Risk Factors Comparison 2023-12-19 to 2022-12-20 Form: 10-K

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An investment in our common stock involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the specific risk factors discussed below, together with all of the other information in this Annual Report on Form 10- K, including the section titled " Management' s Discussion and Analysis of Financial Condition and Results of Operations " and our consolidated financial statements and related notes. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. If any such risks actually occur, our business, financial condition, or results of operations could be materially and adversely affected. In such cases, the market price of our common stock could decline, and you may lose all or part of your investment. Risks Related to Our Business, Industry and Supply ~~Chain~~ **ChainWe** ~~We~~ have incurred losses and anticipate continued losses and negative cash flows. We have transitioned from a research and development company to a commercial products manufacturer, services provider and developer. We have not been profitable since our year ended October 31, 1997. We expect to continue to incur net losses and generate negative cash flows until we can produce sufficient revenues and gross profit to cover our costs. We may never become profitable. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future. For the reasons discussed in more detail below, there are uncertainties associated with our achieving and sustaining profitability. We have, from time to time, sought financing in the public markets in order to fund operations and will continue to do so. Our future ability to obtain such financing could be impaired by a variety of factors, including, but not limited to, the price of our common stock, our lack of available shares and general market conditions. Our cost reduction strategy for manufacturing may not succeed or may be significantly delayed, which may result in our inability to deliver improved margins. Our cost reduction strategy for manufacturing is based on the assumption that increases in production will result in economies of scale. In addition, our cost reduction strategy relies on advancements in our manufacturing process, global competitive sourcing, engineering design, reducing the cost of capital and technology improvements (including stack life and projected power output). Failure to achieve our cost reduction targets could have a material adverse effect on our results of operations and financial condition. We have debt and finance obligations outstanding and may incur additional debt in the future, which may adversely affect our financial condition and future financial results. As of October 31, ~~2022~~ **2023** , our total consolidated debt and finance obligations outstanding (" indebtedness ") was $ ~~83~~ **123** . ~~5~~ **0** million ($ ~~82~~ **119** . ~~4~~ **5** million, net of deferred finance costs). Our ability to make scheduled payments of principal and interest and other required repayments depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flows from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flows, we may be required to adopt one or more alternatives, such as selling assets, restructuring operations, restructuring debt or obtaining additional equity capital on terms that may be onerous or dilutive. We may incur additional indebtedness in the future in the ordinary course of business, which could include onerous restrictions on us. If new debt is added to current debt levels, the risks described above could intensify. Our debt agreements contain representations and warranties, affirmative and negative covenants, and events of default that entitle the lenders to cause our indebtedness under such debt agreements to become immediately due and payable. We rely on project financing for our generation operating portfolio, which includes debt and tax equity financing arrangements, to realize the benefits provided by investment tax credits and accelerated tax depreciation. In the event that interest rates continue to rise or there are changes in tax policy, our financial results could be harmed. Rising interest rates may increase our cost of capital. Part of our business strategy is to generate positive cash flows after debt service from our generation operating portfolio. Rising interest rates may have an adverse impact on the cost of debt and thus result in lower cash flows after debt service than we realize today. We also expect that projects we retain in our generation operating portfolio will receive capital from tax equity investors who derive a significant portion of their economic returns through tax benefits. Tax equity investors are generally entitled to substantially all of the project' s tax benefits, such as those provided by the U. S. investment tax credit (" ITC ") and Modified Accelerated Cost Recovery System or bonus depreciation. Our ability to obtain additional financing in the future depends on the continued confidence of financing sources in our business model and the continued availability of tax benefits applicable to our products. If we are unable to enter into tax equity financing agreements with attractive pricing terms, or at all, we may not be able to obtain the capital needed to finance the build out of our generation assets which would impact our overall liquidity and our business, financial condition and results of operations. ~~Unanticipated~~ **36Unanticipated** increases or decreases in business growth may result in adverse financial consequences for us. We operate a 167, 000 square- foot manufacturing facility in Torrington, Connecticut where we produce the individual cell packages and assemble the fuel cell modules for our carbonate fuel cell products. The maximum annualized capacity (module manufacturing, final assembly, testing and conditioning) is 100 MW per year under the Torrington facility' s current configuration when being fully utilized. The Torrington facility is sized to accommodate the eventual annualized production capacity of up to 200 MW per year with additional capital investment in machinery, equipment, tooling and inventory. ~~44We~~ **We** have a manufacturing and service facility in Taufkirchen, Germany that has the capability to perform final module assembly for up to 20 MW per year of carbonate sub- megawatt fuel cell power platforms to service the European market. Our European service activities are also operated out of this location. Our manufacturing and research and development facility in Calgary, Alberta, Canada is focused on the engineering and development of the Company' s ~~solid oxide fuel cell ("~~ SOFC ~~")~~ and SOEC technologies. This facility also houses our SOFC and SOEC stack research and development effort and includes equipment for the manufacturing of solid oxide cells and stacks, including advanced manufacturing capabilities. ~~This facility includes equipment for the manufacturing of solid oxide cells and stacks, including an advanced automated stack manufacturing line which has been developed to ensure that the labor and overhead which are required to produce these technologies are optimized for efficiency and complement the low direct material cost of the stack.~~ As of October 31, ~~2022~~ **2023** , this facility is capable of producing 1 MW per year of SOFC or approximately 4 MW per year of SOEC. We are investing in expanding this facility with the goal of increasing its production capacity to 10 MW per year of SOFC or 40 MW per year of SOEC, and we expect this expansion to be complete **in** ~~by the middle of~~ fiscal year 2024. If this expansion is delayed, our ability to timely fulfill future orders to meet anticipated demand and our future revenues and ability to achieve profitability will be negatively impacted. If our business grows more quickly than we anticipate, our existing and planned manufacturing facilities may become inadequate and we may need to seek out new or additional space, or retrofit or further equip our existing facilities, at considerable cost to us. If our business does not grow as quickly as we expect, our existing and planned manufacturing facilities would, in part, represent excess capacity for which we may not recover the cost. In that circumstance, our revenues may be inadequate to support our committed costs and our planned growth, and our gross margins and business strategy would be adversely affected ~~. We are subject to risks in international operations, including risks relating to our ongoing relationship with POSCO Energy Co., Ltd. (" POSCO Energy ") and Korea Fuel Cell Co., Ltd. (" KFC "). Since we market our products both inside and outside the U. S., our success depends in part on our ability to secure international customers and our ability to manufacture products that meet foreign regulatory and commercial requirements in target markets, as well as the ability to provide service to our international customers. With the settlement of our litigation with POSCO Energy and KFC, we expect to make significant product sales into South Korea and, with our renewed emphasis on marketing our products in European markets, we expect to make future product sales there as well. We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. In addition, we are subject to tariff regulations and requirements for export licenses, particularly with respect to the export of some of our technologies. We face numerous challenges in our international expansion, including the strain any future growth may place on management, service and operations teams and financial infrastructure. We will face risk from complex and changing regulatory requirements, fluctuations in currency exchange rates, accounts receivable requirements and collections, difficulties in managing international operations, potentially adverse tax consequences, restrictions on repatriation of any earnings and the burdens of complying with a wide variety of international laws. In addition, with respect to South Korea, pursuant to the terms of the Settlement Agreement, we may have to rely on POSCO Energy and KFC for some period to provide certain services, such as operations and maintenance services to any new customers, and we will need their cooperation to transition long term service agreements from their existing customers to us in the future. Given the historical relationship among the parties with respect to certain actions and inactions by POSCO Energy and KFC and the prolonged litigation among the parties, there can be no guarantee that the parties will be able to successfully work together. Any of these factors could adversely affect our results of operations and financial condition~~ . If our goodwill and other indefinite- lived intangible assets and long- lived assets (including project assets) become impaired, we may be required to record a significant charge to operations. We have recorded significant impairment charges, and may in the future be required to record significant impairment charges, to operations in our financial statements should we determine that our goodwill, other indefinite- lived intangible assets (i. e., in process research and development (" IPR & D ")) and other long- lived assets (i. e., project assets, property, plant and equipment and amortizing intangible assets) are impaired. Such charges might have a significant impact on our reported financial condition and results of operations. Project assets and property, plant and equipment impairment charges totaled approximately $ **2. 4 million, $** 1. 8 million ~~,~~ **and** $ 5. 0 ~~million and $ 2. 4~~ million for the fiscal years ended October 31, **2023,** 2022 ~~,~~ **and** 2021 ~~and 2020~~ , respectively. ~~45As~~ **As** required by accounting rules, we review our goodwill for impairment at least annually as of July 31 or more frequently if facts and circumstances indicate that it is more likely than not that the fair value of a reporting unit that has goodwill is less than its carrying value. Factors that may be considered a change in circumstances indicating that the carrying value of our goodwill might not be recoverable include a significant decline in projections of future cash flows and lower future growth rates in our industry. We review IPR & D for impairment on an annual basis as of July 31 or more frequently if facts and circumstances indicate the fair value is less than the carrying value. If the technology has been determined to be abandoned or not recoverable, we would be required to record a charge reflecting impairment of the asset. We review long- lived assets for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. We consider a project asset commercially viable and recoverable if such project asset is anticipated to be sellable for a profit, or generates positive cash flows, in excess of the cost of the project asset once it is either fully developed or fully constructed. If any of our project assets are not considered commercially viable or costs are not deemed to be recoverable, we would be required to record a charge reflecting the impairment of such project assets. Our Advanced Technologies contracts are subject to the risk of termination by the contracting party and we may not realize the full amounts allocated under some contracts due to the lack of Congressional appropriations or early termination. ~~A~~ **37A** portion of our revenues has been derived from long- term cooperative agreements and other contracts with the DOE and other U. S. government agencies. These agreements are important to the continued development of our technology and our products. We also contract with private sector companies under certain Advanced Technologies contracts to develop strategically important and complementary offerings. Generally, our privately funded Advanced Technologies contracts, including our EMTEC Joint Development Agreement, **contracted demonstration projects undertaken with EMTEC or other ExxonMobil affiliates,** and our government research and development contracts are subject to the risk of termination at the convenience of the contracting party and may contain certain milestones and deliverables which we may not be able to meet if actual results **or the timing of deliverables** differ materially from our original estimates **or contractually agreed timelines** . Furthermore, with respect to government- funded contracts, irrespective of the amounts allocated by the contracting agency, such contracts are subject to annual Congressional appropriations and the results of government or agency sponsored reviews and audits of our cost reduction projections and efforts. We can only receive funds under government- funded contracts ultimately made available to us annually by Congress as a result of the appropriations process. Accordingly, we cannot be sure whether we will receive the full amounts awarded under our privately funded, government research and development or other contracts. Termination of the contracts or failure to receive the full amounts under any of our Advanced Technologies contracts could materially and adversely affect our business prospects, results of operations and financial condition. Utility companies may resist the adoption of distributed generation and could impose customer fees or interconnection requirements on our customers that could make our products less desirable. Investor- owned utilities may resist adoption of distributed generation fuel cell plants as such plants are disruptive to the utility business model that primarily utilizes large central generation power plants and associated transmission and distribution. On- site distributed generation that is on the customer- side of the electric meter competes with the utility. Distributed generation on the utility- side of the meter generally has power output that is significantly less than central generation power plants and may be perceived by the utility as too small to materially impact its business, limiting its interest. Additionally, perceived technology risk may limit utility interest in stationary fuel cell power plants. Utility companies commonly charge fees to larger, industrial customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back up purposes. These fees could increase the cost to our customers of using our SureSource products and could make our products less desirable, thereby harming our business prospects, results of operations and financial condition. We depend on third party suppliers for the development and timely supply of key raw materials and components for our products. We use various raw materials and components to construct a fuel cell module, including nickel and stainless steel that are critical to our manufacturing process. We also rely on third- party suppliers for the BOP components in our products. Suppliers must undergo a qualification process, which takes four to twelve months. We continually evaluate new suppliers, and we are currently qualifying several new suppliers. There are a limited number of suppliers for some of the key components of our products. In addition, to the extent the processes that our suppliers use to manufacture components are ~~46proprietary~~ -- **proprietary** , we may be unable to obtain comparable components from alternative suppliers, all of which could harm our business prospects, results of operations and financial condition. We do not know whether we will be able to maintain long- term supply relationships with our critical suppliers, or secure new long- term supply relationships on terms that will allow us to achieve our objectives, if at all. A supplier' s failure to develop and supply components in a timely manner or to supply components that meet our quality, quantity or cost requirements or our technical specifications, or our inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us, could each harm our ability to manufacture our ~~SureSource~~ products. In addition, our supply chain has been, and ~~may continue to~~ **in the future could** be, adversely affected by the COVID- 19 pandemic **or other pandemics** , which ~~has~~ **may** ~~created~~ - **create** global shipping and logistics challenges. These challenges **may** include extended shipping lead times and pricing pressures on transportation and logistics that **could** ~~have adversely impacted, and may continue to~~ adversely impact ~~,~~ our ability to meet our production schedules and project deadlines, may result in additional and increased costs, or may otherwise adversely impact our business, results of operations and financial condition. If **such events occur and** we are unable to pass these costs on to our customers or timely complete projects, we may experience reduced revenue and other adverse impacts on our business, results of operations and financial condition. ~~Given that our customers and suppliers are facing similar global supply chain challenges, we expect continued difficulty in forecasting demand and supply needs for the foreseeable future. While we have implemented several initiatives to mitigate the effects of the COVID- 19 pandemic on our business, our business, results of operations and financial condition may still be adversely impacted. Our~~ **38Our** business and operations may be adversely affected by ~~the~~ **new outbreaks of** COVID- 19 ~~outbreak~~ **variants** or other ~~similar~~ outbreaks **of contagious diseases** . Any outbreaks of contagious diseases, including **new outbreaks of** COVID- 19 **variants** , and other adverse public health developments in countries where we and our suppliers operate, could have a material and adverse effect on our business, financial condition and results of operations. These effects could include disruptions to or restrictions on our employees' ability to travel, as well as temporary or prolonged closures of our facilities or the facilities of our customers, suppliers, or other vendors in our supply chain. ~~In addition~~ **Any of these events** , **which may result in disruptions to our supply chain or customer demand, could materially and adversely affect our business and our financial results. The extent to which new outbreaks of** COVID- 19 **variants** ~~has resulted in a widespread health crisis that has adversely affected, and~~ may ~~continue to adversely affect, the economies and financial markets of many countries, resulting in economic downturns that could affect demand for our products or our ability to obtain financing for our business or projects. COVID- 19 may impact the health of our team members, directors or customers, reduce the availability of our workforce or those of companies with which we do business, or otherwise cause human impacts that may negatively impact our business. Any of these events, which may result in disruptions to our supply chain or customer demand, could materially and adversely affect our business and our financial results. The extent to which COVID- 19 will~~ impact our business and our financial results will depend on future developments, which are highly uncertain and cannot be predicted. Such developments may include new mutations of the virus, the continued efficacy of vaccines and the actions that may be taken by various governmental authorities in response to ~~the~~ **a new** outbreak, such as periodic quarantine or " shelter- in- place " orders and business closures imposed by various states within the United States, and the impact on the U. S. or global economy. ~~For example~~ **At this time** , **it is impossible** ~~on March 18, 2020, in response~~ to **predict** the ~~escalating global~~ **future impact of** COVID- 19 ~~outbreak, we temporarily suspended operations at our~~ - **or other public health crises** ~~Torrington, Connecticut manufacturing facility, and also ordered those employees~~ that could **emerge** ~~work from home to do so. We resumed operations~~ in ~~the manufacturing facility on June 22, 2020, and we established a phased- in return to work schedule commencing March 15, 2021 for those~~ -- **the future** ~~employees working from home that was completed April 19~~ , **including** ~~2021. However, we continue to evaluate our ability to operate in the event of resurgences of COVID- 19 and the advisability of continuing operations, based on federal, state and local guidance, evolving data concerning the pandemic and the best interests of our employees, customers and stockholders. Accordingly, there can be no assurance that any of our facilities will remain open (in~~

~~full or in part) or that our~~ other ~~operations will continue at full or limited capacity. If we again have to shut down production either due to a resurgence of the COVID- 19 pandemic~~ **pandemics** ~~or due to an outbreak in one of our~~ - **or** ~~facilities~~ **epidemics** , ~~our project schedules and associated financing could be adversely affected. Further, we have experienced, and may continue to experience, increased costs and expenses, including as a result of (i) conducting daily " fitness- for- duty " assessments for employees, including symptom checks and providing personal protective equipment, (ii) the expansion of benefits to our employees, including the provision of additional time off for employees who have contracted COVID- 19 or are required to be quarantined or who are unable to obtain childcare to return to work, and the reimbursement of expenses incurred while working from home, (iii) implementing increased health and safety protocols at all of our facilities, including increased cleaning / sanitization of workspaces, restricting visitor access, mandating social distancing guidelines and increasing the availability of sanitization products, and (iv) the increased cost of personal protective equipment. Although we believe the Company is currently considered an " essential " business in its operating markets, if any of the applicable exceptions or exemptions are curtailed or revoked in the future, or any of these exemptions or exceptions do not extend to any of our key suppliers, our business, operating results and financial condition could be adversely impacted. As a result, at this time, it is impossible to predict the future impact of COVID- 19~~ on our business, liquidity, capital resources, supply chain and financial results or its effect on clean energy demand, capital budgets of our customers, or demand for our products ~~. Additionally, while we have continued to prioritize the health and safety of our team members 47and customers as we continue to operate during the pandemic, we face an increased risk of litigation related to our operating environments. Even after the COVID- 19 pandemic has subsided, we may continue to experience adverse impacts to our business as a result of any economic recession that has occurred or may occur in the future because of the pandemic, or because the pandemic worsens again. Additional public health crises could also emerge in the future, including other pandemics or epidemics. Any such public health crisis could pose further risks to us and could also have a material adverse effect on our business, results of operations and financial position~~ . An increase in energy costs, including as a result of the ongoing conflict between Russia and Ukraine, may materially adversely affect our business, financial condition, and results of operations. Our results of operations can be directly affected by volatility in the cost and availability of energy, which is subject to global supply and demand and other factors beyond our control. The ongoing conflict between Russia and Ukraine has impacted global energy markets, particularly in Europe, leading to ~~high~~ **higher** volatility **in** ~~and increasing~~ prices for crude oil, natural gas and other energy supplies. Higher energy costs result in increases in operating expenses at our manufacturing facilities, in the expense of shipping materials to our facilities, and in the expense of operating our projects for which we procure natural gas, all of which may in turn adversely affect our business, financial condition, and results of operations. Failure to meet Environmental, Social, and Governance (" ESG ") expectations or standards or to achieve our ESG goals could adversely affect our business, results of operations, financial condition, and stock price. In recent years, there has been an increased focus from stakeholders on ESG matters, including greenhouse gas emissions and climate- related risks, renewable energy, water stewardship, waste management, diversity, equality and inclusion, responsible sourcing and supply chain, human rights, and social responsibility. Given our commitment to ESG, we actively manage these issues and have established and publicly announced certain goals, commitments, and targets which we may refine or even expand further in the future. These goals, commitments, and targets reflect our current plans and aspirations and are not guarantees that we will be able to achieve them. Evolving stakeholder expectations and our efforts to manage these issues, report on them, and accomplish our goals present numerous operational, regulatory, reputational, financial, legal, and other risks, any of which could have a material adverse impact, including on our reputation and stock price. Such risks and uncertainties include: • reputational harm, including damage to our relationships with customers, suppliers, investors, governments, or other stakeholders; • adverse impacts on our ability to sell and manufacture products; • the success of our collaborations with third parties; • increased risk of litigation, investigations, or regulatory enforcement action; • unfavorable ESG ratings or investor sentiment; • diversion of resources and increased costs to control, assess, and report on ESG metrics; • our ability to achieve our goals, commitments, and targets within the timeframes announced; • access to and increased cost of capital; and • adverse impacts on our stock price. Any failure, or perceived failure, to meet evolving stakeholder expectations and industry standards or achieve our ESG goals, commitments, and targets could have an adverse effect on our business, results of operations, financial condition, and stock price. ~~Risks~~ **39Risks** Related to Sales of our ProductsWe derive significant revenue from contracts awarded through competitive bidding processes involving substantial costs and risks. Our contracted projects may not convert to revenue, and our project awards and sales pipeline may not convert to contracts, which may have a material adverse effect on our revenue and cash flows. We expect a significant portion of the business that we will seek in the foreseeable future will be awarded through competitive bidding against other fuel cell technologies and other forms of power generation. The competitive bidding process involves substantial costs and a number of risks, including the significant cost and managerial time to prepare bids and proposals for contracts that may not be awarded to us and our failure to accurately estimate the resources and costs ~~48that~~ -- **that** will be required to fulfill any contract we win. In addition, following a contract award, we may encounter significant expense, delay or contract modifications or award revocation as a result of our competitors protesting or challenging contracts awarded to us in competitive bidding. Our failure to compete effectively in this procurement environment could adversely affect our revenue and / or profitability. Some of the project awards we receive and orders we accept from customers require certain conditions or contingencies (such as permitting, interconnection, financing or regulatory approval) to be satisfied, some of which are outside of our control. Certain awards are cancelable or revocable at any time prior to contract execution. The time periods from receipt of an award to execution of a contract, or receipt of a contract to installation may vary widely and are determined by a number of factors, including the terms of the award, governmental policies or regulations that go into effect after the award, the terms of the customer contract and the customer' s site requirements. These same or similar conditions and contingencies may be required by financiers in order to draw on financing to complete a project. If these conditions or contingencies are not satisfied, or changes in laws affecting project awards occur, or awards are revoked or cancelled, project awards may not convert to contracts, and installations may be delayed or canceled. This could have an adverse impact on our revenue and cash flow and our ability to complete construction of a project. We have signed product sales contracts, EPCs, PPAs and long- term service agreements with customers subject to contractual, technology, operating, commodity (i. e. natural gas) and fuel pricing risks as well as market conditions that may affect our operating results. We apply the transfer of control over time revenue recognition method under Accounting Standards Codification Topic 606: Revenue from Contracts with Customers to certain service contracts which are subject to estimates. On ~~a quarterly~~ **an annual** basis, we perform a review process to help ensure that total estimated contract costs include estimates of costs to complete that are based on the most recent available information. The amount of costs incurred on a cumulative to date basis as a function of estimated costs at completion is applied to contract consideration to determine the cumulative revenue that should be recognized to date. We have contracted under long- term service agreements with certain customers to provide service on our products over terms up to 20 years. Under the provisions of these contracts, we provide services to maintain, monitor, and repair customer power plants to meet minimum operating levels. Pricing for service contracts is based upon estimates of future costs including future module exchanges. While we have conducted tests to determine the overall life of our products, we have not run certain of our products over their projected useful life or in all potential conditions prior to large scale commercialization. As a result, we cannot be sure that these products will last to their expected useful life or perform as anticipated in all conditions, which could result in warranty claims, performance penalties, maintenance and module replacement costs in excess of our estimates, losses on service contracts and / or a negative perception of our products. As a result of our products' lack of maturity, we have incurred and may continue to incur charges for warranty claims, performance penalties, maintenance and module replacement costs in excess of our estimates and losses on service contracts. Each of these risks could be material under these contracts and, as a result, we may experience diminished returns or be required to write off all or a portion of our capitalized costs in these project assets. In certain instances, we have executed PPAs with the utility, end- user of the power or site host of the fuel cell power plant. We may then sell the PPA and power plant to a project investor or retain the project and collect revenue from the sale of power over the term of the PPA, recognizing electricity revenue as power is generated and sold. Our growing portfolio of project assets used to generate and sell power under PPAs and utility tariff programs exposes us to operational risks and uncertainties, including, among other things, lost revenues due to prolonged outages, replacement equipment costs, risks ~~associated~~ **40associated** with facility start- up operations, failures in the availability or acquisition of fuel (including natural gas and renewable natural gas), the impact of severe adverse weather conditions, natural disasters, terrorist attacks, cybersecurity attacks, risks of property damage or injury from energized equipment, availability of adequate water resources and ability to intake and discharge water, use of new or unproven technology, fuel commodity price risk and fluctuating market prices, and lack of alternative available fuel sources. Our ability to proceed with projects under development and complete construction of projects on schedule and within budget may be adversely affected by escalating costs for materials and fuel (including natural gas and renewable natural gas), supply chain and logistics challenges, tariffs, labor and regulatory compliance, inability to obtain necessary permits, interconnections or other approvals on acceptable terms or on schedule and by other factors. If any development project or construction is not completed, is delayed or is subject to cost overruns, we could become obligated to make delay or termination payments or become obligated for other damages under contracts, experience diminished returns or be required ~~49to~~ **to** write off all or a portion of our capitalized costs in the project. Each of these events could have an adverse effect on our business, financial condition, results of operations and prospects. We extend product warranties for our products, which products are complex and could contain defects and may not operate at expected performance levels, which could impact sales and market adoption of our products, affect our operating results or result in claims against us. We develop complex and evolving products and we continue to advance the capabilities of our fuel cell stacks. We ~~now~~ produce **carbonate fuel** stacks ~~in the United States~~ with ~~a net rated power output of 350 kilowatts when new and~~ a 7- year cell design life. We **are also in the process of manufacturing and selling SOEC and SOFC products. We** provide ~~for a warranty of our products~~ - **product warranties** for a specific period of time against manufacturing or performance defects. We accrue for warranty costs based on historical warranty claim experience; however, actual future warranty expenses may be greater than we have assumed in our estimates. ~~We are still gaining field operating experience with respect to our products, and despite experience gained from our growing installed base and testing performed by us, our customers and our suppliers, issues~~ **Issues** have been and may continue to be found in existing or new products including, but not limited to, module decay rates which have exceeded and may continue to exceed design expectations. This has resulted and may continue to result in a delay in recognition or loss of revenues and may result in loss of market share or failure to achieve broad market acceptance. The occurrence of defects has also caused and may continue to cause us to incur significant warranty, support and repair costs in excess of our estimates, could divert the attention of our engineering personnel from our product development efforts, and could harm our relationships with our customers. Although we seek to limit our liability, a product liability claim brought against us, even if unsuccessful, would likely be time consuming, could be costly to defend, and may hurt our reputation in the marketplace. Our customers could also seek and obtain damages from us for their losses. We currently face and will continue to face significant competition, including from products using other energy sources that may be lower priced or have preferred environmental characteristics. We compete on the basis of our products' reliability, efficiency, environmental considerations and cost. Technological advances in alternative energy products, improvements in the electric grid or other sources of power generation that use lower priced fuel or no fuel, or other fuel cell technologies may negatively affect the development or sale of some or all of our products or make our products less economically attractive, non- competitive or obsolete prior to or after commercialization. Significant decreases in the price of alternative technologies or grid delivered electricity, or significant increases in the price of our fuels could have a material adverse effect on our business because other generation sources could be more economically attractive to consumers than our products. Additionally, in certain markets, consumers and regulators have expressed a preference for zero- carbon generating resources over fueled resources, which could adversely affect sales of our products in such markets. Other companies, some of which have substantially greater resources than ours, are currently engaged in the development of products and technologies that are similar to, or may be competitive with, our products and technologies. Several companies in the U. S. are engaged in fuel cell development, although we are the only domestic company engaged in manufacturing and deployment of stationary carbonate fuel cells. Other emerging fuel cell technologies include small or portable PEM fuel cells, stationary phosphoric acid fuel cells, stationary solid oxide fuel cells, and small residential solid oxide fuel cells. Any of these technologies and any of our competitors has the potential to capture market share in our target markets. There are also other potential fuel cell competitors internationally that could capture market share. Other than fuel cell developers, we must also compete with companies that manufacture combustion- based distributed power equipment, including various engines and turbines, and have well- established manufacturing, distribution, operating ~~and~~ **41and** cost features. Electrical efficiency of these products can be competitive with our ~~SureSource~~ power plants in certain applications. Significant competition may also come from gas turbine companies and large scale solar and wind technologies. Our plans are dependent on market acceptance of our products. Our plans are dependent upon market acceptance of, as well as enhancements to, our products. Fuel cell systems represent an emerging market, and we cannot be sure that potential customers will accept fuel cells as a replacement for traditional power sources or non- fuel based power sources, hydrogen generation sources or storage. As is typical in a rapidly evolving industry, demand and market acceptance for recently introduced products and services are subject to a high level of ~~50uncertainty~~ -- **uncertainty** and risk. Since the distributed generation, hydrogen, carbon capture and storage markets are still evolving, it is difficult to predict with certainty the size of these markets and their growth rates. The development of a market for our products may be affected by many factors that are out of our control, including: ● the cost competitiveness of our fuel cell products including availability and output expectations and total cost of ownership; ● the future costs of natural gas, renewable natural gas (biofuels), and other fuels used by our fuel cell products; ● customer reluctance to try a new product; ● the market for distributed generation, hydrogen, carbon capture and storage and government policies that affect those markets; ● government incentives, mandates or other programs favoring zero carbon energy sources; ● local permitting and environmental requirements; ● customer preference for non- fuel based technologies; and ● the emergence of newer, more competitive technologies and products. If a sufficient market fails to develop or develops more slowly than we anticipate, we may be unable to recover the losses we will have incurred in the development of our products, and we may never achieve profitability. We must complete development of our new products and develop additional commercially viable products in order to achieve our long- term revenue targets. In fiscal year 2022, we established new target revenues to be met by the end of fiscal year 2025 and the end of fiscal year 2030. In developing these revenue targets, we assumed the successful commercialization of our SOEC, SOFC and carbon capture products. If we experience delays in meeting our development goals **(including manufacturing expansion)** for these products, these products exhibit technical defects, or we are unable to meet cost or performance goals with respect to these products, including goals for power output, hydrogen production, rates of carbon capture, useful life and reliability, then our ability to generate revenue and achieve profitability from sales of these new products will be delayed or may not occur at all. In addition, if we are unable to develop additional commercially viable products in the future, we may not be able to generate sufficient revenue to become profitable. The profitable commercialization of our products depends on our ability to reduce the costs of our products, and we cannot assure you that we will be able to sufficiently reduce these costs to achieve profitability. Our products use inherently dangerous, flammable fuels, operate at high temperatures and use corrosive carbonate material, each of which could subject our business to product liability claims. Our business exposes us to potential product liability claims that are inherent in products that use hydrogen. Our products utilize fuels such as natural gas and convert these fuels internally to hydrogen that is used by our products to generate electricity. Although our platforms do not combust fuels for the generation of electricity, the fuels we use are combustible and may be toxic. In addition, our SureSource products operate at high temperatures and use corrosive carbonate material, which could expose us to potential liability claims. Although we ~~have incorporated~~ - **incorporate** a robust design and redundant safety features ~~in~~ **42in** our power plants, have established comprehensive safety, maintenance, and training programs, follow third- party certification protocols, codes and standards, and do not store natural gas or hydrogen at our power plants, we cannot guarantee that there will not be accidents. Any accidents involving our products or other hydrogen- using products could materially impede widespread market acceptance and demand for our products. In addition, we might be held responsible for damages beyond the scope of our insurance coverage. We also cannot predict whether we will be able to maintain adequate insurance coverage on acceptable terms. ~~51Risks~~ -- **Risks** Related to Privacy, Data Protection and CybersecurityWe are increasingly dependent on information technology, and disruptions, failures or security breaches of our information technology infrastructure could have a material adverse effect on our operations and the operations of our power plant platforms. In addition, increased information technology security threats and more sophisticated computer crime pose a risk to our systems, networks, products and services. We rely on information technology networks and systems, including the Internet, to process, transmit and store electronic and financial information and to manage a variety of business processes and activities, including communication with power plants owned by us or our customers and production, manufacturing, financial, logistics, sales, marketing and administrative functions. Additionally, we collect and store data that is sensitive to us and to third parties. Operating these information technology networks and systems and processing and maintaining this data, in a secure manner, are critical to our business operations and strategy. We depend on our information technology infrastructure to communicate internally and externally with employees, customers, suppliers and others. We also use information technology networks and systems to comply with regulatory, legal and tax requirements and to operate our fuel cell power plants. These information technology systems, many of which are managed by third parties or used in connection with shared service centers, may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components thereof, power outages, hardware failures, computer viruses, attacks by computer hackers or other cybersecurity risks **including the impact of emerging technologies** , telecommunication failures, user errors, natural disasters, terrorist attacks or other catastrophic events. If any of our significant information technology systems suffer severe damage, disruption or shutdown, and our disaster recovery and business continuity plans do not effectively resolve the issues in a timely manner, our product sales, financial condition and results of operations may be materially and adversely affected, and we could experience delays in reporting our financial results, or our fuel cell power plant operations may be disrupted, exposing us to performance penalties under our contracts with customers. In addition, information technology security threats — from user error to cybersecurity attacks designed to gain unauthorized access to our systems, networks and data — are increasing in frequency and sophistication. Cybersecurity attacks may range from random attempts to coordinated and targeted attacks, including sophisticated computer crime and advanced persistent threats. These threats pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data. Cybersecurity attacks could also include attacks targeting customer data or the security, integrity and / or reliability of the hardware and software installed in our products. We have experienced, and may continue to experience in the future, cybersecurity attacks that have resulted in unauthorized parties gaining access to our information technology systems and networks and, in one instance, gaining control of the information technology system at one of our power plants. However, to date, no cybersecurity attack has resulted in any material loss of data, interrupted our day- to- day operations or had a material impact on our financial condition, results of operations or liquidity. While we actively manage information technology security risks within our control, there can be no assurance that such actions will be sufficient to mitigate all potential risks to our systems, networks and data. In addition to the direct potential financial risk as we continue to build, own and operate generation assets, other potential consequences of a material cybersecurity attack include reputational damage, litigation with third parties, disruption to systems, unauthorized release of confidential or otherwise protected information, corruption of data, diminution in the value of our investment in research, development and engineering, and increased cybersecurity protection and remediation costs, which in turn could adversely affect our competitiveness, results of operations and financial condition. The amount of insurance coverage we maintain may be inadequate to cover claims or liabilities relating to a cybersecurity attack. Additionally, the legal and regulatory environment surrounding information security and privacy in the U. S. and international jurisdictions is constantly evolving. Violation or non- compliance with any of these laws or regulations, contractual requirements relating to data security and privacy, or our own privacy and security policies, either intentionally or unintentionally, or through the acts of intermediaries could have a material adverse effect on our brand, reputation, ~~business~~ **43business** , financial condition and results of operations, as well as subject us to significant fines, litigation losses, third- party damages and other liabilities. ~~52Tax~~ -- **Tax** , Accounting, Compliance and Regulatory RisksWe are required to maintain effective internal control over financial reporting. In a prior fiscal year, our management identified a material weakness in our internal control over financial reporting. If other control deficiencies are identified in the future, we may not be able to report our financial results accurately, prevent fraud or file our periodic reports in a timely manner, which may adversely affect investor confidence in our Company and, as a result, the value of our common stock. We are required, pursuant to Section 404 of the Sarbanes- Oxley Act (" Section 404 "), to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. Complying with Section 404 requires a rigorous compliance program as well as adequate time and resources. We may not be able to complete our internal control evaluation, testing and any required remediation in a timely fashion. Additionally, if we identify one or more material weaknesses in our internal control over financial reporting, we will not be able to assert that our internal controls are effective. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. In a prior fiscal year, our management identified a material weakness in our internal control over financial reporting, which has been remediated. We cannot be certain that other material weaknesses and control deficiencies will not occur in the future. If material weaknesses are identified in the future, or if we are not able to comply with the requirements of Section 404 in a timely manner, our reported financial results could be materially misstated and we could be subject to investigations or sanctions by regulatory authorities, which would require additional financial and management resources, and the value of our common stock could decline. To the extent we identify future weaknesses or deficiencies, there could be material misstatements in our consolidated financial statements and we could fail to meet our financial reporting obligations. As a result, our ability to obtain additional financing on favorable terms or at all could be materially and adversely affected which, in turn, could materially and adversely affect our business, our financial condition and the value of our common stock. If we are unable to assert that our internal control over financial reporting is effective in the future, investor confidence in the accuracy and completeness of our financial reports could be further eroded, which would have a material adverse effect on the price of our common stock. Our results of operations could vary as a result of changes to our accounting policies or the methods, estimates and judgments we use in applying our accounting policies. The methods, estimates and judgments we use in applying our accounting policies have a significant impact on our results of operations. Such methods, estimates and judgments are, by their nature, subject to substantial risks, uncertainties and assumptions, and factors may arise over time that could lead us to reevaluate our methods, estimates and judgments. In future periods, management will continue to reevaluate its estimates for contract margins, service agreements, loss accruals, warranty, performance guarantees, liquidated damages, inventory valuation allowances and allowance for doubtful accounts. Changes in those estimates and judgments could significantly affect our results of operations and financial condition. We will also adopt changes required by the Financial Accounting Standards Board and the SEC. We may be affected by environmental and other governmental regulation. We are subject to various federal, state and local laws and regulations relating to, among other things, land use, safe working conditions, handling and disposal of hazardous and potentially hazardous substances and emissions of carbon dioxide and pollutants into the atmosphere. Our business exposes us to the risk of harmful substances escaping into the environment, resulting in personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all. In addition, it is possible that industry- specific laws and regulations will be adopted covering matters such as transmission scheduling, distribution, emissions, and the characteristics and quality of our products, including installation and servicing. These regulations could ~~limit~~ **44limit** the growth in the use of carbonate fuel cell products, decrease the acceptance of fuel cells as a commercial product and increase our costs and, therefore, the price of our products. We believe that our businesses are operating in compliance in all material respects with applicable environmental laws; however, these laws and regulations have changed frequently ~~53in~~ **in** the past and it is reasonable to expect additional and more stringent changes in the future. Accordingly, compliance with existing or future laws and regulations could have a material adverse effect on our business prospects, results of operations and financial condition. If we fail to comply with applicable environmental laws and regulations, governmental authorities may seek to impose fines and penalties on us or to revoke or deny the issuance or renewal of operating permits and private parties may seek damages from us. Under those circumstances, we might be required to curtail or cease operations, conduct site remediation or other corrective action, or pay substantial damage claims. Given that some of our product configurations run on fossil fuels, we may be negatively impacted by CO2- related changes in applicable laws, regulations, ordinances, rules or the requirements of the incentive programs on which we and our customers currently rely. Changes in any of the laws, regulations, ordinances or rules that apply to our installations and new technology could make it illegal or more costly for us or our customers to install and operate our products at particular sites. Additionally, our customers and potential customers' energy procurement policies may prohibit or limit their willingness to procure our products. Our business prospects may be negatively impacted if we are prevented from completing new installations or our installations become more costly as a result of laws, regulations, ordinances, or rules applicable to our products, or by our customers' and potential customers' energy procurement policies. In addition, certain of our products benefit from federal, state and local governmental incentives, mandates or other programs promoting clean energy generation. Any changes to or termination of these programs could reduce demand for our products, impair sales financing, and adversely impact our business, financial condition and results of operations. A negative government audit could result in an adverse adjustment of our revenue and costs and could result in civil and criminal penalties. Government agencies, such as the Defense Contract Audit Agency, routinely audit and investigate government contractors. These agencies review a contractor' s performance under its contracts, cost structure, and compliance with applicable laws, regulations, and standards. If the agencies determine through these audits or reviews that we improperly allocated costs to specific contracts, they will not reimburse us for these costs. Therefore, an audit could result in adjustments to our revenue and costs. Further, although we have internal controls in place to oversee our government contracts, no assurance can be given that these controls are sufficient to prevent isolated violations of applicable laws, regulations and standards. If the agencies determine that we or one of our subcontractors engaged in improper conduct, we may be subject to civil or criminal penalties and administrative sanctions, payments, fines, and suspension or prohibition from doing business with the government, any of which could materially affect our results of operations and financial condition. Exports of certain of our products are subject to various export control regulations and may require a license or permission from the U. S. Department of State, the U. S. Department of Energy or other agencies. As an exporter, we must comply with various laws and regulations relating to the export of products, services and technology from the U. S. and **with the laws and regulations of** other countries having jurisdiction over our operations. We are subject to export control laws and regulations, including the International Traffic in Arms Regulation, the Export Administration Regulation, and the Specially Designated Nationals and Blocked Persons List, which generally prohibit U. S. companies and their intermediaries from exporting certain products, importing materials or supplies, or otherwise doing business with restricted countries, businesses or individuals, and require companies to maintain certain policies and procedures to ensure compliance. We are also subject to the Foreign Corrupt Practices Act, which prohibits improper payments to foreign governments and their officials by U. S. and other business entities. Under these laws and regulations, U. S. companies may be held liable for their actions and actions taken by their strategic or local partners or representatives. If we, or our intermediaries, fail to comply with the requirements of these laws and regulations, or similar laws of other countries, governmental authorities in the United States or elsewhere, as applicable, could seek to impose civil and / or criminal penalties, which could damage our reputation and have a material adverse effect on our business, financial condition and results of operations. ~~54The~~ **45The** Paycheck Protection Program loan received by us in 2020 and subsequently repaid by us in 2021 has resulted in an informal SEC inquiry into our financial disclosures and may subject us to challenges regarding qualification for the loan, enforcement actions, fines and penalties. On April 20, 2020, we entered into a Paycheck Protection Program Promissory Note, dated April 16, 2020 (the " PPP Note "), evidencing a loan to the Company from Liberty Bank under the Coronavirus Aid, Relief, and Economic Security Act (the " CARES Act "). Pursuant to the PPP Note, we received total proceeds of approximately $ 6. 5 million on April 24, 2020 (the " PPP Loan "). In accordance with the requirements of the CARES Act, as amended by the Paycheck Protection Program Flexibility Act of 2020 (the " PPP Flexibility Act "), the PPP Loan may have been fully forgiven if (i) proceeds were used to pay eligible payroll costs, rent, mortgage interest and utilities and (ii) full- time employee headcount and salaries were either maintained during the 24- week period following disbursement of the PPP Loan or restored by December 31, 2020. If not so maintained or restored, forgiveness of the PPP Loan would have been reduced in accordance with regulations issued by the U. S. Small Business Administration. On October 29, 2020, we applied for forgiveness of the PPP Loan. While we believe we met all of the requirements of the CARES Act, as amended by the PPP Flexibility Act, for forgiveness, on February 11, 2021, we withdrew our application for forgiveness and repaid all amounts outstanding under the PPP Note, together with all accrued interest, in part because our financial circumstances had changed substantially since the time of the application for forgiveness, such that we were no longer in need of forgiveness of the PPP Loan. As a result of this repayment, the PPP Loan is not reported on our Consolidated Balance Sheets as of October 31, **2023 and** 2022 ~~and 2021~~. Our receipt of the PPP Loan, our submission of a forgiveness application, and our withdrawal of our forgiveness application may result in adverse publicity and damage to our reputation, governmental investigations, inquiries, reviews and audits, such as the SEC inquiry described below, which could consume significant financial and management resources. Any of these events could harm our business, results of operations and financial condition.

On or about May 11, 2020, the Division of Enforcement of the SEC sent us an inquiry requesting that we voluntarily provide information to the SEC pertaining to our application and resulting PPP Loan and how the need for the PPP Loan compares with our filings, disclosures and financial condition. While this request for information was voluntary and we were not obligated to respond, we cooperated with the request for information and voluntarily provided information to the SEC. The SEC did not communicate with us in fiscal year ~~2021~~ **2022** or fiscal year ~~2022~~ **2023** about its inquiry. Risks Related to Our Need for Additional CapitalWe will need to raise additional capital, and such capital may not be available on acceptable terms, if at all. If we do raise additional capital utilizing equity, existing stockholders will suffer dilution. If we do not raise additional capital, our business could fail or be materially and adversely affected. The implementation of our business plan and strategy requires additional capital to fund operations as well as investment by us in project assets. If we are unable to raise additional capital in the amounts required, on terms acceptable to us, or at all, we will not be able to successfully implement our business plan and strategy. Our capital- intensive business model increases the risk that we will not be able to successfully implement our plans if we do not raise additional capital in the amounts required. In addition, if we raise additional funds through further issuances of our common stock, or securities convertible into or exchangeable for shares of our common stock, into the public market, including shares of our common stock issued upon exercise of options or warrants, holders of our common stock could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of our then- existing capital stock. Any debt financing secured by us in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities. If we cannot raise additional funds when we need them, our business and prospects could fail or be materially and adversely affected. In addition, if additional funds are not secured in the future, we will have to modify, reduce, defer or eliminate parts of our present and anticipated future projects, or sell some or all of our assets. ~~55Risks~~ **46Risks** Related to our Intellectual Property and Technology LicensesWe depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our future growth and success. Failure to protect our existing intellectual property rights may result in the loss of our exclusivity or the right to use our technologies. If we do not adequately ensure our freedom to use certain technology, we may have to pay others for rights to use their intellectual property, pay damages for infringement, misappropriation, or other violation, or be enjoined from using such intellectual property. We rely on patent, trade secret, trademark and copyright law to protect our intellectual property. We previously licensed certain of our carbonate fuel cell manufacturing intellectual property to POSCO Energy on an exclusive basis in the South Korean and broader Asian markets, and pursuant to the terms of the Settlement Agreement with POSCO Energy, we have done so again, but this time on a limited, non- exclusive basis to enable module replacement to POSCO Energy' s existing LTSA customers only. ~~(See the section above entitled " Business – License Agreements — License Agreements and Settlement Agreement with POSCO Energy " for more information with respect to the limited license granted to POSCO Energy and KFC.)~~ In addition, effective as of June 11, 2019, we entered into the EMTEC License Agreement, pursuant to which we agreed, subject to the terms of the EMTEC License Agreement, to grant EMTEC and its affiliates a non- exclusive, worldwide, fully paid, perpetual, irrevocable, non- transferrable license and right to use our patents, data, know- how, improvements, equipment designs, methods, processes and the like to the extent it is useful to research, develop, and commercially exploit carbonate fuel cells in applications in which the fuel cells concentrate carbon dioxide from industrial and power sources and for any other purpose attendant thereto or associated therewith. Such right and license is sublicensable to third parties performing work for or with EMTEC or its affiliates, but shall not otherwise be sublicensable. Furthermore, on November 5, 2019, we entered into the EMTEC Joint Development Agreement, pursuant to which we agreed to grant EMTEC and its affiliates a worldwide, non- exclusive, royalty- free, irrevocable, perpetual, sub- licensable, non- transferable (subject to certain exceptions) right and license to practice certain Company background intellectual property (to the extent not already licensed pursuant to the EMTEC License Agreement) for new carbonate fuel cell technology in carbon capture applications and hydrogen applications. We depend on POSCO Energy and EMTEC to also protect our intellectual property rights, but we cannot assure you that POSCO Energy or EMTEC will do so. As of October 31, ~~2022~~ **2023** , we (excluding our subsidiaries) had ~~129~~ **139** U. S. patents and ~~251~~ **282** patents in other jurisdictions covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions), with patents directed to various aspects of our SureSource technology, SOFC technology, PEM fuel cell technology and applications thereof. As of October 31, ~~2022~~ **2023** , we also had ~~40~~ **34** patent applications pending in the U. S. and ~~107~~ **98** patent applications pending in other jurisdictions. As of October 31, ~~2022~~ **2023** , our subsidiary, Versa Power Systems, Ltd. (" Versa "), had ~~29~~ **24** U. S. patents and ~~87~~ **86** international patents covering SOFC technology (in certain cases covering the same technology in multiple jurisdictions). As of October 31, ~~2022~~ **2023** , Versa also had ~~7~~ **9** pending U. S. patent applications and ~~21~~ **26** patent applications pending in other jurisdictions. In addition, as of October 31, ~~2022~~ **2023** , our subsidiary, FuelCell Energy Solutions, GmbH, had license rights to 2 U. S. patents and 7 patents outside the U. S. (in certain cases covering the same technology in multiple jurisdictions) for carbonate fuel cell technology licensed from Fraunhofer IKTS. Some of our intellectual property is not covered by any patent or patent application and includes trade secrets and other know- how that is not able to be patented, particularly as it relates to our manufacturing processes and engineering design. In addition, some of our intellectual property includes technologies and processes that may be similar to the patented technologies and processes of third parties. If we are found to be infringing, misappropriating or otherwise violating third- party intellectual property, we do not know whether we will be able to obtain licenses to use such intellectual property on acceptable terms, if at all. Our patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope, and enforceability of a particular patent. We cannot assure you that any of the U. S. or international patents owned by us (including our subsidiaries) or other patents that third parties license to us will not be invalidated, circumvented, challenged, rendered unenforceable or licensed to others, or that any of our owned or licensed pending or future patent applications will be issued with the breadth of claim coverage sought by us or our licensors, if issued at all. In addition, effective patent, trademark, copyright and trade secret protection may be unavailable, limited or not applied for in certain foreign countries. ~~56We~~ **We** also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or able to be patented, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our subcontractors, vendors, suppliers, consultants, strategic business associates and employees. We cannot assure you that ~~these~~ **47these** agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships. Certain of our intellectual property has been licensed to us on a non- exclusive basis from third parties that may also license such intellectual property to others, including our competitors. If our licensors are found to be infringing, misappropriating or otherwise violating third- party intellectual property, we do not know whether we will be able to obtain licenses to use the intellectual property licensed to us on acceptable terms, if at all. If necessary or desirable, we may seek extensions of existing licenses or further licenses under the patents or other intellectual property rights of others. However, we can give no assurances that we will obtain such extensions or further licenses or that the terms of any offered licenses will be acceptable to us. The failure to obtain a license from a third party for intellectual property that we use at present could cause us to incur substantial liabilities, and to suspend the manufacture or shipment of products or our use of processes requiring the use of that intellectual property. While we are not currently engaged in any **material** intellectual property litigation, we could become subject to lawsuits in which it is alleged that we have infringed, misappropriated or otherwise violated the intellectual property rights of others or commence lawsuits against others who we believe are infringing, misappropriating or otherwise violating our rights or violating their agreements to protect our intellectual property. Our involvement in intellectual property litigation could result in significant expense to us, adversely affecting the development of sales of the challenged product or intellectual property and diverting the efforts of our technical and management personnel, whether or not that litigation is resolved in our favor. The U. S. government has certain rights relating to our intellectual property, including the right to restrict or take title to certain patents. Multiple U. S. patents that we own have resulted from government- funded research and are subject to the risk of exercise of " march- in " rights by the government. March- in rights refer to the right of the U. S. government or a government agency to exercise its non- exclusive, royalty- free, irrevocable worldwide license to any technology developed under contracts funded by the government if the contractor fails to continue to develop the technology. These " march- in " rights permit the U. S. government to take title to these patents and license the patented technology to third parties if the contractor fails to utilize the patents. Risks Related to Our Common and Preferred StockOur stock price has been and could remain volatile. The market price for our common stock has been and may continue to be volatile and subject to extreme price and volume fluctuations in response to market and other factors, including the following, some of which are beyond our control: ● failure to meet commercialization milestones; ● failure to win contracts through competitive bidding processes, or the loss of project awards previously announced or anticipated prior to entering into definitive contracts; ● the loss of a major customer or a contract; ● variations in our quarterly operating results from the expectations of securities analysts or investors; ● downward revisions in securities analysts' estimates or changes in general market conditions; ● changes in the securities analysts that cover us or failure to regularly publish reports; ● announcements of technological innovations or new products or services by us or our competitors; ~~57~~ ● announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments; **48** ● additions or departures of key personnel; ● investor perception of our industry or our prospects; ● insider selling or buying; ● demand for our common stock; ● dilution from issuances of our common stock; ● general market trends or preferences for non- fueled resources; ● ~~the COVID- 19 pandemic~~ **pandemics** , ~~including~~ **or** any ~~worsening of~~ **public health or safety issues in** the ~~pandemic~~ **regions where we operate** ; ● general technological or economic trends; and ● changes in **the** United States or foreign political environment and the passage of laws, including, tax, environmental or other laws, affecting the product development business. The closing price of our common stock on December 14, ~~2022~~ **2023** was $ ~~3~~ **1** . ~~72~~ **56 per share** . There can be no assurance that the current stock price will be maintained, and it is possible that our stock price could drop significantly. In the past, following periods of volatility in the market price of their stock, companies have been the subject of securities class action litigation. If we become involved in securities class action litigation in the future, it could result in substantial costs and diversion of management' s attention and resources and could harm our stock price, business prospects, results of operations and financial condition. Future sales of substantial amounts of our common stock could affect the market price of our common stock. Future sales of substantial amounts of our common stock, or securities convertible into or exchangeable for shares of our common stock, into the public market, including shares of our common stock issued upon exercise of options or warrants, or perceptions that those sales could occur, could adversely affect the prevailing market price of our common stock and our ability to raise capital in the future. Provisions of Delaware and Connecticut law and of our certificate of incorporation and by- laws may make a takeover more difficult. Provisions in our Certificate of Incorporation, as amended (" Certificate of Incorporation "), and **Second** Amended and Restated By- Laws (" By- laws ") and in Delaware and Connecticut corporate law may make it difficult and expensive for a third- party to pursue a tender offer, change in control or takeover attempt that is opposed by our management and board of directors. These anti- takeover provisions could substantially impede the ability of public stockholders to benefit from a change in control or change in our management and board of directors. Our By- laws provide that the Court of Chancery of the State of Delaware is the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a judicial forum deemed favorable by the stockholder for disputes with us or our directors, officers or employees. Our By- laws provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our Certificate of Incorporation or our By- laws, any action to interpret, apply, enforce, or determine the validity of our Certificate of Incorporation or By- laws, or any action asserting a claim against us that is governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder' s ability to bring a claim in a judicial forum that the stockholder finds favorable for disputes against us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other ~~58employees~~ -- **employees** . Alternatively, if a court were to find the choice of forum provision contained in our By- laws to be inapplicable or unenforceable in such an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition. ~~The~~ **49The** rights of our Series B Preferred Stock could negatively impact our cash flows and dilute the ownership interest of our stockholders. The terms of our Series B Preferred Stock also provide rights to their holders that could negatively impact us. Holders of the Series B Preferred Stock are entitled to receive cumulative dividends at the rate of $ 50 per share per year, payable either in cash or in shares of our common stock. To the extent the dividend is paid in shares of our common stock, additional issuances could be dilutive to our existing stockholders and the sale of those shares could have a negative impact on the price of our common stock. A share of our Series B Preferred Stock may be converted at any time, at the option of the holder, into 0. 5910 shares of our common stock (which is equivalent to an initial conversion price of $ 1, 692 per share), plus cash in lieu of fractional shares. Furthermore, the conversion rate applicable to the Series B Preferred Stock is subject to additional adjustment upon the occurrence of certain events. The Series B Preferred Stock ranks senior to our common stock with respect to payments upon liquidation, dividends, and distributions. The rights of the holders of our Series B Preferred Stock rank senior to our obligations to our common stockholders. Upon our liquidation, the holders of Series B Preferred Stock are entitled to receive $ 1, 000. 00 per share plus all accumulated and unpaid dividends (the " Liquidation Preference "). Until the holders of Series B Preferred Stock receive the Liquidation Preference with respect to their shares of Series B Preferred Stock in full, no payment will be made on any junior shares, including shares of our common stock. The existence of senior securities such as the Series B Preferred Stock could have an adverse effect on the value of our common stock. General Risk FactorsLitigation could expose us to significant costs and adversely affect our business, financial condition, and results of operations. We are, or may become, party to various lawsuits, arbitrations, mediations, regulatory proceedings and claims, which may include lawsuits, arbitrations, mediations, regulatory proceedings or claims relating to commercial liability, product recalls, product liability, product claims, employment matters, environmental matters, breach of contract, intellectual property, indemnification, stockholder suits, derivative actions or other aspects of our business. Litigation (including the other types of proceedings identified above) is inherently unpredictable, and although we may believe we have meaningful defenses in these matters, we may incur judgments or enter into settlements of claims that could have a material adverse effect on our business, financial condition, and results of operations. The costs of responding to or defending litigation may be significant and may divert the attention of management away from our strategic objectives. There may also be adverse publicity associated with litigation that may decrease customer confidence in our business or our management, regardless of whether the allegations are valid or whether we are ultimately found liable. Financial markets worldwide have experienced heightened volatility and instability which may have a material adverse impact on our Company, our customers and our suppliers. Financial market volatility can affect the debt, equity and project finance markets. This may impact the amount of financing available to all companies, including companies with substantially greater resources, better credit ratings and more successful operating histories than ours. It is impossible to predict future financial market volatility and instability and the impact on our Company, and it may have a materially adverse effect on us for a number of reasons, such as: ● The long- term nature of our sales cycle can require long lead times between application design, order booking and product fulfillment. For such sales, we often require substantial cash down payments in advance of delivery. For our generation business, we must invest substantial amounts in application design, manufacture, installation, commissioning and operation, which amounts are returned through energy sales over long periods of time. Our growth strategy assumes that financing will be available for us to finance working capital or for our customers to provide down payments and to pay for our products. Financial market issues may delay, ~~59cancel~~ -- **cancel** or restrict the construction budgets and funds available to us or our customers for the deployment of our products and services. ● Projects using our products are, in part, financed by equity investors interested in tax benefits, as well as by the commercial and governmental debt markets. The significant volatility in the U. S. and international stock ~~markets~~ **50markets** causes significant uncertainty and may result in an increase in the return required by investors in relation to the risk of such projects. ● If we, our customers or our suppliers cannot obtain financing under favorable terms, our business may be negatively impacted. Weakness in the economy and other conditions affecting the financial stability of our customers could negatively impact future sales of our products and our results of operations. Our products require a long- term investment from our customers. Global inflationary pressures, particularly in the United States, have increased recently to levels not seen in recent years. Should our customers be impacted by these pressures, it could result in delays in purchasing decisions which could impact future sales of our products and our results of operations. In addition, downturns in the worldwide economy, due to inflation, geopolitics, major central bank policy actions including interest rate increases, public health crises, or other factors could also adversely affect our business. Our results of operations could be adversely affected by economic and political conditions globally and the effects of these conditions on our customers' businesses and levels of business activity. Economic and political events in 2022 **and 2023** have altered the landscape in which we and other U. S. companies operate in a variety of ways. In response to inflationary pressures, the U. S. Federal Reserve has raised interest rates, resulting in an increase in the cost of borrowing for us, our customers, our suppliers, and other companies relying on debt financing. World events, such as the Russian invasion of Ukraine and the resulting economic sanctions, have impacted the global economy ~~, including by exacerbating inflationary and other pressures linked to COVID- related supply chain disruptions~~ . Prolonged inflationary conditions, high and / or increased interest rates, and additional sanctions or retaliatory measures related to the Russia- Ukraine crisis, or other **geo- political** situations, could further negatively affect U. S. and international commerce and exacerbate or prolong the period of high energy prices and supply chain constraints. At this time, the extent and duration of these economic and political events and their effects on the economy and the Company are impossible to predict. Our future success will depend on our ability to attract and retain qualified management, technical, and other personnel. Our future success is substantially dependent on the services and performance of our executive officers and other key management, engineering, scientific, manufacturing and operating personnel. The loss of the services of any such personnel could materially adversely affect our business. Our ability to achieve our commercialization plans and to increase production at our manufacturing facility in the future will also depend on our ability to attract and retain additional qualified personnel, and we cannot assure you that we will be able to do so. Recruiting personnel for the fuel cell industry is competitive. Our inability to attract and retain additional qualified personnel, or the departure of key employees, could materially and adversely affect our development, commercialization and manufacturing plans and, therefore, our business prospects, results of operations and financial condition. In addition, our inability to attract and retain sufficient personnel to quickly increase production at our manufacturing facility when and if needed to meet increased demand may adversely impact our ability to respond rapidly to any new product, growth or revenue opportunities. Our inability to attract and retain sufficient qualified personnel to staff our government or third party funded research contracts may result in our inability to complete such contracts or terminations of such contracts, which may adversely impact financial conditions and results of operations. We are subject to risks inherent in international operations. Since we market our products both inside and outside the U. S., our success depends in part on our ability to secure international customers and our ability to manufacture products that meet foreign regulatory and commercial requirements in target markets **, as well as the ability to provide service to our international customers** . We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. In addition, we are subject to tariff regulations and requirements for export ~~60~~ **licenses, particularly with respect to the export of some of our technologies. We face numerous challenges in our international expansion, including the strain any future growth may place on our management, service and operations teams and financial infrastructure, unexpected changes in regulatory requirements and other geopolitical risks, fluctuations in currency exchange rates, longer accounts receivable requirements and collections, greater bonding and security requirements, difficulties in managing international operations, potentially adverse tax consequences, restrictions on repatriation of any earnings and the burdens of complying 51**