



## Frequently Asked Questions for Contour Energy Systems

*February 2010*

**Q1. Contour is claiming battery improvements in five key areas: price/performance, capacity, ruggedness, shelf life storage/recharge cycles, and safety/durability/environmental impact. What are the specific improvements in each of these areas?**

A1. Our new carbon fluoride primary battery offers up to 8 times the performance versus similar sized lithium cells. Our product has extended the operational temperature range from as low as -60C up to and exceeding 160C, which is a significant improvement on the high and low ends of the spectrum versus other competing lithium systems. Additionally, our carbon fluoride chemistry system has double the shelf life of manganese-based lithium systems and does not experience performance degradation when stored at temperatures in excess of 60C. Plus, unlike liquid lithium systems (like lithium sulfur dioxide and lithium thionyl chloride), our carbon fluoride battery operates at a lower pressure and does not use a toxic electrolyte system that can cause severe damage in case of accidental venting or leakage.

**Q2. Carbon fluoride batteries have been around since the 1970s. What exactly is Contour doing to advance the state of primary CFx batteries?**

A2. Historically, carbon fluoride batteries have offered excellent energy density, high temperature performance, and shelf life. Where they have fallen short and prevented a wider market penetration is their limited power capability and reduced low temperature performance. At Contour, we have developed a proprietary process that introduces fluorine into the carbon material that provides a fundamentally different atomic structure than traditional carbon fluoride materials. This new structure, coupled with our use of new and exotic materials, not only retains all the favorable aspects of traditional primary LiCFx batteries, it provides best-in-class power and low temperature performance versus other lithium primary-based systems.

**Q3. With so many other companies producing Carbon Monofluoride batteries, how is it possible that only Contour seems able to achieve such significant advances?**

A3. Carbon mono-fluoride batteries have been used in very small, niche applications due to historic limitations (cost, power capability, low temperature performance). Through Contour's material advancements in the initial carbon and the process that introduces fluorine into the structure, we fundamentally change the atomic structure of the carbon fluoride compound. This patent process enables us to produce advanced material that, when incorporated into our battery system, provides these breakthrough performance results.

**Q4. What are the key advancements among Contour's 60 patentable technologies?**

A4. The key advancements in our patent portfolio span rechargeable and non-rechargeable systems as well as material advancements in the cathode, anode, and electrolyte areas. Our core technology within the portfolio centers on fluorine electrochemistry. Historically, this is an under-researched and under-commercialized area offering significant opportunities for the future.

**Q5. Why is it critical for next-generation battery companies like Contour to maintain expertise in battery chemistries, nano-materials science and manufacturing processes?**

A5. Most successful battery companies have developed key expertise in material development or manufacturing that provided a competitive advantage during their formation. In order to maintain that competitive advantage, these companies must continue to invest in refining material development and manufacturing processes. Contour subscribes to this model as it identifies new opportunities and as a means of maintaining its competitive advantage in the markets in which it competes.

**Q6. What does Contour mean when it refers to nano-materials? Is nanotechnology strategic to the company's long-term success?**

A6. As part of the work we have done, using nano-materials (or sub-micron sized particles) offer some unique properties in our battery systems that can be optimized for certain markets. We will continue to do work with nano-sized particles and use them in products where they deliver the most value.

**Q7. Why is Contour focusing so much of its efforts on fluorine-based battery chemistries?**

A7. We believe that fluorine has a huge potential as an energy carrier when placed in an electrochemical system. We have seen this with a variety of different compounds in the lab. It has also been proven in older carbon monofluoride systems. Additionally, Contour

has access to unique talent in fluorine electrochemistry, which makes us uniquely qualified to commercialize these systems.

**Q8. How is the company overcoming some of the safety issues associated with fluorine?**

A8. While fluorine by itself can be extremely reactive, once that it is combined into the final material form used in battery systems, it is extremely benign and safe. We do use fluorine in our material manufacturing process and we have partnered with a strategic supplier that has global fluorine operations.

**Q9. Contour claims to be the only battery company to develop customizable batteries with a 'Tunable Cathode'. What is this and why is it significant?**

A9. Because we control the cathode manufacturing process, we have the ability to make specific changes to manufacturing properties that will alter the physical structure on the atomic level. This allows us to make batteries with extremely high energy density, extremely high power density, or a mixture of the two. This is significant because certain applications may require power and energy features [ , that are not designed as part of our standard product offerings. By a simple modification of our material process, we can provide a battery system that addresses the specific needs of our target customer. This is a unique capability offered by Contour.

**Q10. Is Contour doing any work on materials used for anodes, electrolytes and separators?**

A10. We are continuing to do additional work on all of these components for primary and rechargeable systems. We believe that the work we do in these areas offers the opportunity for potential advances in future products while at the same time deepening our understanding of the characteristics of our existing products.

**Q11. What is so unique about Contour's manufacturing process?**

A11. Our manufacturing process enables us to produce a carbon fluoride material that is physically different on the atomic level versus other carbon fluoride powders, resulting in our power and energy advantages. The specifics of the manufacturing process are considered trade secrets that we do not share publically.

**Q12. What kind of primary lithium and advanced rechargeable batteries is Contour Energy Systems developing? What form factors is company producing?**

A12. Contour Energy Systems is developing primary lithium batteries using a lithium and carbon fluoride couple. Our products provide next generation performance in the areas of energy and power density, temperature range, and robustness versus other lithium-based

systems. For our standard products, we will be producing coin, cylindrical, and thin film prismatic formats. Additionally, we will be placing these cells into standard and custom battery packs based on the specifications of our OEM customer base.

**Q13. Is Contour manufacturing its own products, OEMing its technology and/or licensing its IP? Why does Contour believe this strategy will be successful?**

A13. Contour is open to all of these business options. What is important about our strategy is that we fully understand the customer needs prior to selecting a commercialization option. This understanding of market performance and pricing requirements guides the development of our technologies. We then select the best commercialization option that will add value for both the customer and our company. This differentiates us from other emerging companies in the battery and portable power space.

**Q14. What are the target markets and applications that Contour is developing products/technologies/systems for, both initially and over time?**

A14. Our target markets are in the government and defense, transportation, medical, industrial, portable electronics, and other specialty markets. Some of the applications that our products will power within these markets include: tire pressure monitoring systems (TPMS), memory back-up, military radios and equipment, smart metering, medical monitoring and patient care devices, and powered credit cards.

**Q15. What is the Total Addressable Market for Contour's primary and advanced rechargeable battery systems?**

A15. The primary lithium battery market is forecast to reach \$1.5 billion in 2010, driven by military, industrial and portable electronics applications. The rechargeable battery market that Contour is targeting is forecast as a \$10 billion opportunity today and growing with the addition of new portable devices.

**Q16. Who are Contours major competitors?**

A16. Contour's major competitors are other lithium battery producers who will differ depending on specific markets. Competitors include: Saft Batteries (along with its subsidiary Tadiran), Panasonic Batteries, Spectrum Brands (RayOVac), Ultralife Corporation, Wilson GreatBatch (and their subsidiary Electrochem), Eagle Picher, and various other smaller Asian companies.

**Q17. What factors most differentiate Contour from its competitors?**

A17. In addition to the battery chemistry, advanced materials and manufacturing process breakthrough discussed previously, there are several things that differentiate us from our competitors. First, we focus on fully understanding our target markets and addressing their specific portable power needs. Second, a Contour imperative is to bring breakthrough technologies to the market as opposed to incremental improvements. Finally, we have an executive leadership group with critical experience in transitioning technology development to commercially viable products.

**Q18. What is Contour’s partnership strategy and how important is it to the company’s long-term success?**

A18. As with any early-stage company, partnerships play a critical role in accelerating the commercialization of new technology. Partnerships can come in the form of technical, operational, and sales and marketing partnerships and can range from contract manufacturing to joint development work. In the near term we will continue to identify potential partners that can accelerate our company toward profitability. We anticipate that as we become a more established company, our partnership strategy will evolve. Currently, Contour enjoys strategic partnerships with CalTech, CNRS, MIT and Schlumberger.

**Q19. How is Contour leveraging its relationship with the many universities and research centers featured on the Website?**

A19. We identify technologies through the universities and research facilities that can address the current and future needs of our market and are synergistic with our own technologies. We then develop a working relationship that is mutually beneficial for both parties. At Contour, we have the ability to prove the benefits of the underlying technical advances. We then look to either commercialize or license, depending on the value that it brings to the end use market and where it fits into our strategy.

**Q20. Is Contour planning to form relationships with other universities and research centers?**

A20. We will continue to evaluate exciting technologies from universities and research centers in the future and will pursue new partnerships on a case-by-case basis.

**Q21. Do you expect there to be a shortage of lithium in the foreseeable future, and if so, how is Contour preparing for the situation?**

A21. We do not expect there to be a shortage of lithium. There are substantial resources both in South America and China. Additionally there are several alternative methods for recovering lithium from non-conventional resources (i.e. sea water).

**Q22. Who are the company founders and executive staff?**

A22. The company was founded by Dr. Robert Grubbs, a Nobel laureate in polymer based chemistry systems; Dr. Rachid Yazami, a visiting professor from Cal Tech; and Dr. Andre Hamwi, a world-renowned fluorine expert out of the University of Blaise-Pascal in France. Our executive staff consists of T. Joseph Fisher, CEO, a 30 year battery industry veteran with Energizer, L.C. Chiu, COO, Sohrab Hossain, CTO, and Eric Lind, VP of Business Development who has over 15 years of battery industry experience including executive level positions with Duracell and Ultralife.

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