ocean dumping" as regulated under Sections 102 and 103 of the Clean Water Act, construction of dams, dikes, piers, or others that could alter the course of waters of the United States. Also included is any shore activity with the potential for runoff to waters of the United States. If available, include documentation of appropriate consultation(s), e.g., with the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act or Sections 9 and 10 of the Rivers and Harbors Act; and with EPA [40 C.F.R. Parts 220-233].

Pre-Existing Contamination. Indicate if the proposed project will disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment. Quantify and characterize such pre-existing substances, including whether they are present above background or regulatory levels. Also quantify the volume of contaminated materials (e.g. soil, sediment, groundwater, debris, etc.) which would require transport to a properly permitted treatment, storage, or disposal facility as the result of the proposed project.

Pesticide Use. A pesticide is a substance intended for preventing, destroying, repelling, or mitigating any type of pest including insects, rodent, nematode, fungus, or weed, and any substance intended for use as a plant regulator, defoliant, or desiccant. While the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) imposes no requirements on private applicators, commercial pesticide applicators must be certified by the state or U.S. EPA. Additionally, FIFRA requires that certain pesticides known as “restricted use pesticides” (listed in 40 C.F.R. 152.175) to only be applied by certified applicators. If either commercial or private pesticide application or the utilization of restricted use pesticides is anticipated, indicate "yes". If a private application is anticipated, document measures to be undertaken to assure safe storage, use, and disposal.

Asbestos. If the proposed project includes demolition or renovation of an existing building, you must determine if asbestos is present. Common asbestos-containing building materials may include but are not limited to floor tile, mastics, wall board, joint compound, acoustic ceiling tiles, thermal insulation, spray-on fire proofing, glazing, caulking, roof flashing, and felts. Demolition and renovation activities that may impact asbestos containing building materials are regulated by the U.S. Occupational Health and Safety Administration (OSHA) through the Asbestos in Construction Standard and asbestos air emissions from asbestos abatements are regulated by the EPA as a hazardous air pollutant under the Clean Air Act (CAA). Include a description of measures to be undertaken to comply with asbestos removal requirements of 29 C.F.R. 1926.1100 and 40 C.F.R. 61 (Subpart M).

Polychlorinated Biphenyls (PCBs). PCBs are a family of man-made organic chemicals that were domestically manufactured from 1929 until banned in 1979 due to their toxicity and persistence in the environment. Given their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were largely used as dielectric and coolant fluids in transformers, capacitors, electric motors, etc. Manufacture, processing, transport, use, marking, storage, and disposal of PCBs are regulated by EPA [40 C.F.R. Part 761] in accordance with the Toxic Substances Control Act. Some states also regulate PCBs as hazardous waste. If the proposed project involves replacement or removal of capacitors, transformers, voltage regulators, circuit breakers, switches, cables, electromagnets, or other electrical equipment, presence or absence of PCBs should be ascertained. A "yes" indication

should be supported with information on the anticipated concentration and quantity of PCB oil, and the intended method/location of disposal.

Navigable Air Space. The U.S. Department of Transportation Federal Aviation Administration (FAA) regulates objects which invade navigable air space or otherwise constitute an obstruction to air navigation, and determines whether such activities constitute a navigation hazard. Indicate "yes" if the proposed project involves construction or alteration more than 200 feet above ground level, any construction or alteration in instrument approach areas, and other construction or alteration identified in 14 C.F.R. 77.13. Document notification of the appropriate Manager, Air Traffic Division, of the FAA Regional Office for the area within which the construction or alteration will be located. Copies of FAA Form 7460-1 Notice of Proposed Construction or Alteration may be obtained from the regional FAA office or electronically through FAA's website.

Underground Storage Tanks. Indicate "yes" if 10 percent or more of tank volume (including the volume of underground pipes) will be beneath surface of the ground. Indicate if installation, use, or removal of underground storage tanks is anticipated, and whether tank use is/was for storage/collection of hazardous waste, heating oil, other petroleum or petroleum-based substances, stormwater, or wastewater. Describe any leak detection/monitoring methods to be used for storage of hazardous waste or regulated petroleum products like gasoline or diesel.

Underground Extraction/Injection. Underground extraction/injection is the subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well where the depth of the well is greater than the largest surface dimension. If the proposed project involves construction or use of an injection well, indicate "yes," and describe the class of the well as defined in 40 C.F.R. 146.5, the type and quantity of contaminants (e.g., waste disposal, hydrocarbon or mineral extraction) and whether the injection involves an exempt aquifer as defined in 40 C.F.R. 146.4.

Use of a Non-Renewable Resource. Non-renewable resources are naturally occurring substances (e.g., metals, minerals, fossil fuels) that are in limited supply and cannot be replaced or regenerated. The exhaustion or threatened exhaustion of such resources could have significant ramifications. Indicate "yes" if the proposed project would involve a resource that is in limited supply.

* Definitions and requirements are subject to regulatory changes.

Project Title: DOE Lithium Hydroxide Plant NO. 2 Project ("LHP-2 Project")

Quality Jobs and Community Benefit Plan ("Equity Plan"):

Piedmont Lithium Inc.
LHP-2 Project

I. INTRODUCTION

Piedmont Lithium Inc. ("Piedmont" or the "Applicant") is pleased to submit the following Equity Plan, as outlined in Funding Opportunity Announcement Number DE-FOA-0002678. Piedmont is a diverse and inclusive company intent on providing over 100 well-paying jobs in rural McMinn County, Tennessee. Piedmont is dedicated to the objectives of job growth and quality and the advancement of equity, environmental, and energy justice priorities. Piedmont's core values are care for its people, humility in the way it operates, creativity in the way it innovates, respect for the communities Piedmont operates in, and integrity in how it conducts business.

Our operating model and guiding principles are to live these core values each day, deliver best-in-class safety, environment and health performance, operate sustainably (beyond compliance with applicable laws and regulations), focus on customers in all we do, empower Piedmont's teams and enable "lean decision making," deliver operational excellence that exceeds customer expectations, drive process technology excellence and continuous improvement, and create a culture of learning and development.

This Equity Plan provides an overview of Piedmont's dedication to equity generally and details our approach to this proposed Project specifically as it pertains to:

1) Community Engagement;
2) Quality Jobs;
3) Diversity, Equity, Inclusion, and Accessibility;
4) Environmental Justice; and,
5) Goals of the Justice40 Initiative.

Community Engagement

It is critical that federal investments the battery manufacturing and materials processing sector support sustainable community economic development and prosperity, as well as advance the goals outlined above. Piedmont Lithium is well-situated to be a part of that effort, and is dedicated to taking the following actions to ensure the proposed plan would not only meet but exceed the goals stated in the FOA. As our Equity Plan will demonstrate, Piedmont is dedicated to making a positive contribution to society through its work, time, and resources. Piedmont currently and will continue to contribute through the volunteer work of its teammates, the financial support of various organizations to fund a range of local initiatives, or by fostering job creation that helps improve the quality of life and overall economic impact in our communities.

Case Study - Overall Community Engagement*:* One example that demonstrates our commitment to community engagement is our existing work in Gaston County, North Carolina. Gaston County is home to Piedmont's proposed Carolina Lithium Project, an integrated mining and lithium hydroxide processing plant project currently in the development stage as we work through the local and state permit and approval process. As part of Piedmont's community engagement in Gaston County, it has partnered with, become members of or otherwise engaged with the following local community organizations:

- *Habitat for Humanity of Gaston County:* Piedmont formed a "full home partnership" and committed $150,000, along with volunteer hours donated by members of the Piedmont Lithium family, to build a new home;
- *Education Partnerships with Local Colleges and Universities*: Piedmont has partnered with the local and Gaston College both through their Apprenticeship 1-2-3 program and their Center for Advanced Manufacturing, where it plans to set up comprehensive technical training programs for mechanics, electricians and control room operators. Piedmont is also exploring partnerships with Duke University, NC State, and UNC Charlotte regarding internships and other workforce development opportunities;
- *Historic Belmont Trolley*: Piedmont is the key sponsor of this lithium-battery powered historic trolley that will service local commuters, residents and visitors, and will be housed in a car barn that also will serve as a trolley museum;
- *Local Schools and Museum*: Piedmont is active in educating and engaging with students on many fronts. Our professional geologist volunteers time at the local Gaston County schools and the Schiele Museum of Natural History – the Fossil Fair and Gemstone Mining Event (we also sponsor an exhibit there) about geology and. We also support the Gaston County School "Teachers are Superheroes" program; and
- Numerous other organizations, activities, and causes, including United Way, Toys for Tots, Cherryville Area Ministries, BackPack Weekend Food Program, Local Adopt-a Highway,

Honey Hunters (baseball), Cherry Blossom 5K – Title Sponsor, volunteering at local food banks, and adopting local waterways.

Looking Ahead: Piedmont is looking forward to becoming an engaged and responsible corporate partner, employer, and neighbor in the Etowah and McMinn County community. Piedmont fully recognizes the importance and value of developing meaningful relationships with local community-based organizations, residents, businesses, worker organizations, disadvantaged communities (DACs) and the local government. Piedmont plans to engage with the following community organizations before, during and after the project:

- McMinn County Habitat for Humanity;
- Coordinated Charities of Athens, providing assistance with groceries, utilities, rent, and other necessary items;
- Etowah Christmas Project, donating toys to disadvantaged children during the holidays;
- United Way of East Tennessee Highlands, providing for the health, education, financial stability of children, veterans, teens, the elderly and the economically challenged;
- Athen-McMinn Family YMCA, supporting programming and services;
- McMinn Regional Humane Society;
- Adopt-A-Highway;
- McMinn and Etowah Youth Sports; and
- 4-H Youth Development, McMinn County.

As Piedmont becomes more familiar with McMinn County and the City of Etowah, we are confident that further opportunities for philanthropic engagement with the community will arise. Piedmont Lithium will also seek opportunities to support the history of Etowah, including such historically important buildings as the L&N Depot and the Etowah Depot Museum, the Gem Theater, Carnegie Library, and Lloyd Campbell Scout Lodge.

Community Outreach: Piedmont will also engage with the community through open session Town Hall meetings before and during the project. Piedmont will host the meetings in a local school or community center and provide opportunities for residents to learn about the project, ask questions and express any concerns. Piedmont would invite the community via newspaper ads, flyers and online posts. Likewise, when Piedmont moves into the process of hiring, we will hold local job fairs and sending job notices, postings, flyers, and so on. The Company will also establish a community phone number and email address that will allow residents to contact us directly with any questions.

***Local Business Engagement*:** In addition to local community engagement, we are engaging with local businesses in our areas to increase economic development and high-paying jobs. Piedmont Lithium is an active member of three Chambers of Commerce in Gaston County, NC and has

further engaged with the business community in Gaston County through business Lunch and Learns. During these events, Piedmont shares information about the multitude of products and services the Carolina Lithium Project will require. The Company is already engaged with several local businesses for engineering, waste management, accounting, communications, real estate and legal services. Piedmont Lithium also looks forward to likewise engaging with the McMinn County business community. Piedmont will join the Etowah Chamber of Commerce as well as the Athens Chamber of Commerce to support activities and become an active member of the business community.

Focus on Small Business: Piedmont will offer Lunch and Learns for local small businesses so that it can begin to inform the local business community about our project and opportunities to become vendors, suppliers and partners. In addition to the goods that Piedmont will need to purchase for the construction and operation of the facility, Piedmont will need to hire local businesses or persons in McMinn County related to utilities, warehousing, safety, maintenance, shipping and receiving, material handling, supply chain, procurement, logistics, human resources, accounting, engineering, grounds and buildings, quality control and more.

***Educational Institution Engagement*:** Just as Piedmont has done in Gaston County, NC, Piedmont will seek to engage with students of all ages from the Etowah City Elementary School and Mountain View Elementary School, to the McMinn Central High School. Our scientists, engineers and environmental professionals are happy to volunteer time with students to share their unique knowledge and experience. Piedmont also would seek to explore partnerships with Cleveland State Community College, Tennessee Weslyan College and Tennessee College-Applied Tech and the University of Tennessee.

Local Government Engagement: Piedmont will engage openly and responsively with the City of Etowah and McMinn County officials before, during and after the project. Piedmont plans to establish a Community Benefit Agreement with McMinn County, its Economic Development group and local county officials and leaders. Areas that will be highlighted in the agreement would be:

- living wage standards for employees;
- community services (or funding for these programs);
- access to the space;
- workshops or job training programs;
- one-time payments to community groups or residents; and
- hiring standards to ensure the workforce is local and made up of people of color and other disadvantaged workers, including returning citizens.

As this section makes clear, Piedmont Lithium is dedicated to taking concrete actions to ensure the proposed plan would not only meet but exceed the goals stated in the FOA. Piedmont is dedicated to making a positive contribution to society through its work, time, and resources.

Quality Jobs and Skilled Workforce

In addition to providing ample community engagement, as set forth above, it is critical that federal investments the battery manufacturing and materials processing sector create good paying, quality jobs and spur the development of a skilled workforce. Piedmont is well-situated to be a part of that effort, and is dedicated to taking the following actions to ensure the proposed plan would not only meet but exceed the goals stated in the FOA.

Apprenticeship Programs: Piedmont will offer many challenging career paths to individuals who are technically and mechanically inclined, as well those who are interested and experienced in supervision and leadership. Piedmont is exploring partnerships with local educational institutions including, but not limited to, secondary education career and technical education initiatives and community college programs. Piedmont's goal is to offer apprenticeship programs where future employees can receive training on lithium hydroxide plant ("LHP-2") control systems and operations while the site is being built. To the extent that it can support local STEM programs, Piedmont will do that as well.

The LHP2 site will be located in McMinn County, Tennessee. Businesses located in McMinn County attract their workforce from 13 counties. Beyond McMinn County itself, workers primarily come from the surrounding Bradley, Loudon, Meigs, Monroe, Polk, Rhea and Roane counties. With a strategic location within 50 miles of either Chattanooga or Knoxville, McMinn County businesses offer an ideal working environment for commuters from these larger cities. Current and prospective employees benefit from McMinn County's status as an education hub in southeastern Tennessee.

Three reputable institutions are located within the county, with many more only a short drive outside the county. In 2021, Cleveland State Community College opened the McMinn Higher Education Center (MHEC), a collaborative space for students to complete degrees in-person or online and includes space for local industry training to upgrade the existing workforce. Piedmont will work within all three institutions to create and retain an attractive workforce. As a new company locating to McMinn County, Piedmont will be introduced to other workforce partners outside of the institutions listed above to create and retain workforce.

Your Skill. Your Future.: A program Piedmont will work with is Your Skill. Your Future. ("YSYF") - a program managed by public and private leaders of McMinn County to match the needs of an evolving industry base with a qualified and knowledgeable workforce. YSYF provides the connections to institutions like the Tennessee College of Applied Technology-Athens and

Cleveland State Community College for certifications and customized technical programs in today's careers in high demand, including automotive technology, electro-mechanical technology, computer electronics, machine tool technology, welding and more.

Local Ties and Community Connections: Piedmont will also work with McMinn County Economic Development Authority and AMMP. Today's young adults are essential to the growth of McMinn County's population, industry, and jobs. It is essential they find the support and resources needed to grow into the future community leaders of McMinn County. AMMP is a networking association for adults between the ages of 21 and 40 who live or work in McMinn County. AMMP's purpose is to promote and develop the common good and social welfare of residents in McMinn County, Tennessee by attracting, developing, and retaining young professionals through civic volunteerism, social engagement, regional networking, professional development, and talent recognition. In partnership with McMinn County Economic Development Authority, the group's focus is on specific issues of economic and community development, while also fostering personal relationships among its members.

American Job Center: Piedmont will also partner with American Job Center (Tennessee). The American Job Center is where people and jobs connect. It is made up of a dynamic partnership of public and private resources supporting economic development and providing workforce solutions to businesses and individuals in Southeast Tennessee and beyond. Tennessee has a network of centers across the state where employers can go to find workers they need and job seekers can get career information and services.

Code of Business Conduct and Ethics**:** Piedmont's Code of Business Conduct and Ethics ("Code of Conduct") commits Piedmont to fair treatment and non-discrimination. In addition to being an equal opportunity employer, Piedmont believes in allocating resources and establishing, in an equitable manner, policies, and procedures that are fair, impartial, and just. Piedmont believes it will become better and achieve growth by intentionally creating a culture of equity and empowerment through acquiring and retaining a diverse workforce.

Quality Jobs and Compensation**:** Piedmont's compensation program is designed to attract and retain talented employees in the industry by offering competitive compensation and benefits. Piedmont uses a combination of fixed and variable compensation that includes base salary, incentive bonuses with a pay for performance element and merit increases. As part of its long-term incentive plan for executives and certain key employees, Piedmont provides long-term equity awards tied to the value of its stock price, some of which are performance-based. Additionally, all employees are eligible for an annual discretionary cash bonus and a long-term equity grant. Piedmont is also focused on the health and wellness of our employees. As such, it offers eligible employees comprehensive medical plans, dental and vision coverage, short-term

and long-term disability insurance, term life insurance, flexible work schedules, an employee assistance program, remote/hybrid work options, paid time off, and a 401(k) plan.

The Workforce of the Future: As we previously stated, Piedmont Lithium will also develop close engagement with students of all ages from the Etowah City Elementary School and Mountain View Elementary School, to the McMinn Central High School. Our scientists, engineers and environmental professionals are happy to volunteer time with students to share their unique knowledge and experience. Piedmont also would seek to explore partnerships with Cleveland State Community College, Tennessee Weslyan College and Tennessee College-Applied Tech and the University of Tennessee. These students are not only part of our community, but may also be our future scientists, engineers, and professionals.

Community Benefit Agreement: These efforts will be further strengthened by our Community Benefit Agreement, and dedication to living wage standards for employees, job training programs, and hiring standards to ensure the workforce is local and made up of people of color and other disadvantaged workers, including returning citizens.

Figure 1. Estimated Timeline for Critical Hires

Expected Hires	Function	Recruitment Timeline	2022	2023
Phase 1				
Health, Safety, Environment Leader	Operations	Complete		
Legal Assistant	Corporate	Complete		
Manager, SEC Reporting & Technical Accounting	Finance	Complete		
Manager, Corporate Accounting	Finance	3-4 months	3Q	
Staff Accountant / Accounts Payable	Finance	Complete		
Manager, Financial Planning & Analysis	Finance	3-4 months	3Q	
Phase 2				
Process Technology Leader - LiOH Plant	Operations	3-4 months	3Q	
Contract Manager	Corporate	1-2 months		1Q
Supply Chain Leader	Operations	2-3 months		1Q

Expected Hires	Function	Recruitment Timeline	2022	2023
Procurement Manager	Operations	2-3 months		2Q
Project Controls Lead	Engineering	Complete	3Q	
Communications Specialist	Corporate	Complete		
Graphic Design Specialist	Corporate	3-4 months	4Q	
Phase 3				
Plant Manager	Operations	2-3 months		1Q
Construction Manager	Engineering	1-2 months		1Q
Quality (QA/QC) Leader	Operations	2-3 months		2Q
Maintenance & Reliability Leader	Operations	3 months		2Q
Commissioning & Ops Readiness Leader	Operations	3 months		3Q
Procurement Administrative	Operations	3 months		3Q
Logistics / Customer Service	Operations	3 months		4Q
Information Technology Leader	Corporate	3-4 months		4Q

Operations Team Project Hiring Plan: The estimated manpower requirements of the lithium hydroxide conversion plant within the Project are shown in Figure 2.

Figure 2. Lithium Hydroxide Conversion Manpower Requirements and Estimated Payroll

Description	Number of Employees	Total Annual Labor Cost
Management		
Plant Manager	1	[redacted] (b) (4)
Plant Operations		

Description	Number of Employees	Total Annual Labor Cost
Production Supervisor	4	[redacted]
Safety/Training Supervisor	1	[redacted]
Process Engineer	1	[redacted]
Control-room Operator	8	[redacted]
Relief Operator	8	[redacted]
Packer/Production Helper	20	[redacted]
Shipping Workers	2	[redacted]
Receiving Warehouse Lead	1	[redacted]
Receiving Warehouse Worker	1	[redacted]
Material Lead	1	[redacted]
Material Handlers	3	[redacted]
Maintenance		
Maintenance Supervisor	1	[redacted]
Mechanical Maintenance Lead	1	[redacted]
Millwright / Mechanic	6	[redacted]
Millwright / Mechanic Night Shift Only	4	[redacted]
Maintenance / Planner	1	[redacted]
Electrical / Instrumentation Supervisor	1	[redacted]
Electrical / Instrumentation lead	1	[redacted]
Electrical / Instrumentation Technician	6	[redacted]
Electrical / Instrumentation Technician Night Shift Only	2	[redacted]

(b) (4)

Description	Number of Employees	Total Annual Labor Cost
Electrical / Instrumentation Planner	1	[redacted]
QC Laboratory		
QC Supervisor	1	[redacted]
QC Lead	4	[redacted]
QC Technician	8	[redacted]
R&D Technician (special Projects)	1	[redacted]
Utilities		
Utilities Supervisor	1	[redacted]
Wastewater Treatment	4	[redacted]
Boiler room Operator	4	[redacted]
Relief Operator	1	[redacted]
LiOH Conversion Plant Estimated Jobs Total	**99**	[redacted]

(b) (4) [redacted]

Diversity, Equity, Inclusion, and Accessibility

Piedmont's principles incorporate equity considerations in approaching Diversity, Equity, Inclusion, and Accessibility. In addition to being an equal opportunity employer, Piedmont also believes in allocating resources and establishing, in an equitable manner, policies, and procedures that are fair, impartial, and just. Piedmont believes it will become better and achieve growth by intentionally creating a culture through acquiring and retaining a diverse workforce.

These commitments toward diversity, equity, inclusion, and accessibility will be incorporated into every part of our project, and we will continue to look for new ways to not only meet these commitments but exceed them. For instance, Piedmont will review all contractor's procurement evaluation and will add and or modify as necessary to ensure that Piedmont is evaluating, during the selection process, vendors that meet criteria such as veteran, woman, and/or minority owned, identify the acceptable diversity of a company's population that is required to meet Piedmont's criteria.

Piedmont Lithium's is committed to diversity, equity, and inclusion and actively tracks the number of minorities and women on our team. Currently, Piedmont Lithium is staffed at 34 employees, including fourteen women. Our executive team currently has eight people, of which three are women and one is African American. We have four Board of Directors, one of which is African American and a woman. Piedmont recognizes it takes unique gifts, talents, varied perspectives, backgrounds and experiences to deliver innovative, high-quality products and services. To provide a diverse and inclusive workplace, Piedmont focuses its efforts on creating a culture where all employees can contribute their skills and talents and be themselves.

Figure 3. Equity Plan SMART Milestones

DEIA Actions	SMART Milestone	Metric
Local Government Engagement	Budget Period 1	Establish a Community Benefit Agreement with McMinn County, its Economic Development group and local county officials and leaders.
Community Outreach and Engagement	Ongoing, Budget Period 1, 2, 3, 4, 5	Conduct significant outreach and engagement with local nonprofit institutions to develop meaningful relationships with local community-based organizations, residents, businesses, worker organizations, disadvantaged communities (DACs)
Support and conduct outreach with local community and educational institutions to support hiring efforts	Ongoing, Budget Period 1, 2, 3, 4, 5	Explore partnerships with Cleveland State Community College, Tennessee Weslyan College and Tennessee College-Applied Tech and the University of Tennessee
Evaluate the DEIA efforts of vendors	Budget Period 1	Identify and quantify Minority Business Enterprises, Minority Owned Businesses, Women Owned Businesses, and Veteran Owned Businesses to solicit as vendors and subcontractors for bids
Local Business Engagement	Budget Period 2	Offer Lunch and Learns for local small businesses
Apprenticeship Programs	Budget Period 3	Identify partnerships with local educational institutions including, but not limited to, secondary education career and technical education initiatives and community college programs. Piedmont's goal is to offer apprenticeship programs where future employees can receive training on lithium hydroxide plant ("LHP-2") control systems and operations while the site is being built. To the extent that it can support local STEM programs, Piedmont will do that as well.

Justice40 Initiative Plan

The Biden-Harris Administration named racial equity and addressing the climate crisis as immediate priorities and called on a whole-of-government approach to address two of the most important and urgent challenges of our time. These issues are related and often intersecting. So, the Administration created the Justice40 Initiative which aims to deliver 40 percent of the overall benefits of federal investments in climate and clean energy, including sustainable transportation, to disadvantaged communities.

Piedmont will work closely with the federal, state and local governments to ensure all areas under the Justice40 Initiative Plan, including, climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution, and the development of critical clean water and wastewater infrastructure, are part of the Community Benefits Agreement set forth for LHP2 the project. The State of Tennessee has programs in place currently, which Piedmont will become a part of once project commences in the state.

The Office of Policy and Sustainable Practices' Community programs and services work with Tennesseans, community leaders and organizations, local governments and utilities, non-profits, and K-12 formal and informal educators and students to support Tennessee in pursuing sustainability and resilience. We provide education by participating in outreach events, and facilitating opportunities for action on topics, such as water and wastewater optimization, beneficial reuse of tires, radon testing and education, environmental education, and food waste diversion and composting. Piedmont Lithium will work with organizations such as Tennessee Environmental Council to ensure that environmental justice and racial justice are one in the same.

Conclusion

This Equity Plan reflects Piedmont Lithium’s dedication to the goals outlined above and the proposal team's initial plan to carry these efforts out throughout the project. As the project moves forward, the team will seek not only to meet these goals but surpass them through the identification of additional measures that would meaningfully contribute to the project's community benefit, provision of quality jobs, skilled workforce training, DEIA, and the objectives of the Justice40 Initiative Plan. Thank you for your consideration.

Project Title: DOE Lithium Hydroxide Plant NO. 2 Project ("LHP-2 Project")

FOA Area of Interest 1: Commercial Scale Production Plants for Domestic Separation of Critical Cathode Battery Materials

Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing
Funding Opportunity Announcement (FOA) Number: DE-FOA-0002678
FOA Type: Initial
CFDA: 81.086

LETTERS OF COMMITMENT (enclosed)

Automakers
General Motors
Arrival

Cell Makers
Northvolt
LG Chem
LyTen
Solid Power
KORE
Panasonic

Cathode
BASF
C4V
Honeywell
Redwood
Soelect
Umicore

National Labs
Ames National Laboratory

Recyclers
Retriev

Suppliers
Genesis
Lhoist

300 Renaissance Center
Detroit, MI 48265-3000

June 29, 2022

U.S. Department of Energy
Offices of Manufacturing and Energy Supply Chains, and Energy Efficiency and Renewable Energy
1000 Independence Ave SW
Washington, DC 20585

RE: Letter of Support for DOE Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing Funding Opportunity Announcement (FOA) DE-FOA-0002678

To whom it may concern:

General Motors LLC (GM) is pleased to offer support of the Piedmont Lithium Inc. (Piedmont) proposal to be submitted under Area of Interest 1 (Commercial-scale Production Plants for Domestic Separation of Critical Cathode Battery Materials from Domestic Feedstocks) under the DOE FOA referenced above. GM believes that a high-quality, domestic, cost-competitive lithium-ion battery manufacturing supply chain is imperative for the success and prosperity of domestic production of lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, is one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by U.S. automakers. China is currently the dominant provider of lithium compounds in the current global supply chain. U.S. producers supply less than 10% of domestic needs. This limited availability has the potential to limit the growth of Electric Vehicle production in the U.S.. This limited availability could also be worsened by long supply chains. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will foster the rapid expansion of the U.S. electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase U.S. production of battery-grade lithium hydroxide at a greenfield site in the Southeastern U.S. within close proximity to nearly 500 GWh of battery production capacity. This site will have capacity to support battery materials for approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce high- quality battery grade lithium hydroxide materials leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

GM is supportive of this Piedmont initiative. We believe that successful implementation will enable the success of the U.S. lithium-ion battery market. We also believe that Piedmont has significant potential to advance localized production of lithium compound materials and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

Sham Kunjur
Executive Director, EV Raw Materials CoE

ARRIVAL

June 14, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application (DE-FOA-0002678)

To whom it may concern:

Arrival is writing in support of Piedmont Lithium's application for the DOE grant relating battery materials processing and battery manufacturing. We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

As a producer of zero-emission, battery-electric vehicles, Arrival is supportive of Piedmont Lithium's efforts to decarbonize the broader transportation and logistics industries, which is also essential to addressing the urgent climate crisis. Support for the domestic lithium-ion battery supply chain is critical to meeting this goal. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Please contact me if you have any questions on the contents of this letter or with respect to Arrival's continuing support of Piedmont's project.

Sincerely,

Richard Colley
Vice President for Public Policy

northvolt

Letter of Support for DOE Grant Application

20 June 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Regarding: Funding Opportunity Number DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

To whom it may concern,

This Letter of Support for DOE Grant Application (this "**Letter of Support**") is set out for the purpose of supporting of the Piedmont initiative, as clarified herein.

We, **Northvolt AB**, reg. no. 559015-8894, a company registered in and duly incorporated under the laws of Sweden and having its registered office at Alströmergatan 20, 112 47 Stockholm Sweden ("**Northvolt**"), believe that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of lithium-ion batteries for electric vehicles ("**EV**") and grid energy storage in America. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Northvolt understand that the global supply of lithium compounds today comes primarily from China, and the USA currently only have the capability of supplying less than 10 % of US needs from domestic production facilities. This is of potential concern for the growth of EV production in the US, as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high green house gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US EV market.

Northvolt has been made aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US, with a close proximity to significant announced battery production capacity. The site is expected to have the capacity to support approximately 500,000 vehicles annually, and to utilize state of the art technology to produce a high quality battery grade lithium hydroxide, leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has operating experience in the lithium industry.

Northvolt is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

For Northvolt AB,

Simon Miller
Acting Director Cathode Raw Material Purchasing

CONFIDENTIAL

LG Chem

LG Chem, Ltd.

LG Twin Tower, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Korea

T. 82-2-3773-1114 F. 82-2-3773-7935 www.lgchem.com

WeConnectScience

June 17th, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc. ("**Piedmont**")

Subject: Letter of Support for DOE Grant Application

To whom it may concern,

LG Chem, Ltd. ("**LG Chem**" or "**we**") believe that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the United States would significantly advance the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, is one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the US. We understand that, in the US, the domestic supply capability of lithium hydroxide is less than 10% of the demand. This is of potential concern for the growth of electric vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and increases exposure to sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will enhance the development of a domestic manufacturing base to meet the growing demand for batteries and will help enable the rapid expansion and competitiveness of the US electric vehicle market, in line with the federal administration's goals to mitigate climate change impacts.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity (the "**Project**"). We understand that the Project will have the capacity to support approximately 500,000 vehicles annually, and will utilize state of the art technology to produce a high quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina. And we also understand their team has considerable operating experience in the lithium industry. Once Piedmont is operational, LG Chem would qualify Piedmont's materials whether to include into LG Chem's supply chain.

While LG Chem has not entered into any binding obligations or commitments in respect of the Project and this letter does not create or evidence any such obligations or commitments, we are pleased to provide this letter of support in respect of the Project, as we believe that it has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Nothing contained in this letter creates any current or future contractual relationship between LG Chem and the US Department of Energy or Piedmont. This letter shall not be construed as a commitment, promise or offer from LG Chem in any aspect or as an application for any funding under Funding Opportunity Announcement No. DE-FOA-0002678 or otherwise and, consequently, LG Chem shall not be considered as an applicant therefore.

Yours sincerely
For and on behalf of LG Chem. Ltd.

Jaywin Lee
Head of M&A,
LG CHEM, LTD.

Lyten Inc.
145 Baytech Dr.
San Jose, CA 95134

June 14, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Lyten Inc. believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the U.S. is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, is one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the U.S. Today, the global supply of lithium compounds comes primarily from China, and domestic sources have the capability of supplying less than 10% of our needs. This is of urgent concern for the growth of electric vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with consistent, high-quality, cost-competitive components, including lithium hydroxide, will help ignite a rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing a plan to significantly increase U.S. production of battery-grade lithium hydroxide at a greenfield site in the Southeastern U.S. within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 domestically produced EV's annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina. Moreover, Piedmont's team has considerable operating experience in the lithium industry.

Lyten Inc. is supportive of Piedmont's domestic expansion plan and believes that it will contribute significantly to the success of the U.S. lithium-ion battery market. Further, Piedmont and Lyten already entered into a Raw Materials Pricing Agreement/LOI and are exploring broader partnership alternatives, to use Piedmont's lithium, pending commercial considerations, to accelerate production of Lyten's advanced, Lithium-Sulfur batteries for EV's.

We believe that Piedmont has significant potential to advance locale production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust, end-to-end domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

Lyten Inc.
Dan Cook, CEO

June 9, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Solid Power, Inc. believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.
We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Solid Power is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

Joshua Buettner-Garrett, Chief Technology Officer
Solid Power, Inc.

KORE Power, Inc.
1875 N Lakewood Drive
Suite 303
Coeur d'Alene, ID 83814

June 15, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

KORE Power, Inc. believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

KORE plans to build an advanced large-scale battery cell manufacturing facility in Buckeye, Arizona. The facility is planned to consist of over 12-Gigawat hours (GWh) battery cell production lines, along with product manufacturing centers to receive raw materials and components. KORE Power, Inc. is willing to qualify supply from Piedmont into our cathode supply chain once they are operational assuming that mutually agreeable commercial conditions are met.

KORE Power, Inc. is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

KORE Power, Inc.
Alexander Nickolatos
CFO

Panasonic ENERGY

Panasonic Energy Co., Ltd.
1-1,Matsushita-cho, Moriguchi City,
Osaka 570-8511, Japan

June 28, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Panasonic Energy Co., Ltd. believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials for lithium-ion batteries . Our company understands that the global supply of lithium compounds today comes primarily from China. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high green house gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are informed that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. According to Piedmont, this site will have the capacity to support approximately 500,000 vehicles annually, and this new plant will utilize state of the art technology to produce a high quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Panasonic Energy Co., Ltd. is supportive of this Piedmont initiative. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

Shoichiro Watanabe
Executive Vice President
Chief Technology Officer, In charge of Procurement
Panasonic Energy Co., Ltd.

We create chemistry

Dr. Matthias Dohrn
Senior Vice President
Global Base Metals Services
BASF SE

June 27, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

BASF believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, is one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the US, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will reportedly have the capacity to support approximately 500,000 vehicles annually and utilize state of the art technology to produce a high-quality battery grade lithium hydroxide, leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team, which has considerable operating experience in the lithium industry.

BASF Corporation
25 Middlesex/Essex Turnpike,
Iselin, NJ 08830
Tel:(732) 205-5299
www.basf.com/usa

Internal

We create chemistry

BASF is supportive of this Piedmont initiative and believes that it will help enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

With kind regards,

Matthias Dohrn
Sr. Vice President

BASF Corporation
25 Middlesex/Essex Turnpike,
Iselin, NJ 08830
Tel:(732) 205-5299
www.basf.com/usa

C4V
45 Murray Hill Road #2226
Vestal, New York 13850, USA
Ph: +1-607-224-2225, email: admin@c4v.us

June 14, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:
C4V believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

C4V is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Sincerely,

Shailesh Upreti
CEO

Honeywell

Jeffrey Dormo
VP GM Fluorine Products

Phone 973-452-3163
Jeffrey.Dormo@Honeywell.com
www.honeywell.com

ADVANCED MATERIALS
115 Tabor Road
Morris Plains, NJ 07950

June 03, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Honeywell believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative, and that Lithium hydroxide is one important component of this value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA and can also be used to manufacture Fluorinated lithium salts and some other additives that are essential for Lithium battery electrolytes.

Our company understands that the global supply chain of lithium compounds today primarily lies outside of the USA.. In the USA, we only have the capability today of supplying less than 10% of our needs from fully domestic production facilities. This is of concern for the growth of Electric Vehicle production in the US as it represents a strategic availability risk for US interests, imposes a long supply chain and includes sources with high greenhouse gas emissions profiles. Enabling domestic lithium source such as lithium hydroxide, is expected to support the rapid expansion of US battery production.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually (25 GWH/yr.).

Provided that Piedmont's approach allows them to offer LiOH at an economically competitive value, Honeywell is supportive of this initiative and expects that it will become an important part of the success of the US lithium-ion battery market.

Additionally, Honeywell is considering to enter the market to produce battery electrolyte salts and formulated electrolytes. Honeywell expects that Piedmont's envisioned facility could supply the needed lithium source and provided that Piedmont's quality and commercial terms are competitive, Honeywell commits to evaluating the Piedmont material for use during the raw material evaluation phase of its project.

Best regards,

Jeffrey Dormo
VPGM, Fluorine Products

Honeywell Internal

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REDWOOD MATERIALS

Redwood Materials
2801 Lockheed Way
Carson City, NV 89706

June 23, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Redwood Materials believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage.

Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles.

Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Redwood is driving down the environmental footprint and cost of lithium-ion batteries by offering large-scale sources of domestic battery materials, to include precursor and cathode active material. Redwood plans to ramp production of precursor and cathode active materials in the US to 100 GWh annually in the coming years, enough to produce more than one million electric vehicles a year.

Redwood is willing to qualify supply from Piedmont into our supply chain once they are operational assuming that mutually agreeable commercial conditions are met.

Redwood is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized

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production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

DocuSigned by:
Jason Thompson
24D1F6A218A64CF...

Jason Thompson
Chief Financial Officer
Redwood Materials

SOELECT INC
NO MORE BUT BETTER

June 9th, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Soelect believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of domestic production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, is one component of this important value chain. Lithium hydroxide is used to manufacture the market-leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and our domestic production facilities only have the capacity to supply less than 10% of what the USA needs. This is of grave concern for the growth of Electric Vehicle production in the US, as it presents strict limitations on availability, imposes a long supply chain for suppliers, and permits lithium sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive lithium hydroxide will help enable rapid expansion of the United States electric vehicle market.

Piedmont Lithium is developing an expansion plan to significantly increase United States production of battery-grade lithium hydroxide at a greenfield site in the Southeast, in close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce high-quality, battery-grade lithium hydroxide, leveraging the experience that Piedmont Lithium has built while developing their fully integrated site in North Carolina and their team, which has considerable operating experience in the lithium industry.

Soelect supports Piedmont Lithium's initiative and believes that it will accelerate the success of the United States lithium-ion battery market. We believe that Piedmont Lithium has great potential to advance domestic production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust, vertically integrated domestic supply chain for the manufacture of automotive lithium-ion batteries.

Best regards,

Soelect Inc.

Dr. Sung-jin Cho
Founder/CEO

Office: 336-500-8686 | office@soelect.com
4355 Federal Drive, Ste 140, Greensboro, NC 27410

June 8th , 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Umicore believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the South-eastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Umicore is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

Umicore Rechargeable Battery Materials

Stephan Jannis
VP Supply

Wim Geens
Business Head Lithium & Manganese

Umicore
Rue du Marais, 31, 1000 Brussels, Belgium
Phone +32 2 227 70 05
Internet www.umicore.com • VAT BE 0401 574 852 • Bank 210-0052900-87• TRA 40801
Registered Office: Broekstraat 31 Rue du Marais, B-1000 Brussels, Belgium

June 16, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

A robust and cost-competitive lithium-ion battery manufacturing supply chain in the United States is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. A critical component of this important value chain is lithium hydroxide, which is required to manufacture the market-leading cathode materials preferred by U.S. automakers. Yet, the global supply of lithium compounds today comes primarily from China, and in the United States, we only have the capability of covering less than 10% of our needs from domestic lithium-production facilities. Related to the dominance of the foreign supply chain, it is easy to foresee a major impediment for the growth of electric vehicle production in the US due to potential limitations on the availability of lithium compounds in the near future. Further, the existing supply chains are unnecessarily long, and they include sources with high greenhouse gas emissions profiles and processing technologies that leave large carbon footprints. Ensuring domestic lithium-ion battery manufacturers have access to consistent, high quality, cost-competitive components, including lithium hydroxide, will help to enable the rapid and sustained expansion of the U.S. electric vehicle market.

I am aware that Piedmont Lithium Inc. is developing an expansion plan to increase U.S. production of battery-grade lithium hydroxide significantly at a greenfield site in the Southeastern United States, and within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support annual production of approximately 500,000 electric vehicles. This new plant will utilize state of the art technology

to produce a high-quality battery-grade lithium hydroxide, leveraging the experience that Piedmont Lithium has built while developing their fully integrated site in North Carolina and their team, which has considerable operating experience in the lithium industry.

I serve as a Principal Investigator of an ongoing research that targets novel processing technologies to extract most of lithium values from spodumene. My team at the U.S. Department of Energy (DOE) Ames Laboratory focuses on the low-temperature mechanochemical extraction of lithium from chemical-grade spodumene concentrate available in the United States, and that work is funded by the Critical Materials Institute – a U.S. DOE Energy Innovation Hub – with support from Piedmont Lithium. Our research indicates that in addition to extraction of nearly all lithium values from chemical-grade spodumene concentrate, this novel process is energy-efficient, does not produce unmanageable waste streams, and promises a very low carbon footprint. Hence, I support this Piedmont Lithium initiative without reservation, being convinced that its fruition will become an important factor in enabling the success of the U.S. lithium-ion battery market. My experience working with Piedmont Lithium makes me believe that the company has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Sincerely,

Vitalij K. Pecharsky
Anson Marston Distinguished Professor
Department of Material Science and Engineering, and
Faculty Scientist, Group Leader, and Principal Investigator
Ames Laboratory of the U.S. Department of Energy

June 2, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Retriev Technologies believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high-quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Retriev Technologies is focused on growing the most advanced cross-chemistry battery management and materials solution business. With decades of experience, we provide customers with a trusted team that is focused on material recovery and upgrading. We have the ability to leverage any or all services for a fully traceable solution to support sustainability efforts across North America.

We are extremely supportive of this Piedmont initiative and believe that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries. When Piedmont is operational, Retriev Technologies would intend to include them in our supply plans and qualify their material as we look to produce battery raw materials.

Best regards,

David A. Klanecky | CEO Retriev Technologies Battery Management & Recycling

Mobile +1 651-492-8755 / dklanecky@solvedbyretriev.com

June 2, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Genesis Alkali believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, are one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high greenhouse gas emissions profiles. We believe providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity and anticipate that this site will have the capacity to support approximately 500,000 vehicles annually. We understand the new plant will utilize state of the art technology to produce a high-quality battery-grade lithium hydroxide leveraging the experience that Piedmont has built, while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Genesis Alkali is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Regards,

Edward T Flynn

EVP & President, Genesis Alkali

Genesis Alkali, LLC • 1735 Market Street • Philadelphia, Pennsylvania 19103 • Tel: (215) 845-4500 • Fax: (215) 845-4650

Lhoist

June 9, 2022

US Department of Energy
Office of Energy Efficiency and Renewable Energy (EERE)
Funding Opportunity Number: DE-FOA-0002678
Applicant Name: Piedmont Lithium Inc.

Subject: Letter of Support for DOE Grant Application

To whom it may concern:

Lhoist North America believes that a high-quality, cost-competitive lithium-ion battery manufacturing supply chain in the USA is imperative for the success and prosperity of localized production of American lithium-ion batteries for electric vehicles and grid energy storage. Lithium hydroxide, essential for lithium-ion batteries, is one component of this important value chain. Lithium hydroxide is used to manufacture the market leading cathode materials preferred by automakers in the USA. Our company understands that the global supply of lithium compounds today comes primarily from China, and in the USA, we only have the capability of supplying today less than 10% of our needs from domestic production facilities. This is of potential concern for the growth of Electric Vehicle production in the US as it presents potential limitations on availability, imposes a long supply chain for suppliers, and includes sources with high green house gas emissions profiles. Providing domestic lithium-ion battery suppliers with access to consistent, high-quality, cost-competitive components, including lithium hydroxide, will help enable the rapid expansion of the US electric vehicle market.

We are aware that Piedmont is developing an expansion plan to significantly increase US production of battery-grade lithium hydroxide at a greenfield site in the Southeastern US within close proximity to nearly 500 GWh of battery production capacity. This site will have the capacity to support approximately 500,000 vehicles annually. This new plant will utilize state of the art technology to produce a high quality battery grade lithium hydroxide leveraging the experience that Piedmont has built while developing their fully integrated site in North Carolina and their team which has considerable operating experience in the lithium industry.

Lhoist North America is supportive of this Piedmont initiative and believes that it will enable the success of the US lithium-ion battery market. We believe that Piedmont has significant potential to advance localized production of lithium compounds and fill a critical gap in the creation of an energy-efficient, robust vertical domestic supply chain for the manufacturing of automotive lithium-ion batteries.

Best regards,

Mark Milner

Lhoist
Mark Milner, VP Commercial and Business Development

Location(s) of Work Documentation

DE-FOA-0002678

Control Number: 2678-1739

Prime Applicant/ Team Member	Address	City	State	Nine Digit Zip Code (ZIP+4)
Piedmont Lithium Inc.	42 E Catawba Street	Belmont	NC	28012
Piedmont Lithium Inc.	2284-2290 Old Athens Etowah Road (McMinn)	Athens	TN	37303

AUSTIN DEVANEY
Austin.Devaney@usa.net • Cell (704) 920-8970 • Fort Mill, SC

Education and Training
Master of Business Administration (MBA) – Edwin L. Cox School of Business, Southern Methodist University, 1999
Bachelor of Science (BS) – Chemical Engineering, Clemson University, Clemson, SC, 1988

***Relevant* Research and Professional Experience**

Dynamic Sales and Business Management Executive with a demonstrated track record of increasing sales, increasing profitability, and building productive teams. Strong marketing and technical background leveraged to consistently outperform objectives. Exceptional communicator with excellent problem-solving skills. Technical areas of expertise include Lithium, Lithium Batteries, Battery Materials, Pulp & Paper, Potassium and Sodium Chemicals and other Inorganic Specialty Chemicals.

2020 – Present Vice President of Sales & Marketing, Piedmont Lithium, Belmont, NC

- Responsible for all commercial activities for developing Lithium producer
- Responsible for all sales activities globally with various levels of the supply chain including automakers.
- Negotiate sales agreements with customers.
- Develop customer offerings in the by-product segment and lead a team consisting of JV members and outside consultants.
- Lead sustainability initiatives and industry affiliations

2015 – 2019 Global Director – Lithium Product Management
Global Sales Director – Energy Storage, Albemarle, Charlotte, NC

- Responsible for all Product Management activities globally for the Lithium Salts GBU with 2018 Revenue of $1B
- Lead a Product Management team of five direct reports (three in North America and two in China) responsible for pricing strategy, volume allocation and product design.
- Leads the tolling activities of the division with revenues in excess of $100MM.
- Established and managed the internal long-term supply-demand balance and expansion modeling for our facilities.
- Negotiated Long Term Supply Agreements with Energy Storage customer base.

2010 – 2015 National Sales Manager – Battery Products
Global Product Manager – Lithium Hydroxide, Rockwood Lithium, Kings Mountain, NC

- Responsible for all sales activities in North America to both Secondary and Primary Battery Markets

- Developed relationships with both direct buyers and downstream users of EV traction batteries (i.e. OEM auto manufacturers)
- Led product development efforts for global cathode producers to garner share from competitors
- Supported global sales efforts and developed market expertise through customer visits in Asia and North America
- Responsible for all Battery Product and Special Metal sales in North America
- Directed and represented Rockwood through trade show participation for battery markets globally.

2019 – 2020 Director, Lithium & Battery Materials, IHS Markit, Houston, TX

- Contracted with IHS Markit to perform SWOT Analysis of their offerings to the Cleantech market.
- Led three direct reports and five indirect on Battery segment needs
- Surveyed market participants to revise product offerings
- Presented market overview to Senior Management and proposed reorganization to target client needs
- Created content for marketing newsletter and new marketing channels

Previous Experience

Division Manager, FUCHS LUBRICANTS, Harvey, IL

- Charged with leading a $20MM Division with full P&L responsibility in the Southeastern United States.
- Directed nine field sales representatives and managed three operational staff
- Developed and executed pricing and marketing strategy for Southeastern markets resulting in year over year profit growth in 2008.
- Promoted to absorb the Florida Division into the Southeast Division. Reorganized, increasing profits 50% in 2009 over 2008

Commercial Manager
Sales and Marketing Manager, FINNCHEM USA (Kemira), Eastover, SC

- Charged with all sales and marketing activity for the $75MM business unit. Responsible for increasing sales through strong customer-focused efforts and strategic price increases. Instrumental in all aspects of the sale of the Finnchem business unit to Kemira.
- Directed nine field sales representatives and managed three operational staff
- Served on Senior Management Team with CFO and VP/GM responsible for all divisional operating decisions including Technology and Strategy
- Developed and executed strategy diversifying customer base and increased pricing leading to a 50% increase in profits year over year
- Involved in sales development efforts throughout the Americas (primarily USA, Canada & Brazil)
- Responsible for all contractual purchases of Raw Materials

BINH MEADOR
bmeador@piedmontlithium.com
+1 713 894-0724

Education and Training

Texas A&M University, Chemical Engineering, Bachelor's Degree, 2001

Summary of experience:

Professional with 20 years of project execution experience, working in various leadership roles as project manager, technical manager, department manager and lead engineer. Experience building and managing high performance teams to execute major projects spanning from feasibility study, front-end development, contract bid evaluation, detailed design to construction.

2020 – Present **Senior Project Manager, Chemical Operations, Piedmont Lithium, Belmont, NC.**

- Manage the day-to-day operations of the project
- Lead the team to define and deliver each phase of the project
- Ensure that the right people are in place to allow the business to expand to its full potential. This will include a thoughtful and objective evaluation of the existing team, the development of team members, and enhancing the team, as appropriate
- Manage relationships with contractors to ensure clear definition of scope and smooth delivery of work packages.
- Drive best value decision making to ensure the project moves forward, minimizing delays and setbacks, in order to deliver the project to the highest quality standards while remaining on time and budget.
- Maintain excellent relationships with community and regulatory leadership to advance the interests of the company.
- Support the team to obtain relevant permits related to the construction and operation of the Chemical Plant
- Partner with the entire project and operational leadership team to ensure seamless commissioning, ramp up and ongoing operation of the entire lithium producing value chain

2019 – 2020 **Project Engineer, Fluor Corporation, Houston, TX**

- Coordinated the initial project set up and evaluated the scope change when site moved from Arizona to Texas.
- Led team through onsite and offsite scope development and key design reviews.
- Oversaw the deployment of various engineering software on the project.
- Hold regular discussion with client and monitor the closure of project key decisions.

2017 – 2019 **Contract Superintendent Representative, Fluor Corporation, Ahmadi, Kuwait**

- Responsible for administering $1.4 billion USD lump sum turnkey project on behalf of owner.
- Reviewed and inspected Contractor's works to ensure compliance with the contract requirements and Company specifications.
- Led the engineering team and key client representative located in the Contractor office (Sharjah, UAE) while providing appropriate levels of engineering assurance, project execution advice, collaborating with Kuwait Oil Company (KOC) Major Projects team and interfacing with other KOC Asset owner, Q&HSE and Contract teams.
- Defined detailed scopes, cost, schedule and drafted budget proposal.
- Led project through various stage gate approval, secured funding and issued contract requisitions.
- Prepared and issued invitation to bid, evaluated technical and commercial bids. Prepared recommendation for contract award and mobilized project team.
- Analyzed project risks and led project risk reviews.

2014 – 2017 **Design Engineering Manager, Fluor Corporation, Houston, TX**

- Led the project team and supporting disciplines to deliver the basic engineering design specifications for the ExxonMobil Research & Engineering Company (EMRE) Flexicoking technology with the plant capacity of 2 MT/A.
- Performed technical review of licensor basic engineering package for the Butadiene Extraction Unit (BEU) new grass root complex which is designed for the production of 100,000 metric tons of butadiene product using Lummus/BASF technology.

2012 – 2014 **Process Department Manager, Fluor Corporation, Trinidad and Tobago, West Indies**

- Assigned company personnel to and from projects
- responsible for people development
- Implemented the necessary tools, practices and procedures to effectively execute each project, ensuring that all projects being executed are aligned with company operating systems requirements.

2001 – 2012 **Process Engineer, Fluor Corporation, Houston, TX**

- Developed process deliverables, created design specifications, wrote process description, sized pressure safety valve (PSV)
- Participated and provided resolution to safety review action items
- Worked with estimating group for project cost estimate
- Used Intergraph SmartPlant to develop Piping and instrumentation diagram

J. Monique Parker, CSP
(704) 813-2301• jmonique.parker@yahoo.com

Education and Training
Tennessee Technological University Cookeville, TN
Bachelor of Science, Chemical Engineering, May 2001

***Relevant* Research and Professional Experience**

Professional with 20 years of manufacturing experience in various industries and roles, capable of managing multiple sites. International experience in safety, quality management, and business/product management; including auditing, program development, and business strategy development and execution.

2020 – Present Sr. Business and New Product Development, Albemarle Corp., Charlotte, NC

- Maintain and grow $30 Million global business segment
- Develop end-to-end internal and external strategy for responsible global business segment
- Engaging with sales, operations, logistics, CSR, supply chain, purchasing, etc.
- Exceeding sales forecast (revenue/volume) each month for responsible business with sales support
- Optimize product mix based on efficiency, productivity, and profitability
- Develop and execute launch (internal and external) process for new products to enter the market

2019 – 2020 Business Process Improvement Director, Albemarle Corp., Charlotte, NC

- Led cross-functional team to develop the companies end-to-end operating model
- Led effort to stabilize business use of new SAP system
- Liaison between the business and the supporting functions (IBO)
- Define all Lithium processes for the entire end-to-end supply chain; including understanding gaps within the process and plan development to remove the gaps
- Develop KPIs for the business and IBO organization to ensure alignment and collaboration
- Align with the Commercial/Marketing teams to ensure customer experience program is fully developed

2018 – 2019 Global Quality Director – Lithium Specialties, Albemarle Corp., Charlotte, NC

- Active member of the Lithium Specialties Leadership team reporting to VP/GM of the business
- Focusing on improving the overall customer experience
- Led various workshops (using LEAN/OpEx techniques) to develop the workflow for order processing while identifying and developing cost savings improvement plan to remove gaps
- Leading quality control, quality management, and quality assurance for all sites within business
- Responsible for quality of active pharmaceutical ingredients (high level FDA involvement)
- Developed strategy to implement process and systems to manage overall quality

- Integral resource for all aspects of the business - Sales, Product Management, Customer Service, R&D, Supply Chain, Manufacturing, and Logistics

2016 – 2018 Corporate Global Business Unit HSE Leader, Albemarle Corp., Charlotte, NC

- Developed robust HSE strategy for global business unit to provide a continuous improvement framework that supports both the business strategy as well as the Corporate HSE goals and objectives
- Responsible for 10+ global manufacturing sites (half covered by OSHA PSM type programs) - maintaining awareness of HSE requirements within each region of the world
- Led the effort of implementation/adoption of the Albemarle HSE management system following acquisition of international sites
- Implemented Safety DNA to drive change within all levels in regards to culture acceptance of HSE to be able understand blind spots and other obstacles for acceptance
- Liaison with operations within the assigned GBU to provide first point of contact guidance on HSE related matters
- Develop multi-media training programs for all levels within the organization to ensure all HSE topics are properly covered and understood
- Develops programs for HSE corrective actions resulting from audits and led teams through critical incident investigations
- Point of contact with assigned GBU president and staff to communicate issues up and down the organizational hierarchy
- 35% reduction in OSHA recordable type injuries in first year of the role
- Active member of the Global Business Unit Leadership Team
- Key member of the Corporate HSE staff, advising the VP of HSE on trends and issues
- Heavily involved with all contact with governmental officials in every region in regard to HSE matters – consulted if not present

2012 – 2016 Environmental Health & Safety Leader, Owens Corning, Jackson TN

- Multi-site responsibility for EHS for Jackson, TN and Novi, MI
- Manage all environmental (air, waste, water, DOT) and safety programs for the site (Title V permit active site)
- Maintain all city, state, and federal documentation for all regulations (OSHA, EPA, etc.)
- Developed a plant safety plan to achieve a ZERO safety culture (reduced incidents from 7 to 2)
- Coordinate safety and environmental training for all levels at the facility
- Manage and maintain the budget and staffing for the safety department – reduced spend by 5% without comprising PPE and other safety needs
- Approve all investigations for safety and environmental matters – driving for true root cause
- Certified Hazard Recognition Specialist Trainer – Owens Corning Program – Human Error concept approach
- Worked with the State environmental agency to create a user-friendly Title V permit
- Handle all Worker's Compensation cases
- Facilitate/Led Process Safety Management Hazard Assessments at other Owens Corning locations
- Developed and implemented incident reporting system for the site –utilizing SharePoint

Keith Phillips
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1 973 809 0505

Education and Training
University of Chicago, MBA, Finance, 1984 - 1986
Laurentian University/Université Laurentienne, Bachelor of Commerce (B.Com.), Accounting and Finance, 1978 – 1982

***Relevant* Research and Professional Experience**

Mr. Phillips has had a career on Wall Street spanning 30 years during which he has worked on strategic and financing transactions representing over $100 billion in aggregate value. Mr. Phillips was most recently a Senior Advisor with merchant banker Maxit Capital, after leading the mining investment banking teams for Merrill Lynch, Bear Stearns, JPMorgan and Dahlman Rose. Mr. Phillips has worked with numerous mining companies, including many established global leaders, and has dedicated most of the past decade to advising exploration and development-stage companies in achieving their strategic objectives, with a particular focus on obtaining relevance in the United States capital markets.

2017 - Present **President and CEO, Piedmont Lithium, Belmont, NC**

- Developed strategy to grow Piedmont Lithium into a major U.S. producer of lithium hydroxide
- Led fund-raising efforts including 7 successful public equity raises, to enable Piedmont to advance its global spodumene concentrate and lithium hydroxide projects
- Built Piedmont team from 2 people to 32 people, positioning the Company to execute on its plans in the United States and globally

Sep 2015 - Jun 2017 **Senior Advisor, Maxit Capital, NY, NY**

- Advised and assisted public and private mining companies in pursuing strategic growth options and raising capital via the public and private capital markets.

May 2008 - Aug 2015 **Managing Director, Cowen and Company (and predecessor firm, Dahlman, Rose & Co.) NY, NY**

- Group Head, Mining & Metals
- Advised and assisted public and private mining companies in pursuing strategic growth options and raising capital via the public and private capital markets.

2003 - 2008 **Managing Director, JPMorgan Chase & Co (and predecessor firm, Bear Stearns & Co.) NY, NY**

- Group Head, Mining & Metals

- Advised and assisted public and private mining companies in pursuing strategic growth options and raising capital via the public and private capital markets.

1997 - 2002 **Managing Director, Merril Lynch, NY, NY**

- Group Head – Global Basic Industries
- Advised and assisted public and private mining and paper/forest products companies in pursuing strategic growth options and raising capital via the public and private capital markets.

1994-1989 **Vice President, Goldman Sachs, NY, NY**

- Headed Canadian investment banking coverage, and advised public and private companies in accessing the U.S. capital markets

MICHAEL D. WHITE, CPA
Houston, TX 77382 - 713.878.9049
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www.linkedin.com/in/michaeldwhitecpa

Education and Training
Bachelor of Science (BS), Accounting & Finance, University of Houston, 1995

***Relevant* Research and Professional Experience**

Mr. White has extensive experience in leading global finance and accounting organizations, mergers and acquisitions including post-merger integrations, initial public offerings, internal controls, and information systems.

2021-2011 Executive Vice President & Chief Financial Officer, Piedmont Lithium, Belmont, NC

- Assist the CEO in developing, for the Board's approval, a strategic direction and positioning to ensure the Corporation's success.
- Together with the CEO and the COO, develop and recommend to the Board an annual operating plan and financial budget that support the Corporation's long-term strategy.
- Create, coordinate, and evaluate the financial controls and supporting information systems of the Corporation.
- Together with the CEO, approve and coordinate changes and improvements to disclosure controls and procedures and internal control over financial reporting.
- Ensure that effective internal controls are in place and take steps to enhance, where necessary, the internal control systems within the Corporation.
- Develop appropriate key performance indicators to monitor and drive the financial performance of the Corporation.
- Oversee and monitor the Corporation's financial position, banking and financing activities and capital structure and monitor the respect of banking and financial covenants and hedging arrangements, as applicable, including effective tax strategies and compliance for the Corporation.
- Coordinate the preparation of the Corporation's financial statements and management discussion and analysis (annual and interim), including annual audit, quarterly reviews, and any offerings with external auditors
- Certify documents as required under securities laws.

2018-2021 Vice President, Chief Accounting Officer & Corporate Controller (Apergy Corporation) CHAMPIONX (NASDAQ: CHX) (Formerly Apergy Corporation (NYSE: APY)), Houston, TX

- Manufacturing, chemicals and services company, revenues of $3.5B. Change in control: Apergy ($1.5B revenues) merged with ChampionX.
- Headed global finance and accounting organization through successful IPO / spin-off and subsequent Form S-4 filings for $300M debt and $4B (122M) common stock issuances.
- Executive lead for Audit Committee Board meetings and key contributor to earnings release, CEO / CFO earnings scripts and signor for SEC financial filings. Section 16 Officer.

- Developed long-range financial outlook and commentary in response to COVID-19 pandemic and crude oil oversupply; directed goodwill valuation assessment, resulting in $687M impairment charge in 2020.
- Championed comprehensive finance and accounting talent assessment resulting in global controllership re-alignment with improved accountability, efficiencies, mentoring program, and succession planning.
- Collaborated with Segment President to simplify operational model, improving DSO 32% by re-negotiating key customer contracts and decreasing inventory loss 25% through automation of processes and controls.
- Created sustainable, financial reporting with key performance metrics for operational leadership review with CEO / CFO.
- Completed post-merger integration of accounting, policies and reporting for combined ChampionX / Apergy entity.
- Chaired Apergy's Disclosure Committee, overseeing controls and procedures for required information in SEC public filings.

2013 – 2018 AEGION CORPORATION (NASDAQ: AEGN), St. Louis, MO

Senior Vice President, Chief Accounting Officer & Corporate Controller 2017 – 2018
Senior Vice President, Corporate Controller 2013 – 2017

- Manufacturing and services company in industrial, oil and gas and water industries with revenues of $1.3B.
- Led finance and accounting organization (125+ employees; 15 countries) including corporate, segment CFOs, controllership, shared services, and global FP&A. Audit Committee lead. Section 16 Executive Officer and SEC filing signatory.
- Spearheaded global and corporate budgeting, forecasting and KPI processes including partnering with operations. High involvement with CEO, CFO and investor relations to establish key themes, messaging, and GAAP/non-GAAP reporting.
- Centralized European finance organization by relocating accounting center from U.K. to The Netherlands and reducing accounting footprint from 6 to 3 countries; achieved 40% cost savings and increased team accountability.
- Executed $50M restructuring plan with annual cost savings of $65M through headcount reductions (1,300+), office consolidations, business divestitures, closure of Hong Kong and Denmark facilities and collection of foreign receivables.
- Improved global accounting close cycle by 33% (6-day to 4-day close) as part of lean six sigma process.
- Managed SEC filings and resolution of SEC comment letters involving complex accounting issues. Successfully led global adoption of new revenue recognition standard (percentage of completion, manufacturing, and software).

Awards and Honors

Certified Public Accountant (State of Texas)
American Institute of Certified Public Accountants
Texas Society of Certified Public Accountants
Gexa Energy Employee of the Year

Patrick H. Brindle
pbrindle@piedmontlithium.com / Mobile +1 (412) 818-0376 / Belmont, NC

Education and Training
Virginia Tech, BS Civil Engineering, 1999
Virginia Tech, BS Environmental Science, 1999

***Relevant* Research and Professional Experience**

Mr. Brindle has more than 20 years' experience in senior management and engineering roles including multi-year expatriate assignments and has completed EPC projects in diverse jurisdictions including the United States, Canada, China, Mongolia, Australia, Brazil, and others.

2022 - Present Executive Vice President and Chief Operating Officer
2021 – 2022 Executive Vice President and Chief Development Officer
2018 – 2021 Vice President and Project Manager, Piedmont Lithium, Belmont, North Carolina

- Building of a pre-production lithium business from a single project entity to a multi-asset, U.S. listed company through a combination of organic growth and acquisitions
- Development of the Company's $2 billion capital projects portfolio including lithium assets in the United States, Canada, and Ghana
- Recruitment of a core leadership team from a base of four employees to 30+ employees within a two year window to enable the Company's development and operational plan
- Creation of operational and project capital and operational cost estimates, schedules, and financial modeling
- Management of technical studies, metallurgical testwork programs, and technology selection
- Oversight of the Company's permitting and environmental programs
- Establishment of Company safety programs in collaboration with the Company's VP of Safety, Environment, and Health
- Support for stakeholder engagement including community relations, regulatory agencies, federal, state and local governments
- Development of operational leadership teams
- Interface with Company joint venture partnerships in Canada and Ghana
- Evaluation of M&A opportunities
- Support for investor relations, corporate communications, and capital raising activities

2013 – 2017 Senior Vice President of Engineering, DRA Taggart, Pittsburgh, Pennsylvania

- Integration of the Taggart Global engineering teams into DRA following the acquisition of Taggart by DRA in 2014
- Acquisition of Montreal-based Met-Chem in 2016

- Support for an EPC business which peaked at $450+ million in total annual revenue
- Technical sales leadership
- Executive sponsor and study manager for large-scale projects within DRA Americas

2010 – 2012 **Senior Vice President, Taggart Australia, Brisbane Australia**
General Manager, Ausenco Taggart Mongolia, Ulan Bator, Mongolia

- Set up and wind down of Company's Mongolian legal entity and project office
- Project Director for multiple EPC projects and large project technical studies

2008 – 2010 **Vice President of Engineering, Taggart Global, Pittsburgh, Pennsylvania**

- Modernization of Company standards, cost control and engineering systems
- Executive sponsorship for large projects

2007 – 2008 **General Manager, Taggart do Brasil, Vitoria, Brazil**

- Commissioning Manager – Sol Coquiera Tubarao Project
- Wind up of Company project offices in Brazil

2007 – 2008 **Vice President of Engineering, Taggart Global CIS, Moscow, Russia**

- Project office for the delivery of the SUEK Tugnui Mine in Buryatia

2002 – 2006 **Vice President of Engineering, Taggart Global, Beijing, China**

- Design and commissioning of 26 EPC projects within a 4 year time frame

2000 – 2002 **Process Engineer, Taggart Global, Pittsburgh, Pennsylvania**

Relevant Publications

1. Cook, B., Aghamirian, M., Li, H. Nabiri, N., Nottingham, J., Quinn, J. Gunning, C. Gibson, C., Brindle, P. (2022). "Production of Spodumene Concentrate from the North Carolina Piedmont Lithium Project." 61st Annual Conference of Metallurgists (COM 2022)

Approved by OMB
0348-0046

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

1. Type of Federal Action: a. contract B. b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	**2. Status of Federal Action:** a. bid/offer/application B. b. initial award c. post-award	**3. Report Type:** a. initial filing A. b. material change

4. Name and Address of Reporting Entity: X Prime _____ Subawardee Tier_____, if Known: **Piedmont Lithium Inc.** **32 N. Main Street** **Belmont, NC 28012** **Congressional District, if known:**	**5. If Reporting Entity in No. 4 is Subawardee,** Enter Name and Address of Prime: **Congressional District, if known:**
6. Federal Department/Agency: **U.S. Department of Energy**	**7. Federal Program Name/Description:** CFDA Number, *if applicable*: _____
7. **Federal Action Number,** *if known:* DE-FOA-0002678	**9. Award Amount**, *if known:* **$**
10. a. Name and Address of Lobbying Registrant *(if individual, last name, first name, MI):* Venn Strategies 1341 G St NW, Washington, DC 20005	**b. Individuals Performing Services** *(including address if different from No. 10a) (last name, first name, MI):* Steinberg, Benjamin, R. Tharrington, Joshua, N. MacGillivray, Doug, C. Olson, Erik, R. Ferrell, David
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	**Signature:** _____ **Print Name:** Patrick H. Brindle **Title:** Chief Operating Officer **Telephone No.:** 412-818-0376 **Date:** 06/28/2022
Federal Use Only	**Authorized for Local Reproduction** **Standard Form - LLL (Rev. 7-97)**

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

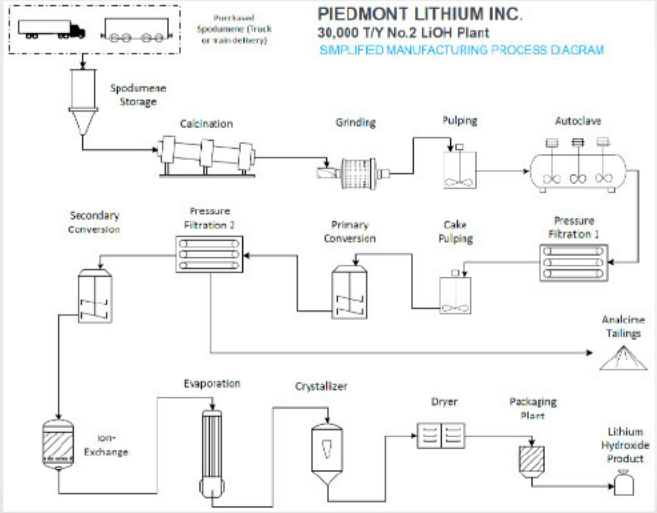
2678-1739

Piedmont Lithium Hydroxide Conversion Plant

PI NAME / ORGANIZATION

Project Summary

Piedmont Lithium is proposing to build a greenfield Lithium Hydroxide conversion plant that will be capable of producing up to 30,000 tonnes per year of battery grade material. This plant will reduce the reliance on foreign sources of material and support the development of an Electric Vehicle supply chain here in the United States. Using an alkaline pressure leach technology Piedmont will produce battery grade material and the resulting tailings material have applications in the construction markets allowing for a more circular use of the feedstock. Supporting this project will secure jobs in many downstream industries and the production of electric vehicles which will reduce our reliance on fossil fuels in the transportation sector.



Piedmont's Lithium conversion project will lessen the dependence on foreign supply of lithium chemicals.

Key Personnel/Organizations

Patrick Brindle – Chief Operating Officer
Austin D. Devaney – Chief Commercial Officer
Michael White – Chief Financial Officer
Malissa Gordon – Community and Government Affairs Manager

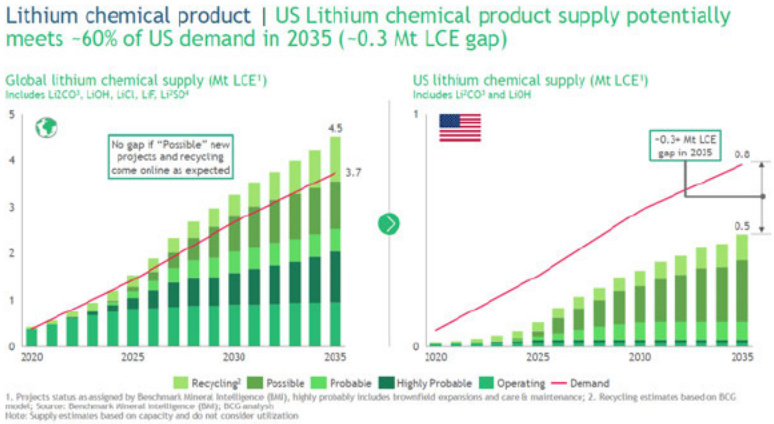
Budget and Timeline

Federal funds: $100,000,000 Cost-share: $472,00,000
Total: $ 572,000,000

Key Milestones & Deliverables

Budget Period 1	FEED, Site Selection & Permitting
Budget Period 2	Detailed Design & Procurement
Budget Period 3	Construction
Budget Period 4	Commissioning & Ramp Up
Budget Period 5	Production

Project Impact



Statement of Project Objectives
DE-FOA-0002678; CFDA 81.086
Piedmont Lithium Inc.
LHP-2 Project

A. OBJECTIVES

Lithium hydroxide ("LiOH") is the preferred feedstock for high-nickel cathodes used in electric vehicle ("EV") batteries today and in the future. Piedmont Lithium Inc. ("Piedmont" or the "Applicant"), a Delaware corporation which is listed on Nasdaq and trades under the symbol "PLL". Piedmont will build, own, and operate an advanced manufacturing plant for up to 30,000 metric tonnes per year ("tpy") of battery quality lithium hydroxide ("LiOH"). The U.S.-based manufacturing plant will produce LiOH from spodumene concentrate ("SC6") sourced from projects in Ghana and Canada where Piedmont holds equity interest and material offtake rights, or other market sources. The manufacturing plant utilizes an innovative third party LiOH processing technology that has superior operating cost and sustainability profiles relative to current producers based in Australia, China, and South America ("LHP-2 Project" or the "Project"). Piedmont seeks funding for the LHP-2 Project including all manufacturing processes and supporting infrastructure.

B. SCOPE OF WORK

The Project will be one of the world's largest and lowest-cost producers of LiOH, with a sustainability footprint that is superior to incumbent producers, all in an ideal location to supply the rapidly growing EV supply chain in the United States. The Project will manufacture LiOH sourced from hard rock lithium ore by using a novel process which is expected to result in lower overall operating costs, fewer emissions, reduced carbon intensity, and no hazardous byproducts. Piedmont will use Metso Outotec's technology to complete this process which include pressure leaching, conversion and ion exchange process stages. The Project will be conducted in 4 budget periods:

Budget Period 1: FEED, Site Selection, and Permitting: In this budget period, the main focus will be to evaluate bids, select contractors, conduct design updates, complete feasibility studies, submit permit applications, and make early commitments on long-lead equipment items. During this period, Piedmont will also meet Equity Plan milestones to include establishment of a Community Benefit Agreement with the local government, conduct community outreach and engagement, support and conduct outreach with local community and educational institutions to bolster hiring efforts, and evaluate to the diversity, equity, inclusion, and accessibility efforts of its vendors.

Budget Period 2: Detailed Design and Procurement: In this budget period the main tasks will be a Final Investment Decision ("FID"), detailed design engineering, and procurement of remaining equipment items. During this period, Piedmont will also meet Equity Plan milestones to include community outreach and engagement, support and conduct outreach with local community and

educational institutions to bolster hiring efforts, and local business engagement through lunch and learns.

Budget Period 3: Construction: During construction and for this budget period, Piedmont will commence site mobilization; complete civil works, undertake construction, and achieve mechanical completion. During this period, Piedmont will also meet Equity Plan milestones to include community outreach and engagement, support and conduct outreach with local community and educational institutions to bolster hiring efforts, and work to establish apprenticeship programs to build a skilled workforce.

Budget Period 4: Commissioning and Ramp-Up: Following mechanical completion, activities during this budget period will include commissioning, production of first crystal, and complete of EPC contractor performance testing. During this period, Piedmont will continue meeting Equity Plan milestones to include community outreach and engagement, as well as support and conduct outreach with local community and educational institutions to bolster hiring efforts.

Budget Period 5: Production: In this final budget period, operations will take over full management of the facility, production will be ramped up to name-plate capacity, and the EPC contractor will demobilize. During this period, Piedmont will continue meeting Equity Plan milestones to include community outreach and engagement, as well as support and conduct outreach with local community and educational institutions to bolster hiring and workforce development efforts.

C. TASKS TO BE PERFORMED

As set forth in more detail in the Technical Volume and throughout the following Statement of Project Objectives ("SOPO"). The following tasks will be conducted:

All Budget Periods

Overall Project Management and Planning

The recipient will perform project management activities to include project planning and control, subcontractor control, financial management, data management, management of supplies and/or equipment, risk management, and reporting as required to successfully achieve the overall objectives of the project.

Task 0.0 – Project Management and Planning:

A preliminary schedule has been prepared for the Project. At a basic engineering level of project detail, schedule development is limited to high level activities including feasibility study, detailed engineering, procurement of long lead items, critical contract formation and award, construction, and pre-operational testing activities.

Task 0.1- Kick-Off Meeting:

LHP-2 design engineering kick-off will occur in July 2022 upon award of the FEED contract to Kiewit-Primero.

Budget Period 1: FEED, Site Selection, and Permitting:

Task 1.1 Contractor selection
Task 1.2 Site location selection
Task 1.3 Basic engineering update
Task 1.4 Testwork
- Subtask 1.4.1 Pilot testwork
- Subtask 1.4.2 Bench scale testwork

Task 1.5 Front End Engineering Design (FEED)
- Subtask 1.5.1 Design development
- Subtask 1.5.2 Design reviews
- Subtask 1.5.3 Preliminary HAZOP
- Subtask 1.5.4 P&I Diagrams – issued for detailed design
- Subtask 1.5.5 Project execution plan
- Subtask 1.5.6 Project schedule
- Subtask 1.5.7 Capital cost estimate

Task 1.6 EPC contract agreement
Task 1.7 Early commitment for key long lead items

Budget Period 1 Go/No-Go Decision Point: The periodic, topical and final reports to confirm the tasks set forth above will be submitted as required by DOE. To ensure the successful completion of the Budget Period 1 set forth above, the proposed technical milestone which is Specific, Measurable, Achievable, Relevant, and Timely ("SMART"), and demonstrates a technical achievement, for **Budget Period 1**, is as follows:

	Milestone	Type	Description
1.1	Contractor Selection	Technical	Complete – Awarded to Kiewit
1.2	Site location selection	Technical	Complete – Etowah, TN
1.3	Basic engineering update	Technical	Update to Metso:Outotec design based on design optimization workshops
1.4	Testwork	Technical	
1.4.1	[redacted] (b) (4)	Technical	[redacted] (b) (4)
1.4.2	[redacted]	Technical	[redacted]
1.5	FEED	Technical	
1.5.1	Design Development	Technical	Completion of all engineering deliverables in accordance with FEED contract between Kiewit and Piedmont
1.5.2	Design Reviews	Technical	Progressive stage gates of design advancement including process, mechanical, layout, civil, architectural, piping, electrical, instrumentation, and control

1.5.3	Preliminary HAZOP	Technical	Formalized process to safety review using P&I diagrams and process design. Facilitated by 3rd party.
1.5.4	P&I Diagrams	Technical	Process Flow Diagrams (PFD) and Piping & Instrument Diagrams (P&ID) must be Issued for Design (IFD) at the conclusion of FEED
1.5.5	Project Execution Plan	Technical	A detailed project execution plan covering the EPC delivery of the LHP-2 Project will be prepared by Kiewit during FEED and included in the EPC Contract.
1.5.6	Project Schedule	Technical	A Level 3 Project Schedule covering the EPC delivery of the LHP-2 Project will be prepared by Kiewit during FEED and included in the EPC Contract.
1.5.7	Capital Cost Estimate	Technical	A Class 3 Capital Cost Estimate in accordance with AACE Guidelines will be prepared by Kiewit during FEED and will form the basis of the Target Cost Estimate to be included in the EPC Contract.
1.6	EPC Contract Agreement	**Go/No Go**	Finalized EPC contract terms including but not limited to terms & conditions, scope of work, project schedule, capital cost, performance guarantee requirements, and warranty obligations.
1.7	Early commitment for key LLI	**Go/No Go**	An analysis of the critical path of the project schedule and commitment to place orders for certified engineering design for long lead equipment items including but not limited to substation, kiln, autoclave, crystallizers, and filters.

<u>Budget Period 2:</u> Detailed Design and Procurement

Task 2.1 Final Investment Decision (FID)
Task 2.2 Detailed Design Engineering
- Subtask 2.2.3 30% Design Review
- Subtask 2.2.4 60% Design Review
- Subtask 2.2.5 90% Design Review
- Subtask 2.2.6 HAZOP
- Subtask 2.2.7 Management of Change

Task 2.3 Long Lead Procurement
Task 2.4 Remaining Procurement
Task 2.5 Expediting
Task 2.6 Quality Control

Budget Period 2 Go/No-Go Decision Point: The periodic, topical and final reports to confirm the tasks set forth above will be submitted as required by DOE. To ensure the successful completion of the Budget Period 1 set forth above, the proposed technical milestone which is Specific, Measurable, Achievable, Relevant, and Timely ("SMART"), and demonstrates a technical achievement, for **Budget Period 2**, is as follows:

	Milestone	Type	Description
2.1	Final Investment Decision	Go/No Go	A decision by the Board of Directors of Piedmont to authorize full capital expenditure on the project. The minimum requirements for FID will be a completed FEED, receipt of permits required for construction and operation of LHP-2, and completion of capital raising activities.
2.2	Detailed Design Engineering	Technical	Conversion of FEED engineering deliverables to Issued for Construction (IFC) engineering packages for all disciplines including: • Process • Mechanical • Civil / Structural • Platework • Piping • Electrical • Instrumentation and Control • Architectural • HVAC • Fire Protection
2.2.1	30% model review	Go/No Go	Go/No-Go gating item for advancement of engineering design with client (Piedmont) approvals. Major gating items at this stage are overall layout, process design, P&I design, design criteria, civil design.
2.2.2	60% model review	Go/No Go	Go/No-Go gating item for advancement of engineering design with client approvals. Major gating items at this stage are detailed layout, controls philosophy, controls narrative, major piping.
2.2.3	90% model review	Go/No Go	Go/No-Go gating item for issuance of IFC design
2.2.4	HAZOP	Technical	Third-party facilitated process upon completion of P&I Diagrams. Upon completion of HAZOP design must follow Management of Change processes
2.2.5	Management of Change	Technical	Formalized processes to control changes in engineering design following completion of HAZOP.
2.3	Long Lead Procurement	Technical	Procurement activities will be undertaken in accordance with Kiewit Primero 'Commercial Procurement Execution Plan' 105032-PM-PLN-003. Long lead items will include mechanical and electrical equipment which are on the critical path or for which lead times are greater than 52 weeks
2.4	Remaining Procurement	Technical	Procurement activities will be undertaken in accordance with Kiewit Primero ' Commercial Procurement Execution Plan' 105032-PM-PLN-003. All other procurement items including non-long lead mechanical and electrical equipment, fabrication, and bulk materials will be procured according to completion of engineering packages and project schedule requirements.
2.5	Expediting	Technical	Kiewit Primero as EPC contractor will be responsible for Expediting and Materials Management under the Procurement Execution Plan.

	Milestone	Type	Description
2.6	Quality Control	Technical	Piedmont will employ 3rd party contractors to perform QA/QC over the EPC contractors performance of work.

Budget Period 3: Construction

Task 3.1 Site mobilization
Task 3.2 Site early works
Task 3.3 Construction
Task 3.4 Mechanical Completion

Budget Period 3 Go/No-Go Decision Point: The periodic, topical and final reports to confirm the tasks set forth above will be submitted as required by DOE. To ensure the successful completion of the Budget Period 1 set forth above, the proposed technical milestone which is Specific, Measurable, Achievable, Relevant, and Timely ("SMART"), and demonstrates a technical achievement, for **Budget Period 3**, is as follows:

	Milestone	Type	Description
3.1	Site Mobilization	Technical	Site mobilization includes establishment, perimeter fencing, site laydown for materials management, site office construction, temporary power, and other pre-work activities.
3.2	Site Early Works	Technical	Site early works include site civil construction, installation of drainage and stormwater features, and sub-foundations.
3.2	Construction	Go/No Go	Kiewit Primero will manage and perform construction activities in accordance with 'Construction Execution Plan' 105032-PM-PLN-002. Construction includes all foundations, equipment installation, tank assembly, structural erection, piping installation, electrical, instrumentation & control, quality control and field verification up to the point of Mechanical Completion.
3.4	Mechanical completion	Go/No Go	At Mechanical Completion functional control of the LHP-2 Site is turned over to the Commissioning Manager.

Budget Period 4: Commissioning and Ramp Up

Task 4.1 Commissioning
Task 4.2 First Crystal
Task 4.3 Performance Testing
Task 4.4 Ramp up to name plate capacity

Budget Period 4 Go/No-Go Decision Point: The periodic, topical and final reports to confirm the tasks set forth above will be submitted as required by DOE. To ensure the successful completion of the Budget Period 1 set forth above, the proposed technical milestone which is Specific,

Measurable, Achievable, Relevant, and Timely ("SMART"), and demonstrates a technical achievement, for **Budget Period 4**, is as follows:

	Milestone	Type	Description
4.1	Commissioning	Go/No Go	Commissioning of the LHP-2 Plant will be completed by plant area. Individual process circuits will be commissioned according to the following general guidelines: • C0 – Verification of plant and equipment • C1 – Dry commissioning • C2 – No load (wet) commissioning • C3 – Load commissioning • C4 – Area handover
4.2	First Crystal	Go/No Go	First crystal is defined as the first Commercial Quality product produced by the LHP-2 Plant.
4.3	Performance Testing	Go/No Go	Performance testing will be the contractual milestone for the EPC contractor to demonstrate that all contractual requirements have been met. Performance testing will be completed over a period of 14-30 days and will measure, at a minimum: • Mechanical availability guarantees • Process throughput guarantees • Lithium recovery guarantees • Product quality guarantees At the conclusion of Performance Testing the facility is turned over to Operations.
4.4	Ramp up to name plate capacity	Go/No Go	Ramp up is a process that occurs over a period of 12-18 months to bring the operation to: • Full production rate of 30,000 t/y • Product quality for all finished product

Budget Period 5: Production

Task 5.1 Full handover to operations
Task 5.2 Contractor demobilization
Task 5.3 Ongoing operations

Budget Period 5 Go/No-Go Decision Point: The periodic, topical and final reports to confirm the tasks set forth above will be submitted as required by DOE. To ensure the successful completion of the Budget Period 1 set forth above, the proposed technical milestone which is Specific, Measurable, Achievable, Relevant, and Timely ("SMART"), and demonstrates a technical achievement, for **Budget Period 5**, is as follows:

	Milestone	Type	Description
5.1	Full handover to operations	Technical	At the handover to operations point the EPC contract is concluded and the warranty period commences.
5.2	Contractor demobilization	Technical	The EPC contractor removes all personnel and equipment from site during this period.

5.3	Ongoing operations	Technical	Operations manages ongoing production, regular maintenance and sustaining capital maintenance activities.

D. DELIVERABLES

In addition to the reports specified in the "Federal Assistance Reporting Checklist", the Recipient will provide the following to the DOE Project Officer (identified in Block 15 of the Assistance Agreement as the Program Manager):

- Summary of accomplishments and project work report will be prepared for inclusion in the Vehicle Technologies Office annual programmatic progress report. Report will be due by October 31 of each year.
- [*Insert additional deliverables required under the funding opportunity announcement]*
- [*Insert additional deliverables proposed by the applicant]*

E. BRIEFINGS AND TECHNICAL PRESENTATIONS

- A technical presentation at the Vehicle Technologies Annual Merit Review Meeting held in Washington, DC.
- Detailed project status update briefings at Washington, DC or via communication / conferencing media approximately twice per year. Briefings will explain the plans, progress, and results of the technical effort.
- Technical paper(s) and presentations as appropriate at technical society meetings, or at technical exchange meetings.

Applicant Name: Piedmont Lithium Inc.
Project Director/Principal Investigator(s): Patrick H. Brindle – Chief Operating Officer
Project Title: LHP-2 Project

Project Objectives: The objective is to develop a U.S.-based Project to be one of the world's largest and lowest-cost producers of battery quality lithium hydroxide with a sustainability footprint that is superior to incumbent producers. The Project will be sited in an ideal location to supply the rapidly growing electric vehicle supply chain in the United States. At full production, the LHP-2 Project will contribute 30,000 metric tons per year of battery quality lithium hydroxide to the domestic battery and EV market.

Project Description: The Project will manufacture LiOH sourced from hard rock lithium ore by using a novel process that is expected to result in lower overall operating costs, fewer emissions, reduced carbon intensity, without hazardous byproducts. Metso:Outotec's technology will be leveraged to complete this process, which includes pressure leaching, conversion, and ion exchange, crystallization and packaging processing stages.

Located in McMinn County, Tennessee, the proposed site is Tennessee-certified and within an Opportunity Zone. The site has direct access to high voltage power, natural gas, and water and wastewater services. The Project is also logistically advantageous with adjacent rail service by CSX and proximity to U.S. Routes 11 and 411 as well as Interstate I-75. Additionally, the site is approximately 12 miles from the Hiawasee River, allowing for barge transport of SC6 to the Project and potential modularization of construction.

Major Participants: Piedmont Lithium Inc. will lead the project and has awarded Front-End Engineering Design ("FEED") to a joint venture featuring Kiewit and Primero Group ("Kiewit-Primero"). Primero is a leading engineering firm specialized in lithium processing, and Kiewit is among the largest Engineer, Procure and Construct ("EPC") contractors in the United States.

Project Timeline: Kiewit-Primero will complete a feasibility study for the Project by Q4 2022. The site is Tennessee certified, and Piedmont Lithium expects to be fully permitted for the Project by the end of 2022. FEED completion is expected by the end of Q1 2023. Piedmont plans to enter into an EPC contract with Kiewit-Primero on a negotiated basis, which would put the Company in a position to proceed with a Final Investment Decision ("FID") in Q1 2023. The Project is expected to begin construction in the first half of 2023, subject to capital raising and permitting timelines. The Project will then commence commissioning, ramping up incrementally through 2H 2025. The first commercial lithium hydroxide product is expected by the end of 2025 with full capacity in both throughput and battery-quality lithium achieved in 2026.

Project Title: DOE Lithium Hydroxide Plant NO. 2 Project ("LHP-2 Project")

Technical Volume
Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing
Funding Opportunity Announcement (FOA) Number: DE-FOA-0002678
FOA Type: Initial
CFDA: 81.086

FOA Area of Interest 1: Commercial Scale Production Plants for Domestic Separation of Critical Cathode Battery Materials

Proposer:

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Belmont, NC 28012

Names of Team Organizations:
Piedmont Lithium Inc.

Performance Period: 60 Months

Confidentiality Statement: *Pages 2-50 of this document may contain trade secrets, confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the government. The government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.*

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1. Project Overview

1.1. Background

Lithium hydroxide ("LiOH") is the preferred feedstock for high-nickel cathodes used in electric vehicle ("EV") batteries today and in the future. Piedmont Lithium Inc. ("Piedmont" or the "Applicant"), is a Delaware corporation listed on Nasdaq which trades under the symbol "PLL." The Applicant will build, own, and operate an advanced manufacturing plant for up to 30,000 metric tonnes per year ("tpy") of battery quality LiOH. The U.S.-based manufacturing plant will produce lithium hydroxide from spodumene concentrate ("SC6") sourced from projects in Ghana and Canada where the Applicant holds equity interest and material offtake rights, or other market sources. The manufacturing plant utilizes an innovative third party LiOH processing technology that has superior operating cost and sustainability profiles relative to current producers based in Australia, China, and South America ("LHP-2 Project" or the "Project"). The Project is part of a broader company strategy to onshore lithium processing and provide U.S. and North American supplies of LiOH.

Piedmont has received 18 Letters of Commitment submitted with this application across the battery supply chain (both upstream and downstream) as well as from Ames National Laboratory. This robust support for the Project highlights the urgent market demand for domestic lithium hydroxide production. Piedmont is uniquely positioned to meet this need on an accelerated timeline, which would be further boosted through receipt of grant funds.

About Piedmont Lithium Inc. Piedmont Lithium Inc., the Applicant, is a Delaware corporation listed on Nasdaq and trades under the symbol "PLL." The Applicant will build, own and operate a U.S.-based advanced manufacturing plant for up to 30,000 tpy of battery quality LiOH with SC6 sourced from the Company's operations in Ghana, Quebec, or from other market sources.

The Applicant's headquarters are located in Belmont, North Carolina. The Applicant was founded in 2016 with the purpose of on-shoring domestically sourced lithium. The Applicant has scaled up to 30 employees at the time of writing, all U.S. citizens with local expertise in the domestic and international lithium industries. Piedmont's employees are mostly comprised of engineers and geologists with extensive experience developing projects in the U.S. and internationally.

Piedmont's Goals. Piedmont's goals, which are aligned with its values, include remaining committed to the health and safety of our employees and the community; creating the most sustainable and technically advanced lithium hydroxide business in the world; benefitting the local economy by creating jobs and contributing to the prosperity of the community, and leading environmental stewardship in the communities where we operate by implementing sustainable practices to ensure clean water, air, and land.

A Focus on ESG in Response to Market Demand. The Applicant boasts a strong environmental, social, and governance focus. Piedmont possesses a strong balance sheet to fund Piedmont's expected growth of each of its strategic assets, including the Applicant's Project. Piedmont's

strategic vision is to build America's leading LiOH business. LiOH demand is expected to grow more than 30% per year through 2030. LiOH is required for high-nickel cathodes needed to produce longer-range EVs. Currently, China produces approximately 83% of the world's LiOH, but western original equipment manufacturers ("OEMs") will demand cleaner, sustainably sourced supplies.

Experienced Team and Leadership. Piedmont possesses an experienced team and leadership to successfully execute the Project. The Project has an operational team with large project, mining and minerals processing, chemical industry, and lithium manufacturing experience. The Project's senior staff functions are filled with highly experienced industry leaders. Senior leadership of Piedmont is focused on driving shareholder value in a responsible way.

Domestic Project; Strategic International Assets. Piedmont owns strategic assets for sourcing lithium hydroxide to power the EV transition in three locations, including the Carolina Lithium Project in North Carolina which would be the nation's only integrated spodumene-to-hydroxide manufacturing site. In addition to the Carolina Lithium Project, the Piedmont has approximately 35% interest in Canada's largest lithium project in Quebec, and an earn-in right to acquire a 50% interest in Africa's best-located lithium business in Ghana.

Piedmont’s strategy is to be America's number one producer of LiOH, with production capability expanding in four phases. The Project is phase three and is expected to produce up to 30,000 tpy of LiOH and will use internationally sourced feedstock from the Company’s projects in Ghana and Quebec, and from other market sources. **Figure 1** shows an overview of Piedmont’s asset base while **Figure 2** provides a summary timeline of how Piedmont has prioritized the Project within its phased approach for overall LiOH production. SC6 will be the feedstock for the Project and is the preferred LiOH feedstock when considering cost, sustainability, and scalability. Alternatives, such as brine sources of lithium, are likely to remain focused on lithium carbonate markets, and it remains unclear if other novel feedstocks can support battery quality LiOH production. This makes Piedmont's SC6 clean manufacturing process an industry leader in battery quality LiOH.

The Project will be supported by SC6 produced from the Ewoyaa Project in Ghana shown in **Figure 3** as well as the Quebec-based North American Lithium Project shown in **Figure 4**. These operations are outside of the scope of this Application. The Company will develop the SC6 operations in Ghana and Quebec first to demonstrate the SC6 quality and commercial performance of these operations.

Figure 1. Piedmont's project portfolio includes lithium assets in the United States, Canada, and Ghana and two proposed LiOH plants in the United States

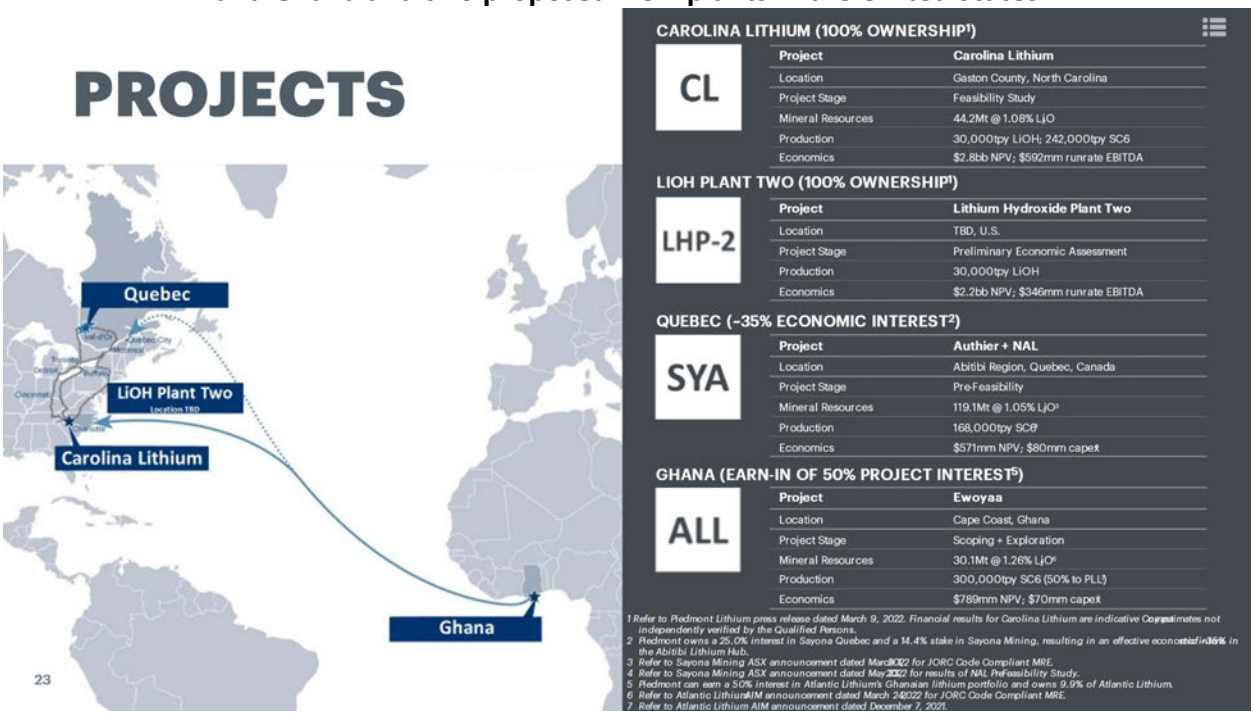


Figure 2. Piedmont capital project development timeline. LHP-2 will be supported by SC6 produced from Ewoyaa and the Abitibi Hub

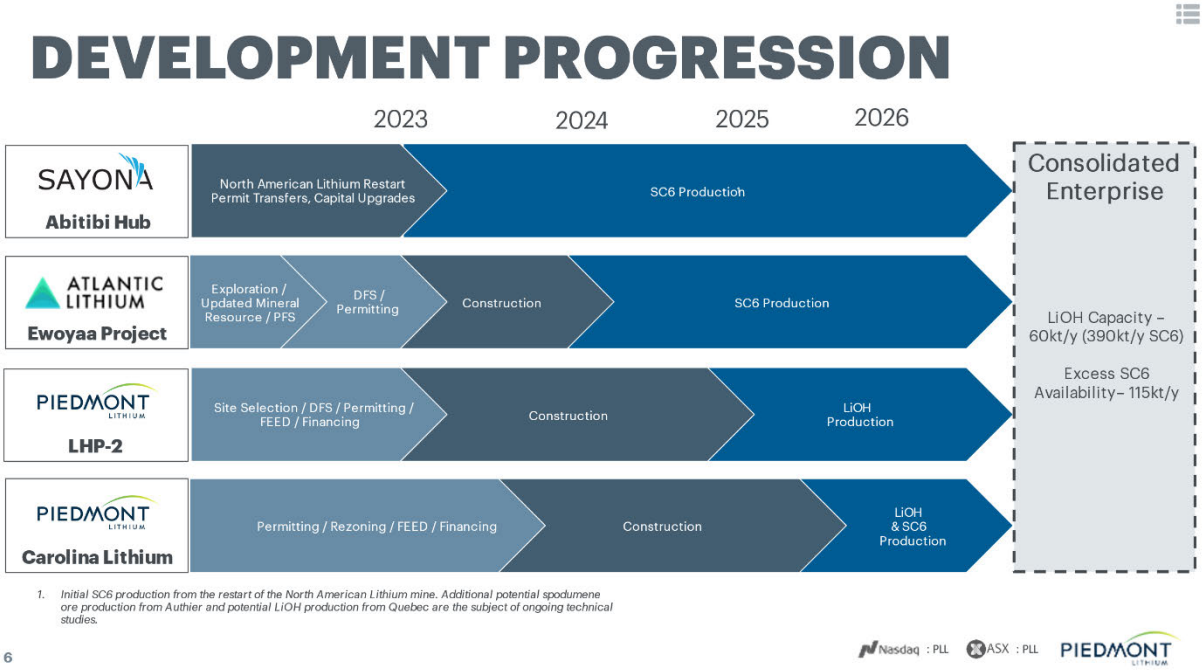


Figure 3. Summary of the Ewoyaa Project with aerial image of Takoradi Port

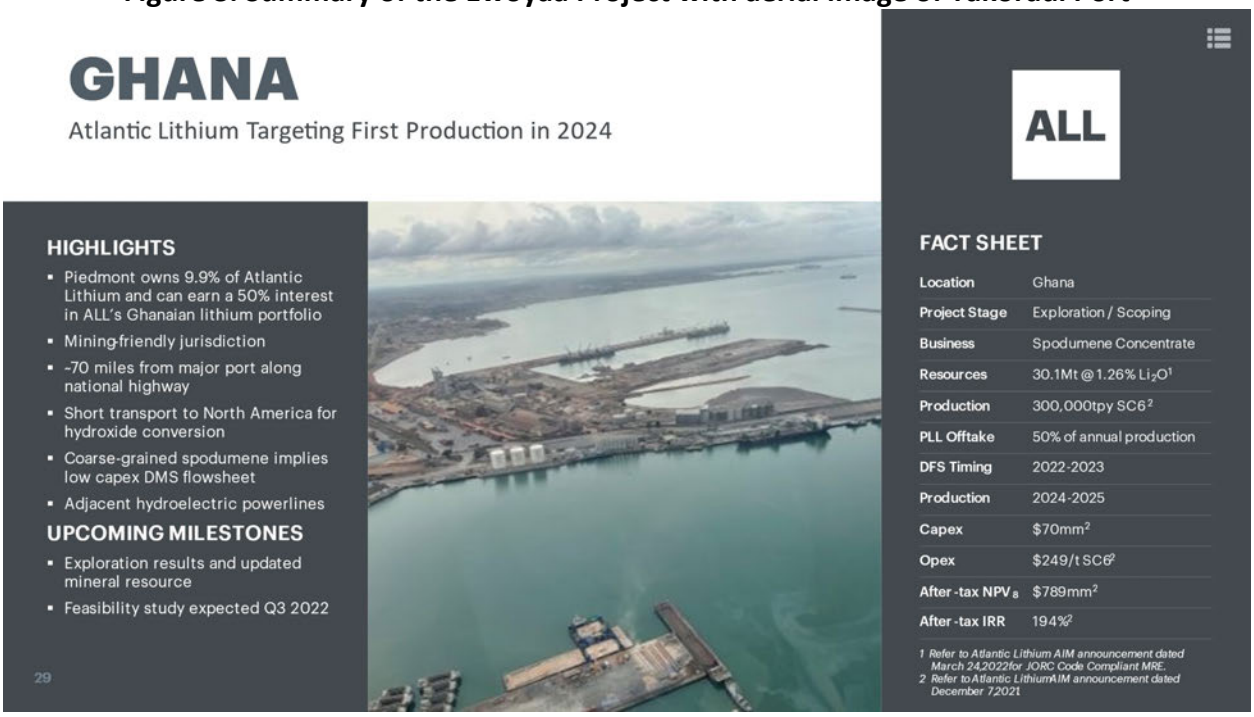
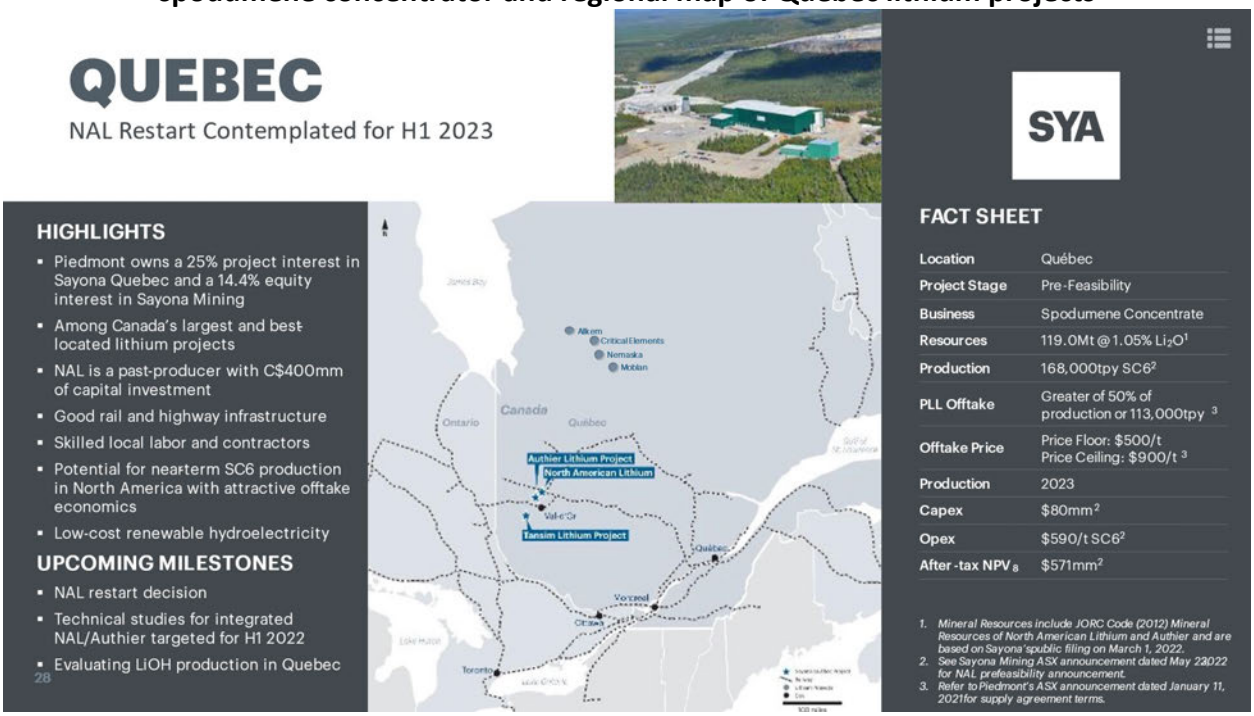


Figure 4. Summary of the North American Lithium restart with aerial photo of existing spodumene concentrator and regional map of Quebec lithium projects



Project Employment. Employment at the Project site is estimated to create approximately 100 permanent operations jobs along with 40 corporate personnel. The Project is also expected to create approximately 500 additional construction jobs throughout the life of construction. The

Applicant expects the Project to provide additional economic benefits to the local region by attracting other businesses and increasing revenue to current local businesses.

Project Technology. The Project will be one of the world's largest and lowest-cost producers of lithium hydroxide, with a sustainability footprint that is superior to incumbent producers, all in an ideal location to supply the rapidly growing EV supply chain in the United States. The Project will manufacture LiOH sourced from hard rock lithium ore by using a novel process which is expected to result in lower overall operating costs, fewer emissions, reduced carbon intensity, and no hazardous byproducts. Piedmont will use Metso:Outotec's proprietary technology in the Project which includes pressure leaching, conversion and ion exchange process stages.

Figure 5. A Metso:Outotec pressure leach vessel

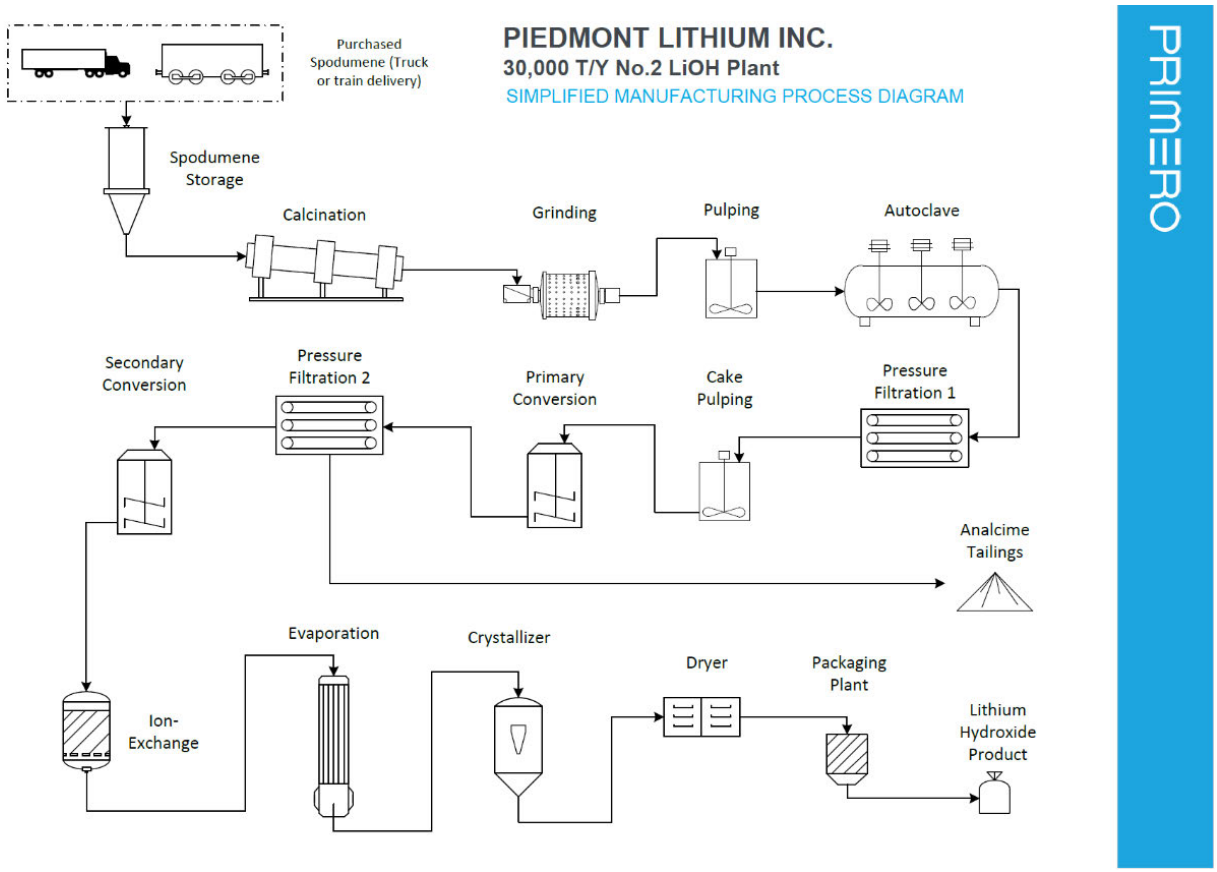
The Project will advance state-of-the-art LiOH manufacturing by deploying an innovative technology pioneered by Metso:Outotec. Metso:Outotec's proprietary technology offers a novel process concept for SC6, which involves direct alkaline leach for lithium extraction and solubilization, followed by crystallization of the lithium salt product. The technology utilizes naturally occurring, American-sourced soda ash as the principal reagent. The leach process is environmentally sustainable due to its acid and sulfate free processes, without undesired crystallized salts or byproducts, producing inert & neutral mineral residue for re-use or disposal.

The Project would be the first in the United States to utilize the pressure leach technology for LiOH manufacturing at a commercial scale. The Metso:Outotec autoclave, shown in **Figure 5**, is the centerpiece of this advanced process. **Figure 6** is a representative diagram of the pressure leach, impurity removal, and crystallization processes.

(b) (4)

Project Scope. The scope of the Project encompasses spodumene concentrate storage, LiOH processing and manufacturing, shipping and logistics. The SC6 projects which support the LHP-2 Project are excluded from the application scope and are not shown in the figure below. **Figure 7** describes the overall LHP-2 Project scope of work.

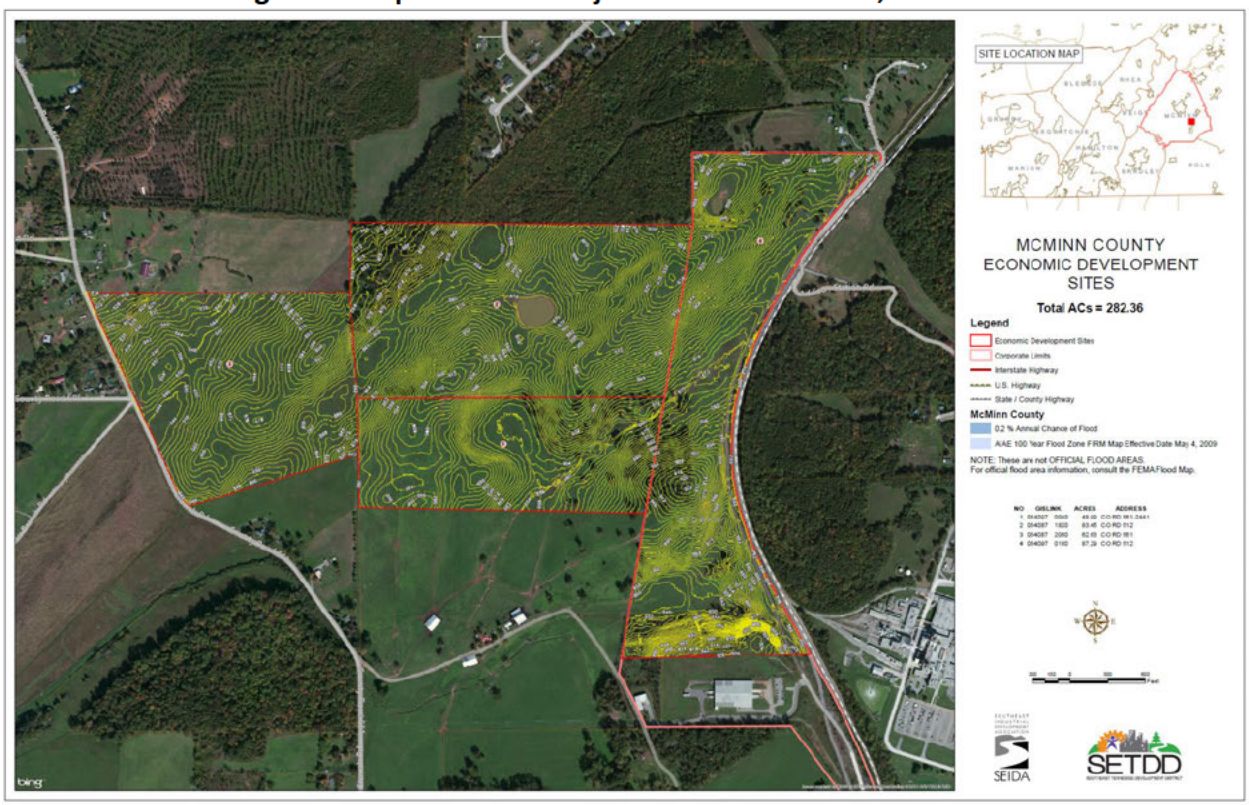
Figure 7. LHP-2 Project Lithium Hydroxide Manufacturing Process Flow Diagram



Project Site. The proposed project location is McMinn County, Tennessee. The proposed site is Tennessee certified, located within an Opportunity Zone, has direct access to high voltage power, natural gas, water, and wastewater services. Additionally, the project is logistically advantaged with adjacent rail service provided by CSX, in close proximity to U.S. routes 11 and 411, and near Interstate I-75. The site is approximately 12 miles from the Hiawasee River allowing barge transport of SC6 to the Project and potential modularization of construction.

Figure 8 shows the location of the LHP-2 Project at the preferred site location near Etowah in McMinn County, TN.

Figure 8. Proposed LHP-2 Project Location in Etowah, Tennessee



Robust Project Economics. The results from the recently completed LHP-2 Preliminary Economic Assessment ("PEA") outlines the expected output of the Project in **Figure 9**. The study contemplates a 30-year Project life. The manufacturing plant is assumed to achieve full capacity within 12 months of commencement. The PEA has been modeled as a merchant operation with the Company purchasing SC6 at market rates for the life of operations from the Company's operations in Ghana and Quebec, or from market sources.

Figure 9. Estimated LHP-2 Project Production and Financial Outcomes

Project Summary Outcomes	Unit	Estimated Value
Annual Production		
Operation life	years	30
Steady state annual lithium hydroxide production	t/y	30,000
Average annual spodumene concentrate (SC6) purchases	t/y	196,000
Operating and Capital Costs		
Steady-state LiOH production all in sustaining costs ("AISC")	$/t	$10,630
Total initial capital cost	$mm	$572
Sustaining and deferred capital	$mm	$163
Working capital	$mm	$128
Financial Performance		

Project Summary Outcomes	Unit	Estimated Value
After tax Net Present Value ("NPV") @ 8% discount rate	$mm	[redacted]
After tax Internal Rate of Return ("IRR")	%	[redacted]
Average annual steady state EBITDA	$mm/y	[redacted]
Average annual steady state after-tax cash flow	$mm/y	[redacted]

(b) (4) [redacted]

1.2. Project Goal

The Project will construct a new commercial-scale facility to create battery-grade-cathode-precursor (lithium hydroxide) manufacturing capacity within the United States. The Project will utilize sustainably extracted feedstocks that will ultimately be used in electric vehicles. The use of Metso:Outotec's third party technology for LiOH manufacturing will reduce carbon emissions, reagent usage, and eliminate certain solid waste streams. Additionally, relative to competitors, the Project will result in lower water usage and a smaller land footprint.

The Project will advance state-of-the-art LiOH manufacturing by deploying an innovative technology pioneered by Metso:Outotec. All of the unit operations within the LHP-2 project with the exception of the autoclave leach process are used in LiOH manufacturing plants today. Pressure leach technology is used in other minerals and metals conversion processes currently, but it is a new application in lithium manufacturing at commercial scale.

[redacted]
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Project is intended to accelerate availability of domestically sourced LiOH in the United States.

1.3. DOE Impact

LiOH is the preferred feedstock for high-nickel cathodes used in EV batteries today and will be in the future. The Applicant will build, own and operate a U.S.-based advanced manufacturing plant for up to 30,000 tpy of battery quality LiOH using SC6 sourced from the Company's projects in Ghana, Quebec, or from other market sources.

[redacted]
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1.4. Equity Plan: Quality Jobs and Community Benefits

Piedmont Lithium's core values exhibited by our employees are care for our people, humility in the way we operate, creativity in the way we innovate, respect for the communities in which we operate, and integrity in how we conduct business. Piedmont has provided an Equity Plan with this application as a separate document that outlines how the Project will ultimately achieve the administration's equity and Justice40 initiative goals for this funding opportunity. The Equity Plan outlines how the Project will support (1) Quality Jobs including (a) efforts to attract, train, and retain a skilled workforce, and (b) workforce opportunities in communities that have lost jobs due to the displacements of fossil energy jobs; and provide (2) Community Benefits including (a) Diversity, Equity, Inclusion, and Accessibility; and (b) the Justice40 Initiative.

Specifically, the Project will (1) support the BIL objectives to invest in America's workforce by including specific elements to accelerate job growth and job quality, including approaches to give workers a free and fair choice to join or form a union; and (2) advance DOE's equity, environmental, and energy justice priorities, including DOE's commitment to the Justice40 Initiative. Key milestones achieving these priorities may be found in the Equity Plan and Statement of Project Objectives ("SOPO").

2. Technical Description, Innovation, and Impact

2.1. Relevance and Outcomes

The Project will be one of the world's largest and lowest-cost producers of lithium hydroxide, with a sustainability footprint that is superior to incumbent producers, all in an ideal location to supply the rapidly growing EV supply chain in the United States. The scope of the Project encompasses spodumene concentrate storage, LiOH processing and manufacturing, shipping and logistics.

The Project will manufacture 30,000 tpy of LiOH sourced from hard rock lithium ore by using a novel process which is expected to result in lower overall operating costs, fewer emissions, reduced carbon intensity, and no hazardous byproducts. Piedmont will use Metso:Outotec's technology to manufacture LiOH including pressure leaching, conversion, and ion exchange process stages. The Project will be the first-of-its-kind in the United States and accelerate domestic LiOH production.

Project Intellectual Property. Piedmont has all intellectual property rights necessary to use and commercialize the technology employed in the Project. The Project will manufacture LiOH sourced from hard rock lithium ore using a novel, and more sustainable, process. The Project will deploy Metso:Outotec's proprietary technology and the Applicant has obtained all required permission and license to use this technology. Metso:Outotec's expertise provides innovative and proven calcination, leaching, purification and lithium recovery technologies covering the whole range of production, from raw materials to battery grade LiOH.

[redacted]

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2.2. Feasibility

Project Technology. The technology provides innovative and proven calcination, leaching, purification, and lithium recovery technologies covering the whole range of production, from SC6 to battery grade LiOH. **Figure 10** below outlines the Metso:Outotec LiOH manufacturing process.

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Project Engineering Status. Project engineering is at a basic engineering level today. Piedmont has awarded Front-End Engineering Design ("FEED") to a joint venture featuring Kiewit and Primero Group ("Kiewit-Primero"). Primero is a leading engineering firm specialized in lithium processing, and Kiewit is among the largest EPC contractors in the United States. Kiewit-Primero will complete a feasibility study for the Project by Q4 2022. As the Etowah Site is already Tennessee certified, the Company expects to be fully permitted for the LHP-2 Project by the end of 2022. FEED completion is expected by the end of Q1 2023. Piedmont plans to enter into an Engineer, Procure and Construct ("EPC") contract with Kiewit-Primero on a negotiated basis putting the Company in a position to proceed with a Final Investment Decision ("FID") in Q1 2023.

The Project is expected to begin construction in 1H 2023, subject to capital raising and permitting timelines. The Project will then commence commissioning, ramping up incrementally through mid-2025. The first commercial lithium hydroxide product is expected in 2H 2025 with full capacity in both throughput and battery-quality achieved in 2026.

The initial basis of design for LHP-2 will be the testwork program completed for the Company's Carolina Lithium Project, with confirmatory bench scale tests to be undertaken on a blend of Ghanaian and Canadian SC6 samples. A second pilot testwork program to confirm solution chemistries, recycle requirements, and impurity removal performance will be undertaken as part of FEED and detailed design engineering with expected completion in early 2023. During the study phases of the Project, Piedmont has relied on a number of professional, independent third parties in the development of engineering designs, permitting, metallurgical testwork, and technology development. These consultants are listed in **Figure 11** below.

Figure 11. Study Phase Project Consultants

Consultant	Study Phase Scope of Work
Primero Group Limited	Preliminary Economic Assessment Study
Metso:Outotec	LiOH Technology Package Basic Engineering; Pilot Testwork
GEA	Crystallization package
SGS Lakefield	Spodumene concentration metallurgical testwork
HDR Engineering, Inc.	Permitting, environment, and social studies
Benchmark Mineral Intelligence	Lithium products marketability

Beginning with FEED and carrying through to the execution stage of the Project, Piedmont Lithium will execute the project with the list of contractors and key suppliers shown in **Figure 12**.

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Piedmont expects to construct the LiOH conversion plant on an EPC basis. Piedmont has awarded FEED to a joint-venture of Kiewit-Primero. Upon completion of Project commissioning Piedmont will take over operations and maintenance of the LiOH manufacturing plant.

Technology Demonstration.

Technical Results; Quality Assurance. In May 2021, Piedmont Lithium contracted with Metso:Outotec to perform a pilot testwork program involving Metso:Outotec's proprietary pressure leach technology. The Metso:Outotec process provides a more sustainable method for producing lithium hydroxide monohydrate product, with reductions in emissions and byproduct generation. The goal of this test program was to confirm the total lithium conversion from SC6 feedstock to LiOH when operating at the expected conditions of the commercial plant.

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Technology Acceptance. The Metso:Outotec lithium conversion technology is not in commercial operation in the United States today. On July 8, 2021 Russia-based Halmek Lithium announced an award of an engineering and equipment supply contract to Metso:Outotec for delivery of a 20,000 tpy LiOH plant in Tula with scheduled first operation date in 2023[1]. There are also additional public announcements related to the use of Metso:Outotec's lithium conversion technology by other well-known companies either supplying or requiring lithium hydroxide for

[1] Due to the war in Ukraine and ongoing sanctions against Russia the status of this project is not known at this time. Piedmont's selection of the Metso:Outotec technology is not contingent on the success of the Halmek Project and we are not affiliated with any activity associated with the Halmek Project.

lithium-ion battery production. Finnish-based Keliber and Canada's Critical Elements have each completed successful pilot programs on their own SC6 sources using the Metso:Outotec conversion technology. According to publicly available reports on Keliber's agreement with Metso:Outotec, "a continuous lithium hydroxide pilot was carried out at the Outotec R&D center. The purity of the product received was extremely high and lithium recovery in the process was better than the one used in the Definitive Feasibility Study in February 2019."[2] The outcomes of Piedmont's own Definitive Feasibility Study mirrored these results.

Piedmont expects the results of the future pilot program as well as the batch scale testwork using Ghanaian and Canadian SC6 samples will achieve similar quality results to prior programs.

LiOH conversion process using pressure leach technology is not a new concept. Metso:Outotec has decades of experience processing lithium with first patents filed in 1980's. Metso:Outotec's Research and Development Center has processed more than 15 concentrates from Europe, Australia, North and South America with the pressure leach technology. The autoclave has demonstrated successful conversion with more than 3,500 hours of operating time when totalizing all testing campaigns Metso:Outotec completed to date with various SC6 feedstocks. Piedmont pilot test with Carolina's ore produced similar results and is within the expected conversion range when comparing with Metso:Outotec's experience with other feedstocks.

While the chemistry of the pressure leach technology is proven in pilot and bench scale tests, all scale-up commercial equipment for each stage of the process have been installed and operated in other metallurgical processes. The rotary kiln is used in various industrial applications such as cement production. Metso:Outotec has designed and installed at least seven autoclaves for various projects globally since 1998.

2.3. Innovation and Impacts

The use of Metso:Outotec's third party technology for LiOH processing will reduce CO_2 emissions and reagent usage. Lastly, relative to competitors, the Project will result in lower water usage and a smaller land footprint. **Figure 16** provides a comparison of Piedmont's sustainability profile compared to international competitors derived from Minviro Reports and Piedmont's own estimates.

[2] *See* Paul Moore, *Keliber books Outotec for basic engineering of Päiväneva lithium concentrator*, International Mining, June 30, 2020, https://im-mining.com/2020/06/30/keliber-books-outotec-basic-engineering-paivaneva-lithium-concentrator/.

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[redacted]

All Lithium Is Not Created Equally: Hydroxide vs. Carbonate. There are two forms of lithium that can be used in electric vehicles and lithium-ion batteries, lithium carbonate and lithium hydroxide. Lithium comes from spodumene ore via hard rock mining, or from metallic brines stored in man-made ponds in the high deserts around the world (primarily South America). Generally speaking, when brine is the source material, water has been pumped into the earth, usually in a very remote location, to create a brine that is captured in storage ponds. Over the course of 18-24 months, in ideal conditions, natural evaporation occurs, and the resulting material is lithium carbonate. Through an additional chemical process, the carbonate can be converted into lithium hydroxide.

The alternative to a brine operation is the hard rock mining of spodumene ore. Once the ore is mined, a concentrate is created where the lithium-infused spodumene is filtered and captured. The concentrate then goes to a nearby chemical processing operation where the hydroxide is produced. The benefits of spodumene ore are numerous. Its strategic domestic abundance (in North Carolina specifically), creates easier access, and lowers overall production costs across the supply chain. It's also not subject to weather as a means of production, which allows for greater certainty of supply and control of production.

LiOH is the preferred lithium salt for high-nickel cathodes. For the North American EV market, high-energy density, high nickel cathode batteries will dominate the market. Of the giga-factories shown in **Figure 37** below nearly all are expected to require LiOH as their primary lithium feedstock.

Production of LiOH from SC6 requires fewer process steps and has at least a $2,000 per ton cost advantage of LiOH production from brine-based lithium sources.

Furthermore, while several alternate sources of lithium have been proposed both domestically and internationally including but not limited to lithium clays, searlesite, hectorite, geothermal brines, and direct lithium extraction, none of these sources have yet to be proven at commercial scale.

3. Workplan and Market Transformation Plan

3.1. Project Objectives

As noted throughout this technical volume, the Applicant will build, own, and operate an advanced manufacturing plant for up to 30,000 tpy of battery quality LiOH. The Project seeks to bring a secure and sustainable domestic supply of LiOH to the United States.

3.2. Technical Scope Summary

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[redacted]

3.3. Performance Periods

The Performance Periods for the Project will include:

- Period 1 – Front End Engineering Design, Site Selection and Permitting
- Period 2 – Design Engineering and Procurement
- Period 3 – Construction
- Period 4 – Commissioning and Ramp-up
- Period 5 – Handover to Operations

3.3.1. Performance Period 1
FEED, Site Selection, and Permitting (months -12-0): [redacted] (b) (4) [redacted]

FEED, site selection, and permitting activities are integral aspects of LHP-2 but will be completed prior to the start of a Final Investment Decision and commencement of the program. FEED will be completed by the team of contractors shown in **Figure 12** above led by Kiewit-Primero. FEED costs are excluded from the budget and will be 100% funded by the Applicant.

The primary objective of the FEED work includes advancing the design of the facility from conceptual design to detailed design, with the intent of arriving at a readiness for EPC execution of the LHP-2 Project. Major FEED activities include:

- Develop project philosophies and design criteria for all disciplines
- Develop major equipment specifications to support an EPC estimate
- Develop engineering deliverables to the level of detail to adequately support the cost estimate and to prepare for project EPC delivery
- Implement Piedmont equipment tagging and numbering system
- Complete a pre-HAZOP and incorporate recommendations in the EPC proposal.
- Provide Level 3 EPC project schedule
- Develop project procurement plan
- Develop construction plan
- Develop preliminary start up and commissioning plan

Major FEED deliverables and outcomes to be achieved during this period are (a) Contractor Selection (b) Site location selection; (c) Metso:Outotec basic design update; and (d) Feasibility Study. Additional FEED items include; (a) Design review (IFR); (b) HAZOP review (Process Safety Review); and (c) P&ID issued for design (IFD). The estimated completion items for this Performance Period include (a) permit applications and (b) early commitment for key long lead equipment items.

3.3.2. Performance Period 2 – Detailed Design and Procurement (months 0-14): [redacted] (b) (4) [redacted]

- Receipt of permits
- EPC contract agreement
- Financial Investment Decision (FID)
- Detailed design

- 30% model review
- 60% model review
- 90% model review
- Long lead procurement
- Remaining procurement

3.3.3. Performance Period 3 – Construction (months 14-27): [redacted] (b) (4)

- Site mobilization
- Site early works
- Construction
- Mechanical completion

3.3.4. Performance Period 4 – Commissioning and Ramp Up (months 16-47): [redacted] (b) (4)

- Commissioning
- First Crystal
- Performance testing

3.3.5 Performance Period 5 – Production (months 47-61): [redacted] (b) (4)

- Ramp up to name plate capacity
- Contractor demobilization

3.4. WBS and Task Description Summary

Piedmont has established a standard Work Breakdown Structure (WBS) for all Company capital projects. Under the Company WBS the LHP-2 Project is assigned Project No. 2202. The standard Level 1 and Level 2 WBS codes applicable to the LHP-2 Project are shown in **Figure 19**.

[redacted] (b) (4)

[redacted]

(b) (4)

Below are listed the key tasks in order to achieve Project milestones. In order to meet the project objectives, Piedmont will perform the following tasks:

[redacted]

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[redacted]

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[redacted]

[redacted]

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[redacted]

(b) (4)

[redacted]

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3.5. Milestone Summary

The Applicant has provided a summary of the milestones necessary to achieve Project success in **Figure 25** below. To reference equity milestones, please reference the Equity Plan and Statement of Project Objectives ("SOPO").

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[redacted]

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[redacted]

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[redacted]

3.6. Go/No-Go Decision Points

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[redacted]

(b) (4)

[redacted]

3.7. End of Project Goal

The Applicant's end of project goal is to build a facility that will have the capacity produce up to 30,000 tpy of battery quality LiOH in an advanced manufacturing plant. LiOH is the preferred feedstock for high-nickel cathodes used in EV batteries today and in the future. The Project is intended to meet the overarching goal of providing a domestic supply of LiOH for use in EV batteries. The Project will then meet U.S. national security and energy goals of ensuring safe, sustainable, and secure domestic supplies of LiOH.

3.8. Project Schedule

The Applicant has prepared a Level 1 Project Schedule as shown in the Gantt chart in **Figure 24** below. The Project Schedule encompasses the entire Project – including tasks, milestones, and Go/No-Go decision points as referenced above.

(b) (4)

[redacted]

3.9. Buy American Requirements for Infrastructure Projects

The Applicant's proposed Project is a private project for a private purpose and as such does not fall within the definition of public infrastructure. The Applicant believes that due to this, the Applicant will not need to provide additional documentation to support compliance with the Buy American requirements for infrastructure projects. Should the U.S. Department of Energy need additional information regarding Buy American requirements the Applicant is ready and able to furnish this information and has provided a waiver request with this application.

3.10. Project Management

3.10.1. Organization and Approach to Managing the Work

Piedmont Lithium expects to construct the LHP-2 Project on an EPC basis. Kiewit-Primero has been awarded a contract for FEED and in parallel with performance of the FEED contract Piedmont will negotiate an EPC contract with Kiewit-Primero to be executed upon FID. The key technology packages from Metso:Outotec and GEA will be managed by the EPC contractor and the EPC contractor will deliver balance of plant engineering and integrate the overall project design and implementation.

Piedmont Lithium will self-operate the LiOH manufacturing plant. **Figure 25** identifies the major contract work packages. Kiewit/Primero will manage the major contract packages as part of the EPC Contract.

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[redacted]

3.10.2 Contractor Plans and Procedures

Using the basic engineering deliverables as the design concepts, Kiewit-Primero will fully develop the design and produce necessary deliverables to complete FEED and prepare the Project for full EPC delivery. During FEED, engineering will be performed in accordance with LHP-2 project-specific requirements, industry recommended practices and Kiewit-Primero standard specifications and procedures. Detailed plan for EPC delivery will be completed during FEED in Performance Period 1. Major EPC management plans are shown in **Figure 26**.

Figure 26. Kiewit Primero EPC Contractor Management Plans

Plan	Plan Description
Project Execution Plan	Overview of the project scope, work processes, specific execution details and overall project requirements
Safety Management Plan	Describes the overall project health and safety requirements following Kiewit's 'Nobody Gets Hurt' principles.
FEED Scope of Work	Contractor's scope of services and scope of facilities for the FEED phase
Technical deliverables	All technical deliverables associated with the project including P&IDs, equipment specifications, building architecture design, electrical loads, etc.
Procurement Management Plan	Establishing the project's policies and guidelines to be used for contract execution and management. This document includes supplier sourcing, contracting plan and supplier management.
Construction Management Plan	Describing the construction strategy, approach, methods and procedures to conduct and optimize construction execution
Start-up and Commissioning Plan	Information regarding commissioning sequence and the process of bringing the plant to its normal operating condition
Project Estimating Plan	Methodology of how the estimate is produced and outlines the procedure and plan to arrive at the level of accuracy sufficient for EPC delivery
List of engineering codes and standards	List of industry recommended practices to be applied to the design of the facility.
Project Coordinating Procedure	Strategies and communication plan to ensure the team functions as a whole to achieve common project goals

3.10.3 Owner Plans and Procedures

Piedmont has retained HDR Engineering as Program Manager and Owner's Engineer for the execution of the LHP-2 Project. HDR and Piedmont will form an Integrated Project Management Team (IPMT) that will oversee the performance of the EPC Contractor. The IPMT will use established plans and procedures to control project outcomes including safety performance, cost and schedule management, document control, asset management, change management, financial controls, risk management, quality assurance, and quality control. **Figure 27** summarizes the major Owner plans and procedures which the Project will follow.

Figure 27. Integrated Project Management Team Plans and Procedures

Plan	Plan Description
Project Controls Requirements	Describing the project schedule, cost budget and reporting requirements. This document also includes how each element will be managed through the life cycle of the project.
Permitting Matrix	Summary of all permits required for the construction and operation of the facility. The log includes permit type, status, requirements, and timing. This document assists the team to navigate through permitting process.
Environmental Health & Safety Requirements	Providing health and safety requirements including safety manuals, daily job hazard analysis, injury and incident reporting
Risk Management Plan	Detailing how risk shall be managed throughout the life cycle of the project. This includes the risk review procedure; risk register and the reviewing frequency
Change Management	Procedure on controlling changes after final approval of design or budget

3.10.4 Cost Controls and Project Financial Management

Project costs will be managed using the Project Cost Breakdown Structure (CBS) which includes the Work Breakdown Structure plus additional cost details. The Project will be implemented using a Target Cost Model with progress measured on an Earned Value Basis. Project costs will be managed using the Company's project software, InEight, and ERP system, Oracle Netsuite. HDR Engineering will assist the Owner in processing contractor claims, validating earned value analysis, verifying invoices, and managing change order.

3.10.5 Change Management

Engineering design changes will be controlled through the Project's Management of Change Process. Field during construction will be controlled through redline drawing changes and approved by the Engineer. Field changes will be incorporated into the as-built Project documentation. Scope changes which have cost or schedule impacts will be managed with contractual Change Notices and follow the EPC Contract's Change Notice Procedure process. All changes will be reviewed and approved by the Owner prior to implementation.

3.10.6 Risk Management

Risk Management is critical to the success of large capital projects. Piedmont and Kiewit-Primero have identified a number of project risks and maintain an active risk register and mitigation strategies. The Risk Register employs a conventional 'likelihood x consequence' risk scoring methodology. The most significant risks to the LHP-2 Project as well as mitigation strategies are identified in **Figure 28**.

[redacted]

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[redacted]

3.10.7 Quality Assurance / Quality Control

Project QA/QC will be managed in accordance with the Project Quality Plan which sets forth the requirements for quality in engineering design, procurement, equipment inspections, field inspections, non-destructive testing requirements, and pre-commissioning tests. Third party specialists will be employed by the Owner where required to ensure that Contractor performance is in accordance with the EPC Contract.

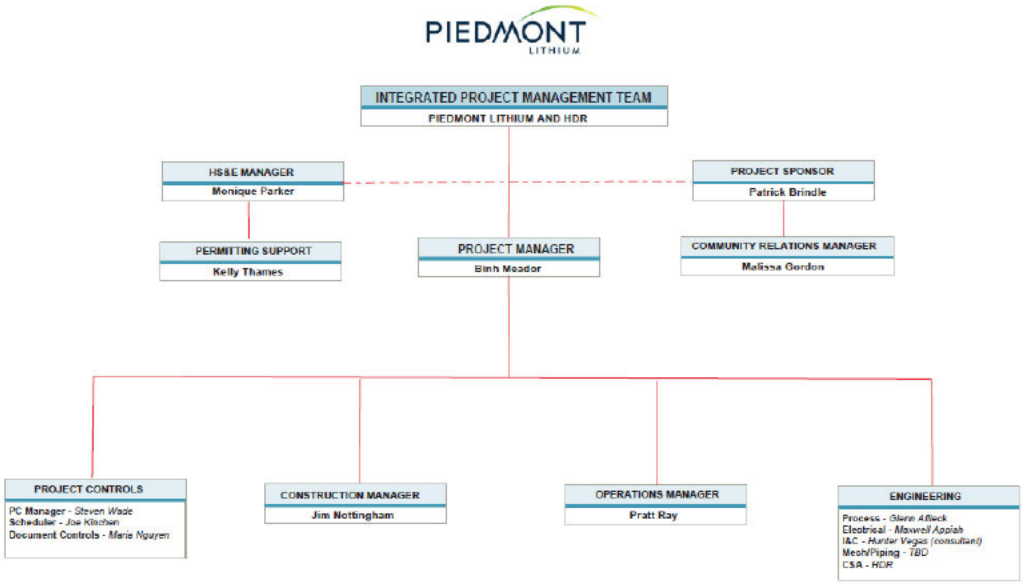
3.10.8 Communications Management

Project Communications will be managed in accordance with the Project Coordinating Procedure noted in **Figure 21** above. InEight will be used for document management, transmittals, requests for information, and documentation of project decisions.

3.10.9 Owner's Team

Piedmont's Owner's team will be responsible for managing the performance of the EPC Contractor. The Owner's team will be comprised of employees from Piedmont and HDR Engineering in an Integrated Project Management Team (IPMT) format. The key members of the IPMT are shown in **Figure 29**.

Figure 29. Integrated Project Management Team and Project Organizational Chart



3.10.10 Operations Workforce Recruitment, Training and Development

Owner's Team Project Hiring Plan. Employment at the LHP-2 Project site is estimated to create approximately 100 permanent operations jobs with an additional 40 corporate personnel supported by the project. The Project is also expected to create approximately 500 additional construction jobs throughout the life of the construction. With this Project, the Applicant expects an economic benefit to the local region by attracting other businesses and increasing revenue to current local businesses. A list of critical hires and estimated timeline for recruitment for the early stages of the Project is provided below in **Figure 30**.

Figure 30. Estimated Timeline for Critical Hires

Expected Hires	Function	Recruitment Timeline	2022	2023
Phase 1				
Health, Safety, Environment Leader	Operations	Complete		
Legal Assistant	Corporate	Complete		
Manager, SEC Reporting & Technical Accounting	Finance	Complete		
Manager, Corporate Accounting	Finance	3-4 months	Q3	
Staff Accountant / Accounts Payable	Finance	Complete		
Manager, Financial Planning & Analysis	Finance	3-4 months	Q3	
Phase 2				
Process Technology Leader - LiOH Plant	Operations	3-4 months	Q3	
Contract Manager	Corporate	1-2 months		Q1
Supply Chain Leader	Operations	2-3 months		Q1
Procurement Manager	Operations	2-3 months		Q2
Project Controls Lead	Engineering	Complete	Q3	
Communications Specialist	Corporate	Complete		
Graphic Design Specialist	Corporate	3-4 months	Q4	
Phase 3				
Plant Manager	Operations	2-3 months		Q1
Construction Manager	Engineering	1-2 months		Q1
Quality (QA/QC) Leader	Operations	2-3 months		Q2
Maintenance & Reliability Leader	Operations	3 months		Q2
Commissioning & Ops Readiness Leader	Operations	3 months		Q3
Procurement Administrative	Operations	3 months		Q3
Logistics / Customer Service	Operations	3 months		Q4
Information Technology Leader	Corporate	3-4 months		Q4

Operations Team Project Hiring Plan. The estimated manpower requirements of the LiOH manufacturing plant within the Project are shown in **Figure 31**.

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[redacted]

3.10.11 Project Qualification Plan

Piedmont will work with customers to qualify the LHP-2 Project upon completion of commissioning and production of first commercial crystal. The Applicant has received letters of support from key industry players including GM, LG Chem, Northvolt, Redwood, BASF, and Umicore. While none of these letters represent a commitment to purchase LiOH from the LHP-2 Project, they indicate a willingness from the market to work to qualify Piedmont LiOH product and ensure availability of a domestic LiOH supply chain.

3.11. Market Transformation Plan

3.11.1. Target Market

Piedmont is focused on establishing strategic partnerships with customers for battery grade lithium hydroxide with an emphasis on a customer base which is focused on EV demand growth in North America and Europe. Piedmont will concentrate this effort on these growing EV supply chains, particularly in light of the growing commitments of battery manufacturing by groups such as Ford, General Motors, LGES, Northvolt, SK Innovation, Volkswagen as well as chemical manufacturers such as LG Chem, POSCO and others. Advanced discussions with prospective customers are ongoing. The Applicant expects that roughly 80% of the LiOH produced will be sold through long term contract agreements.

Piedmont is confident about the ability of the Project to achieve significant customer agreements based on its market analysis above. Agreements and draft agreements on these arrangements are highly confidential and will be made available in due course.

Piedmont has made strategic decisions to delay significant offtake agreements at this stage of the Project and does not base the success of the Project off of one singular offtake agreement. This strategy is supported by the projected increase in demand for both LiOH and EVs. This trend is encouraging to allow Piedmont to secure customer agreements at the optimal time in the market. As evidence of this significant customer and supplier interest, the Applicant has included numerous letters of support with this application.

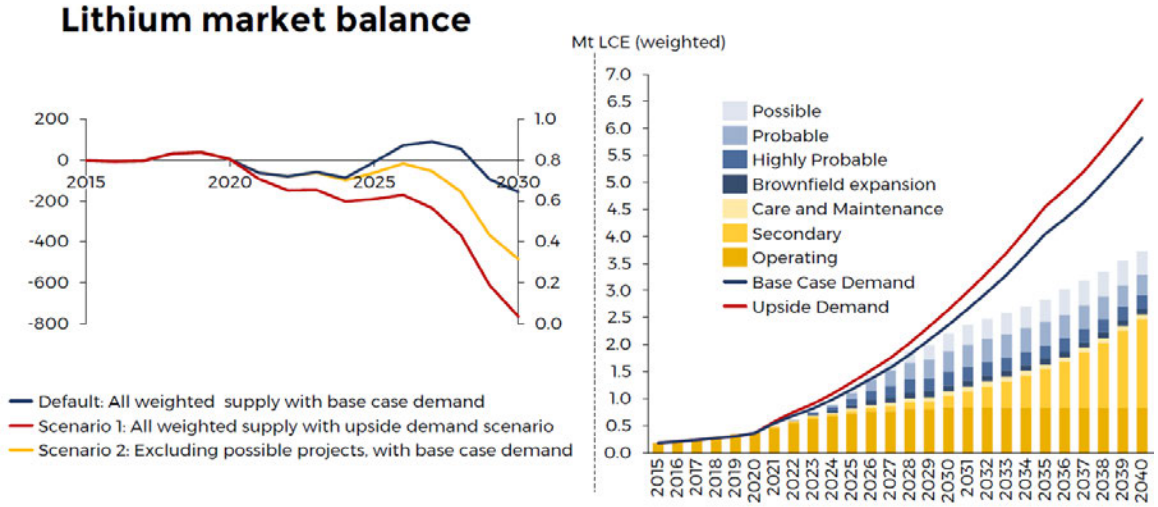
Market Summary. As the world searches for cleaner sources of energy to help reduce carbon emissions, an opportunity exists for countries and companies that can answer the call, especially as it relates to transportation. As car companies like GM, Ford, Tesla and others are proving, the demand for electric vehicles ("EVs") of all kinds is growing rapidly in the U.S. and around the globe. Some projections indicate that by 2030 there will be approximately 245 million electric vehicles on the road around the world, accounting for about 30% of new car sales, and as much as 60% by 2040. But none of this growth will be possible without growth in the production of lithium-ion batteries, and that will require growth in the availability of lithium, and in particular, lithium hydroxide. The adage, “If it can’t be grown it must be mined” serves as a reminder that electric vehicles, energy storage, and a clean economy begin with metals, and in this particular case, they begin with lithium.

Leading researchers have forecast a remarkable increase in the demand for battery-grade LiOH. LiOH is used in the production of high nickel cathode material for lithium-ion electric vehicle batteries and is more suitable as it provides the best lithiation performance in the cathode manufacturing process. Currently, China controls 83% of the processed lithium needed to produce lithium-ion batteries. They also have a large position in actual battery assembly. Beyond their production dominance, they are heavily invested in sourcing the raw materials required to produce battery-grade lithium. This comes from partnerships with countries and companies in Chile, Argentina, Australia, and several others.

China's position in the lithium supply chain, coupled with their investment in, and with other countries, creates an unnecessary headwind for the U.S. lithium-ion battery and electric vehicles market. It doesn't have to be this way. Today the U.S. contributes less than 2% of the world supply of lithium, even though the U.S. holds 17% of global lithium reserves. The creation of a uniquely American electric vehicle supply chain will benefit U.S. workers, the U.S. economy and U.S. producers of lithium-ion batteries, components, and electric vehicles. Reinventing the current supply chain will create more favorable economics related to accessibility, affordability, and speed-to-market for everyone involved.

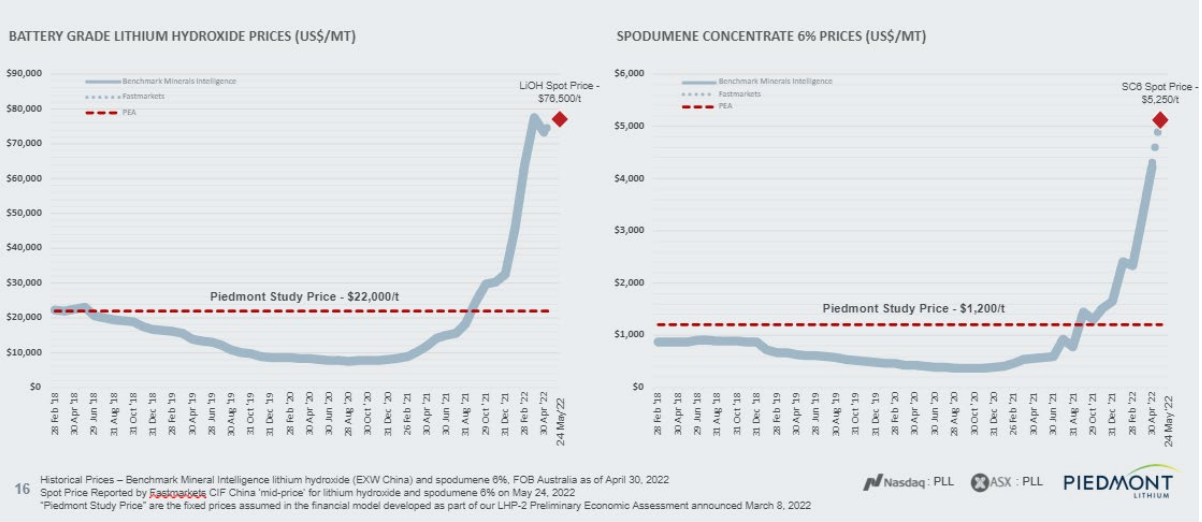
Benchmark Mineral Intelligence ("Benchmark") reports that total battery demand will grow to 507 GWh in 2022 translating to 478kt of lithium carbonate equivalent ("LCE") demand in 2022, a growth of 41% over 2021 demand. Benchmark forecasts total demand in 2022 to be 620kt on an LCE basis. Benchmark further expects the market to remain in a structural deficit for the foreseeable future as demand gets a head-start on supply. In the near impossible scenario that all expected lithium projects come online on time as planned and without any issues, the first surplus will not occur until 2027. Benchmark believes that in this extreme case, a surplus could only be expected to last a few years before demand forces the market into a large deficit without further new projects yet undiscovered or developed. **Figure 32** demonstrates the forecasted growth in LiOH supply demand.

Figure 32. LiOH supply demand forecast according to Benchmark Minerals (Q1 2022)



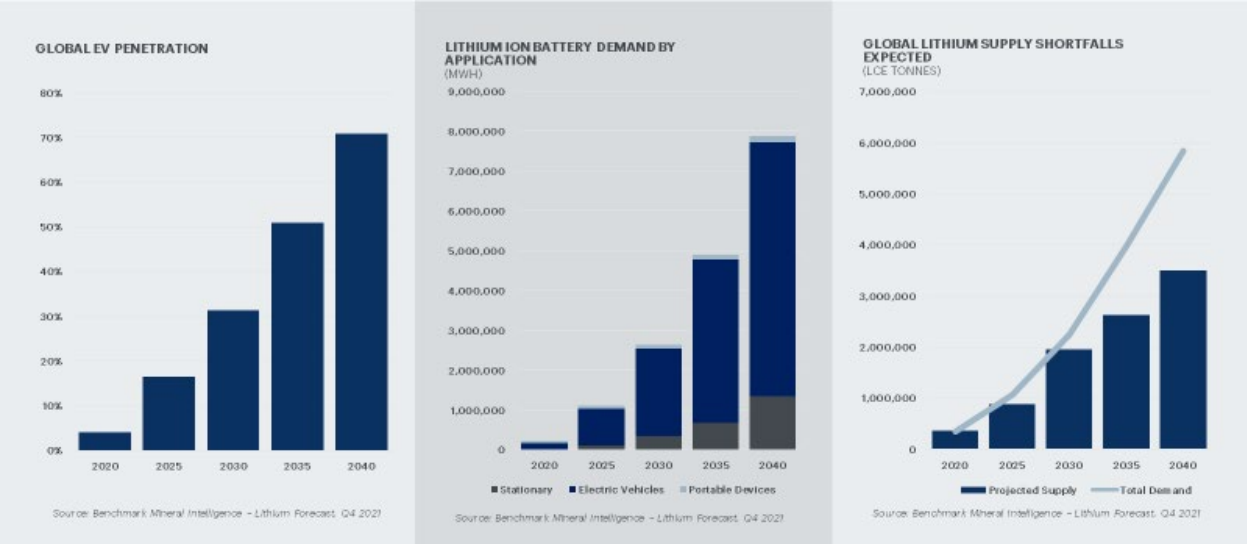
Piedmont technical studies have been completed using the analysis in **Figure 33** which assumes long term battery-grade lithium hydroxide and SC6 of $22,000 per ton for LiOH and $1,200 per ton for SC6. This conservative estimate of long-term prices was established using data from J.P. Morgan, Benchmark Minerals, Fastmarkets, and others. As of May 24, 2022 the spot price of LiOH had increased to $76,500 per Fastmarkets.

Figure 33. Battery grade lithium hydroxide pricing



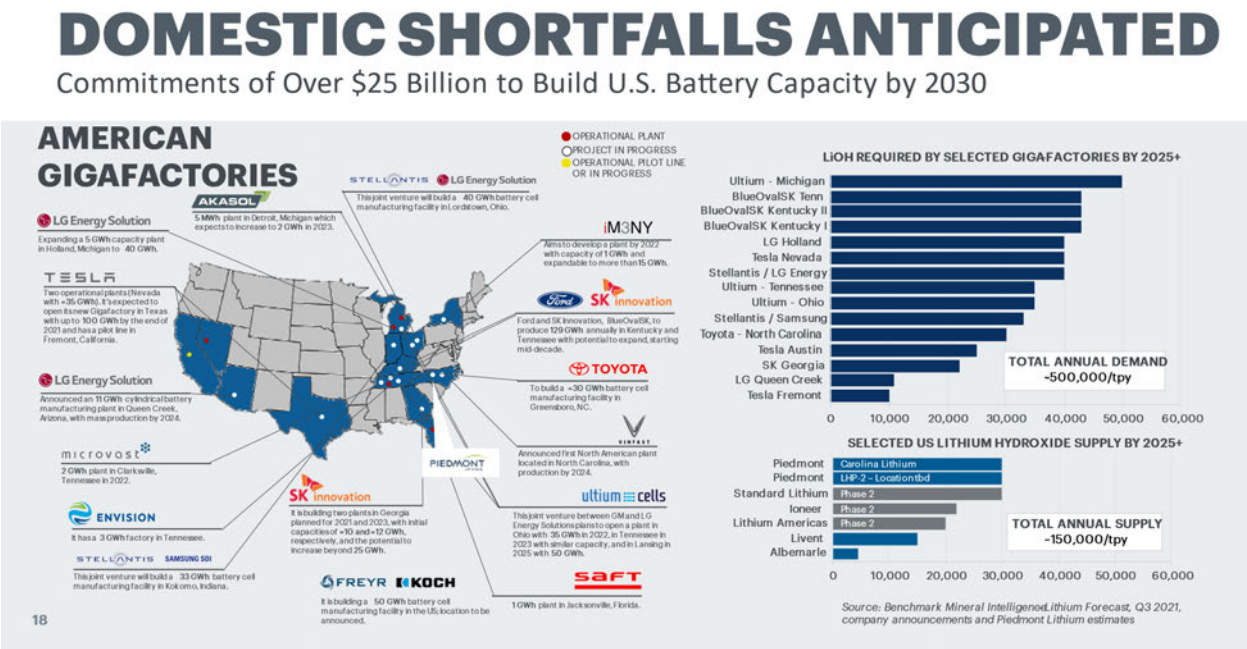
Earlier forecasts of 30% EV penetration by 2030 could grow to be as high as 50% if sufficient raw materials are available for EV production. **Figure 34** provides analysis on EV market share penetration. This promising shift has led the White House to promote policies and issue executive orders to increase the EV share of the market to 50% by 2030. The world is focused on decarbonization and getting to net zero. Public policy and consumer demand are intersecting to make it happen. One key factor is that battery prices are falling, which is making EV's more affordable as shown below. Furthermore, EVs are increasingly impacted by innovations in battery technology that are made possible through the use of lithium.

Figure 34. EV Penetration Forecast and Expected Lithium Supply Shortfalls



Piedmont believes that electrification demands regionalization. To reduce costs and increase EV deployment, all aspects of the EV battery supply chain need to move closer to the customer. Shorter supply chains help manufacturers control costs and increase speed to market. A robust domestic EV supply chain will help the nation reach decarbonization goals. **Figure 35** demonstrates the strategically important location of the Project and illustrates the expected shortfalls in U.S. domestic LiOH supply 2028 based on announced battery manufacturing capacity.

Figure 35. Expected Domestic Market Shortfalls in Lithium Supply in 2028 Based on Announced Battery Manufacturing Capacity



3.11.2. Competition

Competitive Cost and Sustainability Profile. Others seek to capitalize on the growing demand for lithium hydroxide. However, Piedmont's market position is superior to competing market participants. **Figure 36** below outlines other domestic producers of lithium in California, Nevada, and Arkansas. Compared to competitors in the domestic lithium market, Piedmont's LHP-2 Project will use a conventional source of lithium. The Project does not pose the same water scarcity challenges as its Western competitors. The Project is securing raw materials from friendly jurisdictions which have well understood and straightforward regulatory processes for mine permit approval. Piedmont expects to be producing SC6 in Canada in 2023.

Figure 36. Comparison of Piedmont to Domestic Competitors

COMPANY	CONTROLLED THERMAL RESOURCES	IONEER	LITHIUM AMERICAS	PIEDMONT LITHIUM	STANDARD LITHIUM
Project Name	Hell's Kitchen	Rhyolite Ridge	Thacker Pass	Piedmont	Smackover
Project Ownership	100%	100%	100%	100%	30%
Location	California	Nevada	Nevada	North Carolina	Arkansas
Raw Material	Geothermal Brine	Searlesite Clay - Unique	Hectorite Clay	Spodumene	Tail Brine
Raw Material Share of 2021 Market	0%	0%	0%	60%	0%
Final Product	Carbonate	Carbonate	Carbonate	Hydroxide	Carbonate
DFS Timeline	Q1 2020	Q1 2020		Q4 2020	
Resource Grade	1.50% Li_2O	0.17% Li_2O	0.29% Li_2O	1.09% Li_2O	
Annual Production	20,000 tpy LiOH	20,200 tpy Li2CO3	30,000 tpy Li2CO3	30,000 tpy LiOH	20,900 tpy Li2CO3
By-Products		Boron		Quartz, Feldspar, Mica	-
Salient Points	Large, high-grade resource	BLM Land – Buckwheat Tiem	BLM Land – Native Americans	Private land	Public Land – Secured Water Rights
	SQM as strategic partner	Higher Capital Intensity – Plant Build	Water Challenges Exits - Nevada	Pure spodumene mineralogy	Smackover Brine – Bromine
	Tesla, LG, Mitsui offtakes	Cash cost $8,000 ex-boron	Higher Capital Intensity - Plant Build	Low operating costs	Technology Risk - High
	Lack of Fresh Water	Water Challenges Exits - Nevada	Sulfur Leaching Technology	Federal permits received	High Operting Cash Costs
	Reinjection of Spent Brine	Permitting via EIS process			

The use of Metso:Outotec's third party technology for LiOH processing will reduce CO_2 emissions and reagent usage. Lastly, relative to competitors, the Project will result in lower water usage and a smaller land footprint. As shown above, **Figure 16** (Piedmont's Carbon, Water, and Land Profile vs. Competitors) provides a comparison of Piedmont's sustainability profile compared to international competitors derived from Minviro Reports and Piedmont's own estimates.

3.11.3. Distribution Channels

Please see **Section 3.10.1. Target Market** to learn more about how Piedmont will approach customer contracts and serve domestic markets. Piedmont expects to enter into sales agreements directly with OEMs, battery manufacturers, and cathode producers using our own internal sales force led by our Chief Commercial Officer. The Applicant will limit its reliance on distributors or trading companies for LiOH sales.

3.11.4. Barriers, Mitigation Plan, Commercialization Timeline, US Manufacturing Plan

The key barriers to entry in this space are related to access to lithium resources, technical know-how, access to capital, product quality, customer relationships, and scale. In order to build an asset or business to supply lithium chemicals to the market, access to reliable, proven lithium

resources is required. Without access to a raw material source the entire business model is dependent on others for feedstock. Having access to a lithium resource is a critical first step and Piedmont Lithium has access to lithium mineral resources in North Carolina, Canada, and Africa.

Next, lithium suppliers need to have both capital funding (for a highly capital-intensive process) and technical know-how to turn that resource into a usable product for the market (for example lithium hydroxide for use in EV batteries). The capital intensity of a lithium chemical conversion plant ranges from $15,000 to $20,000 per metric ton of product produced (for example a 30,000 tpy LiOH plant can have capital expenditure costs of $450-600mm to construct). Once a lithium supplier has identified the funding, obtaining the technical expertise to design, build, start-up, and operate is very challenging because this skillset is unique. This is specifically challenging due to the new market being developed for domestic lithium supply when there have been relatively few lithium chemical plants built in the U.S. in the past 20 years.

Once a supplier has found the resource, capital, and built the plant the next step is to produce a high-quality product that enables the supplier to align with a customer and get specified into their product (for example lithium-ion battery architecture). This requires several steps – building a solid relationship with customers and customer confidence, product quality, location of the asset, and scale. All EV lithium-ion batteries require a specific level of quality for the refined materials that go into a battery. LiOH “battery grade” is required as the lithium component quality of material that goes into a battery. This is typically designated by a quality standard required for lithium chemicals utilized in battery applications.

Another ancillary consideration is related to the scale of the supplier's process and operation. Most lithium-ion battery manufacturers and OEM’s will require significant quantities of lithium chemicals (such as lithium hydroxide) for their lithium-ion battery operation. This can range from several thousand metric tonnes to well over one-hundred thousand metric tonnes of material required for their operations. Being able to demonstrate this type of scale is an important differentiator for a raw material producer in this space.

3.11.5. Legal/Regulatory/IP and Infrastructure Requirements, Data Dissemination, and Product Distribution

4. Technical Qualifications and Resources

Piedmont possesses an experienced team and leadership to successfully execute the Project. The Project has an operational team with large company and chemical industry experience. The Project's senior staff functions are filled with highly experienced industry leaders as outlined below.

Contractor Capabilities. Piedmont has also relied on a number of professional, independent third parties in the development of engineering designs, permitting, metallurgical testwork, and technology development. These consultants are outlined in **Figure 11** and **Figure 12** above.

Financial Capabilities. Piedmont has retained two investment banking firms, Evercore ISI and J.P. Morgan, to act as its financial advisors and help it run a strategic investment process. Evercore ISI is the largest independent M&A advisory globally. J.P. Morgan is providing financial advice to Piedmont under the leadership of its energy investment banking and M&A groups, including its energy transition team.

Over the past three years Piedmont has raised over $310 million in gross proceeds from equity offerings led by J.P. Morgan, Evercore, and others. The Company has a demonstrated track record of raising money through capital markets.

Piedmont Capabilities: Proven Industry Leaders.
Keith Phillips, Chief Executive Officer
30+ years advisory & financing experience with JPMorgan, Merrill Lynch & Goldman Sachs.
Mr. Phillips joined Piedmont on July 10, 2017, after a 30-year career on Wall Street during which he has worked on strategic and financing transactions representing over $100 billion in aggregate value. Mr. Phillips was most recently a Senior Advisor with merchant banker Maxit Capital, after leading the mining investment banking teams for Merrill Lynch, Bear Stearns, JPMorgan and Dahlman Rose.

Mr. Phillips has worked with numerous mining companies, including many established global leaders, and has dedicated most of the past decade to advising exploration and development-stage companies in achieving their strategic objectives, with a particular focus on obtaining relevance in the United States capital markets. Mr. Phillips received his MBA from The University of Chicago and a B.A. in Commerce from Laurentian University in Canada.

Patrick Brindle, EVP and Chief Operating Officer
20+ years project global development experience
Mr. Brindle has served as our Executive Vice President and Chief Operating Officer since March 2022 and previously held the position of Chief Development Officer from May 2021 until March 2022. From January 2018 to May 2021, Mr. Brindle served as our Vice President and Project Manager. Prior to joining the Company, from January 2000 to December 2017, he worked in various roles in engineering and management including as Vice President of Engineering with DRA Taggart, LLC, a subsidiary of DRA Global Limited (ASX: DRA), an engineering firm specialized in project delivery of mining and mineral processing projects globally. Over his career, Mr. Brindle has held various management and senior engineering roles, including multi-year expatriate assignments, and has completed EPC projects in diverse jurisdictions, including the U.S., Canada, China, Mongolia, Brazil, Russia and others. Mr. Brindle received a B.S. in Environmental Science and a B.S. in Civil Engineering from Virginia Tech.

Bruce Czachor, EVP and Chief Legal Officer
Former Partner of Shearman & Sterling
Mr. Czachor has served as our Executive Vice President and Chief Legal Officer and Secretary since August 2021. He joined the Company in December 2018 on a part-time basis as our Vice President and General Counsel and served as legal consultant for most of 2020 before rejoining

as our Vice President and General Counsel in December 2020. Mr. Czachor has over 34 years of experience in general corporate matters, corporate governance, capital markets, bank finance, mergers and acquisitions, joint ventures, licensing agreements and commercial transactions, and was a partner at Shearman & Sterling LLP and Orrick, Herrington & Sutcliffe LLP. Over his career, Mr. Czachor has represented a wide variety of businesses, ranging from Fortune 500 companies to start-ups, and he has extensive experience in the mining, energy and cleantech industries. Mr. Czachor received a J.D. from New York Law School and a B.A. in Political Science from Binghamton University. He is admitted to practice in New York, New Jersey and California.

Michael White, EVP and Chief Financial Officer

25+ years of experience, most recently Chief Accounting Officer of Apergy Corporation

Mr. White has served as our Executive Vice President and Chief Financial Officer since May 2021. Prior to joining the Company, Mr. White served as Vice President, Chief Accounting Officer and Corporate Controller of ChampionX Corporation (Nasdaq: CHX), formerly Apergy Corporation, a multibillion-dollar manufacturing, chemicals and services public company, where he was responsible for leading the company's global accounting and financial reporting. In that role, Mr. White led enterprise-wide transformation of the global controllership function, created sustainable financial reporting with key performance metrics for operational leadership and provided financial leadership related to mergers and acquisition activities, including a successful IPO. Prior to ChampionX, Mr. White served as Senior Vice President, Chief Accounting Officer and Corporate Controller for Aegion Corporation, a global manufacturing company serving the industrial, oil and gas and water industries. He has held senior financial leadership positions throughout his 25-year career with companies primarily in the energy and technology sectors, including roles as Chief Financial Officer of Baker Energy and as a manager in the assurance practice with Ernst & Young LLP. Mr. White received a B.B.A. in Accounting and Finance from the University of Houston, C.T. Bauer College of Business and is a C.P.A.

Austin Devaney, SVP and Chief Marketing Officer

Former head of lithium sales for Albemarle

Mr. Devaney is a chemical engineer by training and has spent most of his career in senior commercial roles. From 2015 to 2019 he served in increasingly senior sales and marketing roles with Albemarle Corporation, the world's #1 lithium producer, ultimately serving as Vice President Strategic Marketing and Customer Excellence. For Albemarle's predecessor, Rockwood Lithium, Mr. Devaney served as Global Product Manager – Lithium Hydroxide, and National Sales Manager – Battery Products.

In his time at Albemarle and Rockwood, Mr. Devaney developed broad and deep relationships with many of the most important participants in the global electric vehicle supply chain. His technical background was particularly useful in navigating the product qualification processes that are required by global auto makers. This experience will be directly relevant as Piedmont completes its initial lithium hydroxide testwork programs in the coming weeks and will have product samples to share with prospective customers for the first time.

Prior to his time in the lithium business, Mr. Devaney had senior marketing and operational roles with US chemical companies including Occidental Chemical Corporation, Kemira, and Fuchs Lubricants. After leaving Albemarle in 2019, he served as Director, Lithium & Battery Materials for IHS Markit. He earned his B.S. in Chemical Engineering from Clemson University and his MBA from Southern Methodist University.

Monique Parker, CSP, VP Safety, Environment and Health

Former Global Quality Director for lithium specialties for Albemarle

Ms. Parker is a chemical engineer by training with 20+ years' experience in environmental services, process improvements, operations management and safety leadership. From 2016 – 2021 Ms. Parker held several senior leadership roles at Albemarle, including Corporate Global Business Unit HSE Leader, Global Quality Director for lithium specialties, Business Process Improvement Director, and New Product Development.

Prior to joining Albemarle Ms. Parker held safety and environmental leadership positions at Owens Corning, Hexcel, Unilever, and Milliken. She earned her B.S. in Chemical Engineering from Tennessee Tech and is a Certified Safety Professional.

Lamont Leatherman, VP and Chief Geologist
25+ years' experience; discovered the Carolina Lithium Project
Mr. Leatherman is an exploration geologist with over 25 years of experience. Mr. Leatherman is the former project geologist for BHP Minerals and Noranda. He has extensive experience in numerous styles of mineralization including lithium bearing pegmatite systems. Mr. Leatherman holds a B.S. in Geology from Appalachian State University.

Malissa Gordon, Manager Community & Government Relations
13+ years at Gaston County Economic Development
Ms. Gordon joined Piedmont in 2020 as Manager – Community and Government Relations. She most recently spent over 12 years with the Gaston County (North Carolina) Economic Development Commission. Ms. Gordon brings deep local roots to the Piedmont team with strong connections to community leaders, non-profit and business organizations. Ms. Gordon received her B.S. in Corporate Communications from Western Carolina University.

Binh Meador, Senior Project Manager - Chemical Ops
20+ years chemical engineering with Fluor
Ms. Meador is currently the Senior Project Manager for chemical operations. In this role, she provides leadership and direction through all phases of the project development for the Lithium Hydroxide chemical facility.

Ms. Meador has 20 years of project execution experience. Since starting her career Ms. Meador has held a variety of increasingly leadership roles as project manager, technical team lead, and department manager positions. Ms. Meador has experience building and leading high-

performance teams to execute major projects for both greenfield and brownfield facilities. She has worked on domestic as well as international projects including multiple years expat assignments in the Caribbean and the Middle East. Ms. Meador is a graduate of Texas A&M University with a B.S. in Chemical Engineering.

Jim Nottingham, Senior Project Manager - Concentrate Ops
30+ years mining constructions & concentrator operations

Mr. Nottingham's joined Piedmont in 2021 has over 30+ years' experience in mining and mineral processing operations and construction including an extended tenure with Cannelton Industries, Inc. in various departments including the engineering and safety department. He also served as a mine foreman, mine manager, general plant foreman and plant manager. Mr. Nottingham later joined Arch Coal, Inc. in 2005 as a plant manager with responsibilities of planning, preparation, financial forecasting, and day-to-day operational management of an coal processing plant, train loading facility and refuse disposal.

In 2007 he joined Taggart Global, Inc. as Senior Project Manager, bringing over twenty years of experience. This includes intricate knowledge of plant design, budget preparation, commissioning, construction, and operations. Mr. Nottingham acquired a B.S. in Mining Engineering in 1981 from West Virginia Institute of Technology.

Pratt Ray, Production Manager - Chemical Ops
30+ years' experience in lithium chemical production at Livent

Mr. Ray joined Piedmont in 2020 and has 30 years of experience processing lithium carbonate and LiOH from spodumene and brine. Mr. Ray began his career with LCA before the company was purchased by FMC in the mid-1980s. He led the operations team that produced the first carbonate from brine in Argentina for FMC, and subsequently was the operations lead in two major process upgrades in the hydroxide and causticizing circuits that led to FMC's battery grade hydroxide. After FMC, Ray worked at Quebec Lithium as a consultant for their carbonate process. Mr. Ray has a B.S. in Business Management with a Concentration in Global Manufacturing in addition to a PMP Certificate from the University of Phoenix.

David Buckley, Advisor - Process Engineering
25+ years lithium conversion; formerly with Livent and Albemarle
Mr. Buckley is a 25-year veteran of the lithium business, having worked most recently as Chief Process Engineer of Quebec-based Critical Elements Corporation after senior positions with FMC's Lithium Division and Albemarle (former Rockwood Lithium). Mr. Buckley has extensive experience in lithium extraction from both hard rock resources and lithium bearing brines. He also brings experience in converting the extracted lithium into lithium carbonate, lithium hydroxide and other downstream lithium chemicals. He has a B.S. in Chemical Engineering from Virginia Tech.

Existing Equipment and Facilities. The LHP-2 Project will be constructed on a greenfield site. No existing equipment and facilities exist today.

Relevant Efforts and Innovations. As part of due diligence and preliminary engineering for the LHP Project, Piedmont completed multiple testwork programs and technical studies to evaluate two different methods of conversion of SC6 to battery quality LiOH. These methods included (1) acid-roasting and causticization and (2) Metso:Outotec pressure leaching.

Acid roasting is the conventional methodology used by Chinese producers to manufacture LiOH. It is an 'open source' process which does not require the use of specific proprietary equipment. Piedmont completed bench scale testwork and a prefeasibility study of an acid roast plant. The acid roasting route has negative environmental impacts including 1) the production of sodium sulfate anhydrous, a soluble hazardous byproduct 2) creation of emissions associated with the acid roast and 3) an aluminosilicate tail which has residual acidic properties which must be neutralized.

In 2021 Piedmont completed pilot scale testwork and a feasibility study of a pressure leach lithium hydroxide manufacturing plant featuring proprietary equipment and intellectual property provided by Metso:Outotec. The Metso:Outotec process uses naturally-occurring, U.S. sourced soda ash as its principal reagent, eliminating acid roasting as a step in the lithium hydroxide manufacturing process. The tailings from the pressure leach do not have residual acidic properties and are non-hazardous. Additionally, sodium sulfate is eliminated as a byproduct. Based on the superior environmental profile of the Metso:Outotec process and the ability to source the principal reagents on a long term basis from domestic suppliers, Piedmont selected the alkaline pressure leach as the go-forward technology for LHP-2.

Time Commitments. Key members of the Integrated Project Management Team including the Senior Project Manager, Construction Manager, and Discipline Engineers are dedicated to the implementation of the LHP-2 Project. The FEED Contract and EPC Contract terms require that key management and engineering personnel from Kiewit Primero are committed to the Project with liquidated damages penalties if personnel are removed from the LHP-2 Project.

DOE/NNSA FFRDCS. The Project will not rely on DOE/NNSA FFRDC resources.

Foreign Entity of Concern. The Applicant commits to not use battery material supplied by or originating from a foreign entity of concern.

5. References

Due to the commercial nature of this Project, the Applicant has not submitted significant research references. However, if the U.S. Department of Energy seeks additional background material the Applicant will provide more information upon request.