



**The Coretec Group, Inc.**

**Second Quarter 2022 Shareholder Call**

**August 17, 2022**

## CORPORATE PARTICIPANTS

**Matthew Kappers**, *Chief Executive Officer*

**Dr. Michelle Tokarz**, *Vice President of Partnerships and Innovation*

**Matthew Hoffman**, *Chief Financial Officer*

## PRESENTATION

### Operator

Welcome to The Coretec Group Shareholder Call Second Quarter 2022.

My name is Irene and I will be the coordinator of today's event.

I would now like to turn the conference call over to Matt Kappers, CEO of the Company. Matt, please go ahead.

### Matthew Kappers

Great. Thank you, Irene.

Good morning and welcome to The Coretec Group's Shareholder Call.

I'm Matt Kappers, the Chief Executive Officer of The Coretec Group. With me are Matt Hoffman, our Chief Financial Officer, and Dr. Michelle Tokarz, our Vice President of Partnerships and Innovation.

Today's call will be primarily focused on Endurion, our battery development project. We will give you more background on Endurion and its underlying technology. We will also give you an update on CSpace, our sponsored research project, and government funding opportunities.

Thank you to everyone who submitted questions. As we go through the call today, our presentation will answer your questions to the extent that we are able. We have to be very careful about protecting our trade secrets.

As we discussed on previous calls, electric vehicles, clean tech, and energy storage are in the forefront of today's technological advancements. We strive to become a significant player in the EV and clean tech industry, and due to our proprietary technology and the strength of our location in Ann Arbor, we are well-positioned to do so.

Yesterday, President Biden signed into law the Inflation Reduction Act, which emphasized the country's commitment to EVs and clean tech. This signing cannot be underemphasized. It is the right time, right place for renewables, clean technologies, especially within the exploding EV sector.

First, it's important to understand our silicon anode and how Endurion is different from other battery developments. Dr. Michelle Tokarz will give us an explanation. First, a little background on Michelle; Michelle has a Bachelor's degree in Chemistry and a Ph.D. in Material Science, both from the University

2

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of Michigan. Michelle has nearly 20 years of experience commercializing technologies, starting with the University of Michigan's spin-out, based on her doctoral work that received both Phase I and Phase II STTR funding from the National Science Foundation.

Her work has included several successful collaborations with university professors, medical doctors, graduate students, incubators, and accelerators. We're thrilled to have Michelle on our team. She's the perfect blend of science and business. She has the chemistry and science knowledge as well as the business acumen to apply it. The running joke in our group is that she always says, "Wow, that's a great technology, but what's the value proposition?" Thankfully, Michelle keeps us in line with our goals.

Even though we have IP protection, we have to be careful not to disclose too much. With that in mind, Michelle, please give us the highlights of our Endurion technology.

### **Dr. Michelle Tokarz**

Thanks, Matt.

I am excited to be an integral part of the Endurion project with The Coretec Group. With Dr. Elgammal's knowledge of the battery industry and vision for Endurion, combined with Dr. Downes' innovative abilities and hands-on wet chemistry skills, I have no doubt we will be able to demonstrate the unique value we intend to bring to silicon-based anodes in lithium-ion batteries using our bottom-up chemistry approach, with the creation of silicon-based nanoparticles with an engineered solid electrolyte interface, or SEI-layer, to address capacity, charge times and cycle life.

First, I want to explain the role of cyclohexasilane, CHS, as the genesis of the Endurion project. To begin, our team at The Coretec Group are experts in engineering silicon, and our work with CHS and other silanes are the starting ingredients for our silicon anodes. As we continued to refine the CHS manufacturing process for scale and work with similar molecules, it was a logical extension to apply our expertise to develop a silicon anode in-house in order to demonstrate firsthand the enhanced properties we are capable of with our materials.

Most of the industry are already addressing the known expansion issues with silicon via what are known as silicon nanostructures; for example, silicon thin-films, nanowires or nanoparticles. While many of these materials are created with vapor deposition processes or mechanical ball milling methods, we are utilizing a proprietary bottom-up chemical synthesis approach. It is precisely this approach that makes us unique. We intend to show the ability to build up customizable silicon-based nanoparticles that are not currently possible with current methods. In other words, we are creating silicon nanoparticles from scratch, rather than mechanically breaking down large silicon particles.

To use a cooking example, you can make cracker crumbs by smashing up saltines. We're making cracker crumbs by baking individual tiny crackers to exact specifications. By customizing silicon nanoparticles from the bottom-up chemistry, we are working to minimize the expansion and pulverization problems, as well as engineer around the SEI-layer issues. Further, smaller particles significantly increase the active surface area, which leads to greater battery performance, including specifically, faster charger times.

We are currently creating these nanoparticles derived from cyclohexasilane and similar molecules in our wet labs. While we optimize this wet chemistry process, we plan to concurrently utilize standard battery half-cell testing results to inform us of necessary modifications to the creation of these nanoparticles. We expect this to be an iterative process whereby the nature of the nanoparticles is continually optimized until we've demonstrated a battery half-cell that affirms that our wet chemistry approach is valid and worthy of further optimization in conjunction with an appropriate anode and/or battery manufacturer.

Every member of The Coretec Group is bringing their own unique skill set to the Endurion project, and I have every confidence that we'll be able to substantially contribute to enhanced cycle life of silicon-based anodes with our approach.

### **Matthew Kappers**

Thanks, Michelle.

As you can tell, she's in tune with the industry and nanotechnology. She's a rising star in her field. She was recently interviewed by TriplePundit, and you can find her article on our website.

We are making great progress with Endurion. Again without saying too much, we have created materials that have been and will be tested. As Michelle said, this development is an iterative process where we develop materials, we'll refine the chemistry, test, make improvements, and test again. This process will continue until we reach what we call a minimal viable product.

Along with our in-house work, we have a research project with the French Alternative Energy and Atomic Commission, also known as CEA. We've recently received a preliminary status report. Our collaboration with Professor Pascale Chenevier has led to some exciting developments regarding CHS' potential for silicon anodes. CEA has used several xylene-based materials including CHS in testing. CHS has demonstrated the lowest deposition temperatures that they have observed to-date, and CHS-based deposition showed the highest yields of silicon nanomaterials, which is particularly important in silicon nanos.

In addition, when using CHS as a silicon source, the unique hybrid composite materials, consisting of nanowires, and nanoflakes, were shown. This research indicates that CHS has low temperature deposition and high silicon yields in nanomaterials. We are conferring with CEA as the research continues and will issue a press release regarding this project as information becomes available.

Similar to our project at CEA, the Eindhoven research is focused on deposition rates of CHS at low temperatures. The data from their research will be helpful in our Endurion project development, as well as other industries like semiconductors. As we've mentioned before, the project was delayed by equipment breakdowns, as well as COVID. The project timeline was initially set for one year. However, due to these delays, that timeline has been extended. The Eindhoven team is continuing their work and we will keep you posted when we receive results.

Matt Hoffman, our CFO, is leading the effort to pursue governmental funding opportunities. Applying for government grants is a tedious and laborious process, and Matt's our guy. Organization and thoroughness are the keys to success in grant proposals, which fits well into Matt's skill set.

Matt, please give us an update on some of the recent legislation and future opportunities.

### **Matthew Hoffman**

Thanks, Matt.

There are two avenues that we are pursuing for potential government research funding. The first is related to our Endurion project. As Michelle described, our approach in creating a better lithium-ion battery is based on a novel synthesis method of creating silicon quantum dots. We are currently gathering data on our active anode to create a compelling proposal for the impact and scalability of our invention.

A great example of a funding opportunity that we are considering is America's Seed Fund powered by the National Science Foundation. This is an opportunity that we strongly meet the criteria for and have the

bandwidth to pitch, execute, and well-manage. Combinations of Phase I and Phase II awards for this program can be up to \$2 million over a 36-month timeframe.

In addition, through the Infrastructure Investment and Jobs Act, the Department of Energy plans to provide nearly \$3 billion to programs designed to spur domestic production of advanced batteries for electric vehicles and energy storage. We are closely watching these developments.

The other avenue for research funding would be in the form of a partnership with a larger player, where we would utilize our technology, either Endurion for battery development or CHS for the semiconductor market. The recent passing of the CHIPS and Science Act specifically allocates \$39 billion over five years to expand domestic semiconductor manufacturing. We recognize that securing funding from this bill requires a partnership in the market. This is a great opportunity for The Coretec Group to advance discussions with domestic companies and capitalize on development funding to realize the value of CHS in the semiconductor market.

The opportunities that I've just mentioned are a few examples that align with our technologies and timing. We are actively monitoring the necessary channels for opportunities and will be aggressive in following and closing on a development revenue stream.

### **Matthew Kappers**

Thanks, Matt.

As an update on the CSpace project, our partnership with the University of Adelaide is going very well. For background, the goal is to create an imaging chamber material that has high image quality, which is determined by brightness, contrast, and sharpness. Our partners at Adelaide are producing and comparing four different types of glasses for use in the image chamber. They're examining the brightness of each glass under a pulsed dual-infrared laser system.

As first proof of concept stuff, the Adelaide team fabricated four different, small scale, domed (phon) glasses, which can generate green image pixels using the laser system. According to their preliminary results, telluride glass is brighter than the reference glass, ZBLAN fluoride glass, while the other types of glasses are considerably dimmer. These results are very promising as telluride glass may be more easily scalable.

The research at Adelaide continues, and once Adelaide has more definitive results, they will be publishing a journal article, as well as making an academic presentation. We will certainly share this information with you as it becomes available.

We are building shareholder value. We are developing solutions to problems that the EV world is striving to solve. Our Endurion project is developing a battery with faster charging, longer life, higher energy density, and capacity for more charge, discharge cycles in its lifetime. These improvements are incredibly valuable. Battery development companies similar to Coretec are receiving strong valuations in the market. For example, it was recently announced that Amprius, a silicon anode developer, is merging with Kensington Capital at a valuation of \$939 million. Other deals include battery developers such as Microvast and QuantumScape. There is significant M&A activity in clean tech, especially with EV and energy storage.

We are creating further value as we make progress with Endurion at CHS. New processes and intellectual property are being created. Not only does it create inherent business value, it provides us protection for our developments.

Looking ahead, our team will be at The Battery Show from September 14 through September 16. It is the premier conference for the energy storage industry as most of the major players will be there. We will be meeting with key suppliers and vendors. The educational seminars have a number of topics that are relevant to Endurion and our Tech team will be participating in them. All in all, The Battery Show is a great opportunity to stay on top of industry trends and innovations.

That same week, The Detroit Auto Show kicks off, and we will be attending. After these shows, we will be writing blog posts with our updates and observations, so please stay tuned with our social media channels.

To wrap up the call, I saw a quote from the late Steve Jobs. He said, “Great things in business are never done by one person. They’re done by a team of people.” Here at The Coretec Group, we are doing great things because we have a highly talented, diverse team of experts that are completely committed to Endurion, CSpace, CHS, and our goals.

Last week we had an all-hands planning meeting and the enthusiasm filled the room. We are highly energized about our future. Our Board of Directors, the Coretec team, research partners and stakeholders, we’re all pulling in the same direction. It’s an exciting time at The Coretec Group, and great things are on the horizon.

Please sign up for Company notifications on our Investor Relations site and follow us on social media channels. We look forward to providing you with regular updates on our progress. We appreciate your time and thank you.

Irene, that completes our call.

### **Operator**

Thank you. Ladies and gentlemen, this concludes today’s conference call. Thank you for being with us today. Have a lovely day ahead. You may disconnect your lines.